4.7 Relationship Between Local Short-Term Uses and Maintenance and Enhancement of Long-Term Productivity

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As used in this section, "short-term" refers to the 30-year duration of the right-of-way (ROW) renewal for the Trans-Alaska Pipeline System (TAPS), whereas "long-term" refers to an indefinite period beyond the termination of the ROW and oil and gas production on the North Slope. As noted in the discussion of direct, indirect, and cumulative impacts of the proposed action, effects vary in kind, intensity, and duration.

In most environmental impact statements, the no-action alternative is literally a "do-nothing" alternative, and the environmental impacts associated with this alternative are presumed to be nonexistent. This is not the case for the analysis of TAPS ROW renewal. Historically, short-term environmental and social impacts have occurred, and whatever long-term effects follow from these prior short-term effects cannot be altered by selection of either the proposed or the no-action alternatives. In this sense, some of these long-term effects are foreordained. The pipeline and Valdez Marine Terminal (VMT) have been constructed, as have present Alaska North Slope (ANS) fields. Long-term consequences of these actions will be faced whether or not the ROW is renewed. So too are the effects of the Permanent Fund. Depending upon how this fund is invested and what dividends are authorized, financial benefits from this fund could persist in perpetuity.

In assessing the relationship between short-term and possible long-term effects what is relevant is the difference in the level of these effects comparing the cases where the pipeline and VMT are closed, as are presently operating ANS fields, versus continued operation of TAPS, development of additional ANS fields, and potential development of ANS's vast natural gas reserves.

4.7.1 Physical Resources

As noted in several EISs for ANS developments (e.g., National Petroleum Reserve-Alaska (NPR-A), various Beaufort Sea Lease Sales) oil and gas exploration and development activities will produce short-term, and may produce long-term, effects. For example, the EIS for NPR-A (BLM and MMS, 1998) states:

> "Construction activities associated with road and pad construction, culvert and bridge work in streams and lakes that disturb stream banks or shorelines, blockages of natural channels and floodways that disrupt drainage patterns, and removal of gravel would cause short-term increases in erosion and sedimentation. Water removal could cause short-term changes in aquatic habitat. Permanent gravel roads and pads, airstrips, pipelines, and facilities constructed adjacent to or crossing streams and lakes would have long-term effects on water resources. Magnitude and duration of effects would vary with the type and extent of the activities."

Likewise, the EIS for the Beaufort Sea Planning Area Oil and Gas Lease Sale 170 (MMS, 1998) states:

> "Water pollution from onshore activities is a long-term but local effect...although the pristine water quality of the study area may be impaired, spillage is judged an insignificant long-term, low, local effect for water quality. This level of effect may be considered an appropriate compromise for obtaining oil and gas resources."

Other ANS EISs contain much the same language. It should be noted that the long-term effects on water quality associated with construction activities and physical infrastructure could, in principle, be controlled by the actions taken for dismantling, removal, and restoration (DR&R).

4.7.2 Biological Resources

Exploration, development, and production activities will produce localized adverse short-term effects on vegetation. The recovery time for vegetation from construction activi-

ties and spills is such that damage is likely to extend only briefly beyond cessation of operations. Moreover, the area potentially impacted is only a small fraction of the total resource area.

Short-term adverse effects on biological populations and habitats could occur in the event of an oil spill. The areal extent of these impacts depends upon several factors, including the location of the spill (onshore versus offshore), quantity spilled, season, meteorological conditions during and after the spill, and the success of cleanup and mitigation measures. Potential effects include adverse impacts on population size, reductions in the number of species in the affected area, and changes in behavior and migration patterns. Long-term effects also might occur if recovery from the short-term effects extended beyond the duration of the ROW extension.

It is generally believed (see, e.g., BLM and MMS, 1998; MMS, 1996a, 1998) that after completion of oil production, oil spills and their effects would not occur and the marine environment would be expected to "remain at or return to its normal long-term productivity level." Experience with Outer Continental Shelf (OCS) areas where oil and gas have been produced for many years indicates that there has been no discernible decrease in long-term productivity. Experience differs somewhat in the North Sea, where some persistent effects may have taken place.

4.7.3 Cultural/Paleontological Resources

Archeological and historic sites discovered prior to and during development and continued production would enhance long-term knowledge of Alaska's history and prehistory. However, cultural and paleontological resources are inherently nonrenewable. To the extent that these occur, adverse impacts may be difficult to mitigate or reclaim.

4.7.4 Visual Resources

DR&R of pads, pipeline sections, pump stations, and other facilities can provide vistas which present similar visual appearance to the undisturbed land. Airstrips might be removed, which restores the original appearance of the land or at least reduces the visual impact. Alternatively, airstrips might be maintained, permitting continued access to the area, which might benefit residents and visitors alike. The Dalton Highway will be maintained under either alternative and visual impacts are not expected to change.

Increased visitor access could result in a degradation of the wilderness quality of certain areas.

4.7.5 Socioeconomic Effects

Socioeconomic effects of selection of the preferred action alternative are mixed, but largely beneficial:

- Among the adverse impacts are potential disruptions in subsistence activity that could result from oil spills. These are believed to be short-term effects, however. Under either alternative recreational hunting and fishing are likely to increase in areas important for subsistence users. These effects can only be influenced or mitigated by resource managers and regulators.
- Obvious beneficial impacts include jobs and revenues in the short term. However, these short-term effects can have long-term consequences. The Permanent Fund, for example, could provide financial resources for citizens of Alaska long after the cessation of oil and gas production. Selection of the preferred action alternative provides additional contributions to the Permanent Fund. Moreover, prospects for gas-to-liquids (GTL) or other gas commercialization schemes could develop within the planning horizon and continue to provide benefits after the close of the ROW renewal period.