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**PUBLIC INFORMATION ON
OIL AND GAS ACTIVITIES**

**An Assessment of Current and
Future Strategies for
Canada's East Coast Offshore**

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SUMMARY

This study is a response to the need for a re-examination of information strategies and the public's need for information on developments in the east coast offshore oil and gas industry.

The objectives of the study were:

- to assess the information needs of the general public;
- to evaluate existing information materials;
- to identify deficiencies in the current information system;
- to identify strategies for better meeting the information needs of the general public; and
- to prepare sample information modules.

The study included several different data collection and analytical tasks, involving concurrent collection of data in both Newfoundland and Nova Scotia. The tasks included:

- a review of existing survey data;
- the organization of special discussion groups to supplement survey data;
- the development of case histories of public information programs in the recent past; and
- a survey of both government and industry sources of information materials.

In addition, the amount, type, and quality of available information was assessed. A catalogue of existing public information materials was compiled and a classification of these materials drawn up, including evaluations of the level of information and performance.

From the study several major conclusions were drawn:

- a) Much offshore information has been developed as a response to environmental review processes.
- (b) Information developed outside of these processes has tended to reflect **corporate** rather than public concerns.
- (c) Information developed by public sources--particularly the **federal government**--dominates the offshore information scene.

- (d) Public response to offshore information is mixed, with most members of the public indicating a high degree of **skepticism**.
- (e) The general public is concerned that information provide a **balanced or neutral view** of offshore developments and that this information be more **topical** and more **accessible**.
- (f) There are few examples of **integration** in available materials--i.e., no single source exists that can provide information on a range of offshore topics.
- (g) Neither industry nor government has developed a systematic method of **logging or monitoring information needs and responses**.

SOMMAIRE

Cette étude répond au besoin d'une part, de réexaminer les techniques de dissémination d'information et d'autre part, à celui du public d'être renseigné sur les développements dans l'industrie pétrolière et gazière au large des côtes.

Les but de l'étude furent:

- d'établir les besoins d'information du grand public;
- d'évaluer la documentation existante;
- d'identifier les lacunes du système d'information actuel;
- d'identifier les techniques permettant de mieux satisfaire les besoins d'information du grand public; et
- de préparer des échantillons de modules d'information.

L'étude comprenait plusieurs collecte de données différentes et de tâches analytiques, y compris la collecte simultanée de données à Terre-Neuve et en Nouvelle-Écosse. Les tâches comprenaient:

- un examen des données d'enquête actuelles;
- la mise sur pied de groupes spéciaux de discussions afin d'étoffer les données d'enquête;
- la mise au point des études de cas des programmes récents d'information publique; et
- une enquête à la fois sur les sources d'information gouvernementales et industrielles.

De plus, la quantité, le genre et la qualité de l'information disponible ont été évalués. L'on a dressé un catalogue de la documentation existante et établi une classification de celle-ci comprenant des évaluations du niveau de l'information et du rendement.

L'on a tiré plusieurs conclusions importantes de l'étude:

- (a) Beaucoup d'information sur le large des côtes a été constituée en réponse aux processus d'examen de l'environnement.

- (b) L'information développée en dehors de ces processus a tendance à refléter les préoccupations des sociétés plutôt que celles du public.
- (c) L'information rassemblée par le secteur public - et en particulier le gouvernement fédéral - domine le champ d'information sur le large des côtes.
- (d) La réaction du public à l'information sur le large des côtes est mitigée avec la majorité manifestant un degré considérable de scepticisme.
- (e) Il importe de savoir pour le grand public que l'information offre une vision équilibrée ou neutre des développements au large des côtes et que cette information soit plus locale et accessible.
- (f) Il n'y a que peu d'exemples d'intégration dans la documentation disponible - c'est-à-dire qu'il n'existe aucune source unique pouvant fournir de l'information sur toute une gamme de sujets sur le large des côtes.
- (g) Ni l'industrie, ni le gouvernement n'a mis au point une méthode systématique permettant de répertorier ou de surveiller les besoins et réponses en information.

1. STUDY BACKGROUND AND APPROACH

1.1 INTRODUCTION

The Environmental Studies Revolving Fund (ESRF) has sponsored this study as part of an effort to address the need for more regular and accessible information on east coast offshore oil and gas development for the general public.

The prospect for major oil and gas development in Atlantic Canada has generated a keen interest on the part of the general public in acquiring further information on such development. While many technical studies on offshore oil and gas have been completed, and others are planned or under way, the number of public consultation and information-transfer programs available to the general public is still limited. Notwithstanding the publications and hearings associated with the Federal Environmental Assessment and Review Office (FEARO) review process in Nova Scotia and Newfoundland, and the many workshops, seminars, and panel discussions organized independently by the major operators, and by various government and university groups, there has been little concerted effort to develop the materials required to provide the general public with comprehensible information on oil and gas development.

Preliminary results from a number of recent surveys suggest a need for such materials. The respondents in the east coast social issues scoping study (Cleland et al., 1985), for example, expressed considerable uncertainty over oil and gas development, reflecting a need for both more and better information, or at least for information that is more accessible. A number of surveys, including those developed for the Hibernia and Venture environmental impact assessments (EIA), also suggested information deficiencies. Under these circumstances, a review and evaluation of existing information needs and materials seemed necessary to discern the gap between the public's need for information and the kinds of information now available, and to provide a basis for development of new materials. This study begins with such a review, and then attempts to link the evaluation of existing materials to the development of new information strategies which better address the public's need for quality information on offshore development.

1.2 STUDY BACKGROUND

1.2.1 Objectives

East coast offshore oil and gas activities are an important and relevant topic of discussion for all Atlantic Canadians. Offshore information from a wide variety of sources is already available to people in the region--the media, government, and the oil companies themselves having contributed to the development of information materials. Some of the materials available include:

- brochures and booklets distributed by the oil companies;
- position papers and research papers distributed by government;
- films and videotapes prepared by a variety of sources, including university extension services, government, and the oil companies;
- educational materials, including curriculum materials, developed by independent groups; and
- news releases and feature articles, in both newspapers and magazines.

Many of these information materials have been developed for **key publics**--groups with special interests such as government, teachers, politicians, and people who are active in various groups and associations concerned with the offshore. By contrast, very few materials have been developed for the **general public**, that is, for persons whose interest in the offshore is less specialized or less focused.

The present study is intended to impact by addressing the following general objectives:

- a) Assess the information needs of the general public.
- b) Evaluate existing materials and the current information system.
- c) Identify deficiencies in the current information system.
- d) Identify strategies for better meeting the information needs of the general public.
- e) Prepare sample information modules based on the findings of the evaluation procedure which will serve as models of appropriate information-transfer strategies.

- f) Provide both industry and government with an appropriate communications methodology and philosophy, i.e., a set of standards for style, content, and level of technical sophistication.

1.2.2 Approach

One of the major goals of this study was to evaluate the appropriateness, quality, and effectiveness of existing public information materials and programs (Table 1). This evaluation was based mainly on an assessment of the needs of the information audience and an analysis of the relationship of the information audience to its source.

The evaluation included the following tasks:

- a review of existing survey data on public attitudes and needs as it concerns information on oil and gas activities;
- the organization of special "discussion groups" to supplement survey data on public information needs;
- the development of case histories of public information programs in the recent past, particularly those associated with EIA processes; and
- a survey of government and industry sources of information materials to determine public information responsibilities, and the development of criteria for future public information materials and programs.

In addition, the amount, type, and quality of available information was assessed. A catalogue of existing public information materials was compiled and a classification of these materials drawn up, including evaluations of the level of information and performance.

This approach provided both an evaluation of public information materials and programs--to judge their appropriateness and effectiveness--and suggested criteria for future information strategies, program selection, and evaluation methods.

* * * *

The documentary and social research upon which this study was based took place over a period of approximately eight months. In the chapters which follow, the details of this research and the specific conclusions of each component are presented, together with a substantial amount of support materials and case studies.

TABLE 1
Conceptual Framework for Evaluation of Public Information, East Coast Offshore

Rationale	Observations (what it is)	Standards (what it should be)	Judgement
<p><u>Target audience general public</u></p> <p>To determine if existing public information materials and programs are appropriate and effective for the general public.</p>	<p><u>Appropriateness</u></p> <ol style="list-style-type: none"> 1. Suitability <ul style="list-style-type: none"> - needs of information audience - relationship audience/source 2. Quality: describe <ul style="list-style-type: none"> - level of information - level of performance 	<p><u>Appropriateness</u></p> <ol style="list-style-type: none"> 1. State high priority information needs of target audience 2. State by whom and when these needs should be filled 3. State the ideal relationship of the information audience in acquiring information according to their needs 4. Criteria of suitable and high quality information 	<p><u>Concerned with prior experience</u></p> <ol style="list-style-type: none"> 1. Catalogue of materials <ul style="list-style-type: none"> - design - execution - dissemination 2. Programs/case histories/past experience/judgement 3. Discussion groups 4. Survey data 5. Industry survey
<p><u>Effectiveness</u></p> <ol style="list-style-type: none"> 1. Maintenance 2. Accomplishments 	<p><u>Effectiveness</u></p> <ol style="list-style-type: none"> 1. How much information reaches the audience? 2. How much information is understood? 3. How much information is useful? 	<p><u>Concern with the outcome of the effort</u></p> <ol style="list-style-type: none"> 1. Discussion groups 2. Survey data 3. Industry survey 4. Case histories 	

2. INFORMATION NEEDS

This chapter provides an overview of the Canadian oil and gas industry and the public's perception of it by describing briefly the present "information environment" in the industry, including those circumstances which have influenced communications requirements for the east coast offshore. It then reviews environmental impact assessment processes in Canada and elsewhere, noting the historical development of this form of public accounting, and the significant effect it has had on public information programs. Finally it shows how the public has reacted to this situation; it provides a review of survey data and studies on public information needs and preferences, many of which were undertaken by, or on behalf of, the oil and gas industry.

2.1 THE OIL AND GAS INDUSTRY AND PUBLIC INFORMATION

The need to develop costly new frontier resources, coupled with a general concern that Canadian participation in oil and gas exploration be increased, led to the introduction of the National Energy Program (NEP) in 1980. The Canada Oil and Gas Lands Administration (COGLA) was created in 1981 as the primary agent of the NEP. This agency is responsible for the management of federal oil and gas interests on the Canada Lands--an area of more than 10 million km² encompassing onshore areas in the Northwest and Yukon Territories and the Arctic, and offshore areas on the Atlantic and Pacific coasts--and is thus responsible for much of the research and development activity arising from offshore expenditures.

In Nova Scotia and Newfoundland, decisions about the joint management of offshore activities have affected both the pace and location of oil and gas activities. The negotiations over jurisdiction and revenues has dominated public information, particularly the mass media. Federal-provincial bargaining has also affected the timing of major energy projects, throwing private interests and the interests of regulatory agencies temporarily into the background. The signing of the Atlantic Accord ended a decade of disagreement between the Newfoundland and federal governments over control and management of oil and gas resources, and may bring about increased exploration and early development off the Newfoundland coast. This action should in turn produce an increased demand for information about development.

2.2 ENVIRONMENTAL ASSESSMENT AND THE PUBLIC REVIEW PROCESS

Public information per se--that is, information made openly available for use by private individuals, groups, or communities--has been a public service of most government departments and agencies. In an age of consumer consciousness and public relations, it is increasingly a concern of industry and business. Unlike many other industries public information about oil and gas is also specifically provided for in government legislation, and the consequent processes of regulatory review and public assessment have further affected the degree of public interest in, and industry provision of, public information.

This situation contrasts with earlier attitudes of both the industry and the public. In the past, when oil companies operated in relatively small, land-based areas, information was often closely guarded, a natural concomitant of a fiercely competitive industry where the advanced disclosure of technical data or prospective development was considered unwise. As a result, the industry was often perceived as secretive and uncommunicative, making decisions at short notice and without public knowledge, consultation or regard. Such perceptions, coupled with cynicism about large industry in general and with growing social and environmental awareness and activism in the late 1960s, led to demands for public accountability. Processes of informal review were begun at this time, and legislated assessment procedures were eventually put in place in both the United States and Canada.

Throughout the past two decades such legislation, together with freedom of information legislation, has changed the whole nature and process of public information dissemination. Today, in almost all jurisdictions for onshore and offshore, the release of information on the results of exploration and development drilling is required at regular intervals; such regulatory mechanisms as the EIA process in Canada also provide for public review of the environmental and socio-economic effects of any proposed development, an analysis of alternatives to development, and assessment of the ability of the proponent, the government, and the community to accommodate these effects.

The provision of public information in the recent past has been tied not only to oil development itself, but increasingly to formal and informal processes of public review for environmental protection. Public awareness of the social, economic, and environmental implications of oil and gas activities has evolved from specific public concerns with pollution control and other environmental issues to preventative planning in both the human and physical environment as legislated in formalized EIA. The rise of EIA processes in Canada and the United States also represents a growth in public consciousness and public participation in the functioning of industry affairs.

For east coast offshore developments, the importance of the public review process has been increasingly emphasized at both the federal and provincial levels. Public disclosure of information and public participation are considered vital to the EIA process and to oil and gas industry operations in general.

In Canada, techniques of public information have evolved through more than 20 review panels covering a nuclear power station, port expansion, highways, hydro projects, uranium mines, oil refineries, airports, pipelines, oilfields, and offshore drilling. A review of these projects and other associated conferences and proceedings reveals seven important themes concerning the public's attitudes toward public information and the role of industry and government in providing such information.

- a) Ensuring trustworthy, reliable, and pertinent public information.
- b) Involvement of the public at the earliest possible planning stages of a project, continuing through development and abandonment, especially in monitoring and mitigation, local employment and training, local business use and development, and social and cultural support.
- c) Early identification of issues and information needs gained through a variety of means such as community meetings, workshops, "issues" seminars, site visits, and public information.
- d) Establishment of "feedback" mechanisms in public information programs.
- e) A "common language" for communication to make the general public aware of the socio-economic and environmental effects of development. Too often industry and government information has been difficult to understand because of style and content, although the technical, scientific, and policy information contained the facts most likely to affect people's lives.
- f) The use of local decision-makers and existing community information networks to provide information directly to communities and individuals concerned. These could include local government, trade and business associations, long-distance education and post-secondary extension and community education programs, schools and school groups, newspapers, radio, television, community billboards, and information centres such as libraries.
- g) Ease of access in public information and widespread dissemination through the use of information centres, toll-free

communications system using interactive information transfer, a central register of all employees, potential employees and jobs, newspaper inserts, and more effective use of the mass media and adult education.

The EIA process and associated public information themes, attitudes, and developments are not the subject of this study but they have shaped public perception and information needs, have greatly increased the oil industry and government's role in providing public information, have produced an immense body of public information, and have provided a focal point for debate on the use and application of public information. The key point is that there has been a **transition in viewpoint**--from seeing public information as simply an aspect of "public relations," to considering it a public right and privilege, a matter of government regulation, and a corporate responsibility. People want to know not only the basics of oil and gas activities--what it is, where it takes place, and what it involves--but they also want knowledge that will facilitate their participation, aid decision-making, increase project or industry benefits, and mitigate and monitor negative effects for themselves and their region. From the point of view of industry, public information involves questions of responsibility--good conduct, credibility, and trust. These matters touch upon the central questions of this inquiry, namely: What does the general public want to know? What information is available and from whom? What are industry's mechanisms and responsibilities in public information? How does industry formulate and fulfil these? What is the relationship of industry information to other available sources?

2.3 REVIEW OF SURVEY DATA

The development of information on the east coast offshore has paralleled the exploration process and its administrative/political adjunct, the EIA process. Public reaction to these events has been extremely varied, and provides an incomplete, but nevertheless important, measure of the "success" of public information programs in communicating the implications of offshore development to those affected. Information about the public's reaction--in the form of surveys and research reports--is available from a variety of public and private sources, including the industry itself. To evaluate this source of information, and to determine whether data obtained in this way is of any value in assessing the public's "need" for information, IDP undertook a comprehensive review of survey data.

The method used for this review was:

- to access all available surveys on public attitudes toward offshore development;

- to catalogue the topical areas covered in each; and
- to evaluate coverage of topical and regional materials.

If successful, this review could be used to generate specific criteria for information materials which would then provide a basis for comparison with existing materials. If not, the consultants would be forced to develop other sources for criteria development.

The sources consulted for this review included the following:

- . Eastcan survey of Nova Scotia/Newfoundland public on attitudes to oil and gas, (Eastcan 1984)
- . DECIMA Research, specific issues survey for the Canadian Petroleum Association (DECIMA 1983)
- . DECIMA Research, survey of Quebecers' attitudes towards oil and gas industry, with comparison to national data (DECIMA 1984a)
- . DECIMA, panel study of advertising awareness for Canadian Petroleum Association (DECIMA 1984b)
- . Venture study on "community fabric and social issues," for Mobil Oil Canada, Ltd. (Griffiths and Muecke 1983)
- . Hibernia social attitudinal survey for Mobil Oil Canada, Ltd. (MacLaren Plansearch Ltd. 1981)
- . Hibernia attitude survey for Mobil Oil Canada, Ltd. (Research Associates Ltd. 1984)
- . Hibernia survey of influentials for Mobil Oil Canada, Ltd. (Research Associates Ltd. 1984)

With two exceptions (DECIMA 1983 and 1984b) these surveys were highly specific both as to region and topical focus. For this reason, they are not strictly comparable. However, their goals were broadly similar, and all contained some data on public information requirements. They were all commissioned by industry sources (e.g., oil-producing companies and the Canadian Petroleum Association).

2.3.1 Analysis

Analysis of these surveys indicates that the present state of knowledge on this subject is uneven, and that it does not in itself provide a basis for developing new information materials. Nevertheless, we can draw a number of important conclusions about this topic and suggest a method whereby some of the major issues might be evaluated using different methodology.

In Table 2 the results of the analysis are presented in seven main topics, six of which were derived from the most comprehensive of the surveys analyzed, the Eastcan opinion survey. There are many gaps in the data compiled in Table 2, because most of these surveys were not concerned primarily with information requirements, and because no one survey was co-ordinated with any other. The lack of an integrated, systematic effort to evaluate information needs is the reason for the present study.

2.3.2 Limitations of Data

The variations in methodology and topical focus represent the main limitation on the authors' ability to interpret and draw conclusions from these surveys. The methodologies used ranged from telephone interviews of random samples, to personal interviews of random samples, to personal interviews of "key persons" and "influentials." Topical focus varied from a strong emphasis on attitudes to the industry, to emphasis on perceptions of particular regional projects.

This variation made it difficult to obtain valid comparisons of the data presented. For example, the Venture survey and some components of the Hibernia influentials survey showed a strong interest in the use of public meetings and presentations at the community level as a vehicle for communicating information on oil and gas. By contrast, general opinion surveys, such as those for Decima (1983) and Eastcan (1984) showed that direct presentations of this sort rank low on the scale of "preferred" sources, compared to TV, radio, and newspapers. Similarly, some of these surveys showed that people are interested in more specific information on the offshore, whereas others indicated that more general information is needed.

It was not possible to resolve these inconsistencies; a more focused survey is required on the specific topic of the public's need for information. However, a number of general conclusions can be drawn from the present exercise.

TABLE 2

Summary of Conclusions, Public Information Requirements
for the Oil and Gas Industry

General subject	Eastcan surveys	Decima 1983 (specific issues)	Decima 1983-84 panel surveys	Decima 1983 nationwide survey
Knowledge of offshore oil and gas (general)	90% felt themselves average-to-poor in this area	No data	No data	No data
General rating of industry in providing information	88% rated companies average-to-poor in "keeping you informed"	No data	No specific data, but rating of industry generally improving	No specific data, but an awareness of energy advertising steady to decreasing
Trustworthiness of industry in provision of information	88% said companies "don't tell us anything"	No data	No data	No specific data, but industry generally rated higher than government
Most productive information sources	Radio/TV and news articles favoured	Newspapers (journalists) deemed most believable	No data	No data
Least productive information sources	Community meetings and presentations rated lowest	The industry and government ranked lowest	No data	No data
Type of information sought	No data	Information on job impacts, effect of foreign oil on Canadian situation	No data	No data
Present knowledge (specific)	Poorest on daily activities and financial arrangements, best on future potential and safety	Poor on specifics of price determination	No specific data, but results show differences between "proven awareness" and "simple recognition"	No data

TABLE 2 (Continued)

General subject	Venture 1983 social issues survey	Hibernia (1981) social attitudinal survey	Hibernia (1984) attitude survey	Hibernia (1984) influentials survey
Knowledge of offshore oil and gas (general)	Poor, despite local meetings and visits to North Sea by local officials	Appears to be better in urban than rural areas, based on level of contact and discussion	Large majority (71%) felt they were "somewhat" or "a little" knowledgeable. Income and education positively correlated with perception of being knowledgeable	Unanimous concern over lack of information on specifics: jobs, development status, etc.
General rating of industry in providing information	Poor, but only in the sense that all information is biased	No data	No data	No data, except to note that levels of information generally inadequate
Trustworthiness of industry in provision of information	No direct information, but note a "lack of public confidence"	No data	No data	No data
Most productive information sources	Community-level information preferred, especially meetings	Television well ahead of other sources (31%). TV more important in rural areas	Television, followed by radio and newspapers rated highest. Increased public consultation required by 81%	Public meetings generally favoured over other sources. Brochures another possibility, using local distribution channels. TV seen as useful because direct
Least productive information sources	No data	Personal contact, newspapers, radio all below 10%	Magazines, open line shows and acquaintances rated lowest	No data
Type of information sought	Impacts on fishery, location of facilities, skills and services required	No data	"General" information needs rated significantly higher than specifics. Impact on Nfld. and ownership question next, followed by environment and employment	No consensus on this subject, but general interest in more "concrete and specific" information
Present knowledge (specific)	Poor on LNG terminal, as evidenced by lack of materials use in libraries	Little data, but clear that technical information is not readily available, to rural, low-income, poorly educated	Poor on technical subjects, as indicated by 14% unaided response level to question on production system and pace of development	No data

2.3.3 General Conclusions

General knowledge of offshore oil and gas. Available data suggests that the general public is poorly informed on technical and policy issues, but that some population segments are better informed than others--e.g., urban over rural, high income over low income. Most people needed to be "coached" when asked specific questions on offshore technology (e.g., floating versus fixed production systems), and most people rated themselves as deficient in these areas. Although some surveys showed an increasing appreciation of the **importance** of oil and gas development to Canada's energy needs, this appreciation should not be confused with increased **understanding** of issues.

General rating of the industry in providing information. There is little information on this, except for the Decima surveys, which showed a gradual improvement in rating but nevertheless indicated that the industry still has a long way to go. Some data from key person surveys suggested a view of all such information as biased, or inadequate, or both. It is assumed, in short, that all parties have a vested interest in specific viewpoints on oil and gas, and that all such information must be viewed skeptically.

Trustworthiness of industry in providing information. This point is an extension of the previous one. Decima's surveys have shown a steady increase in trust regarding industry information until 1980, and a slight but probably insignificant decline since then. Reflecting the skepticism noted above, 88% of those surveyed by Eastcan said that the companies "don't tell us everything," which could be interpreted either as criticism or as recognition of the fact that some such information is proprietary. As the Venture survey showed, there was more likely to be a "lack of confidence" about industry viewpoints among the better informed and more influential people. The "general public" seems on the whole to be as favourably disposed to information that flows from the industry as it does to information from other sources.

Most productive information sources. There was a tendency to see television as the most "important" information source; it was also rated as the most frequently consulted source. At the same time, however, newspapers (i.e., journalists) were rated as the "most believable" source of information in at least one survey (Decima 1984). Opinions of influentials and key persons interviewed during research for the Hibernia report placed greater emphasis on direct communications by meetings and public events. The demographic breakdown of these responses suggests that television's primacy varies by income, education, and rural or urban status. It is, therefore, clear that television and other "visual" media are potentially useful primarily because of their mass appeal, although there is considerable difference of opinion on this matter.

Least productive information sources. Community meetings and presentations or events generally rated lowest, followed by open-line shows, magazines and personal contacts. The relatively poor rating given to community meetings and presentations is somewhat surprising, but probably reflects the public's skeptical view that these were "orchestrated" events. The consistent demand for such meetings suggests that the public views them as important platforms for debate and exchange of information, if not for the accumulation of facts about the development.

Print sources in general have a more limited appeal because they require literacy, but are used more regularly by people who make decisions and who may influence others' decisions. A distinction must again be made between access to these sources and their influence on the public. For example, although newspapers and magazines ranked lower than television because they have less "mass appeal," there was an indication that the former are perceived as more reliable.

Type of information sought. Except for the Hibernia attitude survey (Research Associates, 1984a) the consensus on this question was that the need for information on "specifics" rates much higher than the need for "general" information on oil and gas. Issues such as jobs, location of facilities, and skills required rated extremely high, indicating that, for any program of public information to succeed, these issues must be addressed. The anomalous results from Hibernia may simply indicate that the public feels a general deficiency of information, and cannot conceptualize its requirements at a more specific level.

Present level of knowledge (specific). The considerable media coverage on safety issues and potential reserves has produced a greater public awareness of these topics, whereas knowledge of financial aspects, day-to-day work activities on a rig, types of onshore facility and offshore system, and the nature of price determination remains poor. There was a clear indication that data of the latter sort is needed, even though the awareness of this need varied.

2.3.4 Conclusions

The major conclusion of this review is that no clear and consistent survey data are available on the information needs of the "general public." The only firm conclusions which can be stated are that:

- the public's knowledge of offshore activities is inadequate for people to make informed decisions about the potential effect of the offshore on themselves and their families;

- some people, particularly so-called influentials, perceive a need for more detailed technical information on such key issues as labour demand and social service effects;
- visual media command more attention than print media, but probably have less credibility; and
- most information on this topic is seen as biased and one-sided.

These conclusions in turn suggest a number of possible actions:

- greater effort is required to assess the level and type of use of current information materials, independent of survey data--e.g., library loan information, mailing lists, public responses to industry information at meetings, briefs, etc.;
- research methods other than surveys must be used to evaluate public requirements and to gauge potential response to different information formats and materials; and
- increased use of mixed-media approaches should be explored, e.g., use of brochure and slide-show combinations, because reliance on a single medium such as television seems inappropriate.

These suggested actions have been pursued in the remaining chapters of this report.

3. DISCUSSION GROUPS

3.1 BACKGROUND

The best communications efforts should begin with an evaluation of the audience and the informed responses the audience can provide about their information needs and preferences, for example:

- . attitudes to existing information
- . information expectations
- . information preferences
- . information goals

Sample surveying is one conventional method for obtaining information of this sort in which individuals represent the qualities of the whole. Its major drawback is its cost, which in turn tends to limit the use of detailed question protocols and open-ended questions. A second method, widely used in market research, is the focus or discussion group, which involves selection of a number of experienced (not necessarily influential or representative) people who are invited to take part in a structured discussion about a particular product, service, or problem area.

As a number of surveys had already been undertaken (see chapter 2) to ascertain public reaction to the oil companies and their activities, it was concluded that further survey research would be an inappropriate and unnecessary expense. In consultation with the ESRF Socio-Economic Issues East Coast Committee (which identified the need for this study) and the scientific advisor, IDP undertook a series of discussion groups in Nova Scotia and Newfoundland to discuss public information needs and to evaluate samples of public information materials. The information obtained from these discussions would be used to assist in:

- identifying information needs;
- identifying deficiencies in existing materials; and
- suggesting alternative content and media for the development of new materials.

In addition to supplementing survey data, the information gained through the discussion groups was intended to complement two other major research tasks, namely:

- the collection and cataloguing of existing public information materials; and
- a survey of government and industry communications personnel concerning their objectives in preparing and evaluating public information and consultation programs.

3.2 OBJECTIVES AND METHODOLOGY

Four discussion groups of eight to ten people, two groups in Nova Scotia and two groups in Newfoundland, were selected. Selection of participants was based on availability, background, and geographical location. Two criteria were used to select participants: region and background.

- a) Region: two groups were selected in each province, with each province having one discussion group in an area expected to be affected directly by oil and gas development. On this basis the following areas were chosen:

Newfoundland:	St. John's Placentia
Nova Scotia:	Halifax Guysborough County.

- b) Background: people were selected, on the basis of consultation with key publics, as members of the general public who were expected to be knowledgeable about the public's needs. They included people from the following types of occupation:

- . education and training (teachers, etc.)
- . public safety (policemen, firemen, etc.)
- . direct sales (salesmen, etc.)
- . personal care (nurses, doctors, etc.)
- . personal services (recreation, public services)
- . other (students, housewives, etc.).

A model agenda and time frame for each meeting was drawn up to ensure that each group followed a set format to analyse and compare results. Background information was prepared for participants.

Each discussion group met for two hours. During the first hour, participants were informed about the background of the project, and the purpose and approach of the discussion group, and they discussed pertinent questions and sample materials.

During the second hour, evaluation forms were completed and sample materials from other areas of oil development were viewed. Most of the meetings took considerably longer than scheduled, because of the high level of interest shown by participants.

Packages of sample information on the east coast offshore were provided to give participants a focus for discussion and evaluation. Samples were selected from east coast operators and from government departments in Nova Scotia and Newfoundland. The selection of sample materials was based on availability and applicability (Table 3).

Although sample materials were obtained across Canada and the United Kingdom to provide possible models for the development of new materials, these were not available in sufficient quantity to distribute individually to participants. Instead, samples of these materials were displayed at each meeting. These transcripts have been saved as an archival source and are available upon request at IDP Consultants Ltd.

The same discussion group leader attended all four meetings. Recording of meetings was done by two designated people at each meeting. The minutes were combined, summarized, and distributed later to discussion group participants.

3.3 RESULTS

This section compares and analyses the similarities and differences in interest in public information and media preferences between groups in Newfoundland and groups in Nova Scotia, and then between Newfoundland groups and Nova Scotia groups where appropriate.

3.3.1 Procedural Differences

All discussion groups followed a similar format. The same discussion group leader was used in all sessions in Newfoundland and Nova Scotia to ensure consistent results. St. John's was used as the testing and evaluation session for all subsequent discussion groups. Based on the results of this session, some discussion questions were condensed, and the time allotment for discussion and evaluation of sample materials was extended. British and Canadian materials other than east coast materials were incorporated into discussion and evaluation by means of informal comparison only.

Although all groups expressed a desire to obtain materials in advance of the sessions, this was not possible because of constraints of time and the availability of materials in the large

TABLE 3
Sample Information Modules for ESRF Discussion Groups, April-May 1985

	Sample A	Sample B	Sample C
St. John's	<p>Mobil Oil Canada Ltd.^a</p> <ol style="list-style-type: none"> 1. <u>Hibernia Project Community Information Booklet</u> 2. <u>Working Safely Offshore</u> (brochure) 3. <u>Glossary of Some Commonly Used Oil Terms</u> (typescript) 	<p>Petroleum Directorate Government of Newfoundland</p> <ol style="list-style-type: none"> 1. <u>Petroleum Directorate Information Kit</u> <ul style="list-style-type: none"> - Petroleum Directorate (fact sheet) - Significant Discoveries Offshore Newfoundland and Labrador (poster) - Hydrocarbon Distribution Hibernia Reservoir (poster) - Poster Floating Production System - Poster Fixed Production System - "Exploratory Drilling" (typescript) - "Newfoundland and Offshore Petroleum" 	<p>Husky/Bow Valley</p> <ol style="list-style-type: none"> 1. <u>Husky/Bow Valley East Coast Project</u> (brochure)
Placentia	Same as St. John's	Same as St. John's ^b	<ol style="list-style-type: none"> 1. <u>Husky/Bow Valley East Coast Project</u> (brochure) 2. <u>At Work Offshore^c Newfoundland</u> (brochure)
Halifax and Guysborough	<p>Shell Canada Resources</p> <ol style="list-style-type: none"> 1. <u>Offshore Drilling ... Deeper and Deeper</u> (booklet) 2. <u>Shell's East Coast Exploration Activity 1945-1982</u> (typescript) 	<p>Government of Nova Scotia</p> <ol style="list-style-type: none"> 1. Department of Mines and Energy Information Kit <ul style="list-style-type: none"> - Weekly Offshore Well Status - Current Rig Activity - An Introduction to the Offshore 2. Department of Development Industrial Benefits Kit <ul style="list-style-type: none"> - Booklet - Posters 	<p>Husky/Bow Valley</p> <ol style="list-style-type: none"> 1. <u>Husky/Bow Valley East Coast Project</u> (brochure) 2. <u>At Work Offshore Nova Scotia</u> (brochure)

^a Mobil posters also used in discussion group but not included in sample evaluation.

^b Distributed with proviso that materials were in the course of being updated.

^c Not available for St. John's discussion group.

quantities necessary. In the Newfoundland sessions participants in Placentia evaluated an additional item in Sample C. In addition, participants in Placentia were notified that Sample B (Newfoundland Petroleum Directorate materials) were in the process of being revised and updated. Participants in both Nova Scotia groups evaluated identical samples. All participants were allowed to keep their information samples so that they not only contributed information to the study, but also gained information from the sessions.

Some of the discussion group participants in St. John's and Halifax were people who deal with the general public. This selection was in part because the original direction of the discussion groups was toward participants with this background and experience; in part it occurred because St. John's and Halifax are urban centres with large government and service sectors. Following the St. John's discussion group, it was decided that whenever possible in subsequent groups, participants with this particular background would be used only minimally.

With the exception of Halifax, attendance at all discussion groups was 100% of those invited to participate, indicating a high degree of interest: participants were not paid and had only a bare knowledge of the intent of the discussion groups before they were held. In addition to the information samples, all participants received a copy of the transcript of the proceedings of their discussion groups. Participants in Placentia and Guysborough requested and received copies of the transcript of proceedings in St. John's and Halifax, respectively. Participants in all discussion groups expressed a willingness to participate further in similar meetings and evaluated the meetings attended as being both useful and informative.

3.3.2 Evaluation of Available Public Information on Oil and Gas

All participants received an evaluation form at the end of the session, intended both to provide comments on the discussion group experience, and to help focus and elaborate upon the viewpoints expressed in the meeting.

Many participants (58%) said they had given a great deal of thought to the topic of public information, from a high of 87.5% of the people in Placentia to a low of 37.5% in Guysborough (Table 4, question 1).

Most participants (82.3%) felt that the available information was inadequate and 93% felt that more information was needed. Opinion was somewhat divided on the question of target audiences for existing information. 52% felt that information was available for special interests only, while 37.4% disagreed, and 10.6% were unsure. Most participants in Guysborough (77.8%) felt strongly that available information was for special

TABLE 4

Summary of Discussion Group Evaluations

Question 1: Before today's discussion, how much thought had you given to the topic discussed?

	a great deal %	a little %	none at all %
St. John's	57.0	29.0	14.0
Placentia	87.5	12.5	0.0
Halifax	50.0	50.0	0.0
Guysborough	37.5	62.5	0.0
% of Total	58.0	38.5	3.5

Question 2: Do you agree or disagree with the following statements?

	Agree %	Disagree %	Not Sure %
a) Available information adequate			
St. John's	14.3	57.1	28.6
Placentia	0.0	100.0	0.0
Halifax	16.7	83.3	0.0
Guysborough	0.0	88.9	11.1
% of Total (a)	7.8	82.3	9.9
b) More information needed			
St. John's	100.0	0.0	0.0
Placentia	100.0	0.0	0.0
Halifax	83.3	16.7	0.0
Guysborough	88.9	11.1	0.0
% of Total (b)	93.0	7.0	0.0

TABLE 4 (continued)

		Agree %	Disagree %	Not Sure %
c)	Available information for special interests only			
	St. John's	42.8	42.8	14.4
	Placentia	37.5	62.5	0.0
	Halifax	50.0	33.3	16.7
	Guysborough	77.8	11.1	11.1
	% of Total (c)	52.0	37.4	10.6
d)	Usefulness to "average" person			
	St. John's	42.8	42.8	14.4
	Placentia	37.5	50.0	12.5
	Halifax	33.3	50.0	16.7
	Guysborough	66.7	22.2	11.1
	% of Total (d)	45.1	41.2	13.7

Question 3: How do you evaluate the sample information modules?

			High (%)	Medium (%)	Low (%)	High (%)	Medium (%)	Low (%)
		Sample	St. John's			Argentia		
a)	Degree of technical difficulty	A	14	43	43	0	50	50
		B	40	60	0	38	38	24
		C	33	50	17	0	25	75
b)	Quality of presentation	A	0	86	14	50	38	12
		B	0	67	33	25	63	12
		C	0	16	84	63	0	37
c)	Educational level required	A	15	57	28	13	75	12
		B	16	84	0	25	63	12
		C	0	84	16	1	75	24
d)	Usefulness to 'average' person	A	0	73	27	14	14	72
		B	29	15	56	0	57	43
		C	16	0	84	15	28	57

TABLE 4 (continued)

			High (%)	Medium (%)	Low (%)	High (%)	Medium (%)	Low (%)
		Sample	Halifax			Guysborough		
a)	Degree of technical difficulty	A	17	33	50	33	33	34
		B ^a	40	60	0	34	66	0
		C	17	50	33	22	66	12
b)	Quality of presentation	A	40	20	40	44	44	12
		B	40	40	20	33	23	44
		C	40	60	0	0	55	45
c)	Educational level required	A	17	66	17	33	55	12
		B	40	60	0	33	55	12
		C	17	50	33	23	77	0
d)	Usefulness to "average" person	A	33	17	50	0	12	88
		B	0	66	24	12	0	88
		C	0	17	83	0	25	75

a Participant noted sample was disjointed and confusing, hard to read, and difficult to use because of its meaningless information.

Question 4: How would you rate the following types of materials for use by the general public?

	Good (%)	Fair (%)	Poor (%)
a) Short brochures/ pamphlets (> 3 pp.)			
St. John's	28.6	57.1	14.3
Placentia	62.5	25.0	12.5
Halifax	100.0	0.0	0.0
Guysborough	77.8	0.0	22.2
% of Total (a)	67.0	20.0	13.0

TABLE 4 (continued)

	Good (%)	Fair (%)	Poor (%)
b) Long brochures/ pamphlets (4-25 pp.)			
St. John's	0.0	42.9	57.1
Placentia	12.5	0.0	87.5
Halifax	0.0	83.3	16.7
Guysborough	0.0	22.2	77.8
% of Total (b)	3.1	37.1	59.8
c) Slide shows			
St. John's	57.1	42.9	0.0
Placentia	75.0	25.0	0.0
Halifax	16.7	16.7	66.6
Guysborough	55.6	22.2	22.2
% of Total (c)	53.0	27.0	20.0
d) Videotapes			
St. John's	85.7	0.0	14.3
Placentia	87.5	12.5	0.0
Halifax	20.0	80.0	0.0
Guysborough	88.9	0.0	11.1
% of Total (d)	76.0	17.0	7.0
(e) Magazine articles			
St. John's	57.1	42.9	0.0
Placentia	75.0	25.0	0.0
Halifax	66.7	33.3	0.0
Guysborough	66.7	22.2	11.1
% of Total (e)	67.0	30.0	3.0

TABLE 4 (continued)

	Good (%)	Fair (%)	Poor (%)
(f) Newspaper articles			
St. John's	28.6	57.1	14.3
Placentia	75.0	25.0	0.0
Halifax	83.3	16.7	0.0
Guysborough	77.8	22.2	0.0
% of Total (f)	66.2	30.3	3.5
g) TV information shows			
St. John's	100.0	0.0	0.0
Placentia	75.0	12.5	12.5
Halifax	100.0	0.0	0.0
Guysborough	55.6	44.4	0.0
% of Total (g)	82.7	14.2	3.1
h) Radio information shows			
St. John's	85.7	0.0	14.3
Placentia	50.0	25.0	25.0
Halifax	83.3	16.7	0.0
Guysborough	55.6	22.2	22.2
% of Total (h)	68.6	17.0	15.4

interests only. Participants were also divided over the question of the usefulness of existing public information on oil and gas to the "average" person. About half (45.1%) agreed that existing public information is useful, whereas 41.2% disagreed, and 13.7% were unsure (Table 4, question 2).

Discussion groups in Newfoundland rated most samples as medium in terms of degree of technical difficulty, quality of presentation (with the exception of sample C, Husky/Bow Valley, which was rated low in St. John's), and educational level required. All samples were rated as medium-to-low in terms of usefulness with most of the St. John's group rating sample C, Husky/Bow Valley, as low and Placentia rating sample A, Mobil Oil Canada, Ltd., as low in terms of usefulness to the "average" person (Table 4, question 3).

Discussion groups in Halifax rated materials as generally medium-to-low in degree of technical difficulty, quality of presentation, and education level required. None of the samples rated highly in these categories and their usefulness to the average person was rated as medium-to-low (Table 4, question 3). Sample B (Government of Nova Scotia) was rated as difficult to read and understand and sample C (Husky/Bow Valley) was rated as extremely low in terms of usefulness. Reasons for low ratings noted in comments written upon evaluation forms included:

- lack of relevant information about employment and training;
- difficulty in understanding terminology (material was source-oriented rather than audience-oriented); and
- poorly written and illustrated material.

In the Guysborough discussion group participants generally rated the materials as medium in terms of degree of technical difficulty, quality of presentation, and education level required. They rated materials as low in terms of usefulness to the "average" person (Table 4, question 3). Written comments on evaluation forms noted the following points:

- a lack of information about information and how to access information; and
- a lack of "hard" information about employment and training.

3.3.3 Evaluation of Public Information Needs and Sources of Public Information

Both the sources of information and the modes of information transfer are important when evaluating public information needs. The relationship of the source of information to its intended

audience must be described to evaluate the appropriateness of information and its effectiveness.

In the discussion groups, the first question asked of each group was "How do you now find out about oil and gas?"

The mass media were ranked as the major source of information and mode of information transfer, with the exception of the Placentia group, for which government officials and special interest groups were listed as major sources of information. This result may reflect Placentia's identification as a potential site for oil and gas activities and because an environmental review has already been held in the area in connection with a proposed supply base development. Differences and similarities in common sources of information, in order of preference, for all discussion groups are shown in Table 5.

The type or subject of information provided must be related to the practical information needs of the general public. Information must be useful, but to be useful, it must also be credible. Furthermore, the general public needs a context in which to place information. Without information about the timing, location, and type of activities, other information about employment, socio-economic effects, and environmental effects, for example, are too vague and insubstantial to be useful.

Participants in all discussion groups were then asked "What do you want to know about oil and gas activities?" This question was aimed at defining public information needs and is summarized in Table 6.

As shown, participants in all discussion groups were interested in pertinent, credible information which can be summarized in the following terms:

- a) What will oil and gas development do to me?
 - . socio-economic effects
 - . environmental effects
 - . location of activities
 - . type of activities.

- b) What will oil and gas development do for me?
 - . employment and training
 - . business opportunities.

All participants expressed a need to know the time frame and critical path of proposed and actual developments. This information was regarded as important universally because it allowed people to capitalize on opportunities and to plan for the future.

TABLE 5

Ranked List of Existing Sources of Public Information Transfer

St. John's			Placentia			Halifax			Guysborough		
Ranking	Source	Ranking	Source	Ranking	Source	Ranking	Source	Ranking	Source	Ranking	Source
1	Television, radio	1	Public servants involved in oil and gas	1	Newspaper, television	1	Newspaper, radio, television				
2	Special news programs	2	Petroleum Directorate	2	Personal or professional contacts	2	Personal or professional contacts				
3	Operator's seminar (Mobil)	3	Special interest groups	3	Trade shows, academic conferences	3	Manpower centres				
4	Special interest groups	4	Television, radio magazines	4	Government departments	4	Government departments				
5	Memorial University of Nfld. Extension Service	5	School programs	5	<u>Ocean Ranger</u> inquiry	5	Business network				
6	Personal or professional contacts	6	Libraries	6	Libraries	6	Operators				
7	Social action groups	7	Election campaigns	7	Journals, magazines	7	Libraries				
8	Government departments	8	Public meetings, seminars	8	Operators	8	Environmental impact statement process				
		9	Information trailer			9	Public information seminars				
		10	Development association meetings								
		11	Service clubs								

TABLE 6
Summary of Information Needs, All Discussion Groups

St. John's	Placentia	Halifax	Guysborough
Realistic employment	Effects on environment	The "truth"	The "truth"
Effect on lifestyle	Economic effects, effects on "average" person	Realistic information: - employment - location of activities - level of activities	Job descriptions and training opportunities
"Hard information" on jobs, effects of development	Effect on the fisheries	"True" economic potential	Development path - timing - locations - types of major activities
Time frame of development	Time frame of development activities	Environmental impact	Potential business opportunities
Unbiased information	Employment and training	Social impacts: - family disruption - jobs - fishery	Local benefits
Technical/transportation		Comparative studies into development elsewhere	
Economy/inflation		Aids to information - information guides - dictionaries	

All groups mentioned **socio-economic and environmental effects as important**. However, they consistently identified the following information needs as having the highest priority, namely:

- a) Employment. With the exception of the Placentia group (which ranked effects on the environment and the fisheries as higher, perhaps reflecting the community's social and economic orientation), employment and training were leading information needs in all groups.
- b) Credible information. The Halifax and Guysborough groups both ranked credibility as the foremost information need. If information is not credible, then, regardless of its subject, it will not be useful. Both the St. John's and Placentia groups ranked "hard", "unbiased", or "realistic" information as also important.
- c) Time frame/development path. All groups wanted to know about the timing, location, and type of activities.

It is significant that these high-priority information needs define three different aspects of information:

- . type or subject of information;
- . credibility of sponsoring agency;
- . context in which information is presented.

3.3.4 Standards of Public Information

Discussion group participants in all areas identified the standards by which they judged the appropriateness and quality of the public information they received and these are summarized in Table 7. **All groups placed a high priority on current, credible, and useful information.** Most felt it important that information be issue-oriented, and that it be accurate and clearly presented. Although this may seem self-evident, its importance to the project is that it emphasizes the lack of credibility and perceived usefulness which, participants felt, is evident in current industry materials.

3.3.5 Evaluation of Types of Media

Participants were asked to rate selected types of print and non-print information materials for use by the general public, from brochures and pamphlets to radio information shows (see Table 4, question 4).

TABLE 7
Summary of Standards of Public Information, All Discussion Groups

St. John's	Placentia	Halifax	Guysborough
Information should be: - pre-tested - evaluated - down-to-earth - up-to-date - reliable - applicable - useful	Information should be: - educational - brief - to the point - useful - current - appropriate - issue-oriented	Information should be: - the truth - realistic	Information should be: - regular - current - provided with overview - accurate - topical
	Information should not be: - biased - one-sided	Information should not be: - misleading - biased	

In general, the mass media--television, video-cassette, magazine, and newspaper articles and radio information shows--were the preferred types of public information. Television information shows were rated as "good" by 80% of participants. Nova Scotian participants rated newspaper articles higher than their Newfoundland counterparts. In the Halifax and Guysborough groups, 83% and 78%, respectively, rated newspapers as "good" whereas 29% in the St. John's group and 75% in the Placentia group rated them as good, which may reflect the generally higher literacy rates in Nova Scotia, and the reputations of newspapers in both provinces. Radio information shows were rated higher in the Halifax and St. John's groups than in the Guysborough and Placentia groups, and all but Guysborough rated television information programs as good. All groups rated videotapes as good with the exception of Halifax which rated them as fair.

Participants in the Guysborough, Placentia and Halifax groups rated short brochures as good, whereas the St. John's group considered them only fair. Again, this may be a reflection of general cultural differences between the areas, i.e., differences in literacy and/or preference for oral/visual communication. Long brochures or pamphlets (4-25 pages) were considered fair-to-poor by all participants.

3.3.6 Preferred Types of Media

Participants in all discussion groups were asked their media preferences for information on oil and gas development.

Nova Scotia. Both discussion groups rated newspaper inserts and supplements, newspaper and magazine articles, and television and radio information and talk shows as their most-preferred media. Other preferences included:

- mall displays;
- specialty publications that could be handed out at mall displays;
- direct-mail householder bulletins and public notices.

Newspaper inserts and supplements were rated as most preferable because they

- were easily and widely accessible;
- were current and topical;
- could be saved; and
- could be presented at regular intervals and thereby build up public information routinely.

Regularly scheduled current affairs information was also cited as advantages of television and radio information and talk shows.

Although mass-media techniques were favoured, participants felt that they also had inherent disadvantages, such as biased reporting and representation of vested interests.

If written by government or industry, it was felt this type of public information would be little more than advertisement or propaganda. A central concern, then, was that all public information be **detached and disinterested** to convince audiences that it represented a balanced view.

Newfoundland. As might be expected, participants in the St. John's group preferred television and radio programs, feature films, and public displays (malls, schools, etc.) which would incorporate a wide choice of print material and audio-visual displays. The advantages of these types of media were:

- . easy access
- . choice of material
- . informative
- . easy to understand
- . highly visual.

Disadvantages were cited as lack of control of the medium and biased reporting.

Other types of preferred media included the following:

- . public seminars
- . public demonstrations
- . public service announcements
- . slide show/video-cassettes and pamphlets that could be used in schools and public displays.

Participants in the Placentia group placed more emphasis on news reports, workshops, televised discussions, and public meetings that could be used for purposes of public education. They emphasized that information should be current, topical, delivered in laymen's terms, and oriented towards local needs and career development. Televised face-to-face meetings with government and industry personnel were suggested as a lively process of public education, which would reach beyond the relatively small number of people directly involved. This kind of process is already available to Newfoundland communities through the

Memorial University Extension Service, as well as through news programs and community television.

3.4 CONCLUSIONS

Discussion groups provide a method whereby industry may both evaluate public information needs and monitor and evaluate sample materials, which may then be modified following audience review. Participation in the discussion groups was generally enthusiastic, and all participants indicated a willingness to participate further and rated the sessions both informative and worthwhile in terms of information gained through samples and discussion, and the contribution they felt they were making to future industry efforts. Considering the high value that most participants placed on personal and professional networks of information, discussion groups held regularly are clearly a means of promoting knowledge about, and understanding of, the activities and aims of the oil and gas industry.

This method of monitoring and evaluating may prove to be superior to the use of surveys, because it is lower in cost, more efficient, and capable of evaluating more complex materials. If instituted on a regular basis, it would enable industry to draw up criteria for the development of new materials, test and evaluate these materials, and provide a basis for selecting key topics of concern to answer public information needs. It is possible that industry groups could establish regular evaluation "panels" to provide continuity and greater reliability in analysing materials, a method used commonly in market and opinion research. Discussion groups could also provide the basis for developing survey questions for general industry surveys and scoping studies on a much wider scale.

4. EXISTING PUBLIC INFORMATION SOURCES AND MATERIALS

This chapter analyses the available public information and how it is conveyed to its target audience, the general public.

As part of this study, sources of public information were contacted to collect and classify as much of the body of material as possible. Because no convenient and reasonably authoritative guide to sources and materials was available, either in Nova Scotia or in Newfoundland, a directory of public information sources was compiled to provide the means for completing two other important study tasks: first, a survey of selected key public information personnel concerning their responsibilities, objectives, services, and criteria for developing and delivering public information programs and materials; and second, the compilation of a descriptive catalogue of print and non-print media on oil and gas activities.

The catalogue provides an inventory of available materials, information on topical coverage, geographic focus, levels of information, criteria for evaluating the content and quality of the materials, and information about sources of information. More importantly, it provides a means of measuring what is available against what people want to know on key points such as content, media, program selection, and information transfer. It is on the basis of this comparison that recommendations for materials and strategies for public information on the offshore are made. A summary of the research effort and findings for both the information sources directory and the descriptive catalogue are contained in Appendices B and C, respectively.

The process of locating and gathering materials simulated, in a more directed and comprehensive way, the act of public information transfer as it now exists. With the exception of mass media information, through radio, television, and newspapers, public information on oil and gas activities is only available if you ask for it. To quote a member of the discussion group in Placentia, "You have to know a little to ask a little." One must know who produces public information on oil and gas and why, what information is produced, and how is it accessed by the general public. Balanced against these questions are those of the right to information, its uses and application, and the responsibilities of those who produce it.

4.1 TYPES OF INFORMATION

The Directory of Public Information Sources and the Annotated Catalogue of Public Information Materials demonstrate that public information is available on a wide variety of

subjects by a multitude of issuing agencies using many different types of media.

Most public information is produced by a specific agency, government department or company, is distributed in limited numbers, and is often restricted to a specific project, process, or activity. Accessing is generally by direct request only. The range of materials and users is wide, and systematic accessing is difficult. Government checklists were used to access information published by government departments in the Government of Canada and the Government of Nova Scotia. No checklist has been maintained by the Government of Newfoundland and Labrador. Collection and cataloguing of these materials has been primarily ad hoc by contacting relevant departments and by indexing department collections. Apart from film catalogues of non-print media published by some of the operators and by the National Film Board of Canada, most operators do not maintain publication lists or catalogues of public information materials.

There are a substantial number of international and Canadian reference works such as petroleum dictionaries, encyclopedias, and statistical handbooks, a selection of which are listed in the catalogue. Bibliographies are maintained by many government departments or agencies, by research and other institutes such as libraries, by associations like the Canadian Petroleum Association, and by special-interest groups.

While there are extensive computer data bases on technical and environmental subjects, such as the Arctic Science and Technology Information System (ASTIS) bibliography, there is no data base comprising reference, general, environmental, technical, economic, policy, health and safety, education and training, and socio-economic materials on the east coast offshore. Similarly, individual operators, government agencies, and others generally do not maintain basic reference materials such as checklists or publications lists. The lack of a systematic, central data base, as well as current publications lists and checklists and other finding aids about information, limit the ability of the general public to select and access materials to meet their information requirements.

4.2 VIEWPOINTS OF THE MAJOR INFORMATION SOURCES

Our research indicates that the different stages of resource development require and produce different types of public information materials and methods of dissemination. Public information materials in the east coast offshore to date have been concerned mainly with the exploration phase of oil and gas activities. Public information is now in a state of transition: new materials are being prepared as specific major projects such as Hibernia and Venture move into the development stage. During

this stage, information becomes more specific as development plans detail the type, location, and level of activity. Public knowledge and awareness of oil and gas activities also increase, influenced by regulatory processes and by public review processes, both of which produce large quantities of public information on specific projects and their effects. Specific requirements for information associated with regulatory and public review processes should be the target of additional study, once the first phase of these processes is complete.

When surveyed, most of the key public information sources amongst industry, government, and special interest groups painted a fairly uniform picture of public information knowledge and needs. They noted that the level of public knowledge about the oil and gas industry was generally low and that the level of inquiry dropped off as people became dubious and bored.

On the other hand, many key public information contacts expressed frustration at their own lack of knowledge about public information on oil and gas, citing a lack of reference tools, such as contact lists, directories, and catalogues. They acknowledged that although they received many public inquiries for information, they were often not knowledgeable about where information could be obtained beyond their own resources. Four other concerns and problems were cited.

- a) **Short "shelf life" of materials**, which became quickly out of date. Many contacts were in the process of updating or revising material when contacted.
- b) **Lack of information on the needs of the general public** and the difficulty in defining these needs.
- c) **Lack of means with which to prepare and update materials adequately.** Public information officers frequently noted competing demands for information within the company which limited the public information effort.
- d) **Lack of materials suitable for school visits and of curriculum materials.**

Media "hype" and the relationship of media and government were also noted: the media and politicians in particular were viewed as sources of misleading pronouncements that greatly heightened public skepticism. Special interest groups were identified as an especially influential voice in public information, both in their role as public advocates and in their effective use of mass media to formulate public opinion and to focus public attention on issues of concern.

For their part, special interest groups were concerned with the quality of information available and the lack of two-way, person-to-person dialogue with industry on issues of concern, particularly economic, employment, and environmental issues.

From the point of view of topical coverage, materials in the general category include a wide range of subjects. Although providing an introduction to the operations and activities of the industry generally, these materials often do not satisfy certain priority needs for information in answering questions about the environment, education and training, health and safety, and the economy. Furthermore, these general materials often do not refer the reader or user to specific materials which cover the same subjects in more depth. In some cases, these more specific materials simply do not exist, or exist only in the form of technical reports to government and industry. Materials of the latter sort may require a high level of technical knowledge, i.e., geological, chemical, engineering, and political skills not usually found in the general public. For example, a wealth of information on environmental issues, such as ice and icebergs, oil spill technology, effects on the marine environment and coastal marine sites, and effects on the fishery is publically available, but it is generally difficult to access and is in an inappropriate form for use by the general public.

4.3 DEFINING THE PROBLEM OF INFORMATION NEEDS

To "translate" highly technical and complex subjects into "layman's" terms is the major challenge in preparing information for the general public. Beyond a lack of basic knowledge about industry's activities, there are additional problems:

- a) Translating material into layman's terms may render the material too "simplistic." In the discussion group evaluation of sample materials, for example, participants noted that the Hibernia Project Community Information Booklet (Mobil Oil Canada Ltd. 1985) trivialized important issues by oversimplifying them and presenting them with cartoon illustrations. Information presented at this level of information about complex issues was not considered credible.
- b) Translating material into simple terms may be interpreted as presenting only one point of view. One participant noted that the information in the booklet (Mobil Oil Canada, Ltd. 1985) was one-sided and was concerned only with the industry viewpoint. He noted that a title, "Protection from the Environment," indicated that it was the physical environment which constituted an environmental hazard when, on the contrary, oil industry activities represent a hazard to the environment which otherwise would not exist. From the point of view of the general public, concern for the effects of oil industry on the environment is as great or

greater than concern for the effects of the environment on the oil industry.

- c) Translating material into simple terms may produce results which are technically inaccurate. Most public information is produced by non-technical experts such as public relations or community consultation specialists. Misinformation can occur when technical subjects are translated into laymen's terms without review or input from technical experts.

Translating technical information into laymen's terms can be improved by the following:

- a) A glossary of terms should be included with each piece of material with explanation in text also provided.
- b) Analogies, illustrations, and anecdotes should be used in communications so that the audience can relate to the information in known terms.
- c) Information should be reviewed by a technical expert or panel of experts to ensure accurate information.
- d) Material should be pre-tested to provide audience review and evaluation so that materials may be adjusted and improved before final release.

There are also significant gaps in much-needed information currently available on topical issues, such as education and training, health and safety, economy, and policy. Although most general public information touches upon these key topics, the information contained is often too vague and insubstantial to be useful.

The question of employment and training illustrates the problems of providing public information about topics to which the public gives high priority. The public's needs for information on employment and training can be summarized as follows:

- a) What kinds of jobs are available in the petroleum industry?
- b) What kind of job can I get in the petroleum industry?
- c) What kind of training and experience will I need to get a job in the petroleum industry?
- d) Where can I get the training and experience I need to get a job in the petroleum industry?

Associated information needs would include the following:

- a) Is the petroleum industry a safe place to work?

- b) How many jobs will be available?
- c) Where will jobs be available and for whom will they be available?
- d) Will development go ahead?

From the point of view of industry and government, these key questions involve many factors, some known and some unknown because of the uncertain nature of the industry, the new environment in which it is operating, and the present phase and level of activities on the east coast offshore. Industry and government also are facing extremely high public expectations of employment and training in the Atlantic region because high traditional unemployment rates, low levels of industrialization, and the adversarial political climate have raised expectations of economic benefits from oil and gas development over the last decade.

In addition, information about employment and training is spread amongst a variety of operators, training services, government departments and agencies, and educational institutions. Each of these agencies have responsibilities, policies, and provisions which together contribute to the "whole picture" of employment and training as it is now known. The information, however, is widely dispersed and is in the form of technical reports, policy statements, agreements, Canada Benefits documents, regulations, and special departmental programs or is not written down at all.

Apart from the lack of information about factors that influence the supply and demand of petroleum industry jobs, there is also a generally low level of information about the **type** of work involved. This applies not only to specific occupational profiles but also to broader assumptions about the **nature** of employment in the resource sector, namely that:

- a) Project work is not permanent and workers are hired either for the duration of the project or are supplied by contractors with specific project component requirements which are often very short-term.
- b) Project employment involves unskilled, semi-skilled, or skilled occupations in which participation rates among regional workers or disadvantaged groups are traditionally low.
- c) Certain project employment involves skills and extensive industry training and experience which precludes much of the regional labour force.

The problem of lack of timely and specific information also applies to subjects such as the economics of oil and gas development and occupational health and safety.

4.4 ALTERNATIVE APPROACHES

No current public information materials draw the pieces of this information puzzle together. Some general understanding of the nature of petroleum development--its different phases and levels of activity in exploration, development and production, and the physical, social, economic, and political environment in which these activities occur--is needed to understand that some questions cannot be answered at certain times. Consciousness of the "unknown" factors that affect industry's ability to answer key questions at certain times is clearly something that can only be developed over time, through increasing mass public education about this relatively new industry off Canada's east coast.

Print media dominated media selection in existing public information materials on the east coast offshore, with government and technical reports the single largest category. Books, leaflets, brochures, typescripts, newspaper inserts, factsheets, periodicals, and information kits comprised the remainder of materials. Information kits, which offer a selection of materials and key subjects on particular projects, was the smallest single category of print materials.

Non-print materials were dominated by films, produced either by multinational operators or the National Film Board of Canada with the Memorial University of Newfoundland Extension Service. Posters were produced by several east coast operators, government departments, and periodicals. Slide and tape shows and video-cassettes were also produced by several east coast operators and by government agencies. Audio-visual aids which were not catalogued include core samples, oil samples, and a model of a semi-submersible oil rig. It should be noted that both operators and government agencies used a mixture of media--usually brochures and factsheets with slide shows, films, video-cassettes, overheads, and samples--in the course of community consultation programs and for some public information sessions.

The media preferences of the general public emphasize the mass media--namely, television, radio, and newspapers and periodicals--which are:

- . easily accessed and available
- . current
- . topical.

Non-print materials such as films, illustrated print materials, such as short brochures, or mass circulation print materials,

such as newspaper inserts and magazine articles, were generally preferred.

Our case studies of past public information programs show that, in Newfoundland and Labrador, innovative use of video techniques for public information and adult education bears particular mention. In 1979, Oil and Gas Video Modules were developed by the Extension Service of Memorial University and the National Film Board of Canada to supply information on oil developments in Newfoundland and Labrador. They covered a range of topics from scientific and technological, ecological and environmental, general background information on other developments, current updates on development in the east coast offshore, and future strategies to cope with development. These modules were designed to highlight both positive and negative aspects of oil and gas development, with pre-packaged segments to meet the needs of particular audiences.

These materials were created explicitly as a tool for Extension Service field staff and were not generally released or circulated. They were used mainly at oil and gas seminars and public forums arranged for church groups, school groups, development associations, business groups, media, unions, citizens' committees, town councils, and government departments. The project was funded mainly through Memorial University Extension Service's own operating budget without support from government or industry, which was solicited but not forthcoming. With the suspension of environmental impact studies by Mobil in 1982 and the casualty of the Ocean Ranger the same year, public interest and requests for this information have declined at the Extension Service, and have shifted in focus to concerns primarily about employment and safety.

In 1980, the Extension Service also sponsored a series of workshops on public participation in resource development. The central questions examined in these workshops were: how can the public meaningfully participate in decisions relating to resource development, and what information mechanism could be put in place to provide better resource development education at the school and community levels, and for the general public?

Amongst the findings of these workshops was a recognition of the pivotal role of the media in public information. It was a general consensus that the general public depends on the media for much of its information. With the great amount of information available, the media often interprets facts selectively, and it is felt that the media should provide a basis of understanding through "in-depth" coverage. On the basis of this recommendation and the events of the Ocean Ranger marine disaster in 1982, the Canadian Broadcasting Corporation (CBC) in St. John's produced a series of in-depth background reports about oil and gas development in Norway, concentrating on construction activities and on health and safety technology.

The development of video modules, together with the use of video techniques in social development is a natural extension and updating of past successes in mass education. These are disseminated through existing community, adult education, and mass-media networks

Mixed-media presentations combining print and non-print media, particularly those that offer a selection of different materials, were also favoured by the discussion groups. Interestingly, in the Nova Scotia discussion groups in particular, the Canadian Offshore Resources Exhibition (CORE), held annually in Halifax, was cited as an excellent example of public information. Visitors could see, hear, and read information of their own choice according to their own information needs. However, few availed themselves of the opportunity because of the high price of admission. Distance from large centres such as Halifax was also cited as a barrier to using this important, comprehensive, and current source of information. Participants felt that a public information exhibition, such as CORE, developed through the participation of a wide variety of industry and government sources of information and with admission free, should be developed for use in places such as malls, community halls, and trailers.

Print materials on the east coast offshore in general, and Newfoundland and Nova Scotia in particular, are available in sizeable numbers. However, specific project information, or regional and local information (at the county, municipal, or community level) is available only in very small quantities. Information specifically tailored for areas where developments are occurring (Guysborough County-Canso area and Halifax in the case of Nova Scotia), or where they may occur (Placentia, Come By Chance, Avalon Peninsula, St. John's, in the case of Newfoundland) should be developed to meet the priority information needs identified in these discussion groups.

Most print and non-print public information materials, with the exception of mass-media information, such as radio, television, and newspapers, are available from issuing agencies by direct request only. Thus the responsibility for identifying and selecting information is placed almost completely on the general public, who are neither information specialists nor industry experts.

The deficiencies in accessing information can be summarized as follows:

- a) A lack of knowledge about industry which would enable the general public to specify information needs.
- b) A lack of information about information

- . where is the information?
 - . what information is available?
 - . who should be contacted?
 - . how can the information be obtained?
- c) A lack of information about the general public's need for information. Few issuing agencies maintain a record of information requests through which public information needs may be monitored and evaluated.

Technical and government reports often contain current information on key subjects identified by the general public as having high priority. But from the point of view of the target audience, the general public, this medium is inappropriate because:

- a) The information is "source oriented," that is, generally written for an expert target audience in government and industry.
- b) The information level is usually beyond the basic level of knowledge of the general public.
- c) The information is often lengthy, complex and, with the exception of technical charts and figures, not illustrated or glossed.
- d) The information is difficult to access because it is available in limited quantities, is in limited circulation, or is not freely available.

There appears to be a general lack of information on an "intermediate" level of knowledge--i.e., knowledge that falls between basic, general information and augmented, technical information--on subjects using the media preferences of the general public.

Existing information on the east coast offshore is:

- . heterogeneous
- . inadequately classified
- . produced mainly by government
- . quickly out of date
- . source oriented
- . predominantly print in format.

Public information needs are inadequately researched, with no effort made to distinguish among the different segments of the general public, to distinguish the types of information required by each, or to identify levels of knowledge.

Few companies, associations, or government departments have a specific public information program which is independent of project or government requirements, and none is tailored to public information needs. Our survey of operators showed that the rationale for existing public information programs, apart from those developed for public reviews, is based on corporate objectives, with very little input from the general public. For example, requests for public information are generally handled ad hoc. Few operators maintain publications lists (annotated or otherwise), a formal record of requests by which public information demand could be monitored, or other evaluation and feedback techniques such as reply cards or mechanisms to invite public comment and evaluation.

Typically, those responsible for corporate public information are involved in a range of public relations functions with target audiences--partners, potential partners, clients, employees, potential employees, government, business and special interest groups--whose information needs can be highly defined. There is no industry consensus on general public information needs and, hence, no industry public information goals, objectives, responsibilities, and strategies for this audience.

Although surveys have been used to sound out public attitudes to the oil and gas industry, these surveys are primarily national and use demographic analysis to demonstrate the influence of age, family size, level of education, and income on attitude. As the review of survey data shows, there is a need to define further the less specialized and less focused needs of the general public as a whole, and to identify specific target audiences. Methods such as discussion or focus groups, combined with the use of monitoring and feedback mechanisms, such as reply cards or records of request, may help to define segments of this target audience.

Discussion groups are effective, relatively inexpensive, and can be held over time to monitor needs and trends in public information in certain areas and with certain groups of people, beginning where sample surveys leave off. Participants in Newfoundland and Nova Scotia could include fishermen and farmers, urban professionals, the unemployed, small businesspeople, minorities, women, students, or educators. As shown in the transcripts of our discussion group sessions, individuals had specific information needs that could be applied to a larger segment of the population. For example, a black Nova Scotian ranked information about affirmative action employment policies for minorities as an information priority, whereas a Newfoundland housewife was less concerned with public information personally than she was with provision of information within the school system for her children so that they could learn early the challenges and benefits of this new industry which would span their lifetimes. Personalized approaches, such as the discussion

groups, may more effectively define the target audience by providing a typology of information needs.

In conclusion, it may be said that:

- a) There is no systematic and organized method for the dissemination of information to the public.
- b) Most operator materials focus on the particular exploration activities and modes of the company.
- c) With the exception of Mobil Oil Canada, Ltd.'s "shop-front" approach, neither oil companies nor government have established accessible, well-advertised information centres or programs.
- d) Information is often difficult to obtain from companies in particular.
- e) There is no central co-ordinating framework whereby the general public can obtain information.

Thus public information needs may be summarized as:

- "issue-oriented";
- topical and mainly concerned with two questions:
 - . what will oil and gas do to me?
 - . what will oil and gas do for me?
- requiring a basic level of knowledge, i.e., not highly technical.

5. FUTURE STRATEGIES FOR PUBLIC INFORMATION AND CONSULTATION

The present chapter is concerned entirely with the presentation of a set of strategies for future public information and consultation activities on the east coast offshore. It is divided into three parts:

- a summary of major conclusions from the evaluative phase of the study;
- recommendations for new information policies and strategies; and
- recommendations for new materials.

5.1 SUMMARY OF CONCLUSIONS

The development of public information for the east coast offshore has shown several tendencies.

- a) Much information has been developed as a response to the requirements of public (EIA) review processes, rather than as a response to more general needs for information.
- b) Information developed outside of the EIA process by private sector sources has reflected corporate rather than public concerns--that is, it is part of a larger effort by operators to improve their public image in the region.
- c) Information developed by public sources--particularly the federal government--dominates the information scene, and represents the only major effort to date to produce an ostensibly "neutral" form of information on the offshore.
- d) Public response to offshore information is mixed, with most members of the public indicating skepticism over the motives and methods of presentation. Industry sources are considered to be particularly questionable in this regard, although the government is also likely to be seen as having a decided bias in its approach to information.
- e) A major concern of the general public, therefore, is that information provide a **balanced view** of offshore developments--rather than assume the industry's or the company's viewpoint. Neutrality and fairness are felt to be essential components of any public information program.

- f) Other concerns of the general public are that information be **topical**, i.e., oriented to topics of current popular interest, and **accessible**, i.e., readily available in affected areas from recognized public sources.
- g) As this implies, most current materials on the offshore are **inaccessible** to the public, because their distribution is not centrally organized; most information sources (companies, government agencies) control distribution of materials themselves, and there is no central agency or institution to which persons can go for "**information about information.**"
- h) There is also no method for **differentiating** materials from a skills or technical viewpoint, i.e., for ranking them as a way of informing potential users of the skill level required. Although the level of skill and background information needed for using these materials varies from item to item and from source to source, there is no way to discern this at source.
- i) There are few examples of **integration** in available materials--i.e., no single source exists that can provide information on a range of topics, or on a range of skill levels. As a result, persons seeking information are forced to consult a variety of sources to obtain depth and breadth of information.
- j) Evaluation of information provided by both public and private sources shows that neither industry nor government have developed a systematic method of **logging or monitoring information needs and responses**. Few companies or agencies have even bothered to keep counts of the level or type of requests for information.

As these observations suggest, the state of public information on the east coast offshore is far from satisfactory. Although in the absence of detailed, focused, survey research on the topic, it is impossible to pinpoint the principal difficulties with information development and management in this area, nevertheless we can be fairly certain that new approaches and methods are urgently required. In Newfoundland and Nova Scotia, public sentiment about the offshore runs the full gamut from resentment over the lack of useful information, to skepticism bred from exposure to constantly changing information, to apathy because government and the companies appear to "control" the flow and character of information.

A clear requirement for new approaches to public information by both government and industry is thus warranted by these concerns.

5.2 RECOMMENDATIONS: NEW STRATEGIES FOR DEVELOPMENT AND DISSEMINATION OF PUBLIC INFORMATION

The development of a new approach to public information on the offshore requires first a set of "strategies," i.e., approaches to be used by both industry and government to further the development of improved information resources. The major criticisms and deficiencies identified and summarized in the conclusions suggest that new approaches should include several ideas.

- a) A more focused effort on the part of industry to provide the public with **targeted** materials, i.e., materials that would be oriented to the needs of specific markets. This effort may require market and needs assessment research to identify specific markets and their information requirements. Industry has already shown an awareness of the fact that consumer perceptions are vital to its survival; what is needed now is to refine and expand this awareness through dedicated research.
- b) A **neutral source** of information for the public, e.g., an information centre or repository that could handle information requests directly and perhaps could provide an unbiased source of both policy and technical background data on specific developments. A centre of this sort could operate within the existing information system, e.g., by using public libraries or appropriate government offices. However, neutrality and accessibility would be best served by establishing a **separate organization** to provide this function, and **only** this function. Government grants, corporate levies, or both, could be used to support the centre, but such a centre must ultimately be perceived as an autonomous entity not linked to any corporate interest or viewpoint.
- c) Development of **topical** materials on the offshore, e.g., brochures or booklets examining key issues, such as employment potential, safety factors, and social impacts. The requirement for such materials is another dimension of the neutrality and credibility issue; hence, the development of such materials might best be undertaken by a neutral, or at least broadly representative, source--e.g., ESRF or the CPA. This development would have the additional benefit of relieving industry of direct responsibility for providing information on topics that fall outside the normal range of corporate concern.
- d) An increasing reliance on self-selection of materials and self-learning formats--e.g., public displays, interactive displays using microcomputers, and "layered" packages which include information suited to a variety of experience

levels. This is another dimension of the need for materials that speak to public rather than corporate concerns. Providing the public with an opportunity to choose both the level and type of information required, will enhance credibility and create a more effective learning environment.

- e) A more aggressive information policy for industry, which includes delivery of materials to schools, development associations, local decision-makers, and others who may be in positions of influence. If the companies decide to meet public information needs themselves, rather than leave this to a neutral source, then it is clear that they will have to bring information to those who deal in it.
- f) A system of monitoring public information requirements, e.g., through mailbacks, surveys, or personal evaluation, both for private industry and government. This element is perhaps the most important in the proposed strategy, for the absence of such a system presented a major limitation to the present analysis. Monitoring of information requirements could be undertaken most effectively by industry itself through agencies such as the CPA--who may be able to maintain standard procedures and formats for logging of information requests, and could provide industry-wide summaries and analyses of such requests on a periodic basis.

5.3 RECOMMENDATIONS: NEW STRATEGIES FOR PUBLIC CONSULTATION IN THE OFFSHORE

Public consultation in the east coast offshore requires further examination and discussion of its goals and objectives before truly effective changes can be instituted. It is clear from this report that **information dissemination** and **public consultation** are not simply different aspects of the same process: each requires separate attention and a specific mandate. The current status of public consultation in the industry is extremely erratic--some companies having fully developed programs whereas others have minimal or no programs. Because the status of industry programs is often a function of government requirements (e.g., the EIA process or Canada Benefits), most of our recommendations assume continued pressure from these sources. The recommendations are:

- a) Industry must become more familiar with the **community and social contexts** of the provinces in which they operate. Particularly in the east coast, where small rural communities are the archetypal social form, industry must become especially familiar with the nature of social

organization and authority in these communities, if they are to avoid criticism and skepticism.

- b) Industry must make an effort to relate the **benefits** of offshore development to the **needs of particular communities**. It is not enough to produce general descriptions of project benefits in "person-years" or "value added to GDP," without providing additional information on how the community will benefit.
- c) Industry must **"open up" its planning and development process to local review**, i.e., provide up-to-date information on company development plans and activities to the public as project planning progresses. This information will enable the public to identify key areas of concern and to undertake their own local planning efforts, commensurate with project needs.
- d) **The development of project communication materials must be done interactively**, that is, industry should use the public consultation process as a testing ground (monitor) for informational materials, and invite feedback from communities that may be affected by the project.

Community involvement in project planning should therefore be encouraged, and industry should take a pro-active role in establishing this involvement. There have been several examples of such efforts in the east coast offshore, notably Mobil's Community Consultation Program for Hibernia, but even in these otherwise laudable efforts there is a lack of direct feedback between consultation and project planning, or between consultation and the development of information materials. The major conclusion of this study is that **public consultation must become the principal force behind development of information materials, rather than simply a means of promoting or distributing them**. Again, the difference is one of emphasis rather than intent: industry must recognize that the public consultation process mandated by EIA legislation is perceived by residents of the region as inadequate at best and even autocratic and patronizing at worst. Many criticisms of company information programs are really aimed at the EIA process itself, as manifested in company efforts to provide background and impact data.

There is, then, little question that industry must develop its own public consultation process, independent of government-regulated processes, and that it must communicate the differences between these processes to the general public. To do this effectively and in sufficient time to have a positive effect on current east coast developments, it will be necessary to:

- a) Establish either an industry-wide (Canadian Petroleum Association, Offshore Operators Division) set of guidelines for community involvement, or, lacking this, a set of public guidelines for each of the project operators.
- b) Establish liaisons early in the project with key community groups, or municipal governments, or both, to ensure that regular lines of communication are established.
- c) Provide project-specific information to these groups as early as possible, indicating clearly if the information is preliminary.
- d) Request feedback on both the content and format of the materials presented, providing forms for this purpose if necessary.
- e) Establish at the beginning that information on such things as effects on local employment, shoreside project locations, and project costs is difficult to produce with any accuracy and is constantly subject to change.
- f) Establish a method for regularly communicating updates on project information at the local level, to reinforce the changeability of such data.

5.4 RECOMMENDATIONS FOR NEW MATERIALS

The development of new information materials for the east coast offshore will require considerable time, effort, and expense on the part of both industry and government. The mandate of the present study is to provide strategic guidelines for the development of such materials, as well as **samples** of the materials and their suggested mode of presentation. In addition, the consultants were required to present a basic materials outline and a selection of sample materials for evaluation by industry sources. This section covers all three of these major study outputs: guidelines, materials (with outline), and evaluation.

5.4.1 Strategic Guidelines

Information materials for the east coast offshore should be developed in accordance with a number of governing principles.

- a) They should be **integrated** topically to provide an organised system of information on offshore activities. Using a "family appearance" in development of materials, or linking materials with a common theme or organizational principle, enhances recognition and stimulates interest among the

general public. When confronted with an organized, thematically-structured group of materials, users will be more likely to seek information at the boundaries of their normal interests, i.e., they will feel less inhibited in approaching new topics.

- b) They should be **accessible** to a broad spectrum of the public, either through use of mass-media techniques or through use of decentralised information services.
- c) They should provide **information about information**, i.e., guides to both sources and materials, to ensure that the public has an opportunity to view a full range of information options.
- d) They should be presented in a **mixture of formats and media**, to emphasise their accessibility. Reliance on print media as the major format may result in use of "lowest common denominators" to reach the general public, rather than targeting of publics with media appropriate to their needs.
- e) They should be **clearly differentiated** as to audience type and skill level, to permit self-selection of information by the general public and to encourage people to become familiar with these topics at their own rate and in their own way.
- f) They should be **neutral in perspective**, i.e., their content and style should reflect a willingness to show "both sides" of an issue or topic. In pursuit of this objective, industry and government should both "test market" their information materials to a variety of publics, using focus groups or selected mailings.
- g) A continuing system of research and analysis of information materials should be established--either independently by industry and government, or jointly by both. The object of this system would not be to prescribe the **content** of materials, but rather to establish **criteria for their development**--e.g., scheduling of materials for different stages of the exploration, development, and production phases of a field, or setting standards for different types of target markets or publics, and evaluating the response of each to the materials developed.

These are guidelines only, and must be considered in relation to the overall role which information-transfer plays in the business of oil and gas exploration and development. Another important consideration is the **source** of information materials itself. The specific role played by private companies, industry organizations, various levels of government, non-profit associations and agencies, and the media itself, remain to be more clearly defined. There are significant differences in the type

and content of materials produced by these sources at present. Although it is not necessary from the public's viewpoint for the distribution of materials to be highly structured, it would be beneficial to industry in particular if their role as information agents were better understood by the public. The effect of social impact assessment (SIA) and environmental impact assessment (EIA) processes on the industry's role has been particularly profound, and has certainly created the impression that oil companies themselves--particularly the Hibernia and Venture operator, Mobil Oil--are responsible for providing information to the general public on demand.

The development of new, public guidelines for both type and content of materials will go a long way towards correcting this impression. Creating a new **source** of both materials and information guidelines--one that is perceived to be neutral and generalist in perspective--should relieve private companies of their present ambiguous role, and may also provide government with a means of simplifying information transfer requirements for all aspects of oil and gas development.

The final decision on industry's information mandate rests, of course, with industry itself. In an era of increasing public concern and awareness, industry has already been identified as a primary source of information on the offshore, and many companies have already developed substantial public information capabilities. Nevertheless, most companies surveyed in this study wore the mantle of this responsibility uneasily, to say the least. The development of public information is not a natural function for such companies, which have hitherto treated most information on exploration and development as proprietary and have naturally been reluctant to undertake full disclosure of information about such activities. Thus, it is only logical to expect that when a private company with a major stake in offshore development proffers information on its present activities and future plans, it will do so as part of a general effort to improve its public image.

Logic and tradition notwithstanding, it is clear from the findings of this report that these approaches need to be carefully re-examined by industry, as does the role of government as a major quantitative source of information.

5.5 SAMPLE MATERIALS

The terms of reference of this study called for the development of "sample materials," i.e., materials that were representative of new approaches to public information development, as recommended by the study. IDP Consultants interpreted this to mean that the study should produce three different elements:

- a suggested concept or approach to public information that would be indicative of the principles developed from our criticism of existing materials;
- an outline of these materials which emphasized their integration and relatedness; and
- actual examples, in written form, of some of the key elements of the outline, i.e., sample booklets or catalogues or scripts.

These elements are presented in order below in an account of how an ostensibly neutral, multi-topic information package might be presented to the general public in a manner consistent with the needs of both industry and government to improve public awareness of their activities and of the offshore in general.

5.5.1 Concept

Public information on any technical subject must be presented in a medium or context that is acceptable and familiar to the widest variety of publics. A logical setting for the presentation of such material--and one that has received surprisingly little attention from the industry--is the modern **shopping mall**. The shopping mall may be seen as a **paradigm** for accessible public information displays, and has been used as such by a variety of public and private sources, ranging from government departments to service organizations to car dealers.

In this section, the mall is used as a framework for a public presentation on the offshore, emphasizing that the actual venue could be any of a number of public display areas where relatively large numbers of people pass by frequently. The mall environment permits "directive" displays, i.e., it allows the promoter to use eye-catching presentations designed to attract the consumer away from other activities, and even to funnel the public through a display in a pre-determined sequence. The mall customer is also a potential consumer of information materials, because most people enter a mall with the expectation that they will carry something away. Distribution of pamphlets and other easily transportable materials is thus enhanced by the mall environment.

The type of display envisioned for this purpose is a complex, and carefully integrated series of modules covering the full range of offshore topics, from the purely geophysical and exploratory aspects, to socio-economic aspects such as potential labour force and effects on the community. The display would have **seven** distinctive modules, each containing a series of items and each beginning with a simple visual display--typically, a panel or poster--that highlights the basic facts and figures

pertinent to the topical area. Each panel would lead the consumer to a selection of support materials, ranging from working models and cutaways, to brochures and booklets, to interactive computer programs and self-actuating slide displays. The emphasis within each module area would be on **self-selection** of materials, i.e., the consumer would be instructed first to identify the level and type of information preferred, and then to choose the appropriate item. Each module would centre on an introductory guide to the area, in booklet form, which would provide a broad approach to more detailed topics presented in the same display, to reference works, or to more advanced materials mentioned in a source book.

Although this display would be most effective if presented in its entirety--to emphasise the interconnectedness of both biophysical and socio-economic topics--nevertheless it could be broken into smaller parts, to accommodate space limitations or special information requirements. The concept of a linked, but also separable group of information displays has much to recommend it and would represent a significant resource both to private companies and to government.

5.5.2 Outline

An outline of the general and specific topics included in the mall display is presented as Figure A in Appendix A. This depicts the physical layout and major linkages between the seven modules. A more detailed explanation is contained in section 3.0 of Appendix A--which also lists the various items to be presented under each module or topical area. The display follows a logical sequence from modules which treat the biophysical and geological, to those which deal with socio-economic topics, finally culminating in a module devoted to information itself, including a guide to information sources and a catalogue of materials.

This outline covers the full range of materials which the authors believe could be developed for the east coast offshore--i.e., it is intended as a comprehensive framework for future development, rather than as a rigid list of items to be prepared. Those items which were selected for sample development as part of this project are signified with an asterisk (*).

5.5.3 Materials

The sample materials developed for this project include the following items:

- **Module 4** . display panel
 - . short brochure, "Risk to Personal Safety in the Offshore"

- . long brochure, "Environmental Risks Offshore"
- **Module 5** . display panel
 - . short brochure, "Where Can I Train for Work in the Offshore?"
 - . long brochure, "Oil Companies Mean Jobs"
- **Module 6** . display panel
 - . short brochure, "Where Can I Train for Work in the Offshore?"
 - . short brochure, "How Can Communities Prepare for Oil and Gas Impacts?"
 - . short brochure, "What Business Opportunities Will Oil and Gas Bring to Small Communities?"
- **Module 7** . display panel
 - . short brochure, "How Can I Find Out More About Offshore Development?"
 - . Directory of Public Information Sources

These items, with the exception of the last item in Module 7, are contained in Appendix A of this report. The Directory of Public Information Sources is available as a separate publication from the authors of this report, and is further described in Appendix B. An Annotated Catalogue of Public Information Materials is also available from the authors, and this is described in Appendix C.

5.5.4 Evaluation

A questionnaire was prepared to enable industry spokespersons and information specialists to comment on the materials outline, proposed strategy (as given in an early draft of this chapter), and specific sample materials. Eleven packages were mailed to members of the Offshore Operators Division (OOD) Public Information Committee, each containing the two basic items (outline, strategy), one sample module (varied among the eleven members), and an evaluation questionnaire (a copy of which is included in the appendices to this report).

The response to this mail-out was quantitatively poor, but qualitatively good. Only four evaluation forms were returned, although the consultants were able to have direct conversation

with three other committee members. The comments of these reviewers can be summarized by the following:

- Usefulness to company programs. All but one reviewer felt that the material would be useful to industry, especially for community-level programs. One other entered the caveat that the **amount** of public information material represented here was perhaps excessive, i.e., it was indicative of an over-reaction on industry's part.
- Level or type of audience. Answers were varied here, with most agreeing that the suggested materials could meet many different public needs. One reviewer suggested that the coverage was too ambitious, namely, that it was "trying to do too much."
- Suggested improvements. Again, answers were varied. Most felt that the material should be as specific and detailed as possible, including information on specific company histories and development activities. A more factual, specific approach was urged, although one reviewer doubted that the amount of facts presented here could be digested by a "typical" member of the public.
- Adequacy of coverage. Generally, coverage was considered to be more than adequate. However, one reviewer commented that the **sample** materials, at least, appeared to present more data on Hibernia than on Venture (see below). This reviewer was also concerned that, by taking a "project" orientation, the materials would be quickly outdated and might raise false expectations.
- Information service/centre. This idea generally received strong support, but opinions on its role, source of support, and the appropriate agency to carry it out, were extremely varied. Several concerns were expressed, including:
 - that it would duplicate industry's work;
 - that operation by a "third party" would be confusing to the public;
 - that the centre should not diminish industry's role, but should co-exist.

One strong opinion expressed was that the centre be run by CPA concurrently in its Halifax and St. John's offices.

In addition to these general comments, a number of specific comments were made to the consultants which should be noted here.

- a) Information contained in Module #5--Oil and Gas: What are the Benefits?--particularly the Job Dictionary, should be

revised to emphasize that opportunities exist in **management and professional work** as well. The present document appears to be biased towards lower-paying and less-skilled jobs, implying that other employment will not be available to local people. The section on benefits should ideally include this new data and should be presented in a more positive and opportunity-oriented fashion.

- b) Information contained in Topic A, "Environmental Risks," of Module #4 was felt by some to be more detailed than is warranted by the target audience. Although this is a general problem for information on technical subjects, and the consultants have attempted to avoid jargon and abstraction in preparation of this module, it is clear that further work needs to be done here.
- c) Finally, the topics covered by Modules 1, 2, and 3 were felt by some to be unnecessary for this type of presentation. Because the public has demonstrated a need for data on "relevant" topics, it may be that information on geophysical or engineering concerns should simply be eliminated from public displays.

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APPENDIX A
FUTURE INFORMATION STRATEGIES
AND SAMPLE INFORMATION MATERIALS

1.0 RATIONALE AND SCOPE

The following is an outline of a proposed information exhibit on East Coast offshore development. It should be viewed primarily as a means of demonstrating the potential range and organization of such materials, rather than as a literal proposal for such an exhibit. The materials themselves could in fact be used in other contexts as well, and most have been designed as "stand-alone" items.

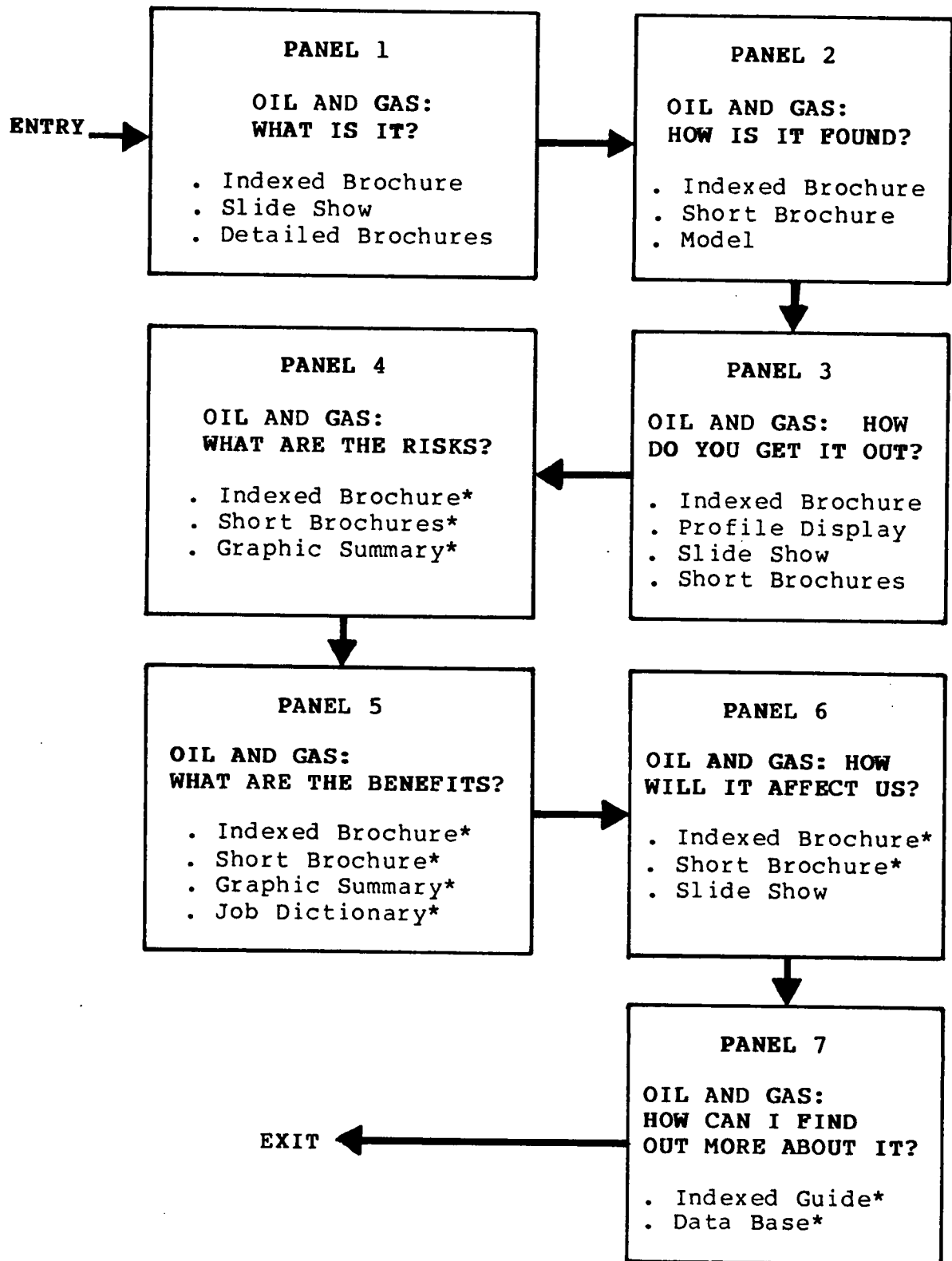
2.0 ORGANIZATION

As shown in the following figure, the general framework for this information exhibit is a walk-through display in which seven poster/panels identifying key themes or topics are presented in sequence, each having its own appropriate set of background materials. The background materials for each topic include several different levels of difficulty, i.e. they range from the panels themselves, which present visual and simply written materials, to short brochures which provide quick-response explanations of key topics (often with tab-indexing), to more detailed brochures presenting a comprehensive explanation of topics such as environmental risk and employment prospects, and finally to complex visual treatments such as models, maps and graphic summaries.

Six of the seven areas or modules presented here actually contain two separate topics, each containing separate lists of materials. The final selection for a particular display would incorporate only some of these topics, and the full selection is given here primarily to demonstrate the potential range of topics which could be covered in such a display. In addition a guide to additional sources--both private and public--will be available at display module #7, which is devoted exclusively to finding aids. The guide is augmented by a Directory of Public Information Sources (see Appendix B) and a Catalogue of Public Information Materials (see Appendix C). The latter could be presented as a group of separate catalogues--print, non-print, government, oil companies, etc.--or alternatively as an interactive computer database which could be regularly updated.

The modules themselves follow, with an outline of the components of each module by major topics and mixed-media selection. Accompanying modules 4, 5, 6 and 7 are sample information materials.

OIL AND GAS PUBLIC DISPLAY MATERIALS



* Indicates sample module developed

MODULES 1, 2, AND 3

OUTLINES ONLY

MODULE 1

OIL AND GAS: WHAT ARE THEY?

Topic A: Chemical and Physical Characteristics of Oil and Gas

- . Poster/panel showing the chemical components of oil and gas and their by-products. Emphasis on graphic presentation.
- . Brochure: What is Petroleum, and What Can You Do With It?
- . Samples: Various grades and types of oil displayed in clear vials to emphasize clarity, viscosity, API rating.

Topic B: Geomorphology of Oil and Gas Structures

- . Poster/panel with graphic depiction of a typical oilfield in cross-section, brief accounting of key features such as stratigraphy, folding, faults.
- . Brochure: "What is an Oil/Gas Field?"
- . Model: Similar to panel, but with more detail.

MODULE 2

OIL AND GAS: HOW DO YOU FIND IT?

Topic A: Seismic Work

- . Poster/panel showing the rig on location over an oilfield (cut-away), with insets showing typical core samples, geophysicists at work, etc.
- . Brochure: "How Do You Know Where to Find Oil and Gas Reserves?"
- . Map: Showing location of major known fields and major operators. This should be a simplified version of maps available from sources such as Atlantic Energy News.

Topic B: Drilling Operations

- . Poster/panel showing drill rig interior, with insets illustrating the specific functions of the rig, operations, etc.
- . Brochure: "How Do You Locate Oil/Gas?"
- . Summary: One-page representation of drilling activities with graphics.
- . Slide Show: Five-minute self-actuated slide show giving brief overview of drilling activities--what happens in a typical day, names of activities, etc.

MODULE 3

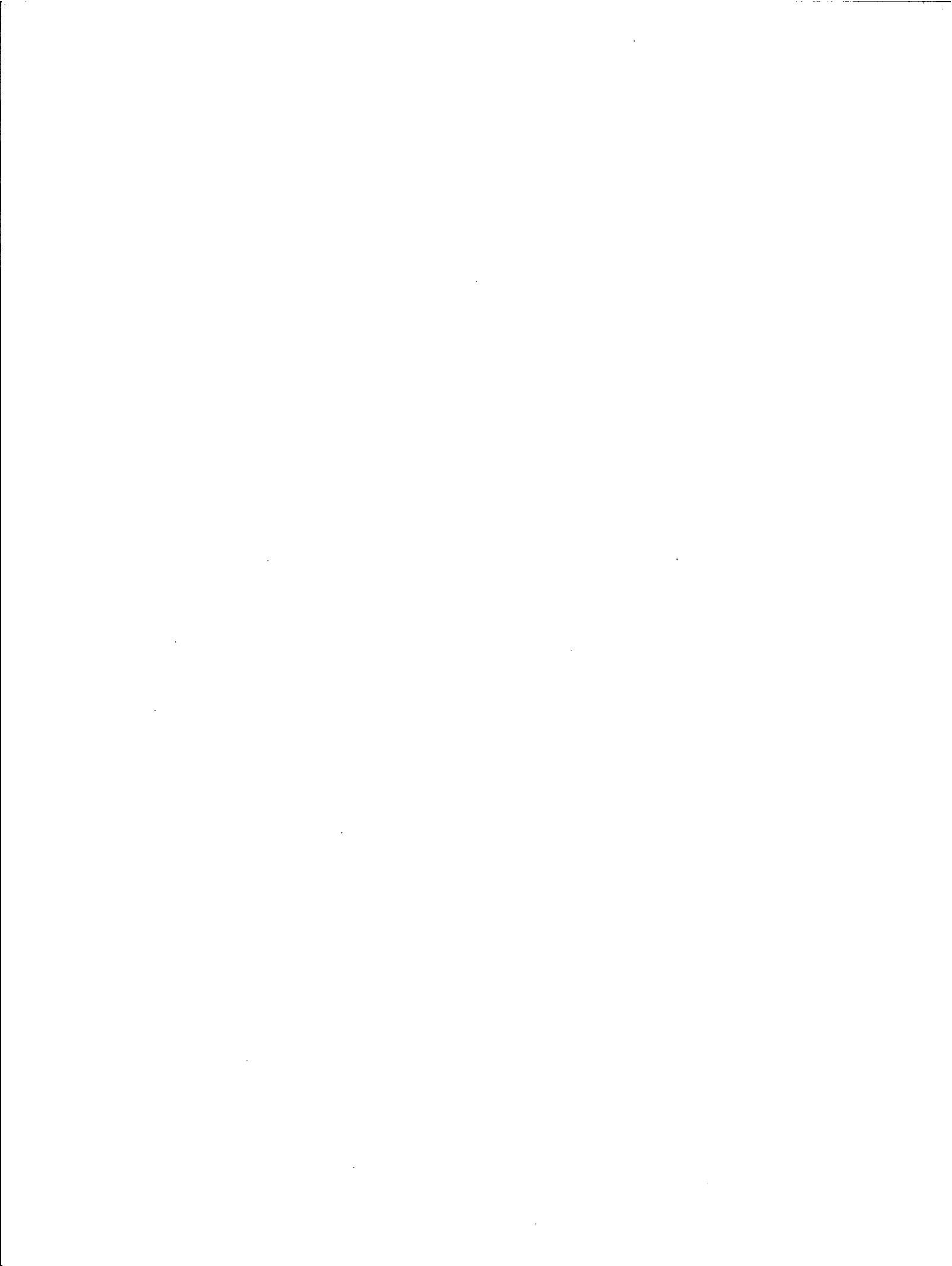
HOW DO YOU GET THE OIL AND GAS OUT?

Topic A: Basics of Oil and Gas Production

- . Poster/panel showing two main types of production platforms, fixed and floating. Brief accounting of main operational differences, costs, preferred uses.
- . Brochure: "How Are Oil and Gas Produced?"
- . Summary: Sheet showing brief comparison between fixed and floating systems, with graphics.

Topic B: Oil Transportation and Refining

- . Poster/panel showing sequence from wellhead to refinery, with illustrations of two different delivery options--subsea pipelines and tanker transfer at sea.
- . Brochure: "How is Oil/Gas Brought Ashore?"
- . Brochure: "How is Oil Refined?"
- . Summary sheet showing the linkages between production and distribution, and the variations in refined product. Strongly graphic in approach.



MODULES 4 - 7:
DETAILED SAMPLES

MODULE 4

WHAT ARE THE RISKS OF OIL AND GAS DEVELOPMENT?

OUTLINE

Topic A: Environmental Risks

- . Poster/panel showing major factors which create risk in the offshore environment--icebergs, storms, other ships, technical failure. Stress that there are two aspects to risk--risk to the environment, and risk from the environment.
- . Brochure: "Environmental Risks Offshore: A Guide to the Problems of Drilling in a Hostile Setting"
- . Short Brochure: "How Safe is Offshore Work?"

Topic B: Economic and Financial Risks

- . Poster/panel showing difficulties of hitting the pay zone, high costs relative to revenues, etc.
- . Brochure: "How Much Does It Cost To Find Oil and Gas?"
- . Brochure: "Who Pays for Oil and Gas Exploration and Production?"

GENERAL RATIONALE

This module addresses the general question of risk in offshore, specifically environmental risk, but touching as well on personal risk (safety).

For present purposes, these two topics are blended, since in the popular mind risk to self may be a product of environmental factors. Since it is conventional in most impact research to separate them, the final version of this module may be divided more completely into two sections.

The tone of this module is **constructive** and **helpful**. In keeping with the general need to enhance credibility in public information about the offshore, the information provided is factually balanced. Negative events such as the Ocean Ranger disaster and the recent Scotian Shelf blow-out are included as examples, while at the same time, measures to control and mitigate such disasters are mentioned. The module is intended to demonstrate to the public that the safety of offshore development has improved significantly, but that there is still an element of risk.

The module includes the following items:

- . A display panel, "What Are the Risks of Offshore Development?"
- . An indexed general brochure, "Environmental Risks Offshore: A Guide to the Problems of Drilling in a Hostile Setting."
- . A short booklet, "Risks to Personal Safety in Offshore Development"
- . A slide show, "The Risks of Offshore Drilling" (narrative and picture schedule only provided)

MODULE 4: DISPLAY PANEL

WHAT ARE THE RISKS OF OFFSHORE DEVELOPMENT?

PICTURE

BLOWOUT

The ENVIRONMENT is the major factor affecting riskiness of offshore development. There are two concerns:

- . The risk of damage to the environment by exploration and development activities.
- . The risk of damage from the environment, e.g. storms, ice, etc.

RISK TO THE ENVIRONMENT is brought about by a variety of activities--flaring, exhaust gases, drilling mud, water discharges, solid waste, and of course blowouts.

RISK FROM THE ENVIRONMENT is caused primarily by storms, icebergs and pack ice. Of these, icebergs create the greatest and most frequent hazard.

PICTURE

ICEBERG

PREVENTIVE MEASURES have already been introduced to reduce environmental risk. These include:

- . Ice surveillance
- . Environmental studies
- . Emergency guidelines
- . Oil spill prevention plans
- . "Cleaning" procedures for effluent
- . Abandonment procedures

MODULE 4: LONG BROCHURE

(COVER PAGE)

ENVIRONMENTAL RISKS OFFSHORE

**A Guide to the Problems of
Drilling in a Hostile Setting**

1 . **The Setting**

2 . **The Fishery**

3 . **Drilling and Production**

4 . **Transportation**

5 . **Major Accidents**

6 . **Abandonment**

**A SELF-LEARNING GUIDE TO THE
ENVIRONMENT OF THE EAST COAST OFFSHORE**

ENVIRONMENTAL RISK OFFSHORE

A. THE SETTING

Canada's offshore waters present the oil industry with a new variety of technical challenges. The North Sea may be as stormy and the Arctic may be colder, but no other offshore development poses the same combination of severe storms, pack ice and icebergs. This combination, set in the midst of some of the richest fishing grounds in the world, will seriously test the industry ability to operate safely.

Just as offshore drilling can affect the environment, the environment itself is certain to affect offshore drilling. The next few pages will show what the industry is up against drilling offshore. Following sections will discuss the kinds of impacts the industry could have on that environment.

1. Storms

The offshore can expect storms at any season. Those which develop in winter are more intense and more sudden. Typically, they develop in the ocean to the south of Nova Scotia and move quickly north. In summer, when storms originating in the North Atlantic are at a minimum, tropical hurricanes can move up along the eastern seaboard to become cyclones, bringing stormy weather to the Grand Banks.

The strongest winds are in January, February and March, when gusts from the south or southwest can exceed 90 knots. These are also the months of the most severe freezing rain, freezing spray and wind chill conditions. The severity of these conditions can be seen in a comparison with St. John's, which is known for its harsh weather. Average monthly winds recorded at the Hibernia wellsite, for example, are 70% to 80% higher than at St. John's airport.

Waves generated by these winds are, of course, highest in winter when storms tend to be longer and more intense. The most severe storm in the area in recent years was the storm of mid-February, 1982, which sank the drill rig Ocean Ranger. The "significant wave height" in that storm (the average height of the highest one-third of all waves) was 12.7 meters. The maximum wave height expected in seas of this state is 25 meters. A study of the worst 18 storms in the area from 1951 to 1980 suggests that similar conditions may recur, on average, every 19 years. Storms generating a maximum wave height of nearly 30 meters can be expected about once every century.

2. Ice

Obviously any activity which uses fixed or semi-permanent structures in the path of moving ice must find ways to adjust to this condition. Ice offshore takes two forms: sea ice formed in autumn and winter by the freezing of ocean water, chiefly in the Arctic and off Labrador, and icebergs formed by the "calving" of glaciers on Greenland and Ellesmere Island. Both are swept south on the Labrador Current and can represent a hindrance and at times a hazard to vessels in their path.

The destructive power of any moving object depends on its speed and weight. Because of its speed, a bullet weighing little more than an ounce can kill an elephant; because of its weight, an iceberg moving more slowly than a child crawls can brush aside or crush almost anything man can build. The best defense is to avoid the collision.

Obviously, safe winter operation requires reliable forecasts of the behavior of ice. For example, operators on the Grand Banks have co-operated in a regional ice management system, compiling ice data from more than a dozen sources and forecasting ice drift from data on weather and current conditions.

Pack Ice

Ice formed off the Labrador coast in December drifts down to about Cape Freels by late January. By late February, the warmer air and water of the Grand Banks usually stall its advance, and prevailing westerlies keep it well offshore. However, easterly winds occasionally interrupt these westerlies and drive the ice against the coast. The combined effect of easternly winds and the Labrador Current can lead to dramatic southward shifts of the pack.

Sea ice came within 46 km of the site of Hibernia, for example, in 12 of the 25 years from 1960 to 1984. In the most severe period, from 1972 to 1977, ice reached the site every year, in coverage usually less than 6/10ths of the sea surface. Except when the pack is driven against the shore, this relatively loose formation is typical; the pressure ridges formed when pack ice is confined are rare on the open ocean. However, pack ice swept against a fixed offshore installations would exert tremendous force, especially if strong wind and currents worked together.

Icebergs

Most of Newfoundland's icebergs are formed at the edge of advancing glaciers which creep down the valleys from the Greenland ice-cap to the sea. As the ice reaches tidewater at the head of a fjord, icebergs "calve" or split away from the glacier and drift out on the tide.

Because most of an iceberg is underwater, bergs are much more subject to currents than wind. The currents which control the speed and direction of their drift circle the southern end of Greenland and sweep far north into Davis Strait before swinging south along the east shore of Baffin Island and the Labrador coast.

The ultimate fate of icebergs is certain; they break up and melt. Most do so long before they reach the Grand Banks, but enough survive to pose a major hindrance to shipping and offshore drilling.

Of an estimated 40,000 medium to large icebergs produced by Greenland each year, an average of 300 to 400 reach the Grand Banks. However, the number can vary much more widely than this average suggests. For example, there were no icebergs at all on the northern Grand Banks in 1966, but in 1984 there were 2,100, the most on record. In a typical decade, the numbers can range from below 50 to more than 1,000.

The average size of icebergs which reach the northern Grand Banks is 600,000 tons, with a depth, or draft, of 95 meters below the surface and a height of 20 meters above. The maximum size of bergs in that region can be as much as 10 million tons, with a draft of 200 meters. The mobility of bergs of that size is limited, because they ground in shallow water.

As icebergs pass Newfoundland, most follow the main streams of the Labrador Current, drifting either through the Avalon Channel or the Flemish Pass. These routes straddle the Grand Banks, which is shallow enough to block the drift of any bergs with a keel depth of more than 80 meters. So the Grand Banks itself protects offshore wells from the largest 30% of the icebergs which reach that area, but smaller bergs can drift wherever the currents take them. About 13% of the icebergs which do make it to the Grand Banks cross the sites of offshore wells.

One of the features of the iceberg behaviour of most interest to the oil industry is "scouring". When a berg grounds in shallow water it may roll over, which reduces its draft, and then keep drifting. More often it stays upright and plows along the seabed until its huge mass is finally brought to rest. The broad track or scour left by this grounding is a relatively

permanent record of the event, so the accumulation of scours is a rough guide to the numbers, size and behaviour of large icebergs for centuries in the past.

An understanding of iceberg scouring is obviously vital to the design and protection of underwater oilfield facilities. These will include wellhead equipment, flowlines which convey oil to central manifolds, and gathering lines which deliver oil from manifolds to storage or loading facilities on the surface.

Research has found that scours in the East Coast offshore are most common in depths between 80 and 90 meters. Their maximum width is 60 meters and most have scraped less than a meter into the sea floor. The deepest scour found in the Hibernia area, for example, was 1.6 meters, but the deepest anywhere on the Grand Banks was 7 meters, from a berg that grounded in much deeper water about 90 kilometers north of Hibernia. The longest scour found so far was more than 7 kilometers.

The following sections look at what is at stake in drilling for oil offshore, the importance of marine resources and the ongoing harvest of resources in that area, and how the offshore petroleum industry could affect them.

B. THE FISHERY

All life in the ocean depends on microscopic plants which, like plants on shore, use sunlight and raw nutrients to make living food. In the ocean, however, nutrients are concentrated near the bottom while sunlight can only penetrate the upper layers of the water. For this reason, much of the ocean is relatively barren; life is most abundant in those areas where currents and the shape of the bottom promote an upwelling of the richer waters from the deep.

This is true of the Grand Banks, one of the richest fishing areas of the world, where the frigid Labrador Current meets the warmer North Atlantic Current near Flemish Pass, and helps to stir the nutrients of the bottom into the lighted water near the surface. This promotes an abundance of plankton, the tiny creatures on which all forms of marine life, from shrimps to whales, depend.

Not only plankton but the eggs and larvae of nearly all the commercially important fish species spend all or part of their lives near the surface, which makes them vulnerable to changes in this environment. Contamination by spilled oil or chemicals, or changes in water temperature from the routine discharge of heated cooling water, could have severe local effects. However, the huge area of Grand Banks makes it able to absorb and quickly

neutralize the effect of any but the most calamitous accident, so that only marine life in the immediate area of a minor accident or routine discharge would be affected.

The five species which make up 95% of the fish catch on the Grand Banks are, in order of catch size, cod, redfish, plaice, capelin and yellowtail flounder. The Grand Banks is the major fishing area for three of these, contributing 63% of the plaice, 85% of the capelin and 83% of the yellowtail flounder taken by the Canadian Atlantic fishery. The Grand Banks has supplied almost half the total world catch of yellowtail flounder and more than a quarter of the world catch of plaice in recent years. However, cod is by far the most important species, both to the inshore and offshore fisheries.

The impact of offshore development on the fishery can take a number of forms, from the exclusion of trawlers from the area of rigs or seabed installations, to competition for skilled labour, to the fouling of gear or the possible tainting of fish by a blowout or an accidental spill.

The immediate area of Hibernia, for example, has not been important to the offshore fishery for any species except plaice. An exclusion zone of 8 by 13 kilometers would, at worst, reduce the Canadian catch by 1%.

The issue of competition for labour is more complex. The chief area of concern is the possible loss of highly trained personnel who could be attracted to offshore jobs: the youngest and best educated inshore fishermen, the engineers and officers of the trawler fleet and the supervisory and technical staff of the fish processing sector. However, it is far from certain that much real change will occur. For example, Newfoundland's high unemployment rate and the very high number of skilled Newfoundlanders who have found work in other provinces, many of whom could be drawn back to the province by work in the offshore, mean that fishermen and plant workers would not be able to flock to the oil industry in great number even if they chose.

The most spectacular problem oil drilling and production could create offshore would be a major blowout from a rig or a major spill from a ruptured tanker or storage vessel. Such accidents are discussed in greater detail later.

Studies suggest that the risk of a major accident is extremely low. If a large spill or blowout happened, however, the effect on the fishery could be severe. For example, Hibernia is "upstream" of most of the Grand Banks, in terms of water currents, so that the slick from a major disaster could cover a large portion of the grounds. In terms of its impact on the fishery, this would be most critical in May, June or July, when a

month-long halt to the Newfoundland trawler fishery could cost nearly \$3 million dollars in lost catch and \$4.5 million in lost processing wages.

On the other hand, only the most disastrous and unlikely accident, a major blowout which could not be halted quickly, or a collision which ruptured several tanks of a shuttle tanker, would interfere with the fishery this severely.

C. DRILLING AND PRODUCTION

The following sections describe environmental effects of different phases of the offshore operation.

1. Atmospheric Emissions

Flaring During Production Tests

How much oil or gas a well can produce is found by measuring the flow through a "choke" of a given diameter. Gas and oil produced in these tests is normally burned off, because storage and refining facilities are not installed until later. Tests will be carried out on each of the producing wells drilled during development drilling. Gas and liquids will be flared, with assistance of diesel fuel, and will create a heavy smoke plume. However, given the location of the rigs and the relatively small amounts involved, there will be little significant impact.

During production, a low pressure flare pilot light will burn continuously to eliminate vented fumes from tanks and pressure relief systems. However, the low sulphur content of offshore crude will mean insignificant volumes of sulphur dioxide and hydrogen sulphide.

Exhaust Gases

Compressors, generators and heaters on each drilling platform will produce 10 to 20 million cubic meters of exhaust a day. Initially, this will be diesel exhaust, and will contain emissions of nitric and sulphur oxides. Once natural gas is being produced from the wells, the turbines will run on cleaner gas.

2. Liquid-Solid Releases

Water-Based Drilling Mud

Drilling rigs pump a solution of special mud down the drill pipe and back up the sides of the hole, to lubricate the bit, flush the drill cuttings to the surface and maintain safe pressures in the well. This mud is eventually discarded, most of it in a continual discharge while drilling, with occasional batch dumps of mud that has become too thick. The discharge would amount to about 6,000 cubic meters per well.

Solids used in drilling mud are chiefly barite, bentonite and potassium chloride, but there are 14 other chemicals in much lower amounts. Nearly all are toxic to fish in sufficient concentrations. However, mud will be dumped near the surface and will dilute 300 to 500 times before settling to the sea floor. Less than 10% of the mud will remain suspended in water, forming a visible plume. This will be quite quickly dispersed in stormy weather, but could effect respiration and feeding mechanisms of some plankton and fish. However, the total area affected is very small.

Drill cuttings from shale shakers, which recycle the mud, will be discharged directly into sea at a rate of about three cubic meters a day. This will form a small pile around the wellhead, but with negligible impact.

Oil-Based Drilling Mud

Directional drilling, which permits drilling numerous wells from one location, frequently requires an oil-based mud. Even after cleaning, the drill cuttings would be sticky and would not disperse as readily as cuttings from water-base mud. With more than 40 wells to be drilled from a fixed platform, if this production system is chosen, the pile of cuttings could be ten meters high. However, the total area contaminated enough to harm sea bottom life would be less than two square kilometers.

Deck Drainage

Rainwater drainage and waste fluids from drilling and production operations will be treated to remove oil and related fluids. This recovery is not total, but discharges of oily waste will be intermittent and will be rapidly dispersed.

Produced Water

Besides oil and gas, offshore formations contain water, which must be treated to remove oil before disposal. Formation water typically is more dense than sea water, due to a higher proportion of dissolved minerals, and would contain some traces of oil even after treatment. In summer, produced water discharged from a floating platform would sink till it reached water of a similar temperature and density. It would then disperse in a horizontal plume at that level, perhaps about 30 meters below the surface, and would be diluted by 10,000 times within five km. However, before it is thoroughly diluted, it could kill plankton and shellfish larvae, and produce minor tainting of fish. Produced water discharged at a greater depth from a fixed platform would plunge to the bottom, where it would be diluted somewhat more slowly, but with little or no effect on commercial fish species.

Cooling Water

Rigs used in development drilling would need about 10,000 cubic meters of cooling water a day, chlorinated to inhibit pipe fouling. During production, semi-submersible platforms would require about 60,000 cubic meters of cooling water a day, and fixed platforms three times this volume. In either system, about 50,000 cubic meters would be injected back into the well to maintain the formation pressure which brings oil to the surface. The remainder would be dumped overboard. This hot, chlorinated water would quickly dilute, but some fish and plankton near the point of discharge would be affected.

Storage Displacement Water

In a gravity-based or fixed production system, storage "cells" will be filled with sea water at some times and with crude oil at others. When oil is pumped into a shuttle tanker from storage, sea water will flow into the cell to replace it. Between loading operations, new oil will flow into the cell from the well, displacing the sea water. Water discharged in this process will be untreated, but its oil content should be low. It will dilute about 40 times within 40 meters of the platform.

A floating production system would have no discharge of replacement water.

Sanitary and Domestic Waste

Sewage will be aerobically treated and dumped overboard, just as all sea-going ships do.

3. Floating versus Fixed: Environmental Impacts

While fixed and floating production systems would have some different environmental impacts, the differences tend to balance out between the two. For example, treatment of oily water is more efficient on a fixed platform than on a floating system, where constant motion makes it more difficult to separate oil and water. On the other hand, the greater deck area of a floating system permits the use of more separators.

Similarly, discharge of drilling mud and cuttings would be more dispersed from a floating system than from a fixed platform, where as many as 50 wells may be drilled from one site by means of directional drilling techniques. The floating system would affect a much larger area; the fixed system would affect a small area more severely, particularly since directional drilling requires the use of oil-based mud which, even after treatment, leaves oily drill cuttings to accumulate on the sea bottom.

A floating system would have many more underwater facilities, such as flowlines, wellheads and manifolds. This, and a greater volume of supply boat traffic, would mean more potential interference with the offshore fishery.

4. Cumulative Effects

The combined effects of many small changes in the environment around an offshore well like Hibernia may build up in time, with some damage to the immediate area. Toxic chemicals in the drill cuttings, for example, will build up in the sediment. However, the currents and the storminess of the Grand Banks will promote rapid dilution and dispersal of most effluents.

5. Garbage

Some dry garbage will be burned. Wet garbage such as food scraps, and non-combustible dry garbage such as bottles and cans will be carried ashore for disposal.

6. Noise

Routine noise will be from generators and operations on the drilling deck, and from flaring during production tests. Noise may exceed 100 decibels above the surface and up to 180 decibels under water. Except within a radius of about four miles, this should not add significantly to the existing noise from shipping, fishing and the turbulence of the ocean itself, which is from 65 to 90 decibels.

D. TRANSPORTATION

1. Supply and Work Boats

During development drilling offshore discharge of bilge water from supply and work vessels is expected to add about 3% to current estimated levels of contamination by sea-going vessels. During the operation this may increase to 6%, though it would be higher still during the six-month period when the production system is being installed.

E. MAJOR ACCIDENTS

1. Blowout

Oil and gas deposits are under high pressure, but a variety of techniques can control these pressures during exploration and development drilling. Primarily, the weight of a long column of heavy drilling mud in the hole keeps a well under control. If a sudden "kick" of high pressure overcomes the weight of mud, so that oil, gas or water begins to spout from a well, blowout preventers at the wellhead can block the flow. A blowout is only possible if both these systems fail.

One study of offshore drilling experience elsewhere in the 1970s found an average blowout rate of one a year for every 100 exploration wells, one for every 250 development wells, and one for every 3,300 production wells. In the Gulf of Mexico, the rate was 98 blowouts in more than 17,000 wells. Only 12 of these blew oil.

Normal formation pressures and an absence of shallow gas deposits should make the risk of a blowout offshore quite low. However, both a "worst-case" and an "average-case" scenario for this type of disaster have been examined.

Worst Case

In the worst case, 4,800 cubic meters or about 30,000 barrels of oil a day would gush from the well for 90 days, the maximum time required to drill a relief well. If the blowout occurred at the sea floor, it would gush to the surface in a plume of oil, water and gas. A slick would form nearly four kilometers wide. If the blowout occurred at the surface in summer, when calmer waters mean less effective dispersal of the slick, oil would drift more than 600 kilometers and last 40 days before 90% would be gone. By comparison, oil from a subsea blowout in winter would travel less than 100 kilometers and last barely four days.

Average Case

The average size of an offshore blowout involves a flow of about 2,000 barrel a day, brought under control in five days. If a blowout were to occur offshore, it would probably be of about this size.

If the blowout occurred at the surface, it would spray forth as a plume gushing about 50 meters into the air. Oil would fall to the surface in a cloud of fine droplets, probably within a kilometer of the well. About 30% would evaporate quickly; the fate of the remainder would depend on sea state and weather. While the slick from an average-size surface blowout would be as wide as a major or worst-case blowout, the slick would be only about one-tenth as thick and would disperse much more quickly. Ninety percent would be gone within a week.

Blowout Impacts

Sediments and water beneath the plume area of a subsea blowout would be contaminated with oil, which would harm some species and stimulate the growth of some organisms which can feed off hydrocarbons. This enriched but distorted bottom life would give way to the normal range of seabed species when the oil was degraded or buried by new sediments. There would be no lasting impact to bottom life.

In the water, the major impact would be on fish, eggs, larvae and plankton caught up in the blowout plume itself, which would involve 0.09% of the total seawater on the Grand Banks if the blowout lasted 90 days. The effect of this would depend largely on the movements of particular fish stocks at the time. The same is true of pelagic fish such as capelin, herring and Atlantic salmon which might come in contact with the slick, and of the eggs and larvae of many commercial fish species, which drift at or near the surface at some stage in their growth.

2. Oil Spill

Oil could be spilled from tanker accidents as well as from a blowout. Mobil's impact assessment for the Hibernia field examined the impact of spills of 9,000 and 30,000 cubic meters, the average and the worst size spills for tankers of the type planned for the offshore.

Analysis of such accidents in the offshore developments show a spill rate of one barrel for every million barrels produced in the North Sea, a roughly similar operating environment.

Assuming average wind and currents, the slick from the worst-case spill would be one kilometer long, nearly four and a half kilometers wide and seven millimeters thick within a hour of the spill. The slick from an average spill would be much narrower and thinner, 500 meters wide and 0.8 millimeters thick.

As much as 40% could evaporate quickly in warm water, which would slow the spread of the slick. Depending on the sea state, the slick could be gone, dispersed into the water, within a few days. However under some conditions, particularly strong wave action in cold water, the oil can form a heavy, sticky emulsion of oil and water nine or ten times as bulky as its oil content alone. This can take the form of floating mats or gobs which can persist for weeks and which can be extremely difficult to clean up. It is probably this form of spilled oil which would most severely affect the trawler fishery.

Seabirds, however, are more vulnerable to oil slicks, chiefly because oil affects the waterproof and insulating quality of their feathers. The vulnerability of particular species depends on their habits and distribution as well as on the time and location of a major accident, and the direction of drift.

3. Shoreline Impacts

Calculations of what would happen to oil from a blowout or a major spill offshore suggest that the risk of any oil reaching the shore is less than 1%. The odds against a major accident happening in the first place, combined with the rate of dispersion of the slick and the probable direction of drift, all combine to make shore contamination unlikely.

Any oil which did reach Newfoundland from Hibernia, for example, would be days or even weeks old, with most of its more toxic ingredients already lost by evaporation. What remained would be thick and heavy, and would damage shorelife more by smothering than by any chemical effect.

The long-term effect of oil on a shore is chiefly determined by the nature of the shoreline and its exposure to heavy waves. Sheltered beaches, salt marshes and lagoons are most likely to retain stranded oil. Oil deposited on beaches and cliffs exposed to the sea can be fairly quickly broken up by waves. However, where oil seeps down into crevices, or into the spaces between large beach cobbles, it can last much longer than it would on bare cliffs or sand.

If oil did persist on shore, it could locally threaten spawning capelin and feeding seabirds if it were somehow washed back down to the landwash in spring or early summer.

4. Chemical Spills

Many of the chemicals used in offshore drilling area toxic, and some could be spilled in handling. Cement, chemicals added to drilling mud and the chemicals added to cooling water are some of the materials which could be spilled.

The "worst-case" chemical spill would be the loss of a container of chemicals during the unloading of a supply boat. However, such containers are reinforced and could probably be recovered intact. A more likely accident is the loss or puncture of a small drum. Depending on the rate of leakage and the current, the impact of such an accident could be very severe within a small area. However, a barrel of the most toxic chemicals used in offshore drilling would affect less than a tenth of a square kilometer of seabed.

F. ABANDONMENT

When the field is exhausted and wells are abandoned, wellheads will be plugged and exposed sea-floor installations will be cut flush with the bottom to remove hazards to deep sea fishing. Subsea flowlines will be drained and flushed with sea water, then flooded and capped. If a concrete platform is used, its storage cells will be flushed and filled with sea water. Effluents from these activities will be similar to those dumped during production. Overall, the effects will be slight.

MODULE 4: SHORT BROCHURE

RISK TO PERSONAL SAFETY IN THE OFFSHORE

Canada's offshore is a difficult and risky place to work. While many people feel the risks are worth it, it is reassuring to know that safety precautions and comfort factors have improved tremendously in recent years.

This is due in part to the popular reaction to the Ocean Ranger disaster, and in part to the improved technologies available to offshore industries.

There are three key areas where the personal safety of rig workers is at risk:

- . **At-Sea Risks** from equipment failure or carelessness.
- . **Transportation Risks** during movement to and from rigs, or on ships servicing them.
- . **Health Risks** due to long-term environmental and stress factors.

AT-SEA RISKS

include a wide variety of things, for example:

- . Breakage or slippage of drilling equipment
- . Diving accidents
- . Fume inhalation or fire exposure

TRANSPORTATION RISKS

result from such things as:

- . Iceberg collisions
- . Storm events
- . Helicopter accidents

HEALTH RISKS

result from such things as:

- . Exposure to air-borne pollutants
- . Job conditions, e.g. heavy labour
- . Off-job factors, e.g. living in tight spaces, routine, etc.

Important strides have been taken to reduce the risk of offshore work and improve the quality of life on drill rigs and other offshore equipment. The report of the Royal Commission on the Ocean Ranger, plus several internal industry and government task forces, have produced the following changes:

- . Improved forms of survival suit and wider distribution of suits.
- . More rigorous enforcement of safety procedures, practice drills, etc.
- . Better management at sea, including greater concern for the mental as well as physical well-being of workers.
- . Better emergency handling facilities onshore, including specialized treatment centres.

Offshore work still involves sizeable risks, but the situation is improving rapidly. For more information on this topic, see the "Guide to Sources" at Display 7.

MODULE 5

WHAT ARE THE BENEFITS OF OIL AND GAS DEVELOPMENT?

OUTLINE

Topic A: Employment and Business Benefits

- . Poster/panel showing main features of offshore development and its local benefits--e.g. numbers of jobs, business opportunities, training prospects.
- . Brochure: "Oil Companies Mean Jobs: A Guide to the Kinds of Employment Opportunities Associated with Offshore Development"
- . Short Brochure: "Where Can I Train for Offshore Work?"
- . A JOBS DICTIONARY, part of item 2 above.
- . A graphic summary of benefits by type and amount.

Topic B: Financial and Industrial Benefits

- . Poster/panel showing spin-offs from oil and gas development, potential government revenues, industrial benefits, business potential.
- . Brochure: "Where do the Revenues from Offshore Development Go?"
- . Guide: "What Can I Sell to an Oil Company?"

GENERAL RATIONALE

This module is designed to present information on the positive aspects of oil and gas development, specifically:

- . the types of work which will be available;
- . the number of specific jobs which will be available;
- . the benefits in terms of supply and service contracts to local companies;
- . the overall impact on the provincial/local economy.

The tone of this module is meant to be upbeat, reinforcing the advantages of industrial development but without ignoring the possible limitations as well. Data provided is relatively conservative, showing the low-end scenario for offshore development and placing most emphasis on the diversity of opportunities and the need to obtain special training to take advantage of these. The module includes the following items:

- . A display panel, "What are the Benefits of Oil and Gas Development?"
- . A large brochure, "Oil Companies Mean Jobs: A Guide to the Kinds of Employment Opportunities Associated with Offshore Development."
- . A series of short brochures:
 - . "Where Can I Train for Offshore Work?"
 - . "What Business Opportunities Will Offshore Development Create?"
 - . A JOBS DICTIONARY, part of item 2 above
 - . A graphic summary of benefits by type and amount

DISPLAY PANEL

WHAT OPPORTUNITIES WILL OIL AND GAS DEVELOPMENT BRING?

Picture

Canada's Offshore Reserves Provide a Great Opportunity for:

- . More jobs
- . New kinds of jobs
- . New business opportunities
- . Increased incomes

Picture

What Specific Benefits Can We Expect?

- . Direct employment in supply yards and construction should amount to ___ person-years.
- . Indirect employment in support and service work should amount to ___ person-years.
- . Increased revenues to the provincial economy should amount to \$_____.
- . Income and expenditures should amount to \$_____.

Picture

How Can I Find Out About Employment Opportunities?

- . Contact the government review panel to get copies of recent impact studies.
- . Scan the "jobs dictionary" available at this display.
- . Contact local job counsellors at CEIC or vocational counsellors at schools.
- . Check with trades and vocational schools to see what kinds of training are available.

Picture

How Can I Find Out About Business Opportunities in the Offshore?

- . Contact oil companies to obtain a list of their supply requirements.
- . Contact support companies--supply vessels, drilling fluids, electronic companies--to see if they require additional support.
- . Check with local Board of Trade or Chamber of Commerce.
- . Read the business and industry sections of the major impact studies for Venture and Hibernia.

MODULE 5: MAIN BROCHURE

(COVER PAGE)

OIL COMPANIES MEAN JOBS

A Guide to the Kinds of Employment Opportunities
Associated with Offshore Oil and Gas Development

1 . Introduction: Opportunities in the Offshore

2 . Background: What is Offshore Work Like?

3 . Offshore Jobs in Drilling

4 . Other Offshore Jobs

5 . Onshore Jobs

**A SELF-LEARNING GUIDE TO THE
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MODULE 5: SHORT BROCHURE

(COVER PAGE)

WHERE CAN I TRAIN FOR WORK IN THE OFFSHORE?

A Guide to Programs and Courses
Available on Canada's East Coast

1 . Introduction: What Kinds of Training are Necessary?
.

2 . On-the-Job Training
.

3 . Short Courses
.

4 . Diploma/Degree Courses
.

**A SELF-LEARNING GUIDE TO THE
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INTRODUCTION: WHAT KINDS OF TRAINING ARE NECESSARY?

Offshore work requires a wide range of skills and experience--almost as wide and varied as the number of positions available.

In many cases, training can be obtained on the job, given basic qualifications. In others, short-term training or even full-scale diploma/degree programs is required.

For example, a **roustabout** requires no experience or training at all, but time spent as a roustabout qualifies one for work as a **roughneck** or **derrickhand**. To move up to **ballast control operator** requires general offshore experience (e.g. as a roughneck), plus 12 weeks on the job with an experienced operator.

At a higher level, to obtain a job as a **dynamic position operator** requires both a year of on-the-job training, and a technical degree such as engineering or engineering technology. Top jobs such as rig captain require both a master's certificate and 52 weeks experience as a first mate.

On-shore jobs usually require much the same experience and training as similar jobs in non-petroleum industries, except for a few highly specialized examples. Industrial mechanics and machinists, for example, can obtain training at local vocational and trade institutes. Petroleum engineers and meteorologists, by contrast, require highly specialized training not presently available in the province.

In the following sections, the various jobs available are cross-referenced to their training requirements, so that persons seeking this kind of work can readily see where they must go to obtain the required preparation.

ON-THE-JOB TRAINING

The following kinds of jobs can be obtained without previous training, but do require on-the-job experience which may have to be gained at a lower pay level:

OFFSHORE JOBS (RIGS)

- . Ballast Control Operator
- . Crane Operator
- . Derrickhand
- . Driller
- . Rig Superintendent
- . Toolpusher
- . Roustabout
- . Roughneck
- . Shakerhand
- . Sub-Sea Engineer
- . Warehouseman
- . Watchstander

OTHER OFFSHORE JOBS

- . Chief Cook*
- . Chief Steward*
- . Second Cook*
- . Steward*
- . Oiler
- . Seaman*
- . Trainee

ONSHORE JOBS

- . Dockworker
- . Insulator
- . Labourer
- . Painter
- . Telephone Operator
- . Warehouseman

*Indicates that although no training is needed, programs are available to improve access to the workforce.

SHORT-TERM TRAINING

The following kinds of jobs can be obtained following specialized, short-term training, i.e. less than one year:

Job	Training Required
Data Management System Watchstander	Special diploma
Cook	9-month course at Trades College
Seaman	3-week special course at Trades College, Bay St. George College
Carpenter	9-10 month course at Trades College
Clerk	Variety of short-term programs available
Concrete Worker	9-10 month course at Trades College
Draftsman	9-10 month course at Trades College
Heavy Equipment Operator	3-4 month course available at Bay St. George College
Industrial Mechanic	9-10 month course at Trades College, Fisheries College
Machinist	9-10 month course at Trades College, Bell Island/Gander Vocational Schools
Pipefitter	9-10 month course at Vocational Schools
Sheet Metal Worker	9-10 month course at Trades College, Fisheries College
Truck Driver	One-month and 3-month course at Bay St. George College
Typist	9-month Business Ed at Vocational Schools

LONGER-TERM TRAINING

The following jobs may be obtained following longer-term training, i.e. more than one year:

Job	Training Required
Dynamic Position Operator	Degree in Electrical Engineering/ Electronics
First Engineer	2nd Class Motor Certificate
Master	Master Mariner Certificate
Rig Captain	Master Mariner Certificate
Medic	Nursing/Paramedic Degree
Aircraft Mechanic	2-year course in Gander
Engineering/ Engineering Technologist	Memorial University, Trades College
Instrument Fitter	2-3 year course at Gander or Corner Brook
Marine Fabricator	2-3 year course at Fisheries College
Meteorologist	Transport Canada
Petroleum Technologist	3-year course at Trades College
Petroleum Engineer	5-year course at Memorial University plus outside courses
Surveyor	3-year course at Trades College

MODULE 6

HOW WILL OIL AND GAS DEVELOPMENT AFFECT MY COMMUNITY?

OUTLINE

Topic A: Impacts in Newfoundland and Nova Scotia

- . Panel/poster, describing major impacts, both direct and indirect.
- . Brochure: "What Effect Will Oil and Gas Have on My Community?"
- . Short Brochures: "How Can Communities Prepare for Oil and Gas Impacts?"
"What Business Opportunities Will Oil and Gas Bring to Small Communities?"
- . Slide Show: "Oil Development and Your Community: The Risks and the Benefits." Self-actuating 8-10 minutes.

Topic B: Oil and Gas Impacts in Other Countries

- . Poster/panel showing differences in impacts in other jurisdictions, e.g. comparing Shetland with Aberdeen, Norway with Alberta.
- . Brochure: "Oil in the North Sea: How Did It Affect People's Lives?"
"Oil in the North Sea: How Did Government Prepare for It?"

RATIONALE

This module contains information on the socio-economic impacts of oil and gas development. Special emphasis is placed on the community as a receiver of both the risks and benefits of offshore development, since this is the most common point of reference for most Atlantic Canadians. The module is basically an effort to put data from the Venture and Hibernia SEIS studies in a more readable format, with a change in emphasis--from "facts about impacts" to "opportunities and how to take advantage of them."

The standard format is used, namely:

- (a) A panel-board, highlighting the key points using graphs and pictures. Heading: "What Effects Will Oil and Gas Have on My Community?"
- (b) A sourcebook-brochure, providing quick reference to the main topic areas through an index-tab system. Title: "What Effect Will Oil and Gas Have on My Community?" (same as panel).
- (c) A series of short topical brochures covering supplementary topics such as:
 - . How will oil and gas affect me and my community?
 - . How can my community prepare for oil and gas impacts?
 - . What business opportunities will oil and gas bring to small communities?
- (d) A continuous slide presentation, "Oil Development and Your Community: The Risks and Benefits."

MODULE 6: PANEL DISPLAY

WHAT EFFECT WILL OIL AND GAS HAVE ON MY COMMUNITY?

Picture
(Platform
Construction)

It is Basically a LARGE CONSTRUCTION PROJECT. Oil and gas development means construction, maintenance and operation of very large pieces of equipment--drilling rigs, production platforms, etc. Most of this activity will take place in or quite near existing communities.

Map
(Showing
Probable
Sites)

There Will Be DIRECT IMPACTS on Some Communities

Platform construction, repair and supply facilities will often locate in or near existing communities to make use of existing roads, harbours, etc. Some new services will have to be built to accommodate increased traffic and a larger population.

Map
(Showing
Secondary
Impacts)

There Will Be INDIRECT IMPACTS on Other Communities

Supplies and workers may come from a wide range of communities in the province. Your community may be able to supply labour, services, or specific products to the oil and gas industry, even if not located near a major project.

Development Will Create Both RISKS and BENEFITS for the Community

RISKS: Pressure on land, housing, some community services. New jobs, with the prospect of working away from home. New people in the community.

BENEFITS: Increased tax revenues, more jobs with higher incomes, new services and facilities for use after the oil boom is over.

MODULE 6: SMALL BROCHURE

WHAT EFFECT WILL OIL AND GAS HAVE ON MY COMMUNITY?

- .
1 . **Introduction: Big Projects, Small Communities**
.

- 2 . **Direct Impacts**
.

- 3 . **Indirect Impacts**
.

- 4 . **Preparation for Impacts**
.

- 5 . **Opportunities**
.

**A SELF-LEARNING GUIDE TO THE
ENVIRONMENT OF THE EAST COAST OFFSHORE**

INTRODUCTION: BIG PROJECTS, SMALL COMMUNITIES

Offshore oil and gas development means large construction projects, similar in scale to the building of Churchill Falls or the Lepreau Power Plant. Many of these projects will take place near small communities, because they require large amounts of vacant, unrestricted land. Your community could be directly affected by such developments, and if not, it could be indirectly affected by increased job opportunities, demand for services, etc.

There are several types of projects which could affect your community:

- . Construction of concrete ("gravity-base") platforms, which requires deep water and lots of open space for equipment storage, assembly of parts, etc.
- . Construction of the "topsides" of the concrete platforms, which involves work much like shipbuilding or metal fabrication.
- . Construction of the "flow lines" which will be used for moving oil from the sea bottom to the platform itself.
- . Repair of rigs, particularly those used in exploratory drilling.

These activities involve highly specialized skills and large amounts of equipment and materials. As the following pages show, your community will experience various kinds of impacts.

DIRECT IMPACTS

There are a number of areas where your community could experience a **direct impact** from oil and gas development:

- . **JOBS** Increased work opportunities could bring more regular and higher incomes.

- . **SERVICES** The community may have to develop new roads, sewer and water lines, educational facilities and recreational services.

- . **HOUSING** There may be a demand for more houses, or for accommodations of various kinds for transient workers.

- . **LAND-USE** The project may need a large amount of land for construction and for equipment storage. This land may have alternative uses for other members of the community.

These impacts are "direct" in the sense that you can measure them and prepare for them. In the next section, we look at "indirect" impacts, that is, those which are less obvious and less easily measured.

INDIRECT IMPACTS

If your community is not selected as the site for a major construction project, or is not affected by changes in transportation or other services because of its proximity to such a site, you may still feel the impacts of oil and gas development.

For one thing, those persons of working age in your community may be attracted to the new project for the purpose of obtaining a job. If the project is some distance away, this may result in a pattern of **commuting** to work on a daily basis, or even **migration** of workers to the site for longer periods--say, a week or a month at a time. People in the Atlantic Provinces will find nothing new in this--but the scale and length of time of these projects may mean that communities will want to consider offering services to spouses who are left at home, or day-care arrangements for families in which both spouses work on the project.

There are a number of other areas in which **indirect impacts** of this sort may be felt:

- . **Social Life** As people spent less time in the community, the type and amount of social activity will change.
- . **Outsiders** There will be greater numbers of outsiders living in and passing through the community, placing new demands on services.
- . **Resources** There will be changes in the way your community uses its resources--water, land, the fishery--and this may not be apparent for many years.

It is important that you and your community consider the possible impacts of oil and gas very carefully, and analyze your own needs and requirements. Will the advent of oil mean changes in the complexity and pace of your lives? Will it bring changes in the types of people you interact with? Will it result in greater wealth in the community, with attendant changes in people's outlooks? None of these things is certain to happen, and none will necessarily result in negative changes; but it is important that the community **prepare** for the possibility of change, and be properly informed about the possibilities.

MODULE 6: SHORT BROCHURE

HOW CAN COMMUNITIES PREPARE FOR OIL AND GAS IMPACTS?

THE PROBLEM

Many Newfoundland (N.S.) communities will experience the direct impacts of offshore developments over the next decade. Others will be affected only indirectly. In either case, the community itself will need to prepare for change by starting to evaluate its own requirements.

THE SOLUTION

Some of the things communities should do now are:

- . Contact oil companies, supply companies and the government to get a better idea of where onshore developments will happen.
- . Start collection information on the offshore--oil company publications, Environmental Impact Statements, background studies, government reports, etc. Make sure you and your community groups are familiar with these materials.
- . Prepare a **community profile**, listing your community's services, employment levels, available skills, businesses, etc.
- . Prepare a **community brief** for presentation to interested companies, commissions, etc. This brief should include such things as:
 - a survey of local businesses
 - an assessment of local development potential, e.g. wharfage, open space, etc.
 - a list of possible businesses which you are interested in establishing there

MODULE 6: SHORT BROCHURE

WHAT BUSINESS OPPORTUNITIES WILL OIL AND GAS BRING TO SMALL COMMUNITIES?

THE PROBLEM

Oil and gas developments require goods and services, many of which can best be supplied by local companies. But many of the large companies involved in these developments are either unaware of what local companies can offer, or have their suppliers arranged beforehand.

THE SOLUTION

If there is an oil-related development taking place in your area, and you have or intend to start a small business, then consider doing the following:

- . Contact the developer (oil company, supply base operator, etc.) and obtain a list of his procurement needs.
- . See if the developer has a local business agent who will be handling procurement.
- . Try to identify a need which could be filled by local people but is not--for example, catering or security.
- . Get the developer to put his requirement in writing, so you can show banks and the government the need you intend to fill.
- . Use the following checklist of possible opportunities to see if there are any which appeal to you.

- _____ Food and Catering Services
- _____ Light Machinery Rental and Sales
- _____ Welding and Metal Fabrication
- _____ Recreational/Leisure Services
- _____ Visitors' Accommodation
- _____ Small Items Hardware Supply

MODULE 7

OIL AND GAS: HOW CAN I FIND OUT MORE ABOUT IT?

OUTLINE

- . Panel/poster showing both sources and types of information available, and the linkages between different agencies and authorities.
- . GUIDE TO INFORMATION SOURCES ON THE EAST COAST OFFSHORE, providing a comprehensive, tab-indexed listing of sources and types of information.
- . DATA BASE or catalogue of offshore materials, both print and non-print. Indexed by source, type and location. Presented as a written text, but could be computerized if appropriate.

GENERAL RATIONALE

This module is concerned exclusively with information access, and would be the final module encountered in the proposed mall display. It is therefore meant to tie together the themes of the previous six modules by showing how the information required for each can be obtained. The central theme of the module is that information on these topics is widely dispersed, and must be systematically accessed if one is to learn much about them. It also stresses that there are gaps in information which must be recognized by the information-seeker. These gaps represent significant differences in approach between the various oil companies and the "general public" and can only be filled by further research or by public pressure.

This module includes the following items:

- (a) A panel, "How Can I Find Out More About Offshore Development?" This panel will differ from the others in that it will include a flow diagram illustrating the public information process.
- (b) A "Guide to Information Sources on the East Coast Offshore."
- (c) A data base on information materials. This item is currently in print format, but could easily be computerized.

MODULE 7: BROCHURE/GUIDE

HOW CAN I FIND OUT MORE ABOUT OFFSHORE DEVELOPMENT?

A Guide to Information Services
in Government and Industry

1 . **Background: Information on the Offshore**

2 . **Government of Canada**

3 . **Provincial Governments**

4 . **Mobil Oil Canada**

5 . **Petro-Canada**

6 . **Other Oil Companies**

**A SELF-LEARNING GUIDE TO THE
ENVIRONMENT OF THE EAST COAST OFFSHORE**

HOW CAN I FIND OUT ABOUT OFFSHORE DEVELOPMENT?

Picture

- . What
- . Where
- . How
- . Who
- . When

Picture

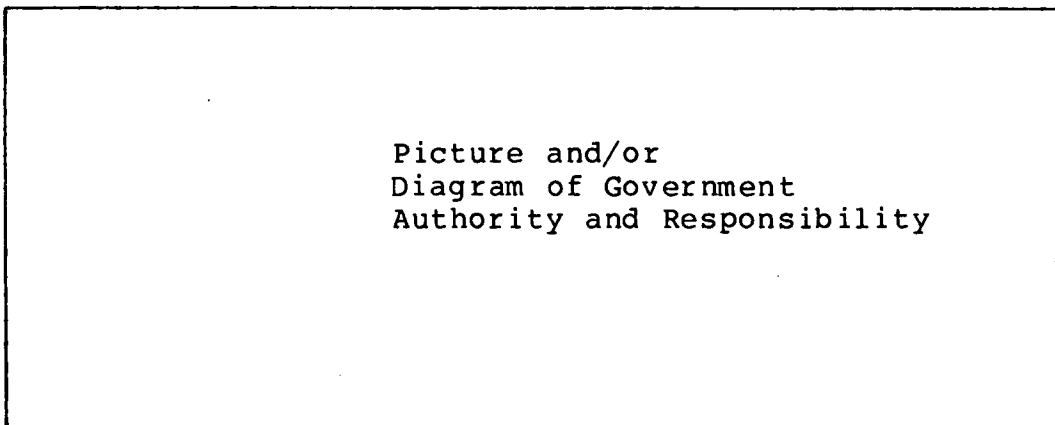
Offshore exploration began on the East Coast in 1964 when it was recognized that the continental margin held great potential for petroleum discoveries. Since then oil companies have carried out extensive exploratory activities. A total of ___ wells have been drilled off the Grand Banks, Labrador and Scotia Shelf. In 1979, a consortium of companies headed by Mobil Oil Canada Limited struck oil at the P-15 well located in the Hibernia structure approximately 360 km southeast of St. John's. This the first--and to date the only--field discovered to have definite commercial potential offshore Newfoundland. There are current plans for development of this field and the operator--Mobil Oil--has now submitted an Environmental Impact Statement to a joint federal-provincial panel, which will be reviewed before Mobil is given permission to proceed.

Map showing
drilling
activities

The exploration, development and management of oil and gas activities involves government and industry at all levels. General information on their activities is available upon request on the following subjects:

- . Industry and project activities
- . Government policy and regulations
- . Environmental management and protection
- . Business opportunities
- . Employment and training opportunities

In the following pages, we present a brief summary of the information currently available from industry and government, including where and how to get it.



Example

GOVERNMENT OF NEWFOUNDLAND AND LABRADOR

Information from this source generally originates from four main departments:

- . Newfoundland Petroleum Directorate
- . Department of Development and Tourism
- . Department of Labour
- . Department of Environment

The responsibilities of these departments, and their role in regulating offshore activities, are explained further in the following pages. As a general rule, the Province is concerned with activities **onshore**, e.g. the development of supply and fabrication facilities to support offshore activities. However, the Province is also co-manager of the resource through the federal-provincial energy management board, and publishes many items of information on offshore activities.

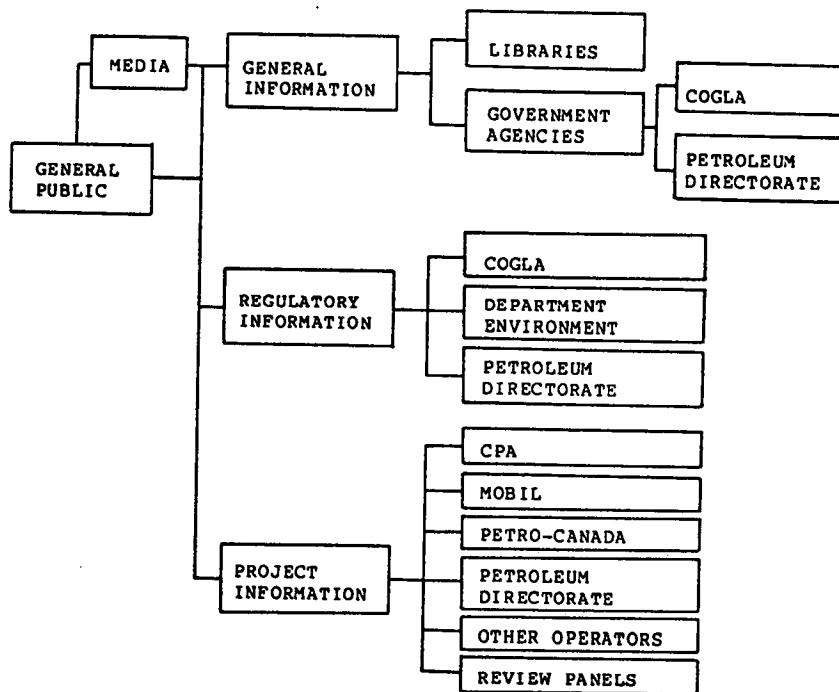
MODULE 7: PANEL DISPLAY

HOW CAN I FIND OUT MORE ABOUT OFFSHORE DEVELOPMENT?

INFORMATION on the offshore is available from a variety of sources:

- . Provincial Governments
- . Federal Government
- . Oil/Gas Production Companies
- . Supply and Service Companies

ACCESS to this information means knowing what you want and who has it. The flow of information for the offshore looks something like this:



GENERAL INFORMATION refers to information which provides background and historical data on oil/gas development. It is most readily available from libraries and government agencies having general responsibility for the offshore. The media may be another source.

REGULATORY INFORMATION refers to information on the rules governing exploration and development. This is most easily obtained from the regulatory agencies themselves.

PROJECT INFORMATION refers to information on specific projects, e.g. Hibernia or Terra Nova. Much of this can be obtained directly from the "operators" of the project, or from the panels set up for review of each.

APPENDIX B
DIRECTORY OF PUBLIC
INFORMATION SOURCES

1.0 INTRODUCTION

1.1 PURPOSE AND SCOPE

The directory was compiled to assist in identifying sources of public information in the absence of a reference guide to public information on oil and gas activities. Once compiled, the directory was used to contact public information officers and agencies to both solicit materials to be compiled in the catalogue (see Appendix C) and to survey these information sources regarding these materials (see Section 2.0 Overview of Information Services).

The directory includes public information sources in government (federal, provincial and municipal), industry (operators and industry associations), universities, libraries, business and trade associations and special interest groups. It does not include mass media print sources such as popular journals and periodicals although these may be included in future directories. Sources were compiled from existing government, industrial and other directories.

Selected sources were then contacted by telephone or letter to answer questions about their public information responsibilities, objectives, materials and programs, and criteria or basis for the development of these. All East Coast operators were contacted. Most government departments and special interest groups were contacted by telephone because of the sheer number of these sources. All findings are reported in tables accompanying the profiles of major public information sources provided in Section 2.0.

1.2 LIMITATIONS AND APPLICATIONS

The directory is not comprehensive or exhaustive, given the study constraints and the absence of existing authoritative reference guides or directories of public information in Nova Scotia and Newfoundland. Nevertheless, Nova Scotia, with its more highly developed information services, is better supplied than Newfoundland and Labrador where most directories, where they exist, are out of date or in the process of being updated. Users are advised to consult the following section 2.0, which profiles the information responsibilities and services of the main sources of public information.

The lack of a directory with an overview to sources is a serious gap in present public information services. It is recom-

mended that an industry association such as the Canadian Petroleum Association/Offshore Operators Division prepare a directory for publication which provides not only basic information such as a source, profile, contact name, addresses and telephone numbers, but also a list of available items of public information by title (if a publication), type (poster, slide/tape, brochure, newsletter, etc.) and conditions of use and access.

Such a directory should contain essential public information on what is available and from whom, would require annual updating and wide distribution to industry and government agencies and public repositories such as libraries. The format could be easily adapted to a computer database and integrated with the catalogue of public information materials listed in Appendix C and cross-referenced by the key subject listing used in the catalogue. A computerized guide to information would then have wide application in an information network such as public libraries using interactive data terminals such as TELIDON.

1.3 ORGANIZATION AND DOCUMENTATION METHODOLOGY

The directory is prefaced by an overview of public information sources. The overview profiles the mandate, responsibilities, organization and materials and information services provided by the lead information departments or officers of industry, government, business and trade associations, university and research groups and special interest groups. It also contains the results of the survey of selected key information sources. This research--both the overview and the directory itself--provides in part the basis of the analysis contained in Volume I, Section 4.0 of this report.

The directory is organized as follows. There are three major categories according to geographic area:

- 3.1 Canada**
- 3.2 Nova Scotia**
- 3.3 Newfoundland and Labrador**

It should be noted again that the directory is not comprehensive, and does not list all possible Canadian, Nova Scotia and Newfoundland and Labrador sources of information on East Coast Offshore oil and gas activities, but only those identified in the course of this study. For example, national operators provide extensive national and international public information services which may be useful to local people such as industry personnel and educators. A full, annotated listing of sources and public information services should be included if this directory is adapted for publication and use by the general public.

Within each of these geographic major categories, sources are listed alphabetically under sub-categories according to the type of information source as follows:

Government

- Federal
- Provincial
- Municipal

Operators

- Industry, Business and Trade Associations**
- University and Research Agencies**
- Special Interest Groups**

Each entry contains the following information where available or applicable:

1. **Name of Department/Agency**

Full name. Printed.

2. **Annotation**

Briefly describes the mandate and purpose of each department/agency. Could be expanded with further information on information service, materials, programs available.

3. **Address**

The address of the department or agency.

4. **Telephone/Telex**

The telephone, and where available or applicable, telex number of the department or agency.

5. **Contact**

The name and, where available or applicable, the position of a person who can be contacted for public information.

2.0 OVERVIEW OF PUBLIC INFORMATION SOURCES

2.1 INDUSTRY

The petroleum industry provides such information through two main sources:

- (1) the Canadian Petroleum Association (CPA) and the Offshore Operators Division (OOD);
- (2) individual operators.

2.1.1 CPA/OOD

The Canadian Petroleum Association (CPA) comprises companies who explore and develop the oil and natural gas resources of Canada. Founded in 1952 as an outgrowth of western petroleum producers' associations in Alberta and Saskatchewan, the CPA has offices and staff in six provinces including Halifax and St. John's. In 1983 the Eastcoast Petroleum Operators Association (EPOA, comprising 20 member companies) merged with the CPA to form the Offshore Operators Division (OOD) of the CPA. In 1984 there were 65 full-member companies in the CPA, mainly major industry players in Canada, as well as 90 associate member companies.

The CPA works through 45 standing committees which address issues and technical matters which affect industry, and works also in public affairs, policy development, environmental research and a number of other areas (see Figure 2.1). The OOD also works on the basis of standing committees, several in conjunction with the Arctic Operators Association (APOA), reviewing technical and operating issues and developments offshore (see Table 2.1 and Figure 2.2). The Offshore Operators Division is one of four within the CPA. The other three are the B.C. Division, the Arctic Division and the Pipeline Division. The CPA/OOD maintains offices in Halifax and St. John's to support their East Coast activities.

2.1.2 Public Information Services

Both the CPA and OOD provide petroleum industry information to the general public among other target audiences in government and business. In 1980 the CPA initiated a mass communications program Canada-wide designed to provide information about Canada's energy situation to the public. Public information efforts included:

ORGANIZATION CHART

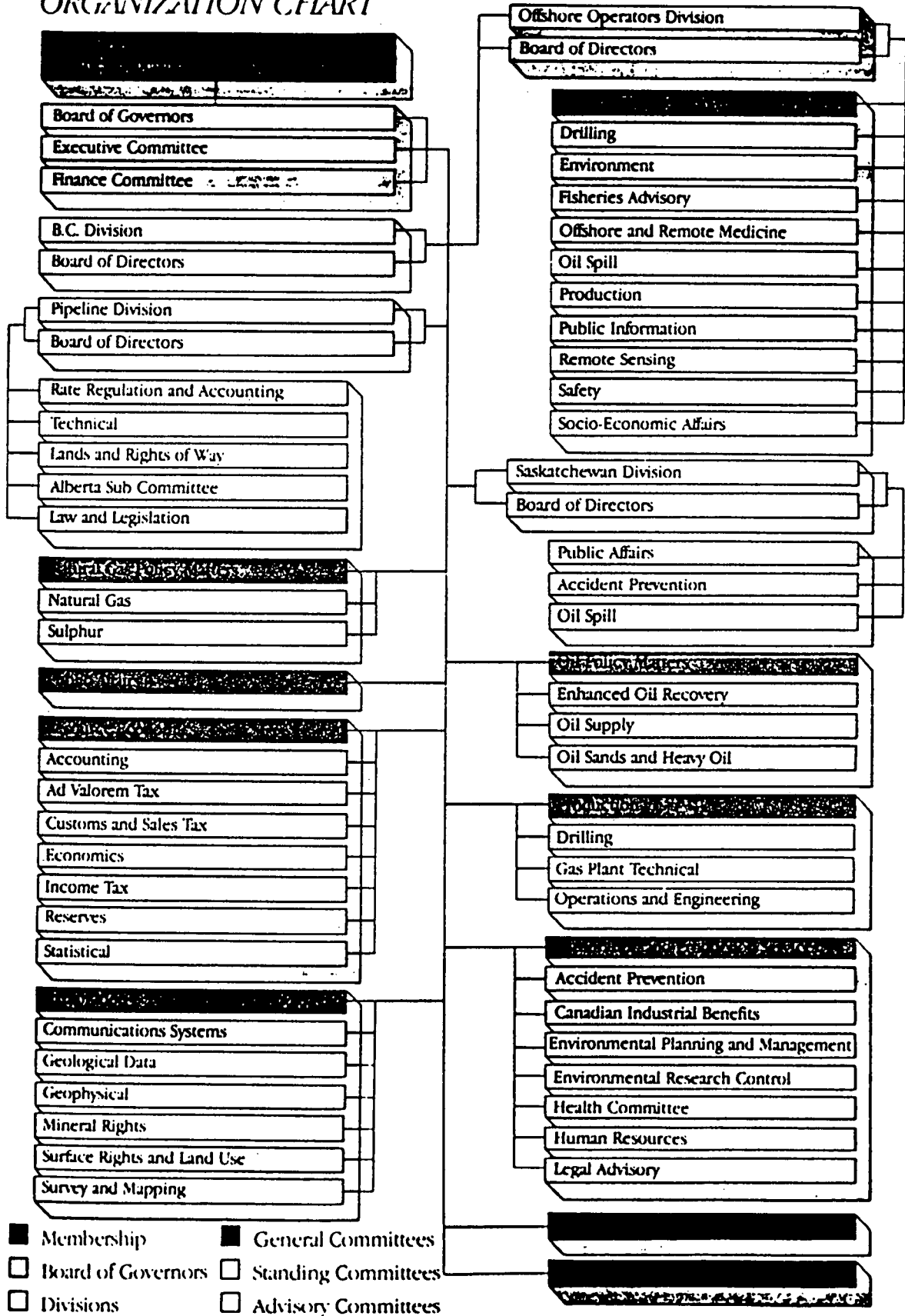
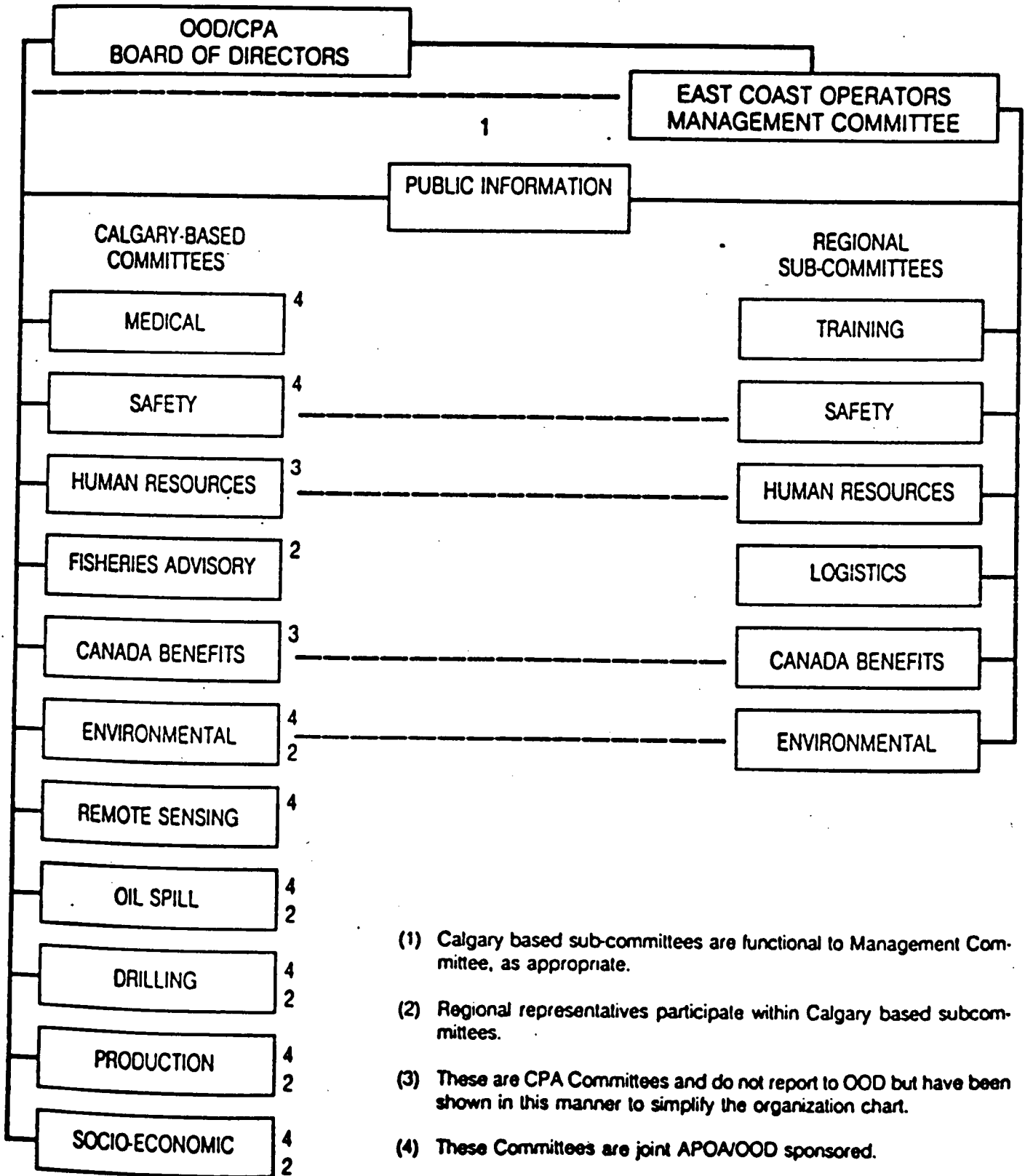


TABLE 2.1: PROFILE, OFFSHORE OPERATORS DIVISION

Formed:	1983, in association with the Canadian Petroleum Association.
Membership:	Twenty companies with petroleum interests off Canada's East Coast (see attached).
Purpose:	<ul style="list-style-type: none">- To help and enable industry to deal with common issues and matters related to safe and efficient offshore exploration, development and production.- To research technical and operating matters of mutual industry interest such as oil spill prevention, offshore safety, education and training, medicine and environmental research.- To cooperate with other industries such as fisheries and shipbuilding.- To communicate with operator associations, education associations, special interest groups, and with federal and provincial governments and their agencies.
Objectives:	<ul style="list-style-type: none">- To conduct research into environmental, socio-economic and engineering impacts of offshore operations.- To review regulations that affect the industry in Eastern Canada.- To make recommendations through the Canadian Petroleum Association to government on offshore policy.
Organization:	(see attached Figure 4.1.1, Organization Chart) Headquarters - Calgary Regional Offices - St. John's, Halifax East Coast Operators Management Committee (ECOMC) oversees the work of standing committees on drilling and production, the environment, fisheries, offshore and remote medicine, oil spills, public information, remote sensing, offshore safety and production structures. Six subcommittees deal with specific problems: <ul style="list-style-type: none">Canadian BenefitsEnvironmentLogisticsHuman ResourcesSafety and Training
Projects and Activities:	Ongoing projects include: <ul style="list-style-type: none">Oil spill cooperativeIceberg researchEast Coast Oil Spill Response Association (ESRA)Offshore Safety Task ForceTelecommunications development (satellite)Fisheries and oceanographic researchFisheries compensationCommon standards for offshore production facilitiesPublic information
Public Information Services:	<u>Eastern Offshore News</u> Offshore Operators Division booklet Library Weekly radio broadcast Newspaper inserts Speakers Bureau Factsheets Press releases Slide/tape presentation (in production) Annual report

Figure 2.2
**Canadian Petroleum Association
 Offshore Operators Division**



- (1) news conferences at which the CPA provided comment, technical information and analytical information to the Canadian news media;
- (2) media interviews by CPA spokesmen on television, radio and in print;
- (3) speakers who represented the CPA in six provinces at over 70 occasions. CPA speakers also spoke at conferences in the United States and Europe.

The CPA provides a number of print materials for distribution including:

- (1) Pamphlets -

Our Petroleum Resources

Petroleum in British Columbia

Offshore Operators Division

Saskatchewan Oil Facts (being updated)

Reference Points (French and English)

Environmental Issues/Sour Gas (5 additional brochures to be completed in 1986)

- (2) Book (in press)

The Great Oil Age (a technical, economic and social history of the petroleum industry in Canada since 1850)

In addition to an annual report, the CPA also publishes two periodicals, the CPA Review and the Eastern Offshore News. The CPA Review, a glossy format periodical with a limited distribution of approximately 7500 (target audience, key government members, ministers, policy advisors, senior civil servants, business, special interest groups and interested members of the general public) has been redesigned to provide information to a wider, less technical audience. A feature issue on the East Coast Offshore is expected in 1985. The Eastern Offshore News, an irregular periodical of similar format and target audience, covers the Atlantic region. The CPA also prepares numerous technical and statistical reports and publishes the authoritative Statistical Handbook, which is updated on a yearly basis. A bibliography of all CPA publications is available upon request from the CPA and OOD.

In the Atlantic region, the Public Information Committee (PIC) is a national committee coming under the CPA/OOD. To guide

PIC in its policies and activities, it conducted surveys in 1984 including an Offshore Safety survey in Newfoundland. In 1984, in response to a perceived need for public information in the industry, PIC developed six advertisements on major offshore safety programs which appeared in newspapers in St. John's and Halifax in February and March of 1984. The committee also began a series of short weekly radio commentaries on offshore oil activities which started in St. John's and are being developed for Halifax as well. The committee also continues to provide educational materials, organize safety demonstrations and arrange media conferences.

The types of public materials which are prepared fall into roughly three categories:

- (1) Brochures--sent out upon request or by a mailing list to public or special interest groups or to answer general inquiries by request from the general public.
- (2) Reports--usually in glossy magazine format or, in the case of government, technical report style. Circulated in-house or to key publics via a mailing list which provides a description and update of operational and financial details. Available to the general public upon request.
- (3) Project-Specific Information Kits--prepared for areas such as the East Coast, Norman Wells, the Beaufort Sea and Labrador--areas which are directly affected by oil development. Information may consist of a combination of fact-sheets, news releases, leaflets, brochures or pamphlets on specific project activities. Dissemination is by direct request.
- (4) Audio-Visual Materials--mainly posters, slide/tape shows and video-cassettes.
- (5) Speakers.

In addition there are also trade and association publications, mainly periodicals, which have limited distribution/circulation to key publics and to those members of the general public who directly request these items. Public affairs and information departments of some oil companies such as the British Petroleum (BP) Company Limited in the United Kingdom, BP Canada, Shell, Imperial Oil and Trans Canada Pipelines in Canada may also prepare films and other audio-visual material which are made available on loan to operators, commercial and industrial firms, educational institutions, public libraries, film societies, scientific and cultural societies and other institutions and societies. Mobil Oil Canada, Ltd. has developed an information program for schools which includes mixed media presentations (film, slide show, posters, print materials) and speakers such as oil rig workers.

The amount and type of information prepared is generally determined by corporate objectives and overall level of activity. Companies with active drilling programs and activities associated with exploration agreements are likely to receive more requests from, and provide more information for, the general public. Associations like the CPA and OOD provide either specialized information or general industry overviews through reports and reviews.

Industry is also required to submit a complete description of project activities in their Canada Benefits documents when exploration agreements are signed. These detail exploration and drilling activities and explain specific corporate objectives and policies in the areas of industrial benefits, human resources planning, and socio-economic impacts.

Much of the current information about the level, type, location, and costs of industry activities, as well as information about local benefits is contained in these annual documents. In addition, annual reports of the CPA/OOD provide an overview of industry activity in the region and materials like the CPA Review and the East Coast Offshore News provide regular updates. Yet both the periodical publications and the annual reports have limited circulation amongst the general public beyond those who directly request them. Similarly, Canada Benefits documents are rarely requested although they are publicly available. Comparable information on aggregate industry activities is not available to the public in any other form. The most current industry information in the East Coast Offshore is contained in reports for the committees and subcommittees of the East Coast Operators Management Committee (ECOMC). This is "state-of-the-art" information, primarily in the form of highly technical reports intended for an expert audience, but it is available to the public upon request.

2.2 GOVERNMENT

2.2.1 Government of Canada

Following the National Energy Program in 1981-82 which created a regime for oil and gas exploration and development in the frontier regions of Canada including the East Coast Offshore, the Government reorganized departments concerned with economic and energy policy, and created several new agencies such as the Canada Oil and Gas Lands Administration (COGLA). In 1985 federal government departments and agencies were involved in nearly every aspect of oil and gas exploration and development in Canada including:

- . exploration and development activities
- . exploration/marine equipment and support services
- . government policy
- . production and marketing
- . monitoring
- . Canadian ownership
- . research and development
- . reservoirs
- . revenue/taxation
- . supplies allocation
- . oil spills claims and regulations
- . incentives
- . legislation and regulation
- . occupational health and safety
- . marine regulations and safety/search and rescue
- . marine pollution control measures and compensation
- . environmental protection and review
- . industrial incentives and assistance
- . employment assistance and training

The main government department responsible for national policy, research and development and the management of federal oil and gas interests is the department of Energy, Mines and Resources (EMR) (see Figure 2.3). The principal agency of EMR responsible for the management of federal oil and gas interests which serves as the major point of interface between government and industry is the Canada Oil and Gas Lands Administration (COGLA) shown in Figure 2.4.

Both EMR and COGLA are served by the Communications Branch, EMR, which maintains regional information offices across Canada including St. John's and Halifax. These regional offices provide general public information (mainly brochures and press releases) and field general inquiries on energy policies and programs. All of the departmental divisions and departmental agencies and boards produce publically available information, mainly in the form of technical reports, annual reviews and periodicals in addition to the information available in departmental files. The Geological Survey and Earth Sciences Branch maintain sophisticated libraries and computer databases such as GEOSCAN, the national information centre for geosciences exploration and development. Library services are available to federal departments, academic institutions and the general public. Each departmental sector, agency and board maintains information on a broad spectrum of petroleum-related subjects.

Other departments also have information on petroleum-related activities. Transport Canada (TC) through its Ship Safety Branch (SSB) and the various divisions of the Canada Coast Guard (CCG) is responsible for ship pollution regulation, search and rescue and marine navigation and safety, marine emergencies such as oil spills and the Maritime Pollution Claims Fund for oil spill compensation. Environment Canada (EC) through the Environmental

Figure 2.3

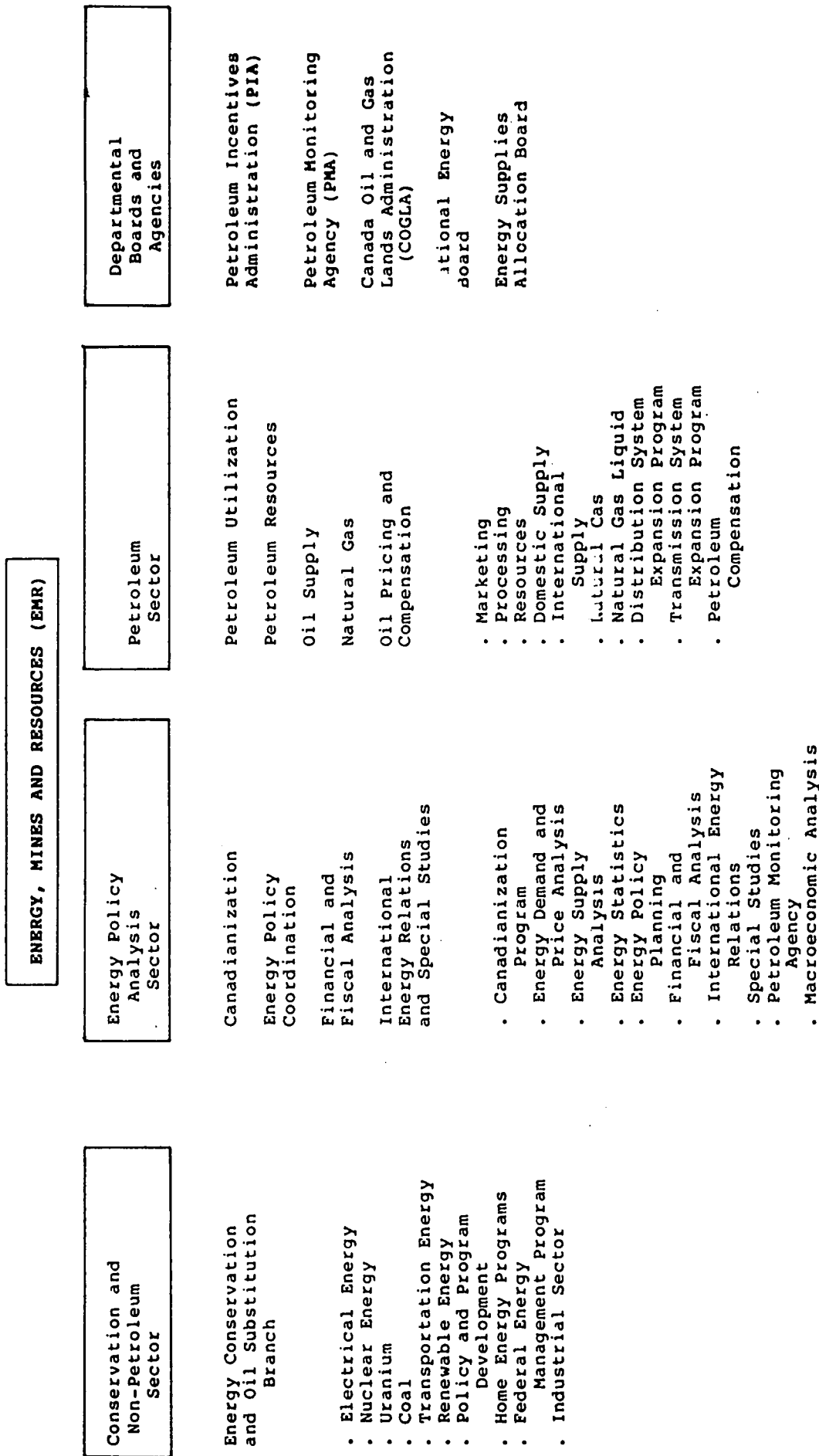


Figure 2.4

**CANADA OIL AND GAS LANDS
ADMINISTRATION (COGLA)**

- Responsible for the management of federal oil and gas interest on the Canada Lands including the East Coast Offshore.
- Serves as the principal point of contact between the federal government and the petroleum industry.

Land Management Branch	Engineering Branch	Resource Evaluation	Environmental Protection	Canada Benefits	Policy Analysis
<ul style="list-style-type: none"> • Responsible for administration of exploration and production rights under the Canada Oil and Gas Act. • Negotiates exploration agreements. • Monitors owner performance. • Collects royalties and other revenues. • Issuance and administration of oil and gas rights in the federal Public Lands within the provinces. 	<ul style="list-style-type: none"> • Responsible for regulation and monitoring of exploration, development and production. • Issues authorization to drill subject to environmental approval. • Conducts safety inspections of equipment used by industry. 	<ul style="list-style-type: none"> • Assesses the resource potential of the Canada Lands. • Authorizes geophysical and geological factors and hazards in drilling programs. • Monitors data and results from all oil and gas activities. 	<ul style="list-style-type: none"> • Coordinates advice about terms and conditions necessary for environmental protection and aspects of safety. • Assesses effect oceanographic, meteorological and ice conditions on human safety. • Assesses effects of drilling operations on marine and coastal life. • Evaluates contingency plans and compensation schemes. 	<ul style="list-style-type: none"> • Evaluates and monitors companies' plans to ensure that Canadian workers are given fair full access to Benefits packages are negotiated with oil and gas companies as part of exploration agreements and development plans. 	<ul style="list-style-type: none"> • Responsible for analyzing and implementing Canada Lands policy. • Liaison with other federal and provincial agencies.

Source: COGLA Annual Report 1984.

Protection Service (EPS) stimulates development and application of oil spill preparedness measures, technical services to prevent or lessen the impact of such environmental emergencies. In addition it maintains the Federal Environmental Assessment Review Office (FEARO) which carries out programs to ensure that environmental effects are taken into account early in the planning of projects on federal property such as the Canada Lands. FEARO publishes an annual bibliography of environmental impact studies amongst its many technical publications. Government departments such as the Department of Regional Industrial Expansion (DRIE) also administer programs to develop ocean industry support services and provides pamphlets and brochures on these, targeted mainly to business and industry.

There is little public information available on employment and training programs in oil and gas although Employment and Immigration Canada (CEIC) has an extensive public information program. The CEIC has certain responsibilities, objectives and mechanisms for employment and training in the East Coast Offshore as shown in Table 2.2. Policy is relatively new and still in the developing stage with few specific programs in place. With the Atlantic Accord and provisions in the Canada-Newfoundland Development Fund, the setting up of the Newfoundland Department of Career Development and industry moving into development activities, a great deal of information on job specifications, labour supply and demand, and employee funding and training will soon become available. CEIC in St. John's has retained an oil consultant who is in the process of setting up a computer database of petroleum-related occupations and profiles of job-seekers.

2.2.2 Government of Nova Scotia

The Government of Nova Scotia and the Government of Canada jointly manage petroleum-related exploration and development in Nova Scotia's offshore region, the province through the Department of Mines and Energy and the Federal Government through the Canada Oil and Gas Lands Administration (COGLA). Table 2.3 describes the joint resource management of offshore activities.

A legislative framework consisting of three offshore and four onshore acts legally implement the provisions of the Canada-Nova Scotia Agreement on Offshore Resource Management and Revenue Sharing (1982) (see Table 2.4 for list of statutes).

The main information sources of the Government of Nova Scotia and their products/services are summarized in Table 2.5. The lead information agencies are the Department of Mines and Energy, which provides information on exploration, development, regulation and policy and safe operations of resource activities, and the Department of Development, which has extensive public information available geared to a target audience of industry and business representatives, potential investors, small business and

TABLE 2.2: GOVERNMENT RESPONSIBILITIES (CEIC AND COGLA), EAST COAST OFFSHORE TRAINING AND EMPLOYMENT

<u>Government Objectives</u>	<u>Government Mechanisms</u>	<u>Operator Responsibilities</u>	<u>Operator Mechanisms</u>
1. To maximize employment and career opportunities for all Canadians generally.	1. Provisions for the fundamental rights of all Canadians to share in the benefits of oil and gas exploration and development are written into exploration agreements between operators and COGLA.	1. As part of project planning, operators develop a profile of occupations: <ul style="list-style-type: none"> . number of jobs . minimum requirements necessary to fulfill jobs safely . identification of entry level jobs which require no previous experience 	1. Atlantic Region Petroleum Industry Training Service (PITS) <ul style="list-style-type: none"> . Identify training needs of industry . Develop and offer training programs . provide advice . help establish standards for training
2. To maximize employment and career opportunities for workers from regional labour forces in particular.	2. Major operators are also being asked to develop a Special Affirmative Measures Plan (SAM Plan) or a commitment to develop one by a specific date to provide for the special needs of target groups.	2. Identification of specific steps to meet objectives of fair and equitable representation for training and employment for target groups.	2. Courses St. John's and Halifax: <ul style="list-style-type: none"> . Basic Offshore Training . Basic offshore Survival Training (BOST) . Standby Crew Vessel Training . (Mariner First Aid, Senior Officer Marine Emergency Management, Fast Rescue Craft) . Fire Team . Introduction to Offshore Operations . First Line Supervisor's Offshore Blowout Prevention
3. To increase the level and transfer of skills, expertise and knowledge for Canadian and regional workforces through the provision of training and development of employment opportunities.	3. Special funding through direct grant (Atlantic Accord fund) and through CEIC Skills Growth Fund.	3. Anticipated annual results and timetables for life of project <ul style="list-style-type: none"> . hiring . training . retraining . evaluation 	Onsite or On-rig Programs: <ul style="list-style-type: none"> . Onsite Blowout Prevention and Well Control . Hydrogen Sulphide (H₂S) Alert . Heli-Deck Officer Training
4. To ensure that socially and economically disadvantaged groups and individuals (e.g. women, native peoples, disabled persons and, in Nova Scotia, blacks) have fair and equitable access to training and employment opportunities (called target groups).	4. Register of people seeking employment in industry (CEIC).	4. Review system to assess performance of operators, contractors and sub-contractors through annual report format of Canada Benefits Plan.	4. Canada Benefits analysts, Human Resources Manager.

TABLE 2.3: JOINT RESOURCE MANAGEMENT OF OFFSHORE ACTIVITIES, NOVA SCOTIA

<u>Activity</u>	<u>Joint Review Management</u>
Post of Lands	Federal and Provincial officials recommend to Board* Board considers and approves or rejects
Exploration Agreement	
. Negotiations	Federal and Provincial officials negotiate with industry Board considers and approves or rejects
. Activity	Federal and Provincial officials monitor COGLA issues approvals on behalf of Board
Development Plan	Federal and Provincial officials review Board considers and approves or rejects
Production Licence	
. Negotiations	Federal and Provincial officials negotiate with industry Board considers and approves or rejects
. Activity	Federal and Provincial officials monitor COGLA issues approvals on behalf of Board

* Board - Canada-Nova Scotia Offshore Oil and Gas Board

TABLE 2.4: ONSHORE AND OFFSHORE LEGISLATION, NOVA SCOTIA

<u>Onshore</u>	<u>Offshore</u>	<u>Canada</u>
Petroleum Resources Act	Canada-Nova Scotia Oil and Gas Agreement (Nova Scotia) Act	Canada-Nova Scotia Oil and Gas Agreement Act
Energy and Mineral Resources Conservation Act	Offshore Oil and Gas Act	Canada Oil and Gas Act
Pipeline Act	Oil and Gas Production and Conservation (Nova Scotia) Act	Oil and Gas Production and Conservation Act
Gas Utilities		

TABLE 2.5: SUMMARY INFORMATION, GOVERNMENT OF NOVA SCOTIA
SURVEY OF PUBLIC INFORMATION MATERIALS AND PUBLIC CONSULTATION PROGRAMS

Department, Agency/Contact	Public Information Responsibilities	Public Information Objectives	Public Information Services	Criteria/Basis for Development of Materials
Department of Development/ Richard Butler	Development of business and industry through specific programs. Industrial Loan Program Trade Expansion Program Rural Industry Program Small Business Develop- ment Corporation Program (SBDC) Venture Capital Program Industrial Estates Limited (IEL)	Creating an economic climate that fosters growth and develop- ment. Provision of information on petroleum-related activities and major projects to Nova Scotia businesses. Provision of information to help maximize industrial benefits, new industrial investment and medium to high technology activities.	Booklets Brochures Statistical Compilations Speakers Trade Shows Information Profiles	As required to provide information and guide to regulations and requirements for business and industry to assist and guide business and industry.
Department of Environment/	To provide information on pollution control and resource management. Planning to maintain and enhance environmental quality.			
Department of Fisheries/ Art Longard	Facilitate the flow of information between the petroleum industry and the fishery. Mandate mainly areas of industrial develop- ment, estuarine and inland fisheries, marketing and training.	Advise oil companies on the potential effects on the fishery. Advise fishermen through fisheries field personnel on plans of industry.	General Inquiries Fisheries field personnel Fisheries Atlas Booklets on history and development of fishery Cookbook Information Services Division: - Trade missions - Trade shows - Displays - Media Campaigns - Institutional Training Programs	Program needs Industrial Development Training and field services Marine Resources and Marketing Economic Studies and Planning Direct requests for information
Government Services/ Information Services	Communication services for public and internal information programs of departments, agencies, boards, Commissions and crown corporations.	To provide a wide variety of commun- ications services directly to the general public.	Publication and Advertising Creative Services Media Services Government Printing Service (Queen's Printer) Public Inquiries Service - Nova Scotia - Cape Breton	

Table 2.5 (Cont'd)

<u>Department, Agency/Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Objectives</u>	<u>Public Information Services</u>	<u>Criteria/Basis for Development of Materials</u>
Department of Labour and Manpower/ Peter Woods	Provide information on the training of apprentices, occupational safety, enforcement of labour standards and legislation affecting labour and safety in the workplace.	See Public Information Services	No public information prepared specifically on offshore industry. Direct response to inquiries about jobs and training. Contact with education system through talks with students and counsellors. Directory of Companies used as a reference for people looking for work. Course Book outlining courses.	
Department of Mines and Energy	Responsible for supplying information on energy to all sectors of the economy. Monitoring of oil and gas activities, supply/demand.	Provide information on the exploration, development, regulation and safe operation of resource extraction, namely energy management, energy resources.	Annual Report Oil and Gas Activities Pamphlet on Venture Gas Field Information material News Releases Ministerial Statements Direct inquiries	Direct inquiries Monitoring of activities
Department of Education	Provides information on public education programs directly operated by the Department--institutes of technology and others--and indirectly through general supervision and assistance for programs operated by public school boards and other organizations.		Provides information on: Vocational Education Program Other Education Programs including: - Adult Education Program - Nova Scotia Teachers College - Teacher Certification - Education Resource Services (Nova Scotia Museum, Provincial Library, Education Media Services) - Ethnic Services - Publication and Reference Periodical Publications General Inquiries Press Releases Advertising	General inquiries As required for publications

ocean industry. The Department of Labour and Manpower, which oversees apprenticeship training programs, has no formal public information available but provides direct counselling.

2.2.3 Government of Newfoundland and Labrador

For the past decade the Government of Canada and the Government of Newfoundland and Labrador differed over issues of joint management of energy resources. In 1970 the Newfoundland and Labrador Petroleum and Natural Gas Act was passed and regulations were formulated by 1977. The Newfoundland and Labrador Petroleum Directorate (NLPD) was established in 1979 to administer the Act and act as a focal point of contact with the oil industry, the federal government and other agencies.

Although Newfoundland and Canada continued to negotiate an agreement through the early 1980's, jurisdictional dispute over ownership and control of the Continental Shelf was referred to the Newfoundland Supreme Court and the Supreme Court of Canada. In 1983 the Newfoundland Supreme Court ruled that the Province of Newfoundland and Labrador does not own the offshore resources. In 1984 the Supreme Court of Canada found in favour of the Federal Government on the issue of offshore ownership.

In Newfoundland and Labrador, federal-provincial disagreement over resource management was resolved with the signing of the Atlantic Accord, a Memorandum of Agreement between the Government of Canada and the Government of Newfoundland and Labrador on Offshore Oil and Gas Resource Management and Revenue Sharing (1985). This co-operative regime set out in principle the following points:

- (1) the Canada-Newfoundland Offshore Petroleum Board;
- (2) the legislative framework to implement the provisions of the Canada Oil and Gas Act and the Oil and Gas Production and Conservation Act, and other consistent regulations;
- (3) the principles of revenue sharing;
- (4) the establishment of a Canada-Newfoundland Offshore Development Fund;
- (5) Equalization Offset Payments;
- (6) a public review process of any proposed development;
- (7) an oil pollution and fisheries compensation regime;
- (8) provisions for research and development, and education and training;

(9) constitutional entrenchment.

The main information agencies and information materials available from the Newfoundland Government are summarized in Table 2.6. The lead information source is the Newfoundland and Labrador Petroleum Directorate, which, among numerous research and administrative functions, also promotes and co-ordinates public awareness and interest in oil and gas (see Figure 2.4). By contrast, the Department of Development and Tourism prepares materials aimed mainly at business and industry. The newly created Department of Career Development is expected to provide extensive information on training resources and job opportunities. The Department of Labour and Manpower presently provides only limited public information on oil and gas employment but maintains a database on offshore employment. The Department of Education, through its curriculum specialists, is presently preparing curriculum materials and course modules in social sciences, environmental and earth sciences and industrial and vocational education which have hydrocarbon resource components.

2.3 OTHER

Technical and academic agencies and institutions in Newfoundland and Nova Scotia--such as the Centre for Cold Ocean Resources and Engineering (Newfoundland) and the Institute for Resource and Environmental Studies (Nova Scotia)--produce mainly highly technical information on engineering and environmental subjects, and maintain sophisticated databases and information services for member institutes and agencies. This information is publically available, but is usually accessed only by member institutes, agencies and professional people.

Business and trade associations in both Nova Scotia and Newfoundland--such as the Board of Trade--provide information services such as newsletters, speakers, workshops, reports and directories mainly to members (often small business), although inquiries are also received from members of the general public because of the public profile of these groups. These groups produce very little information materials specifically on oil and gas activities for members, and no materials targeted for the general public.

Special interest and public advocacy groups--such as Ecology Action Centre in Halifax--also produce very little public information per se apart from irregular newsletters. Most of these groups, however, maintain in-house libraries and information resource centres, often containing extensive collections on oil and gas activities in Canada and the United Kingdom which can be accessed by the general public. These groups act formally and

TABLE 2.6: SUMMARY INFORMATION, GOVERNMENT OF NEWFOUNDLAND AND LABRADOR, SURVEY OF PUBLIC INFORMATION MATERIALS AND PUBLIC CONSULTATION PROGRAMS

<u>Department/ Agency/Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Objectives</u>	<u>Public Information Services</u>	<u>Criteria/Basis for Development of Materials</u>
Department of Career Development/ Cyril McCormack	Responsible for post-secondary and advanced and continuing education including Memorial University, College of Fisheries, College of Trades and Technology, Bay St. George Community College, all vocational schools and adult and continuing education programs.	To coordinate man- power planning and training to ensure that the province is fully prepared to meet existing and future human resource require- ments.	To be determined	To be determined
Department of Development/ Wayne Stockwood, Fred Murrin	Support, assist and promote all matters dealing with offshore oil and gas exploration and production and other resource sectors and industry.	To publicize the possibilities for industry and business in the province	Trade missions Press campaigns Exhibitions Brochures	
Department of Education/ Robert Parsons		(See Department of Career Development)		
Department of Environment/ Geraldine King	To promote environ- mental education for: - schools - general public	<ol style="list-style-type: none"> 1. To develop a program of environmental education for the school system. 2. To assist environ- mental groups by information on specific issues. 3. To develop very basic information on the environment to be used at primary school level. 4. Long-term objective to develop a program aimed at the general public on the economy and the environment. 	Brochures Posters Filmstrip Comic book Speakers provided on request	Curriculum development Selection of topics of current concern and develop materials
Department of Mines and Energy		No Public Information on Oil and Gas Activities See Petroleum Directorate		

Table 2.6 (Cont'd)

<u>Department/ Agency/Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Objectives</u>	<u>Public Information Services</u>	<u>Criteria/Basis for Development of Materials</u>
Department of Labour and Manpower/ Theresa Rahl	To provide information on request through counselling on off- shore employment.	Direct counselling	Slideshow shown on request to high schools. No published information available on jobs or employ- ment requirements and training. Monthly statistical report published containing summary of employment in the petroleum industry. Registry of people seeking jobs is maintained (12,149 people registered).	
Newfoundland Information Service/ Doug Burgess	To provide information on government activities to the press.		Weekly newsletter press/wire service for press releases. Contact list of public information officers. Press conferences.	
Newfoundland and Labrador Development Corporation/ Inforeach	To provide information to business and industry.		Library Catalogue of library holdings Information kits Brochures Speakers	
Newfoundland and Labrador Petroleum Directorate/ Ray Hawco Bob Cahill	To administer Newfoundland and Natural Gas Act (1970). Act as a focal point of contact with industry. To provide a provincial expertise on oil and gas matters.	Independent Analytic assess- ment of resource exploration and development To facilitate and coordinate public involvement in development.	Reports Information Kit Brochures Posters Background papers Speakers Slideshow	Response to direct request Research needs of government

**NEWFOUNDLAND AND LABRADOR
PETROLEUM DIRECTORATE**

Organizational Chart

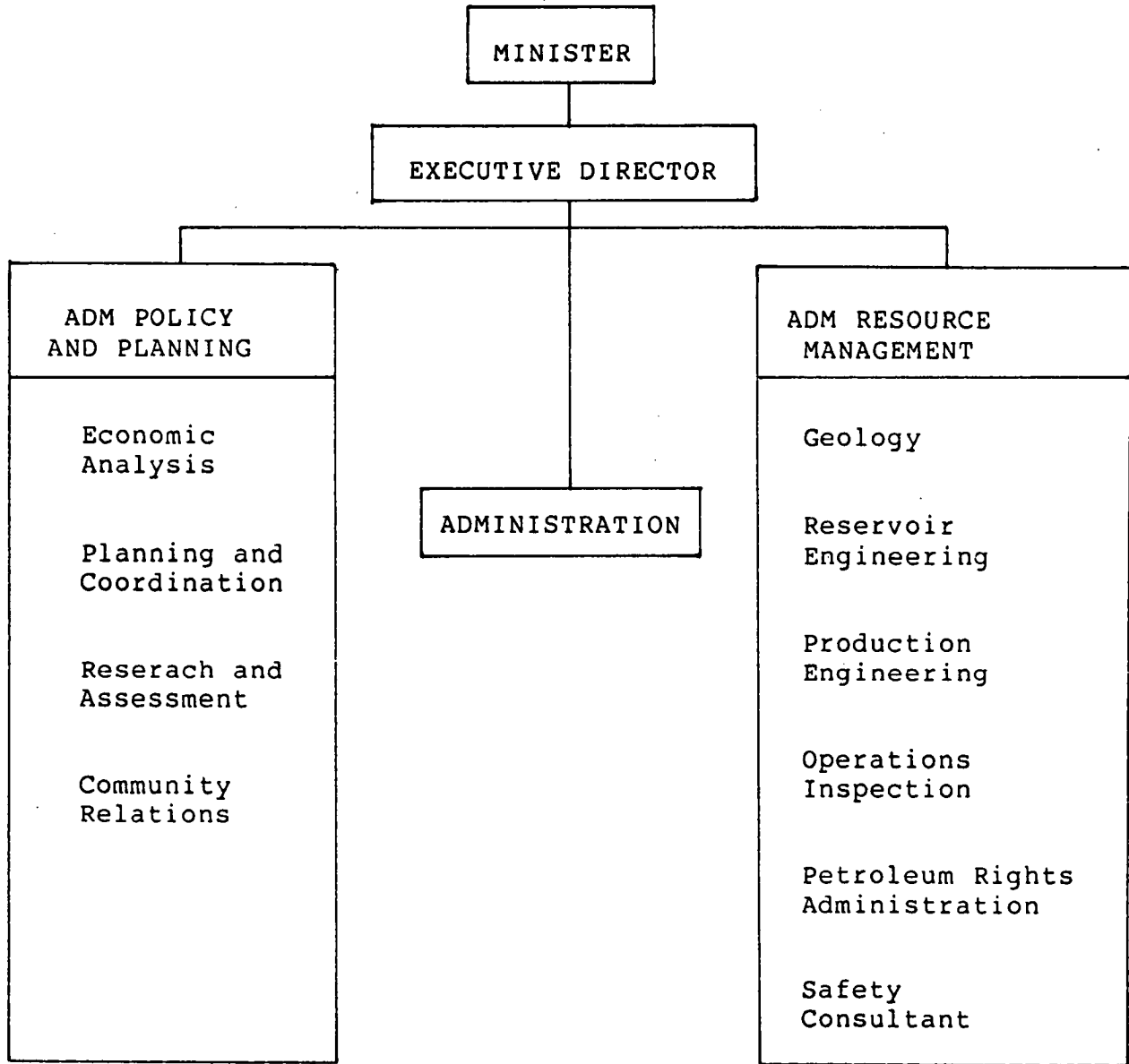


Figure 2.4

informally as points of information referral and as "interpreters", spokesmen or advocates of public interests, mainly through the mass media or through workshops, seminars, community meetings and other public forums. In this latter role, special interest and public advocacy groups are especially influential in formulating public opinion on oil and gas activities.

Further information on these sources is available in Table 2.7 (Nova Scotia) and Table 2.8 (Newfoundland and Labrador).

* * *

Copies of the Directory of Offshore Information Sources may be obtained from IDP Consultants Ltd., the authors of this report. For further information on availability and pricing, write:

Information Services,
IDP Consultants Limited,
P.O. Box 188, Stn. "C",
St. John's, Newfoundland A1C 5J2

TABLE 2.7: OTHER INFORMATION SOURCES, OIL AND GAS, EAST COAST OFFSHORE, NOVA SCOTIA

<u>Organization/ Agency Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Services</u>	<u>Remarks</u>
Bedford Institute			
Community Planning Association (CPAC) Maureen Vine	To provide information on a wide variety of issues related to land use planning, community development and environmental issues. To assist community groups on issues related to land use planning. To provide an educational service.	Regular Newsletter Library Speakers Workshop Planning - AID Program <u>Offshore Monitor</u> (irregular newsletter) Annual report	Materials are prepared on a project by project basis as issues
City of Halifax Industrial Commission David Miller	Information role chiefly one of responding to inquiries from firms interested in getting established in Halifax and to notify existing businesses of impending developments.	Mailing List Information Kit	Public knowledge of offshore rated as low.
Dalhousie University			
Dalhousie Ocean Studies Program			

Table 2.7 (Cont'd)

<u>Organization/ Agency Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Services</u>	<u>Remarks</u>
Halifax Library Association Judy Reade	To provide information services to members, university and the general public.	Brochure listing over 20 libraries in the Halifax- Dartmouth area which have materials in their collections dealing with oil and gas. Distribution to businesses, all contributing libraries and local organizations.	
Offshore Trade Association of Nova Scotia Janice Hare (175 member companies) (OTANS)	To provide information for members, mainly business representing all sectors of the Nova Scotia economy.	Mailing List Seminars Studies/Reports Meetings	Major meetings sponsored for presentation on offshore oil and gas industry. Analysis of levels of business activities and provide information on business opportunities.
Cape Breton Offshore Trade Association (CBOTA) Helen Thomson			
Institute for Resource and Environmental Studies			
Ecology Action Centre			
Halifax Board of Trade Dacrid Gardner	Information role mainly one of responding to direct inquiries and directing people to right source of information. Information to serve mainly members only.	Periodicals Brochures Speakers	Few inquiries from general public.

TABLE 2.8:

**OTHER INFORMATION SOURCES, OIL AND GAS,
EAST COAST OFFSHORE, NEWFOUNDLAND**

<u>Organization/ Agency Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Services</u>	<u>Remarks</u>
Community Services Council Marie Hedderson Sara Walsh	To provide information upon request on social and community issues.	Resource Centre Information Referral Centre Posters Brochures Workshops Oil and Gas Bibliography Newsletters	Information Referral Centre: approximately 1500-1600 calls per year, of which 100-120 are concerning oil and gas. Resource Centre collections policy is not systematic. Primary databases include Health and Welfare Canada database and Canada Council on Social Development (Social Planning and Research Exchange System SPAREX Catalogue).
Alliance for Community Planning (Oil and Gas) (17 member associates and groups) Joanne Cag	To provide a province-wide forum for community-based organizations and interest groups in oil and gas. - to encourage the development of appropriate information, educational and training services for public participation - to increase public awareness - to solicit necessary finances	Workshops for interested persons on various aspects of oil and gas development. Written materials associated associated with workshops.	Also meets with government departments, agencies and others. Lobbying group. Co-ordinates activities aimed at the social impact of oil and gas
Inter-Church Commission on the Social Impact of Resource Development Joanne Cag			Information needs include: a) access to experts b) funding c) two-way dialogue on "bread and butter issues" such as economy and employment d) more "technological" information e) more information on companies Suggested information media: a) touring exhibit mobile bus b) person-to-person information c) information office
Ocean Ranger Families Foundation Cle Newhook			
Community Alcohol and Drug Dependency Commission of Nfld. and Labrador Eve Beck	To provide information on addictions services and research.	Resource Centre Posters Brochures Papers Library Bibliography Speakers	File on addictions research and and resource development. No prepared public information specifically on oil and gas.
Canadian Mental Health Association Mary Martin Rowe	To provide information and referral on mental health services and and research	Posters Brochures Booklets Speakers	Study on possible impact on mental health from resource development in preparation.
Canadian Wildlife Society	To provide information on issues concerning wildlife and ecology/natural environment.	Newsletter Meetings Workshops	Committee on resource development. Newsletter provides information on environmental issues oil and gas to members.

Table 2.8 (Cont'd)

<u>Organization/ Agency Contact</u>	<u>Public Information Responsibilities</u>	<u>Public Information Services</u>	<u>Remarks</u>
St. John's Planning Office City of St. John's Mark Shrimpton	To provide information of public interest to citizens of St. John's and others.	Monthly Newsletter Library Bibliography Brochures Booklets Trade Shows Reports	
St. John's Board Board of Trade Valerie Wicks	To provide information on business opportunities in St. John's. To provide information to members on issues which concern them.	Answer business inquiries Speakers Newsletter (for members) Membership Directory Publications List (in press) Surveys Booklets Slide Show	
Memorial University Centre for Cold Ocean Research and Engineering (C-Core)			
Earth Sciences			
Institute of Social and Economic Research (ISER)			
School of Continuing Studies and Extension Elayne Harris Sally Lou LeMessurier	Public adult education and information services.	Division of Educational Technology Library Brochures Video Modules Bibliography Workshops Periodicals (<u>Decks Awash</u>)	

Note: Other organizations and agencies which maintain information on oil and gas activities or answer public inquiries include:

- Community Housing and Support Services (CHAS)
- Newfoundland and Labrador Federation of Co-ops
- John Howard Society
- Newfoundland Status of Women Council
- Provincial Advisory Council on the Status of Women
- Newfoundland and Labrador Federation of Municipalities

APPENDIX C
ANNOTATED CATALOGUE OF
PUBLIC INFORMATION MATERIALS

1.0 PURPOSE AND SCOPE

The purpose of the catalogue, which includes both print and non-print media, is to describe existing public information materials and to identify their sources in government, industry and elsewhere. Such a catalogue provides:

- (1) an inventory of existing public information materials;
- (2) information on topical coverage, geographic focus and levels of information;
- (3) information on sources of information;
- (4) criteria for evaluating the level of information and quality of the material.

Similarly, the scope of the catalogue was restricted to public information materials produced specifically for the general public by selected industry, government and other focused sources. It excludes such public information as newspaper and magazine articles, most technical reports except those listed in public information sources, and scholarly articles and books. This catalogue is not therefore a register of all information available to the public, though it fairly represents those sources listed in the directory. A database or annotated catalogue which listed data from sources of information other than those in the directory was beyond the mandate of this study, but should be developed at a later time, preferably as part of a **public information database**. The scope, focus and methods of recording and evaluating materials were established following consultation with government and industry representatives, and information experts such as librarians.

2.0 SOURCES OF MATERIALS

The collection and evaluation of existing materials has been an ongoing aspect of this project. A number of sources were identified and materials solicited from the following:

- (1) various departments and agencies of the Government of Canada;
- (2) various departments and agencies of the Government of Nova Scotia;
- (3) various departments and agencies of the Government of Newfoundland and Labrador;
- (4) industry and trade associations, especially the Canadian Petroleum Association (CPA)/Offshore Operators Division (OOD), and others;
- (5) individual operators;
- (6) university-associated departments, agencies and associations in Canada, Nova Scotia, and Newfoundland;
- (7) information centres such as libraries and institutes;
- (8) special interest groups; and
- (9) private publishers.

To assist in collecting materials, a directory of sources of public information was compiled (see Appendix B).

3.0 LIMITATIONS

Most public information is produced by a specific agency, government department or company, is distributed in limited numbers and is often restricted to a specific project, process, or activity. Accessing is generally by direct request only. The range of materials and sources is wide, and systematic accessing is difficult. Government checklists were used to access information published by government departments in the Government of Canada and the Government of Nova Scotia. No checklist has been maintained by the Government of Newfoundland and Labrador. Collection and cataloguing of these materials has been primarily ad hoc, by contacting relevant departments and indexing department collections. **The lack of a central checklist of these publications is a severe limitation on public information access in Newfoundland and Labrador in particular.**

Apart from film catalogues of non-print media published by some of the operators and by the National Film Board, most operators do not maintain publications lists or catalogues of public information materials. Industry materials listed in this catalogue were solicited directly from industry representatives through both survey and personal contacts. The lack of a central checklist of all industry print media also limits public information access.

It should be noted that neither the annotated catalogue nor the directory of information sources can be considered complete and definitive, and should be regarded as preliminary only. Many catalogue entries were determined by the material sent to the compiler. If public information material was not sent by an operator or government department, or a selection only was sent, this is represented in the catalogue by gaps and omissions. There were few means of checking for completeness of entries against bibliographies, checklists or publications lists as few exist. The catalogue is biased towards sources such as the Government of Canada as this source maintained an available, annotated checklist, and therefore catalogue entry could be more systematic and complete.

4.0 DOCUMENTATION METHODOLOGY

An annotated catalogue was chosen as the means for compiling an inventory of existing public information materials on oil and gas development. The scope of this catalogue is all public information materials published in, or including information about, the East Coast Offshore.

The type of materials catalogued include the following:

- dictionaries, reference materials directories and encyclopedias;
- curriculum materials which include printed and non-printed works;
- policy and statistical publications.

For each catalogue entry, a conspectus was drawn up to accommodate the wide range of material types and subjects. This provided a rapid topical summary while also giving an overall perspective. The conspectus also provided a tabulation of details which may be easily adapted to a computerized data base. In addition, in its present form it has been used statistically to assess the scope of coverage, subject perimeters and parameters, geographic focus, comparative strengths and weaknesses of the materials, and give an indication of collection intensity by designated levels of information as shown in section 5.0 of this Appendix. Where appropriate, checklist catalogue numbers were included.

The catalogue has been divided into two main sections:

- I. Print Media
- II. Non-Print Media

4.1 CONSPECTUS

Each catalogue entry contains the following information in the following order:

1. Title
Full Title
Printed in bold type at the beginning of the entry.
2. Series Title
Where a work is part of a series, this is indicated.

3. **Place of Publication or Production**
Always given where known followed by a colon:
4. **Publisher, or for Films, Agency for Whom the Film was Produced**
Follows the place of publication or production.
5. **Date of Publication or Production**
Year, if given. Year in square brackets if the date or any other publication information is uncertain. The abbreviation n.d. indicates that the date is not known.
6. **Format of Material**
Noted for both printed and non-printed work by the following designations:
 - Book - Bound, >50 p.
 - Report - Bound, spiral binding, >10 p., technical language/
style and content
 - Booklet - Bound, <20 p.
 - Brochure - Bound or folded <10 p.
 - Leaflet - Folded <5 p., usually 1 p. folded
 - Typescript - Stapled, typed manuscript
 - Factsheet - 1 p. verso and recto
 - Periodical
 - Poster
 - Slide/Tape
 - Video/Cassette
 - Film
 - Microfiche
7. **Collation**
Tells how many pages there are or whether the printed work is illustrated, in colour and contains maps and charts. For films the collation notice indicates the length of the film, the format (e.g. 16 mm) and whether or not the film is in colour, if known.
8. **Geographic Coverage**
Indicates the geographic region, area and place covered by the material using standard designations. The designation International indicates non-specific geographic coverage.

The following geographic areas have been identified on the basis of materials collected:

International

Canada

Canada - International

Canada - Arctic

Canada - Offshore

East Coast Offshore

Atlantic Provinces
Newfoundland
Labrador
Nova Scotia
St. John's
Halifax

Newfoundland - Hibernia
Nova Scotia - Venture

9. Subject Area

Indicated by listing of designated key subject area and subject subdivision

10. Level of Information

In order to indicate the level of information the following designations are given:

(a) Basic Information Level

Up-to-date or general materials that serve to introduce and define a subject, and support secondary school or routine public inquiries.

(c) Augmented Information Level

A wider selection of materials of sufficient intensity to support reading demands of an educated general public and college-level study or independent inquiry.

11. Annotation

Briefly describes the work. Catalogue annotations are compiled from labels, short citations, published summaries and examination of materials.

4.2 KEY SUBJECT AREAS

Key subject areas were selected to provide broad headings for the classification of materials. The criteria for selecting these key subject areas were based on relevant classifications suggested by standard reference, the materials themselves and the limited information available on perceived public needs. These may be further adjusted and refined. The key subject areas were subdivided by more specific subject divisions which further delineated the information contained in the materials.

1. Reference

- a) Checklists and catalogues
- b) Bibliographies
- c) Dictionaries
- d) Handbooks and guides

2. General Information - Background

- a) Energy sources, renewable and non-renewable
- b) Resources and reserves
- c) World petroleum and natural gas exploration, development and production
- d) Canada's conventional petroleum resources
- e) Oil and gas development in Canada
- f) Oil and gas development in Newfoundland/Nova Scotia
- g) Phases of development
 - exploration
 - development
 - production
 - abandonment

3. Environment - Geology/Marine Land

- a) Physical and chemical characteristics of oil and gas
- b) Petroleum geology and geophysical exploration
 - location of fields
 - geomorphology oil and gas structures
 - exploration success and geological risk
- c) Marine environment
 - environmental features and hazards (fall and winter storms, pack ice, icebergs, fog)
 - oil spills and pollution (surveillance, clean-up, compensation)
 - marine hazards, interference, gear conflicts, disturbance of marine life cycles, fishery access, mitigative measures
- d) Land issues (construction activities, production activities)
- e) Environmental Impact Statements and associated materials

4. Technical (Includes Production and Transportation)

- a) Reservoir production characteristics
- b) Well drilling and control
 - facilities and materials
 - methods of production and equipment
 - fixed platform

- floating platform
- fixed-floating
- c) Transportation facilities and methods
 - tanker
 - pipeline
 - storage systems
- d) Petroleum refining and products/chemicals industry
- e) Storage bases and support services
 - construction sites needed
 - materials and facilities (platforms, wellheads, loading buoys, tankers)
 - location of construction sites
 - location of service/support bases

5. Economic/Financial

- a) World petroleum and natural gas markets
- b) Calculation of oil prices/petroleum demand
- c) Crude oil prices and OPEC
- d) Refining economics
- e) Business opportunities (new business, expansion, upgrading, supply/support, Canada Benefits)

6. Education/Training

- a) Curriculum materials
- b) Jobs
 - creation/estimates of number of jobs
 - location
 - sources of information
- c) Training
 - acquisition of new skills
 - training programs
 - retraining
 - assistance

7. Health/Safety

- a) Occupational health
- b) Occupational safety

8. Policy

- a) Petroleum laws and regulations
 - mineral rights
 - law of the sea
 - environmental legislation
 - safety

- b) Role of government in petroleum industry
 - jurisdiction
 - control
 - regulations/laws
 - policies

- c) Role of industry
 - policies
 - activities

5.0 FINDINGS

Public information on oil and gas activities is produced by a multitude of agencies on a variety of subjects using diverse media. Nearly 600 items of print and non-print materials were entered and classified in the catalogue. The following highlights the quantitative findings about the nature and disposition of this material.

As shown in Figure 5.1, government (provincial, federal and municipal) produces over half of all available print information with the Government of Canada the single largest source. The large government share reflects in part its role and public interests in resource management, regulation, enterprise, research and development, and in part the bias of the catalogue itself, as noted in Section 3.0 of this appendix.

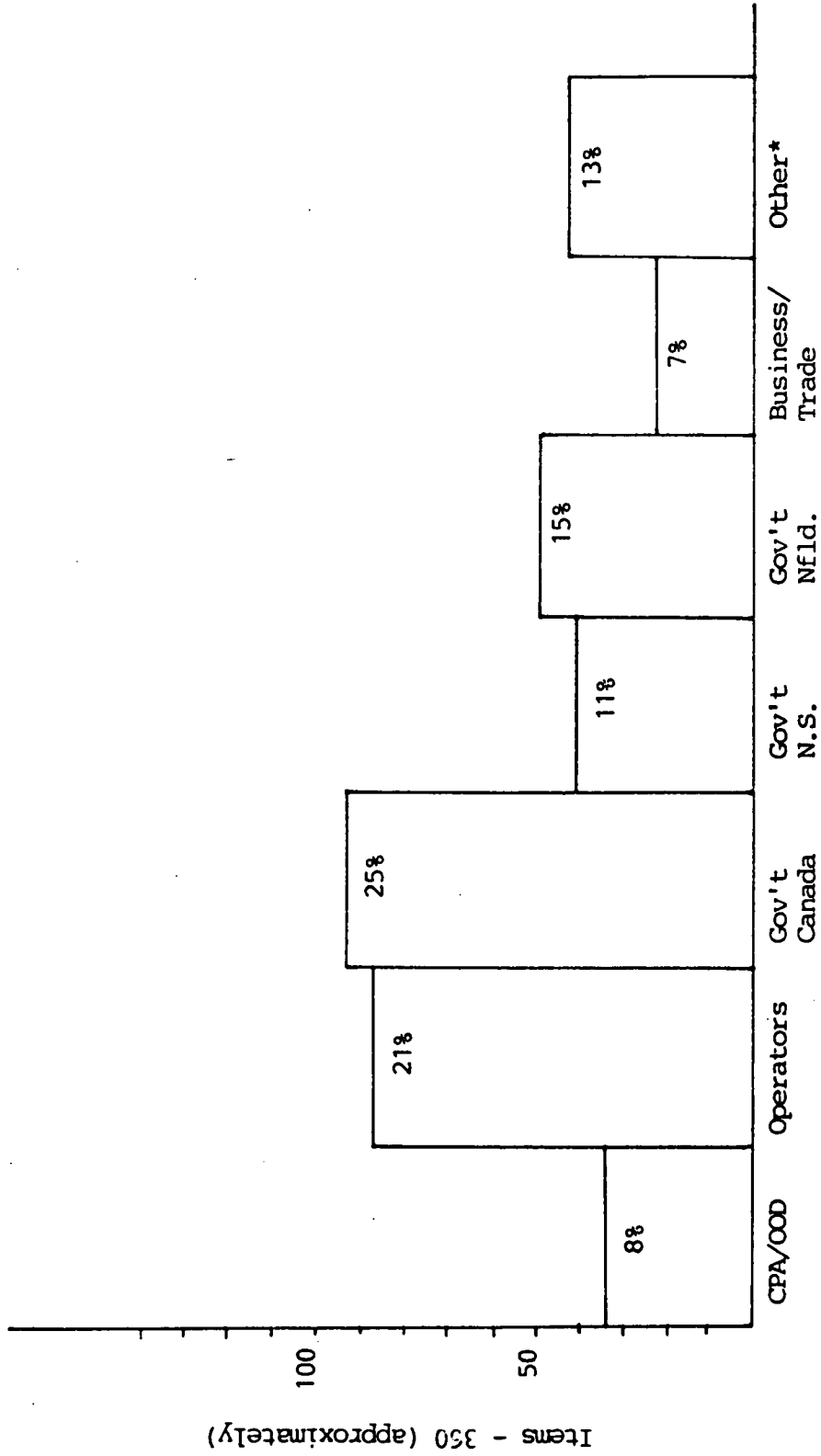
The next single largest source was individual operators who together with the Canadian Petroleum Association (CPA) and its Offshore Operators Division (OOD) produce nearly a third of all materials.

Public information on oil and gas activities in the East Coast offshore apart from industry and government is also provided by a number of organizations and agencies (shown in Figure 5.1) which may be classified as follows:

- technical and academic agencies and institutions;
- business and trade associations;
- public information, and adult and other education services;
- municipal, rural development and community planning groups;
- special interest and public advocacy groups.

The sources or issuing agencies are listed in the Directory of Public Information Sources (Appendix B).

Public information material includes news conferences, newspaper inserts, press releases, annual reports, Canada Benefits documents, reports and studies required by the Environmental Review Process, project brochures, posters, books and booklets, newsletters, popular periodicals, speakers, films, slide/tape presentations, video-cassettes, models and samples, an information centre, and programs such as community meetings, conferences and seminars, school visits and trade shows and exhibitions. The range of materials according to media selection is shown in Figure 5.2.



* Includes municipal, university, research and development and special interest groups.

Figure 5.1 Summary, Print Materials by Source

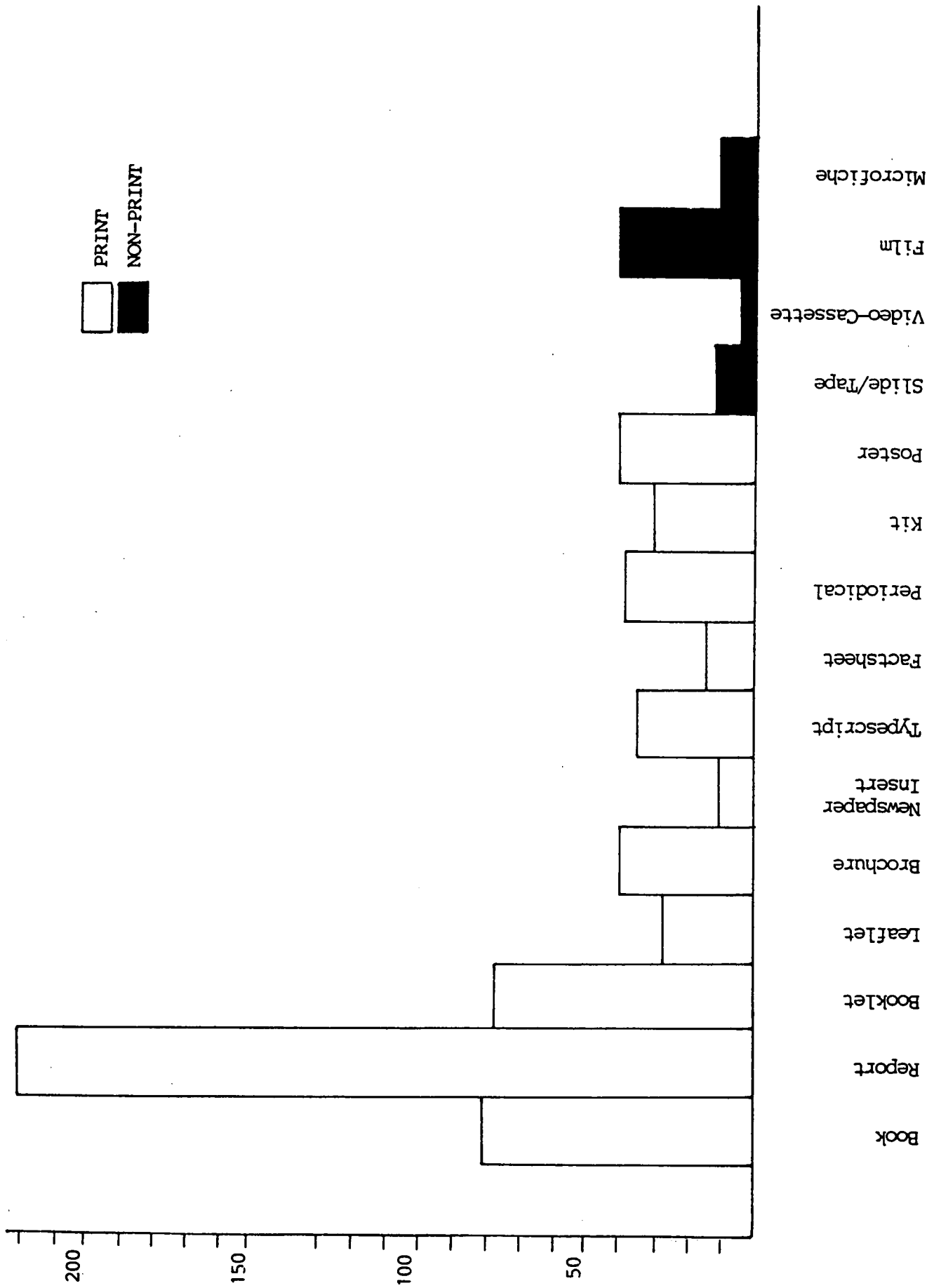


Figure 5.2 Summary, Print and Non-Print Materials by Media Selection

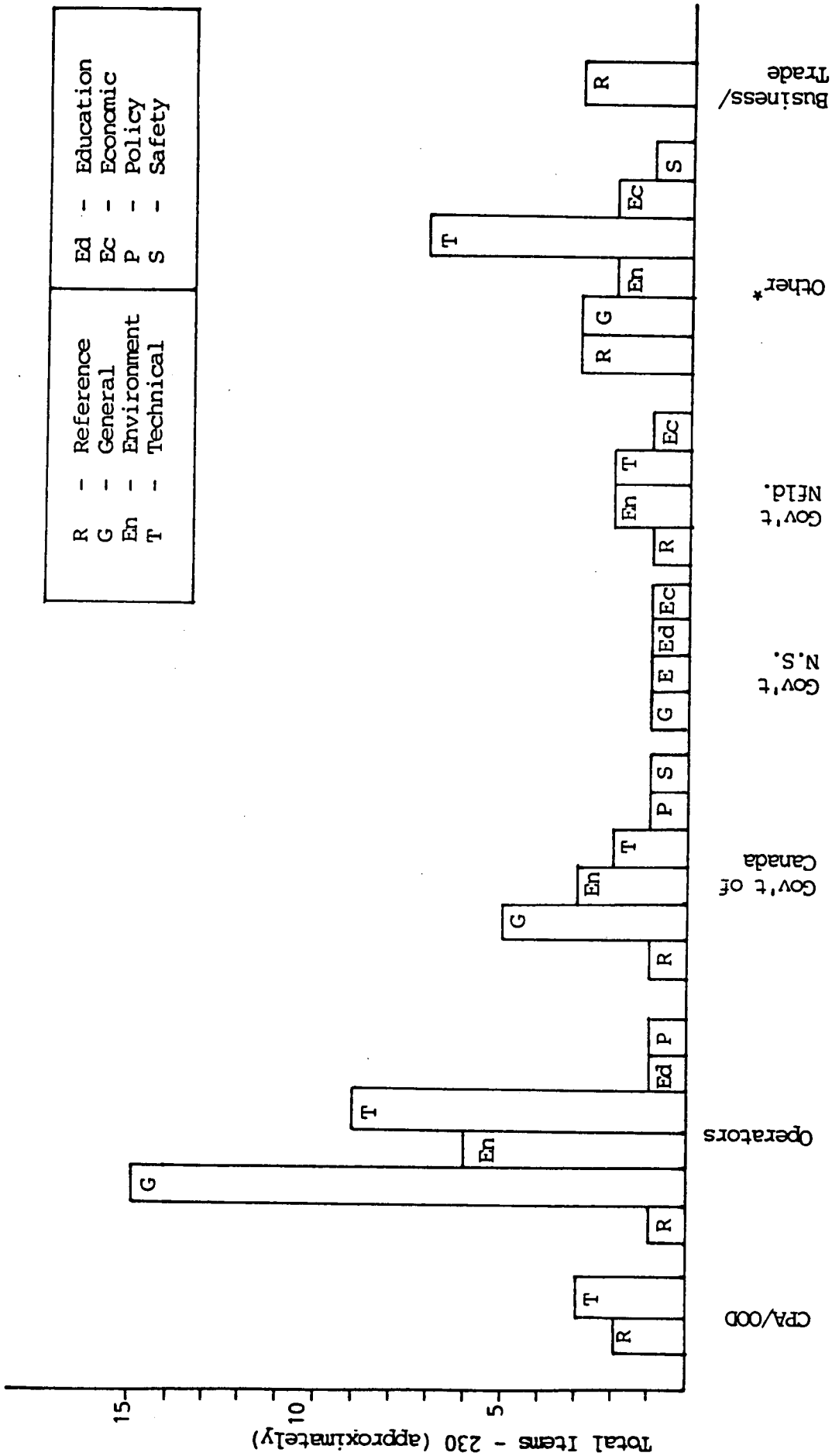
As shown in this figure, print media was predominant with government and technical reports the single largest category. Books, leaflets, brochures, typescripts, newspaper inserts, factsheets, periodicals and information kits comprised the remainder of materials on the East Coast Offshore. Information kits, such as those provided by Mobil Oil Canada, Limited, which offer a selection of materials and key subjects on particular projects, were the smallest single category of print materials.

Non-print materials, shown in Figure 5.3, are mainly produced by operators and by film and education agencies such as the National Film Board (NFB) of Canada, the Extension Service of the Memorial University of Newfoundland (now the Department of Educational Technology of the School of Continuing Studies) or private educational media companies and foundations such as the Petroleum Communications Foundations. Most films produced by operators are international in scope and most of the NFB films and educational media businesses concern conventional oil and gas activities in Western Canada.

As shown in Figure 5.3, there are available a number of international Canadian reference works such as petroleum dictionaries, encyclopedias and statistical handbooks, a selection of which are listed in the annotated catalogue. Bibliographies and lists of holdings and publications are maintained by some government departments or agencies, research and other institutes such as libraries, associations like the CPA/OOD and by special interest groups.

While there are extensive computer databases on technical and environmental subjects such as the Arctic Studies Technological Institute (ASTIS) bibliography, there is no database comprising reference, general, environmental, technical, economic, policy, health and safety, education and training, and socio-economic materials on the East Coast Offshore. Similarly, individual operators, government agencies and others generally do not maintain basic reference materials such as checklists or publications lists. **The lack of a systematic, central database, as well as current publications lists and checklists and other finding aids about information, limits the ability of the general public to select and access materials to meet their information requirements.**

There are also significant gaps in information currently available on topical issues such as education and training, health and safety, economy and policy, as shown in Figures 5.3 and 5.4. These topics have already been identified as priority public information needs (see Volume I, sections 2.0 and 3.0). While most general public information touches upon these key topics, the information contained is often too vague, insubstantial or dated to be useful.



* Includes municipal, university, research and development and special interest groups.

Figure 5.4 Summary Non-Print Media by Source and Key Subject

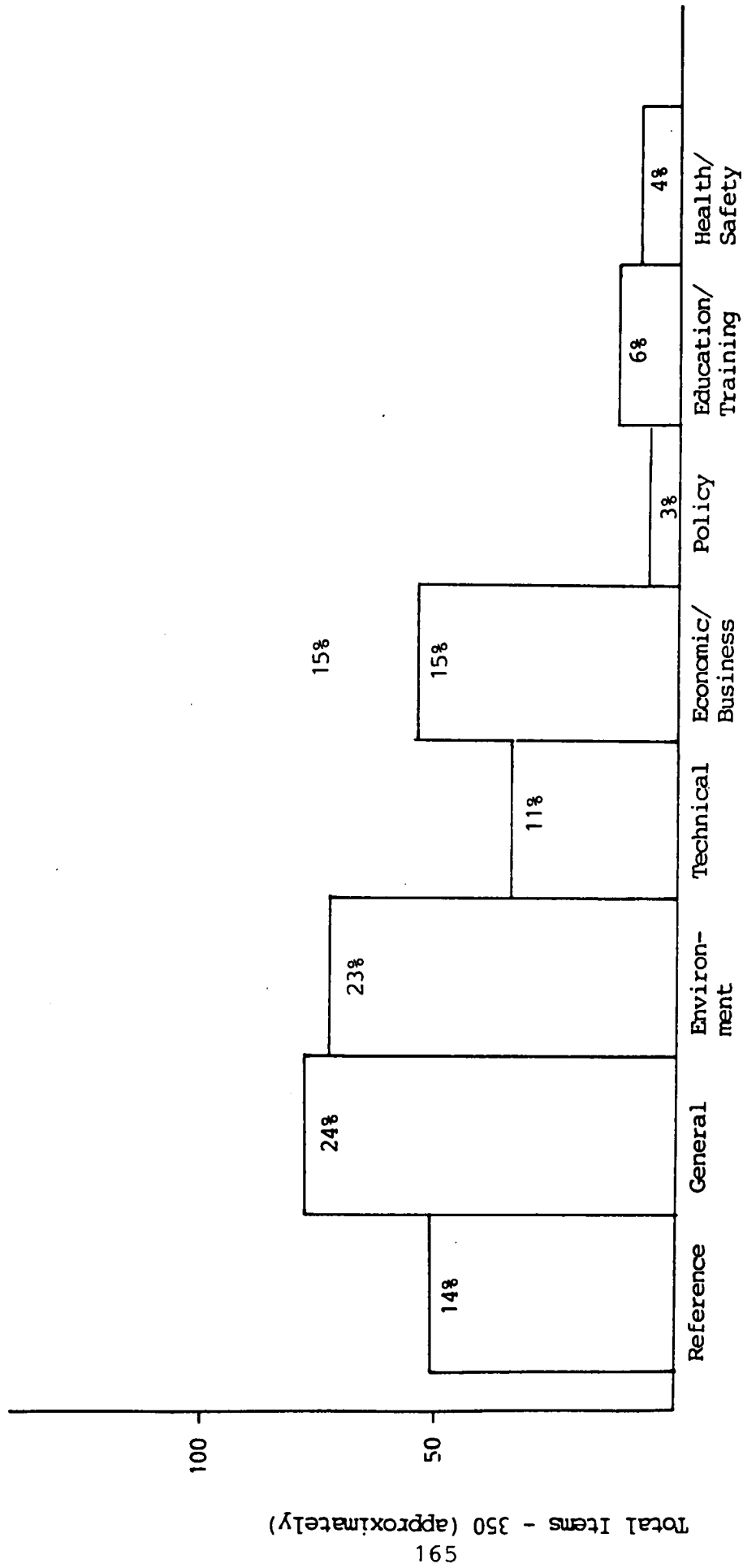


Figure 5.3 Summary, Print Materials by Key Subject

As shown in Figure 5.5, print and some non-print materials on the East Coast Offshore in general, and Newfoundland and Nova Scotia in particular, are available in sizeable numbers. However, specific project information, or regional and local information (at the county, municipal or community level) is available only in very small quantities, as shown in Figures 5.5 and 5.6. Information specifically tailored for areas where developments are occurring (Guysborough County-Canso area and Halifax in the case of Nova Scotia), or where they may occur (in the case of Newfoundland, Placentia, Come By Chance, Avalon Peninsula, St. John's) were cited as priority information needs in discussion groups (see Volume I, section 3.0).

Most print and non-print public information materials, with the exception of mass media information such as radio, television and newspapers, are available from issuing agencies by direct request only. This places the responsibility for identifying and selecting information almost completely on the general public, who are not information specialists or industry experts.

Access to information means both the means and right of access. In Canada, the right of access is based partly on federal regulatory requirements and legislation concerning materials classified as public.

Access to information in federal government departments is described in the registers of the Freedom of Information Act. This register identifies classes of records containing material on the East Coast Offshore in various government departments and agencies such as Energy, Mines and Resources. A summary of pertinent East Coast Offshore information for Energy, Mines and Resources, the major department responsible for oil and gas, is contained in Figure 5.7. Application for information must be made through the deputy minister responsible for the sector or agency in question in any department.

Access to information in provincial government departments in Newfoundland and Nova Scotia is also covered by legislation. In Newfoundland the Freedom of Information Act (1982) makes provision for access by the general public to information held by government departments and agencies. There is no checklist or register of files. Application for information must be made to the deputy minister responsible for the department or agency. In Nova Scotia access to information is provided under the Freedom of Information Act.

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The catalogue described above is being continuously updated by IDP Consultants Limited, the authors of this study. Further

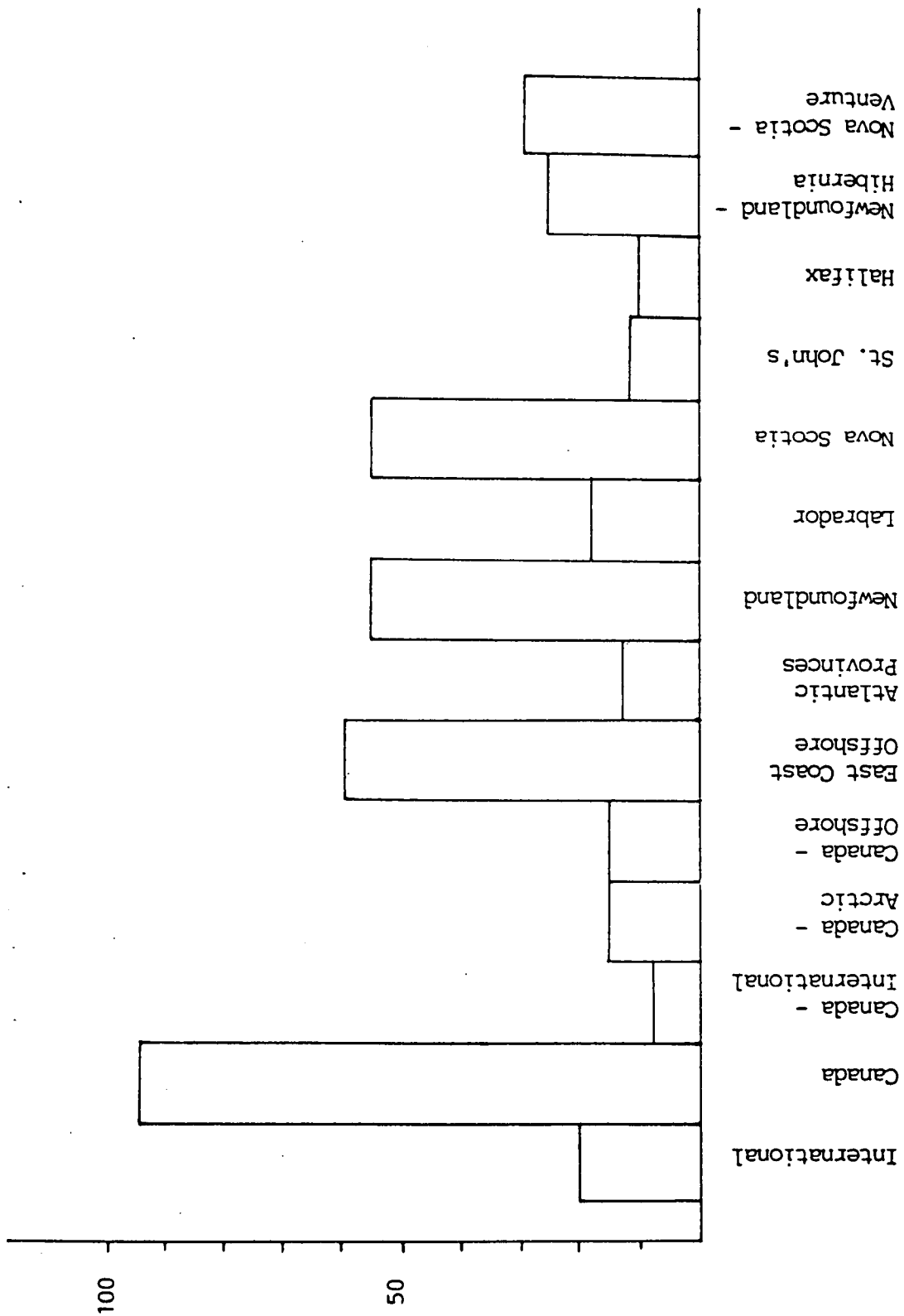


Figure 5.5 Summary, Print Materials by Geographic Area

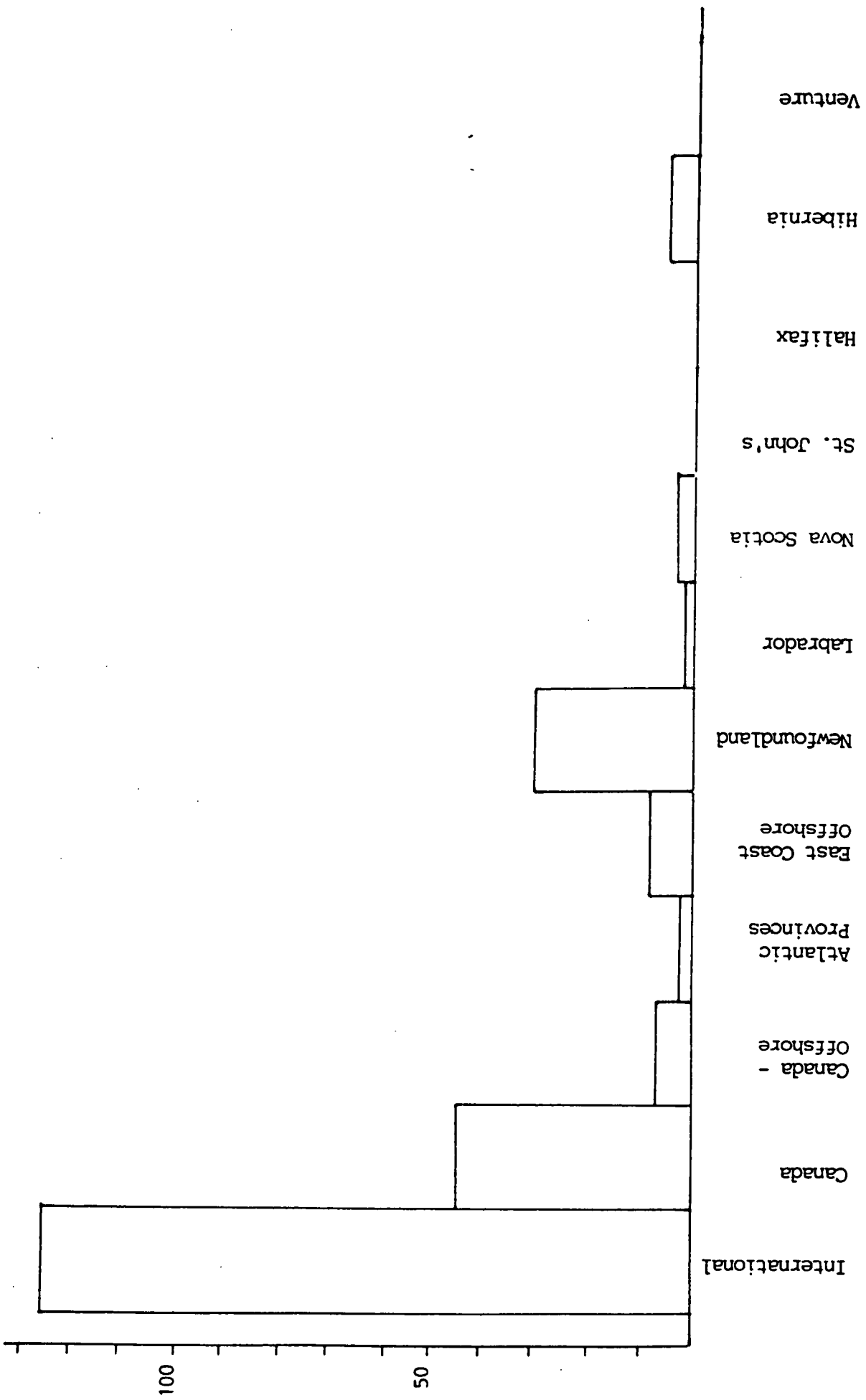


Figure 5.6 Summary, Non-Print Materials by Geographic Area, East Coast Offshore

**FIGURE 5.7. SUMMARY, FREEDOM OF INFORMATION ACT REGISTERS,
DEPARTMENT OF ENERGY, MINES AND RESOURCES**

<u>Department/Agency</u>	<u>Manuals</u>	<u>Classes of Records</u>
Petroleum Incentives Administration (PIA)	Operating Procedures - Petroleum Incentives Program (PIP) - Canadian Ownership and Control Determination Program (COCD) Manual of Interpretation of COCD Regulations (under development) Policy and Precedents Manual - PIP Program Case Assessment Criteria Manual - PIP Program	EMR 330: Policy, Rulings and Evaluation
Canada Oil and Gas Lands Administration (COGLA)	Procedures Manual for Offshore Mineral Rights Procedures Manual for Orders in Council Accounting Procedures Manual for Oil and Gas Permits	EMR 340: Resource Management
Energy Supplies Allocation Board	Crude Oil Allocation Manual Petroleum Products Allocation Manual Gasoline Rationing Manual Petroleum Emergency Allocations Systems Manual	EMR 350: Energy Emergency Planning
Energy Policy Analysis Sector (EMR)		EMR 110: Macroeconomic Analysis EMR 120: Canadianization Program EMR 130: Energy Demand and Price Analysis EMR 140: Energy Supply Analysis EMR 150: Energy Statistics EMR 160: Energy Policy Planning EMR 170: Financial and Fiscal Analysis EMR 180: International Energy Relations EMR 190: Special Studies EMR 200: Monitoring - Petroleum Monitoring Program
Petroleum Sector (EMR)	Oil Import Compensation Program Procedures Manual New Petroleum Resources Compensation Program Procedures Handbook Domestic and Foreign Petroleum and Petroleum Products Levy Program Procedures Handbook Standard Procedures for Petroleum Measurement at Seaports	EMR 270: Natural Gas Liquid EMR 280: Distribution System Expansion Program (DSEP) EMR 290: Transmission System Expansion Program (TSEP) EMR 300: Petroleum Compensation EMR 310: New Oil Reference Price

details on the catalogue--its availability, cost, and applications--can be had by writing:

Information Services,
IDP Consultants Limited,
P.O. Box 188, Stn. "C",
St. John's, Newfoundland A1C 5J2