

Chapter One: Introduction

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Chapter One: Introduction

The Alaska Department of Natural Resources (ADNR) is offering for lease all available state-owned acreage in the North Slope Areawide Oil and Gas Lease Sale area. The lease sale area consists of all state-owned lands lying between the National Petroleum Reserve-Alaska (NPR-A) on the west and the Arctic National Wildlife Refuge (ANWR) on the east, and from the Beaufort Sea in the north to the Umiat Meridian Baseline in the south (Figure 1.1). The lease sale area contains approximately 5,100,000 acres. Only areas for which the state owns or has selected the oil and gas estate will be leased. Some acreage not owned or selected by the state may be included within identified sale tracts, but only state-owned oil and gas rights within those tracts can be leased.

Areawide leasing provides an established time each year that ADNR will offer for lease all available acreage within five geographical regions of the state: the North Slope, Beaufort Sea, Alaska Peninsula, North Slope Foothills, and Cook Inlet. By conducting lease sales at a set time each year, ADNR provides industry with a stable, predictable leasing program, which allows companies to plan and develop their exploration strategies and budgets years in advance. The result is a more efficient exploration and earlier development, which, in turn, benefits the State of Alaska and its residents. Areawide sales are also more efficient for the public and ADNR.

A. Areawide Leasing

1. Authorities

The Alaska Constitution provides that the state’s policy is “to encourage ... the development of its resources by making them available for maximum use consistent with the public interest” and that the “legislature shall provide for the utilization, development, and conservation of all natural resources belonging to the State ... for the maximum benefit of its people” (Alaska Constitution, article VIII, §1 and 2). To comply with this provision, the Alaska State Legislature enacted Title 38 of the Alaska Statutes (AS 38) and directed ADNR to implement the statutes.

Alaska statutes govern the disposal of state-owned mineral interests. AS 38.05.035(e) says that upon a written finding that the interests of the state will be best served, the director may, with the consent of the ADNR commissioner (commissioner) approve contracts for the sale, lease or disposal of available land, resources, property, or interests in them. The written finding is known as a best interest finding and describes the lease sale area, analyzes the potential effects of the lease sale, describes measures to mitigate those effects, and constitutes the director’s determination that the interests of the state will be best served by the disposal. ADNR, Division of Oil and Gas (DO&G) makes available both a preliminary and a final written finding and provides opportunity for public comments. The final written finding also discusses material issues that were raised during the period allowed for receipt of public comment.

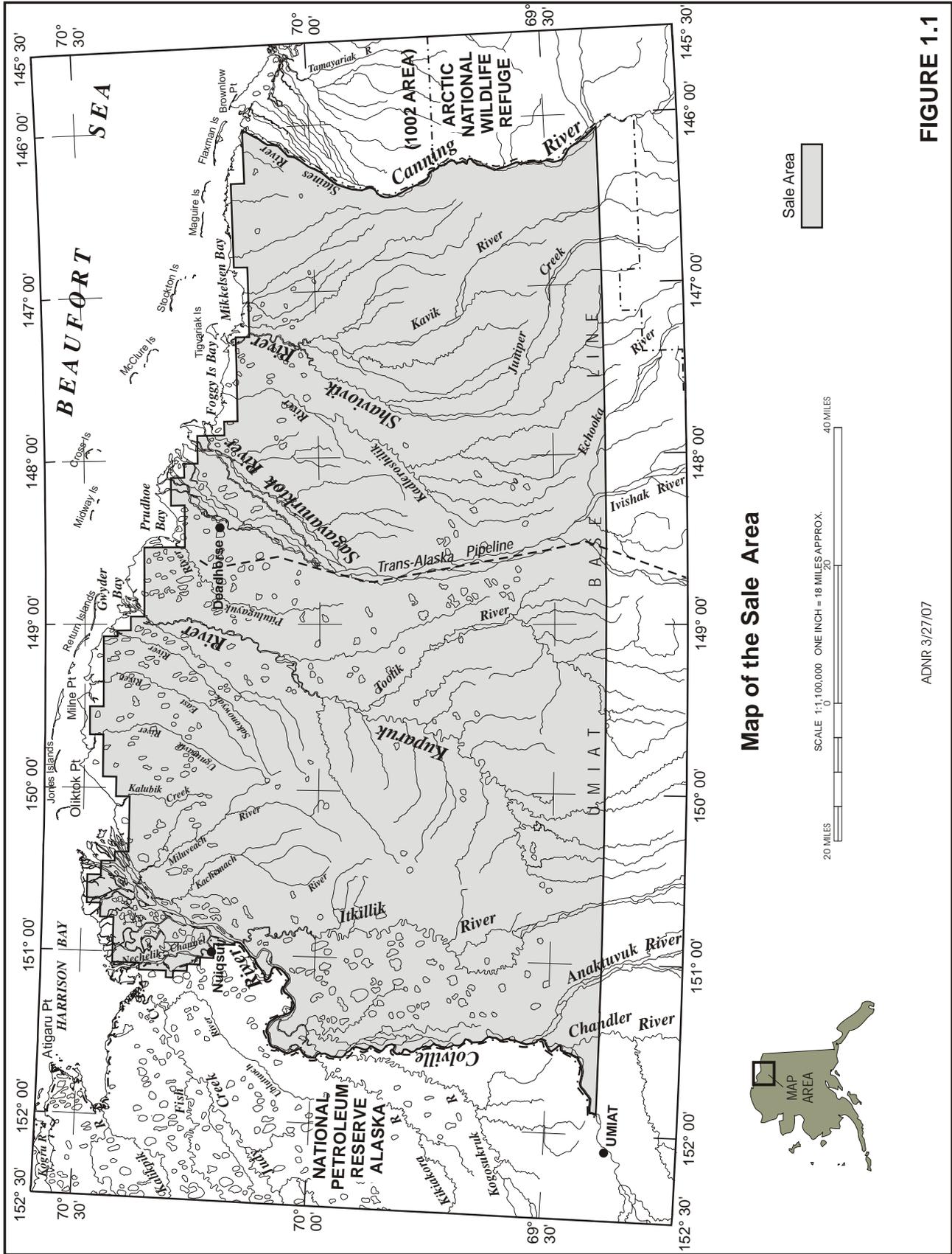


FIGURE 1.1

AS 38.05.035(e) prescribes what, at minimum, must be in these findings. AS 38.05.035(g)(1)(B) lists the following matters that DO&G must consider and discuss in its written finding:

- i. property descriptions and locations;
- ii. the petroleum potential of the sale area, in general terms;
- iii. fish and wildlife species and their habitats in the area;
- iv. the current and projected uses in the area, including uses and value of fish and wildlife;
- v. the governmental powers to regulate the exploration, development, production, and transportation of oil and gas or of gas only;
- vi. the reasonably foreseeable cumulative effects of exploration, development, production, and transportation for oil and gas or for gas only on the sale area, including effects on subsistence uses, fish and wildlife habitat populations and their uses, and historic and cultural resources;
- vii. lease stipulations and mitigation measures, including any measures to prevent and mitigate releases of oil and hazardous substances, to be included in the leases, and a discussion of the protections offered by these measures;
- viii. the method or methods most likely to be used to transport oil or gas from the lease sale area and the advantages, disadvantages, and relative risks of each;
- ix. the reasonably foreseeable fiscal effects of the lease sale and the subsequent activity on the state and affected municipalities and communities, including the explicit and implicit subsidies associated with the lease sale, if any;
- x. the reasonably foreseeable effects of exploration, development, production, and transportation involving oil and gas or gas only on the municipalities and communities within or adjacent to the lease sale area; and
- xi. the bidding method or methods adopted by the commissioner under AS 38.05.180.

A compilation of other laws and regulations applicable to oil and gas activities in Alaska can be found in Appendix B. If the proposed activity occurs in a coastal area, AS 46.40 requires that the activity be consistent with the ACMP, which includes approved local district coastal zone management plans.

2. Public Participation

The public notice statute, AS 38.05.945, includes specific requirements for notice given by ADNR for a written finding under AS 38.05.035(e). These include: publication of both a legal notice and a notice in display advertising in newspapers of statewide circulation and in newspapers of general circulation in the vicinity of the proposed action; public service announcements on the electronic media serving the area to be affected by the proposed action; and one or more of the following methods: posting in a conspicuous location in the vicinity of the proposed action; notification of parties known or likely to be affected by the action; or another method calculated to reach affected parties. Notice must also be given to a municipality if the land is within the boundaries of the municipality; to a coordinating body or a community council if requested in writing; to a regional corporation if the boundaries of the corporation established by the Alaska Native Claims Settlement Act (ANCSA) encompass the land and the land is outside a municipality; to a village corporation organized under ANCSA if the land is within 25 miles of the village for which the corporation was established and the land is located outside a municipality; to the postmaster of a permanent settlement of more than 25 persons located within 25 miles of the land if the land is located outside a municipality, with a request that the notice be posted in a conspicuous location; to a nonprofit community organization or a governing body that has requested notification in writing and provided a map of its boundaries, if the land is within the boundaries.

In addition, AS 38.05.946 provides that a municipality, an ANCSA corporation, or a nonprofit community organization may hold a hearing within 30 days after receipt of the notice. The commissioner also has discretion to hold a public hearing.

The director of DO&G is delegated the authority to make available a preliminary and final written finding and provide opportunity for public comment for a scheduled oil and gas or gas only lease sale (AS 38.05.180). The director signs the best interest finding and the commissioner consents to the director's decision by co-signing the final written finding. A person who is eligible to file a request for the commissioner's reconsideration and who is aggrieved by the final written finding of the director may, within 20 calendar days after issuance of the final written finding, request reconsideration of the decision by the commissioner. A person is eligible to file a request for reconsideration if the person meaningfully participated in the process set out for receipt of public comment by either submitting written comments during the comment period or by presenting oral testimony at a public hearing, if a public hearing was held, and is affected by the final written finding (AS 38.05.035(i)).

A person may appeal a final written finding to the superior court, but only if the person was eligible to request, and did request, reconsideration of that finding at the agency level. In addition, the points on appeal are limited to those presented to the commissioner in the request for reconsideration (AS 38.05.035(l)). By requiring a party to exhaust the administrative review and reconsideration process before appealing to the superior court, the agency is given full opportunity to review, analyze, and respond to the party's points on appeal before litigation. For the purposes of appeal, the burden is on the party seeking review to establish the invalidity of the finding (AS 38.05.035(m)).

3. Best Interest Finding Scope of Review

The director's determination is based upon a review of all facts and issues known, or made known, to the director, which enables him to arrive at a determination whether this disposal serves the best interests of the state. The review and finding address only reasonably foreseeable, significant effects of the uses proposed to be authorized by the disposal (AS 38.05.035(e)(1)(A)). A reasonably foreseeable effect must also be "significant." Significant means a known and noticeable impact on or within a reasonable proximity to the area involved in the disposal.

Public input assists in providing a body of information for the best interest finding review and analysis that is as complete as possible. Information provided by agencies and the public assist the director in:

- reviewing all of the facts and issues;
- determining which facts and issues are material to the decision;
- determining the reasonably foreseeable significant effects of the proposed lease sale.

Therefore, the scope of review and finding for the disposal is limited to applicable statutes and regulations and the material facts and issues known to the director that pertain to the reasonably foreseeable, significant effects of leasing. In preparing the written finding, the director is not required to speculate about possible future effects subject to future permitting that cannot reasonably be determined until the project or proposed use is more specifically defined. The effects of future exploration, development, or production will be considered at each subsequent phase, when various government agencies and the public review permit applications for the specific activities proposed at specific locations in the lease sale area. However, this final finding does discuss, in general terms, the potential effects that may occur from the lease sale.

4. Phased Review

Phased review recognizes that leasing of state land may result in future projects that cannot be predicted or planned with any certainty or specificity at the initial lease sale phase and that will require future detailed review for authorizations needed before commencement. The state cannot determine with any specificity or definition at the leasing phase if, when, where, how, or what kind of production might ultimately occur as the result of leasing. Although advances in technology, unpredictable market change, and specific

infrastructure requirements for possible production cannot be foreseen, new developments or improvements in any or all of these areas may yield answers to some of these questions.

Phasing allows the analysis of leasing to focus only on the issues pertaining to the leasing phase and reasonably foreseeable, significant effects of leasing. Additional authorizations are required for exploration, development, and production phases. When a project is multiphased, review of issues that would require speculation about future factors may be deferred until permit authorization is sought at the exploration, development, and production phases. A discussion of governmental and public involvement at these later phases follows in the section on “Governmental Powers.”

Under AS 38.05.035(e)(1)(C), ADNR may, if the project for which the proposed disposal is sought is a multiphased development, limit the scope of an administrative review and finding for the proposed disposal to the applicable statutes and regulations, facts, and issues that pertain solely to the disposal phase of the project when:

- (i) the only uses to be authorized by the disposal are part of that phase;
- (ii) the disposal is of oil and gas or gas only, and, before the next phase of the project may proceed, public notice and opportunity to comment are provided unless the project is subject to a consistency review under AS 46.40 and public notice and the opportunity to comment are provided under AS 46.40.096(c);
- (iii) the department’s approval is required before the next phase may proceed; and
- (iv) the department describes its reasons for a decision to phase.

B. North Slope Areawide Oil and Gas Lease Sale Process

1. Scope of Review

The conditions under which phasing may occur, as described in the previous section, have been met in the North Slope Areawide Oil and Gas Lease Sale. Accordingly, the review of activities in the lease sale area is of a multiphased development. The director, in making this final finding, has limited the scope of the finding to the applicable statutes and regulations, facts, and issues that pertain solely to the lease phase of oil and gas activities and the reasonably foreseeable significant effects of issuing a lease.

Condition (i) is met because the only uses authorized by the lease sale are part of the leasing phase. The lease gives the lessee, subject to the provisions of the lease, the right to conduct geological and geophysical exploration for oil, gas, and associated substances within the leased area and the right to drill for, extract, remove, clean, process, and dispose of any oil, gas, or associated substances that may underlie the lands described by the lease. While the lease gives the lessee the right to conduct these activities, the lease sale itself does not authorize any exploration or development activities by the lessee on leased tracts.

Condition (ii) is met because the lease sale is of oil and gas or gas only, and before the next phase of the project may proceed, ADNR will provide public notice and the opportunity to comment for any proposed plan of operations in the lease sale area. Additionally, any plan of operations in the lease sale area is subject to consistency with the Alaska Coastal Management Program standards, including public notice and opportunity to comment under AS 46.40.

Condition (iii) is met because ADNR’s approval is required before the next phase (in this case exploration) may proceed. See Chapter Five on the post leasing phases. Before exploration activities can occur

on leased lands, the lessee must secure all applicable permits. Additional authorizations and permits must also be prepared and approved by the state for any subsequent development or production on the lease.

The plans of operations must identify the specific measures, design criteria, construction methods, and standards that will be employed to meet the provisions of the lease. A plan of operations is subject to extensive technical review by a number of local, state, and federal agencies. Oil and gas exploration, development, or production-related activities will be permitted only if the proposed operations comply with all local, state, and federal laws and the provisions of the lease.

Condition (iv) is met because ADNR describes its reasons for the decision to phase in subsection A.4. above.

Therefore, the scope of review in this final finding is limited to the applicable statutes and regulations, the material facts and issues known to the director that pertain to the issuance phase, and the reasonably foreseeable, significant effects of leasing. This includes items required by AS 38.05.035(g)(i)-(x) and all material facts and issues raised by the public during the public comment period. A discussion of the possible specific effects of unknown future exploration, development, and production activities is not within the scope of this finding. The effects of future exploration, development, and production will be considered at each subsequent phase, when various government agencies and the public review permit applications for specific activities proposed at specific locations. However, this finding does discuss, in general terms, the potential effects that may occur with oil and gas exploration, development, production, and transportation within the lease area as well as the mitigation measures to be imposed as terms of the lease and as terms of any subsequent permit to mitigate any possible adverse effects.

2. Best Interest Finding Process

As a result of 1996 amendments, AS 38.05.180(d) allows the commissioner to annually offer leases for oil and gas or leases for gas only of the acreage described in AS 38.05.035(e)(6)(F). Further, a written finding under AS 38.05.035(e)(6)(F) that the interests of the state will be best served is not required before the approval of an exempt oil and gas lease sale or gas only lease sale under AS 38.05.180(d) of acreage subject to a best interest finding issued within the previous 10 years or a reoffered oil and gas lease sale or gas only lease sale under AS 38.05.180(w) of acreage subject to a best interest finding issued within the previous 10 years, unless the commissioner determines that substantial new information has become available that justifies a supplement to the most recent best interest finding. This process is discussed in more detail below (Figure 1.2).

a. Request for Agency Information and Preliminary Best Interest Finding

On July 3, 2006, DO&G issued a *Request for Agency Information* to begin the process of gathering information on the proposed lease sale area. ADNR, Office of Habitat Management and Permitting (OHMP)¹ provided a list of publications and websites to obtain updated information on fish and mammals. The Department of Transportation and Public Facilities said that it was involved in numerous access projects in the proposed lease sale area and was interested in any information or data received from other agencies. The commissioner's office of the Alaska Department of Environmental Conservation (ADEC) proposed a lessee advisory regarding air pollution and emissions and ADEC's Industrial Wastewater Program suggested a change to the mitigation measures. The U.S. Forest Service stated that it did not have ownership interests in the proposed lease sale area and that it did not have any information to provide. ADNR, Office of History and

¹ The Office of Habitat Management and Permitting (OHMP) of the Alaska Department of Natural Resources became the Division of Habitat, a part of the Alaska Department of Fish and Game (ADF&G), effective July 1, 2008, as a result of Executive Order 114.

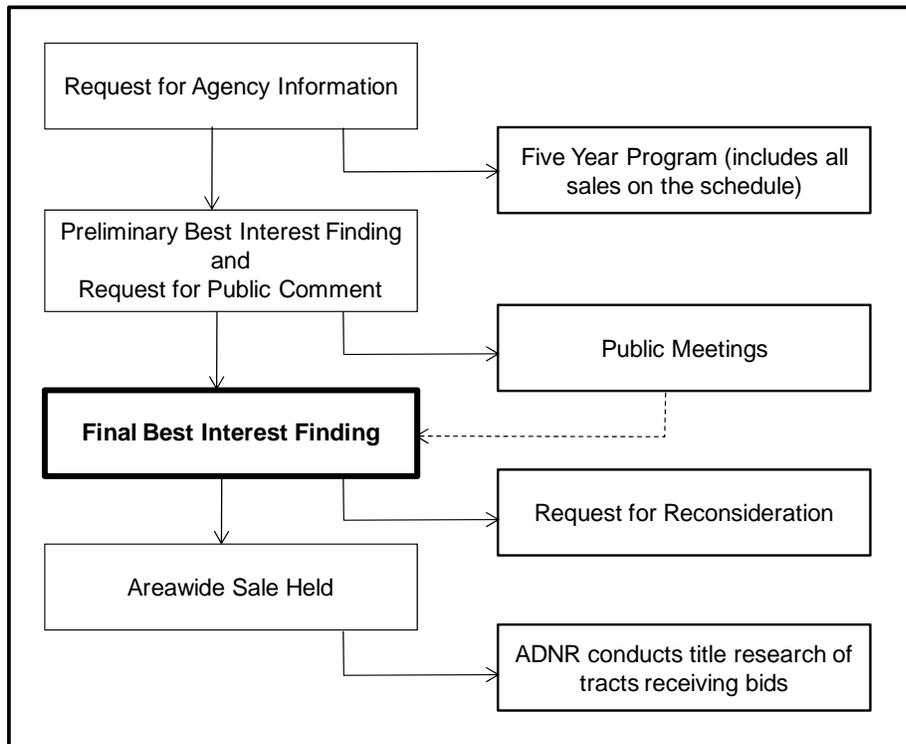
Archaeology stated that the proposed lease sale area was extensive and requested that the final sale boundary area be reviewed under the Alaska Historic Preservation Act. Information provided by these agencies was incorporated into the text of the preliminary best interest finding.

Upon issuance of the preliminary best interest finding, ADNR solicited comments from the public. Appendix A is a summary of those comments and DO&G's responses.

b. Final Best Interest Finding

The proposed finding was revised based in part on comments received during the comment period. Following review of comments on the preliminary best interest finding and any additional available information, the director determined that the lease sale was in the state's best interest and issued this final finding and decision. In accordance with AS 38.05.035, a person who is eligible to file an administrative appeal or request for reconsideration and who is aggrieved by the finding may, within 20 days after issuance of the finding, file an administrative appeal or request for reconsideration of the decision. A person is eligible to file an administrative appeal or request for reconsideration if the person meaningfully participated in the process set out for receipt of public comment by submitting written comment during the period for receipt of public comment, or presenting oral testimony at a public hearing and is affected by the final written finding (AS 38.05.035).

Figure 1.2 North Slope Areawide Public Process



3. Future North Slope Areawide Sales 2008-2017

The last best interest finding for the North Slope Areawide Oil and Gas Lease Sale was issued March 17, 1998 and supplements to the finding were issued on August 15, 2000 and July 24, 2002. The 1998 finding was valid for lease sales held through 2007. This final best interest finding addresses North Slope Areawide Oil and Gas Lease Sales from 2008-2017.

As mentioned above, once a finding has been written for an areawide sale, ADNR can conduct a lease sale in that same area each year for up to 10 years without repeating the entire finding process. However, annually, before holding a sale, DO&G must determine whether a supplement to the finding is required through the following process:

- Approximately nine months before a sale, ADNR will issue a call for comments requesting substantial new information that has become available since the most recent best interest finding for that sale area. This call for comments is sent to agencies and individuals on the division's mailing list and posted on the DO&G Web site. The call for comments must provide opportunity for public comment for a period of not less than 30 days.
- Based on information received, ADNR will determine whether a supplement to the most recent best interest finding is required.
- Based on this determination, ADNR will issue either a supplement to the best interest finding or a "Decision of No New Substantial Information" not later than 90 days before the sale.

4. Post-Sale Title Search

The North Slope region has been divided into tracts that will remain fixed for future sales. The extent of the state's ownership interest in these lands will not be determined prior to the sale; rather, following the sale, ADNR will verify title only for tracts receiving bids. Therefore, should a potential bidder require title or land status information for a particular tract prior to the sale, it will be the bidder's responsibility to obtain that information from ADNR public records. It is possible that a tract included in the sale may contain land that the state cannot legally lease (due to existing lease, federal, Native or private land, etc.). Following the sale, ADNR will complete the title work and issue all of the leases. The actual number of months between the sale date and issuance of lessees will depend on the number of tracts leased and the complexity of the land holdings involved.

C. Governmental Powers to Regulate Oil and Gas Exploration, Development, Production, and Transportation

All oil and gas activities (exploration, development, production, and transportation) are subject to numerous federal, state, and local laws, regulations, policies, and ordinances, with which the lessee is obligated to comply. This section does not provide a comprehensive description of the multitude of laws and regulations that may be applicable to such activities, but it does illustrate the broad spectrum of authorities various government agencies have to prohibit, regulate, and condition activities related to oil and gas activities. Important laws and regulations applicable to oil and gas activities are included in Appendix B. Each of the regulatory agencies (state, federal, and local) has a different role in the oversight and regulation of oil and gas activities, although some agencies may have overlapping authorities.

An oil and gas lease grants to the lessee the exclusive right to drill for, extract, remove, clean, process, and dispose of oil, gas, and associated substances. However, as discussed in the previous section, except for activities that would not require a land use permit or operations undertaken under an approved unit plan of operations, a plan of operations must be approved before any operations may be undertaken on or in the leased area.

Each agency requires various permits and approvals, which are discussed below along with additional information on the review process (see Table 1.1). However, there is no "typical" project. Actual processes, terms, and conditions will vary with time-certain, site-specific operations. Therefore, each agency has field monitors assigned to ensure that operations are conducted as approved.

The appropriate statutes and regulations should be consulted when specifics are required.

1. Alaska Department of Natural Resources

ADNR, through the Division of Oil & Gas (DO&G), Division of Mining, Land and Water (DMLW), the and the Division of Coastal and Ocean Management (DCOM), reviews, coordinates, conditions, and approves plans of operation or development and other permits as required before on-site activities can take place. The department monitors activities through field inspection once they have begun. Each plan of operation is site-specific and must be tailored to the activity requiring the permit. A plan of operation is required to identify the specific measures, design criteria, and construction methods and standards to be employed so as to comply with the terms of the lease. Applications for other state or federal agency authorizations or permits must be submitted with the plan of operation.

a. Fish Habitat Management

Pursuant to Title 41, ADF&G's Division of Habitat administers the permitting process for activities that may affect anadromous fish streams. Under this program, a Fish Habitat Permit is required prior to using, diverting, obstructing, polluting, or changing the natural flow or bed of an anadromous fish waterbody as required in AS 41.14.870(b). In addition, ADF&G also administers the permitting process for activities that may affect the efficient passage of resident fish as per AS 41.14.840.

Under the Alaska Coastal Management Program (ACMP), wetlands and tidelands must be managed to assure adequate water flow, avoid adverse effects on natural drainage patterns, and the destruction of important habitat as per 11 AAC 112.300. Rivers, streams, and lakes must be managed to protect natural vegetation, water quality, important fish or wildlife habitat, and natural water flow (11 AAC 112.300). To further protect fish and wildlife habitat, 11 AAC 112.230 requires that facilities be consolidated to the extent practicable.

b. Alaska Coastal Management Plan (ACMP) Review

The North Slope Areawide Oil and Gas Lease Sale is within the North Slope Borough. Lease related activities are subject to review under the Alaska Coastal Management Plan (ACMP) and the local coastal district plan. An ACMP consistency analysis was issued on May 2, 2007, followed by a proposed consistency determination on January 17, 2008, and a final consistency determination on February 8, 2008.

Permit applications for activities under the lease must be as detailed as necessary for a comprehensive agency review. If a project affects or occurs within the coastal zone, a review of the permit application will be conducted to determine whether the proposed activity is consistent with the standards of the ACMP. Following the review, each agency will approve or disapprove the permit and determine whether any alternative measures (changes in the project description) or permit terms are required prior to approval.

The public is provided the opportunity to participate in ACMP reviews. For example, most permits needed for exploration well drilling require public notice. The ACMP permitting process goes through a 30- or 50-day review and, if other agencies or offices within ADNR require approval, the review is coordinated by the OPMP. This process provides for coordinated agency reviews, public input, and ensures that proposed activities are consistent with the ACMP and local coastal plans.

The 50-day ACMP review process is initiated when the lessee, designated operator, or OPMP distributes an application package to affected coastal resource districts and permitting agencies. The individual agencies initiate their internal consistency reviews and, if necessary, must send a request for additional information to the coordinating agency within 25 days. Public and agency review comments are due on or

before Day 34, and a proposed consistency finding is issued on or before Day 44. A request for additional time to complete the review must be received on or before Day 49, and the final consistency determination is issued on Day 50. However, if a reviewing agency objects to the proposed determination they may elevate the decision to the director. If the determination is elevated, a director’s determination is issued by Day 65. The 30-day review process has shorter time periods between action points. 11 AAC 110.230.

The consistency determination process has been streamlined through the development of A, B, and C list activities.

“A list” activities are considered “categorically consistent” and do not result in significant impacts to coastal resources, and therefore do not require a consistency review. On-pad placement of light poles, railings, electrical towers/poles, modules, and associated oil and gas buildings are examples of A list activities. A Coastal Project Questionnaire (CPQ) application is required for projects on the A list unless the A list says a CPQ is not required.

“B list” reviews are classified as General Concurrences, and the activities are considered routine with standard alternative measures. B list activities adopting the alternative measures are consistent with the ACMP. Individual ACMP consistency reviews are not necessary for activities on the B list. However, a Coastal Project Questionnaire (CPQ) application is required for all projects on the B list.

The resource agency(s) will check the CPQ and plan of operations to ensure that the project qualifies for the A or B list. The coordinating agency will also review the standard alternative measures and any applicable procedures against the plan of operations submitted.

“C list” activities are not covered by the A or B lists, and reviews are classified as Individual Project Reviews. C list activities are subject to the 50- or 30-day review process described in this section.

Table 1.1 Possible Permit Process

Possible Permit Process - Onshore Exploration Well in the North Slope Lease Area														
ID	NAME	M	J	J	A	S	O	N	D	J	F	M	A	M
1	Preapplication Conference		█											
2*	ADNR - ACMP Consistency Determination - AS 46.40				█	█	█							
3	ADNR DO&G - Lease Plan of Operations Review				█	█	█							
4	ADNR Parks - Cultural Resource Survey		█											
5	ADNR DMLW - Temporary Water Use Permit				█	█	█							
6	ADEC - Oil Spill Discharge and Contingency Plan				█	█	█							
7	ADEC - Solid Waste Disposal Permit				█	█	█							
8	ADEC - Wastewater Disposal Permit				█	█	█							
9	ADF&G - Title 41 Anadromous Fish Stream				█	█	█							
10	Army Corps of Engineers - Section 404 Permit			█	█	█	█							
11	AOGCC -Conservation Order							█	█					
12	AOGCC - Permit to Drill								█					
13	AOGCC - Application for Sundry Approval									█				
14	Construction and Drilling									█	█	█		
15	Demobilization and Rehabilitation												█	█

Project: Onshore
Date:2/08/07

Permitting Activity Public Notice

* Only for activity within the Coastal Zone.

c. Plan of Operations Approval

Land use activities within oil and gas leases are regulated under 11 AAC 83.158 and paragraph 10 of the lease. These require the lessee to prepare plans of operation and development that must be approved by DO&G and by any other interest holder, if ownership is shared, before the lessee may commence any activities within the leased area. Except for equipment uses exempted under 11 AAC 96.020, the lessee must prepare a plan of operations and obtain all required approvals and permits for each phase of exploration, development, or production prior to implementation of that activity. All permit applications and plans are available for public review and public notice will be given for all development plans of operations.

An application for approval of a plan of operations must contain sufficient information, based on data reasonably available at the time the plan is submitted, in order for the commissioner to determine the surface use requirements and effects directly associated with the proposed operations. An application must include statements and maps or drawings setting out the following:

- The sequence and schedule of the operations to be conducted in the leased area, including the date operations are proposed to begin and their proposed duration.
- Projected use requirements directly associated with the proposed operations, including the location and design of well sites, material sites, water supplies, solid waste sites, buildings, roads, utilities, airstrips, and all other facilities and equipment necessary to conduct the proposed operations.
- Plans for rehabilitation of the affected leased area after completion of operations or phases of those operations.
- A description of operating procedures designed to prevent or minimize adverse effects on other natural resources and other uses of the leased area and adjacent areas, including fish and wildlife habitats, historic and archeological sites, and public use areas cited in 11 AAC 83.158(d)(4).

When it considers a plan of operation, ADNR often requires stipulations, in addition to the mitigation measures developed through the best interest finding. These additional stipulations address site-specific concerns directly associated with the proposed project. The lease stipulations and the terms and conditions of the lease are attached to the plan of operation approval and are binding on the lessee. The lease also requires that the lessee keep the lease area open for inspection by authorized state officials. Activities are field-monitored by ADNR, ADEC, ADF&G, and AOGCC to ensure compliance with each agency's respective permit terms. In addition, each permittee must post a \$500,000 statewide bond to cover a drill site. Lease operation approvals are generally granted for three years.

d. Geophysical Exploration Permit

The geophysical exploration permit is a specific type of land use permit issued by DO&G under 11 AAC 96.010. Seismic surveys are the most common activity authorized by this permit. The purpose of the permit is to minimize adverse effects on the land and its resources while making important geological information available to the state (11 AAC 96.005). Under AS 38.05.035(a)(8)(C), the geological and geophysical data that are made available to the state are held confidential at the request of the permittee. If the seismic survey is part of an exploration well program, the permit will be reviewed as part of the exploration well permit package. The application must contain sufficient detail to allow evaluation of the planned activities' effects on the land per 11 AAC 96.030(a). In addition, the application must contain a map showing the general location of all activities and routes of travel of all equipment for which a permit is required. It must also contain a description of the proposed activity, any associated structures, and the type of equipment that will be used. Maps showing the precise location of the survey lines must also be provided, though this information is usually held confidential. A \$100,000 bond is required to conduct seismic work. The bond amount for other geophysical surveys is determined when the activity is proposed.

A geophysical exploration permit contains measures to protect the land and resources of the area. The permit is usually issued for one year or less, but may be extended. If the permit is extended, the director may modify existing terms or add new ones. The permit is also revocable for cause under 11 AAC 96.040.

e. Pipeline Rights-of-Way

Most transportation facilities within the lease area or beyond the boundaries of the lease area must be authorized by ADNR under the Right-of-Way Leasing Act, AS 38.35. This act gives the commissioner broad authority to oversee and regulate the transportation of oil and gas by pipelines that are located in whole or in part on state land, to ensure the state's interests are protected. The Right-of-Way Leasing Act process is administered by the State Pipeline Coordinator's Office.

f. Temporary Water Use

A person must receive authorization from DMLW under 11 AAC 93.220 before temporary use of a significant amount of water as described in 11 AAC 93.035(b). Procedures to authorize the temporary use of water as provided in 11 AAC 93.220 will apply if the use continues for less than five consecutive years and the water applied for is not otherwise appropriated. Authorized temporary water use is subject to amendment, modification, or revocation by DMLW if it determines that amendment, modification, or revocation is necessary to supply water to lawful appropriators of record or to protect the public interest. Upon receipt of a written request from the permittee, DMLW may extend an authorization for temporary use of water one time for good cause for a period not to exceed five years (11 AAC 93.210).

g. Permit to Appropriate and Certificate of Appropriation of Water

Industrial or commercial use of water requires a permit to appropriate water under 11 AAC 93.120. The permit is issued for a period of time, not to exceed five years, consistent with the public interest and adequate to finish construction and establish full use of water. Under 11 AAC 93.120(e), DMLW may issue a permit subject to conditions considered necessary to protect the right of prior appropriators of record and the public interest, including: the conditions that no certificate will be issued until evidence is presented to DMLW of acquisition of adequate easements or other means necessary for completion of the appropriation and conditions that require the permittee to measure the water use in a manner to be approved by DMLW and periodically report water use information to DMLW. Permits may also include conditions to maintain, or restrictions from withdrawal, a specific quantity of water to achieve any of the following purposes: protection of fish or wildlife habitat; recreational purposes; navigation; sanitation or water quality; protection of prior appropriators; and any other purpose DMLW determines is in the public interest and should be taken into account under AS 46.15.

Under 11 AAC 93.130, a certificate of appropriation is issued to the permit holder if (1) the permit holder submits a statement of beneficial use stating that the means necessary for the taking of the water have been developed and the permit holder is beneficially using the quantity of water to be certified; and (2) the permit holder has substantially complied with all permit conditions. The certificate may be issued subject to conditions considered necessary to protect the public interest. For example, the permit holder may be required to maintain a specific quantity of water at a given point on a stream or waterbody, or in a specified stretch of stream, throughout the year or for specified times of the year, to achieve protection of fish and wildlife habitat, recreation, navigation, sanitation and water quality, prior appropriators, or any other purpose the commissioner determines is in the public interest. (11 AAC 93.130(c)(1)).

h. Uses Requiring a Land Use Permit

On state land, a permit or other written authorization from DMLW is required for activities involving uses listed in 11 AAC 96.010. Generally allowed uses, uses and activities for which a permit or other written authorization is not required, appear on the list in 11 AAC 96.020. In accordance with 11 AAC 96.025, a generally allowed use is subject to the following conditions:

- (1) activities employing wheeled or tracked vehicles must be conducted in a manner that minimizes surface damage;
- (2) vehicles must use existing roads and trails whenever possible;
- (3) activities must be conducted in a manner that minimizes
 - (A) disturbance of vegetation, soil stability, or drainage systems;
 - (B) changing the character of, polluting, or introducing silt and sediment into streams, lakes, ponds, water holes, seeps, and marshes; and
 - (C) disturbance of fish and wildlife resources;
- (4) cuts, fills, and other activities causing a disturbance listed in (3)(A) – (C) of this section must be repaired immediately, and corrective action must be undertaken as may be required by the department;
- (5) trails and campsites must be kept clean; garbage and foreign debris must be removed; combustibles may be burned on site unless the department has closed the area to fires during the fire season;
- (6) survey monuments, witness corners, reference monuments, mining location posts, homestead entry corner posts, and bearing trees must be protected against destruction, obliteration, and damage; any damaged or obliterated markers must be reestablished as required by the department under AS 34.65.020 and AS 34.65.040;
- (7) every reasonable effort must be made to prevent, control, and suppress any fire in the operating area; uncontrolled fires must be immediately reported;
- (8) holes, pits, and excavations must be repaired as soon as possible; holes, pits, and excavations necessary to verify discovery on prospecting sites, mining claims, or mining leasehold locations may be left open but must be maintained in a manner that protects public safety;
- (9) on lands subject to a mineral or land estate property interest, entry by a person other than the holder of a property interest, or the holder's authorized representative, must be made in a manner that prevents unnecessary or unreasonable interference with the rights of the holder of the property interest.

i. Material Sale Contract

If the operator proposes to use state-owned gravel or other substrate materials for construction of pads and roads, a DMLW material sale contract must include, if applicable: (1) a description of the sale area; (2) the volume of material to be removed; (3) the method of payment; (4) the method of removal of the material; (5) the bonds and deposits required of the purchaser; (6) the purchaser's liability under the contract; (7) the improvements to and occupancy of the sale area required of the purchaser; (8) and the reservation of material within the sale area to the division; and (9) the purchaser's site-specific operation requirements, including erosion control and protection of water; fire prevention and control; roads; sale area supervision; protection of fish, wildlife, and recreational values; sale area access; and public safety. A contract must state the date upon which the severance or extraction of material is to be completed. DMLW may grant an extension not to exceed

one year. When determined by DMLW that a delay in completing the contract is due to causes beyond the purchaser's control, the contract will be extended for a time period equal to the delay.

DMLW may require a purchaser to provide a performance bond based on the total value of the sale. The performance bond must remain in effect for the duration of the contract unless released in writing by the director.

2. Alaska Department of Environmental Conservation

ADEC has statutory responsibility for preventing air, land, and water pollution. ADEC regulates oil and gas activities, such as the disposal of drilling mud and cuttings, the flaring of hydrocarbon gases, and the discharge of wastewater. AOGCC also has regulatory authority over these actions if the activity involves a class II injection well. Several separate written permits are required before an activity can begin. For instance, before solid waste disposal, wastewater or air quality permits are issued, two public notices and an opportunity for public comment (and a public hearing, if requested) are required.

a. Oil Discharge Prevention and Contingency Plan

Lessees must comply with the requirements of AS 46.04.010 - .900, Oil and Hazardous Substance Pollution Control. This requirement includes the preparation and approval by ADEC of an Oil Discharge Prevention and Contingency Plan (C-Plan) (AS 46.04.030; 18 AAC 75.445). Details on the contents of the plan are in Chapter Six.

Prior to receiving a permit to drill, the lessee must demonstrate in each plan of operation the ability to promptly detect, contain, and clean up any hydrocarbon spill before the spill affects fish and wildlife populations or their habitats. ADEC has authority under AS 46.04 for the purpose of preventing and cleaning up oil spills.

If transportation by water is planned, AS 46.04.030 requires that the lessee obtain the approval of ADEC for detailed oil spill contingency plans prior to the commencement of each aspect of the operation, including individual wells, drilling pads or platforms, pipelines, storage facilities, loading facilities, and individual tankers or barges.

b. Wastewater Disposal

Domestic graywater must be disposed of properly at the surface and requires a Wastewater Disposal Permit per 18 AAC 72. Typically, waste is processed through an on-site plant and disinfected before discharge. ADEC sets fluid volume limitations and threshold concentrations for biochemical oxygen demand (BOD), suspended solids, pH, oil and grease, fecal coli form, and chlorine residual. Monitoring records must be available for inspection, and a written report may be required upon completion of operations.

c. Solid Waste Disposal Permit

Recent industry practice is to use methods other than surface reserve pits for disposal of drilling muds, such as injection wells, where possible. In addition, the majority of muds utilized today are water-based. When a well is drilled, muds and cuttings are initially either temporarily stored on a gravel pad or collected in a reserve pit pending final disposal by injection. Drilling muds and cuttings discharged into a reserve pit require pre-approval and a written permit. The permit addresses design, operation, and closure concerns to ensure that unacceptable environmental effects are avoided.

Solid waste storage, treatment, transportation, and disposal are regulated under 18 AAC 60. For all solid waste disposal facilities, a comprehensive disposal plan is required, which must include engineering

design criteria and drawings, specifications, calculations, and a discussion demonstrating how the various design features (liners, berms, dikes) will ensure compliance with regulations.

Before approval, solid waste disposal permit applications are reviewed for compliance with air and water quality standards, wastewater disposal, and drinking water standards, as well as for their consistency with the Alaska Historic Preservation Act. The application for a waste disposal permit must include a map or aerial photograph (indicating relevant topographical, geological, hydrological, biological, and archeological features) with a cover letter describing type, estimated quantity, and source of the waste, as well as the type of facility proposed. Roads, drinking water systems, and airports within a two-mile radius of the site must be identified, along with all residential drinking water wells within one-half mile. There must also be a site plan with cross-sectional drawings that indicate the location of existing and proposed containment structures, material storage areas, monitoring devices, area improvements, and on-site equipment. An evaluation of the potential for generating leachate must be presented as well. For above-grade disposal options, baseline water-quality data may be needed to establish the physical and chemical characteristics of the site before installing a containment cell.

Non-drilling related solid waste must be disposed of in an approved municipal solid waste landfill (MSWLF). MSWLFs are regulated under 18 AAC 60.300-.397. All other solid waste (except for hazardous materials) must be disposed of in an approved monofill (18 AAC 60.400-.495). A monofill is a landfill or drilling waste disposal facility that receives primarily one type of solid waste and is not an inactive reserve pit as defined in 18 AAC 60.990(80). An inactive reserve pit is a drilling waste disposal area, containment structure, or group of containment structures where drilling waste has been disposed of which the owner or operator does not plan to continue disposing of drilling waste per 18 AAC 60.990(62). Closure of inactive reserve pits is regulated under 18 AAC 60.440.

Drilling waste disposal is specifically regulated under 18 AAC 60.430. Design and monitoring requirements for drilling waste disposal facilities are identified in 18 AAC 60.430(c) and (d), respectively. Under 18 AAC 60.430(c)(1), “the design must take into account the location of the seasonal high groundwater table, surface water, and continuous permafrost, as well as proximity to human population and to public water systems, with the goal of avoiding any adverse effect on these resources.” The facility must be designed to prevent the escape of drilling waste and leachate, prevent contamination of groundwater, and be of sufficient volume and integrity to prevent leakage due to erosion, precipitation, wind and wave action, and changing permafrost conditions. The plans for the proposed design and construction of the drilling waste disposal facility and the fluid management plan must be approved, signed, and sealed by a registered engineer per 18 AAC 60.430(c)(5).

Presently, the preferred practice is to dispose of drilling fluids by reinjection deep into the ground; however, EPA and ADEC may authorize limited discharge of waste streams under the NPDES permit system. All produced waters must be re-injected or treated to meet Alaska Water Quality Standards prior to discharge. Before a well may be permitted under 20 AAC 25.005, a proper and appropriate reserve pit, also known as a solid waste disposal cell, must be constructed or appropriate tankage installed for the reception and confinement of drilling fluids and cuttings, to facilitate the safety of the drilling operation, and to prevent contamination of groundwater and damage to the surface environment (20 AAC 25.047).

Typically, a reserve pit is a containment cell lined with an impermeable barrier compatible with both hydrocarbons and drilling mud. Average dimensions are approximately 130 feet wide by 150 feet long by 12 feet deep, although specific configurations vary by site. The cell may receive only drilling and production wastes associated with the exploration, development, or production of crude oil, natural gas or hydrocarbon-contaminated solids. The disposal of hazardous or other waste in a containment cell is prohibited. After the well is deepened, the residue in the reserve pit is often dewatered and the fluids are injected into the well annulus. An inventory of injection operations including volume, date, type and source of material injected is

maintained by requirement. Following completion of well activities, the material remaining in the pit is permanently encapsulated in the impermeable liner. Fill and organic soil is placed over it and proper drainage is re-established. Surface impoundments within 1,500 feet are sampled on a periodic basis and analyzed. In addition, groundwater-monitoring wells are drilled and sampled on a regular basis. If there are uncontained releases during operations, or if water samples indicate an increase in the compounds being monitored, additional observation may be required.

Substances proposed for disposal that are classified as “hazardous” undergo a more rigorous and thorough permitting and review process by both ADEC, per 18 AAC 62 and 63, and the EPA.

d. Air Quality Control Permit to Operate

The federal Prevention of Significant Deterioration (PSD) program, which is administered by ADEC, establishes threshold amounts for the release of byproducts into the atmosphere. Oil and gas exploration and production operations with emissions below predetermined threshold amounts must still comply with state regulations designed to control emissions at these lower levels (18 AAC 50). Activities that exceed predetermined PSD threshold amounts, such as the operation of turbines and gas flares, are subject to a more rigorous application and review process.

For oil and gas activities, these regulations require a permit to flare gas during well testing (a safety measure) or when operating smoke-generating equipment, such as diesel-powered generators. Permit conditions will induce additional scrutiny if a black smoke incident exceeds 20 percent opacity for more than three minutes in any one-hour period.

The burning of produced fluids is prohibited unless failures or seasonal constraints preclude storage in tanks, backhauling, or reinjection. Liquids must be burned in smokeless flares when incinerated. The open burning of produced liquids is prohibited, except under emergency conditions.

Gas produced as a by-product of oil production is usually re-injected into the producing formation to maintain pressure and support further oil production. Flaring is not an approved method of disposal. However, as a safety measure and backup for standard gas handling systems, production facilities which separate oil, gas and water are capable of flaring large volumes of gas. Flaring occurs when the oil and gas separation process is interrupted, or when an unplanned event requires an immediate release of pressure. Pilot flares are an operational necessity and are subject to permit requirements as well.

e. Clean Water Act 401 Certification

Under 18 AAC 15.120, a person who conducts an operation that results in the disposal of wastewater into the waters of the state need not apply for a permit from ADEC if the disposal is permitted under an NPDES permit and ADEC has certified the permit. When an NPDES permit is issued under Section 401 (33 U.S.C. § 1341) of the Clean Water Act, ADEC participates by certifying that the discharge meets state and federal water quality standards. The ADEC certificate is termed a Certificate of Reasonable Assurance.

When an application is made to EPA, a duplicate must be filed with ADEC and public notice of the certification application is published jointly by EPA (40 C.F.R. 125.32) and ADEC (18 AAC 15.140). As a result, the state and federal reviews run concurrently. Public comment is sought and a hearing can be requested.

Following an EPA determination, but within 30 days, ADEC must provide the applicant, EPA, and all persons who submitted timely comments with a copy of the certification. The decision may impose stipulations and conditions (such as monitoring and/or mixing zone requirements), and any person disagreeing

with the decision may request an adjudicatory hearing (18 AAC 15.200 - .920). Once the activity begins, both EPA and ADEC have the responsibility to monitor the project for compliance with the terms of the permit.

The Corps of Engineers' Clean Water Act 404 permit program (see Corps of Engineers, Section 6 below) also requires certification under section 401 of the Clean Water Act and it is processed in a similar manner.

f. Review Process

Following receipt of an application for a solid waste disposal, wastewater, or air quality permit, ADEC must publish two consecutive notices in a newspaper of general circulation in the area affected by the proposed operation, as well as through other appropriate media. Comments must be submitted in writing within 30 days after the second publication and a public hearing may be requested. A hearing will be scheduled if good cause exists. Notice of a public hearing is handled in a manner similar to that of the initial application.

A decision on an application includes (1) the permit, (2) a summary of the basis for the decision and (3) provisions for an opportunity for an adjudicatory hearing (18 AAC 15.200). The decision, as conditioned, is sent to the applicant as well as each person or entity that submitted timely comments or testified at a public hearing. Permits may be valid for up to five years. Renewals are treated the same as the original application, but they do not receive public notice.

3. Alaska Department of Fish and Game

ADF&G evaluates the potential effect of any activity on fish and wildlife, their habitat, and the users of those resources. ADF&G requires permits for any oil and gas related activity in state game refuges, sanctuaries and critical habitat areas. Special Area management plans provide guidelines for certain activities within many legislatively designated areas. By statute, these areas are jointly managed with ADNR. Permits are conditioned to mitigate impacts. For example, timing restrictions may be used to limit the impact on wildlife during sensitive life-cycle periods. There are currently no state game sanctuaries or critical habitat areas on the North Slope.

Decisions are based upon recommendations provided by area staff, the commenting agencies and coastal districts. For permits issued for activities in anadromous streams, an applicant may appeal a rejection or stipulation through procedures described in the Administrative Procedures Act.

4. Alaska Oil and Gas Conservation Commission

AOGCC administers the Alaska Oil and Gas Conservation Act, AS Title 31. The AOGCC may investigate to determine whether waste of oil and gas resources exists or is imminent. It is also responsible for ensuring that accurate metering and measuring of oil and gas production takes place.

The commission maintains programs to ensure that the drilling, casing, and plugging of a well occurs in a manner that prevents: (1) escapement from one stratum into another; (2) the intrusion of water into an oil or gas horizon; (3) the pollution of fresh water supplies; and (4) blowouts, cavings, seepage and fires. For conservation purposes, the commission regulates certain aspects of the drilling, production, and plugging of wells in addition to well spacing, the disposal of salt water and oil field waste and the contamination of underground water.

Reports, well logs, drilling logs and other information must be filed with the commission for each well drilled. The information is confidential until the land from which the data was acquired is no longer subject to a lease, two years after receipt by the state or until the lease expires, whichever is first.

a. Permit to Drill

Before drilling, a Permit to Drill, valid for 24 months, must be obtained from AOGCC (AS 31.05 and 20 AAC 25). The permit application informs the commission of a proposed operator's engineering and safety plans designed to ensure the structural and mechanical ability of the well to contain fluids and gases that could be encountered at various depths and under varying pressure. A diagram of the proposed blow-out prevention (BOP) equipment (used for secondary well control) and an analysis of expected down-hole pressures must be included with the application. A BOP, along with related well-control equipment, must be installed, used, maintained and tested as necessary to assure control over the well and must conform to the latest technology and accepted industry practice.

Casing, cementing, and drilling fluid programs are also designed to ensure primary well control. A drilling fluid monitoring program must be in place to detect gases entrained in the drilling fluid and hydrogen sulfide, a poisonous gas.

Before beginning to drill, an operator must post a bond of \$100,000 in favor of the state for a single well, or \$200,000 for a blanket bond covering more than one well. The purpose of the bond is to ensure that a well is properly completed or abandoned.

For exploration wells, a well-site survey is conducted using seismic techniques. The data from the seismic survey is analyzed to detect shallow gas in near-surface strata to a depth of 2,000 feet, and the depths of suspected overpressured strata are predicted. For offshore wells, an analysis of seafloor conditions is required.

If climatic conditions and operational or environmental concerns become apparent, or if unanticipated circumstances prevent the continuation of an approved program, an operator can secure a well and apply for an operational shut down. When a well is abandoned, plans for setting plugs, mudding, cementing, shooting, testing, and removing the casing must be submitted to AOGCC for approval. Wells may remain abandoned or suspended for long periods of time. Until final plans are made, the commission seeks to prevent the movement of fluids into or between freshwater and/or hydrocarbon sources.

After abandonment, a location clearance is required. For onshore locations, materials, supplies, structures, and installations must be removed, debris properly disposed of, and the reserve pit filled and graded. The location must be left uncontaminated, in a clean condition acceptable to state inspectors.

b. Disposal of Wastes

AOGCC must also review and approve proposals for the underground disposal of water and oil field waste (20 AAC 25.252). Before receiving an approval, an operator must demonstrate that the movement of fluids into freshwater sources will not occur. Disposal must be into a well with equipment designed to ensure a controlled release. A plat is required showing the location of other wells within one-quarter mile that penetrate the same disposal zone, and surface owners located within one-quarter mile must be provided with a copy of the application.

Along with a description of the fluid to be injected (composition, source, daily amount and disposal pressures), the application must contain the name, description, depth, thickness, lithologic description and geological data of the disposal formation and adjacent confining zones. Evidence must be presented that demonstrates the disposal well or storage operation will not initiate or propagate fractures through the confining zones that allow fluids to migrate. In addition, a laboratory analysis is required. Under certain circumstances, however, a fresh water aquifer exemption may be granted (20 AAC 25.440).

Following approval, liquid waste from drilling operations may be pumped into a well drill pipe, casing or annulus. The pumping of drilling mud from reserve pits (not runoff) into exploration or stratigraphic test wells or into the annuli of a well approved in accordance with 20 AAC 25.080 is an operation incidental to drilling of the well, and is not a disposal operation subject to regulation as a Class II well under EPA regulations.

c. Annular Injection

An AOGCC permit is required if fluid is to be injected into a well annulus. The material must be incidental to the drilling of a well (muds and cuttings). AOGCC may take all actions necessary to allow the state to acquire the primary enforcement responsibility for the control of underground disposal related to the recovery and production of oil and natural gas. ADEC considers the volume, depth and other physical and chemical characteristics of the formation designated to receive the waste. Annular disposal is not permitted into water-bearing zones where dissolved solids or salinity concentrations fall below predetermined threshold limits. Waste not generated from a hydrocarbon reservoir cannot be injected into a reservoir.

d. Review Process

AOGCC actions that have statewide application, such as adopting regulations, are conducted in accordance with the Administrative Procedures Act. Major actions that result in conservation orders that apply to a single well or field receive public notice by publication in a newspaper (20 AAC 25.540). In addition, a mailing list is maintained for the purpose of sending notices, orders or publications to those who request them.

5. U.S. Environmental Protection Agency

a. NPDES Permit

The federal Clean Water Act requires a NPDES permit to release pollutants into the waters and wetlands of the United States. The permitting system is designed to ensure that discharges do not violate state and federal water quality standards by identifying control technologies, setting effluent limitations, and gathering information through reporting and inspection.

Typically, approved discharges are covered by a general permit developed through a public review process after the EPA has identified the specific location of a proposed discharge in an Authorization to Discharge. When a general permit for a specific geographical area does not exist, proposed discharges are subject to an individual approval process and NPDES permit.

A NPDES permit covers the discharge of drilling muds, cuttings and wash water, as well as deck drainage, sanitary and domestic wastes, desalination unit waste, blow-out preventer fluids, boiler blowdown, fire control system test water, non-contact cooling water, uncontaminated ballast and bilge waters, excess cement slurry, water flooding discharges, produced waters, well treatment fluids and produced solids. In Alaska, ADEC issues certifications of EPA NPDES permits relative to state water quality standards.

b. Typical Permit Requirements

Only pre-approved discharges may be released and each must be emitted in accordance with an effluent limitation designed for that particular emission at that point of discharge. The permit may be modified or revoked after it is issued if new information justifies different conditions, or if new standards are promulgated that are more stringent than those in the original approval. For example, existing permits prohibit discharges within 1,000 meters of river mouths, and specially designed monitoring programs are required within 1,500 meters of areas considered sensitive.

In all cases, mixing zones are established at the discharge point and produced waters are passed through at least one oil separator before discharge. Under certain conditions verification studies may be required of the mixing zone; discharge limitations are then applied as the emission passes through the mixing zone.

Only pre-approved drilling muds, specialty additives and mineral oil pills may be discharged and maximum concentrations are specified. For each mud system, a precise chemical inventory of its constituents is maintained. Free oil or oil-based muds (those containing oil as the continuous phase, with water as the dispersed phase) may not be discharged at any time. The oil content of a discharge must be analyzed: (1) at the time the fluid or additive is used; (2) when a drilling fluid could become contaminated with hydrocarbons from an underground formation; and (3) immediately when the static sheen test of a discharge indicates violation. Water-based drilling fluids that have contained diesel oil or cuttings associated with muds that contain diesel oil may not be discharged. In state waters, the discharge of cuttings with an oil volume greater than 5 percent by weight, or the discharge of free oil as a result of discharging drilling muds or cuttings is prohibited as well. A static sheen test is performed daily on emission samples as well as prior to any bulk discharge. Generally, the discharge of floating solids or visible foam is not allowed. Surfactant, dispersant and detergent discharges are minimized, but may be allowed to comply with occupational health and safety requirements. In all cases, deck drainage and wash water must go through an oil/water separator; the effluent is tested and any discharge that would cause sheen on the receiving waters is prohibited.

c. Spill Response Plan (C-Plan)

Owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products must prepare a spill prevention control and countermeasures plan (C-Plan) in accordance with 40 C.F.R. § 112. Drilling rigs are included in this facility definition. The purpose of the C-Plan is to prevent discharges of oil into navigable waters of the U.S. and the adjoining shorelines. The plan must address three areas:

- operating procedures installed by the facility to prevent oil spills;
- control measures installed to prevent a spill from entering navigable waters; and
- countermeasures to contain, cleanup and mitigate the effects of an oil spill that impacts navigable waters.

The C-Plan is facility-specific and is part of the required documentation that must be present at the facility for inspection. The owner or operator must have the plan certified by a registered engineer but does not submit it to EPA for approval prior to the beginning of operations. If the facility discharges more than 1,000 gallons or harmful quantities of oil in one event or experiences more than two discharges in a twelve-month period, the operator must submit the C-Plan to the EPA and ADEC for review. The C-Plan differs from the facility response plans (FRP) required by OPA 90 in that the C-Plan focuses on prevention and the FRP focuses on response. See also Section 2.a. above.

d. Review Process

Discharges needing authorization before a general permit is issued require individual permits (40 C.F.R. § 122). Once EPA receives an application for a proposed discharge, a draft permit and fact sheet is prepared to address the proposal. Public notice solicits comments and provides notification of state certification under section 401 of the Clean Water Act.

The review process requires a minimum period of 30 days for public comment and all comments received must be in writing. Public hearings, if scheduled in the original notice, will be canceled if there is no interest in holding them; however, anyone can request a hearing.

An individual permit will not take effect for 30 days, during which time an aggrieved party who earlier submitted written comments may request an evidentiary hearing. EPA will respond by issuing a finding identifying the qualifying issues to be decided before an adjudicatory law judge. For general permits, notice must be published in the Federal Register and issuance may be challenged for 120 days (40 C.F.R. § 124).

A permit will not be issued unless ADEC certifies that the discharge will comply with the applicable provisions of the Clean Water Act and Alaska water quality standards. The certification process is addressed in an agreement between EPA and ADEC. Persons wishing to comment on a state consistency determination or 401 certification must submit written comments within the 30-day comment period.

6. U.S. Army Corps of Engineers

a. Section 10 of Rivers and Harbors Act of 1899 (33 U.S.C. § 403)

A Corps permit is required when work is anticipated on, in, or affects navigable waters. A Section 10 Permit addresses activities that could obstruct navigation. Oil and gas activities requiring this type of permit include exploration drilling from a jackup drill rig, installation of a production platform, or construction of a causeway. The process and concerns are similar to those required for Section 404 approval and, at times, both may be required.

b. Clean Water Act Section 404 Permits

Section 404 of the Clean Water Act established a program to regulate the discharge of dredged and fill material into waters and wetlands of the United States. Activities in waters within the United States that are regulated under this program include fills for development, water resources projects such as dams and levees, infrastructure development such as highways and airports, and conversion of wetlands to uplands for farming, forestry, or other purposes. This program mandates that no dredged or fill material may be discharged in a water body or wetland if a practical alternative disposal method can be utilized. A Section 404 Permit applicant must demonstrate that: (1) steps will be taken to avoid wetland impacts where practicable; (2) steps will be taken to minimize potential impacts to wetlands; and (3) the applicant will provide compensation for any remaining unavoidable impacts through activities to restore or create wetlands. In exercising its permitting authority, the USCOE invites review and comment from state and federal agencies. In Alaska, the ADEC issues CWA Section 401 Certifications of USCOE 404 Permits.

c. General Permits

Some oil and gas activities undergo individual project reviews. Under this process, the USCOE evaluates projects on a case-by-case basis and conducts a public interest determination (33 C.F.R. § 320). The Corps also issues general permits that carry a standard set of stipulations that cover frequent, repetitive and similar activities when, individually and cumulatively, there will be a minimal environmental effect. A general permit describes the activity covered and includes appropriate proposed stipulations and mitigation measures. This type of permit generally has a geographical limitation. There are 36 nationwide general permits, and the Alaska District has an additional 21.

d. Letters of Permission (LOP)

LOPs are a type of permit that, once approved for issuance after a public review process, undergo individual, but abbreviated, reviews. These activities are routine and have been determined to have no significant environmental effect. In Alaska, LOPs are used only for activities that might have an effect on navigable waters under section 10.

e. Review Process

Upon receipt of an application, the Corps solicits comments from the public, federal, state and local agencies as well as other interested parties to assess the impact of the proposed activity on aquatic resources, endangered species, historic properties, water quality, environmental effects and other public interest factors. Most public comment periods last 30 days and a public hearing can be requested.

The U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), ADNR, ADF&G submit comments to the Corps in accordance with the Fish and Wildlife Coordination Act. These comments address compliance with section 404(b)(1) of the Clean Water Act as well as the measures the agencies consider necessary for the protection of wildlife resources. Under the Endangered Species Act of 1973, endangered species that frequent the area are identified and the effect the proposed activity might have on them or their habitat is considered. In some cases, an environmental assessment or environmental impact statement may be required by the National Environmental Policy Act.

An application to the Corps serves as an application to ADEC for state water quality certification as required under section 401 of the Clean Water Act of 1977 (P.L. 95-217) and must be reviewed by EPA. The application is reviewed in light of the Act, the Alaska Water Quality Standard, and other applicable state laws. For placing fill in wetlands, water quality stipulations included in the 401 Certification become part of the Corps permit (ADEC 401 Certification in 18 AAC 15.130-180).

The public interest review (33 C.F.R. § 320.4) considers guidelines set forth under section 404(b) of the Clean Waters Act. The guidelines outline a mitigation sequence applicable to all waters, including wetlands, which must be followed in the decision-making process. A permit will be denied if the contemplated discharge does not meet the required standards. For placement of fill, the mitigation sequence requires avoiding wetlands where practicable, minimizing impact where avoidance is not practicable, and compensating for impact to the extent appropriate and practicable.

In addition, a review of cultural resources is coordinated with the state's Historic Preservation Office. Archeological or historical data that could be lost or destroyed by the proposed activity is considered and presented in the Corp's final assessment of the described project.

A decision to issue a permit, with mitigation measures included, is based upon an evaluation of the probable impacts (including cumulative impacts) of a proposed activity. Benefits that can reasonably be expected to accrue are balanced against reasonably foreseeable costs. Factors relevant to the decision are resource conservation, economics, aesthetics, general environmental concerns, wetlands, fish and wildlife values, flood hazards, floodplain values, land use, navigation, shore erosion and accretion, recreation water, water supply and conservation, water quality, energy needs, safety, food and fiber production, mineral needs, property ownership, and the needs and welfare of the people in general.

7. North Slope Borough

The North Slope Borough has adopted a comprehensive plan and land management regulations under Title 29 of the Alaska Statutes (AS 29.40.020-040). These regulations are Title 19 of the NSB Municipal Code and require borough approval for certain activities necessary for exploration and development of lease contracts. The borough can assert its land management powers to the fullest extent permissible under law to address any outstanding concerns regarding impacts to the area's fish and wildlife species, and habitat and subsistence activities.

The North Slope Borough Coastal Management Plan (NSBCMP) has been incorporated into the ACMP. The program presents policies to regulate activities in the borough's coastal zone. Consistency with

the ACMP standards and the policies of the NSBCMP is discussed in the Alaska Coastal Management Consistency Analysis and the final consistency determination.

8. Other Requirements

a. Native Allotments

Lessees must comply with applicable federal law concerning Native allotments. Activities proposed in a plan of operations must not unreasonably diminish the use and enjoyment of lands within a Native allotment. Before entering onto lands subject to a pending or approved Native allotment, lessees must contact the Bureau of Indian Affairs (BIA) and the Bureau of Land Management (BLM) and obtain approval to enter.

b. U.S. Coast Guard

The U.S. Coast Guard has authority to regulate offshore oil pollution under 33 C.F.R. §§ 153-157.

c. Rehabilitation Following Lease Expiration

Upon expiration or termination of the lease, paragraph 21 of the lease contract requires the lessee to rehabilitate the lease area to the satisfaction of the state and ASRC. The lessee is granted one year from the date of expiration or termination to remove all equipment from the lease area and deliver up the lease area in good condition.

d. Applicable Laws and Regulations

In addition to existing laws and regulations applicable to oil and gas activities, DO&G requires, under paragraph 26 of the state's standard lease contract, that leases be subject to all applicable state and federal statutes and regulations in effect on the effective date of the lease. Leases will also be subject to all future laws and regulations placed in effect after the effective date of the leases to the full extent constitutionally permissible and will be affected by any changes to the responsibilities of oversight agencies.

