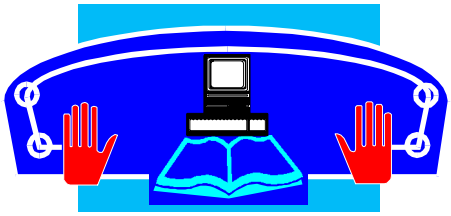

The Norman Wells Experience - Response By Renewable Resources
Date of Report: 1993
Catalogue Number: 6-1-96

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Financial assistance provided by Indian and Inuit Services.

Government of the Northwest Territories
Submissions to the

Beaufort Sea Environmental Assessment Panel

1983

THE NORMAN WELLS EXPERIENCE

John Donihee

September 1983

A. INTRODUCTION

The Beaufort Sea Environmental Assessment and Review Panel has received submissions from Federal and Territorial Government agencies and departments which outline their broad responsibilities and capabilities if Beaufort developments proceed. The purpose of this submission is to supplement the information on the Department of Renewable Resources, Government of the Northwest Territories, by outlining our responsibilities, capabilities and concerns in responding to hydrocarbon development projects and with special reference to our experience to date with the Norman Wells Expansion and Pipeline Project.

The Proponents of the Norman Wells project stated repeatedly in the various regulatory proceedings that it was "just a small pipeline". This may be true. It is true in comparison to even the 'small' development scenario described by Dome, Esso and Gulf in their Environmental Impact Statement (EIS). But, we should not ignore the fact that the' Norman Wells project is the largest project built in recent years in the Northwest Territories. ' Despite the difference in scale between Norman Wells and proposed Beaufort projects, we believe that an examination of our Norman Wells-related experiences can lead to recommendations to the Panel which could result in more effective management for Beaufort development.

In each of the sections which follow, I will begin by reviewing the position taken by our Department in regulatory proceedings dealing with the Norman Wells project, discuss action taken by our department once the project received conditional approval, and describe our experience to date in fulfilling our responsibilities in relation to the project.

B. DEMANDS FOR FORCED GROWTH

Our Departmental responsibilities related to industrial projects in the NWT simply cannot be met for Beaufort development with existing staff and budgets.

In the Norman Wells Environmental Assessment and Review Process (EARP) hearings, the Department of Renewable Resources identified the demands which the Interprovincial Pipelines Ltd. (IPL)/Esso project proposals would place on the Department. We stated that existing programs and priorities would suffer from the demands of an unanticipated development. We explained that the Department would only be capable of fulfilling needs associated with the development if adequate funding and manpower were provided.

The Norman Wells Project EARP Panel requested that the Department estimate the actual requirements of Norman Wells development. In our response to the Panel, and later in the National Energy Board (NEB) hearings, the Department provided estimates of the resources we would require during the preconstruction, construction and early operation stages. The tasks undertaken by staff would be:

1. review of oil spill contingency plans
2. preliminary and final design review
3. development and implementation of training programs for new and existing staff
4. training a surveillance team
5. conservation education for residents of communities affected and for southern workers
6. surveillance of construction
7. monitoring effects of the project.

Of the above list, the Department has not participated in contingency -planning and has only recently been able to expand conservation education. The involvement that we have had in design reviews by virtue of the NEB conditional approval and the constraints that it placed on interaction between the companies and interveners has caused difficulties which will be described later.

Other tasks which the Department should have undertaken to enhance our preparations for development in the Mackenzie Valley were identified in the hearings as:

1. baseline research on woodland caribou in the Mackenzie Valley.
2. development of woodland caribou, moose and furbearer management plans for the Mackenzie Valley.

We have made little progress in addressing these issues because of lack of sufficient resources and higher priority placed on wildlife studies elsewhere.

In retrospect, given our lack of experience at the time, I believe our Department predicted real needs for response to the Norman Wells project fairly accurately. Should we be called upon to predict real needs for proposed Beaufort development, I would like to express my concern about our ability to do so. We have no experience with developments of that possible magnitude. Close

cooperation and definition of roles between governments and industry will be essential for effective planning.

After the Norman Wells project was conditionally approved, special forced growth funding was granted, in 1981, by the Honorable Mr. Munro to the Government of the Northwest Territories. Our Department received adequate funds for work related directly to the project, but funding was not sufficient to address the need for preconstruction data on the environment.

Money for Norman Wells forced growth eventually became available for use in the fall of 1982. It covers a start-up period in 1982-83, a full complement of staff and programs in 1983-84 and 1984-85, and winds down in 1985-86.

Forced growth funding for the Norman Wells pipeline project resulted in the creation of four term positions within the Department of Renewable Resources. A monitoring biologist and the Field Supervisor are currently based in Yellowknife. The latter supervises two wildlife officers who are working in Fort Simpson and Norman Wells. He also coordinates the activities of the regular wildlife officers when they are needed for pipeline-related work.

The Pollution Control Division of our department is responsible for our role in contingency planning for oil spills and action when spills occur on highways, and regulates handling,

disposal and contingency planning for toxic chemicals. This Division has received no special funding.

Because of our limited funding base and commitments to work in other parts of the NWT we have made little headway on the management plans in the Mackenzie Valley about which the Department was concerned three years ago. Questions about moose, caribou and furbearers unanswered then, remain unanswered. Assessment of effects of major projects in the Mackenzie Valley, including other pipelines would still benefit from such work.

Secretarial, administrative, and supervisory duties associated with the Norman Wells project have been added to the workload of regular Departmental staff in Yellowknife.

The Department was able, then, to increase its staff concurrent with the Norman Wells development to a lesser extent than the need we anticipated in 1980.

Because the pipeline part of the project is just beginning -- the first winter construction season will be 1984 -- it is too early to know whether present staff will be able to respond to all pipeline-related demands.

The National Energy Board's conditional approval of the IPL pipeline has also had several negative side effects for us. It created confusion between our role as an intervener and our role

as a regulator. This hampered cooperation between ourselves and the company as strict rules of procedure continued to apply until the leave to construct was granted, once all supplementary submissions by the proponent were approved. Secondly, it created a large and unanticipated workload for interveners, both Government and native organizations.

Recently, high priority needs for planning, research and monitoring in the Beaufort and High Arctic areas were recognized through a special Federal funding program. Accelerated baseline and planning strategy work was funded through the Northern Oil and Gas Action Program (NOGAP) coordinated by DIAND. While initial funding was made available in the last quarter of the 1982-83 fiscal year, the administrative constraints imposed made useful applications of the resources difficult. We had to spend the money by March 31, 1983 and could not carry over into the summer field season. We began studies optimistic that resources would be provided so that we could continue work in 1983-84. This has not been the case. In fact funds are no longer certain at all 'and they will in any case not be provided before April 1984. The project scenarios for which research and planning exercises will be funded do not conform to the large scale plans being discussed in these hearings. They are limited to a small-scale pipeline and a small scale tanker scenario.

When such special funding programs do become available in future to address forced growth needs, it is important to

structure them so that continuity is possible and to reflect the reality of 'field seasons and wildlife biology.

c. PROJECT REGULATION

In its evidence before the Norman Wells EARP and NEB, the Department stressed the importance of project regulation to the environmental successes and failures of the project. Our submission to the NEB said in part:

> The structures established to implement the terms and conditions of the project control will affect the success of efforts to mitigate the effects of this project. Regardless of the good intentions of the proponent, completing the project must be his major priority. Many decisions with environmental consequences will be made in the field and will require on-site inspections and approval by qualified officers.
>
> Individual agencies acting independently to enforce their own legislation would cause considerable confusion. But we also have reservations about the single super-agency approach as it is being exercised elsewhere by the Northern Pipeline Agency. . . We consider its approach too narrow for dealing with the entire range of impacts.

The EARP Panel did not make any recommendations with regard to regulation of the Norman Wells pipeline. The Norman Wells project is now virtually underway -- clearing of some spreads was done during the winter of 1982-83, and no special regulatory procedures have been implemented.

The Department of Renewable Resources is involved in surveillance and enforcement of aspects of the project relating to our mandate.

The Field Supervisor and field staff have received a variety of training to carry on their duties. All staff are specially trained in enforcement of the Environmental Protection Ordinance, administered by our Pollution Control Division. Training in oil - spill prevention and response has been provided. All field staff have attended an environmental land management course run by the petroleum industry in Hinton, Alberta which provides them with some experience of the activities associated with pipeline building.

Wildlife Officers involved in pipeline inspection activities are expected to enforce the Wildlife Ordinance and the Environmental Protection Ordinance. They must deal with problem wildlife, hydrocarbon spills on highways and in communities and the" safe handling of toxic chemicals. They will assist in inspection of operations on Commissioners! Lands for compliance with stipulations of permits issued by the Department of Local Government. However, in these matters any enforcement will be handled by officers of the Department of Local Government. .In addition, our officers hold ex-officio appointments under the Migratory Birds Convention Act and the Fisheries Act and may assist officers of those departments in field surveillance and monitoring. The Department is taking the opportunity provided by the Norman Wells project to train our officers in areas other than those strictly related to wildlife. Our officers will bring to the attention of DIAND or the NEB inspectors any problems they come across related to land use stipulations.

Unfortunately, as we anticipated in our presentations to EARP and --the NEB, there is a lack of co-ordination among Government departments with regard to surveillance and enforcement plans. The primary actors are of course, the National Energy Board and the Department of Indian Affairs and Northern Development. In addition, the Canadian Wildlife Service, Environmental Protection Service, Department of Fisheries and Oceans and the Government of the Northwest Territories all have regulatory mandates.

Because action on such a construction project will occur so fast, the National Energy Board inspectors and DIAND land use inspectors will have to make decisions and issue permit amendments without consultation with other agencies. Communications will be a problem once the trenchers are rolling. To date, no significant attempts have been made to coordinate government involvement in surveillance and enforcement on the pipeline project. Both DIAND and our government have established 'pipeline coordinating offices' which have to date focused on liason and communication.

In its clearing program of 1982-83, the IPL's environmental inspectors effectively maintained environmental standards along the line. As the pressures of actually constructing the pipeline mount, environmental concern may give way in face of time or budget constraints. Future mainline construction enforcement programs should be carefully planned to ensure that regulatory agencies are present when required and that they do not impede operations of the company when they are not.

The Trans-Alaska pipeline, while a much larger project than Norman Wells, can be used in some ways as a model on which to base our surveillance efforts. While recognizing the many differences between the two projects and making no assumptions about the level of IPL's performance, certain problems can be anticipated During construction in Alaska, fuel spills were a major and continuing problem. Whenever fuels are stored, transferred or transported, accidents can happen. Whenever spills of fuel to be used on the Norman Wells project occur, the company is responsible for clean up and restoration. Government should not be expected to handle spills except as a second line of defence. In fact, our government will not be capable of providing extensive assistance. Under its Certificate of Necessity and Convenience from the NEB, the environmental agreement with the Federal Government and the easement agreement with the GNWT, IPL must produce acceptable contingency plans for handling spills. To date, plans produced by the company are not considered adequate by this Department.

From the Alaskan experience, we could anticipate problems with unnecessary terrain disturbances, herbicides, chemicals and fertilizers, erosion control and river and stream crossings. Although this Department does not enforce conditions relating to all those areas, failure either of the stipulations in producing

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1 Norton, David. 19'76. Effects of the Trans-Alaska Oil Pipeline Construction Phase on fish and Wildlife Management. Mackenzie Valley Pipeline Inquiry Vol. 138 p. 20941-20983.

Zemanski, Gil. 1976 Environmental Non-compliance and the Public Interest. Mackenzie Valley Pipeline Inquiry Vol. 199 p. 31550-31580.

Memo from D. Tilden to J.B. Wilson - attached.

the desired result or the enforcement in ensuring the stipulation is 'followed will result in unnecessary environmental disturbance and, eventually, problems for wildlife or wildlife habitat. Therefore, they are a part of our concerns too, if indirect.

Dr. Norton, in his evidence before the Mackenzie Valley Pipeline Inquiry, mentioned the 'double standard' problem:

> Occasionally when some of the projects the Department oversees are within sight of the Alyeska project, Alyeska has screamed 'double standard' because they perceived a contractor or a miner getting away with something for which JFWAT would have nailed Alyeska's hide to the wall. It is much to the credit of the over-worked regular Habitat Protection Officers that these charges never held up . . .

In dealing with other government agencies, however:

> . . . The appearance of letting a state agency do something Alyeska was not allowed to do (altering stream banks and the active flood-plain close to chum salmon spawning grounds) damaged our credibility . . .

Both the level of regulation (standards) and evenness of application (fairness) are real concerns. There were frequent complaints that the Aleyska oil pipeline was over-regulated. We have already heard complaints from IPL and its contractors about over-regulation and could expect resistance from them to any demands for the implementation of environmental protection measures any more stringent than those imposed on Government agencies or other companies carrying out development activities in the north. IPL's complaints about the standard of compliance on Government projects being less than that of their own was in at least one instance justified. Government standards have to be applied in a uniform manner--even to Government agencies. However, some excess of zeal in regulation may also be expected in

dealing with the largest private project to be built to date in the Northwest Territories.

The potential overlap among the concerns of the various Federal and Territorial departments is considerable for the Norman Wells project or any other major development. Of equal concern should be the lack of experience in coordinating, regulating and monitoring major hydrocarbon developments in the North among many of the agencies involved. Government has been reviewing proposals for years. Norman Wells is our first opportunity to roll up our sleeves and do the job.

In discussing regulation of the Beaufort development, the Proponents state (Vol. 7, 1.3):

> In general, while some additional staff may be required by government to handle the increased workload generated by increasing activity in the Beaufort Sea region, at this time there appears to be little need to add to the existing government regulatory structure (that is, additional review bodies or committees). The existing regulatory mechanisms (in terms of subject area and boards, committees and agencies involved), are comprehensive with observation and control of all aspects of industry activity.
>
> Although there are some apparent areas of duplication of regulatory responsibility, . . . the system is effective. No major changes are seen to be necessary other than those that take place in a gradual, evolutionary manner consistent with changing conditions.

I agree with the Proponents that no new regulations or regulatory committees should be necessary. Indeed, the current framework may require some simplification to streamline it. While the Proponents acknowledge the demand for staff and resources necessary to ensure environmental standards are enforced

in the field, they do not mention that the trained staff and resources required for enforcement and surveillance of projects such as those proposed are simply not available at this time.

In other words, Proponents! view of government capabilities, on the ground, greatly exceeds our own. As I mentioned earlier, my department has required extra money and manpower simply to respond to developments of the scale of Norman Wells.

We recognize that as the density of industrial development increases in the North, environmental protection will require a better coordinated and better organized regulatory effort and more sophisticated surveillance, enforcement and monitoring. Proposals for streamlining the regulatory effort often eliminate regional concerns. I urge the Panel, should they consider recommendations of this nature, to consider the legitimate local and regional responsibilities and concerns in such a streamlined or 'one window' system. A Beaufort management model which provides no access to decision-making by Northerners or the Northern government will be a dubious improvement. Our recommendation to the NEB that other regulatory models (such as the Joint State/Federal Fish and Wildlife Advisory Team (JFWAT) used in Alaska) should be investigated is still a valid one. Other planning and regulatory models for the Beaufort Sea might also be considered; land use planning commissions for instance, once a land use planning system is implemented.

D. MONITORING

The term 'monitoring' is often misunderstood. In this submission 'monitoring' refers to:

1. the study of the effects of a project on the environment. These studies rely on a comparison of circumstances prior to development with circumstances subsequent to the development. Monitoring studies should be designed to identify and evaluate short and long term trends and effects
2. the effectiveness of mitigative measures
3. surveillance and enforcement efforts concerned with compliance by the company to environmental stipulations and conditions.

There are, of course, clear requirements for monitoring by IPL in the NEB Certificate of Convenience, the Environmental Agreement between the Company, DIAND and the Government of the Northwest Territories as well as in the easement agreement with the company. However, little coordinated action in this regard has occurred to date. The company's interests in terms of monitoring have been fairly narrowly defined to matters such as erosion, revegetation and slope stability which are more closely related to engineering concerns. Now that IPL has received leave to construct, it is expressing interest in a wider range of monitoring studies.

The Department of Renewable Resources has hired a monitoring biologist for the Norman Wells project. His plans to conduct monitoring studies are hampered by limited funding available and by continual demands for his input on regulatory and other project-related action. Since his position is only funded until 1985, no long term monitoring is planned.

Our biologist is a member of the Norman Wells Research and Monitoring Group. The group was initiated jointly by several federal departments in response to our urging in mid 1982 and consists of the Environmental Protection Service, Canadian Wildlife Service, Inland Waters Directorate Department of Fisheries and Oceans, Canadian Forrestry Service, DIAND and ourselves. Their purpose is to co-ordinate monitoring studies which are still in their formative stage.

Monitoring the effects of a project must necessarily begin with some understanding of preconstruction conditions. The Norman Wells EARP recommended:

> 14. It is recommended that IPL undertake baseline studies on hunted and trapped species to provide information aimed at both the assessment of the impact of the pipeline construction and operation on wildlife, and the development of mitigation measures.

To our knowledge no work has been done in relation to recommendation 14. To provide preconstruction information, field work should have begun at the latest in the winter of 1982 - 1983. Because we have lost the opportunity to develop an adequate preconstruction baseline, neither our studies nor any monitoring studies developed in the future by IPL can truly be comprehensive.

Other recommendations from both Norman Wells EARP and NEB are also relevant to the questions of a monitoring program. The Norman Wells EARP recommended:

> 26. It is recommended that, in consultation with the Government of the Northwest Territories, the Department of Environment, DIAND or a contracted non-government agency carry out an evaluation of the impact management process in order to improve on impact evaluation and mitigation on the Norman Wells and future projects.

As far as we know, nothing has been done in response to recommendation 26. The NEB said (Reasons for Decision p. 97):

> The Board accepts the undertakings of the Applicant with respect to the environmental monitoring and surveillance of the proposed pipeline. The Board also is of the view that a comprehensive and coordinated monitoring program is necessary to maintain the integrity of the line and to ensure the success of proposed mitigative measures. The Board would require the Applicant to file for approval, prior to leave to open being granted, the complete monitoring and surveillance schedule proposed for the pipeline system. (emphasis added)

We are unaware of progress that IPL has made in meeting this requirement.

Monitoring programs should have immediate practical application. Ideally, they would operate with built in feedback loops to the company and appropriate regulatory agencies. Once a problem is identified by the monitoring program, further mitigation, compensation or rehabilitation may be possible on the current project. If not, lessons learned from one project can nevertheless be applied to the next.

E. LAND USE PLANNING

Submissions from the Department of Renewable Resources to the Norman Wells EARP and NEB identified the lack of use planning in the NWT and particularly in the Mackenzie Valley as a significant gap. Pleas for land use planning were common in the Mackenzie Valley Pipeline Inquiry and formed part of Justice Berger's 1977 recommendation to the Federal Government.

The Department said to the Norman Wells Panel:

> By reacting to proposals such as the one from the applicant on a project-by-project basis, Government defers or abdicates the responsibility for comprehensive planning. Other options for use of some lands may be sacrificed without being considered... Land use planning should provide a mechanism for the resolution of conflicts between renewable resources and non-renewable resources. It is a tool for integrated resource development. ,

After a long period during which progress on the planning question appeared negligible to non-existent and during which there were repeated calls for development of a planning mechanism, DIAND announced in late 1980 that a land use planning process would be established in the north.

The Government of the Northwest Territories, native associations (excluding COPE) and DIAND have negotiated a framework for a land use planning process which should be implemented early in 1984. The attached document entitled "July 28 Draft Land Use Planning in the Northwest Territories" outlines the stuctures and process envisioned. Although priority areas for

planning have yet to be formally identified, it is highly likely that the Beaufort Sea region will be one of the first areas addressed.

The agreed-to process would see a Planning Commission whose role, among other things would be to:

1. to develop a land use plan for the region and recommend this plan to federal and territorial governments for approval
2. consider amendments to plans upon the request of the two Ministers responsible (DIAND and Renewable Resources)
3. initiate reviews of proposed activities which are at variance with a plan
4. monitor developments proposed for a planning region to ensure conformity with the plan and report annually to the Ministers on the implementation of the plan.

Clearly once the land use planning process is operational it will go a long way towards eliminating some of the confusion among both public and industry on issues such as location of acceptable coastal areas for port sites, etc. One remaining concern is that many commitments will be made in the Beaufort Region which will simply have to be accommodated by a plan. I do not suggest that development should wait for planning, however, I point out that many of the longer range decisions being considered in these hearings will be overtaken by land use planning.

F. COMPENSATION

In the EARP hearings on Norman Wells expansion the Department (p. 1463 ff.) stated:

> The proponent's plans and current government programs are not sufficient to guide and control the project should it be approved . . . The proponent failed to provide contingency plans for environmental protection... At the application stage, plans for spill prevention and containment and disposition of oil and hazardous chemicals should be explained in considerable detail . . . Many of the costs associated with the impacts of large scale development and renewable resource use are indirect. Because costs and benefits of this project would be geographically separate, it is important to maximize benefits derived from renewable resources by the residents of the area of project impact. The concept would require direct negotiations among both federal and territorial governments and the proponent.
>
> If the project proceeds, the proponent must accept a broad responsibility toward compensating resource users for direct and indirect impacts. Compensation should take three forms; direct monetary payment to individuals for claimed losses; the onus of disproving the cause and extent of such losses should be the responsibility of the proponent; rehabilitation and revegetation of disturbed areas . . .; and habitat enhancement research.

Of the areas of responsibility for compensation outlined above, IPL has identified plans related only to one - revegetation and rehabilitation. Although Mr. Bill Pearce said (Norman Wells EARP transcript p. 1497):

> We are experienced in the compensation of people who are upset and generally our experience is in land owners. . . We have not had too much experience in negotiating with trappers.. .and to that end, we ought to produce a plan with the community help, advice from government, which can come up with a form of compensation plan recognizing the disturbance we cause to the trapper and the time for which we disturb him, but also to ensure that we also are treated fairly.

To date, IPL has contacted us but has not discussed a detailed compensation plan with either our Department or the native

associations. They have hired someone to ensure that trappers are personally notified before their operations begin. The same person will handle claims from the trappers against the company unless other arrangements are made.

We have prepared a Policy on Compensation, an outline of which has already been submitted to the Panel by my Minister, for resource harvesters since the Norman Wells hearings. This policy approach varies little from that provided by the Proponents in their response to deficiencies identified by the Panel. I am certain that we can work out the details with the Proponents and implement a program in the Beaufort Region in a timely fashion.

G. RECOMMENDATIONS

The Norman Wells oilfield expansion and pipeline is a real project, now proceeding in the Northwest Territories, which offered government agencies opportunities to learn. Many of those opportunities have already been lost and there is no assurance that the others will be taken up. Priorities of governments seem to rest on the front end of projects. Once hearings are over, the next project claims our attention. In this case it is the Beaufort which is now claiming the most attention and where once again all agencies will clamour for a "comprehensive and coordinated monitoring" program. Action to date in organizing monitoring studies in the Mackenzie Valley for the Norman Wells

project does not make me confident that either Industry or government has serious interest in determining what the environmental problems of building a pipeline in the Mackenzie Valley really are, as opposed to what they were predicted to be.

To help offset the problem, we need what is termed 'adaptive environmental assessment'. That is, early environmental work cooperatively planned by the companies and concerned government agencies. Land use planning should help clear the air and facilitate the communication necessary to approach development planning more openly.

I would like to restate some of the cogent lessons we have learned from our involvement with the Norman Wells project to date:

1. Conditional approval of the pipeline project resulted in a long-term drain on the financial and personnel resources of our department. We were not permitted input to the terms of reference of supplementary studies by the NEB. When the objectives of those studies were unclear, reviewers were hampered in dealing with the material. Direction from the NEB requiring IPL to respond to our comments in substantive ways was rare except for the winter clearing Environmental Protection Plan. The implications of conditional approvals should be recognized by the bodies recommending them especially when they want continuing inputs from reviewing agencies or other interveners whose resources are limited.

2. The Government of the Northwest Territories reviewed all Norman Wells EARP recommendations and attempted to act on as many as possible. As a result of problems we encountered, we request this Panel to make its recommendations as specific as possible in four ways by:

   a. Considering whether your recommendations are possible within the available time before development begins.

   b. Recognizing what the scale of the recommendation is - what it demands in time, manpower, money, etc.

   c. Stating which specific agency or company or groups should be involved in acting on the recommendation and which should take a leadership role. If recommendations are not followed, it should be clear who has chosen not to act on them.

   d. Indicating the extent to which proponents should accept financial responsibility for implementing recommendations.

3. Lack of co-ordination between government agencies charged with enforcing legislation and regulations applicable to the project may result in regulatory inefficiencies, at best or at worst, gaps in the enforcement efforts. .The coordination and planning of surveillance and enforcement programs for any large project should be planned early after approvals are granted. Thus, approval of any large projects will create a need to review regulatory frameworks and for agencies with field staff, to upgrade and train personnel to prepare them for their role in project development.

4. Government agencies and IPL appear from action to date to have limited interest in conducting monitoring studies. This problem can be avoided in future by early definition of the various parties' interests and intentions with regards to monitoring through a cooperative effort. Once requirements are identified, regulatory agencies must insist on compliance.

5. Lack of preconstruction data on the biological systems in the Mackenzie Valley will limit effectiveness of monitoring studies.

6. Funding must be available to handle forced growth. Our funding for Norman Wells work is adequate but was provided too late to collect preconstruction information on the environment and will end too early for us to determine postconstruction effects. With suitable funding, our Department could fulfill its responsibilities for projects in the Beaufort region such as a small diameter pipeline or transportation of oil and gas by a few tankers. Without funding, our Department will be unable to respond to any level of development in the Beaufort region.

7. The intent of the NOGAP program to conduct planning and research studies to achieve a state of preparedness to deal effectively with hydrocarbon development was good.

However, if the Panel recommends programs like this be enacted to collect predevelopment information then we would prefer that funding:

a. be provided at the beginning of our fiscal year and not during the eleventh month

b. and that each year of the program is confirmed before the year begins.

8. Monitoring studies collecting predevelopment information must be planned on a scale in anticipation of accelerated developments in the future. It would be an error to design programs and studies only for a small diameter pipeline or a few tankers. Like the Proponents' project design, the federal and territorial governments monitoring designs will have to involve the entire Beaufort region, be anticipatory and include continual information exchange with the Proponents.

9* Experience with Norman Wells should be applied, when appropriate, to Beaufort region project designs. This would have benefits for

a. government agencies in designing monitoring studies

b. proponents of projects in that they would be dealing with knowledgeable and experienced government departments

c. pipeline companies in incorporating design lessons from Norman Wells

d. effects identified from Norman Wells activity may be mitigated for Beaufort projects.

10. Our predictions of our departmental needs depend in part on the role we take as a regulator. We have legislative responsibilities and any recommendations for a Beaufort Management model must reflect these responsibilities. Our experience with Norman Wells reinforces our remarks to previous Panels that a co-ordinated response to development by government is required. In addition, regional and local interests should be part of the decision-making process.

CURRICULUM VITAE

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