



## Beaufort Sea and Chukchi Sea Planning Areas

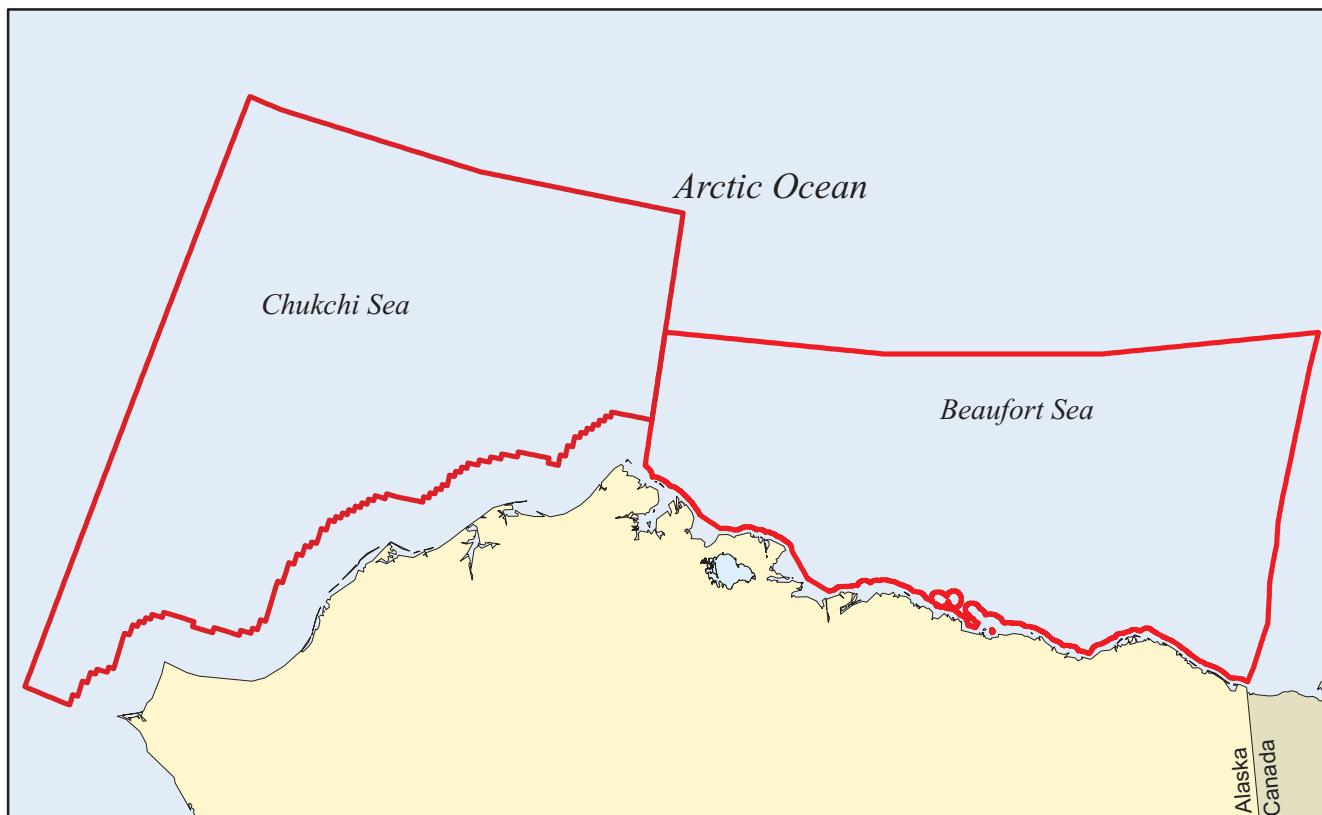
Oil and Gas Lease Sales 209, 212, 217, and 221

Draft Environmental  
Impact Statement

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### Volume IV

Appendices, Figures, Tables





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### **Volume IV**

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Author

**Minerals Management Service**

**Alaska OCS Region**

## **ACRONYMS**

## Acronyms

AAC	Alaska Administrative Code	BLM	Bureau of Land Management
ABWC	Alaska Beluga Whale Committee	BO	Biological Opinion
ACC	Alaska Coastal Current	BOD	biological oxygen demand
ACIA	Arctic Climate Impact Assessment	BOE	barrels of oil energy equivalent
ACMP	Alaska Coastal Management Program	B.P.	Before Present
ACP	Arctic Coastal Plain	BP	British Petroleum
ACS	Alaska Clean Seas	bpd	barrels per day
ACW	Alaska Coastal Water	BPXA	BP Exploration (Alaska), Inc.
ADEC	Alaska Department of Environmental Conservation	BRFSS	Behavioral Risk Factor Surveillance Study
ADF&G	Alaska Department of Fish and Game	BS	Boundary Segment
ADNR	Alaska Department of Natural Resources	BSU	Barrow Service Unit
AES	ASRC Energy Services	BTEX	benzene, toluene, ethylbenzene, and xylene
AEWC	Alaska Eskimo Whaling Commission	BWASP	Bowhead Whale Aerial Survey Program
AGIA	Alaska Gas Inducement Act	CAA	Clean Air Act, also conflict avoidance agreement
AGL	above ground level	CAH	Central Arctic Caribou Herd
AGS	Alaska Gas System	Call	Call for Information and Nominations
AHRS	Alaska Heritage Resource Survey	CANIMIDA	Continuation of Arctic Nearshore Impact Monitoring in Development Areas
AI/AN	American Indian and Alaskan Native	CDC	Centers for Disease Control
AIS	aquatic invasive species	CDFO	Canadian Department of Fisheries and Oceans
AIW	Atlantic Intermediate Water	CBD	Center for Biological Diversity
AMMP	Adaptive Management and Mitigation Plan	CDFO	Canadian Department of Fisheries and Oceans
ANGTS	Alaska Natural Gas Transportation System	CEQ	Council on Environmental Quality
ANHB	Alaska Native Health Board	CER	Categorical Exclusion Review
ANILCA	Alaska National Interest Land Conservation Act	CERCLA	Comprehensive Environmental Response Compensation and Liability Act of 1980
ANIMIDA	Arctic Nearshore Impact Monitoring in Development Areas	CFC	chlorofluorocarbons
ANMC	Alaska Native Medical Center	CFR	Code of Federal Regulations
ANTHC	Alaska Native Tribal Health Consortium	CH <sub>4</sub>	methane
ANWR	Arctic National Wildlife Refuge	CHAP	Community Health Aide Program
AO	Arctic Oscillation	CI	confidence interval
AOGMC	atmosphere-ocean general circulation models	CIDS	concrete island drilling system
APD	Application for Permit to Drill	CIP	Capital Improvements Project
APP	Alaska Permanent Fund	CITES	Convention on the International Trade in Endangered Species
Area ID	Area Identification	cm	centimeter(s)
ARBE	Arctic Region Biological Evaluation	cm/sec.	centimeter(s) per second
ARRT	Alaska Regional Response Team	CI	confidence interval
ASL	above sea level	CIAP	Coastal Impact Assistance Program
ASRC	Arctic Slope Regional Corporation	CMP	Coastal Management Program
ATV	all-terrain vehicle	CO	carbon monoxide
AWIC	Arctic Women in Crisis	COPB	chronic obstructive pulmonary disease
bbl	barrel(s)	COY	cubs of the year (polar bear)
Bbbl	billion barrels (of oil)	cP	centipoise (measure of viscosity and emulsification of oil)
Bcf	billion cubic feet (of gas)		
BE	Biological Evaluation		

## Acronyms

CS	Chukchi Sea (population of polar bears)	ft <sup>3</sup>	cubic feet/foot
CSSP	Climate Change Science Program	FY	Fiscal Year
CWA	Clean Water Act	G&G	Geological and Geophysical permit
CYP1A	cytochrome P4501A	g/m <sup>2</sup>	gram(s) per square meter
CYS	Children & Youth Services	gal	gallon(s)
CZARA	Coastal Zone Act Reauthorization Amendments of 1990	GIS	Geographic Information System
CZMA	Coastal Zone Management Act	GLS	grouped land segments
CZMP	Coastal Zone Management Plan	GPR	ground-penetrating radar
dB	decibel(s)	GWP	global warming potential
DEW	Defense Early Warning	HAPs	hazardous air pollutants
DHHS	(U.S.) Department of Health and Human Services	HEC	Health Effect Category
DLP	defense of life and property	Hz	Hertz
DM	Department Manual	IAP	Integrated Activity Plan
DMT	Delong Mountain Terminal	IBHS	Integrated Behavioral Health Services
DOCD	development operations coordination documents	ICAS	Inupiat Community of the Arctic Slope
DO&G	Div. of Oil and Gas (State)	IDs	identification numbers
DPP	Development and Production Plan	IHA	Incidental Harassment Authorization
DWM	Department of Wildlife Management (North Slope Borough)	in	inch(es)
		in <sup>3</sup>	cubic inch(es)
		IPCC	Intergovernmental Panel on Climate Change
E	evapotranspiration	I/SS	Ice/Sea Segment(s)
EA	Environmental Assessment	ISC	Ice Seal Commission
EEZ	U.S. Exclusive Economic Zone	ITL	Information to Lessees
EFH	Essential Fish Habitat	ITM	Information Transfer Meeting
EIS	Environmental Impact Statement	ITTC	Inupiat Teens Taking Control
EJ	Environmental Justice	IUCN/SSG	World Conservation Union/Species Survival Group
ENP	Eastern North Pacific stock of gray whales	IV	intravenous
EO	Executive Order	IWC	International Whaling Commission
E&P	Exploration and Production	kg	kilogram(s)
EP	Exploration Plan	kHz	kilohertz
EPA	Environmental Protection Agency	km	kilometer(s)
ERA	environmental resource area(s)	km <sup>3</sup>	cubic kilometers
ERAP	Emergency Response Action Plan	kn	knot(s)
ERL	Effects Range-Low	kPa	kiloPascal(s)
ERM	Effects Range-Median	KyBP	thousand years Before Present
ESA	Endangered Species Act	L	liter(s)
ESI	Environmental Sensitivity Index	lat.	latitude
ESP	Environmental Studies Program	lb	pound(s)
EVOS	<i>Exxon Valdez</i> oil spill	LBCHA	Ledyard Bay Critical Habitat Area
EWC	(Alaska) Eskimo Walrus Commission	LC <sub>50</sub>	96-hour lethal concentration for 50% of test organisms
FAS	fetal alcohol syndrome	LHW	Lower Halocine Water
FDA	Food and Drug Administration	LME	large marine ecosystems
FLIR	forward looking infrared (videotape images)	LMR	Land Management Regulation
FMP	Fishery Management Plan	LMW	low-molecular-weight (hydrocarbons)
FNOS	Final Notice of Sale	LNG	liquefied natural gas
FOSC	Federal On-Scene Coordinator	LOA	Letter of Authorization
FR	<i>Federal Register</i>	long.	longitude
FSB	Federal Subsistence Board	LOSC	Local On-Scene Coordinator
ft	foot/feet	LS	land segment(s)

## Acronyms

m	meter(s)	NSBCMP	North Slope Borough Coastal Management Plan
m/sec.	meter(s) per second	NSBMC	North Slope Borough Municipal Code
$m^3/sec.$	cubic meter(s) per second		
MAD	Mutual Aid Agreement		
Mcf	million cubic feet	NSF	National Science Foundation
mg/kg	milligram(s)/kilogram(s)	NTL	Notice to Lessees
mg/L	milligram(s) per liter	NWAB	Northwest Arctic Borough
mi	mile(s)	$O_3$	ozone
$mi^2$	square mile(s)	OBC	ocean-bottom cable
mL	milliliter(s)	OCD	Offshore and Coastal Dispersion
mm	millimeter(s)	OCS	Outer Continental Shelf
MMbbl	million barrels (of oil)	OPA	Oil Pollution Act of 1990
MMC	Marine Mammal Commission	OSCP	Oil-Spill-Contingency Plan
MMcf	million cubic feet	OSRA	Oil-Spill-Risk Analysis (model)
MMO	marine mammal observer	OSRO	oil-spill removal organization
MMPA	Marine Mammals Protection Act	OSRP	oil-spill-response plan
MMS	Minerals Management Service	OSRV	Oil Spill Response Vessel
MOU	Memorandum of Understanding	OWM	Oil Weathering Model
mph	miles per hour	P	precipitation
MRSA	antibiotic-resistant staph infections	PAC	powdered activated carbon
ms	millisecond(s)	PAH	polyaromatic hydrocarbons or polynuclear aromatic hydrocarbons (water quality)
MSA	Magnuson-Stevens Fishery Conservation and Management Act		polycyclic aromatic hydrocarbons (fish resources, lower trophic-level organisms)
MyBP	million years Before Present	PAH	potential biological removal
NAAQS	National Ambient Air Quality Standards		Polar Bear Specialist Group
NAO	Arctic and North Atlantic Oscillations	PBSG	polychlorinated biphenyls
NC	Nanuk Commission	PCBs	Porcupine Caribou Herd
NCP	National Contingency Plan	PCH	Pacific Decadel Oscillation
ng/g	nanogram(s) per gram(s)	PDO	Public Health Baseline Assessment
ng/L	nanogram(s) per liter	PHBA	Public Law
NGO	non-Government Organization(s)	P.L.	potential biological removal
NRC	National Research Council	PBR	Polar Bear Specialist Group
NEPA	National Environmental Policy Act	PBSG	Programmatic Environmental Assessment
NISA	National Invasive Species Act of 1996	PEA	Public Health Nursing
nmi	nautical mile(s)	PHN	fine particulates less than 2.5 microns in diameter
NMFS	National Marine Fisheries Service	$PM_{2.5}$	particulate matter less than 10 microns in diameter
$NO_2$	nitrogen dioxide	$PM_{10}$	Proposed Notice of Sale
$NO_x$	nitrous oxide	PNOS	persistent organic pollutants
NOI	Notice of Intent to Prepare an EIS	POPs	parts per billion
NORM	Naturally Occurring Radioactive Materials	ppb	parts per million
NPDES	National Pollution Discharge Elimination System	ppm	parts per thousand
NPFMC	North Pacific Fisheries Management Council	ppt	Preparedness for Response Program
NPR-A	National Petroleum Reserve - Alaska	PREP	Prevention of Significant Deterioration
NPR-4	Naval Petroleum Reserve No. 4	PSD	Permanent Threshold Shift
NRC	National Research Council	PTS	Resource Conservation and Recovery Act
NRDC	National Resources Defense Council	RCRA	root-mean-square
NSB	North Slope Borough	rms	Record of Decision
		ROD	

## Acronyms

ROI	rate of increase (in whale population)	WIC	Women, Infants, and Children (program)
ROP	Required Operating Procedure	Y-K Delta	Yukon-Kuskokwim Delta
RRT	Regional Response Team	yd	yard(s)
RS/FO	Regional Supervisor/Field Operations	yd <sup>3</sup>	cubic yard(s)
SAC	Scientific Advisory Committee	2D	2-dimensional (seismic survey)
SAP4.6	Synthesis and Assessment Product 4.6	3D	3-dimensional (seismic survey)
sBSW	summer Bering Sea Water	°C	degrees Celsius
SBS	Southern Beaufort Sea (population of polar bears)	°F	degrees Fahrenheit
SCAT	Shoreline Cleanup Assessment Team	<	less than
SCC	Siberian Coastal Current	>	greater than
SDH	social determinants of health	≥	greater than or equal to
SDI	South Drilling Island	µg	microgram(s)
sec	second(s)	µg/g	microgram(s) per gram
SEL	sound-exposure level	µg/kg	microgram(s) per kilogram
SLICA	Survey of Living Conditions in the Arctic	µg/m <sup>3</sup>	microgram(s) per cubic meter
SO <sub>2</sub>	sulfur dioxide	µg/L	microgram(s) per liter
SOI	Shell Offshore, Inc.	µPa	microPascal(s)
SOSC	State On-Scene Coordinator	~	about
SPL	sound-pressure level	§	section
SPM	suspended-particulate matter		
SSDC	single steel drilling caisson		
Sv	Sverdrup(s)		
SWZ	Subsistence Whaling Zone		
TAGS	Trans-Alaska Gas System		
TAPS	Trans-Alaska Pipeline System		
TB	tuberculosis		
Tcf	trillion cubic feet (of gas)		
TCH	Teshekpuk Lake Caribou Herd		
Tg	teragrams		
TLSA	Teshekpuk Lake Special Area		
TLSUA	Teshekpuk Lake Special Use Area		
TSS	total suspended solids		
TTS	Temporary Threshold Shift		
UC	Unified Command		
U.S.C.	United States Code		
USCG	United States Coast Guard		
USDA	United States Department of Agriculture		
USDOI	United States Department of the Interior		
USGS	United States Geological Survey		
USSR	United Soviet Socialist Republics		
UV	ultraviolet		
VOCs	volatile organic compounds		
VSMs	vertical support members		
WAH	Western Arctic Caribou Herd		
wBSW	winter Bering Sea Water		
WHB	Western Hudson Bay		
WHO	World Health Organization		

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## **Appendix A.1: The Information, Models, and Assumptions We Use to Analyze the Effects of Accidental Oil Spills in this EIS.**

We analyze hypothetical crude, condensate, or refined oil spills from oil and gas activities and their relative impact to environmental, economic, and sociocultural resource areas and the coastline that could result from offshore oil development in the Beaufort Sea Sales 209 and 217 or Chukchi Sea Sales 212 and 221 areas. We make a set of assumptions that collectively form a scenario to analyze the effects of oil spills from oil and gas activities in a consistent manner throughout the environmental impact statement (EIS).

Oil spills are broken down into two general spill-size categories and two general phases of operations. These divisions reflect a difference in what information about the spills is derived and used. The oil-spill analysis considers two general spill-size categories: (1) large spills, those greater than or equal to ( $\geq$ ) 1,000 barrels (bbl), meaning that 1,000 bbl is the threshold size; and (2) small spills, those less than ( $<$ ) 1,000 bbl. The oil-spill analysis considers two general operation categories: (1) exploration and (2) development and production.

Large spills are those spills that are  $\geq$ 1,000 bbl and would persist on the water long enough to follow its path in a trajectory analysis. One thousand barrels is the threshold value for a large oil spill. Small spills are those spills  $<$ 1,000 bbl, and a small spill would not be expected to persist on the water long enough to follow its path in a trajectory analysis. In this appendix, the information, models, and assumptions of large spills are discussed in Sections 1 through 4. The information about small spills is discussed in Section 5. Large spills are assumed to occur during development and production. Small spills are assumed to occur both during exploration and development and production.

To judge the effect of a large oil spill, we estimate information regarding the type of oil, the general source of a large oil spill, the location and size of a large spill, the chemistry of the oil, how the oil will weather, how long it will remain, and where it may go. We also estimate the mean number of large spills and the chance of one or more large spills occurring over the entire production life of the development. We simulate the paths large oil spills take to estimate the chance of a large spill contacting, and we combine the chance of a spill contacting with the chance of a spill occurring to estimate the chance of one or more large spills occurring and contacting over the life of production.

Estimating large oil-spill occurrence or large oil-spill contact is an exercise in probability. Uncertainty exists regarding whether exploration or development will occur at all and, if it does, the location, number, and size of large oil spill(s) and the wind, ice, and current conditions at the time of a spill(s). Although some of the uncertainty reflects incomplete or imperfect data, a considerable amount of uncertainty exists simply because it is difficult to predict events 15-40 years into the future.

For small spills, we estimate the type of oil and number and size of a spill. We describe the rationale for these large and small oil-spill assumptions in the following subsections. The rationale for these large and small oil-spill assumptions is a mixture of project-specific information, modeling results, statistical analysis, and professional judgment.

Although the OSRA estimates the statistical mean number of large spills is less than one over the life of both the Chukchi Sea Sales 212 and 221 and each Beaufort Sea Sale 209 or 217, for purposes of analysis we assume one large spill occurs and then analyze its effects in each of the sale areas. After we analyze the effects of a large oil spill, we provide the chance of one or more large oil spills occurring over the production life of the project for the decision maker to consider. An analysis is done for small spills considering the number and volume of small spills. We assume small spills will occur over the life of the project. The majority of small spills occur into containment and never reach the environment.

### **1. Accidental Large Oil Spills.**

To set a reference framework under which the analysis of large oil spills occurs, the following discussion provides the context for the sources of oil in the sea. The inputs of oil in the sea have declined through time to the present.

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Possible causes for the decline include passage of the Oil Pollution Act of 1990 (OPA 90), technology improvements, and implementation of safety-management systems that put into practice risk-reduction interventions. The exploration and production industry contributes approximately 2% of the annual input in North America (Figure A.1-1).

In 2003, the National Research Council (NRC) of the National Academy of Sciences completed *Oil in the Sea III*, its third examination of petroleum inputs into marine waters worldwide. Although direct comparisons between the 1975, 1985, and 2002 reports are difficult due to use of differing computational techniques, it is clear that petroleum inputs from other than natural sources have decreased significantly over 3 decades. Total petroleum input estimates decreased from 43 million barrels per year (MMbbl/yr) to 23 MMbbl/yr between the 1975 and 1985 reports, a 47% decrease. In the 2002 report, total petroleum inputs continued to decrease to 9 MMbbl/yr, a 61% decrease from the 1985 report estimate. Offshore oil and gas development is responsible for 4% of the petroleum in the world's marine environment. Offshore oil and gas petroleum development inputs per annum decreased from 0.56 MMbbl in the 1975 report to 0.35 MMbbl in the 1985 and 2002 reports. At the same time, annual offshore oil production increased from 2.3 billion barrels (Bbbl) to 4.6 Bbbl, to 7.0 Bbbl between the three reporting periods. This demonstrates a significant reduction in petroleum inputs per billion barrels of production from worldwide offshore oil and gas development between the three reporting periods—from 243,000 bbl/Bbbl in the 1975 report, to 76,000 bbl/Bbbl in the 1985 report, to 50,000 bbl/Bbbl in the 2002 report—despite large increases in production. Therefore, even though worldwide production increased 52%, petroleum inputs were approximately the same (0.35 MMbbl per annum) between the 1985 and 2002 reports.

The 2003 report made estimates for North America. The four main categories were: natural seeps, extraction of petroleum, transportation of petroleum, and consumption of petroleum. Offshore oil and gas development was responsible for 2% of the petroleum inputs in North America's marine environment. Natural seepage is the largest input, contributing 63% of total inputs to the marine environment. Consumption is the next largest input, contributing 32% of total inputs, 22% of which are land based and from river runoff. Marine transportation is responsible for 3% of inputs in North American marine waters (Figure A.1-1).

Between 1971 and 2007, OCS operators have produced almost 15 Bbbl of oil. During this period, there were 2,645 spills that totaled to approximately 164,100 barrels spilled (equal to 0.001% of barrels produced), or about 1 bbl spilled for every 91,400 bbl produced. This record has improved over time. Between 1993 and 2007, the most recent 15-year period, almost 7.5 Bbbl of oil were produced. During this period, there were 651 spills that totaled to approximately 47,800 bbl spilled (equal to 0.0006% of barrels produced), or approximately 1 bbl spilled for every 156,900 bbl produced (Anderson, 2008, pers commun.).

**1.1. Large Spill Size, Source and Oil-Type Assumptions.** The large spill size and source assumptions are the same for both Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221. Tables A.1-1 and A.1-2 show the general size categories, source of a spill(s), type of oil, size of spill(s) in barrels, and the receiving environment we assume in our analysis of the effects of oil spills in this EIS for Alternative 2, the Proposed Action and its alternatives for the Beaufort and Chukchi, respectively. The sources of spills are divided generically into platform or pipeline. Platform includes spills from wells and tanks. The type of crude oil used in this analysis is Alaska North Slope crude for Beaufort Sea Sales 209 and 217 and Alpine composite crude for Chukchi Sea Sales 212 and 221. In addition, we look at diesel fuel from tanks onboard a platform and condensate from any possible gas production.

**1.1.1. Large Oil-Spill Sizes.** Large spills are  $\geq 1,000$  bbl. Large spills have a threshold value of 1,000 bbl. This means 1,000 bbl is the minimum size in that category, and the size can be larger. Tables A.1-1 and A.1-2 show the assumed large spill sizes and the EIS sections where we analyze the effects of large and small spill(s) for Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221, respectively.

The large spill-size assumptions we use are based on the reported spills from production in the Gulf of Mexico, and Pacific Outer Continental Shelf (OCS). We use the median spill size in the OCS from 1985-1999 as the likely large spill size. We use Gulf of Mexico and Pacific spill sizes, because no large spills have occurred on the Alaska OCS from oil and gas activities. Small spills are based on the historic spill sizes from production on the onshore Alaska North Slope from 1989-2000. Stakeholders, including the North Slope Borough Science Advisory Committee,

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have suggested using spill rates from the Alaska North Slope in arctic Alaska OCS EIS's. The assumption is that Alaska North Slope spills occur in more similar environments to the offshore Beaufort and Chukchi seas than the Gulf of Mexico and Pacific OCS.

**1.1.2. Source and Type of Large Oil Spills.** The source of large oil spills is generalized into two categories: production platforms and pipelines. The source is considered the place where large oil spills could originate from. Large production platform spills include spills from wells in addition to any storage tanks located on the platform. Large pipeline spills include spills from the riser and offshore pipeline to the shore. Large platform spills are assumed to be either crude oil, condensate oil, or diesel oil from storage tanks. Large pipeline spills are assumed to be crude or condensate oil.

It is known that crude oils vary in properties, and the crude oil spills behave in different ways based on their properties. Both of the crude oils considered in this analysis are medium crudes. The crude oils in the Chukchi are estimated to be lighter than crude oil in the Beaufort, given the existing information. Crude oil samples recovered from wells onshore Alaska North Slope and offshore Beaufort Sea are characterized by a range of American Petroleum Institute (API) gravity. We use Alaska North Slope crude as a composite oil for Beaufort Sea Sales 209 and 217. Alaska North Slope crude has an API gravity of 27-30, depending on where and when it was sampled and was chosen to be representative for oil-weathering simulations.

From crude oil samples recovered from wells, the Chukchi Sea oil seems to be characterized by relatively low sulfur (<18%), high-gravity ( $\geq 35^{\circ}$ ) API crude oils (Sherwood et al., 1998:129). We looked for Alaska North Slope crude oils with similar API gravity values and that had laboratory weathering data. Alpine composite crude oil has an API gravity of  $35^{\circ}$  and was chosen to be representative for the oil-weathering simulations.

For both Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221 we chose a standard diesel oil and a condensate with an API gravity of  $50^{\circ}$  for the oil-weathering simulations.

**1.1.3. Historical Crude Oil Spills  $\geq 1,000$  Bbl on the OCS.** The Gulf of Mexico and Pacific OCS data show that a large spill most likely would be from a pipeline or a platform. Platform spills include spills from wells and tanks on the facility. The median size of a crude oil spill  $\geq 1,000$  bbl from a pipeline from 1985-1999 on the OCS is 4,600 bbl, and the average is 6,700 bbl (Anderson and LaBelle, 2000). The median spill size for a platform on the OCS over the entire record from 1964-1999, based on trend analysis, is 1,500 bbl, and the average is 3,300 bbl (Anderson and LaBelle, 2000). For purposes of analysis, we use the median spill size as the likely large spill size.

**1.1.4. Historical Crude and Condensate Oil Spills from Well-Control Incidents on the OCS and Alaska North Slope.** The Gulf of Mexico and Pacific OCS data show that a large spill likely would not be from a well-control incident. We consider well-control incidents that result in pollution to the environment to be very unlikely events. Well-control-incident events often are equated with catastrophic spills; however, in recent years very few well-control-incident events have resulted in spilled oil, and the volumes spilled often are small. All five of the well-control-incident events  $\geq 1,000$  bbl in the OCS database occurred between 1964 and 1970 (Table A.1-3). Following the Santa Barbara well-control incident in 1969, amendments to the OCS Lands Act and implementing regulations significantly strengthened safety, inspection and pollution-prevention requirements for OCS offshore activities. Well-control training, redundant pollution-prevention equipment, and subsurface safety devices are among the provisions that were adopted in the regulatory program.

From 1971-2007, 228 exploration and development well control incidents occurred, on the OCS while drilling approximately 38,000 wells and producing 15 Bbbl of oil (Table A.1-3). This includes all well-control incidents, whether they caused pollution or not. From 1971-2007, 35 of those 228 well-control incidents resulted in oil spills of crude or condensate, with the amount of oil spilled ranging from <1 bbl to 350 bbl in any one individual spill. The total volume spilled from those 35 well-control incidents is approximately 1,800 bbl. The crude and condensate volume spilled from well-control incidents was approximately 0.00001% of the volume produced. There were no spills  $\geq 1,000$  bbl from well-control incidents in the last 37 years on the OCS.

This section summarizes information from well-control incidents that occurred during drilling from 1992 through 2006 on the OCS and includes all well-control incidents from drilling, even if no pollution occurred to the

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environment. This information is compared with the previous study conducted for drilling well-control incidents that occurred from 1971 through 1991 (Izon, Danenberger, and Mayes, 2007). This information shows a downward trend in the number of drilling well-control incidents per well drilled from 1992-2006 compared to 1971-1991.

The data analyzed was incident reports submitted by OCS oil and gas operators and from Minerals Management Service's (MMS) accident investigation reports. Between 1992 and 2006, 39 well-control incidents occurred, compared with 87 during the time period of the previous study (1971-1991). Overall, the rate of drilling well-control incidents per well drilled improved during the period. The current 15-year study period had a drilling well-control incident rate of one for every 387 wells drilled, compared with a rate of one well-control incident for every 246 wells drilled during the previous study period.

Overall, the current period saw an improvement (decrease) in well control incident duration. Like the previous study, a significant number of well-control-incident events were of short duration. During the current study, 49% of the well-control incidents stopped flowing in 24 hours or less, compared with 57% during the previous study. In the current study, 41% lasted between 1 and 7 days, compared with 26% during the previous study. There were fewer well-control incidents that lasted more than 7 days. The well-control incident with the longest duration during the current study period was 11 days, compared with more than 30 days in the previous period (Izon, Danenberger, and Mayes, 2007).

The U.S. Gulf of Mexico OCS blowout frequencies, as reported by Holland (1997), range from  $5.9 \times 10^{-3}$  blowouts per well drilled for exploratory drilling to  $3.9 \times 10^{-3}$  blowouts per well for development. Izon, Danenberger, and Mayes, (2007) report a well-control incident rate for exploration well drilling of one for every 297 wells drilled, for a frequency of  $3.4 \times 10^{-3}$ . The development well drilling rate is one for every 470 wells drilled, for a frequency of  $2.1 \times 10^{-3}$  (Izon, Danenberger, and Mayes, 2007). Both the exploration and development well-control incident drilling frequencies reflect a decline in well-control incidents over recent years.

The blowout record for the Alaska North Slope remains the same as previously reported in USDOI, MMS (2003) and is summarized herein. Of the 10 blowouts, 9 were gas and 1 was oil. The oil blowout in 1950 resulted from drilling practices that are not relevant today. A third study confirmed that no crude oil spills  $\geq 100$  bbl from blowouts occurred from 1985-1999 (Hart Crowser, Inc., 2000). Scandpower (2001) used statistical blowout frequencies modified to reflect specific field conditions and operative systems at Northstar. This report concludes that the blowout frequency for drilling the oil-bearing zone is  $1.5 \times 10^{-5}$  per well drilled. This compares to a statistical blowout frequency of  $7.4 \times 10^{-5}$  per well (for an average development well). This same report estimates that the frequency of oil quantities per well drilled for Northstar for a spill  $> 130,000$  bbl is  $9.4 \times 10^{-7}$  per well.

**1.1.5. Historical Exploration Spills on the Beaufort and Chukchi OCS.** The MMS estimates the chance of a large ( $\geq 1,000$  bbl) oil spill from exploratory activities to be very low. On the Beaufort and Chukchi OCS, the oil industry drilled 35 exploratory wells. During the time of this drilling, industry has had 35 small spills totaling 26.7 bbl or 1,120 gallons (gal). Of the 26.7 bbl spilled, approximately 24 bbl were recovered or cleaned up. Table A.1-4 shows the exploration spills on the Beaufort and Chukchi OCS. Small (25 bbl or less) operational spills of diesel, refined fuel, or crude oil may occur. The MMS estimates this could be a typical scenario during exploratory drilling in the Beaufort and Chukchi seas. These small spills often are onto containment on platforms, facilities, or gravel islands or onto ice and may be cleaned up.

**1.1.6. Historical Exploration Well-Control Incidents.** No exploratory drilling well-control incidents have occurred on the Alaskan OCS. One exploration drilling blowout of gas has occurred on the Canadian Beaufort. Up to 1990, 85 exploratory wells were drilled in the Canadian Beaufort Sea, and one shallow-gas blowout occurred. A second incident was not included at the Amaluligak wellsite with the Molikpaq drill platform. This resulted in a gas flow through the diverter, with some leakage around the flange. The incident does not qualify as a blowout by the definition used in other databases and, therefore, was excluded (Devon Canada Corporation, 2004).

From 1971-2007, industry has drilled approximately 172 exploration wells in the Pacific OCS, 51 in the Atlantic OCS, 14,006 in the Gulf of Mexico OCS, and 98 in the Alaska OCS, for a total of 14,307 exploration wells. From 1971-2007, there were 70 well control incidents during exploration drilling. Of those 70 well control incidents, 4 resulted in crude or condensate oil spills of 200, 100, 11, and 0.8 bbl, respectively (Table A.1-3). No large spills

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( $\geq 1,000$  bbl) have occurred from 1971-2007 during exploration drilling. Therefore, approximately 14,000 exploration wells have been drilled, and four small spills resulted in crude or condensate reaching the environment from well-control incidents during exploration drilling (Table A.1-3).

## 2. Behavior and Fate of Crude Oils.

There are scientific laboratory data and field information from accidental and research oil spills about the behavior and fate of crude oils. We discuss the background information on the fate and behavior of oil in arctic environments and its behavior and persistence properties along various types of shorelines. We also make several assumptions about oil weathering to perform modeling simulations of oil weathering specific to the size spills we estimate for analysis purposes.

**2.1. Generalized Processes Affecting the Fate and Behavior of Oil.** Several processes alter the chemical and physical characteristics and toxicity of spilled oil. Collectively, these processes are referred to as weathering or aging of the oil and, along with the physical oceanography and meteorology, the weathering processes determine the oil's fate. The major oil-weathering processes are spreading, evaporation, dispersion, dissolution, emulsification, microbial degradation, photochemical oxidation, and sedimentation to the seafloor or stranding on the shoreline (Payne et al., 1987; Boehm, 1987; Lehr, 2001) (Figure A.1-2).

The physical properties of a crude, diesel, or condensate oil spill; the environment it occurs in; and the source and rate of the spill will affect how an oil spill behaves and weathers (Boehm and Page, 2007). The environment in which a spill occurs, such as the water surface or subsurface, spring ice overflow, summer open-water, winter under ice, winter on ice, or winter broken ice, will affect how the spill behaves. In ice-covered waters, many of the same weathering processes are in effect; however, the sea ice and cold temperatures change the rates and relative importance of these processes (Payne, McNabb, and Clayton, 1991).

After a spill occurs, spreading and advection begin. The slick spreads horizontally in an elongated pattern oriented in the direction of wind, waves and currents and nonuniformly into thin sheens (0.5-10 micrometers [ $\mu\text{m}$ ]) and thick patches (0.1-10 millimeters[mm]) (Elliott, 1986; Elliott, Hurford, and Penn, 1986; Galt et al., 1991). In the cooler arctic waters, oil spills spread less and remain thicker than in temperate waters because of differences in the viscosity of oil due to temperature. This property will reduce spreading. An oil spill in broken ice would spread less and would spread between ice floes into any gaps greater than about 8-15 centimeters (cm) (Free, Cox, and Shultz, 1982).

The presence of broken ice tends to slow the rate of spreading (S.L. Ross Environmental Research Ltd. and D.F. Dickens Assocs. Ltd., 1987). Oil spreading and floe motion were studied to determine how floe motion, ice concentration, slush concentration, and oil types affect spreading in ice. Spreading rates were lowered as ice concentrations increased; but for ice concentrations <20-30%, there was very little effect. Slush ice rapidly decreased spreading. If the ice-cover motion increased, then spreading rates increased, especially with slush ice present (Gjosteen and Loset, 2004). Oil spilled beneath a wind-agitated field of pancake ice would be pumped up onto the surface of the ice or, if currents are slow enough, bound up in or below the ice (Payne et al., 1987). Once oil is encapsulated in pack ice, it has the potential to move distances from the spill site with the moving ice.

Oil encapsulated in ice generally will stay with the ice. The oil viscosity, pour point, and density play a major role in controlling the rate of migration in brine channels in a given ice salinity. Brackish ice provides fewer pathways and slows down the surfacing rate. Generally, the difference in timing of exposure of oil through migration channels is <10 days (MAR Inc., S.L. Ross Environmental Research Ltd and D.F. Dickins Associates Ltd, 2008).

Evaporation results in a preferential loss of the lighter, more volatile hydrocarbons, increasing density and viscosity and reducing vapor pressure and toxicity (Mackay, 1985). Evaporation of volatile components accounts for 30-40% of crude loss, with approximately 25% occurring in the first 24 hours (Fingas, Duval, and Stevenson, 1979; National Research Council, 1985). The initial evaporation rate increases with increasing wind speeds, temperatures, and sea state. Evaporative processes occur on spills in ice-covered waters, although at a lower rate (Jordan and Payne, 1980). Fuel oils (diesel) evaporate more rapidly than crude, on the order of 13% within 40

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hours at 23 °Celsius (73 °Fahrenheit); a larger overall percentage of diesel eventually will evaporate. Evaporation decreases in the presence of broken ice and stops if the oil is under or encapsulated in the ice (Payne et al., 1987). The lower the temperature, the less crude oil evaporates. Both Prudhoe Bay and Endicott crudes have experimentally followed this pattern (Fingas, 1996). Oil between or on ice floes is subject to normal evaporation. Oil that is frozen into the underside of ice is unlikely to undergo any evaporation until its release in spring. In spring as the ice sheet deteriorates, the encapsulated oil will rise to the surface through brine channels in the ice. As oil is released to the surface, evaporation will occur.

Dispersion of oil spills occurs from wind, waves, currents, or ice. Dispersion is an important breakup process that results in the transport of small oil particles (0.5 µm-several mm) or oil-in-water emulsions into the water column (Jordan and Payne, 1980; National Research Council, 1985). Droplets <0.5 mm or less rise slowly enough to remain dispersed in the water column (Payne and McNabb, 1985). The dispersion rate is directly influenced by sea state; the higher the sea state and breaking waves, the more rapid the dispersion rate (Mackay, 1985). The presence of broken ice promotes dispersion (Payne et al., 1987). Any waves within the ice pack tend to pump oil onto the ice. Some additional oil dispersion occurs in dense, broken ice through floe-grinding action. More viscous and/or weathered crudes may adhere to porous ice floes, essentially concentrating oil within the floe field and limiting the oil dispersion.

Dissolution results in the loss of soluble, low-molecular-weight aromatics such as benzene, toluene, and xylenes (National Research Council, 1985). Low-molecular weight aromatics, which are acutely toxic, rapidly dissolve into the water column. Dissolution, however, is very slow compared with evaporation; most volatiles usually evaporate rather than dissolve. Dissolved-hydrocarbon concentrations underneath a slick, therefore, tend to remain <1 part per million (Malins and Hodgins, 1981). Dissolved-hydrocarbon concentration can increase due to the promotion of dispersion by broken ice (Payne et al., 1987). Faksness and Brandvik (In press,a) studied the dissolved water-soluble components encapsulated in first-year sea ice. Their data show a concentration gradient from the surface of the ice to the bottom, indicating there is transport of the dissolved components through brine channels. Field studies also showed that high air temperature leads to more porous ice, and the dissolved water-soluble components leak out rapidly but, under cold air temperatures and less porous ice, the water-soluble components leak more slowly and have potentially toxic concentrations (Faksness and Brandvik, In press,b).

Emulsified oil results from oil incorporating water droplets in the oil phase and generally is referred to as mousse (Mackay, 1982). The measurable increases in viscosity and specific gravity observed for mousse change its behavior, including spreading, dispersion, evaporation, and dissolution (Payne and Jordan, 1985). The formation of mousse slows the subsequent weathering of oil. The presence of slush ice and turbulence promotes oil-in-water emulsions (Payne et al., 1987).

Most of the oil droplets suspended in the water column eventually will be degraded by bacteria in the water column or deposited on the seafloor. The rate of sedimentation depends on the suspended load of the water, the water depth, turbulence, oil density, and incorporation into zooplankton fecal pellets.

Subsurface blowouts or gathering-pipeline spills disperse small oil droplets and entrained gas into the water column. With sufficient gas, turbulence, and the necessary precursors in the oils, mousse forms by the time the oil reaches the surface (Payne, 1982; Thomas and McDonagh, 1991). For subsurface spills, oil rises rapidly to the water surface to form a slick. Droplets <50 microns in size, generally 1% of the blowout volume, could be carried several kilometers downcurrent before reaching the water surface (Environmental Sciences Limited, 1982). Blowout simulations show that convective cells set up by the rising oil and gas plume result in concentric rings of waves around the central plume. Surface currents within the ring should move outward, and surface currents outside the ring should move inward, resulting in a natural containment of some oil.

The subsurface release of oil droplets increases slightly the dissolution of oil, but the rapid rise of most oil to the surface suggests that the increase in dissolution—as a percentage of total spill volume—is fairly small. The resulting oil concentration, however, could be substantial, particularly for dispersed oil in subsurface plumes.

An oil spill that occurred under or moved under landfast ice would follow this sequence:

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- (1) The oil will rise to the under-ice surface and spread laterally, accumulating in the under-ice cavities (Glaeser and Vance 1971; NORCOR, 1975; Martin, 1979; Comfort et al., 1983).
- (2) For spills that occur when the ice sheet is still growing, the pooled oil will be encapsulated in the growing ice sheet (NORCOR, 1975; Keevil and Ramseier, 1975; Buist and Dickens, 1983; Comfort et al., 1983). In the spring as the ice begins to deteriorate, the encapsulated oil will rise to the surface through brine channels in the ice (NORCOR, 1975; Purves, 1978; Martin, 1979; Kisil, 1981; Dickens and Buist, 1981; Comfort et al., 1983).

The spread of oil under the landfast ice may be affected by many factors, including the viscosity of the oil, the under-ice topography, and currents. The under-ice topography will greatly influence the oil-pooling capacity. Studies of spreading under a landfast ice sheet have yielded different amounts of oil capacity (Kovacs, 1977; Kovacs et al. 1981). Wilkinson, Wadhams and Hughes (2007) discuss the ability to measure under-ice topography with upward looking multibeam sonar mounted on an AUV to better estimate holding capacity at a particular location. They hypothesize that previous oil-pooling capacity was overestimated and, hence, the spreading rates are underestimated.

The spread of oil offshore will be influenced by the presence of currents, if the magnitude of those currents is large enough. A field study near Cape Parry in the Northwest Territories reported that currents up to 10 cm per second (cm/sec) were present. This current was insufficient to strip oil from under the ice sheet after the oil had ceased to spread (NORCOR, 1975). Laboratory tests have shown that currents in excess of 15-25 cm/sec are required to strip oil from under-ice depressions (Cammaert, 1980; Cox et al., 1980). Current speeds in the nearshore Beaufort generally are <10 cm/sec during winter (Weingartner and Okkonen, 2001). The area of contamination for oil under ice could increase if the ice were to move. Because the nearshore Beaufort and the very nearshore Chukchi is in the landfast ice area, the spread of oil due to ice movement would not be anticipated until spring breakup. Lately, breakout events of landfast ice, as described in Section 3.2.4.1.2, have occurred prior to spring breakup. Spills onshore can be affected by the ice content. Pore ice can increase lateral movement, create preferential flow paths allowing deeper penetration, or restrict infiltration due to high ice saturation in the surface soil (Barnes and Wolfe, 2008).

Prince et al. (2003) discuss three northern spills and demonstrate that photo-oxidation and biodegradation play an important role in the long-term weathering of crude oils even in cold temperatures. Photo-oxidation and biodegradation would continue to weather the oil remaining. In addition to sunlight breaking down the oil, sunlight has the potential for photo-enhanced toxicity (Barron et al., 2008).

Alpine composite and Alaska North Slope crude oil will emulsify readily to form stable emulsions. Emulsification of some crude oils is increased in the presence of ice. With floe grinding, it is likely that Alpine and Alaska North Slope crude may form mousse within a few hours, an order of magnitude more rapidly than in open water.

**2.2. Oil-Spill Persistence.** How long an oil spill persists on water or on the shoreline can vary, depending upon the size of the oil spill, the environmental conditions at the time of the spill, and the substrate of the shoreline and, in the case of the Arctic, whether the shoreline is eroding. The following discusses persistence on water and then on shorelines.

**2.2.1. On-Water Oil-Spill Persistence.** S.L. Ross et al. (2003) completed a study on the persistence of oil spilled on the surface of the water. For purposes of the study, an oil slick persisted on the sea surface was observed to be a coherent slick or perceptible segments of a coherent slick, by normal methods of slick detection, such as aerial surveillance. After worldwide spills were reviewed, 32 spills had enough good persistence data. Refinement of quantitative estimates of oil-slick persistence will depend on collecting further information on spills and their lifetime as slicks on the water. Currently, this information is not routinely collected during oil-spill response. This limits the ability to make estimates about the persistence of oil spills on the water as a coherent slick. In this analysis, MMS conservatively assumes 1,500- and 4,600-bbl spills could last up to 30 days on the water as a coherent slick.

**2.2.2.. Shoreline Type, Behavior, and Persistence.** The shoreline habitats and the estimation of the behavior and persistence of oil on intertidal habitats is based on an understanding of the dynamics of the coastal environments, not just the substrate type and grain size. The sensitivity of a particular intertidal habitat is an integration of the following factors: (1) shoreline type (substrate, grain size, tidal elevation, origin); (2) exposure to wave and tidal energy; (3) biological productivity and sensitivity; and (4) ease of cleanup. All of these factors are used to determine the relative sensitivity of intertidal habitats. Key to the sensitivity ranking is an understanding of the relationships between physical processes; substrate; shoreline type; product type; fate and effect; and sediment-transport patterns. The intensity of energy expended on a shoreline by wave action, tidal currents, and river currents directly affects the persistence of stranded oil. The need for shoreline-cleanup activities is determined, in part, by the slowness of natural processes in removal of oil stranded on the shoreline. These concepts have been used in the development of the Environmental Sensitivity Index (ESI) for shorelines, which ranks shoreline environments as to their relative sensitivity to oil spills, potential biological injury, and ease of cleanup. Generally speaking, areas exposed to high levels of physical energy, such as wave action and tidal currents, and low biological activity rank low on the scale, whereas sheltered areas with associated high biological activity rank highest. A comprehensive shoreline habitat-ranking system has been developed for the entire United States. The shoreline habitats delineated on the Northwest Alaska and North Slope of Alaska are listed in order of increasing sensitivity to spilled oil: 1A) Exposed Rocky Shore; 1B) Exposed Solid Manmade Structure; 3A) Fine- to Medium-Grained Sand Beaches; 3C) Tundra Cliffs; 4) Coarse-Grained Sand Beaches; 5) Mixed Sand and Gravel Beaches; 6A) Gravel Beaches; 7) Exposed Tidal Flats; 8A) Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud, or Clay; 8B) Sheltered, Solid Manmade Structures; 8E) Peat Shorelines; 9A) Sheltered Tidal Flats; 9B) Sheltered Vegetated Low Banks; 10A) Salt- and Brackish-Water Marshes; 10E) Inundated Low-Lying Tundra; and U) Unranked (USDOC, NOAA, 2002; Research Planning Institute, 2002).

The ESI rankings progress from low to high susceptibility to oil spills. In many cases, the shorelines also are ranked with multiple codes such as 10E/7. The first number is the most landward shoreline type, saltmarsh, with exposed tidal flats being the shoreline type closest to the water. For purposes of analysis, we use the shoreline type closest to the water. Table A.1-5 shows the percentage length of each ESI ranking for the most seaward shoreline type for each land segment in United States, Alaska waters. No ESI data are available for Russia.

The percentage length of each ESI type was derived by determining the length of coastline for each land segment. The length of each ESI type was determined for that land segment and then calculated as a percentage of the total land segment length.

**2.3. Assumptions about Large Oil-Spill Weathering.** To run the weathering models using a consistent framework, several assumptions are made regarding the type of oil, the size of the spill, the environmental conditions, and the location of the spill. The following are the assumptions used to estimate large oil-spill weathering:

- The crude oil properties will be similar to Alaska North Slope crude oil for Beaufort Sea Sales 209, 217 and Alpine composite crude oil for the Chukchi Sea Sales 212, 221;
- The condensate oil properties will be similar to a to Sliepner condensate for Beaufort Sea Sales 209, 217 and Chukchi Sea Sales 212, 221;
- The diesel oil properties will be similar to a typical diesel fuel for Beaufort Sea Sales 209, 217 and Chukchi Sea Sales 212, 221;
- The size of the diesel spill is 1,500 bbl.;
- The size of the crude or condensate spill is 1,500 or 4,600 bbl;
- There is no reduction in the size of spill due to cleanup;
- The wind, wave, and temperature conditions are as described;
- The spill is a surface spill;
- Meltout spills occur into 50% ice cover;
- The properties predicted by the model are those of the thick part of the slick;
- The spill occurs as an instantaneous spill over a short period of time;
- The fate and behavior are as modeled (Tables A.1-6 through 12);
- The oil spill persists for up to 30 days in open water.

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Uncertainties exist, such as:

- the actual size of an oil spill or spills, should they occur;
- whether the spill is instantaneous or chronic;
- the location of the spill;
- wind, current, wave, and ice conditions at the time of a possible oil spill; and
- the crude, diesel or condensate oil properties at the time of a possible spill.

**2.4. Modeling Simulations of Oil Weathering.** To judge the effect of a large oil spill, we estimate information regarding how much oil evaporates, how much oil is dispersed and how much oil remains after a certain time period. We derive the weathering estimates of Alaska North Slope crude oil, Alpine Composite crude oil, Sliepner-condensate and diesel fuel from modeling results from the SINTEF Oil Weathering Model (OWM) Version 3.0 (Reed et al., 2005a) for up to 30 days.

**2.4.1. Oils for Analysis.** The oils used in the analysis are medium crude oils. Alaska North Slope Crude composite, with a range of 27-30° API, was chosen for oil weathering simulations for the Beaufort Sea Sales 209 and 217. This API range is representative of known crudes in the offshore Beaufort Sea. Alpine oil composite was chosen for simulations of oil weathering for the Chukchi Sea Sales 212 and 221, because it is a light crude oil that falls within the category of 35-40° API oils estimated to occur in the Sales 212 and 221 area. For both Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221, we used a diesel fuel and Sliepner condensate.

**2.4.2. Alaska North Slope, Alpine Composite, Condensate, and Diesel Fuel Simulations of Oil Weathering.**

We use the SINTEF OWM to perform simulations of oil weathering. The SINTEF OWM changes both oil properties and physical properties of the oil. The oil properties include density, viscosity, pour point, flash point, and water content. The physical processes include spreading, evaporation, oil-in-water dispersion, and water uptake. The SINTEF OWM Version 3.0 performs a 30-day time horizon on the model-weathering calculations, but with a warning that the model is not verified against experimental field data for more than 4-5 days. The SINTEF OWM has been tested with results from three full-scale field trials of experimental oil spills (Daling and Strom, 1999).

The SINTEF OWM does not incorporate the effects of the following:

- currents;
- beaching;
- containment;
- photo-oxidation;
- microbiological degradation;
- adsorption to particles; and
- encapsulation by ice.

The simulated Alaska North Slope (ANS) composite and Alpine composite crude and the condensate oil-spill sizes are 1,500 bbl or 4,600 bbl. The diesel -oil-spill size is 1,500 bbl. We simulate two general scenarios: one in which the oil spills into open water and one in which the oil freezes into the ice and melts out into 50% ice cover.

The Beaufort and Chukchi seas generally are slightly different in terms of the timing of freezeup and meltout. For Beaufort Sea Sales 209 and 217, we assume open water is July through September, and a winter spill melts out in July. For the Chukchi Sea Sales 212 and 221, we assume open water is June through October, and a winter spill melts out in June. We assume the spill starts at the surface. For open water, we model the weathering of the 1,500- or 4,600-bbl spills as if they are instantaneous spills. For the meltout spill scenario, we model the entire spill volume as an instantaneous spill. Although different amounts of oil could melt out at different times, MMS took the conservative approach, which was to assume all the oil was released at the same time. We report the results at the end of 1, 3, 10, and 30 days.

For purposes of analysis, we look at the mass balance of the large oil spill; how much is evaporated, dispersed, and remaining. Tables A.1-6 and A.1-7 summarize the results we assume for the amount evaporated, dispersed, and remaining for ANS Composite crude oil, Tables A.1-8 for a diesel fuel, Tables A.1-9 and 10 for a condensate oil,

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and Tables A.1-11 and 12 for Alpine Composite crude oil in our analysis of the effects of oil on environmental and sociocultural resources.

In general, diesel fuel and condensates will evaporate and disperse in a short period of time (1-10 days). The higher the wind speeds, the more rapid the evaporation and dispersion. Crude oils tend to evaporate and disperse more slowly, especially if the oils become emulsified. The ANS composite will evaporate more slowly than the Alpine composite, but less remains because it disperses more. Crude oil properties vary, and these are representative ranges of how different medium crudes may weather.

The ANS Composite contains a relatively large amount of lower molecular-weight compounds, and approximately 16% and 22% of its original volume evaporated within 1 and 3 days, respectively, at both summer and winter temperatures. At the average wind speeds over the Sales 209, 217 areas, dispersion is slow, ranging from 2-16%. However, at higher wind speeds (e.g., 15 m/s wind speed) the slick will be almost removed from the sea surface within a day.

The Alpine Composite contains a relatively large amount of lower molecular-weight compounds, and approximately 29% and 33% of its original volume evaporated within 1 and 3 days, respectively, at both summer and winter temperatures. Alpine Composite will form water-in-oil-emulsion with a maximum water content of 80% at both winter and summer temperatures, yielding approximately five times the original spill volume (Reed et al. 2005b). At the average wind speeds over the Sales 212 and 221 area, dispersion is slow, ranging from 0-16%. However, at higher wind speeds (e.g., 15 m/s wind speed) the slick will be almost removed from the sea surface within a day.

## 3. Estimates of Where a Large Offshore Oil Spill May Go.

We study how and where large offshore spills move by using a computer model called the Oil-Spill-Risk Analysis (OSRA) model (Smith et al., 1982). By large, we mean spills with a threshold size of  $\geq 1,000$  bbl. This model analyzes the likely paths of over two million simulated oil spills in relation to biological, physical, and sociocultural resource areas which we generically call environmental resource areas. The model uses information about the physical environment, including files of wind, sea ice, and current data. It also uses the locations of environmental resource areas, sociocultural resource areas, barrier islands, and the coast that are within the model study area.

**3.1. Inputs to the Oil-Spill-Trajectory Model.** There are several inputs necessary to run the oil-spill-trajectory model including:

- study area;
- arctic seasons;
- location of the coastline;
- location of environmental resource areas;
- location of land segments and seasonal land segments;
- location of grouped land segments;
- location of boundary segments;
- location of hypothetical launch areas;
- location of hypothetical pipelines and transportation assumptions;
- current and ice information from two general circulation models; and
- wind information.

**3.1.1. Study Area and Boundary Segments.** Map A.1-1 shows the Beaufort and Chukchi Sea Sales 209, 212, 217, and 221 oil-spill-trajectory study area extends from lat. 68° N. to 75° N. and from long. 134° W. to 174° E. The study area is formed by 38 boundary segments and the Beaufort (United States and Canada) and Chukchi seas (United States and Russia) coastline. The boundary segments are vulnerable to spills in both arctic summer and winter. We chose a study area large enough to mostly contain the paths of 2,700 hypothetical oil spills each through as long as 360 days.

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**3.1.2. Trajectory Starting Periods.** We define three time periods for the trajectory analysis of large oil spills. These periods are the months when trajectories are started and the chance of contact is tabulated. We call these three periods annual, summer and winter. These periods have different months in the Beaufort and the Chukchi Sea. Shown below are the three time periods that trajectories were started in and the months that make them up.

Sale Area	Annual	Summer	Winter
Beaufort 209, 217	January-December	July 1-September 30	October 1-June 30
Chukchi 212, 221	January-December	June 1-October 31	November 1-May 31

In the Beaufort, the first, called annual, is from January through December and represents the entire year. We started 2,700 trajectories over the annual season. The second is from July 1 through September 30 and generally represents open water or arctic summer. We started 675 trajectories in the arctic summer. The third is from October 1 through June 30, and represents ice cover or arctic winter. We started 2,025 trajectories in the arctic winter.

In the Chukchi, the first, called annual, is from January through December, and represents the entire year. We started 2,700 trajectories over the annual season. The second, called summer, is from June 1 through October 31 and generally represents open water or arctic summer. We started 1,125 trajectories in the arctic summer. The third, called winter, is from November 1 through May 31 and generally represents ice cover or arctic winter. We started 1,575 trajectories in the arctic winter.

**3.1.3. Locations of Environmental Resource Areas.** Environmental resource areas (ERAs) represent areas of social, economic or biological resources. Our analysts designate these environmental resource areas. The analysts also designate in which months these environmental resource areas are vulnerable to spills, meaning the time period those resources occupy that spatial location. For example, birds may migrate and may be there only from May to October.

Between the Beaufort Sea Sales 209 and 217 and the Chukchi Sea Sales 212 and 217 there are 101 environmental resource areas. Not all environmental resource areas are used for each Sale area analysis. In the Beaufort Sea, there are 88 environmental resource areas, and 93 in the Chukchi Sea. There are 101 spatial features total. They are divided up into the Beaufort and Chukchi as follows: 80 are from both the Chukchi and the Beaufort; 8 are from Beaufort only, and 13 are from Chukchi only (Table A.1-13). Reserved Beaufort ERA identification numbers (IDs) (used in the Beaufort but not in the Chukchi) include ERA IDs 12, 20, 21, 22, 33, 34, 60, and 90. Reserved Chukchi ERA IDs (used in the Chukchi but not in the Beaufort) include ERA IDs 3, 4, 5, 13, 16, 53, 54, 57, 59, 61, 82, 83, and 91.

Maps A.1-2a, A.1-2b, A.1-2c, A.1-2d and A.1.2e show the location of the 101 environmental resource areas. These resource areas represent concentrations of wildlife, subsistence-hunting areas, and subsurface habitats. The names or abbreviations of the environmental resource areas and the months in which they are vulnerable to spills are shown in Table A.1-13. Information regarding the general and specific environmental resource areas for birds, whales, subsistence resources, marine mammals, fish, and lower trophic resources is found in Tables A.1-14, 15, 16, 17, 18, and 19, respectively. We also include Land as an additional environmental resource area. Land is the entire study area coastline and is made up of the individual land segments (LSs) 1 through 126, which are described below.

**3.1.4. Location of Land Segments, Seasonal Land Segments, and Grouped Land Segments.** The coastline was further analyzed by dividing the Chukchi (United States and Russia) and Beaufort (United States and Canada) seas coastline into 126 land segments. Maps A.1-3a, A.1-3b, and A.1-3c show the location of these 126 land segments. Land segments were further analyzed in two ways. First, some land segments were set to different vulnerabilities and called seasonal land segments. The seasonal land segments have the same ID's but different vulnerabilities. Second some land segments were added together to form larger geographic areas and called grouped land segments.

The land segment IDs and the geographic place names within the land segment are shown in Table A.1-20. Land segments are vulnerable to spills in both arctic summer and winter (January through December). For Beaufort Sea Sales 209 and 217, the model defines summer from July 1 through September 30 and winter as October 1 through

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June 30. In the Chukchi Sea Sales 212 and 221, the model defines summer as June through October and winter from November through May.

A set of seasonal land segments were set to different vulnerabilities than January through December to represent resources that are generally not there all year long. These seasonal land segments represent not just the chance of contacting land during the entire year, but the chance of contacting land when those resources are present. Only annual conditional probabilities were tabulated for seasonal land segments, as summer or winter conditional probabilities represent very similar time periods as the vulnerable period. Table A.1-21 shows the seasonal land segment ID, which is the same as the land segment ID, the resources, and the vulnerable period.

Some land segments were grouped together to represent larger geographic places. These grouped land segments, their names, and the individual land segments that make them up are shown in Table A.1-22, and their spatial location is shown on Map A.1-3d.

### **3.1.5. Location of Proposed and Alternative Hypothetical Launch Areas and Hypothetical Pipeline**

**Segments.** The MMS does not know where companies may lease, explore, and eventually develop resources, or even if resources will be developed at all. Although we know some areas could be more likely than others, we need to look at all of the sale areas that are open to leasing and cover those areas in a hypothetical oil-spill analysis. The maps of launch (LAs) areas and pipeline segments (PLs) are hypothetical locations meant to cover the Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221 areas for analysis and are not meant to represent or suggest any particular development scenario. If and when any commercial hydrocarbons are discovered, detailed development scenarios would be engineered, designed, reviewed, and evaluated.

**3.1.5.1. Beaufort Sea.** Map A.1-4 shows the location of the Beaufort 25 hypothetical launch areas (LAs 1-25) and 17 hypothetical pipeline segments (PLs 1-17), the sites where large oil spills could originate if they were to occur for Alternative 2, the Proposed Action and its Alternatives 3-6. The launch areas divide the sale area into smaller areas. Pipeline locations are entirely hypothetical. They do not represent proposed pipelines or any planned pipeline locations. They are spaced along the coast to evaluate differences in oil-spill trajectories from different spatial locations along the coast.

Hypothetical launch points were spaced at one-seventh-degree to two-tenth-degree intervals in the north-south direction (about 15.86-22.5 kilometers [km]) and one-third-degree to one-half-degree intervals in the east-west direction (about 12.67-14.36 km). At this resolution, there were 794 total launch points in space, grouped into 25 launch areas (1-25).

A total of 2,700 trajectories (2,025 in winter; 675 in summer) from each hypothetical launch point over the 15 years of wind data (1982-1996), and results of these trajectory simulations were combined to represent platform spills from 25 launch areas (1-25 Map A.1-4). Launch Areas 2, 4, 6, 8, 10, 12, 15, 17, and 18 begin 3 mi offshore. Launch Areas 1, 3, 5, 7, 9, 11, 13, 14, 16, 19, and 20 begin 12-35 mi offshore. Launch Areas 21-25 begin approximately 43-57 mi offshore. Pipeline spills were represented by 2,700 trajectories (2,025 in winter; 675 in summer) launched from each grid point along each hypothetical pipeline segment (PLs 1-17, Map A.1-4).

For the Chukchi Sea Alternatives 2-6, we assume no large oil spills occur during exploration activities. Development/production activities for Sales 209 and 217 could occur in any of the launch areas (LAs 1-25) or along any of the pipeline segments (PLs 1-17). Table A.1-23 shows the assumptions for how launch areas are serviced by hypothetical pipelines.

**3.1.5.2. Chukchi Sea.** Map A.1-5 shows the location of the Chukchi 15 hypothetical launch areas (LAs 1-15) and 11 hypothetical pipeline segments (PLs 1-11) from five hypothetical pipelines, the sites where large oil spills could originate if they were to occur for Alternative 2, the Proposed Action and its Alternatives 3-6. Pipeline locations are entirely hypothetical. They are not meant to represent five proposed pipelines or any real or planned pipeline locations. They are spaced along the coast to evaluate differences in oil-spill trajectories from different locations along the coast.

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Hypothetical launch points were spaced at one-seventh-degree intervals in the north-south direction (about 15.86 kilometers [km]) and one-third-degree intervals in the east-west direction (about 12.67 km). At this resolution, there were 801 total launch points in space, grouped into 15 launch areas (LAs 1-15).

A total of 2,700 trajectories (1,575 in winter; 1,125 in summer) from each hypothetical launch point over the 15 years of wind data (1982-1996), and results of these trajectory simulations were combined to represent platform spills from 15 launch areas (LAs 1-15 Map A.1-5). LAs 1-3, 14, and 15 are >150 mi offshore. Launch Areas 4-7 are approximately 90-150 mi offshore. Launch Areas 9-13 are approximately 25-90 mi offshore. Pipeline spills were represented by 2,700 trajectories (1,575 in winter; 1,125 in summer) launched from each grid point along each pipeline segment (PLs 1-11, Map A.1-5).

For Sales 212 and 221 Alternative 2 and alternatives, we assume no large oil spills occur during exploration activities. Development/production activities for Chukchi Sea Sales 212 and 221 could occur in any of the launch areas (LAs 1-15) or along any of the pipeline segments (PLs 1-11). Table A.1-24 shows the assumptions about how launch areas were serviced by hypothetical pipelines.

**3.1.6. Current and Ice Information from a General Circulation Model.** For the Beaufort and Chukchi Sales 209, 212, 217, and 221, we use two general circulation models to simulate currents ( $U_{current}$ ) or ice ( $U_{ice}$ ), depending on whether the location is nearshore or offshore.

**3.1.6.1. Offshore.** Offshore of the 10- to 20-meter (m) bathymetry contour, the wind-driven and density-induced ocean-flow fields and the ice-motion fields are simulated using a three-dimensional, coupled, ice-ocean hydrodynamic model (Haidvogel, Hedstrom, and Francis, 2001). The model is based on the ocean model of Haidvogel, Wilkin, and Young (1991) and the ice models of Hibler (1979) and Mellor and Kantha (1989). This model simulates flow properties and sea-ice evolution in the western Arctic during the years 1982-1996. The coupled system uses the S-Coordinate Rutgers University Model (SCRUM) and Hibler viscous-plastic dynamics and the Mellor and Kantha thermodynamics. It is forced by daily surface geostrophic winds and monthly thermodynamic forces. The model is forced by thermal fields for the years 1982-1996. The thermal fields are interpolated in time from monthly fields. The location of each trajectory at each time interval is used to select the appropriate ice concentration. The pack ice is simulated as it grows and melts. The edge of the pack ice is represented on the model grid. Depending on the ice concentration, either the ice or water velocity with wind drift from the stored results of the Haidvogel, Hedstrom, and Francis (2001) coupled ice-ocean model is used. A major assumption used in this analysis is that the ice-motion velocities and the ocean daily flows calculated by the coupled ice-ocean model adequately represent the flow components. Comparisons with data illustrate that the model captures the first-order transport and the dominant flow (Haidvogel, Hedstrom, and Francis, 2001).

**3.1.6.2. Nearshore.** Inshore of the 10- to 20-m bathymetry contour in the Beaufort Sea,  $U_{current}$  is simulated using a two-dimensional (2D) hydrodynamic model developed by the National Oceanic and Atmospheric Administration (NOAA) (Galt, 1980, Galt and Payton, 1981). This model does not have an ice component. The 2D model incorporated the barrier islands in addition to the coastline. The model of the shallow water is based on the wind forcing and the continuity equation. The model was originally developed to simulate wind-driven, shallow-water dynamics in lagoons and shallow coastal areas with a complex shoreline. The solutions are determined by a finite element model, where the primary balance is between the wind forcing friction, the pressure gradients, coriolis accelerations, and the bottom friction. The time dependencies are considered small, and the solution is determined by iteration of the velocity and sea level equations, until the balanced solution is calculated. The wind is the primary forcing function, and a sea level boundary condition of no anomaly produced by the particular wind stress is applied far offshore, the northern boundary of the oil-spill-trajectory analysis domain.

The results of the model were compared to current meter data from the Endicott Environmental Monitoring Program to determine if the model was simulating the first order transport and the dominant flow. The model simulation was similar to the current meter velocities during summer. Example time series from 1985 show the current flow at Endicott Station ED1 for the U (east-west) and V (north-south) components plotted on the same axis with the current derived from the NOAA model for U and V (Der-U and Der-V). The series show many events that coincide in time, and that the currents derived from the NOAA model generally are in good correspondence with the measured currents. Some of the events in the measured currents are not particularly well represented, and that

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probably is due to forcing of the current by something other than wind, such as low frequency alongshore wave motions.

**3.1.6.3. Landfast Ice Mask.** In both the offshore and nearshore models, we added an ice mask within the 0-m and approximately 10- to 20-m water-depth contours to simulate the observed shorefast-ice zone. For each month October through June we apply the monthly ice mask, one for each of those months. For the Beaufort Sea and a portion of the Chukchi Sea, the landfast ice mask was derived from the minimum landfast ice observed each month from October to June in a study titled *Mapping and Characterization of Recurring Spring Leads and Landfast ice in the Beaufort and Chukchi Seas* (Eiken et al., 2006). For the southern Chukchi to the Bering Strait, the landfast ice mask was taken from Stringer, Barrett, and Schreurs (1980) and was applied from December to May. The Canadian Beaufort minimum landfast ice limit was taken from Arctic Environmental Sensitivity Atlas System produced by Environment Canada (2000) and is applied October to June. The documentation in the Arctic Environmental Atlas describes the sources of that data as follows:

1. ATMOSPHERIC ENVIRONMENT SERVICE. 1974-1986. Canadian Ice Charts. Ice Forecasting Central, Environment Canada, Ottawa.
2. CANADA CENTRE FOR REMOTE SENSING. 1973-1983. Selected LANDSAT Imagery. Energy, Mines and Resources Canada, Ottawa.
3. SPEDDING, L.G. and B.W. DANIELEWICZ. 1983. Artificial Islands and Their Effect on Regional Landfast Ice Conditions in the Beaufort Sea. Joint Report Esso Resources Canada Limited and Dome Petroleum Limited, Calgary.

For the Russian Chukchi coast landfast minimum, we reviewed monthly National Ice Center data in ArcGIS for the period 1979-2004. We applied a query to distinguish landfast ice. We conservatively placed the minimum landfast ice line between the 10- and 20-m contour for the months in which landfast ice was present along the coast (October to June).  $U_{ice}$  is zero for the landfast ice mask for the months in which it is applied.

**3.1.7. Wind Information.** We use 15 of the 17-year reanalysis of the wind fields provided to us by Rutgers. The TIROS Operational Vertical Sounder (TOVS) has flown on NOAA polar-orbiting satellites since 1978. Available from July 7, 1979, through December 31, 1996, and stored in Hierarchical Data Format, the TOVS Pathfinder (Path-P) dataset provides observations of areas poleward of lat. 60° N. at a resolution of approximately 100 x 100 km. The TOVS Path-P data were obtained using a modified version of the Improved Initialization Inversion Algorithm (3I) (Chedin et al., 1985), a physical-statistical retrieval method improved for use in identifying geophysical variables in snow- and ice-covered areas (Francis, 1994). Designed to address the particular needs of the polar-research community, the dataset is centered on the North Pole and has been gridded using an equal-area azimuthal projection, a version of the Equal-Area Scalable Earth-Grid (EASE-Grid) (Armstrong and Brodzik, 1995).

Preparation of a basinwide set of surface-forcing fields for the years 1980 through 1996 has been completed (Francis, 1999). Improved atmospheric forcing fields were obtained by using the bulk boundary-layer stratification derived from the TOVS temperature profiles to correct the 10-m level geostrophic winds computed from the National Center for Environmental Prediction Reanalysis surface-pressure fields. These winds are compared to observations from field experiments and coastal stations in the Arctic Basin and have an accuracy of approximately 10% in magnitude and 20 degrees in direction.

**3.1.8. Large Oil-Spill-Release Scenario.** For purposes of this trajectory simulation, all spills occur instantaneously. For each trajectory simulation, the start time for the first trajectory was the first day of the season (winter or summer) of the first year of wind data (1982) at 6 a.m. Greenwich Mean Time (GMT). Each subsequent trajectory was started every 2 days at 6 a.m. GMT. The spatial resolution of the trajectory simulations was well within the spatial resolution of the input data, and the interval of time between releases was sufficiently short to sample weather-scale changes in the input winds (Price et al., 2004).

## 3.2. Oil-Spill-Trajectory Model Assumptions:

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- Large oil spills occur in the hypothetical launch areas or along hypothetical pipeline segments.
- Companies transport the produced oil through pipelines.
- A large oil spill reaches the water.
- Large oil spills persist long enough for trajectory modeling for up to 360 days if they are encapsulated in ice and melt out.
- A large oil spill encapsulated in the landfast ice does not move until the ice moves or it melts out.
- Large oil spills occur and move without consideration of weathering. The oil spills are simulated each as a point with no mass or volume. The weathering of the oil is estimated in the stand-alone SINTEF OWM model.
- Large oil spills occur and move without any cleanup. The model does not simulate cleanup scenarios. The oil-spill trajectories move as though no booms, skimmers, or any other response action is taken.

Large oil spills stop when they contact the mainland coastline, but not the offshore barrier islands in Stefansson Sound.

Uncertainties exist, such as:

- the actual size of the large oil spill or spills, should they occur;
- whether the large spill reaches the water;
- whether the large spill is instantaneous or a long-term leak;
- the wind, current, and ice conditions at the time of a possible large oil spill;
- how effective cleanup is;
- the characteristics of crude, condensate or diesel oil at the time of the large spill;
- how Alpine Composite or ANS crude oil will spread; and
- whether or not development and production occurs.

**3.3. Oil-Spill-Trajectory Simulation.** The trajectory-simulation portion of the model consists of many hypothetical oil-spill trajectories that collectively represent the mean surface transport and the variability of the surface transport as a function of time and space. The trajectories represent the Lagrangian motion that a particle on the surface might take under given wind, ice, and ocean-current conditions. Multiple trajectories are simulated to give a statistical representation, over time and space, of possible transport under the range of wind, ice, and ocean-current conditions that exist in the area.

Trajectories are constructed from simulations of wind-driven and density-induced ocean flow fields and the ice-motion field. The basic approach is to simulate these time- and spatially dependent currents separately, then combine them through linear superposition to produce an oil-transport vector. This vector is then used to create a trajectory. Simulations are performed for three seasons: winter, summer, and annual (January–December). The choice of this seasonal division was based on meteorological, climatological, and biological cycles and consultation with Alaska OCS Region analysts.

For cases where the ice concentration is below 80%, each trajectory is constructed using vector addition of the ocean current field and 3.5% of the instantaneous wind field—a method based on work done by Huang and Monastero (1982), Smith et al. (1982), and Stolzenbach et al. (1977). For cases where the ice concentration is 80% or greater, the model ice velocity is used to transport the oil. Equations 1 and 2 show the components of motion that are simulated and used to describe the oil transport for each spillite:

$$1 \quad U_{\text{oil}} = U_{\text{current}} + 0.035 \quad U_{\text{wind}} \text{ or}$$

$$2 \quad U_{\text{oil}} = U_{\text{ice}}$$

where:

$U_{\text{oil}}$  = oil drift vector

$U_{\text{current}}$  = current vector (when ice concentration is <80%)

$U_{\text{wind}}$  = wind speed at 10 m above the sea surface

$U_{\text{ice}}$  = ice vector (when ice concentration is ≥80%)

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The wind-drift factor was estimated to be 0.035, with a variable drift angle ranging from 0°–25° clockwise. The drift angle was computed as a function of wind speed according to the formula in Samuels, Huang, and Amstutz (1982). (The drift angle is inversely related to wind speed.)

The trajectories age while they are in the water and/or on the ice. For each day that the hypothetical spill is in the water, the spill ages—up to a total of 360 days. While the spill is in the ice ( $\geq 80\%$  concentration), the aging process is suspended. The maximum time allowed for the transport of oil in the ice is 360 days, after which the trajectory is terminated. After coming out of the ice, into open water, the trajectory ages to a maximum of 30 days.

### 3.4. Results of the Oil-Spill-Trajectory Model.

**3.4.1. Conditional Probabilities: Definition and Application.** The chance that a large oil spill will contact a specific environmental resource area including land, land segment, seasonal land segment, grouped land segment, or boundary segment within a given time of travel from a certain location (launch area or pipeline segment) is termed a conditional probability. The condition is that we assume a large spill occurs. Conditional probabilities assume a large spill has occurred and the transport of the spilled oil depends only on the winds, ice, and ocean currents in the study area. Conditional probabilities are reported for three seasons—annual, summer and winter, and six time periods—3, 10, 30, 60, 180, and 360 days. Conditional probabilities are expressed as a percent chance. This means that the probability (a fractional number between 0 and 1) is multiplied by 100 and expressed as a percentage.

For the Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221, annual, summer, and winter periods are shown in Section C.1.b. Contact to an ERA or land segment tabulated from a trajectory that began before the end of summer is considered a *summer contact*. We also estimate the conditional probability of contact from spills that start in winter, freeze into the landfast ice, and melt out in spring. Winter contacts are from spills that begin in winter. Therefore, if any contact to an environmental resource area or land segment is made by a trajectory that began by the end of winter, it is considered a *winter contact*. We also estimate annual conditional probabilities of contact within 3, 10, 30, 60, 180, and 360 days. Annual contact is for a trajectory that is launched any month throughout the entire year.

**3.4.1.1. Conditional Probabilities: Results.** The chance of a large spill contacting, assuming a spill has occurred, is called a conditional probability. It is conditioned on the fact that a large spill has occurred. The oil-spill-trajectory model conditional probability results are summarized generally below and listed in Tables A.2-1 through A.2-156 for the Beaufort Sea Sales 209 and 217 and Tables A.3-1 through A.3-78 for the Chukchi Sea Sales 212 and 221. The Maps for the environmental resource areas are Map A.1-2a through Map A.1-2d and land segments are Map A.1-3a through A.1-3c. For specific analysis of conditional probabilities in regard to specific resources, please see Sections 4.2 and 4.3. Probabilities in the following discussions, unless otherwise noted, are conditional probabilities estimated by the OSRA model (expressed as percent chance) of a spill  $\geq 1,000$  bbl contacting environmental resource areas and land segments within the days and seasons as specified below.

**3.4.1.1.1. Beaufort Comparisons between Spill Location and Season.** The primary differences of contact between spill locations are geographic in the perspective of west to east and nearshore versus offshore. Offshore spill locations take longer to contact the coast and nearshore environmental resource areas, if contact occurs at all. Winter spill contact to nearshore and coastal resources is less often and, to a lesser extent, due to the landfast ice in place from October to June.

#### 3.4.1.1.2. Beaufort Generalities Through Time.

**3 Days:** In general the OSRA model estimates the chance a large spill contacting individual land segments is from nearshore pipelines and launch areas, but not all nearshore pipelines and launch areas have a chance of contact within 3 days.

During the entire year (annual), the OSRA model estimates a large spill, from LAs 2, 4, 6, 8, 10, 17, or 18 has a  $<0.5\text{--}4\%$  chance of contacting individual land segments adjacent to them (Table A.2-13). Pipeline Segments 7, 8, 9, 11, 13, or 14 have a  $<0.5\text{--}2\%$  chance of contacting individual land segments adjacent to them (Table A.2-14).

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All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments over the entire year. The OSRA model estimates the chance of contact to ERA Land is 9% for LA18, and ranges from 1-5% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17 or offshore LAs 1, 19, or 20 (Table A.2-1). Pipeline segments 1, 2, or 7-14 have a 1-4% chance of contacting individual ERA Land (Table A.2-2). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-1 and -2).

During summer, the OSRA model estimates a large spill, from LAs 2, 4, 6, 8, 15, 17, 18, 19, or 20 has a <0.5-7 % chance of contacting individual land segments adjacent to them (Table A.2-73). Pipeline segments 2, 7, 8, 9, or 11-14 have a <0.5-5% chance of contacting individual land segments adjacent to them (Table A.2-74). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments during summer. The OSRA model estimates the chance of contact to ERA Land is 21% for LA18, and ranges from 1-14% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17, or 1-2% for offshore LAs 1, 19, or 20 (Table A.2-61). Pipeline segments 1, 2, or 7-14 have a 1-9% chance of contacting ERA Land (Table A.2-62). All other launch areas or pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-61 and -62).

During winter, the OSRA model estimates a large spill, from LAs 2, 4, 6, or 17-20 has a <0.5-2 % chance of contacting individual land segments adjacent to them (Table A.2-121). Pipeline segments 8, 9, or 14 have a <0.5-1% chance of contacting individual land segments adjacent to them (Table A.2-122). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments during winter. The OSRA model estimates the chance of contact to ERA Land is 21% for LA18 and ranges from 1-14% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17 or 1-2% for offshore LAs 1, 19, or 20 (Table A.2-61). Pipeline segments 1, 2, or 7-14 have a 1-9% chance of contacting ERA Land (Table A.2-62). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-61 and -62).

The OSRA model estimates a large spill, from launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact. During the entire year (annual), LAs 1-25 have a <0.5-27% chance of contacting individual environmental resource areas (Tables A.2-1). Pipeline segments 1-17 have a <0.5-32% chance of contacting individual environmental resource areas (Table A.2-2). During summer, LAs 1-25 have a <0.5-28% chance of contacting individual environmental resource areas (Tables A.2-61). Pipeline segments 1-17 have a <0.5-34% chance of contacting individual environmental resource areas (Table A.2-61). During winter, LAs 1-25 have a <0.5-26% chance of contacting individual environmental resource areas (Tables A.2-109). Pipeline segments 1-17 have a <0.5-31% chance of contacting individual environmental resource areas (Table A.2-110).

**10 Days:** In general the OSRA model estimates the chance of contact to individual land segments is from both nearshore and offshore pipeline segments and launch areas, but not all Pipeline segment and launch areas have a chance of contact within 10 days. LAs 9, 13, 16, or 21-25 have <0.5% chance of contact to individual land segments.

During the entire year (annual), the OSRA model estimates a large spill, from LAs 1-8 10, 12, 14, or 17-20 has a <0.5-7 % chance of contacting individual land segments adjacent to them (Table A.2-15). Pipeline segments 1-3, 7-13, or 14 have a <0.5-5 % chance of contacting individual land segments adjacent to them (Table A.2-16). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments over the entire year. The OSRA model estimates the chance of contact to ERA Land is 22% for LA18 and ranges from 5-16% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17 or 1-9% offshore LAs 1, 3, 5, 7, 14, 16, 19, 20, or 21 (Table A.2-3). Pipeline segments 1-15 have a 1-16% chance of contacting ERA Land (Table A.2-4). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-3 and -4).

During summer, the OSRA model estimates a large spill, from LAs 1-8, 10, 12, or 15-20 has a <0.5-15 % chance of contacting individual land segments adjacent to them (Table A.2-75). Pipeline segments 1-4, 6-15, or 17 have a <0.5-9% chance of contacting individual land segments adjacent to them (Table A.2-76). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments during summer. The OSRA model estimates the chance of contact to ERA Land is 53% for LA18 and ranges from 12-45% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17 or 1-22% for offshore LAs 1, 3, 5, 7, 9, 11, 13, 14, 16, 19, or 20 (Table A.2-63). Pipeline

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segments 1, 2, or 7-14 have a 1-9% chance of contacting ERA Land (Table A.2-62). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-61 and -62).

During winter, the OSRA model estimates a large spill, from LAs 2, 4, 6, or 17-20 has a <0.5-2 % chance of contacting individual land segments adjacent to them (Table A.2-121). Pipeline segments 8, 9, or 14 have a <0.5-1% chance of contacting individual land segments adjacent to them (Table A.2-122). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments during winter. The OSRA model estimates the chance of contact to ERA Land is 53% for LA18 and ranges from 12-45% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17, or 1-22% for offshore LAs 1, 3, 5, 7, 9, 11, 13, 13, 16, 19, 20, 21, or 23 (Table A.2-63). Pipeline segments 1-15 or 17 have a 1-39% chance of contacting ERA Land (Table A.2-64). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-63 and -64).

The OSRA model estimates a large spill, from launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact. During the entire year (annual), LAs 1-25 have a <0.5-30% chance of contacting individual environmental resource areas (Tables A.2-3). Pipeline segments 1-17 have a <0.5-35% chance of contacting individual environmental resource areas (Table A.2-4). During summer, LAs 1-25 have a <0.5-62% chance of contacting individual environmental resource areas (Tables A.2-63). Pipeline segments 1-17 have a <0.5-29% chance of contacting individual environmental resource areas (Table A.2-64). During winter, LAs 1-25 have a <0.5-30% chance of contacting individual environmental resource areas (Tables A.2-111). Pipeline segments 1-17 have a <0.5-34% chance of contacting individual environmental resource areas (Table A.2-112).

**30 Days:** In general, the OSRA model estimates the chance of contact to individual land segments is from both nearshore and offshore pipeline segments and launch areas, but not all pipeline segments and launch areas have a chance of contact within 10 days. Launch Areas 9, 13, 16, or 21-25 have <0.5% chance of contact to individual land segments.

During the entire year (annual), the OSRA model estimates a large spill, from LAs 1-12, 14-21, or 23 has a <0.5-9 % chance of contacting individual land segments adjacent to them (Table A.2-17). Pipeline Segments 1-15 or 17 have a <0.5-7 % chance of contacting individual land segments adjacent to them (Table A.2-18). Launch Areas 13, 22, 24, or 25 or PL16 have a <0.5% chance of contacting individual land segments over the entire year. The OSRA model estimates the chance of contact to ERA Land is 34% for LA18 and ranges from 11-26% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17, or 1-24% for offshore LAs 1, 3, 5, 7, 9, 14, 16, or 10-23 (Table A.2-5). Pipeline Segments 1-17 have a 1-23% chance of contacting ERA Land (Table A.2-6). Offshore LAs 24 and 25 have a <0.5% chance of contact to ERA Land (Tables A.2-5).

During summer, the OSRA model estimates a large spill, from LAs 1-21 or 23 has a <0.5-18 % chance of contacting individual land segments adjacent to them (Table A.2-77). Pipeline Segments 1-15 or 17 have a <0.5-19% chance of contacting individual land segments adjacent to them (Table A.2-78). LAs 24, 25 or PL16 have a <0.5% chance of contacting individual land segments during summer. The OSRA model estimates the chance of contact to ERA Land is 80% for LA18 and ranges from 28-68% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17, or 1-58% for offshore LAs 1, 3, 5, 7, 9, 11, 13, 14, 16, or 19-24 (Table A.2-65). Pipeline Segments 1-17 have a 1-71% chance of contacting ERA Land (Table A.2-66). Launch Area 25 has a <0.5% chance of contact to ERA Land (Tables A.2-65).

During winter, the OSRA model estimates a large spill, from LAs 2-8, 10-12, or 14-20 has a <0.5-5 % chance of contacting individual land segments adjacent to them (Table A.2-125). Pipeline Segments 1-14 or 17 have a <0.5-4% chance of contacting individual land segments adjacent to them (Table A.2-126). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments during winter. The OSRA model estimates the chance of contact to ERA Land is 19% for LA18 and ranges from 5-12% for nearshore LAs 2, 4, 6, 8, 10, 12, 15, or 17, or 1-13% for offshore LAs 1, 3, 5, 7, 9, 11, or 19-25 (Table A.2-113). Pipeline Segments 1-15 or 17 have a 2-10% chance of contacting ERA Land (Table A.2-114). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Tables A.2-113 and -114).

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The OSRA model estimates a large spill, from launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact. During the entire year (annual), LAs 1-25 have a <0.5-27% chance of contacting individual environmental resource areas (Tables A.2-1). Pipeline Segments 1-17 have a <0.5-32% chance of contacting individual environmental resource areas (Table A.2-2). During summer, LAs 1-25 have a <0.5-48% chance of contacting individual environmental resource areas (Tables A.2-65). Pipeline segments 1-17 have a <0.5-58% chance of contacting individual environmental resource areas (Table A.2-66). During winter, LAs 1-25 have a <0.5-32% chance of contacting individual environmental resource areas (Tables A.2-113). Pipeline Segments 1-17 have a <0.5-36% chance of contacting individual environmental resource areas (Table A.2-114).

**3.4.1.1.3. Chukchi Comparisons between Spill Location and Season.** The primary differences of contact between hypothetical launch areas and pipeline segments are geographic in the perspective of west to east and nearshore versus offshore and temporal in terms of how long it takes to contact. Offshore spill locations take longer to contact the coast and nearshore environmental resource areas, if contact occurs at all. Winter spill contact to nearshore and coastal resources is less often and, to a lesser extent, due to the landfast ice in place from December to April. Hypothetical spills have a stochastic northerly or southwesterly direction of spread.

The western edge of the proposed Chukchi lease area is adjacent to Russian territory. Tables A.3-1 through 6 show the range of annual conditional probabilities that a large oil spill starting at particular location will contact ERA7 (U.S. Maritime boundary) within 3, 10, 30, 60, 180, or 360 days. The chance of a large oil spill contacting ERA7 (US Russia Maritime Boundary) from LAs 1-15 or PLs 1-11 is 76% or less within 30 days.

### 3.4.1.1.4. Chukchi Generalities Through Time.

**3 Days:** In general, contact to individual land segments and ERA Land is due to hypothetical spills from the nearshore pipeline segments where assumed hypothetical pipelines could come ashore. Annually, there is a <0.5-1% chance of a large spill contacting ERA Land or individual land segments from launch areas that begin approximately 25-150 mi offshore from the coast. Annually hypothetical pipeline segments adjacent to the coast have a <0.5-7 percent chance of contacting ERA Land. Launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact within 3 days.

During the entire year (annual), the OSRA model estimates a large spill, from PLs 1, 3, 6, 9, or 11, has a <0.5-4 % chance of contacting individual LSs 64 (Point Hope), 65 (Cape Lisburne), 72-74 (Point Lay-Kasegaluk Lagoon), 79 (Wainwright), 82 (Skull Cliff), or 83 (Nulavik) (Table A.3-7). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments over the entire year. The OSRA model estimates the chance of contact to ERA Land ranges from 1-7% for LA 11, PLs 1, 6, 9, or 11 (Table A.3-1). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Table A.3-1).

During summer, the OSRA model estimates a large spill, from PLs 1, 3, 6, 9, or 11, has a <0.5-5% chance of contacting individual LSs 65 (Cape Lisburne), 72-74 (Point Lay-Kasegaluk Lagoon), 78-80 (Point Collie-Wainwright), or 82 (Eluksingiak Point, Skull Cliff) (Table A.3-37). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments. The OSRA model estimates the chance of contact to ERA Land ranges from 1-8% for LA11, PLs 1, 3, 6, 9, or 11 (Table A.3-31). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Table A.3-31).

During winter, the OSRA model estimates a large spill, from PLs 6 or 9 has a <0.5- 4% chance of contacting individual LSs72-74 (Point Lay-Kasegaluk Lagoon), or 79 (Wainwright) (Table A.3-61). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments within 3 days over winter (Table A.3-61). The OSRA model estimates the chance of contact to ERA Land ranges from 1-7% for LAs 1, 6, 9, or 11 (Table A.3-55). All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Table A.3-55).

The OSRA model estimates a large spill, from launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact. During the entire year (annual), LAs 1-15 have a <0.5-37% chance of contacting individual environmental resource areas (Table A.3-1). Pipeline Segments

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1-11 have a <0.5-38% chance of contacting individual environmental resource areas (Table A.3-1). During summer, LAs 1-13 have a <0.5-74% chance of contacting individual environmental resource areas (Table A.3-31). During summer, PLs 1-11 have a <0.5-75% chance of contacting individual environmental resource areas (Table A.3-31). During winter, launch areas 1-13 have a <0.5-41% chance of contacting individual environmental resource areas (Table A.3-55). During winter, PLs 1-11 have a <0.5-39% chance of contacting individual environmental resource areas (Table A.3-55).

**10 Days:** During the entire year (annual), the OSRA model estimates a large spill, from PLs 1, 3, 6, 9 or 11 has a <0.5-6 % chance of contacting individual LSs 64-66 (Point Hope-Ayugatak Lagoon), 71-75 (Sitkok Point-Icy Cape), or 78-85 (Point Collie to Barrow) (Table A.3-8). Nearshore LAs 9-15 have a <0.5-1% chance of contacting LSs 65 (Point Hope, Cape Lisburne), 71-75(Sitkok Point-Icy Cape), 79-80 (Wainwright-Kugrua Bay), or 84-85 (Barrow area) (Table A.3-8). All other launch areas and pipeline segments have a <0.5% chance of contacting individual land segments within 10 days over the entire year. The OSRA model estimates the chance of contact to ERA Land ranges from 4-16% for LAs 1, 3, 6, 9, or 11 (Table A.3-2) and 1-5% for LAs 8-13. All other launch areas and pipeline segments have a <0.5% chance of contact to ERA Land (Table A.3-2).

During summer, the OSRA model estimates a large spill, from PLs 1, 3, 6, 9, or 11 has a <0.5-7% chance of contacting individual LSs 65-66 (Cape Lisburne-Ayugatak Lagoon), 71-76 (Sitkok Point-Avak Inlet), or 78-85 (Nivat Point-Barrow) (Table A.3.-38). Nearshore LAs 9-13 have a <0.5-3% chance of contacting LSs 64-66 (Point Hope-Ayugatak Lagoon), 70-75(Kurchaurak Creek-Icy Cape), 79-80 (Point Belcher-Kugrua Bay), or 83-85 (Nulavik-Barrow) (Table A.2-38). Offshore LA8 has a 1% chance of contacting LS 85 (Barrow). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments within 10 days over summer.

During winter, the OSRA model estimates a large spill, from PLs 6, 9, or 11 have a <0.5-5% chance of contacting individual LSs 72-75 (Point Lay-Icy Cape), 78-80 (Point Collie-Kugrua Bay), and 82-83 (Skull Cliff- Nulavik) (Table A.3-62). Nearshore LAs 10, 11, or 13 have a <0.5-1% chance of contacting 71-75(Sitkok Point -Icy Cape) or 84 (Barrow Area) (Table A.3-62). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments within 10 days over winter (Table A.3-62).

The OSRA model estimates a large spill from launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact. During the entire year (annual), LAs 1-15 have a <0.5-66% chance of contacting individual environmental resource areas (Table A.3-2). Pipeline Segment 1-11 have a <0.5-58% chance of contacting individual environmental resource areas (Table A.3-2). During summer, LAs 1-15 have a <0.5-80% chance of contacting individual environmental resource areas (Table A.3-32). During summer, PLs 1-11 have a <0.5-80% chance of contacting individual environmental resource areas (Table A.3-32). During winter, LAs 1-15 have a <0.5-73% chance of contacting individual environmental resource areas (Table A.3-56). During winter, PLs 1-11 have a <0.5-66% chance of contacting individual environmental resource areas (Table A.3-56).

**30 Days:** Within 30 days, large spills from the southern and western portion of the planning area (PLs 1, 2, 3; LAs 4, 9, or 11) have a <0.5-5% of contacting Russian Chukchi coastline individual land segments. The percent chance of contacting the grouped land segment Russia Chukchi Coastline (GLS 141) ranges from 1-31% from LAs 1-6, 7-11, and 15 and PLs 1-7.

During the entire year (annual), the OSRA model estimates a large spill from PL1, 2, 3 and LAs 4, 9, or 11 has a <0.5-1% chance of contacting LSs 8 or 24-39 (E. Wrangel Island, Yulino-Uelen, Russia) (Table A.3-9). Pipeline Segments 1, 3 and LAs 9, or 10 have a <0.5%-3% chance of contacting individual LSs 64-66 (Point Hope-Ayugatak Lagoon). LAs 5, 8, 10-13 or PLs 3, 5, 6, 8-11 have a <0.5-7% chance of contacting individual LSs 68-86 (Agiak Lagoon -Plover Islands) (Table A.3-9). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments within 30 days over the entire year (Table A.3-9).

During summer, the OSRA model estimates a large spill from PLs 1, 2 or LAs 3, 4, 9 or 10 has a <0.5-3 % chance of contacting LSs 8 or 27-39 (E. Wrangel, Rigol-Uelen, Russia). Launch Areas 4-14 and PLs 1-3, 5-6 or 8-11 have

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a <0.5%-13% chance of contacting at least one individual LSs 64-88 (Cape Seppings-Cape Simpson) (Table A.3-39). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments within 30 days over summer (Table A.3-39).

During winter, the OSRA model estimates a large spill from PLs 1, 2, 3 or LAs 1, 4, 9 or 10 has a <0.5-6 % chance of contacting LSs 8 or 23-39 (E. Wrangel, Emuem-Uelen, Russia). LAs 9 or 10 have a <0.5-1% chance of contacting LSs 64-66 (Point Hope-Ayugatak Lagoon). Pipeline Segments 3, 5, 6, or LAs 10-12 have a <0.5%-6% chance of contacting LSs 70-75 (Kuchaurak Creek-Icy Cape) (Table A.3-63). Pipeline Segments 9, 11, or LAs 9-13 have a <0.5-5 % chance of contacting LSs 78-85 (Point Collie-Barrow). All other launch areas (both nearshore and offshore) and pipeline segments have a <0.5% chance of contacting individual land segments within 30 days over winter (Table A.3-63).

The OSRA model estimates a large spill from launch areas or pipeline segments adjacent to or on top of environmental resource areas have the highest percent chance of contact. During the entire year (annual), LAs 1-15 have a <0.5-81% chance of contacting individual environmental resource areas (Table A.3-3). During the entire year, PLs 1-11 have a <0.5-76% chance of contacting individual environmental resource areas (Table A.3-3). During summer, LAs 1-15 have a <0.5-84% chance of contacting individual environmental resource areas (Table A.3-33). During summer, PLs 1-11 have a <0.5-82% chance of contacting individual environmental resource areas (Table A.3-33). During winter, LAs 1-15 have a <0.5-85% chance of contacting individual environmental resource areas (Table A.3-57). During winter, PLs 1-11 have a <0.5-82% chance of contacting individual environmental resource areas (Table A.3-57).

## 4. Oil-Spill-Risk Analysis.

A measure of oil-spill risk is determined by looking at the chance of one or more large spills occurring and then contacting a resource of concern. This analysis helps determine the relative spill occurrence and contact associated with oil and gas production in different regions of the proposed sale area. Combined probabilities are the chance of one or more large spills occurring and contacting. They are estimated using the conditional probabilities, the oil-spill rates, the resource estimates, and the assumed transportation scenarios. These are combined through matrix multiplication to estimate the mean number of one or more large spills occurring and contacting.

**4.1. Chance of One or More Large Spills Occurring.** The chance of one or more large spills occurring is derived from two components: (1) the spill rate and (2) the resource-volume estimates. The spill rate is multiplied by the resource volume to estimate the mean number of spills. Oil spills are treated statistically as a Poisson process, meaning that they occur independently of one another. If we constructed a histogram of the chance of exactly 0 spills occurring during some period, the chance of exactly 1 spill, 2 spills, and so on, the histogram would have a shape known as a Poisson distribution. An important and interesting feature of this distribution is that it is entirely described by a single parameter, the mean number of spills. Given the mean number of spills, you can calculate the entire histogram and estimate the chance of one or more large spills occurring.

**4.1.1. Large Spill Rates.** We derive the large oil spill rates from a fault-tree modeling studies done by the Bercha Group, Inc. (2006, 2008). This study examined alternative oil-spill-occurrence estimators for the Chukchi and Beaufort seas using a fault-tree method. Using fault trees, oil-spill data from the Gulf of Mexico were modified and incremented to represent expected Arctic performance and included both Arctic and non-Arctic variability. The discussion of fault-tree analyses is incorporated by reference from Beaufort Sea Sales 186, 195, 202 final EIS and Chukchi Sea Sale 193 final EIS Appendix A (USDOI, MMS, 2003a, 2007d) and Beaufort Sales 195 and 202 EAs (USDOI, MMS 2004, 2006b) and summarized below.

Fault-tree analysis is a method for estimating the spill rate resulting from the interactions of other events. Fault trees are logical structures that describe the causal relationship between the basic system components and events resulting in system failure. Fault-tree models are a graphical technique that provides a systematic description of the combinations of possible occurrences in a system, which can result in an undesirable outcome. Figure A-5 shows the generalized parts of a fault tree starting with the top event. The top event is defined as the failure under investigation. In this case, it is either a large pipeline or platform spill. A series of events that lead to the top event

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are described and connected by logic gates. Logic gates define the mathematical operations conducted between events.

Two general fault trees are constructed, one for large pipeline spills and one for large platform spills. The pipeline fault-tree events included corrosion, third-party impact, operation impact, mechanical failure, and natural hazards—unknown and Arctic. The sub-resultant events that make up Arctic include upheaval buckling, ice strudel scour, ice scour, thaw settlement, and other. Platform events include a process facility release, a storage tank release, structural failure, hurricane or storm, collision, and Arctic. The sub-resultant events that make up the Arctic included ice force, low temperature, and others.

In the Bercha Group Inc. (2006, 2008) studies, fault trees were used to transform historical spill statistics for non-Arctic regions to predictive spill-occurrence estimates for the Beaufort and Chukchi seas program area. The Bercha Group, Inc. (2008) fault-tree analysis focused on Arctic effects as well as the variance in non-Arctic effects such as spill size and spill frequency. Arctic effects were treated as a modification of existing spill causes as well as unique spill causes. Modification of existing spill causes included those that also occur in other OCS regions but at a different frequency, such as trawling accidents. Unique spill causes included events that occur only in the Arctic, such as ice gouging, strudel scour, upheaval buckling, thaw settlement, and other for pipelines. For platforms, unique spill causes included ice force, low temperature, and other.

**Treatment of Uncertainties:** The measures of uncertainty calculated were expanded beyond Arctic effects in each fault-tree event to include the non-Arctic variability in spill size, spill frequency, and facility parameters, including wells drilled, number of platforms, and subsea wells and subsea pipeline length. The inclusion of these types of variability—Arctic effects, non-Arctic data and facility parameters—is intended to provide a realistic estimate of spill-occurrence indicators and their resultant variability.

**4.1.1.1. Results for Development Spill Rates.** For purposes of analysis, we use the upper range of the Beaufort development scenario. The annual rates were weighted by the annual production over the total production or the year over the total years, and the prorated rates were summed to determine the rates over the life of the production. For the Beaufort, the life of production for the 3 development case is 20 years. For the Chukchi, the life of production for the one development case is 25 years. Bercha Group, Inc. (2006, 2008) calculated 95% confidence intervals on the total spill rate per billion barrels as follows:

### 4.1.1.1.1. Beaufort.

#### *3 Developments, 20 Year Production Life*

Type	Mean
Platforms/Wells	0.29 spills per billion barrels produced
Pipelines	0.29 spills per billion barrels produced
Total	0.58 spills per billion barrels produced
95% Confidence Interval	0.26-0.78 spills per billion barrels produced

### 4.1.1.1.2. Chukchi.

#### *1 Development, 25 Year Production Life*

Type	Mean
Platforms/Wells	0.21 spills per billion barrels produced
Pipelines	0.30 spills per billion barrels produced
Total	0.51 spills per billion barrels produced
95% Confidence Interval	0.32-0.77 spills per billion barrels produced

**Confidence Interval.** A confidence interval is a range of values that describes the uncertainty surrounding an estimate. A confidence interval is also itself an estimate. It is made using a model of how sampling, measuring, and modeling contributes to uncertainty about the relation between the true value of the quantity we are estimating and our estimate of that value. The “95%” confidence interval listed represents a level of certainty about our

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estimate. If we were to repeatedly make new estimates using exactly the same procedure (by drawing a new sample, calculating new estimates and new confidence intervals), the confidence intervals would contain the average of all the estimates 95% of the time. We have, therefore, produced a single estimate in a way that, if repeated indefinitely, would result in 95% of the confidence intervals formed containing the true value. Confidence intervals are one way to represent how “good” an estimate is; the larger a 95% confidence interval for a particular estimate, the more caution is required when using the estimate. Confidence intervals are an important reminder of the limitations of the estimates.

**4.1.2. Resource-Volume Estimates.** The resource volume estimates and resource development scenarios are discussed in Appendix B.

**4.1.3. Transportation Assumptions.** Appendix A.1 Section C - Estimates of Where an Oil Spill May Go discusses the transportation assumptions for the launch areas and their associated hypothetical pipelines.

**4.1.4. Results for the Chance of One or More Large Spills Occurring.** The chance of one or more large spills occurring does not factor in the chance that a development project occurs. Given the many logistical, economic, and engineering factors, there probably is a <10% chance that a commercial field will be leased, discovered, and developed. However, because leasing and exploration could lead to a development project, MMS must evaluate what would happen if a development occurred, even though the chance of that happening probably is very small in a frontier areas like the Beaufort and Chukchi seas. Our estimate of one or more large spills occurring assumes there is a 100% chance that development(s) will occur and oil will be produced. Clearly, this overstates the oil-spill occurrence associated with leasing and exploration where it is unlikely a development will occur from those activities. If a development occurs, this oil-spill analysis more accurately represents the chance of one or more large spills occurring.

Additionally, the chance of one or more large spills occurring is estimated over the entire production life of the development(s). For the Beaufort, production is assumed to occur over 20 years, and for the Chukchi over 25 years. The estimates of one or more large spills occurring add up the annual chances for both pipeline and platforms over the estimated 20-25 year production life of the development(s).

**4.1.4.1. Beaufort.** The chance of one or more large spills occurring assumes there is a 100% chance that a project or projects will be developed and 0.5 Bbbl of oil will be produced from each sale. The large spill rates used in this section are all based on spills per billion barrels. Using the above mean large spill rates, Table A.1-25 shows the estimated mean number of large oil spills for Alternative 2, the Proposed Action and its Alternatives 3-6. For Alternative 2, the Proposed Action, and its alternatives we estimate 0.15 pipeline spills and 0.15 platform (and well) spills for a total over the 20-year life of Sales 209 or 217 production of 0.30 spills. Although statistically we estimate less than one spill will occur, for purposes of analysis, one large spill was assumed to occur and is analyzed in this EIS.

Using the above mean spill rates, Table A.1-26 shows the chance of no pipeline spills occurring is 86% and the chance of one or more large pipeline spills occurring is 14%. The chance of no large platform spills occurring is 86% and the chance of one or more large platform (wells and platform) spills is 14% for Alternative 2, the Proposed Action and its alternatives over the 20-year production life. The total is derived from the sum of the platform, wells, and pipeline mean number of spills over the entire 20-year production life. The chance no large spills occurring is 74%, and the chance of one or more large spills total occurring is 26% for Alternative 2, the Proposed Action and its alternatives over the 20-year production life. Figure A.1-4 shows the Poisson distribution.

**4.1.4.2. Chukchi.** The chance of one or more large spills occurring assumes there is a 100% chance that a project will be developed and 1 Bbbl of oil will be produced. The large spill rates used in this section are all based on spills per billion barrels.

Using the above mean large spill rates, Table A.1-27 shows the estimated mean number of large oil spills for Alternative 2, the Proposed Action and its alternatives. For Alternative 2, the Proposed Action and its alternatives, we estimate 0.30 pipeline spills and 0.21 platform (and well) spills for a total over the 25-year production life of

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Sales 212 and 221 of 0.51 spills. For purposes of analysis, one large spill was assumed to occur and is analyzed in this EIS.

Using the above mean spill rates, Table A.1-28 shows the chance of no pipeline spills occurring is 74%, and the chance of one or more large pipeline spills occurring is 26%. The chance of no large platform spills occurring is 81% and the chance of one or more large platform (wells and platform) spills is 19% for Alternative 2, The Proposed Action and its alternatives over the 25-year production life. The total is derived from the sum of the platform, wells and pipeline mean number of spills added together over the entire 25-year production life. The chance no spills occurring is 60%, and the chance of one or more large spills total occurring is 40% for Alternative 2, The Proposed Action and its alternatives over the 25-year production life. Figure A.1-5 shows the Poisson distribution.

**4.2. Chance of a Large Spill Contacting.** The chance of a large spill contacting is taken from the oil-spill-trajectory model results, called conditional probabilities, summarized in Section C.4.b and listed in Tables A.2-1 through A.2-156 for Beaufort Sea Sales 209, 217 and Tables A.3-1 through A.3-78 for Chukchi Sea Sales 212 and 221.

**4.3. Results of the Oil-Spill-Risk Analysis: Combined Probabilities.** Tables A.2-157 through A.2-161 show the annual combined probabilities for Beaufort Sea Sales 209 and 217 Proposed Action and its alternatives. Tables A.3-79 through A.3-83 show the annual combined probabilities for Chukchi Sea Sales 212 and 221 Proposed Action and its alternatives. The combined probabilities reflect the chance of one or more large spills occurring and contacting over the assumed production life of the lease area.

**4.3.1. Beaufort.** For the most part, the chance of one or more large spills occurring and contacting environmental resource areas and land segments is 4% or less over 30 days, or 17% or less over 360 days for Alternative 2, The Proposed Action and its alternatives. For environmental resource areas with a chance of occurrence and contact  $\geq 0.5\%$ , the chance of one or more large spills occurring and contacting a certain environmental resource area ranges from 1-1%, 1-2%, and 1-4% within 3, 10, and 30 days, respectively, for Alternative 2, The Proposed Action and its alternatives. For Alternative 2, The Proposed Action and its alternatives, all land segments have a  $<0.5\%$  chance of one or more spills occurring and contacting after 30 days. Within 60 days, LS 92 (Cape Halkett) has a 1% chance of one or more spills occurring and contacting.

**4.3.2. Chukchi.** For the most part, the chance of one or more large spills occurring and contacting environmental resource areas and land segments is 13% or less over 30 days, or 17% or less over 360 days for Alternative 2, The Proposed Action and its alternatives. For environmental resource areas with a chance of occurrence and contact  $\geq 0.5\%$ , the chance of one or more large spills occurring and contacting a certain environmental resource areas ranges from 1-8%, 1-10%, and 1-13% within 3, 10, and 30 days, respectively, for Alternative 2, The Proposed Action and its alternatives. For Alternative 2, The Proposed Action and its alternatives, land segments with a 1% chance of one or more spills occurring and contacting after 30 days include LSs 72 (Point Lay), 73 (Tungaich Point), 74 (Kasegaluk Lagoon), and 75 (Icy Cape).

## 5. Accidental Small Oil Spills.

Small spills are spills that are  $<1,000$  bbl. Table A.1-1 and A.1-2 shows the EIS section where we analyze the effects of small spill(s). We analyze the effects of small spills in Sections 4.4 and 4.5. We consider two oil types for small spills: crude oil and refined oil.

The analysis of Alaska North Slope small spills in USDOI, MMS (2003a, 2007d) are incorporated by reference. Brief summaries of these descriptions, updated and augmented by new material, are provided below. We expect the same companies and regulators to participate offshore in the Beaufort and Chukchi seas as those that are now operating on the onshore Alaska North Slope. We expect similar but not exact environmental conditions. We believe it is reasonable to assume that the rate in the Beaufort and Chukchi seas will be similar to the rate on the Alaska North Slope. The OCS rate of crude and refined small spills is approximately 3,460 spills per billion barrels, and the North Slope rate is approximately 618 spills per billion barrels. For whatever reason, the small spill rate on the Alaska North Slope is significantly less than the OCS rate.

## Appendix A

The analysis of operational small oil spills uses historical oil-spill databases and simple statistical methods to derive general information about small crude and refined oil spills that occur on the Alaska North Slope. This information includes estimates of how often a spill occurs for every billion barrels of oil produced (oil-spill rates), the mean (average) number of oil spills, and the mean and median size of oil spills from facilities, pipelines, and flowlines combined. We then use this information to estimate the number, size, and distribution of operational small spills that may occur from Beaufort Sea Sales 209 and 217 or Chukchi Sea Sales 212 and 221. The analysis of operational small oil spills considers the entire production life of the Beaufort or Chukchi Sea sales and assumes the following:

- commercial quantities of hydrocarbons are present in the multiple-sale Program Area, and
- these hydrocarbons will be developed and produced at the estimated resource levels.

Uncertainties exist, such as

- the estimates required for the assumed resource levels, or
- the actual size of a crude- or refined-oil spill.

We use the history of crude and refined oil spills reported to the State of Alaska, Department of Environmental Conservation (ADEC) and the Joint Pipeline Office to determine crude and refined oil-spill rates and patterns from Alaska North Slope oil and gas exploration and development activities for spills  $\geq 1$  gallon and  $< 1,000$  bbl. Refined oil includes aviation fuel, diesel fuel, engine lube, fuel oil, gasoline, grease, hydraulic oil, transformer oil, and transmission oil. The Alaska North Slope oil-spill analysis includes onshore oil and gas exploration and development spills from the Point Thompson Unit, Badami Unit, Kuparuk River Unit, Milne Point Unit, Prudhoe Bay West Operating Area, Prudhoe Bay East Operating Area, and Duck Island Unit.

The Alaska North Slope oil-spill database of all spills  $\geq 1$  gal is from ADEC. Oil-spill information is provided to ADEC by private industry according to the State of Alaska Regulations 18 AAC 75. The totals are based on initial spill reports and may not contain updated information. The ADEC database integrity is most reliable for the period 1989 and after, due to increased scrutiny after the *Exxon Valdez* oil spill (Volt, 1997, pers. commun.). For this analysis, the database integrity cannot be validated thoroughly. However, we use this information, because it is the only information available to us about small spills. For this analysis, the ADEC database is spot-checked against spill records from ARCO Alaska, Inc. and British Petroleum, Inc. All spills  $\geq 1$  gal are included in the dataset. We use the time period January 1989 through December 2000 in this analysis of small oil spills for the Chukchi Sea.

A simple analysis of operational small oil-spills is performed. Alaska North Slope oil-spill rates are estimated without regard to differentiating operation processes. The ADEC database base structure does not facilitate quantitative analysis of Alaska North Slope oil-spill rates separately for platforms, pipelines, or flowlines. Recently, Everest Consulting (2007) performed a similar analysis for small spills  $< 200$  bbl for the time period 1985-2006 and derived similar results.

**5.1. Results for Small Operational Crude Oil Spills.** The analysis of Alaska North Slope crude oil spills is performed collectively for all facilities, pipelines, and flowlines. The pattern of crude oil spills on the Alaska North Slope is one of numerous small spills; of which the majority are into containment and do not reach the environment. Of the crude oil spills that occurred between 1989 and 2000, 31% were  $\leq 2$  gal; 55% were  $\leq 5$  gal. Ninety-eight percent of the crude oil spills were  $< 1,050$  gal (25 bbl), and 99% were  $< 2,520$  gal (60 bbl). The spill sizes in the database range from  $< 1$  gal-38,850 gal (925 bbl). The average small crude oil-spill size on the Alaska North Slope is 113.4 gal (2.7 bbl), and the median spill size is 5 gal. For purposes of analysis, this EIS assumes an average crude oil-spill size of 126 gal (3 bbl). Everest consulting (2007) determined the median spill size for spills  $< 200$  bbl is 2.1 bbl.

Table A.1-29 shows the estimated crude oil-spill rate for the Alaska North Slope is 178 spills per billion barrels produced for spills less than 500 bbl and 0.64 spills per billion barrels produced for spills  $\geq 500$  bbls. For Beaufort Sea Sales 209, 217 Table A.1-30 shows the assumed number, size, and total volume of small spills for the Proposed Action and alternatives, and Table A.1-31 shows the assumed size distribution of those spills. For Chukchi Sea Sales 212 and 221, Table A.1-32 shows the assumed number, size, and total volume of small spills for the Proposed Action and alternatives, and Table A.1-33 shows the assumed size distribution of those spills.

The causes of Alaska North Slope crude oil spills, in decreasing order of occurrence by frequency, are leaks, faulty valve/gauges, vent discharges, faulty connections, ruptured lines, seal failures, human error, and explosions. The cause of approximately 30% of the spills is unknown.

**5.2. Results for Small Operational Refined Oil Spills.** The typical refined products spilled are aviation fuel, diesel fuel, engine lube, fuel oil, gasoline, grease, hydraulic oil, transformer oil, and transmission oil. Diesel spills are 58% of refined oil spills by frequency and 83% by volume. Engine lube oil spills are 10% by frequency and 3% by volume. Hydraulic oil is 26% by frequency and 10% by volume. All other categories are <1% by frequency and volume. Refined oil spills occur in conjunction with oil exploration and production. The refined oil spills correlate to the volume of ANS crude oil produced. As production of crude oil has declined, so has the number of refined oil spills. Table A.1-34 shows that from January 1989-December 2000, the spill rate for refined oil is 440 spills per billion barrels produced. Tables A.1-35 and A.1-36 show the assumed refined oil spills during the lifetime of the Proposed Action and its alternatives for the Beaufort Sea Sales 209 and 217 and Chukchi Sea Sales 212 and 221, respectively.

### 5.3. Assumptions for Purposes of Small Spill Analysis.

**5.3.1. Beaufort.** The average crude-oil spill size is 126 gal (3 bbl) for spills <500 bbl. An estimated 89 small crude oil spills could occur during the 20-year oil-production period for Alternative 2, The Proposed Action and its alternatives (Table A.1-30), an average of more than 4 per year. The average refined-oil spill size is 29 gal (0.7 bbl), and an estimated 220 refined-oil spills would occur during the 20-year oil-production period for Alternative 2, The Proposed Action and its alternatives (Table A.1-35), an average of 11 per year. Overall, an estimated 15 crude and refined oil spills <500 bbl would occur each year of production for Alternative 2, The Proposed Action and its alternatives.

**5.3.2. Chukchi.** The average crude-oil spill size is 126 gal (3 bbl) for spills <500 bbl. An estimated 178 small crude oil spills could occur during the 25-year oil-production period for Alternative 2 (Table A.1-32), an average of more than 7 per year. The average refined-oil spill size is 29 gal (0.7 bbl), and an estimated 440 refined-oil spills would occur during the 25-year oil-production period for Alternative 2 (Table A.1-36), an average of 17.6 per year. Overall, an estimated 25 crude and refined oil spills <500 bbl would occur each year of production for Alternative 2. The average crude-oil spill size is 680 bbl for spills ≥500 bbl. An estimated one small crude oil spill ≥500 bbl could occur during the 25-year oil-production period for Alternative 2, The Proposed Action and its alternatives (Table A.1-32).

## 6. Cumulative Estimates of Reasonably Foreseeable Oil Spills.

To estimate the likely number of large oil spills in our analysis of cumulative effects, we use the midrange production estimate, which includes our estimate of past, present, and reasonably foreseeable future production for the Alaska North Slope and Beaufort and Chukchi seas. To determine the number of large oil spills, we multiply the offshore and onshore resource/reserve estimates by the spill rate per billion barrels produced.

The incremental contribution of the Alternatives for Sales 209 and 217 by volume of oil is about 5% of the midrange production estimate. To determine the number of large oil spills, we multiply the offshore and onshore resource/reserve estimates by the spill rate per billion barrels produced. The most likely number of offshore oil spills ≥1,000 bbl from all past, present, and reasonably foreseeable future activities is less than one, if all reasonably foreseeable discovered reserves are developed. The most likely number of large spills from alternatives for Sales 209 and 217 is zero (Table 4.3.2-1). The mean number of estimated offshore spills for the Beaufort Sea Sales 209 and 217 offshore area statistically is 0.30.

The most likely number of onshore large oil spills ≥500 bbl from all past, present, and future activities is estimated to be five, the most likely number of spills from Alternative 2 for either Sale 209 or 217 is estimated to be zero (Table 4.2.1-1). For Alternative 2, we assume the contribution of onshore spills could be from an onshore pipeline delivering oil to the Trans-Alaska Pipeline System (TAPS). The mean number of estimated onshore spills from

## Appendix A

facilities and pipelines for the Alaska North Slope area statistically is 5.2, of which, Alternative 2 for Sale 209 and 217 is estimated to contribute statistically 0.09, or 2%.

The most likely number of TAPS pipeline large oil spills  $\geq 500$  bbl is estimated to be one; the most likely number of spills from Alternative 2 for either Sale 209 or 217 is estimated to be zero (Table 4.3.2-1). The mean number of estimated pipeline oil spills statistically is 1.06, of which, Alternative 2 for Sale 209 and 217 is estimated to contribute statistically 0.06, or 6 % (Table 4.3.2-1).

The incremental contribution of the Alternatives for Sales 212 and 221 by volume of oil is about 10% of the midrange production estimate. To determine the number of large oil spills, we multiply the offshore and onshore resource/reserve estimates by the spill rate per billion barrels produced. The most likely number of offshore oil spills  $\geq 1,000$  bbl from all past, present, and reasonably foreseeable future activities is less than one, if all reasonably foreseeable discovered reserves are developed. The most likely number of large spills from Alternatives for Sales 209 and 217 is zero (Table 4.2.1-2). The mean number of estimated offshore spills for the Chukchi Sea Sales 209 and 217 offshore area statistically is 0.51. The mean number of estimated onshore spills from facilities and pipelines for the Alaska North Slope area statistically is 5.2, of which, Alternative 2 for Sales 209 and 217 is estimated to contribute statistically 0.17, or 4%. The mean number of estimated pipeline oil spills statistically is 1.06, of which, Alternative 2 for Sale 209 and 217 is estimated to contribute statistically 0.11, or 12 % (Table 4.3.2-2).

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**Table A.1-1**  
**Large and Small Spill Sizes, Source of Spill, Type of Oil, Number and Size of Spill and Receiving Environment We Assume for Analysis in Beaufort Sea Sales 209 or 217**

EIS Section	Source of Spill	Type of Oil	Number and Size of Spill(s) (Barrels)	Receiving Environment
<b>Large Spills (<math>\geq 1,000</math> barrels)</b>				
4.4	Offshore Pipeline Platform/Storage Tank	Crude Condensate Or Diesel	1 spill 4,600 Or 1,500 barrels	Containment Open Water Under Ice On Top of Sea Ice Broken Ice Coastal Shoreline
<b>Small Spills<sup>1</sup> (<math>&lt; 1,000</math> barrels)</b>				
4.4	Offshore and/or Onshore Operational Spills from All Sources	Diesel or	67 spills $< 1$ barrel 21 spills $\geq 1$ barrel but $< 25$ barrels	Containment Open Water On Top of Sea Ice Broken Sea Ice Snow/Ice Tundra Coastal Shoreline
	Onshore and/or Offshore Operational Spills from All Sources	Crude	1 spills $\geq 25$ and $< 500$ barrels 0 spills $\geq 500$ and $< 1,000$ barrels	
		Refined	220 spills of 0.7 barrels each	

**Note:**

<sup>1</sup> These numbers are for Alternative 2, the Proposed Action. Tables A.1-29 through A.1-36 in Appendix A.1 show the distribution of small crude and refined spills.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-2**  
**Large and Small Spill Sizes, Source of Spill, Type of Oil, Number and Size of Spill and Receiving Environment We Assume for Analysis in Chukchi Sea Sales 212 and 221**

EIS Section	Source of Spill	Type of Oil	Number and Size of Spill(s) (Barrels)	Receiving Environment
<b>Large Spills (<math>\geq 1,000</math> barrels)</b>				
4.5	Offshore Pipeline Platform/Storage Tank	Crude Condensate Or Diesel	1 spill 4,600 Or 1,500 barrels	Containment Open Water Under Ice On Top of Sea Ice Broken Ice Coastal Shoreline
<b>Small Spills<sup>1</sup> (<math>&lt; 1,000</math> barrels)</b>				
4.5	Offshore and/or Onshore Operational Spills from All Sources	Diesel or	133 spills $< 1$ barrel 43 spills $\geq 1$ barrel but $< 25$ barrels	Containment Open Water On Top of Sea Ice Broken Sea Ice Snow/Ice Tundra Coastal Shoreline
	Onshore and/or Offshore Operational Spills from All Sources	Crude	2 spills $\geq 25$ and $< 500$ barrels 1 spill $\geq 500$ and $< 1,000$ barrels	
		Refined	440 spills of 0.7 barrels each	

**Note:**

<sup>1</sup> These numbers are for Alternative II, the Proposed Action. Tables A.1-29 through A.1-36 in Appendix A.1 show the distribution of small crude and refined spills by Alternative.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

Appendix A

**Table A.1-3**

**Number of Well Control Incidents with Pollution per Year in the Gulf of Mexico and Pacific OCS Regions**

Year	Total Number of Incidents	Total Number of Incidents with Crude Oil	Condensate/Crude Oil Spilled (Barrels)			Production	Drilling			Workover/Completion	Well Type	Well Type	Wells Drilled	
			Production, Workover, Completion, P&A	Drilling	Total Exploration and Development		Total	Development	Exploration					
1956	1	0	—	—	0	—	1	—	—	1	—	198	44	242
1957	1	0	—	—	0	—	1	—	—	1	—	311	55	366
1958	2	1	Minimal	—	Minimal	—	1	—	—	1	1	198	62	260
1959	1	0	—	—	0	—	1	—	—	1	—	225	95	320
1960	2	0	—	—	0	1	1	—	—	1	—	285	134	419
1961	0	0	—	—	0	—	—	—	—	0	—	340	127	467
1962	1	0	—	—	0	—	1	—	—	1	—	368	156	524
1963	1	0	—	—	0	—	1	—	—	1	—	379	202	581
1964	8	3	10,280#	100	10,380	5	3	—	—	3	—	493	218	711
1965	5	2	—	1,688	1,688	1	4	—	—	4	—	637	178	815
1966	2	2	Minimal	Minimal	Minimal	—	1	—	—	1	1	604	280	884
1967	2	1	Minimal	—	Minimal	0	—	—	—	—	2	611	297	908
1968	8	0	—	—	0	1	6	—	—	—	1	679	310	989
1969	3	3	—	82,500	82,500	1	2	—	1	1	—	630	233	863
1970	3	3	83,000	—	83,000	1	1	—	—	1	1	652	217	869
<b>56-70</b>	<b>40</b>	<b>15</b>	<b>93,280</b>	<b>84,288</b>	<b>177,568</b>	<b>10</b>	<b>24</b>	<b>0</b>	<b>1</b>	<b>17</b>	<b>6</b>	<b>6,610</b>	<b>2,608</b>	<b>9,218</b>
<b>Major Regulatory Changes to Outer Continental Shelf Lands Act</b>														
1971	6	2	460	—	460	2	2	1	1	—	2	573	264	837
1972	6	1	2	—	2	1	4	2	2	—	1	577	301	878
1973	3	0	0	—	0	—	3	2	1	—	—	550	308	858
1974	6	2	275	—	275	3	2	1	1	—	1	494	344	838
1975	7	0	0	—	0	—	5	4	1	—	2	541	326	867
1976	6	0	—	—	0	1	5	1	4	—	—	810	295	1105
1977	9	1	2	—	2	1	4	3	1	—	4	888	352	1240
1978	11	0	0	—	0	—	7	3	4	—	4	864	324	1188
1979	5	0	0	—	0	—	5	4	1	—	—	811	351	1162
1980	8	1	1	—	1	2	4	3	1	—	2	835	367	1202
1981	10	4	64	—	64	1	3	1	2	—	6	907	354	1261
1982	9	0	0	—	0	—	5	1	4	—	4	862	412	1274
1983	12	1	—	2	2	—	10	5	5	—	2	781	399	1180
1984	5	0	—	—	0	—	4	3	1	—	1	773	598	1371
1985	6	1	50	—	50	0	4	3	1	—	2	682	536	1218
1986	2	0	—	—	0	—	1	—	1	—	1	460	272	732
1987	8	2	61	—	61	3	2	2	—	—	3	464	420	884
1988	4	1	5	—	5	1	2	1	1	—	1	460	571	1031
1989	12	0	—	—	0	3	7	2	3	2*	2	524	471	995
1990	7	3	18	—	18	0	3	1	2	—	4	580	504	1084
1991	8	1	—	0.8	0.8	—	6	2	2	2*	2	457	334	791
1992	3	1	—	100	100	—	3	3	—	—	—	347	223	570
1993	4	0	—	—	0	—	4	1	3	—	—	593	357	950
1994	1	0	—	—	0	—	—	—	—	—	1	621	427	1048
1995	1	0	—	—	0	—	1	1	—	—	—	710	388	1098
1996	4	0	—	—	0	—	2	1	1	—	2	726	453	1179
1997	5	0	—	—	0	—	4	1	3	—	1	859	540	1399
1998	7	3	1.5	—	4.2	2	2	1	1	—	3	643	497	1140
1999	5	1	125	—	125	—	3	1	2	—	2	664	371	1035
2000	9	3	—	200.5	200.5	—	8	5	3	—	1	936	443	1379
2001	10	1	1	—	1	2	5	1	4	—	3	853	411	1264
2002	6	1	350 #	—	350	2	3	1	2	—	1	633	309	942
2003	5	2	10	—	10	2	2	1	1	—	1	539	354	893
2004	5	3	2.5	16.4	18.9	—	2	2	—	—	3	554	362	916
2005	4	0	—	—	0	—	4	3	1	—	—	457	355	812
2006	2	0	10	—	10	—	1	1	—	—	1	350	414	764
2007	7	—	—	—	—	1	2	2	—	—	4	316	300	616
<b>71-07</b>	<b>228</b>	<b>35</b>	<b>1,438.00</b>	<b>319.70</b>	<b>1,760.40</b>	<b>27</b>	<b>134</b>	<b>70</b>	<b>60</b>	<b>4</b>	<b>67</b>	<b>23,694</b>	<b>14,307</b>	<b>38,001</b>

Source: USDOI, MMS, Accident Investigation Board (2008). Notes: 1. Databases and incident reports frozen as of August 4, 2008; 2007 data not finalized, 2. # = hurricane-related; \* sulphur blowouts;

**Table A.1-4**  
**Exploration Spills on the Arctic OCS**

Lease No.	Sale Area	Operator	Date	Time 24 Hr	Facility	Substance	Amt. (Gal)	Cause of Spill	Response Action	Amount Recovered
0344	71	Sohio	7/22/1981	11:00	Mukluk Island	Diesel	0.50	Leaking line on portable fuel trailer	Sorbents used to remove spill. Contaminated gravel removed.	0.05
0344	71	Sohio	7/22/1981	14:00	Mukluk Island	Diesel	1.00	Overfilled fuel tank on equipment	Sorbents used to remove spill. Contaminated gravel removed.	1.00
0280	71	Exxon	8/7/1981		Beaufort Sea I	Hydraulic Fluid	1.00	Broken hydraulic line on ditch witch.	Fluid picked up with shovels.	1.00
0280	71	Exxon	8/8/1981		Beaufort Sea I	Trans. Fluid	0.25	Overfilling of transmission fluid.	Fluid picked up and placed in plastic bags.	0.25
0280	71	Exxon	1/11/1982		Beaufort Sea I	Hydraulic Fluid	0.50	Broken hydraulic line.	Fluid picked up and stored in plastic bags.	0.50
0280	71	Exxon	1/11/1982		Alaska Beaufort Sea I	Diesel	3.00	Overfilled catco 90-3 tank.	Fluid picked up.	3.00
0280	71	Exxon	1/17/1982		Beaufort Sea I	Diesel	1.00	Tank on catco 90-14 overfilled.	Fluid picked up and stored in plastic bags.	1.00
0280	71	Exxon	1/21/1982		Beaufort Sea I	Hydraulic Fluid	0.25	Broken hydraulic line on ditch witch.	Fluid picked up.	0.25
0371	71	Amoco	3/16/1982	N/A	Sandpiper Gravel Island	Unknown	1.00	Seeping from Gravel Island.	Sorbent pads.	Unknown
0849	87	Union Oil	9/4/1982	14:00	Canmar Explorer II	Unknown	1.00	Transfer of test tank from drillship to barge.	None	None
0871	87	Shell Western	9/5/1982	18:55	Canmar Explorer II	Light Oil	0.50	Washing down cement unit, drains not plumbed to oil/water separator.	None	None
N/A	87	Shell	9/14/1982	19:00	Canmar II Drillship	Diesel	30.00	Tank vent overflowed during fuel transfer.	Deployed sorbent pads and pump.	30.00
0191	BF	Exxon	11/11/1982	10:00	Beechey Pt. Gravel Is.	Lube Oil	1.00	Loader tipped over lube oil drum	Oil cleaned up with sorbents. Contaminated gravel removed	1.00
0191	BF	Exxon	1/15/1983	10:00	Beechey Pt. Gravel Is.	Diesel	0.12	Fuel truck spilled diesel as it climbed a 40 degree ramp to island	Sorbents used and contaminated gravel removed	0.12
0191	BF	Exxon	1/23/1983	9:00	Beechey Pt. Gravel Is.	Hydraulic Fluid	2.50	Hydraulic line on backhoe broke	1 gallon in water. Boom deployed with sorbents. Contaminated gravel removed	2.50
0191	BF	Exxon	8/29/1983	6:30	Beechey Pt. Gravel Is.	Hydraulic Fluid	0.20	Hydraulic line on backhoe broke	Spill contained on island surface. Sorbents used and contaminated gravel removed.	0.25
0196	BF	Shell	8/30/1983		Ice Road to Tern Island	Hydraulic Fluid	10.0	Broken hydraulic line on rollogen	Unknown	Unknown
0191	BF	Exxon	2/26/1985	17:30	Beechey Pt. Gravel Is.	Hydraulic Fluid	0.37	Hydraulic line broke	Contaminated Snow Removed	0.37
0196	BF	Shell	3/1/1985	1:30	Ice Road to Tern Island	Hydraulic Fluid	3.00	Hydraulic line broke	Unknown	3.00
0191	BF	Exxon	3/2/1985		Beechey Pt. Gravel Is.	Gasoline	0.01	Operational Spill	Snow shoved into plastic bag.	0.01
0191	BF	Exxon	3/4/1985		Beechey Pt. Gravel Is.	Waste Oil	2.00	Drum of waste oil punctured	Snow recovered	2.00
0196	BF	Shell	3/4/1985	15:30	Tern Gravel Island	Crude Oil	1.00	Well Separator overflowed, crude oil escaped	Line boom deployed	Unknown

**Table A.1-4 (Continued)**  
**Exploration Spills on the Arctic OCS**

Lease No.	Sale Area	Operator	Date	Time 24 Hr	Facility	Substance	Amt. (Gal)	Cause of Spill	Response Action	Amount Recovered
0196	BF	Shell	3/6/1985	16:30	Tern Gravel Island	Crude Oil	15.00	Test burner was operating poorly	Containment Boom deployed	Unknown
0196	BF	Shell	9/24/1985	16:00	Tern Gravel Island	Crude Oil	2.00	Oil released from steam heat coil when Halliburton tank moved	Sorbents and hand shovel used	2.00
0191	BF	Shell	10/4/1985	8:45	Enroute to Tern Gravel Island	Jet fuel B	800.00	Wire sling broke during helicopter transport of fuel blivits	Contaminated Snow Removed. Test holes drilled with no fuel below snow.	Unknown
0196	BF	Shell	10/29/1985	14:00	Tern Gravel Island	Crude Oil	2.00	Test oil burner malfunction	Contaminated snow removed	2.00
0196	BF	Shell	6/27/1986	13:30	Tern Gravel Island	Crude Oil	3.00	Test oil burner malfunction	Spray picked up with sorbents. Bladed up dirty snow.	2.00
1482	109	SWEPI	7/7/1989	3:00	Explorer III Drillship	Hydraulic fluid	10.0	Hydraulic line connector	Sorbent pads	0.84
1092	97	AMOCO	10/1/1991	2:00	CANMAR Explorer	Hydraulic fluid	2.00	Hydraulic line rupture	None	None
0865	87	ARCO	7/24/1993		Beaudril Kulluk	Diesel	0.06	Residual fuel in bilge water	None	None
0866	87	ARCO	9/8/1993	18:30	CANMAR Kulluk	Hydraulic fluid	1.26	Seal on shale shaker failed	None	None
0866	87	ARCO	9/24/1993		CANMAR Kulluk	Fuel	4.00	Fuel transfer in rough weather	3 gallons on deck of barge recovered, none in sea	3.00
1597	124	ARCO	10/31/1993		CANMAR Kulluk	Fuel	0.50	Released during emptying of disposal caisson	None	None
0943	87	Tenneco	1/24/1998	13:00	SSDC/MAT	Gear oil	220.0	Helicopter sling failure during transfer of drums to SSDC	Scooped up contaminated snow and ice	220.0
1585	124	BP Alaska	1/20/1997		Ice Road to Tern Island	Diesel, Hydraulic Fluid	10.5	Truck went through ice; fuel line ruptured	Scooped up contaminated snow and ice. Some product entered water	Unknown

**Source:**

USDOI, MMS, Alaska OCS Region (2006).

**Table A.1-5**  
**Land Segment ID and the Percent Type of Environmental Sensitivity Index Shoreline Closest to the Ocean for United States, Alaska Shoreline**

ID	Geographic Place Names	1B	1B	2A	3A	3C	4	5	6A	6B	7	8A	8B	8E	9A	9B	10A	10E	U
40	Ah-Gude-Le-Rock, Dry Creek, Lopp Lagoon, Mint River	—	—	1	16	0	—	29	0	—	19	6	—	—	8	—	15	1	—
41	Ikpek, Ikpek Lagoon, Pinguk River, Yankee River	—	—	4	30	2	—	0	—	—	22	5	—	—	9	—	14	2	—
42	Arctic Lagoon, Kugrupaga Inlet, Nuluk River	—	—	3	10	2	—	7	0	—	9	17	—	—	17	—	31	2	—
43	Sarichef Island, Shishmaref Airport	—	—	1	24	3	1	3	—	—	9	13	—	—	31	0	9	2	—
44	Cape Lowenstern, Egg Island, Shishmaref, Shishmaref Inlet	—	—	10	9	3	0	1	—	—	10	2	—	—	22	—	26	—	—
45		—	—	1	5	5	—	—	—	—	5	18	—	—	15	—	51	—	—
46	Cowpack Inlet and River, Kalik River, Kividlo, Singeak, Singeakpuk River	—	—	4	17	2	—	—	—	—	26	2	—	—	12	1	28	—	—
47	Kitluk River, Northwest Corner Light, West Fork Espenberg River	—	—	—	24	12	—	—	—	—	16	14	—	—	4	—	18	3	—
48	Cape Espenberg, Espenberg, Espenberg River	0	—	7	13	5	—	6	9	—	12	12	—	—	12	—	20	1	—
49	Kungealoruk Creek, Kougachuk Creek, Pish River	—	—	0	5	7	—	20	—	—	3	4	—	—	16	—	33	—	—
50	Clifford Point, Cripple River, Goodhope River, Rex Point, Sullivan Bluffs	—	—	—	—	—	—	24	18	—	0	22	—	—	1	—	14	—	—
51	Cape Deceit, Deering, Kugruk Lagoon and River, Sullivan Lake, Toawlevic Point	1	—	—	—	1	1	23	6	—	9	8	1	—	2	—	41	6	—
52	Motherwood Point, Ninemile Point, Willow Bay	17	—	—	—	3	—	12	32	—	2	—	—	—	5	—	17	12	—
53	Kiwalik, Kiwalik Lagoon, Middle Channel Kiwalk River, Minnehaha Creek, Mud Channel Creek, Mud Creek	4	—	—	1	1	—	13	10	—	11	10	—	—	26	—	22	2	—
54	Baldwin Peninsula, Lewis Rich Channel	2	—	—	—	2	—	43	3	—	3	6	—	—	0	—	35	3	—
55	Cape Blossom, Pipe Spit	—	—	—	—	10	—	35	10	—	2	—	—	—	6	—	9	20	—
56	Kinuk Island, Kotzebue, Noatak River	—	—	—	—	3	—	2	8	—	4	5	0	—	29	—	47	—	—
57	Aukulak Lagoon, Igisukruk Mountain, Noak, Mount, Sheshalik, Sheshalik Spit	—	—	1	—	—	—	37	—	—	1	—	—	—	22	—	36	—	—
58	Cape Krusenstern, Eigaloruk, Evelukpalik River, Kasik Lagoon, Krusenstern Lagoon,	—	—	—	—	8	0	30	7	—	4	3	—	—	2	—	30	16	—
59	Imik Lagoon, Ipiavik Lagoon, Kotlik Lagoon, Omikviorok River	0	0	—	—	1	—	62	6	—	3	6	—	—	2	—	6	14	—
60	Imikruk Lagoon, Innakuk Bluff, Kivalina, Kivalina Lagoon, Singigrak Spit, Kivalina River, Wulik River	—	—	—	—	0	2	23	2	—	1	5	—	—	8	—	35	22	—
61	Asikpak Lagoon,Cape Seppings,Kavrarak Lagoon,Pusaluk Lagoon,Seppings Lagoon	—	—	—	—	—	—	3	32	13	—	2	—	—	—	—	49	—	—
62	Atosik Lagoon,Chariot,Ikaknak Pond,Kisimilok Mountain,Kuropak Creek,Mad Hill	—	—	—	—	—	—	—	100	—	—	—	—	—	—	—	—	—	—
63	Akoviknak Lagoon, Cape Thompson, Crowbill Point, Igilerak Hill, Kemegrak Lagoon	7	—	—	—	—	—	—	93	—	—	—	—	—	—	—	—	—	—
64	Aiautak Lagoon, Ipiutak Lagoon, Kowtuk Point, Kukpuk River, Pingu Bluff, Point Hope, Sinigrok Point,	16	—	—	—	—	—	—	82	3	—	—	—	—	—	—	—	—	—
65	Buckland, Cape Dyer, Cape Lewis, Cape Lisburne	29	—	—	—	—	—	—	60	5	—	—	—	—	—	—	—	—	—
66	Ayugatak Lagoon	51	—	—	—	—	—	—	46	—	—	—	—	—	—	—	—	—	—
67	Cape Sabine, Pitmegea River	51	—	—	—	—	—	9	—	40	—	—	—	—	—	—	—	—	—
68	Agiak Lagoon, Punuk Lagoon	—	—	—	—	—	—	10	—	86	—	—	—	—	—	—	—	—	—
69	Cape Beaufort, Omalik Lagoon	—	—	—	—	—	—	45	—	50	—	—	—	—	—	—	—	—	—

**Table A.1-5 (continued)****Land Segment ID and the Percent Type of Environmental Sensitivity Index Shoreline Closest to the Ocean for United States, Alaska Shoreline**

ID	Geographic Place Names	1A	1B	2A	3A	3C	4	5	6A	6B	7	8A	8B	8E	9A	9B	10A	10E	U	
70	Kuchaurak Creek, Kuchiak Creek	—	—	—	20	3	—	34	—	—	—	—	—	1	12	9	10	10	—	
71	Kukpowruk River, Naokok, Sitkok Point	—	—	—	34	7	—	21	—	—	—	—	—	25	7	2	2	3		
72	Kokolik River, Point Lay, Siksrikpak Point	—	—	—	30	3	—	7	—	—	—	—	—	3	19	19	—	5	14	
73	Akunik Pass, Tungaich Point, Tungak Creek	—	—	—	27	14	—	7	—	—	—	—	—	—	19	8	—	3	22	
74	Kasgaluk Lagoon, Solivik Island, Utukok River	—	—	—	21	8	—	1	—	—	—	—	—	19	9	—	—	43		
75	Akeonik, Icy Cape, Icy Cape Pass	—	—	—	25	12	—	14	—	—	—	—	—	3	16	18	—	2	10	
76	Akoliakat Pass, Avak Inlet, Tunalik River	—	—	—	21	21	—	7	—	—	—	—	—	4	10	7	—	10	20	
77	Nivat Point, Nokotek Point, Ongoravvik River	—	—	—	47	10	—	30	—	—	—	—	—	2	9	1	1	1		
78	Kuk River, Point Collie, Sigekruck Point,	—	—	—	46	13	—	23	—	—	—	—	—	1	3	2	—	9	3	
79	Point Belcher, Wainwright, Wainwright Inlet	—	—	—	26	26	—	37	—	—	—	—	—	—	—	11	—	—		
80	Eluksingiak Point, Igklo River, Kugrua Bay	—	—	—	23	42	—	16	—	—	—	—	—	9	4	2	—	5		
81	Peard Bay, Point Franklin, Seahorse Islands, Tachinisok Inlet	—	—	—	60	26	—	7	—	—	—	—	—	5	—	2	—	—		
82	Skull Cliff	5	—	—	—	78	—	17	—	—	—	—	—	—	—	—	—	—		
83	Nulavik, Loran Radio Station	1	—	—	—	91	—	8	—	—	—	—	—	—	—	—	—	—		
84	Walakpa River, Will Rogers and Wiley Post Memorial	—	—	—	—	4	—	96	—	—	—	—	—	—	—	—	—	—		
85	Barrow, Browerville, Elson Lagoon	—	—	—	—	—	20	38	—	—	2	—	—	28	—	—	10	1		
86	Dease Inlet, Plover Islands, Sanigaruak Island	—	—	—	11	—	15	23	—	—	13	—	—	35	—	—	3	—		
87	Igalik Island, Kulgurak Island, Kurgorak Bay, Tangent Point	—	—	—	7	—	4	5	—	—	7	—	—	34	27	3	—	13		
88	Cape Simpson, Piasuk River, Sinclair River, Tulimanik Island	—	—	—	—	—	4	5	—	—	3	—	—	19	48	2	—	4	15	
89	Ikpikpuk River, Point Poleakoon, Smith Bay	—	—	—	—	—	—	—	—	—	—	—	—	8	73	—	—	19		
90	Drew Point, Kolovik, McLeod Point,	—	—	—	—	—	25	—	—	—	15	—	—	60	—	—	—	—		
91	Lonely, Pitt Point, Pogik Bay, Smith River	—	—	—	—	—	9	8	—	—	4	—	—	27	30	—	—	22		
92	Cape Halkett, Esook Trading Post, Garry Creek	—	—	—	0	3	16	—	—	—	5	—	—	72	—	—	—	4		
93	Atigaru Point, Eskimo Islands, Harrison Bay,	—	—	—	15	27	8	2	—	—	2	—	—	16	—	—	1	22	7	
94	Fish Creek, Tingmeachsiovik River	—	—	—	11	4	—	—	—	—	12	—	—	3	32	—	—	38		
95	Anachlik Island, Colville River, Colville River Delta	—	—	—	7	2	—	—	—	—	42	—	—	2	36	—	1	8		
96	Kalubik Creek, Oliktok Point, Thetis Mound,	—	—	—	19	0	—	12	1	—	8	—	—	9	1	—	—	25	25	
97	Beechey Point, Bertoncini Island, Bodfish Island, Cottle Island, Jones Islands, Milne Point, Simpson Lagoon	—	—	—	41	5	—	18	—	—	7	—	—	8	0	—	—	10	11	
98	Gwydry Bay, Kuparuk River, Long Island	—	—	—	10	1	—	23	—	—	6	—	—	3	23	—	—	26	7	
99	Duck Island, Foggy Island, Gull Island, Heald Point, Howe Island, Niakuk Islands, Point Brower	—	—	—	—	4	—	14	1	—	9	—	—	1	2	51	—	—	10	4

**Table A.1-5 (continued)****Land Segment ID and the Percent Type of Environmental Sensitivity Index Shoreline Closest to the Ocean for United States, Alaska Shoreline**

ID	Geographic Place Names	1A	1B	2A	3A	3C	4	5	6A	6B	7	8A	8B	8E	9A	9B	10 A	10 E	U	
100	Foggy Island Bay, Kadleroshilik River, Lion Point, Shaviovik River, Tigvariak Island	—	—	—	10	1	—	8	—	—	27	—	—	4	5	—	—	39	5	
101	Bullen Point, Point Gordon, Reliance Point	—	—	—	10	3	—	39	—	—	5	—	—	3	—	—	—	25	15	
102	Flaxman Island, Maguire Islands, North Star Island, Point Hopson, Point Sweeney, Point Thomson, Staines River	—	—	—	11	3	—	37	2	—	8	—	—	7	—	—	14	18		
103	Brownlow Point, Canning River, Tamayariak River	—	—	—	—	2	18	6	—	—	12	—	—	7	35	—	—	1	19	
104	Camden Bay, Collinson Point, Katakturuk River, Konganevik Point, Simpson Cove	—	—	—	—	—	8	30	—	—	9	—	—	14	2	2	—	10	26	
105	Anderson Point, Carter Creek, Itkilyariak Creek, Kajutakrok Creek, Marsh Creek, Sadlerochit River	—	—	—	—	—	14	30	—	—	21	—	—	6	5	—	2	—	23	
106	Arey Island, Arey Lagoon, Barter Island, Hulahula River, Okpilak River	—	—	—	—	—	—	2	7	—	—	23	—	—	14	10	—	—	43	
107	Bernard Harbor, Jago Lagoon, Kaktovik, Kaktovik Lagoon	—	—	—	—	—	4	23	—	—	19	—	—	6	15	—	—	—	34	
108	Griffin Point, Oruktalik Lagoon, Pokok Lagoon	—	—	—	—	—	—	13	24	—	—	20	—	—	15	12	—	1	—	15
109	Angun Lagoon, Beaufort Lagoon, Nuvagapak Lagoon,	—	—	—	—	—	—	28	11	—	—	32	—	—	15	0	—	—	1	13
110	Aichilik River, Egaksrak Lagoon, Egaksrak River, Icy Reef, Kongakut River, Siku Lagoon	—	—	—	—	—	—	3	12	—	—	7	—	—	3	39	—	—	3	34
111	Demarcation Bay, Demarcation Point, Gordon, Pingokraluk Lagoon	—	—	—	—	—	—	9	51	—	—	14	—	—	8	1	—	—	—	17

**Key:**

ID = identification (number).

1A= Exposed Rocky Shore

1B= Exposed Solid Man Made Structure

2A = Exposed Wave-cut Platforms in Bedrock, Mud or Clay

3A = Fine- to Medium-grained Sand Beaches.

3C = Tundra Cliffs.

4 = Coarse Grained Sand Beaches

5= Mixed Sand and Gravel Beaches.

6A = Gravel Beaches.

7 = Exposed Tidal Flats.

8A=Sheltered Rocky Shores and Sheltered Scarps in Bedrock, Mud or Clay

8B = Sheltered, Solid Man-made Structures.

8E = Peat Shorelines.

9A= Sheltered Tidal Flats

9B = Sheltered Vegetated Low Banks

10A = Salt- and Brackish- water Marshes.

10E = Inundated Low-lying Tundra.

U= Unranked.

**Source:**

USDOC, NOAA, (2002), Research Planning, Inc (2002).

**Table A.1-6****Fate and Behavior of a Hypothetical 1,500-Barrel Oil Spill from a Platform in the Beaufort Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	81	73	58	28	84	78	73	65
Oil Dispersed (%)	2	5	16	43	0.2	0.6	2	6
Oil Evaporated (%)	17	22	26	29	16	21	25	29
Thickness (mm)	3.5	2.1	1.2	1	7.6	2.8	1.7	1
Discontinuous Area (km <sup>2</sup> ) <sup>3,4</sup>	2	9	44	181	2	7	18	143
Estimated Coastline Oiled (km) <sup>5</sup>			29				32	

**Note:** For the Alternative 2 Sales 209, 217 and its alternatives, the median platform spill is assumed to be 1,500 barrels.

**TableA.1-7****Fate and Behavior of a Hypothetical 4,600-Barrel Oil Spill from a Pipeline in the Beaufort Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	83	77	65	40	85	81	71	69
Oil Dispersed (%)	1	3	10	32	0.1	0.4	3	4
Oil Evaporated (%)	16	20	25	28	15	19	26	27
Thickness (mm)	3.5	2.1	1.2	1	7.7	4.9	2.9	1.7
Discontinuous Area (km <sup>2</sup> ) <sup>3,4</sup>	4	16	77	320	3	13	61	252
Estimated Coastline Oiled (km) <sup>5</sup>			49				54	

**Notes:**

Calculated with the SINTEF oil-weathering model Version 1.8 of Reed et al. (2000) and assuming an Alaska North Slope crude type. For the Alternative 2 Sales 209, 217 and their alternatives, the median pipeline spill is assumed to be 4,600 barrels.

<sup>1</sup> Summer (July through September), 12-knot wind speed, 2 degrees Celsius, 0.4-meter wave height.

<sup>2</sup> Meltout Spill. Spill is assumed to occur in May into first-year pack ice, pools 2-centimeter thick on ice surface for 2 days at 0 degrees Celsius prior to meltout into 50% ice cover, 11-knot wind speed, and 0.1 meter wave heights.

<sup>3</sup> This is the area of oiled surface.

<sup>4</sup> Calculated from Equation 6 of Table 2 in Ford (1985) and is the discontinuous area of a continuing spill or the area swept by an instantaneous spill of a given volume. Note that ice dispersion occurs for about 30 days before meltout.

<sup>5</sup> Calculated from Equation 17 of Table 4 in Ford (1985) and is the results of stepwise multiple regression for length of historical coastline affected.

**Source:**

USDOI, MMS, Alaska OCS Region (2003).

**Table A.1-8**

**Fate and Behavior of a Hypothetical 1,500-Barrel Diesel Oil Spill from a Platform in the Beaufort or Chukchi Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	80	47	0	-	88	65	20	0
Oil Dispersed (%)	11	40	69	-	3	11	40	53
Oil Evaporated (%)	9	33	31	-	9	24	40	47
Thickness (mm)	0.6	0.3	0.1	-	0.7	0.4	0.2	0.1

**Table A.1-9**

**Fate and Behavior of a Hypothetical 1,500-Barrel Condensate Oil Spill from a Platform in the Beaufort or Chukchi Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	0	-	-	-	13	6	0	-
Oil Dispersed (%)	21	-	-	-	5	10	15	-
Oil Evaporated (%)	79	-	-	-	82	84	85	-
Thickness (mm)	0.3	-	-	-	0.3	0.2	0.1	-

**Table A.1-10**

**Fate and Behavior of a Hypothetical 4,600-Barrel Condensate Oil Spill from a Platform in the Beaufort and Chukchi Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	2	0	-	-	17	5	0	-
Oil Dispersed (%)	19	21	-	-	3	11	15	-
Oil Evaporated (%)	79	79	-	-	80	84	85	-
Thickness (mm)	0.4	0.2	-	-	0.4	0.2	0.15	-

**Notes:**

Calculated with the SINTEF oil-weathering model Version 3.0 of Reed et al. (2005) and assuming a diesel oil and a Sleipner condensate. For the Alternative 2 Beaufort Sea Sales 209, 217 and Chukchi Sea Sales 212, 221 and its alternatives, the median platform spill is assumed to be 4,600 barrels and the median platform spill is assumed to be 1,500 barrels.

<sup>1</sup> Summer Spill, 10-knot wind speed, 3 degrees Celsius, 0.4-meter wave height.

<sup>2</sup> Meltout Spill. Meltout into 50% ice cover, 10-knot wind speed, and 0 degrees Celsius.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-11**  
**Fate and Behavior of a Hypothetical 1,500-Barrel Crude Oil Spill from a Platform in the Chukchi Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	71	67	62	41	71	66	61	55
Oil Dispersed (%)	0	0	1	2	0	1	2	5
Oil Evaporated (%)	29	33	37	57	29	33	37	40
Thickness (mm)	1	1	1	1	1.3	1	1	1
Discontinuous Area (km <sup>2</sup> ) <sup>3,4</sup>	7	29	139	577	2	10	23	188
Estimated Coastline Oiled (km) <sup>5</sup>	25				30			

**Table A.1-12**  
**Fate and Behavior of a Hypothetical 4,600-Barrel Crude Oil Spill from a Pipeline in the Chukchi Sea**

	Summer Spill <sup>1</sup>				Meltout Spill <sup>2</sup>			
	1	3	10	30	1	3	10	30
Time After Spill in Days	1	3	10	30	1	3	10	30
Oil Remaining (%)	70	64	56	44	71	66	61	55
Oil Dispersed (%)	1	3	7	16	0	1	2	5
Oil Evaporated (%)	29	33	37	40	29	33	37	40
Thickness (mm)	1.01	1	1	1	1.3	1	1	1
Discontinuous Area (km <sup>2</sup> ) <sup>3,4</sup>	12	51	243	1008	4	16	80	332
Estimated Coastline Oiled (km) <sup>5</sup>	42				51			

**Notes:**

Calculated with the SINTEF oil-weathering model Version 3.0 of Reed et al. (2005) and assuming an Alpine Composite crude type or Diesel oil. For the Alternative 2 Sales 212, 221 and its alternatives, the median pipeline spill is assumed to be 4,600 barrels. For the Alternative 2 Sales 212, 221 and its alternatives, the median platform spill is assumed to be 1,500 barrels.

<sup>1</sup> Summer (June 1–October 31), 8-knot wind speed, 2.7 degrees Celsius, 0.4-meter wave height.

<sup>2</sup> Meltout Spill (November 1–May 31). Spill is assumed to occur into first-year pack ice, pools 2-centimeter thick on ice surface for 2 days at -1 degrees Celsius prior to meltout into 50% ice cover, 10-knot wind speed, and 0.1 meter wave heights.

<sup>3</sup> This is the area of oiled surface.

<sup>4</sup> Calculated from Equation 6 of Table 2 in Ford (1985) and is the discontinuous area of a continuing spill or the area swept by an instantaneous spill of a given volume. Note that ice dispersion occurs for about 30 days before meltout.

<sup>5</sup> Calculated from Equation 17 of Table 4 in Ford (1985) and is the result of stepwise multiple regressions for length of historical coastline affected.

**Source:**

USDOI, MMS, Alaska OCS Region (2006).

Appendix A

**Table A.1-13 Identification Number (ID) and Name of Environmental Resource Areas, Represented in the Oil-Spill-Trajectory Model and Their Location on Environmental Resource Area Map A.1-2a, Map A.1-2b, Map A.1-2c, Map A.1-2d, or Map A.1-2e**

ID	Environmental Resource Area Name	General Resource	Beaufort 209/217 Map	Chukchi 212/221 Map
1	Kasegaluk Lagoon	Birds, Whales, Barrier Island	A.1-2b	A.1-2b
2	Point Barrow, Plover Islands	Birds, Barrier Island	A.1-2a	A.1-2a
3	ERA 3	Subsistence		A.1-2a
4	ERA 4	Subsistence		A.1-2a
5	ERA 5	Subsistence		A.1-2a
6	ERA 6	Whales	A.1-2c	A.1-2c
7	US Russia Maritime Boundary	Russian Waters	A.1-2a	A.1-2a
8	Maguire, Flaxman Islands	Birds, Barrier Island	A.1-2e	A.1-2e
9	Stockton Islands, McClure Islands	Birds, Barrier Island	A.1-2e	A.1-2e
10	Ledyard Bay SPEI Critical Habitat Area	Birds	A.1-2d	A.1-2d
11	Wrangel Island 12 nmi buffer	Marine Mammals	A.1-2a	A.1-2a
12	ERA 12	Whales	A.1-2d	
13	ERA 13	Subsistence, Whales, Marine Mammals		A.1-2a
14	Cape Thompson Seabird Colony Area	Birds	A.1-2d	A.1-2d
15	Cape Lisburne Seabird Colony Area	Birds, Marine Mammals	A.1-2c	A.1-2c
16	ERA 16	Whales		A.1-2a
17	Angun and Beaufort Lagoons	Birds, Barrier Island	A.1-2c	A.1-2c
18	Murre Rearing and Molting Area	Birds	A.1-2a	A.1-2a
19	Chukchi Spring Lead System	Whales, Birds	A.1-2a	A.1-2a
20	Ice/Sea Segment 7	Whales	A.1-2c	
21	Ice/Sea Segment 8	Whales	A.1-2c	
22	Ice/Sea Segment 9	Whales	A.1-2c	
23	Offshore Wrangel Island	Marine Mammals	A.1-2a	A.1-2a
24	Beaufort Spring Lead 6	Whales	A.1-2b	A.1-2b
25	Beaufort Spring Lead 7	Whales	A.1-2b	A.1-2b
26	Beaufort Spring Lead 8	Whales	A.1-2b	A.1-2b
27	Beaufort Spring Lead 9	Whales	A.1-2b	A.1-2b
28	Beaufort Spring Lead 10	Whales	A.1-2b	A.1-2b
29	Ice/Sea Segment 1	Whales	A.1-2c	A.1-2c
30	Ice/Sea Segment 2	Whales	A.1-2c	A.1-2c
31	Ice/Sea Segment 3	Whales	A.1-2c	A.1-2c
32	Ice/Sea Segment 4	Whales	A.1-2c	
33	Ice/Sea Segment 5	Whales	A.1-2c	
34	Ice/Sea Segment 6	Whales	A.1-2c	A.1-2c
35	ERA 35	Whales	A.1-2c	A.1-2c
36	ERA 36	Whales	A.1-2b	A.1-2b
37	ERA 37	Whales	A.1-2c	A.1-2c
38	Point Hope Subsistence Area	Subsistence	A.1-2a	A.1-2a
39	Point Lay Subsistence Area	Subsistence	A.1-2a	A.1-2a
40	Wainwright Subsistence Area	Subsistence	A.1-2a	A.1-2a
41	Barrow Subsistence Area 1	Subsistence	A.1-2a	A.1-2a
42	Barrow Subsistence Area 2	Subsistence	A.1-2a	A.1-2a
43	Nuqsut Subsistence Area	Subsistence	A.1-2d	A.1-2d
44	Kaktovik Subsistence Area	Subsistence	A.1-2c	A.1-2c
45	ERA 45	Whales	A.1-2b	A.1-2b
46	Herald Shoal Polynya	Whales	A.1-2b	A.1-2b
47	Ice/Sea Segment 10	Marine Mammals	A.1-2b	A.1-2b
48	Ice/Sea Segment 11	Marine Mammals, Whales	A.1-2a	A.1-2a
49	ERA 49	Whales	A.1-2b	A.1-2b
50	Ice/Sea Segment 13	Marine Mammals	A.1-2a	A.1-2a
51	Ice/Sea Segment 14	Marine Mammals	A.1-2a	A.1-2a
52	Ice/Sea Segment 15	Marine Mammals	A.1-2a	A.1-2a
53	Ice/Sea Segment 5a	Whales		A.1-2c
54	Ice/Sea Segment 6a	Whales		A.1-2c
55	Point Barrow, Plover Islands	Marine Mammals	A.1-2b	A.1-2b
56	ERA 56	Whales	A.1.2b	A.1.2b
57	Outer Kotzebue Sound	Marine Mammals		A.1.2a
58	Offshore Pt. Lay to Wainwright	Marine Mammals	A.1.2a	A.1.2a

Appendix A

**Table A.1-13 (Continued) Identification Number (ID) and Name of Environmental Resource Areas, Represented in the Oil-Spill-Trajectory Model and Their Location on Environmental Resource Area Map A.1-2a, Map A.1-2b, Map A.1-2c, Map A.1-2d or Map A.1-2e**

ID	Environmental Resource Area Name	General Resource	Beaufort 209/217 Map	Chukchi 212/221 Map
59	Ostrov Kolyuchin	Marine Mammals		A.1.2a
60	King and Shingle Point	Subsistence	A.1-2d	
61	ERA 61	Whales		A.1.2a
62	Mackenzie River Estuary	Whales	A.1-2d	A.1-2d
63	ERA 63	Whales	A.1-2b	A.1-2b
64	Pearl Bay Area	Birds	A.1-2d	A.1.2d
65	Smith Bay	Whales, Birds	A.1-2b	A.1-2b
66	Herald Island	Marine Mammals	A.1.2a	A.1.2a
67	Herschel Island (Canada)	Birds	A.1-2d	A.1-2d
68	Harrison Bay	Birds	A.1-2b	A.1-2b
69	Harrison Bay/Colville Delta	Birds	A.1-2b	A.1-2b
70	ERA 70	Whales	A.1.2b	A.1.2b
71	Simpson Lagoon, Thetis and Jones Island	Birds	A.1-2c	A.1-2c
72	Gwyder Bay, West Dock, Cottle and Return Islands	Birds	A.1-2c	A.1-2c
73	Prudhoe Bay	Birds	A.1-2c	A.1-2c
74	Offshore Herald Island	Whales	A.1.2a	A.1.2a
75	Water over Boulder Patch	Benthic	A.1-2c	A.1-2c
76	Kendall Island Bird Sanctuary (Canada)	Birds	A.1-2d	A.1-2d
77	Sagavanirktoq River Delta/Foggy Island Bay	Birds	A.1-2c	A.1-2c
78	Mikkelsen Bay	Birds	A.1-2c	A.1-2c
79	Demarcation Bay Offshore	Birds	A.1-2d	A.1-2d
80	ERA 80	Whales	A.1-2c	A.1-2c
81	Simpson Cove	Birds	A.1-2c	A.1-2c
82	ERA 82	Whales		A.1.2a
83	Cape Schmidt	Whales		A.1.2a
84	Canning River Delta	Marine Fish - nearshore	A.1-2d	A.1-2d
85	Sagavanirktoq River Delta	Marine Fish - nearshore	A.1-2d	A.1-2d
86	Harrison Bay	Marine Fish - nearshore	A.1-2b	A.1-2b
87	Colville River Delta	Marine Fish - nearshore	A.1-2b	A.1-2b
88	Simpson Lagoon	Marine Fish - nearshore	A.1-2b	A.1-2b
89	Mackenzie River Delta	Marine Fish - nearshore	A.1-2d	A.1-2d
90	Gary/Kendall	Subsistence	A.1-2d	
91	Hope Sea Valley	Whales		A.1.2a
92	Thetis, Jones, Cottle and Return Islands West Dock	Marine Mammals	A.1-2e	A.1-2e
93	Cross and No Name Island	Marine Mammals	A.1-2e	A.1-2e
94	Maguire Islands, Flaxman Island, Barrier Islands	Marine Mammals	A.1-2e	A.1-2e
95	Arey and Barter Islands and Bernard Spit	Marine Mammals	A.1-2e	A.1-2e
96	Midway, Cross and Bartlett Islands	Birds	A.1-2e	A.1-2e
97	Tigvariak Island	Subsistence	A.1-2e	A.1-2e
98	Anderson Point Barrier Islands	Birds	A.1-2e	A.1-2e
99	Arey and Barter Islands, Bernard Spit	Birds	A.1-2e	A.1-2e
100	Jago and Tapkaurak Spits	Birds	A.1-2e	A.1-2e
101	Icy Reef	Birds	A.1-2e	A.1-2e

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-14****Environmental Resource Areas Used in the Analysis of Large Oil Spill Effects on Birds in Sections 4.4 and 4.5**

ERA	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
1	x	x	Kasegaluk Lagoon	A.1-2b	May-October	Birds, barrier island	<b>Birds:</b> BLBR, LTDU, eiders (STEI, COEI), loons (PALO, RTLO, YBLO)	Lehnhausen and Quinlan, 1981; Johnson, 1993; Johnson, Wiggins, and Wainwright, 1993; Laing and Platte, 1994; Dau and Larned, 2004.
2	x	x	Point Barrow, Plover Islands	A.1-2a	May-October	Birds, barrier island	<b>Birds:</b> SPEI, LTDU	Troy, 2003; Fischer and Larned, 2004.
8	x	x	Maguire, Flaxman Islands	A.1-2c	May-October	Birds, barrier island	<b>Birds:</b> nesting COEI, molting LTDU, PALO	Johnson, Wiggins, and Wainwright, 1993; Johnson, 2000; Fischer and Larned, 2004; Flint et al., 2004; Johnson et al., 2005; Noel et al., 2005.
9	x	x	Stockton Islands, McClure Islands	A.1-2d	May-October	Birds, barrier island	<b>Birds:</b> nesting COEI, molting LTDU, staging SPEI	Johnson, Wiggins, and Wainwright, 1993; Johnson, 2000, Table 2; Troy, 2003; Fischer and Larned, 2004; Flint et al., 2004; Johnson et al., 2005; Noel et al., 2005.
10	x	x	Ledyard Bay SPEI Critical Habitat Area	A.1-2d	July-November	Birds	<b>Birds:</b> seabirds, molting/staging SPEI, staging YBLO	Federal Register, 2001; Laing and Platte, 1994; Petersen et al., 1999; Piatt and Springer, 2003.
14	x	x	Cape Thompson Seabird Colony Area	A.1-2d	May-October	Birds	<b>Birds:</b> seabirds, gulls, shorebirds, waterfowl, staging YBLO	Springer et al., 1984; Piatt et al., 1991; Piatt and Springer, 2003; Stephenson and Irons, 2003.
15	x	x	Cape Lisburne Seabird Colony Area	A.1-2c	May-October	Birds	<b>Birds:</b> seabird breeding colony, staging YBLO	Springer et al., 1984; Piatt et al., 1991; Roseneau et al., 2000; Piatt and Springer, 2003; Stephenson and Irons, 2003; Oppel, 2007; Oppel, 2007.
17	x	x	Angun and Beaufort Lagoons	A.1-2c	May-October	Birds, barrier island	<b>Birds:</b> molting LTDU, scoters, staging shorebirds	Johnson and Herter, 1989.
18	x	x	Murre Rearing and Molting Area	A.1-2a	May-October	Birds	<b>Birds:</b> Murre foraging, rearing, and molting area	Springer et al., 1984; Piatt and Springer, 2003.
19	x	x	Chukchi Sea Spring Lead System	A.1-2a	April-June	Birds, marine mammals	<b>Birds:</b> seabird foraging area; spring migration area for LTDU, eiders (KIEI, COEI), loons	Swartz, 1967; Connors, Myers, and Pitelka, 1979; Sowls et al., 1978; Gill, Handel and Connors, 1985; Johnson and Herter, 1989; Piatt et al., 1991; Piatt and Springer, 2003; Oppel, 2007.
64	x	x	Pearl Bay Area	A.1-2d	May-July-October	Birds	<b>Birds:</b> eiders (SPEI, STEI, KIEI, COEI), loons (PALO, RTLO, YBLO)	Laing and Platte, 1994; Fischer and Larned, 2004.
65	x	x	Smith Bay	A.1-2b	May-October	Birds, marine mammals	<b>Birds:</b> eiders (SPEI, KIEI), loons YBLO	Earnst, et al., 2005; Powell, et al., 2005; Ritchie, Burgess, and Suydam, 2000; Ritchie et al., 2004; Troy, 2003.
67	x	x	Herschel Island (Canada)	A.1-2c	May-October	Birds	<b>Birds:</b> LTDU, BLBR, scoters, eiders, loons, shorebirds	Vermeer and Anweiler, 1975; Richardson and Johnson, 1981; Johnson and Richardson, 1982.
68	x	x	Harrison Bay	A.1-2b	May-October	Birds, fish, marine mammals	<b>Birds:</b> eiders (KIEI, COEI), scoters (BLSC, SUSC), geese (BLBR, CAGO, WFGO), loons, shorebirds	Connors et al., 1984; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
69	x	x	Harrison Bay/Colville Delta	A.1-2b	May-October	Birds, fish, marine mammals	<b>Birds:</b> geese (BLBR), eiders (KIEI, COEI), LTDU, scoters (BLSC, SUSC), loons (PALO, RTLO, YBLO)	Bergman et al., 1977; Johnson and Herter, 1989; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
71	x	x	Simpson Lagoon, Thetis and Jones Island	A.1-2c	May-October	Birds, fish, marine mammals	<b>Birds:</b> geese (BLBR, LSGO, WFGO), eiders (COEI, KIEI), LTDU, scoters (SUSC, WWSC), shorebirds, loons (PALO, RTLO, YBLO)	Richardson and Johnson, 1981; Connors et al., 1984; Divoky, 1984; Johnson et al., 1987; Johnson and Herter, 1989; Stickney and Ritchie, 1996; Noel and Johnson, 1997; Truett, Miller and Kertell, 1997; Johnson, 2000.

Appendix A

**Table A.1-14 (Continued)**  
**Environmental Resource Areas Used in the Analysis of Large Oil Spill Effects on Birds in Sections 4.4 and 4.5**

ERA	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
72	x	x	Gwyder Bay, West Dock, Cottle and Return Islands	A.1-2c	May-October	Birds, fish, marine mammals	<b>Birds:</b> geese (BLBR, LSGO, WFGO), eiders (COEI, KIEI), LTDU, scoters (SUSC, WWSC), shorebirds, loons (PALO, RTLO, YBLO)	Stickney and Ritchie, 1996; Noel and Johnson, 1997; Truett, Miller and Kertell, 1997; Johnson, 2000; Troy, 2003; Fischer and Larned, 2004; Noel et al., 2005; Powell et al., 2005.
73	x	x	Prudhoe Bay	A.1-2c	May-October	Birds, fish, marine mammals	<b>Birds:</b> geese (BLBR, LSGO, WFGO), eiders (COEI, KIEI), LTDU, scoters (SUSC, WWSC), shorebirds, loons (PALO, RTLO, YBLO)	Richardson and Johnson, 1981; Johnson and Richardson, 1982; Stickney and Ritchie, 1996; Noel and Johnson, 1997; Truett, Miller and Kertell, 1997; Troy, 2003; Dau and Larned, 2004, 2005; Fischer and Larned, 2004; Noel et al., 2005; Powell et al., 2005.
76	x	x	Kendall Island Bird Sanctuary (Canada)	A.1-2d	May-October	Birds	<b>Birds:</b> eiders (KIEI, COEI), LTDU, scoters (all 3 species), loons (PALO, RTLO, YBLO)	Divoky, 1984; Richardson and Johnson, 1981; Johnson and Richardson, 1982; Alexander et al., 1997; Dickson et al., 1997.
77	x	x	Sagavanirktoq River Delta /Foggy Island Bay	A.1-2c	May-October	Birds	<b>Birds:</b> eiders SPEI, COEI, LTDU, scoters (all 3 species), loons (PALO, RTLO, YBLO)	Divoky, 1984; Johnson, 2000; Troy, 2003; Dau and Larned, 2004, 2005; Fischer and Larned, 2004; Johnson, Wiggins, and Wainwright, 1993.
78	x	x	Mikkelsen Bay	A.1-2c	May-October	Birds	<b>Birds:</b> eiders (KIEI, COEI), LTDU, scoters, loons (PALO, RTLO)	Divoky, 1984; Johnson, 2000; Troy, 2003; Dau and Larned, 2004, 2005; Fischer and Larned, 2004; Flint et al., 2004; Noel et al., 2005.
79	x	x	Demarcation Bay Offshore	A.1-2c	May-October	Birds	<b>Birds:</b> eiders (KIEI, COEI), LTDU, scoters (SUSC, WWSC), loons	Richardson and Johnson, 1981; Johnson and Richardson, 1982; Johnson and Herter, 1989; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
81	x	x	Simpson Cove	A.1-2c	May-October	Birds	<b>Birds:</b> COEI, LTDU, PALO, scoters (SUSC, WWSC)	Johnson and Herter, 1989; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
96	x	x	Midway, Cross and Bartlett Islands	A.1-2e	May-October	Birds	<b>Birds:</b> Eiders (SPEI, COEI), LTDU, Scoters (all 3 species), and loons (PALO, RTLO, YBLO)	Divoky, 1984; Johnson, 2000; Troy, 2003 fig 3.; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
98	x	x	Anderson Point Barrier Islands	A.1-2e	May-October	Birds	<b>Birds:</b> Eiders (SPEI, COEI), LTDU, Scoters (all 3 species), and loons (PALO, RTLO, YBLO)	Divoky, 1984; Johnson, 2000; Troy, 2003 fig 3.; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
99	x	x	Arey and Barter Islands, Bernard Spit	A.1-2e	May-October	Birds	<b>Birds:</b> Eiders (SPEI, COEI), LTDU, Scoters (all 3 species), and loons (PALO, RTLO, YBLO)	Divoky, 1984; Johnson, 2000; Troy, 2003 fig 3.; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
100	x	x	Jago and Tapkaurak Spits	A.1-2e	May-October	Birds	<b>Birds:</b> Eiders (SPEI, COEI), LTDU, Scoters (all 3 species), and loons (PALO, RTLO, YBLO)	Divoky, 1984; Johnson, 2000; Troy, 2003 fig 3.; Dau and Larned, 2004, 2005; Fischer and Larned, 2004.
101	x	x	Icy Reef	A.1-2e	May-October	Birds	<b>Birds:</b> molting LTDU, scoters, staging shorebirds	Johnson and Herter, 1989.

**Notes:** Yellow-billed Loon (YBLO), Red-throated Loon (RTLO), Pacific Loon (PALO), Arctic Loon (ARLO), COEI (Common Eider), KIEI (King Eider), SPEI (Spectacled Eider), STEI (Steller's Eider), LTDU (Long-tailed Duck), Black Scoter (BLSC), Surf Scoter (SUSC), White-winged Scoter (WWSC), Black Brant (BLBR), White-fronted Goose (WFGO), Canada Goose (CAGO), Lesser Snow Goose (LSGO)

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-15**  
**Environmental Resource Areas Used in the Analysis of Large Oil Spill Effects on Whales in Sections 4.4 and 4.5**

ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
1	x	x	Kasegaluk Lagoon	A.1-2b	May - October	Whales	Beluga Whales	Suydam et al., 2001; Suydam, Lowry and Frost, 2005.
6	x	x	ERA 6	A.1-2c	April-October	Whales	Bowhead Whales	Mel'nikov et al., 2004.
12	x	x	ERA 12	A.1-2d	April-June	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986.
13		x	Kotzebue Sound	A.1-2a	January-December	Whales	Beluga Whales	Suydam et al., 2001; Suydam, Lowry and Frost, 2005.
16		x	ERA 16	A.1-2b	June-September	Whales	Bowhead Whales, Gray Whales	Mel'nikov and Bobkov, 1993; Bogoslovskaya, Votrogov and Krupnik, 1982.
19	x	x	Chukchi Sea Spring Lead System	A.1-2a	April-June	Whales, Birds, Marine Mammals	Bowhead Whales, Gray Whales	Stringer and Groves, 1991; Ljungblad, D.K. et al., 1986.
20	x		Ice/Sea Segment 7	A.1-2c	September-October	Whales, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
21	x		Ice/Sea Segment 8	A.1-2c	September-October	Whales, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
22	x		Ice/Sea Segment 9	A.1-2c	September-October	Whales,	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
24	x	x	Beaufort Spring Lead 6	A.1-2b	April-June	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986.
25	x	x	Beaufort Spring Lead 7	A.1-2b	April-June	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986.
26	x	x	Beaufort Spring Lead 8	A.1-2b	April-June	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986.
27	x	x	Beaufort Spring Lead 9	A.1-2b	April-June	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986.
28	x	x	Beaufort Spring Lead 10	A.1-2b	April-June	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986.
29	x	x	Ice/Sea Segment 1	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy 2005.
30	x	x	Ice/Sea Segment 2	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy 2005.
31	x	x	Ice/Sea Segment 3	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy 2005.
32	x	x	Ice/Sea Segment 4	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy 2005.
33	x		Ice/Sea Segment 5	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
34	x		Ice/Sea Segment 6	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
35	x	x	ERA 35	A.1-2c	August-October	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986.

Appendix A

**Table A.1-15 (Continued)**  
**Environmental Resource Areas Used in the Analysis of Large Oil Spill Effects on Whales in Sections 4.4 and 4.5**

ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
36	x	x	ERA 36	A.1-2c	August-October	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986.
37	x	x	ERA 37	A.1-2c	April-June	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
45	x	x	ERA 45	A.1-2b	April-October	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986.
46	x	x	Herald Shoal and Polynya	A.1-2a	April-November	Whales, Marine mammals,	Gray Whales, Bowhead whales	Stringer and Groves, 1991.
48	x	x	Ice/Sea Segment 11	A1-2b	May-October	Whales	Bowhead Whales , Gray Whales, Walrus	Moore and DeMaster, 1997.
49	x	x	ERA 49	A.1-2a	July-October	Whales		Ljungblad, D.K. et al., 1986; Stringer and Groves 1991.
53		x	Ice/Sea Segment 5a	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
54		x	Ice/Sea Segment 6a	A.1-2c	September-October	Whales, Birds, Marine Mammals	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
56	x	x	ERA 56	A.1-2b	August-October	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986.
61		x	ERA 61	A.1-2b	April-December	Whales	Bowhead, Fin and Humpback Whales	Melnikov, 2000; Melnikov and Bobkov, 1993; Melnikov, et al. 2004; USDOC, NMFS, 2006; Rice, 1974, Bogoslovskaya, Votrogov and Krupnik, 1982; Marqueette et al. 1982; Mizroch, In Prep.; Mizroch, Rice and Breiwick, 1984; Angliss and Outlaw 2005; 2007.
62	x	x	Mackenzie River Estuary	A.1-2d	July	Whales	Beluga Whales	Harwood et al, 1996.
63	x	x	ERA 63	A.1-2a	July-October	Whales	Bowhead Whales	
65	x	x	Smith Bay	A.1-2b	May-October	Whales, Birds	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
70	x	x	ERA 70	A.1-2a	July-October	Whales	Bowhead Whales	
74	x	x	Offshore Herald Island	A.1-2a	August-October	Whales, Polar Bears, Walrus	Bowhead Whales	Bogoslovskaya et al. 1982.
80	x	x	ERA 80	A.1-2c	April-June	Whales	Bowhead Whales	Ljungblad, D.K. et al., 1986; Treacy, 1988, 1989, 1990, 1991, 1992, 1993, 1994, 1995, 1996, 1997, 1998, 2000, 2001, 2002; Monnett and Treacy, 2005.
82		x	ERA 82	A.1-2a	September	Whales	Bowhead whales	Mel'nikov and Bobkov, 1993; Bogoslovskaya, Votrogov and Krupnik, 1982.
83	x		Cape Schmidta	A.1-2a	August-October	Whales	Bowhead Whales	Bogoslovskaya, Votrogov and Krupnik, 1982.
91		x	Hope Sea Valley	A.1-2a	August-October	Whales	Bowhead Whales	Bogoslovskaya, Votrogov and Krupnik, 1982.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-16 Subsistence Environmental Resource Areas Used in the Analysis of Large Oil Spill Effects on Subsistence Resources in Sections 4.4 and 4.5**

ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
3		x	ERA 3	Map A.1-2a	September-October	Subsistence	Bowhead Whales, Grey Whales, Walrus	Mel'nikov and Bobkov, 1993.
4		x	ERA 4	Map A.1-2a	January-December	Subsistence	Bowhead Whales, Grey Whales, Walrus	Mel'nikov and Bobkov, 1993.
5		x	ERA 5	Map A.1-2a	April-September	Subsistence	Polar Bears, Walrus, Seals	Sobelman, 1985; Wisniewski, 2005.
13		x	ERA 13	Map A.1-2a	January-December	Subsistence	Polar Bears, Walrus, Seals, Bowhead Whales, Beluga Whales	Burch, 1985.
38	x	x	Point Hope Subsistence Area	Map A.1-2a	January-December	Subsistence	Beluga Whales, Bowhead Whales, Walrus, Seals	Braund & Burnham, 1984.
39	x	x	Point Lay Subsistence Area	Map A.1-2a	January-December	Subsistence	Fish, Seals, Waterfowl, Beluga Whales	Braund & Burnham, 1984; Impact Assessment, 1989; Huntington and Myrrin, 1996; USDOI, BLM and MMS, 2003.
40	x	x	Wainwright Subsistence Area	Map A.1-2a	January-December	Subsistence	Bowhead Whales, Beluga Whales	Braund & Burnham, 1984; Braund & Associates, 1993a; Kassam and Wainwright Traditional Council, 2001; USDOI, BLM and MMS, 2003.
41	x	x	Barrow Subsistence Area 1	Map A.1-2a	April-May	Subsistence	Bowhead Whales, Beluga Whales, Walrus, Waterfowl, Seals, Ocean Fish	Braund & Burnham, 1984; S.R. Braund & Associates, 1993b; North Slope Borough, 2001; USDOI, BLM and MMS, 2003.
42	x	x	Barrow Subsistence Area 2	Map A.1-2a	August-October	Subsistence	Bowhead Whales, Beluga Whales, Walrus, Waterfowl, Seals, Ocean Fish	Braund & Burnham, 1984; Braund & Associates, 1993b; North Slope Borough, 2001; USDOI, BLM and MMS, 2003.
43	x	x	Nuiqsut Subsistence Area	Map A.1-2d	August-October	Subsistence	Bowhead Whales, Seals, Waterfowl, Ocean Fish	Impact Assessment, 1990a; USDOI, MMS, 2001; North Slope Borough, 2001.
44	x	x	Kaktovik Subsistence Area	Map A.1-2c	August-October	Subsistence	Bowhead Whales, Seals, Walrus, Beluga Whales, Waterfowl, Ocean Fish	Impact Assessment, 1990b; North Slope Borough, 2001.
60	x		King and Shingle Point	Map A.1-2d	April-September	Subsistence	Polar Bears, Seals, Fish, Bowhead Whales, Beluga Whales	Environment Canada, 2000.
90	x		Gary/Kendall	Map A.1-2d	July-August	Subsistence	Beluga Whales	Environment Canada, 2000.
97	x		Tigvariak Island	Map A.1-2e	May-October	Subsistence, Birds	Traditional Whaling Area	Pedersen, 1979.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-17 Environmental Resource Areas, Grouped Land Segments and Land Segments Used in the Analysis of Oil Spill Effects on Marine Mammals in Sections 4.4 and 4.5**

ERA, LS or GLS ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
11	x	x	Wrangel Island 12 nmi buffer	A.1-2a	July - November	Marine Mammals	Polar Bears, Walrus	Kochnev, 2002; Kochnev et al., 2003; Kochnev, In prep.; Fay, 1982.
15	x	x	Cape Lisburne	A.1-2c	May-October	Marine Mammals	Walrus	GarlichMiller, 2007. pers. commun.; Fay, 1982.
23	x	x	Offshore Wrangel Island	A.1-2a	July-November	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
47	x	x	Ice/Sea Segment 10	A.1-2d	May-October	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
48	x	x	Ice/Sea Segment 11	A.1-2a	May-October	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
50	x	x	Ice/Sea Segment 13	A.1-2a	May-October	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
51	x	x	Ice/Sea Segment 14	A.1-2a	May-October	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
52	x	x	Ice/Sea Segment 15	A.1-2a	May-October	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
55	x	x	Point Barrow, Plover Islands	A.1-2a	August-November	Marine Mammals	Polar Bears	Evans, 2008. pers. commun.
57		x	Outer Kotzebue Sound	A.1-2b	May-June	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
58	x	x	Offshore Pt. Lay to Wainwright	A.1-2a	May-October	Marine Mammals	Walrus	Fay, 1982; Jay, 2007. pers. commun.
59		x	Ostrov Kolyuchin	A.1-2a	July -November	Marine Mammals	Polar Bears, Walrus	Kochnev et al., 2003; Kochnev, In prep.; Fay, 1982.
66	x	x	Herald Island	A.1-2a	July-November	Marine Mammals	Polar Bears, Walrus	Ovsyanikov, 1998; Stishov, 1991, Fay, 1982; Jay, 2007 pers. com.
92	x	x	Thetis, Jones, Cottle & Return Isl.	A.1-2e	January-December	Marine Mammals	Polar Bears (den)	Evans, 2008. pers. commun.
93	x	x	Cross and No Name Island	A.1-2e	August-November	Marine Mammals	Polar Bears	Evans, 2008. pers. commun., Miller et al., 2006.
94	x	x	Maguire, Flaxman & Barrier Isl.	A.1-2e	January-December	Marine Mammals	Polar Bears (den)	Evans, 2008. pers. commun.
95	x	x	Arey & Barter Island, Bernard Spit	A.1-2e	August-November	Marine Mammals	Polar Bears	Miller, Schliebe and Proffitt, 2006.
GLS 127		x	Mys Blossom,	A.1-3d	July-November	Marine Mammals	Walrus	Ovsyanikov, 2003; Kochnev, 2004; Kochnev, In prep.; GarlichMiller, pers. commun.; Fay, 1982.
GLS128		x	Bukhta Somnitel'naya	A.1-3d	July-November	Marine Mammals	Polar Bears, Walrus	Ovsyanikov, 2003; Kochnev, 2004; Kochnev, In prep.; GarlichMiller, pers. commun.; Fay, 1982.
LS 28		x	Ostrov Karkarpko, Mys Vankarem,	A.1-3d	July-November	Marine Mammals	Walrus	Kochnev, 2004; Fay, 1982.
LS 29		x	Mys Onmyn,	A.1-3d	July-November	Marine Mammals	Walrus	Kochnev, 2004; Fay, 1982.
GLS 129		x	Ostrov Idlidlya,	A.1-3d	July-November	Marine Mammals	Walrus	Kochnev, 2004; Fay, 1982.
GLS 130		x	Mys Serditse Kamen	A.1-3d	July- November	Marine Mammals	Walrus	Kochnev, 2004; Fay, 1982.
LS 38		x	Mys Unikin,	A.1-3a	July-November	Marine Mammals	Walrus	Kochnev, 2004 Fay, 1982.
LS 39		x	Mys Dezhnev, Mys Peek, Cape Peek	A.1-3a	July- November	Marine Mammals	Walrus	Kochnev, 2004 Fay, 1982;.
LS 48	x	x	Cape Espenberg	A.1-3b	July-October	Marine Mammals	Spotted Seal	Frost, Lowry, and Carroll, 1992.
GLS 134		x	Cape Lisburne	A.1-3b	August-November	Marine Mammals	Walrus	Garlich-Miller, pers. commun.; Fay, 1982.
LS 85	x	x	Barrow, Browerville, Elson Lagoon	A.1-3b	August-November	Marine Mammals	Polar Bears	Evans, 2008. pers. commun.
GLS 142		X	Russian Coastline	A.1-3d	July-November	Marine Mammals	Polar Bears, Walrus	Kochnev, In prep.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-18**  
**Environmental Resource Areas and Land Segments Used in the Analysis of Large Oil Spill Effects on Fish in Sections 4.4 and 4.5**

ERA ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
			<b>Marine Waters</b>					
84	x	x	Canning River Delta	Map A.1-2d	January - December	Marine Fish – nearshore	Arctic cod, Fourhorn sculpin, Capelin	Jarvela and Thorsteinson, 1998.
85	x	x	Sagavanirkot River Delta ERA	Map A.1-2d	January - December	Marine Fish – nearshore	Arctic cod, Fourhorn sculpin, Capelin	Jarvela and Thorsteinson, 1998; Craig, 1984.
86	x	x	Harrison Bay	Map A.1-2b	January - December	Marine Fish – nearshore	Arctic cod, Capelin, OM, Saffron cod Fourhorn sculpin, Wp	Jarvela and Thorsteinson, 1998; Craig, 1984.
87	x	x	Colville River Delta	Map A.1-2b	January - December	Marine Fish – nearshore	Arctic cod, Capelin, OM, Saffron cod Fourhorn sculpin, Wp	Jarvela and Thorsteinson, 1998; Craig, 1984.
88	x	x	Simpson Lagoon	Map A.1-2b	January- December	Marine Fish – nearshore	Arctic cod, Capelin, OM, Saffron cod Fourhorn sculpin, Wp	Jarvela and Thorsteinson, 1998; Craig, 1984.
89	x	x	Mackenzie River Delta	Map A.1-2d	January - December	Marine Fish – nearshore	Arctic cod, Wp, Fourhorn sculpin	Craig, 1984.
LS ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
			<b>Russia</b>					
25	x	x	Amguema River	Map A.1-3a	May - October	Anadromous Fish	CHs,Ps,ALp,DVs,ACs,Kp,Sp,COp,Ws, OMp	Andreev, 2001.
31	x	x	Kolyuchinskaya Bay	Map A.1-3a	May - October	Anadromous Fish	Ps,Ks,DVs,ACs,Wp,OMP	Andreev, 2001.
37	x	x	Chegitun R.	Map A.1-3a	May - October	Anadromous Fish	Bering Cisco,ACs,DVs,Ps,Ks,CHs,Ss, OMp	Andreev, 2001.
38	x	x	Inchoun Lagoon	Map A.1-3a	May - October	Anadromous Fish	CHp,Pp,Kp,COp,Sp,Bering Cisco, Least Cisco	Andreev, 2001.
39	x	x	Uelen Lagoon	Map A.1-3a	May - October	Anadromous Fish	CHp,Pp,Kp,COp,Sp,Bering Cisco, Least Cisco	Andreev, 2001.
	x	x	<b>United States</b>					
40	x	x	Mint R	Map A.1-3b	May - October	Anadromous Fish	CHs,Ps,Sp,DVpr	Johnson and Weiss, 2007.
41	x	x	Pinguk R	Map A.1-3b	May - October	Anadromous Fish	CHs,Pp,DVp,Wp	Johnson and Weiss, 2007.
42	x	x	Upkuarok Ck, Nuluk R. Kugrupaga R. Trout Ck.	Map A.1-3b	May - October	Anadromous Fish	DVpr CHs,Ps,DVp,Wp DVp DVpr,Wp	Johnson and Weiss, 2007.
43	x	x	Shishmaref Airport	Map A.1-3b	May - October	Anadromous Fish	DVp	Johnson and Weiss, 2007.
44	x	x	Shishmaref Inlet Arctic R. Sanaguich R Serpentine R	Map A.1-3b	May - October	Anadromous Fish	DVp,SFp,Wp DVp,SFp,Wp DVp CHp,DVp,SFp,Wp	Johnson and Weiss, 2007.
47	x	x	Kitluk R	Map A.1-3b	May - October	Anadromous Fish	Pp	Johnson and Weiss, 2007.
49	x	x	Kougachuk Ck	Map A.1-3b	May - October	Anadromous Fish	Pp	Johnson and Weiss, 2007.

**Table A.1-18(Continued)**  
**Environmental Resource Areas and Land Segments Used in the Analysis of Large Oil Spill Effects on Fish in Sections 4.4 and 4.5**

LS ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
51	x	x	Inmachuk R Kugruk R	Map A.1-3b	May - October	Anadromous Fish	CHs,Ps,DVp CHp,Pp,DVp	Johnson and Weiss, 2007.
53	x	x	Kiwalik R Buckland R	Map A.1-3b	May - October	Anadromous Fish	CHp,Pp,DVp CHp,COp,Kp,Pp,DVp,Wp	Johnson and Weiss, 2007.
54	x	x	Baldwin Penn Kobuk R & Channels	Map A.1-3b	May - October	Anadromous Fish	DVp,DVs CHp,Kp,Pp,DVs,SFp,Wp	Johnson and Weiss, 2007.
55	x	x	Hotham Inlet Ogriveg R	Map A.1-3b	May - October	Anadromous Fish	CHp,Pp,DVs,Wp CHp,Pp,DVp	Johnson and Weiss, 2007.
56	x	x	Noatak R	Map A.1-3b	May - October	Anadromous Fish	CHp,COp,Kp,Pp,Sp,DVp,SFp,Wpr	Johnson and Weiss, 2007.
57	x	x	Aukulak Lagoon	Map A.1-3b	May - October	Anadromous Fish	Wp	Johnson and Weiss, 2007.
58	x	x	Tasaychek Lagoon	Map A.1-3b	May - October	Anadromous Fish	Pp	Johnson and Weiss, 2007.
59	x	x	Kiligmak Inlet Jade Ck Rabbit Ck Imik Lagoon New Heart Ck Omikviorok R	Map A.1-3b	May - October	Anadromous Fish	DVp,Wp DVp CHp,Sp,DVp Wp DVr DVp,Wp	Johnson and Weiss, 2007.
60	x	x	Imikruk Lagoon Wulik R Kivalina R	Map A.1-3b	May - October	Anadromous Fish	Wp CHp,COp,Kp,Pp,Sp,DVs,Wp CHp,CHs,Pp,DVp	Johnson and Weiss, 2007.
64	x	x	Sulupoaktak Chnl	Map A.1-3b	May - October	Anadromous Fish	Pp,DVp	Johnson and Weiss, 2007.
67	x	x	Pitmegea R	Map A.1-3b	May - October	Anadromous Fish	CHp,Pp,DVp	Johnson and Weiss, 2007.
70	x	x	Kuchiak Ck	Map A.1-3b	May - October	Anadromous Fish	CHs,COs	Johnson and Weiss, 2007.
71	x	x	Kukpowruk R	Map A.1-3b	May - October	Anadromous Fish	CHp,Pp,DVp	Johnson and Weiss, 2007.
72	x	x	Pt Lay ,Kokolik R	Map A.1-3b	June - October	Anadromous Fish	CHp,Pp,DVp	Johnson and Weiss, 2007.
74	x	x	Utukok R	Map A.1-3b	June - October	Anadromous Fish	CHp,Pp,DVp	Johnson and Weiss, 2007.
80	x	x	Kugrua R	Map A.1-3b	June - October	Anadromous Fish	CHs,Ps	Johnson and Weiss, 2007.
87	x	x	Inaru R Meade R Topagoruk R Chipp R	Map A.1-3c	June - October	Anadromous Fish	Wsr CHs,Wp Wsr Ps,Wsr	Johnson and Weiss, 2007.
89	x	x	Ikpikpuk R	Map A.1-3c	June - October	Anadromous Fish	Psr,Wsr	Johnson and Weiss, 2007.
91	x	x	Smith R	Map A.1-3c	June - October	Anadromous Fish	DVp,Wp	Johnson and Weiss, 2007.
93	x	x	Kalikpik R	Map A.1-3c	June - October	Anadromous Fish	Wp	Johnson and Weiss, 2007.

**Table A.1-18 (Continued)**  
**Environmental Resource Areas and Land Segments Used in the Analysis of Large Oil Spill Effects on Fish in Sections 4.4 and 4.5**

LS ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
94	x	x	Fish Ck Nechelik Channel	Map A.1-3c	June - October	Anadromous Fish	CHp,Kp,Pp,DVp,Wp Wp	Johnson and Weiss, 2007.
95	x	x	Colville R & Delta	Map A.1-3c	June - October	Anadromous Fish	CHp,Pp,DVp,Wp	Johnson and Weiss, 2007.
96	x	x	Kalubik R Ugnuravik R	Map A.1-3c	June - October	Anadromous Fish	DVp,Wp Wr	Johnson and Weiss, 2007.
97	x	x	Oogrukpuik R Sakonowyak R	Map A.1-3c	June - October	Anadromous Fish	Wpr Wr	Johnson and Weiss, 2007.
98		x	Kuparuk R Fawn Ck Unnamed 10435 Putuligayuk R	Map A.1-3c	June - October	Anadromous Fish	Wr Wp DVr DVr,OMP,Wr	Johnson and Weiss, 2007.
99	x	x	Sagavanirktok R E. Sagavanirktok Ck	Map A.1-3c	June - October	Anadromous Fish	ACp,Chp,Pp,DVr,Wp DVr	Johnson and Weiss, 2007.
100	x	x	Kadleroshilik R Shaviovik R 10300	Map A.1-3c	June - October	Anadromous Fish	DVr DVp DVr	Johnson and Weiss, 2007.
101	x	x	E Badami Ck 10280(AWC#)	Map A.1-3c	June - October	Anadromous Fish	DVr DVr	Johnson and Weiss, 2007.
102		x	10246(AWC#) 10238(AWC#) 10234(AWC#) Staines R	Map A.1-3c	June - October	Anadromous Fish	DVr DVr DVr Pp,DVp,Wp	Johnson and Weiss, 2007.
103	x	x	W. Canning R Canning R Tamayariak R	Map A.1-3c	June - October	Anadromous Fish	Pp,DVp,Wp CHp,Pp,DVp,Wp DVr	Johnson and Weiss, 2007.
104	x	x	Katakutirik R 10193(AWC#)	Map A.1-3c	June - October	Anadromous Fish	DVp DVr	Johnson and Weiss, 2007.
105	x	x	Marsh Ck Carter Ck	Map A.1-3c	June - October	Anadromous Fish	DVr DVr	Johnson and Weiss, 2007.
106		x	ERA 44,83 (193) Nataroarok Ck Hulahula R Okpilak R 10173(AWC#)	Map A.1-3c	June - October	Anadromous Fish	DVr DVp DVp DVr	Johnson and Weiss, 2007.
107	x	x	Jago R	Map A.1-3c	June - October	Anadromous Fish	DVp	Johnson and Weiss, 2007.
108	x	x	Kimikpaurauk R	Map A.1-3c	June - October	Anadromous Fish	DVr	Johnson and Weiss, 2007.

**Table A.1-18 (Continued)**  
**Environmental Resource Areas and Land Segments Used in the Analysis of Large Oil Spill Effects on Fish in Sections 4.4 and 4.5**

LS ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
109		x	Siksik R Sikrelurak R Angun R 10150- 2004(AWC#) Kogotpak 10140- 2006(AWC#)	Map A.1-3c	June - October	Anadromous Fish	DVr DVr DVr DVr DVp DVr	Johnson and Weiss, 2007.
110	x	x	Aichilik R Egaksrak R Kongakut R	Map A.1-3c	June – October	Anadromous Fish	DVp DVp DVp	Johnson and Weiss, 2007.
	x	x	<b>Canada</b>	Map A.1-3c				
112	x	x	Fish R.	Map A.1-3c	June - October	Anadromous Fish	ACp, Wp	Craig, 1984; Kendel, 1974.
113	x	x	Malcolm R	Map A.1-3c	June - October	Anadromous Fish	ACp, OMp	Craig, 1984.
114	x	x	Firth R.	Map A.1-3c	June - October	Anadromous Fish	ACp,OMP	Craig, , 1984.
116	x	x	Spring R.	Map A.1-3c	June - October	Anadromous Fish	ACp,Wp,SFp,OMP	Craig, 1984.
117	x	x	Babbage R	Map A.1-3c	June - October	Anadromous Fish	ACp,Wp	Craig, 1984.
119	x	x	Blow R	Map A.1-3c	June - October	Anadromous Fish	ACp,Wp,SFp	Craig, 1984.
122-126	x	x	Mackenzie River	Map A.1-3c	June - October	Anadromous Fish	ACpWp,CHp,OMP,SFp	Craig, 1984.

**Key:** AC – Arctic Char, AL – Arctic lamprey, K – Chinook salmon, CH – Chum salmon, CO – Coho salmon, DV – Dolly Varden, P – Pink salmon, OM – Rainbow smelt, S- Sockeye salmon, SF - Sheefish, W – Whitefish (undifferentiated). s - spawning, p – present, r – rearing.

**Source:**  
USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-19**  
**Environmental Resource Areas Used in the Analysis of Large Oil Spill Effects on Lower Trophic Level Organisms in Sections 4.4 and 4.5**

ID	209 217	212 221	NAME	MAP	VULNERABLE	GENERAL RESOURCE	SPECIFIC RESOURCE	REFERENCE
7	x	x	US Russia Maritime Boundary	A.1-2a	January-December	Lower Trophic Level Organisms	International Russian Waters	U.S. Dept. of State, 1990.
75	x	x	Water over Boulder Patch	A.1-2c	July through September	Lower Trophic Level Organisms	Kelp	Dunton, Reimnitz, and Schonberg, 1982; Coastal Frontiers Corporation, 1998; LGL Ecological Research Associates, Inc. 1998.

**Source:**  
USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-20**  
**Land Segment ID and the Geographic Place Names within the Land Segment**

ID	Geographic Place Names	ID	Geographic Place Names
1	Mys Blossom, Mys Fomy, Khishchnikov, Neozhidannaya, Laguna Vaygan	32	Mys Dzhenretlen, Eynenekvyl, Lit'khekay-Polar Station
2	Mys Gil'der, Ushakovskiy, Mys Zapadnyy	33	Neskan, Laguna Neskan, Mys Neskan
3	Mys Florens, Gusinaya	34	Emelin, Ostrov Idlidlya, I, Memino, Tepken,
4	Mys Ushakova, Laguna Drem-Khed	35	Enurmino, Mys Keylu, Netakenikhvin, Mys Neten,
5	Mys Evans, Neizvestnaya, Bukhta Pestsonaya	36	Mys Chechan, Mys Ikgur, Keniskhvik, Mys Serditse Kamen
6	Ostrov Mushtakova	37	Chegitun, Utikan, Mys Volnistyy
7	Kosa Bruch	38	Enmytagyn, Inchoun, Inchoun, Laguna Inchoun, Mitkulino, Uellen, Mys Unikyn
8	Klark, Mys Litke, Mys Pillar, Skeletov, Mys Uering	39	Cape Dezhnev, Mys Inchoun, Naukan, Mys Peek, Uelen, Laguna Uelen, Mys Uelen
9	Nasha, Mys Proletarskiy, Bukhta Rodzher	40	Ah-Gude-Le-Rock, Dry Creek, Lopp Lagoon, Mint River
10	Reka Berri, Bukhta Davidova, , Khishchnika, Reka Khishchnika	41	Ikpek, Ikpek Lagoon, Pinguk River, Yankee River
11	Bukhta Somnitel'naya	42	Arctic Lagoon, Kugrupaga Inlet, Nuluk River
12	Zaliv Krasika, Mamontovaya, Bukhta Predatel'skaya	43	Sarichef Island, Shishmaref Airport
13	Mys Kanayen, Mys Kekurnyy, Mys Shalaurova, Veyeman	44	Cape Lowenstern, Egg Island, Shishmaref, Shishmaref Inlet
14	Innukay, Laguna Innukay, Umkuveyem, Mys Veuman	45	
15	Laguna Adtaynung, Mys Billingsa, Ettam, Gytkhelen, Laguna Uvargina	46	Cowpack Inlet, Cowpack River, Kalik River, Kividlo, Singeak, Singeakpuk River, White Fish Lake
16	Mys Emmatagen, Mys Enmytagyn, Uvargin	47	Kitluk River, Northwest Corner Light, West Fork Espenberg River
17	Enmaat'khyr, Kenmankautir, Mys Olenny, Mys Yakan, Yakanvaam, Yakan	48	Cape Espenberg, Espenberg, Espenberg River
18	Mys Enmykay, Laguna Olennaya, Pil'khikay, Ren, Rovaam, Laguna Rypil'khin	49	Kungealoruk Creek, Kougachuk Creek, Pish River
19	Laguna Kuepil'khin, Leningradskiy	50	Clifford Point, Cripple River, Goodhope Bay, Goodhope River, Rex Point, Sullivan Bluffs
20	Polyarnyy, Kuekvun', Notakatry, Pil'gyn, Tynupytka	51	Cape Deceit, Deering, Kugruk Lagoon, Kugruk River, Sullivan Lake, Toawlevic Point
21	Laguna Kinmanyakicha, Laguna Pil'khikay, Amen, Pil'khikay, Bukhta Severnaya, Val'korkey	52	Motherwood Point, Ninemile Point, Willow Bay
22	Ekiatan', Laguna Ekiatan, Kelyun'ya, Mys Shmidta, Rypkarpyy	53	Kiwalik, Kiwalik Lagoon, Middle Channel Kiwalk River, Minnehaha Creek, Mud Channel Creek, Mud Creek
23	Emuem, Kemuem, Koyvel'khveyergin, Laguna Tengergin, Tenkergin	54	Baldwin Peninsula, Lewis Rich Channel
24		55	Cape Blossom, Pipe Spit
25	Laguna Amguema, Ostrov Leny, Yulinu	56	Kinuk Island, Kotzebue, Noatak River
26	Ekugvaam, Reka Ekugvam, Kepin, Pil'khin	57	Aukulak Lagoon, Igisukruk Mountain, Noak, Mount, Sheshalik, Sheshalik Spit
27	Laguna Nut, Rigol'	58	Cape Krusenstern, Eigaloruk, Evelukpalik River, Kasik Lagoon, Krusenstern Lagoon,
28	Kamnya, Ostrov Kardkarpko, Kovlyuneskin, Mys Vankarem, Vankarema, Laguna Vankarem	59	Imik Lagoon, Ipiavik Lagoon, Kotlik Lagoon, Omikviorok River
29	Akanatkhyrgyn, Nutpel'men, Mys Onman, Vel'may	60	Imikruk Lagoon, Imnakuk Bluff, Kivalina, Kivalina Lagoon, Singirak Spit, Kivalina River, Wulik River
30	Laguna Kunergin, Nutepynmyn, Pyngopil'khin, Laguna Pyngopil'khin	61	Asikpak Lagoon,Cape Seppings,Kavrarak Lagoon,Pusaluk Lagoon,Seppings Lagoon
31	Alyatki, Zaliv Tasytchin, Kolyuchin Bay	62	Atosik Lagoon,Chariot,Ikaknak Pond,Kisimilok Mountain,Kuropak Creek,Mad Hill

**Table A.1-20(Continued)**  
**Land Segment ID and the Geographic Place Names within the Land Segment**

ID	Geographic Place Names	ID	Geographic Place Names
63	Akoviknak Lagoon, Cape Thompson, Crowbill Point, Iglerak Hill, Kemegrak Lagoon	96	Kalubik Creek, Oliktok Point, Thetis Mound,
64	Aiautak Lagoon, Ipiutak Lagoon, Kowtuk Point, Kukpuk River, Pingu Bluff, Point Hope, Sinigrok Point, Sinuk	97	Beechey Point, Bertoncini , Bodfish, Cottle and, Jones Islands, Milne Point, Simpson Lagoon
65	Buckland, Cape Dyer, Cape Lewis, Cape Lisburne	98	Gwydyr Bay, Kuparuk River, Long Island
66	Ayugatak Lagoon	99	Duck Island, Foggy Island, Gull Island, Heald Point, Howe Island, Niakuk Islands, Point Brower
67	Cape Sabine, Pitmegea River	100	Foggy Island Bay, Kadleroshilik River, Lion Point, Shaviovik River, Tigvariak Island
68	Agiak Lagoon, Punuk Lagoon	101	Bullen Point, Point Gordon, Reliance Point
69	Cape Beaufort, Omalik Lagoon	102	Flaxman Island, Maguire Islands, North Star Island, Point Hopson, Point Sweeney, Point Thomson, Staines River
70	Kuchaurak Creek, Kuchiak Creek	103	Brownlow Point, Canning River, Tamayariak River
71	Kukpowruk River, Naokok, Naokok Pass, Sitkok Point	104	Camden Bay, Collinson Point, Katakturuk River, Konganevik Point, Simpson Cove
72	Epizetka River, Kokolik River, Point Lay, Siksrikpak Point	105	Anderson Point, Carter Creek, Itkilyariak Creek, Kajutakrok Creek, Marsh Creek, Sadlerochit River
73	Akunik Pass, Tungaich Point, Tungak Creek	106	Arey Island, Arey Lagoon, Barter Island, Hulahula River, Okpilak River
74	Kasegaluk Lagoon, , Solivik Island, Utukok River	107	Bernard Harbor, Jago Lagoon, Kaktovik, Kaktovik Lagoon
75	Akeonik, Icy Cape, Icy Cape Pass	108	Griffin Point, Oruktalik Lagoon, Pokok Lagoon
76	Akolikatik Pass, Avak Inlet, Tunaliq River	109	Angun Lagoon, Beaufort Lagoon, Nuvagapak Lagoon,
77	Mitliktavik, Nivat Point, Nokotlek Point, Ongoravik River	110	Aichilik River, Egaksrak Lagoon, Egaksrak River, Icy Reef, Kongakut River, Siku Lagoon
78	Kilmantavi, Kuk River, Point Collie, Sigeakruk Point,	101	Demarcation Bay, Demarcation Point, Gordon, Pingokraluk Lagoon.
79	Point Belcher, Wainwright, Wainwright Inlet	112	Clarence Lagoon, Backhouse River
80	Eluksingiak Point, Iglo River, Kugrua Bay	113	Komakuk Beach, Fish Creek
81	Pearl Bay, Point Franklin, Seahorse Islands, Tachinisok Inlet	114	Nunaluk Spit
82	Skull Cliff	115	Herschel Island
83	Nulavik, Loran Radio Station	116	Ptarmagin Bay
84	Walakpa River, Will Rogers and Wiley Post Memorial	117	Roland & Phillips Bay, Kay Point
85	Barrow, Browerville, Elson Lagoon	118	Sabine Point
86	Dease Inlet, Plover Islands, Sanigarauk Island	119	Shingle Point
87	Igalik Island, Kulgurak Island, Kurgorak Bay, Tangent Point	120	Trent and Shoalwater Bays
88	Cape Simpson, Piasuk River, Sinclair River, Tulimanik Island	121	Shallow Bay, West Channel
89	Ikpikpuk River, Point Poleakoon, Smith Bay	120	Trent and Shoalwater Bays
90	Drew Point, Kolovik, McLeod Point,	121	Shallow Bay, West Channel
91	Lonely AFS Airport, Pitt Point, Pogik Bay, Smith River	122	
92	Cape Halkett, Esook Trading Post, Garry Creek	123	Outer Shallow Bay, Olivier Islands
93	Atigaru Point, Eskimo Islands, Harrison Bay, Kalikpik River, Saktuina Point	124	Middle Channel, Gary Island
94	Fish Creek, Tingmeachsiovik River	125	Kendall Island
95	Anachlik Island, Colville River, Colville River Delta	126	North Point, Pullen Island

**Key:**

ID = identification (number).

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-21**  
**Seasonal Land Segment ID, Vulnerable Period, and the General Resource**

SLS ID	Vulnerable	General Resource	SLS ID	Vulnerable	General Resource
25	May - October	Anadramous Fish	72	June - October	Anadramous Fish
28	July-November	Walrus	74	June - October	Anadramous Fish
29	July-November	Walrus	80	June - October	Anadramous Fish
31	May - October	Anadramous Fish	85	August-November	Polar Bears
37	May - October	Anadramous Fish	87	June - October	Anadramous Fish
38	July-November	Walrus	89	June - October	Anadramous Fish
38	May - October	Anadramous Fish	91	June - October	Anadramous Fish
39	July- November	Anadramous Fish	93	June - October	Anadramous Fish
39	May - October	Anadramous Fish	94	June - October	Anadramous Fish
40	May - October	Anadramous Fish	95	June - October	Anadramous Fish
41	May - October	Anadramous Fish	96	June - October	Anadramous Fish
42	May - October	Anadramous Fish	97	June - October	Anadramous Fish
43	May - October	Anadramous Fish	98	June - October	Anadramous Fish
44	May - October	Anadramous Fish	99	June - October	Anadramous Fish
47	May - October	Anadramous Fish	100	June - October	Anadramous Fish
48	July-October	Spotted Seal	101	June - October	Anadramous Fish
49	May - October	Anadramous Fish	102	June - October	Anadramous Fish
51	May - October	Anadramous Fish	103	June - October	Anadramous Fish
53	May - October	Anadramous Fish	104	June - October	Anadramous Fish
54	May - October	Anadramous Fish	105	June - October	Anadramous Fish
55	May - October	Anadramous Fish	106	June - October	Anadramous Fish
56	May - October	Anadramous Fish	107	June - October	Anadramous Fish
57	May - October	Anadramous Fish	108	June - October	Anadramous Fish
58	May - October	Anadramous Fish	109	June - October	Anadramous Fish
59	May - October	Anadramous Fish	110	June - October	Anadramous Fish
60	May - October	Anadramous Fish	112	June - October	Anadramous Fish
64	May - October	Anadramous Fish	113	June - October	Anadramous Fish
67	May - October	Anadramous Fish	114	June - October	Anadramous Fish
70	May - October	Anadramous Fish	116	June - October	Anadramous Fish
71	May - October	Anadramous Fish	117	June - October	Anadramous Fish
72	June - October	Anadramous Fish	119	June - October	Anadramous Fish

**Key:**

SLS = Seasonal Land Segment, ID=Identification (number)

**Source:**

USDOI, MMS Alaska OCS Region (2008).

Appendix A

**Table A.1-22**  
**Grouped Land Segment ID, Geographic Names of Grouped the Land Segment and Land Segments ID's which make up the Grouped Land Segment**

Grouped Land Segment ID	Grouped Land Segment Name	Land Segment ID's
127	Mys Blossom	1, 12
128	Bukhta Somnitel'naya	10, 11
129	Ostrov Idlidlya	33,34
130	Mys Serditse Kamen	35, 36
131	Bering Land Bridge National Preserve	41, 42, 45-50
132	Cape Krusenstern National Monument	57-59
133	Alaska Maritime National Wildlife Refuge	62, 63, 65
134	Cape Lisburne	65, 66, 67
135	National Petroleum Reserve Alaska	76, 77, 80-83, 86-93
136	Kasegaluk Lagoon Special Area (NPR-A)	76-77
137	Teshekpu Lake Special Area (NPR-A)	89-93
138	Arctic National Wildlife Refuge	103-111
139	Ivvavik National Park (Canada)	112-117
140	Kendall Island Bird Sanctuary (Canada)	124-125
141	Russia Chukchi Coast	1-39
142	Russia Chukchi Coast Marine Mammals	1-39
143	United States Chukchi Coast	40-84
144	United States Beaufort Coast	85-111
145	Canada Beaufort Coast	112-126

Source: USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-23**  
**Beaufort Sea Sales 209, 217: Assumptions about How Launch Areas are Serviced by Pipelines for the Oil-Spill-Trajectory Analysis for Alternative 2, The Proposed Action, and its Alternatives**

Launch Area(s)	Serviced by Hypothetical Pipelines	Launch Area(s)	Serviced by Hypothetical Pipelines
LA01 & LA02	PL1 to PL8	LA12	PL12
LA03	PL2 to PL8	LA13	PL5 to PL12
LA04	PL8	LA14	PL6 to PL12
LA05 & LA06	PL2 to PL9	LA15	PL13
LA07	PL3 to PL10	LA16, LA17, LA18 & LA19	PL7 to PL13
LA08	PL9	LA20	PL14, PL13, PL7
LA09	PL4 to PL10	LA21	PL9, PL15
LA10	PL10	LA22 & LA24	PL12, PL16
LA11	PL5 to PL11	LA 23 & LA 25	PL13, PL17

Source: USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-24**  
**Chukchi Sea Sales 212, 221: Assumptions about How Launch Areas are Serviced by Pipelines for the Oil-Spill-Trajectory Analysis for Alternative 2, The Proposed Action, and its Alternatives**

Launch Area(s)	Serviced by Hypothetical Pipelines	Launch Area(s)	Serviced by Hypothetical Pipelines
LA01	PL02, PL03, PL04, PL05, PL06	LA09	PL01
LA02	PL04, PL05, PL06	LA10	PL03
LA03	PL07, PL08, PL09	LA11	PL06
LA04	PL02, PL03	LA12	PL09
LA05	PL05, PL06	LA13	PL11
LA06	PL08, PL09	LA14	PL10, PL11
LA07	PL10, PL11	LA15	PL7, PL8
LA08	PL10, PL11		

Source: USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-25**

**Beaufort Sea Sales 209, 217: Estimated Mean Number of Large Platform, Pipeline and Total Spills for Alternative 2, the Proposed Action and its Alternatives Over the 20 Year Production Life**

Sales	Alt. No.	Alternative Name	3 Fields 20 Years Production		
			Mean Number of Platform/ Well Spills	Mean Number of Pipeline Spills	Mean Number of Spills Total
Beaufort 209, 217	1	No Sale	0	0	0
Beaufort 209, 217	2	Proposed Action	0.15	0.15	0.30
Beaufort 209, 217	3	Barrow Deferral	0.15	0.15	0.30
Beaufort 209, 217	4	Cross Island Deferral	0.15	0.15	0.30
Beaufort 209, 217	5	Eastern Deferral	0.15	0.15	0.30
Beaufort 209, 217	6	Deepwater Deferral	0.15	0.15	0.30

**Note:** Total equals the sum of mean platform/wells and pipeline spills over the 20 year production life

**Source:**

USDOI, MMS, Alaska OCS Region (2008)

**Table A.1-26**

**Beaufort Sales 209, 217: Estimated Chance of One or More Large Platform, Pipeline and Total Spills for Alternative 2, the Proposed Action and its Alternatives Over the 20-Year Production Life**

Sales	Alt. No.	Alternative Name	3 Fields 20 Years Production		
			Percent Chance of One or More Platform/ Well Spills	Percent Chance of One or More Pipeline Spills	Percent Chance of One or More Spills Total
Beaufort 209, 217	1	No Sale	0	0	0
Beaufort 209, 217	2	Proposed Action	14	14	26
Beaufort 209, 217	3	Barrow Deferral	14	14	26
Beaufort 209, 217	4	Cross Island Deferral	14	14	26
Beaufort 209, 217	5	Eastern Deferral	14	14	26
Beaufort 209, 217	6	Deepwater Deferral	14	14	26

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-27**

**Chukchi Sea Sales 212 and 221: Estimated Mean Number of Large Platform, Pipeline and Total Spills for Alternative 2, the Proposed Action and its Alternatives Over the 25-Year Production Life**

Sales	Alt. No.	Alternative Name	1 Field 25 Years Production		
			Mean Number of Platform/ Well Spills	Mean Number of Pipeline Spills	Mean Number of Spills Total <sup>1</sup>
Chukchi 212, 221	1	No Sale <sup>2</sup>	0	0	0
Chukchi 212, 221	2	Proposed Action	0.21	0.30	0.51
Chukchi 212, 221	3	Coastal Deferral	0.21	0.30	0.51
Chukchi 212, 221	4	Ledyard Bay Deferral	0.21	0.30	0.51
Chukchi 212, 221	5	Hanna Shoal Deferral	0.21	0.30	0.51
Chukchi 212, 221	6	Deepwater Deferral	0.21	0.30	0.51

**Note:** 1.Total equals the sum of mean platform/wells and pipeline spills; 2 No spills in Chukchi; spills occur elsewhere due to production elsewhere or importing of oil.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-28**

**Chukchi Sales 212 and 221 Estimated Chance of One or More Large Platform, Pipeline and Total Spills for Alternative 2, the Proposed Action and its Alternatives Over the 25-Year Production Life**

Sales	Alt. No.	Alternative Name	1 Field	25 Years	Production
			Percent Chance of One or More Platform/Well Spills	Percent Chance of One or More Pipeline Spills	Percent Chance of One or More Spills Total
Chukchi 212, 221	1	No Sale	0	0	0
Chukchi 212, 221	2	Proposed Action	19	26	40
Chukchi 212, 221	3	Coastal Deferral	19	26	40
Chukchi 212, 221	4	Ledyard Bay Deferral	19	26	40
Chukchi 212, 221	5	Hanna Shoal Deferral	19	26	40
Chukchi 212, 221	6	Deepwater Deferral	19	26	40

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-29**

**Small Crude-Oil Spills: Estimated Spill Rates for the Alaska North Slope**

Small Crude-Oil Spills <500 barrels, 1989-2000		<b>Note:</b> Oil-spill databases are from the ADEC, Anchorage, Juneau, and Fairbanks. Alaska North Slope production data are derived from the TAPS throughput data from Alyeska Pipeline. <b>Source:</b> USDOI, MMS, Alaska OCS Region (2003).
Total Volume of Spills	135,127 gallons	
—	3,217 barrels	
Total Number of Spills	1,178 spills	
Average Spill Size	2.7 barrels	
Production (Crude Oil)	6.6 billion barrels	
Spill Rate	178 spills/billion barrels of crude oil produced	
Small Crude-Oil Spills ≥ 500 barrels and <1,000, 1985-2000		<b>Note:</b> Oil-spill databases are from the ADEC, Anchorage, Juneau, and Fairbanks. BP Alaska Inc. and Arco. Alaska North Slope production data are derived from the TAPS throughput data from Alyeska Pipeline. <b>Source:</b> USDOI, MMS, Alaska OCS Region (2003).
Total Volume of Spills	171,150 gallons	
—	4,075 barrels	
Total Number of Spills	6	
Average Spill Size	680 barrels	
Production (Crude Oil)	9.36 billion barrels	
Spill Rate	0.64 spills/billion barrels of crude oil produced	

## Appendix A

**Table A.1-30**  
**Small Crude-Oil Spills: Assumed Spills over the Production Life of the Beaufort Sea Sales 209 or 217**

Sale 209, 217 Alternative	Assumed Small Crude-Oil Spills <500 barrels				
	Resources (Bbbl) <sup>1</sup>	Spill Rate (Spills/Bbbl)	Assumed Spill Size (bbl)	Estimated Number of Spills	Estimated Total Spill Volume (bbl)
1 No Sale	0	178	3	0	0
2 Proposed Action	0.5	178	3	89	267
3 Barrow Deferral	0.5	178	3	89	267
4 Cross Island Def.	0.5	178	3	89	267
4 Eastern Deferral	0.5	178	3	89	267
6 Deepwater Def.	0.5	178	3	89	267
Alternative	Assumed Small Crude-Oil Spills ≥ 500 and ≤1,000 barrels				
1 No Sale	0	0.64	680	0	0
2 Proposed Action	0.5	0.64	680	0.32	0
3 Barrow Deferral	0.5	0.64	680	0.32	0
4 Cross Island Def.	0.5	0.64	680	0.32	0
4 Eastern Deferral	0.5	0.64	680	0.32	0
6 Deepwater Def.	0.5	0.64	680	0.32	0

**Note:**

<sup>1</sup>The estimation of oil spills is based on the estimated resources produced. If these resources are not produced then no oil spills occur.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-31**

**Small Crude-Oil Spills: Assumed Size Distribution over the 20-Year Production Life of the Beaufort Sea Sales 209 or 217**

Size <sup>2</sup>	Distribution % in ADEC database	Alternative 1 No Sale	Alternatives 2, 3, 4, 5 and 6	
			17	32
<1 gallon	19.14	0	17	32
>1 and ≤5 gallons	35.37	0	18	67
>5 gallons and <1 bbl	20.41	0	18	18
Total <1 bbl		0		
≥1 bbl and ≤5 bbl	20.61	0	18	3
>5 and ≤25 bbl	3.92	0	1	0
> 25 and <500 bbl	1.4	0	22	267
≥500 and ≤1,000 bbl	--	0		
Total >1 and ≤1,000 bbl		0		
Total Volume (bbl)		0		

**Notes:**

<sup>1</sup> Estimated number of spills is rounded to the nearest whole number.

<sup>2</sup> Spill-size distributions are allocated by multiplying the total estimated number of spills by the fraction of spills in that size category from the Alaska Department of Environmental Conservation (ADEC) database.

**Source:**

USDOI, MMS, Alaska OCS Region (2006) and USDOI, MMS Alaska OCS Region (2008).

**Table A.1-32**  
**Small Crude-Oil Spills: Assumed Spills over the 25-Year Production Life of the Chukchi Sea Sales 212 and 221**

<b>Sale 212, 221 Alternative</b>	<b>Assumed Small Crude-Oil Spills &lt;500 barrels</b>				
	<b>Resources (Bbbl)<sup>1</sup></b>	<b>Spill Rate (Spills/Bbbl)</b>	<b>Assumed Spill Size (bbl)</b>	<b>Estimated Number of Spills</b>	<b>Estimated Total Spill Volume (bbl)</b>
1 No Sale	0	178	3	0	0
2 Proposed Action	1	178	3	178	534
3 Coastal Deferral	1	178	3	178	534
4 Ledyard Bay Def.	1	178	3	178	534
5 Hanna Shoal Def.	1	178	3	178	534
6 Deepwater Def.	1	178	3	178	534
<b>Alternative</b>	<b>Assumed Small Crude-Oil Spills ≥ 500 and ≤1,000 barrels</b>				
1 No Sale	0	0.64	680	0	0
2 Proposed Action	1	0.64	680	0.64	680
3 Coastal Deferral	1	0.64	680	0.64	680
4 Ledyard Bay Def.	1	0.64	680	0.64	680
5 Hanna Shoal Def.	1	0.64	680	0.64	680
6 Deepwater Def.	1	0.64	680	0.64	680

**Note:**

<sup>1</sup>The estimation of oil spills is based on the estimated resources produced. If these resources are not produced then no oil spills occur.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-33**  
**Small Crude-Oil Spills: Assumed Size Distribution over the Production Life of the Chukchi Sea Sales 212 and 221**

<b>Size<sup>2</sup></b>	<b>Distribution % in ADEC database</b>	<b>Alternative 1 No Sale</b>	<b>Alternatives 2, 3, 4, 5, and 6</b>
<1 gallon	19.14	0	34
>1 and ≤5 gallons	35.37	0	63
>5 gallons and <1 bbl	20.41	0	36
Total <1 bbl		0	133
≥1 bbl and ≤5 bbl	20.61	0	36
>5 and ≤25 bbl	3.92	0	7
> 25 and <500 bbl	1.4	0	2
≥500 and ≤1,000 bbl	--	0	1
Total >1 and ≤1,000 bbl		0	46
Total Volume (bbl)		0	1,214

**Notes:**

<sup>1</sup> Estimated number of spills is rounded to the nearest whole number.

<sup>2</sup> Spill-size distributions are allocated by multiplying the total estimated number of spills by the fraction of spills in that size category from the Alaska Department of Environmental Conservation (ADEC) database.

**Source:**

USDOI, MMS, Alaska OCS Region (2006) and USDOI, MMS Alaska OCS Region (2008).

## Appendix A

**Table A.1-34**  
**Small Refined-Oil Spills: Estimated Rate for the Alaska North Slope**

Estimated Small Refined Spill Rate for the Alaska North Slope, 1989-2000	
<b>Total Volume of Spills</b>	94,195 gallons
	2,243 barrels
<b>Total Number of Spills</b>	2,915 spills
<b>Average Spill Size</b>	0.7 barrels (29 gallons)
<b>Production (Crude Oil)</b>	6.6 billion barrels
<b>Spill Rate</b>	440 spills/billion barrels of crude oil produced

**Source:**

USDOI, MMS, Alaska OCS Region (2003).

**Table A.1-35**

**Small Refined-Oil Spills: Assumed Spills over the Production Life of the Beaufort Sea Sales 209, 217**

Sales 209, 217 and its Alternatives	Resource Range (Bbbl)	Spill Rate (Spills/Bbbl)	Average Spill Size (bbl)	Estimated Number of Spills <sup>1</sup>	Estimated Total Spill Volume (bbl) <sup>1</sup>
1 No Sale	0	440	0.7 (29 gal)	0	0
2 Proposal	0.50	440	0.7 (29 gal)	220	154
3 Coastal Deferral	0.50	440	0.7 (29 gal)	220	154
4 Ledyard Bay Def.	0.50	440	0.7 (29 gal)	220	154
5 Hanna Shoal Def.	0.50	440	0.7 (29 gal)	220	154
6 Deepwater Def.	0.50	440	0.7 (29 gal)	220	154

**Note:**

<sup>1</sup> The fractional estimated mean spill number and volume is rounded to the nearest whole number.

**Key:** Bbbl = Billion barrels. bbl = barrel. gal = gallon.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

**Table A.1-36**

**Small Refined-Oil Spills: Assumed Spills over the Production Life of the Chukchi Sea Sales 212, 221**

Sales 212, 221 and its Alternatives	Resource Range (Bbbl)	Spill Rate (Spills/Bbbl)	Average Spill Size (bbl)	Estimated Number of Spills <sup>1</sup>	Estimated Total Spill Volume (bbl) <sup>1</sup>
1 No Sale	0	440	0.7 (29 gal)	0	0
2 Proposal	1	440	0.7 (29 gal)	440	308
3 Coastal Deferral	1	440	0.7 (29 gal)	440	308
4 Ledyard Bay Def.	1	440	0.7 (29 gal)	440	308
5 Hanna Shoal Def.	1	440	0.7 (29 gal)	440	308
6 Deepwater Def.	1	440	0.7 (29 gal)	440	308

**Note:**

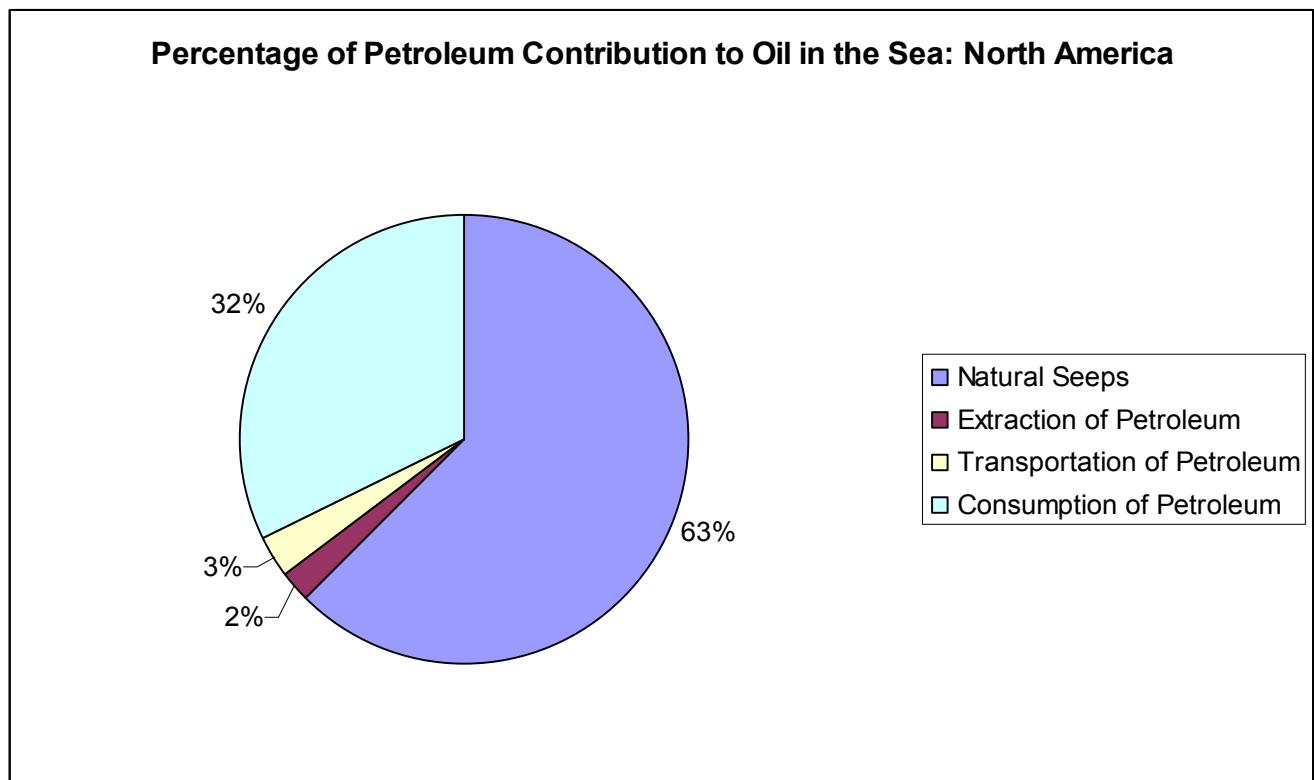
<sup>1</sup> The fractional estimated mean spill number and volume is rounded to the nearest whole number.

**Key:**

Bbbl = Billion barrels. bbl = barrel. gal = gallon.

**Source:**

USDOI, MMS, Alaska OCS Region (2008).

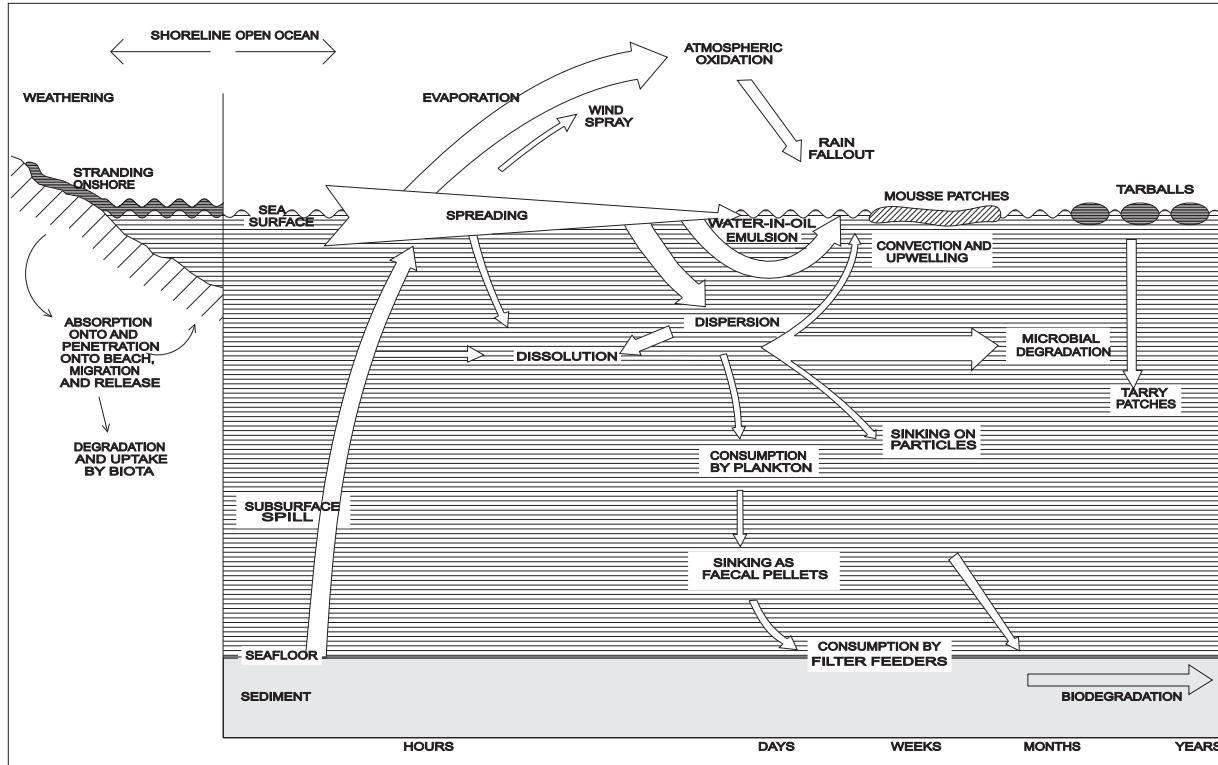


**Source:** National Research Council, (2003).

**Figure A.1-1 Contributions of Oil in the Sea for North America**

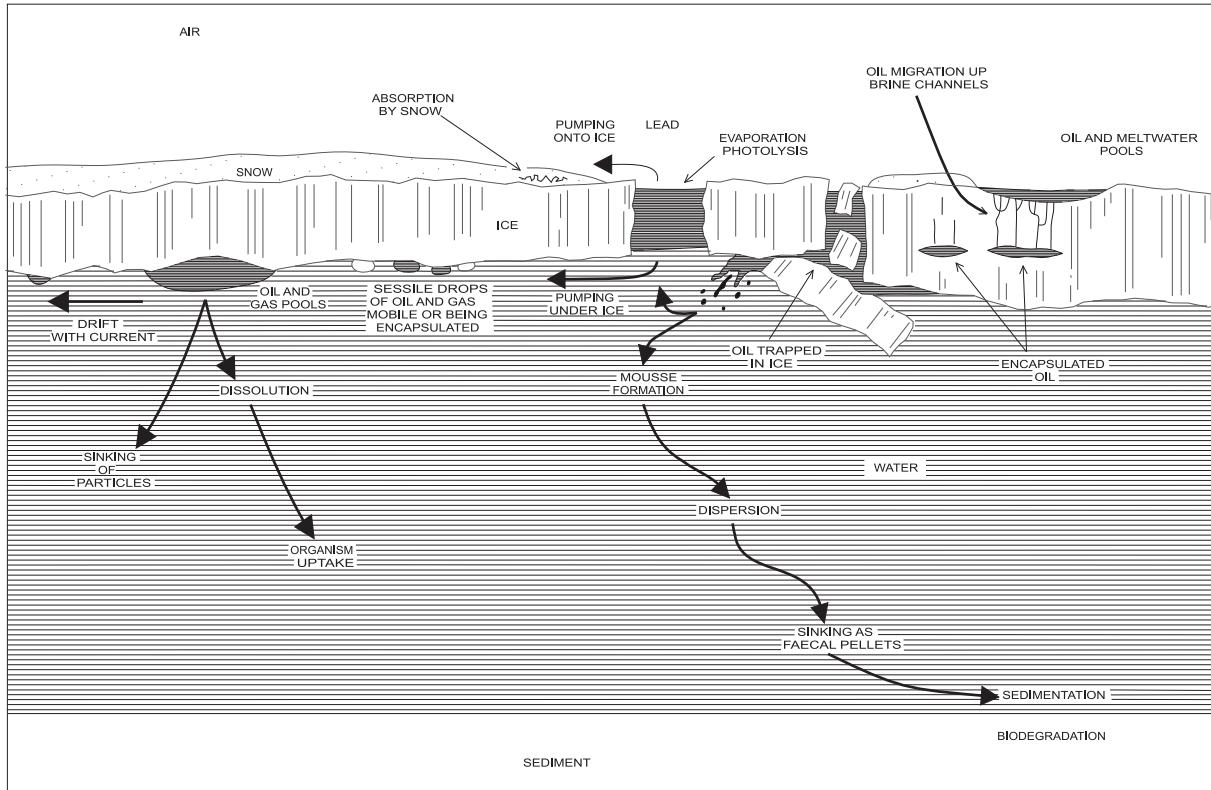
## Appendix A

### Summer



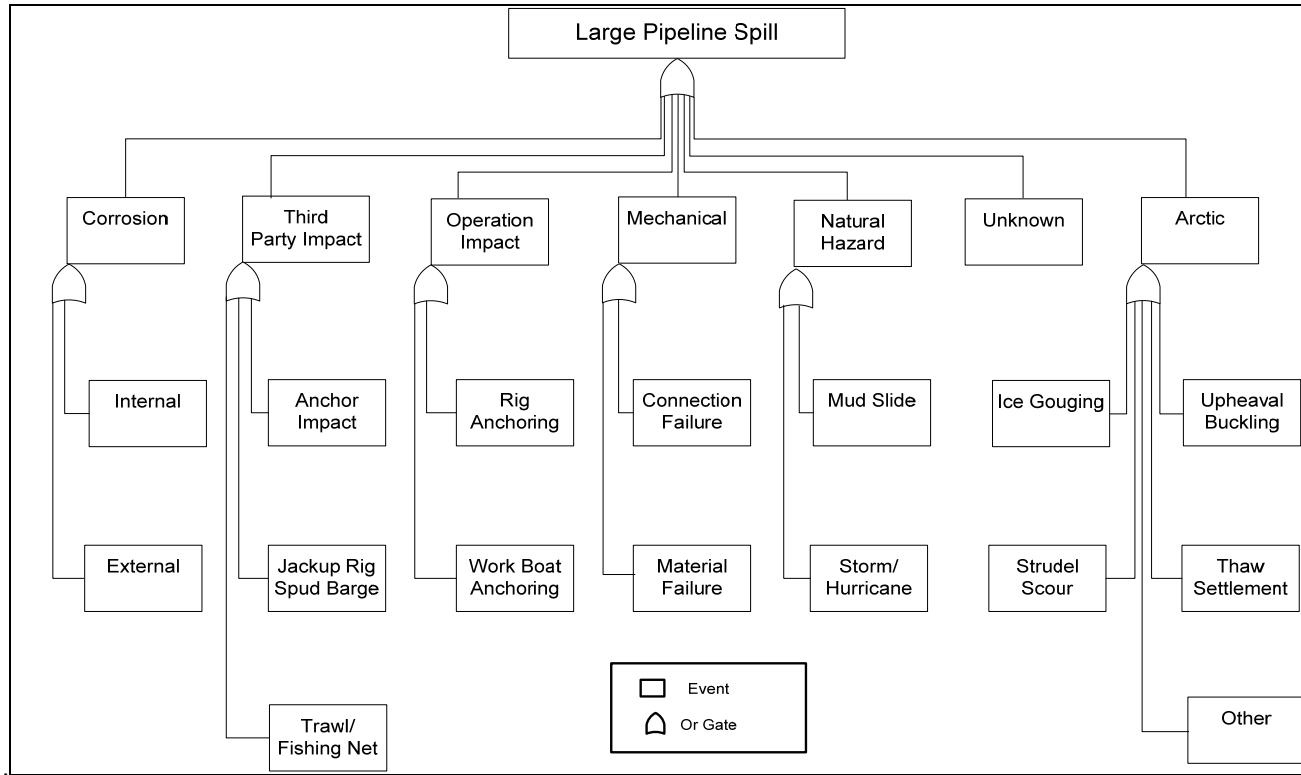
Source: After MacKay, 1985, and Rasmussen, (1985).

### Winter

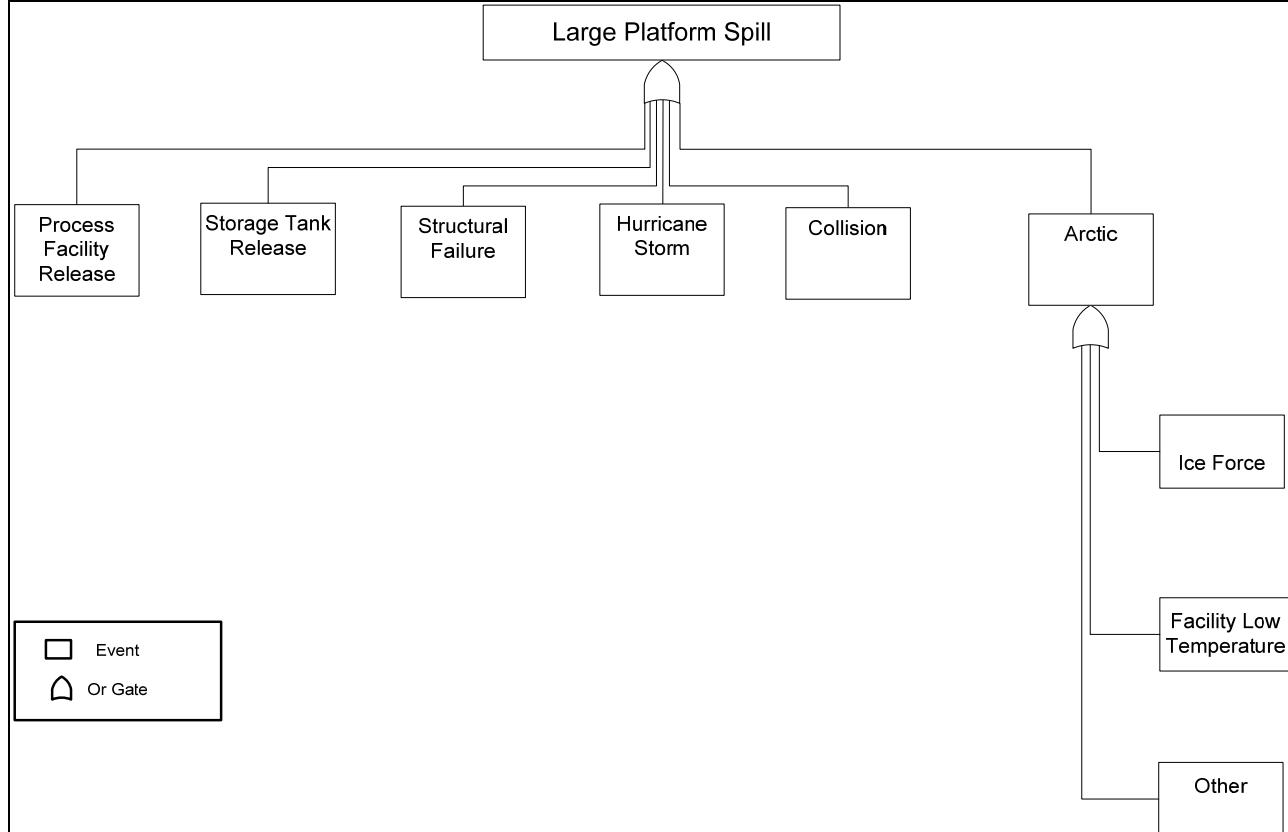


Source: After Hillman and Shafer (1983), and Mackay, (1985).

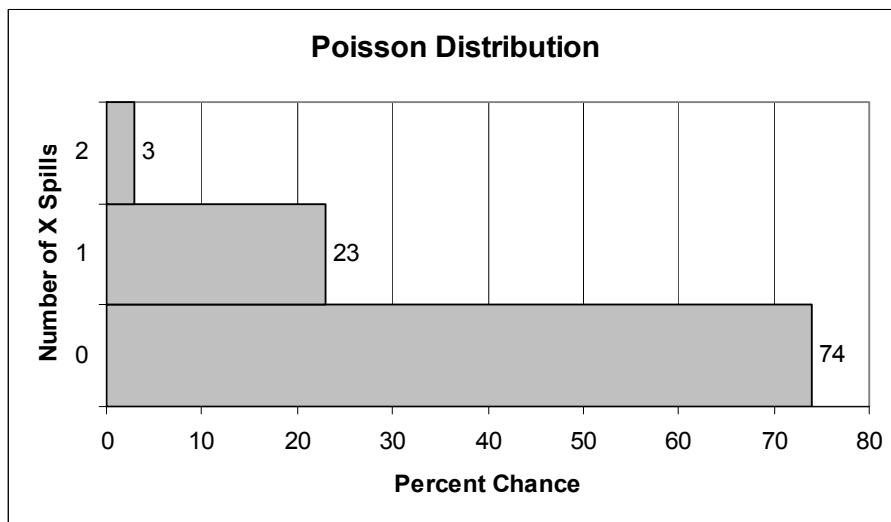
**Figure A.1-2 Fate of Oil Spills in the Ocean During the Arctic Summer and Winter**



**Figure A.1-3. Typical Fault Tree for a Pipeline Spill**

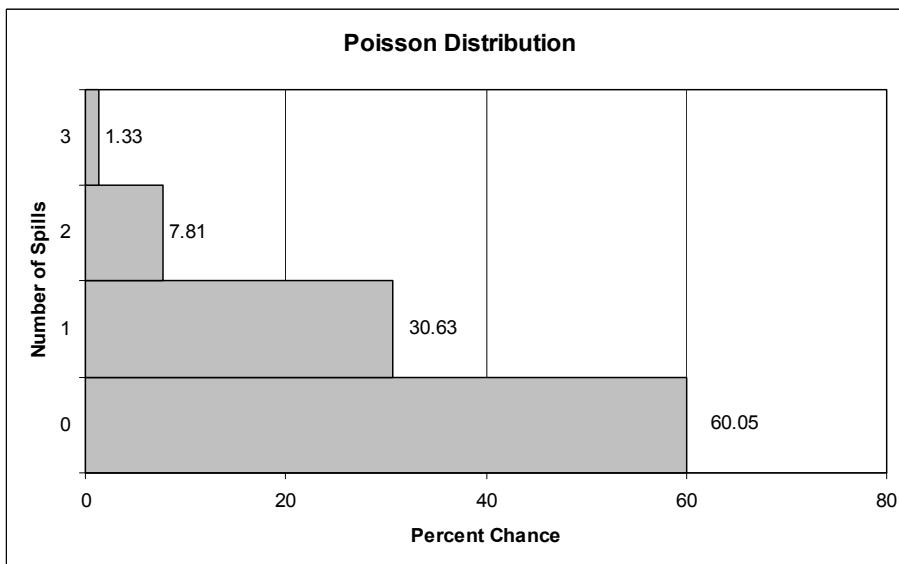


**Figure A.1-4. Typical Fault Tree for a Platform Spill**



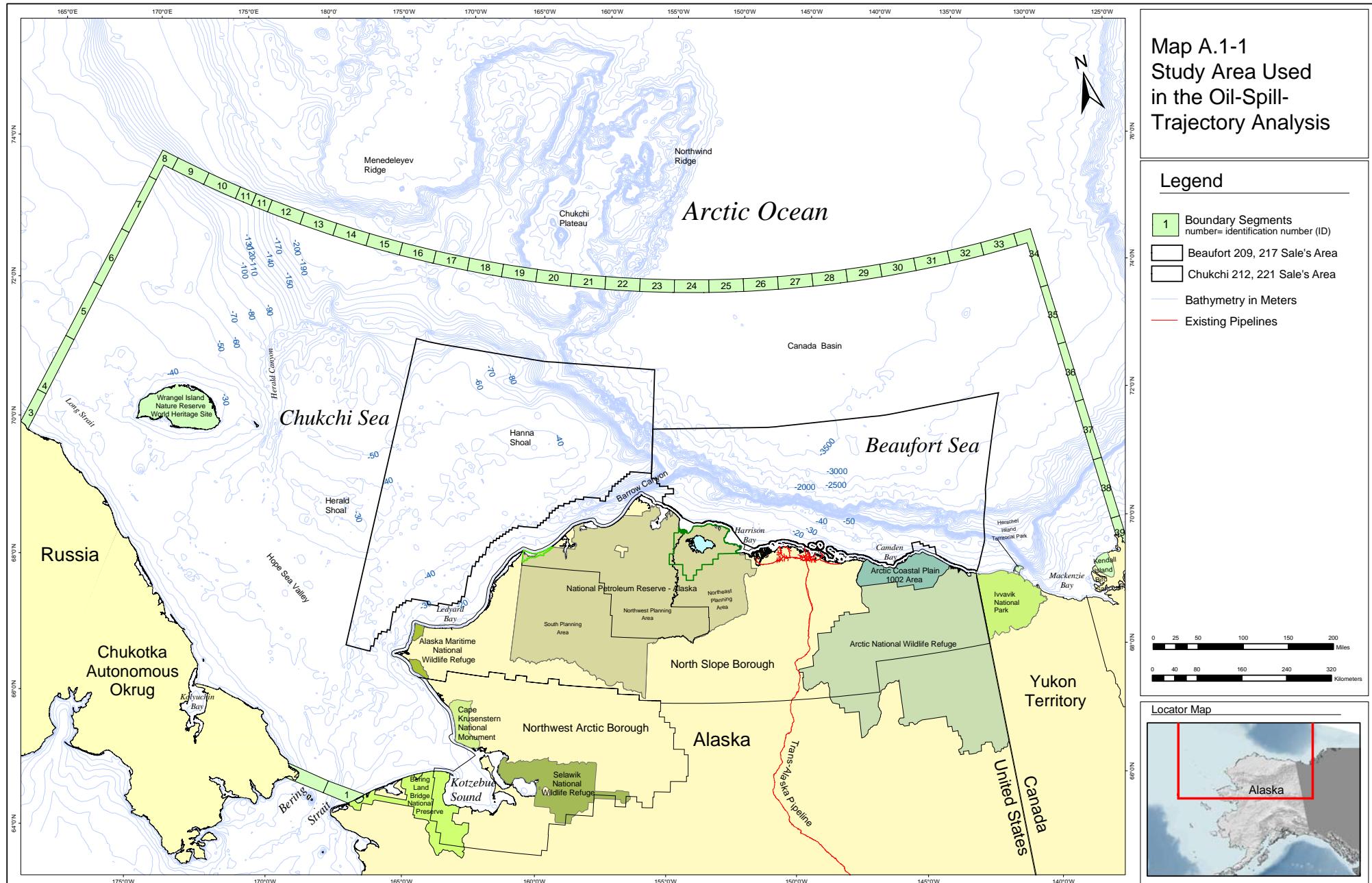
Mean Number of Spills = 0.3  
 Percent Chance of One or More = 26%  
 Percent Chance of No Spills = 74%  
 Most Likely Number = 0

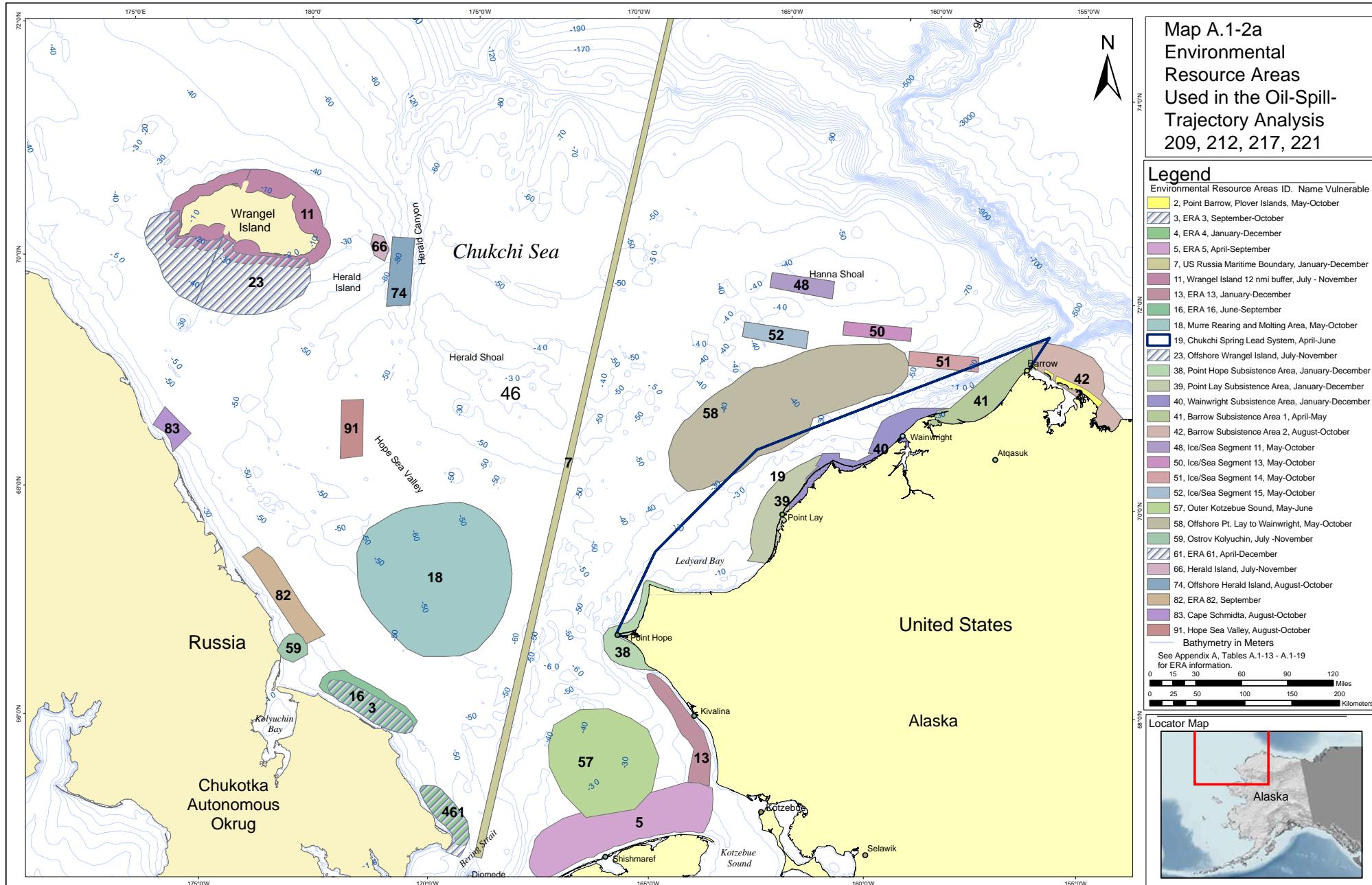
**Figure A.1-5. Poisson Distribution: Beaufort Sea Sales 209 or 217, Alternative 2, Proposed Action and its Alternatives, Total (Pipeline and Platform) over the 20-Year Production Life**

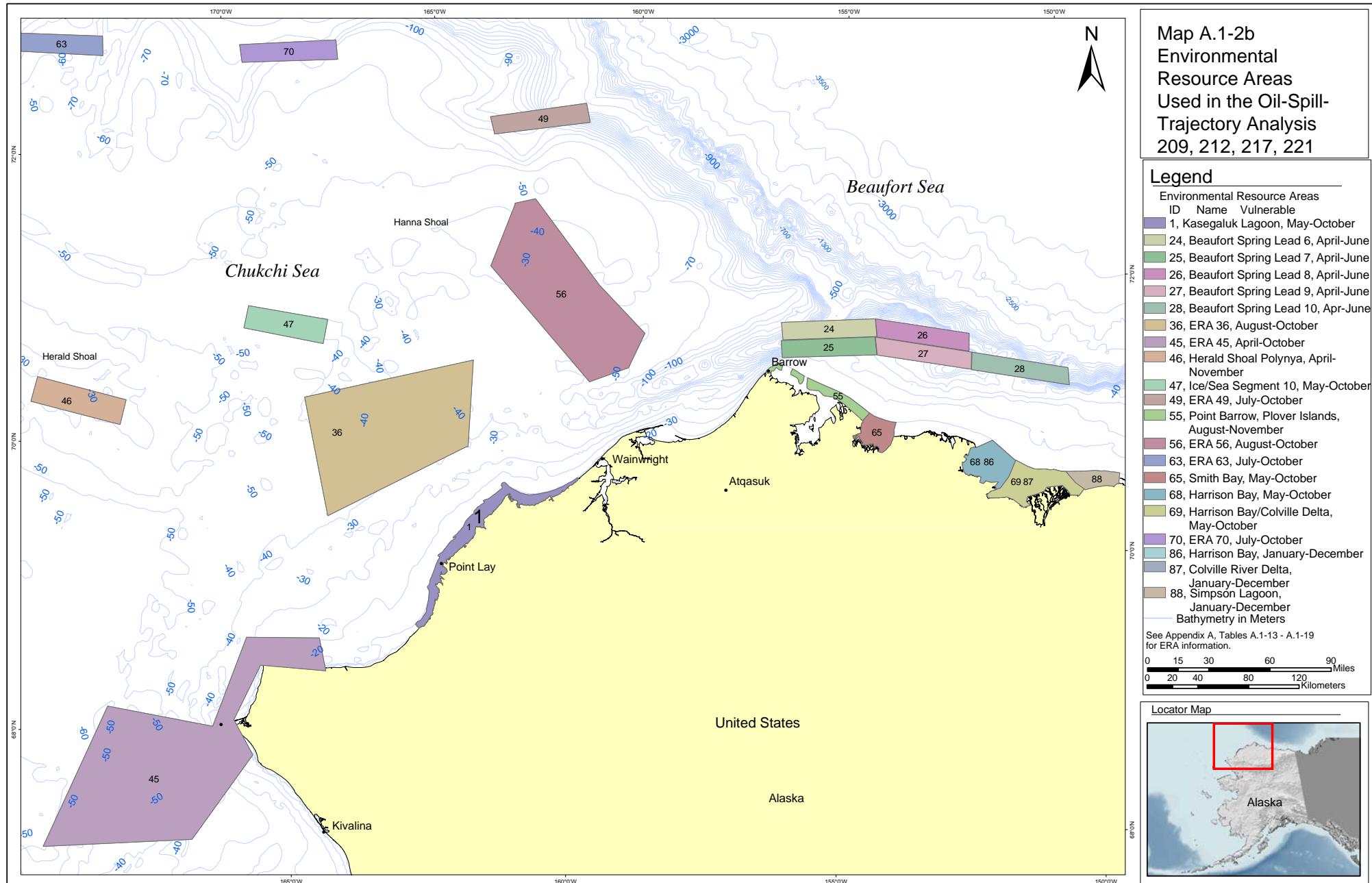


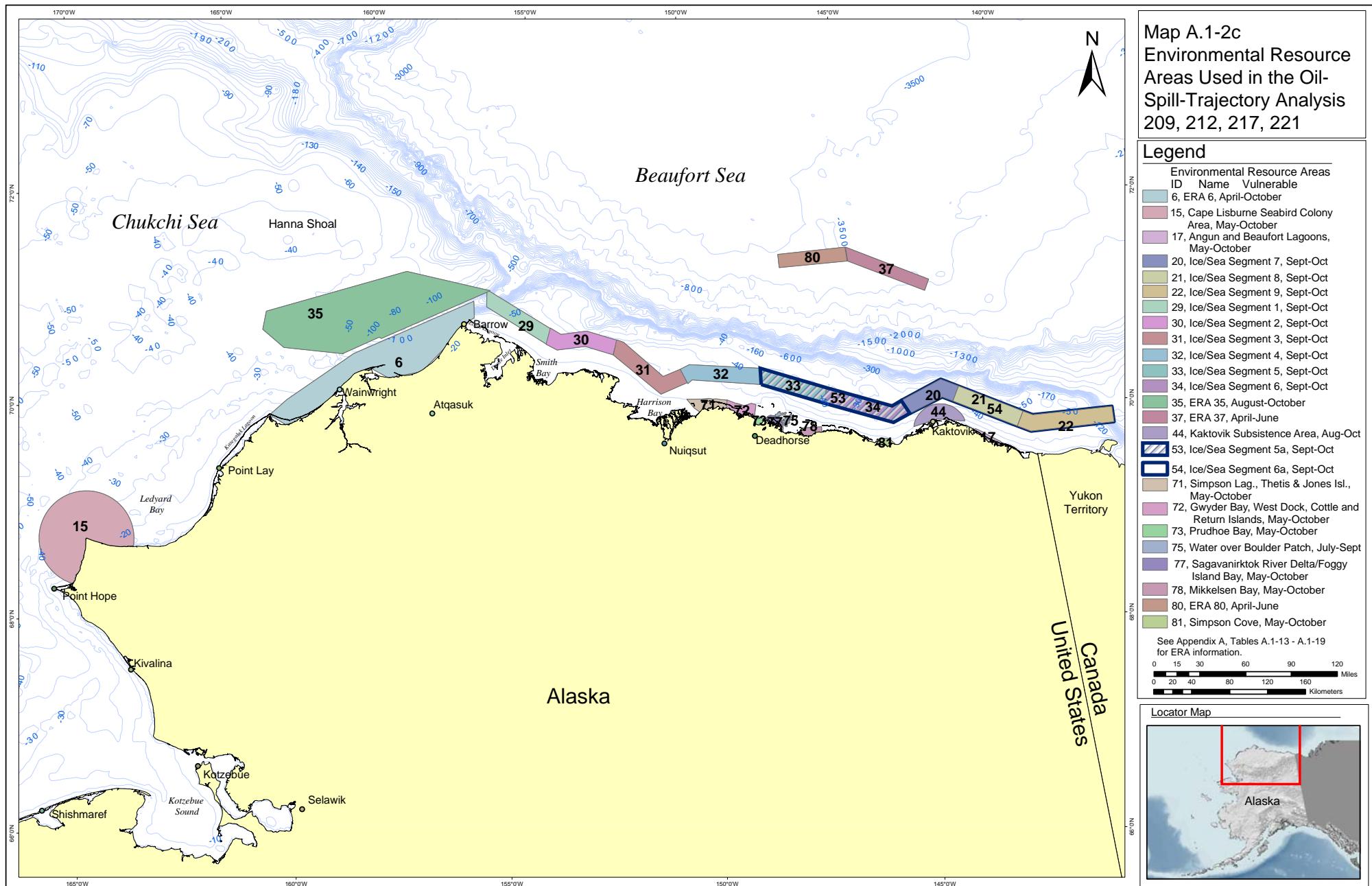
Mean Number of Spills = 0.51  
 Percent Chance of One or More = 40%  
 Percent Chance of No Spills = 60%  
 Most Likely Number = 0

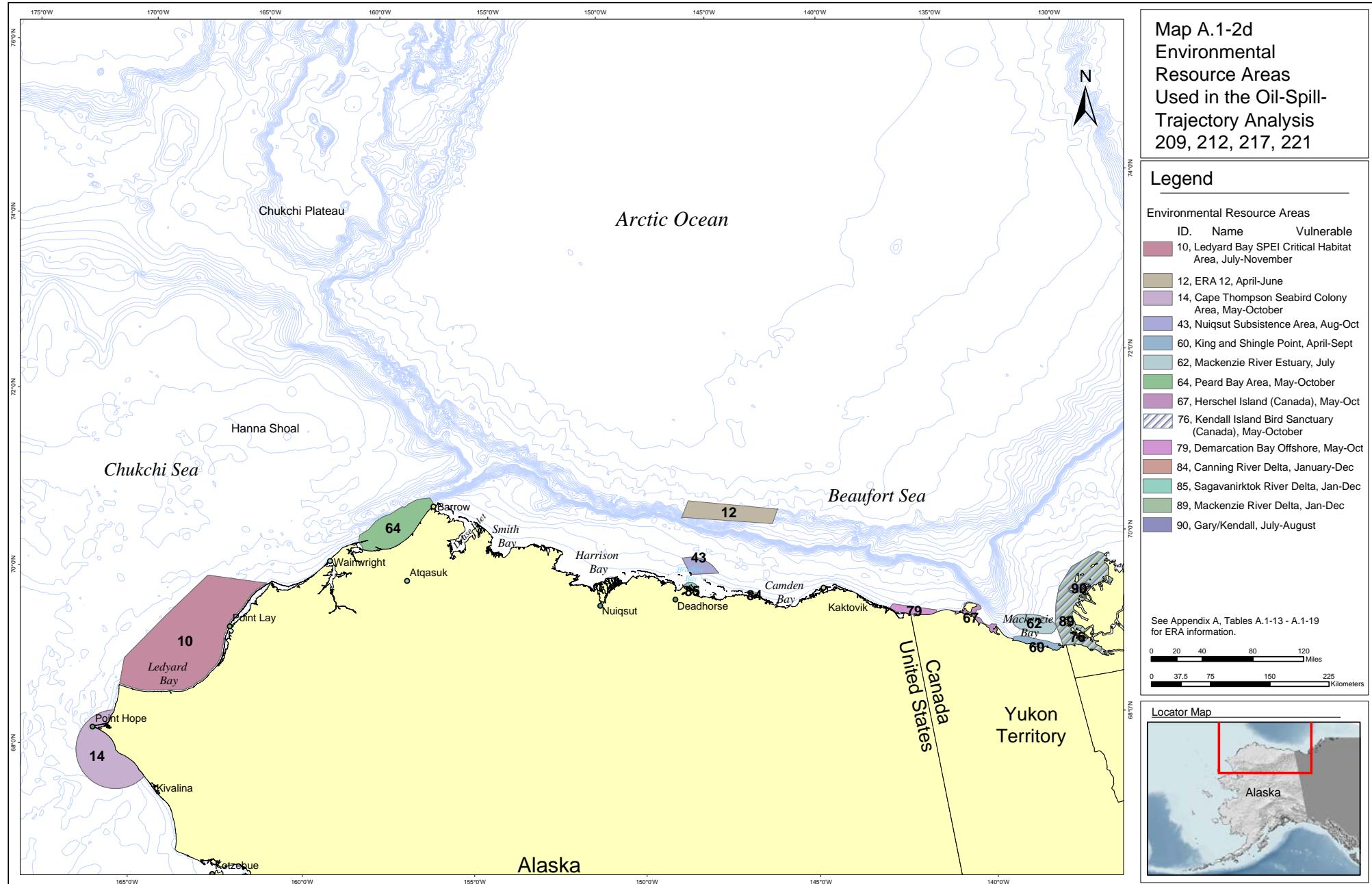
**Figure A.1-6. Poisson Distribution: Chukchi Sales 212 and 221, Alternative 2, Proposed Action and its Alternatives, Total (Pipeline and Platform) over the 25-Year Production Life**

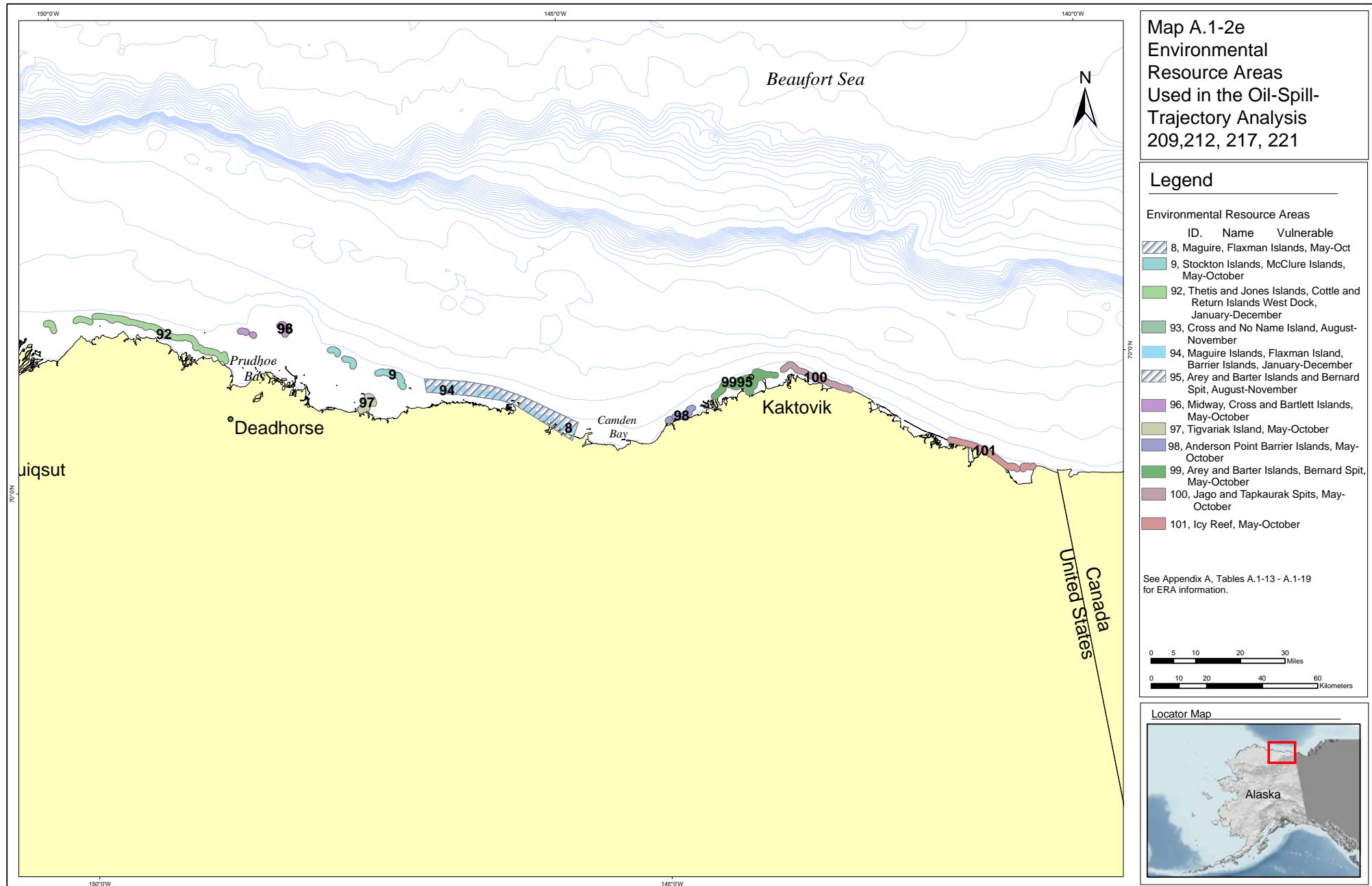




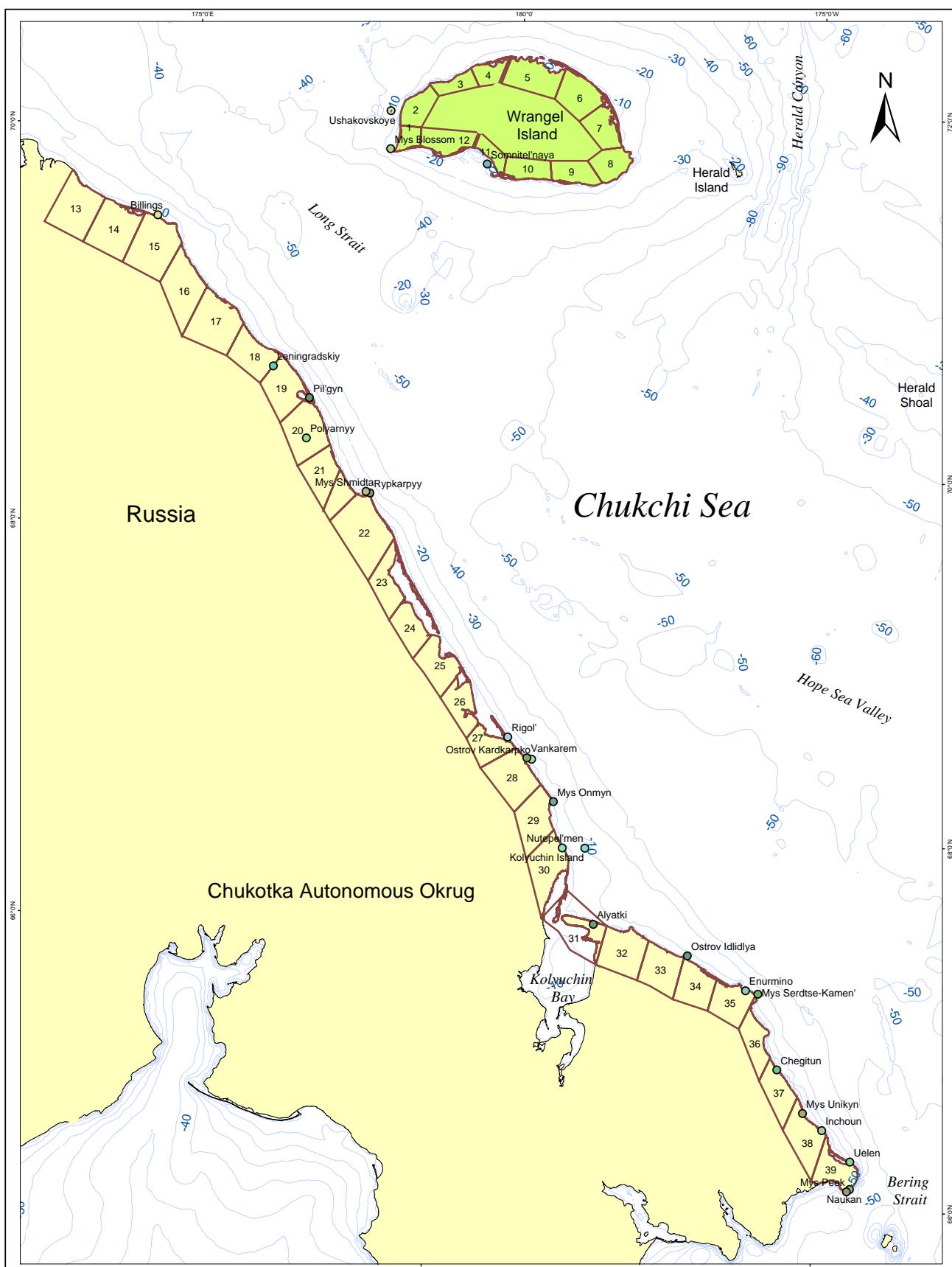








## Appendix A



Map A.1-3a  
Land Segments  
(1-39) Used  
In the Oil-Spill-  
Trajectory Analysis  
209, 212, 217, 221

Arctic Multiple-Sale Draft EIS

### Legend

- 1 Land Segments, number = identification number (ID)
- Wrangel Island Nature World Heritage Site
- Chukotka Autonomous Okrug, Russia
- Bathymetry in Meters

0 5 10 20 30 Miles  
0 10 20 40 60 Kilometers

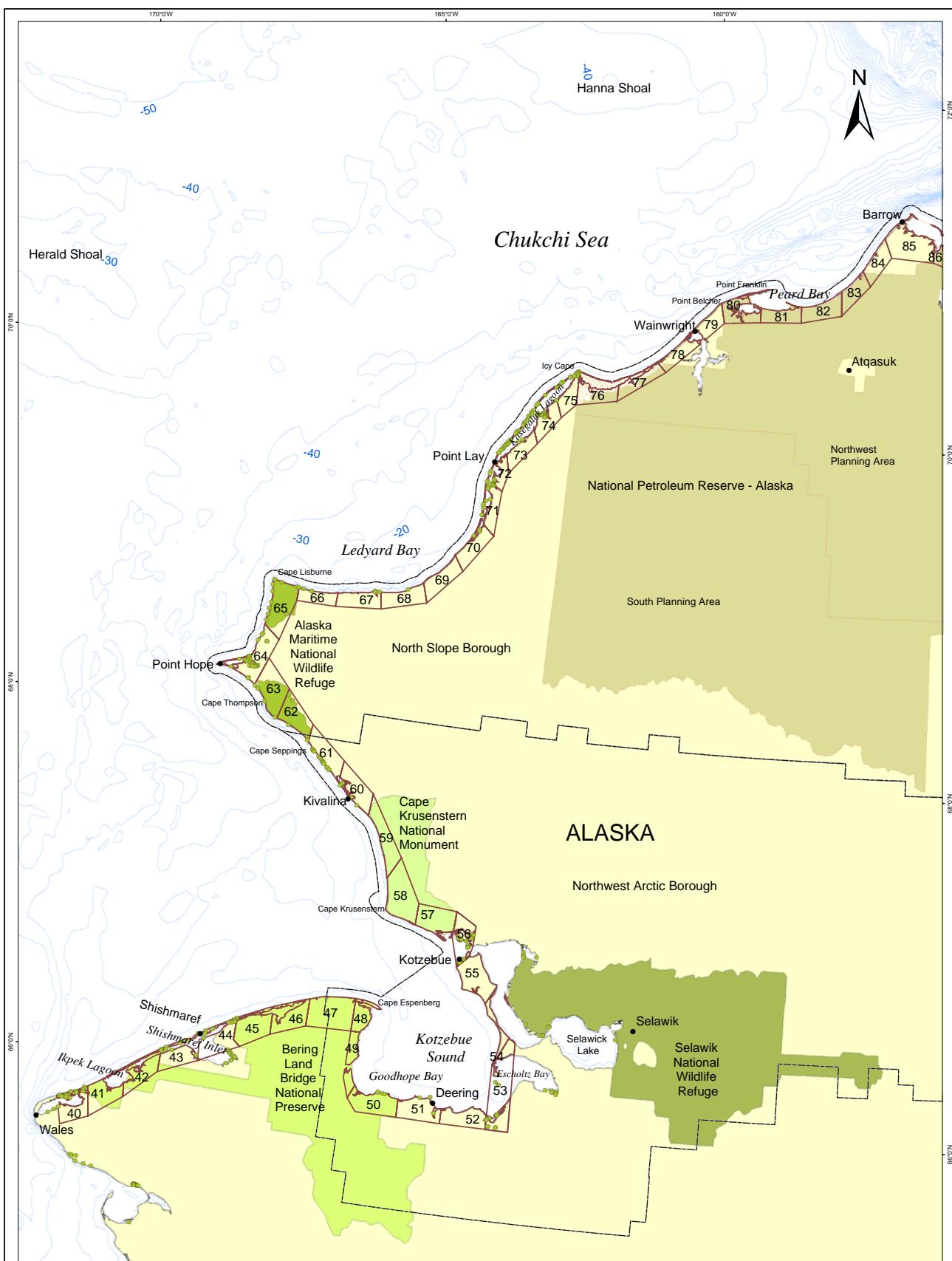
A.1-78

### Locator Map



November 2008

## Appendix A



**Map A.1-3b  
Land Segments  
(40-85) Used  
In the Oil-Spill-  
Trajectory Analysis**  
**209, 212, 217, 221**  
Arctic Multiple-Sale Draft EIS

### Legend

- 40 Land Segments, number = identification number (ID)
- Kasegaluk Lagoon Special Use Area
- Alaska Maritime National Wildlife Refuge
- Bathymetry in Meters

0 15 30 60 Miles

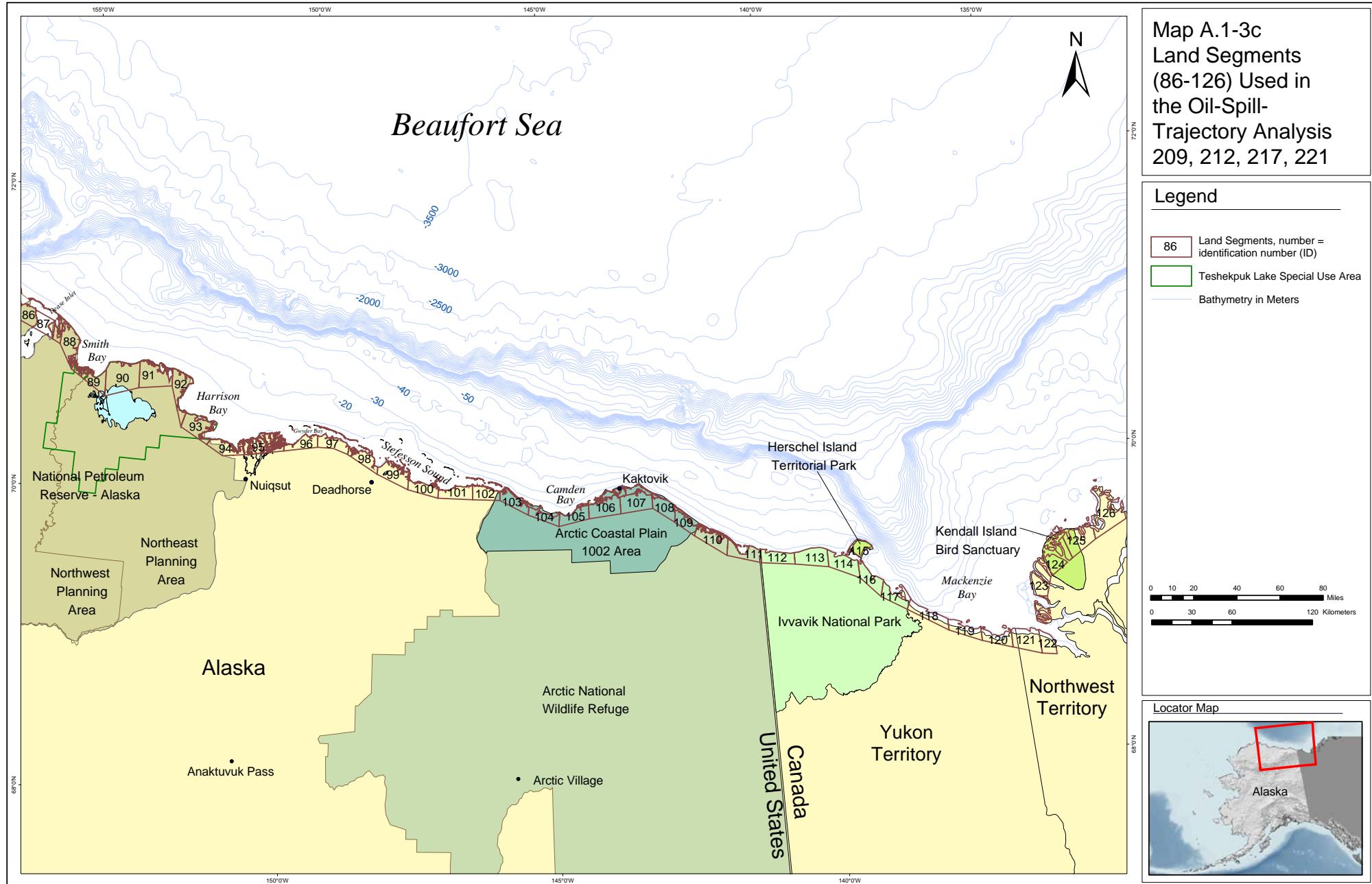
0 25 50 100 Miles

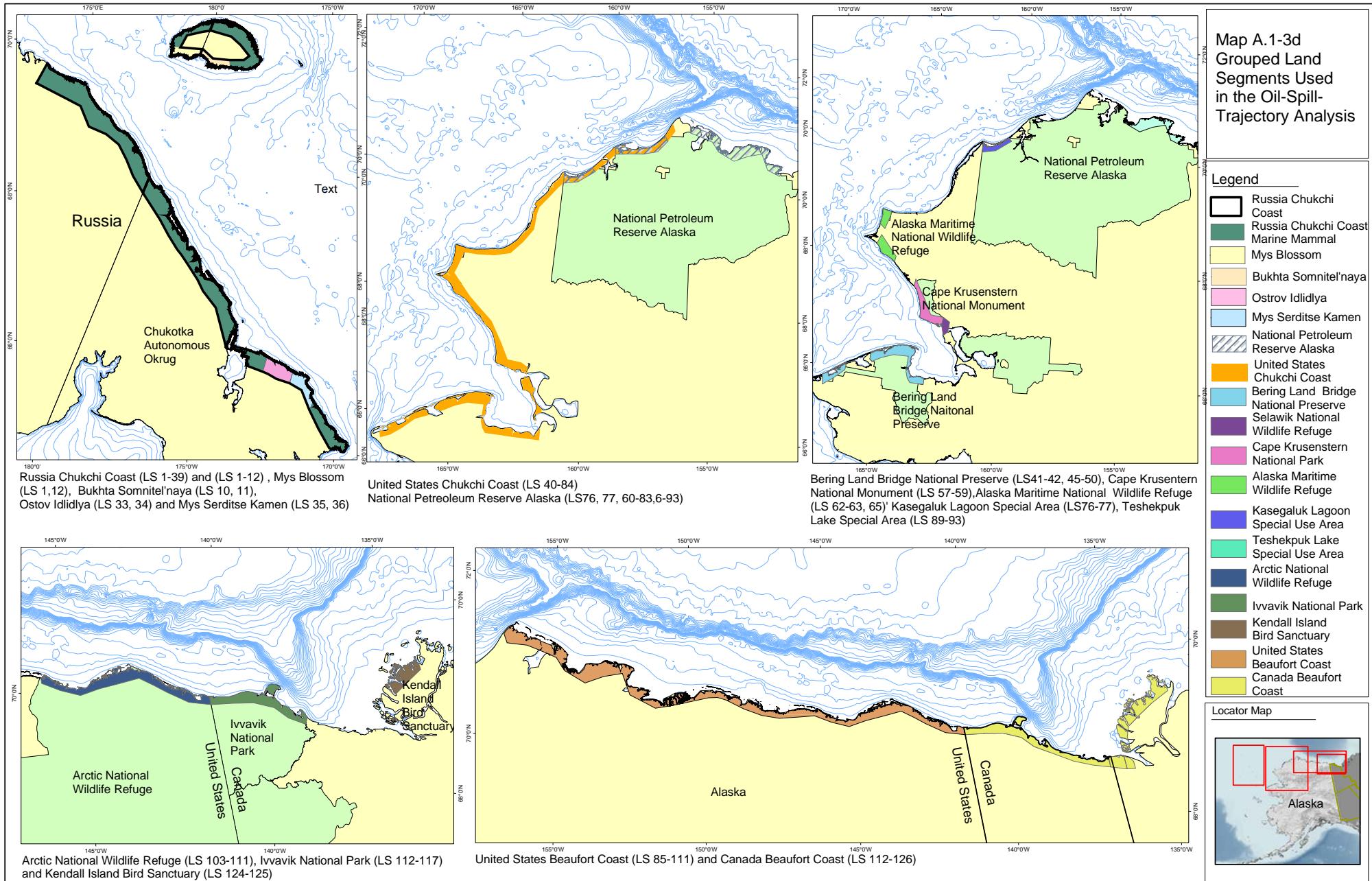
A.1-79

### Locator Map

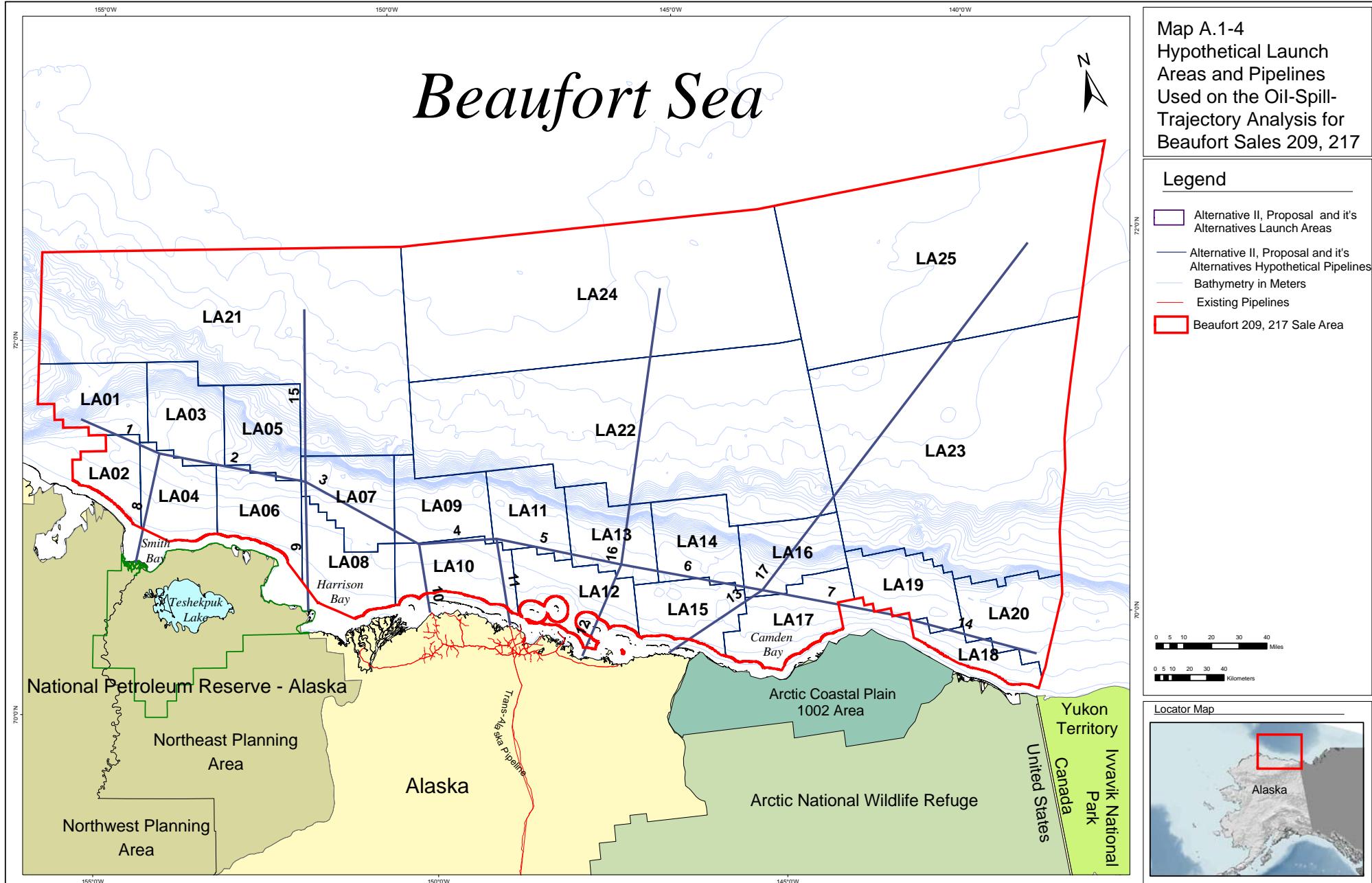


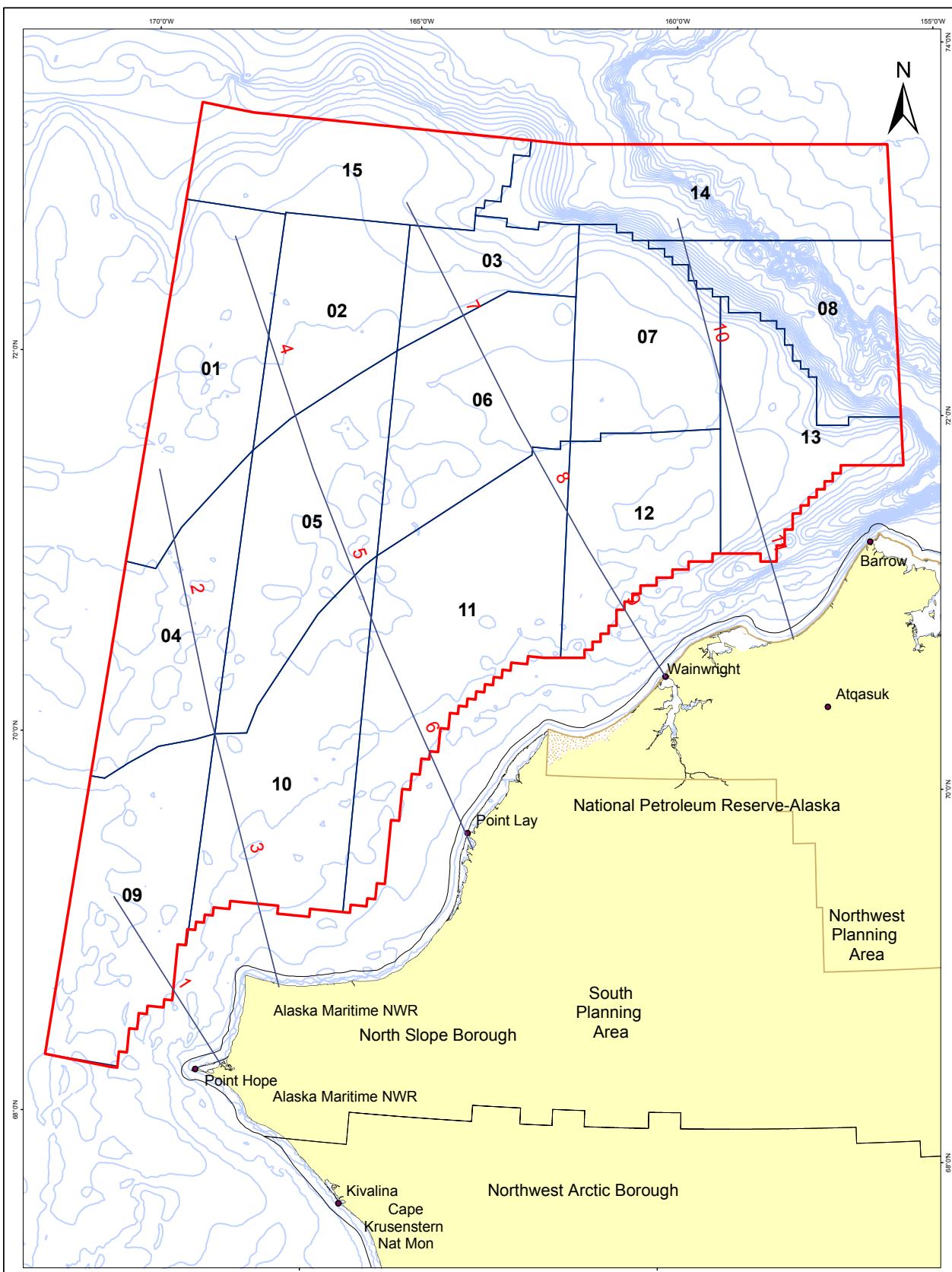
November 2008





# Beaufort Sea







## **APPENDIX A.2**

### **BEAUFORT SEA SALES 209, 217 SUPPORTING TABLES**

---



## Appendix A

### Appendix A.2 Beaufort Sea 209, 217 Table List

#### Table Titles

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ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	1	5	-	5	-	5	-	4	-	1	-	1	-	-	1	-	4	9	1	1	-	-	-	-	
2	Point Barrow, Plover Islands	1	9	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
12	ERA 12	-	-	-	-	-	-	-	-	-	-	3	-	3	1	-	-	-	-	-	-	5	-	-	-	
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7	-	4	-	-	-	-	-	
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	11	6	-	-	-	-	-	
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	6	-	-	-	-	-	
24	Beaufort Spring Lead 6	15	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	Beaufort Spring Lead 7	10	7	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	Beaufort Spring Lead 8	1	1	12	1	10	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	Beaufort Spring Lead 9	1	1	12	4	10	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	Beaufort Spring Lead 10	-	-	-	-	4	1	11	1	4	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
29	Ice/Sea Segment 1	4	11	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	Ice/Sea Segment 2	-	2	2	9	2	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Ice/Sea Segment 3	-	-	-	-	1	6	4	11	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	Ice/Sea Segment 4	-	-	-	-	-	-	1	1	1	12	4	3	1	-	-	-	-	-	-	-	-	-	-	-	
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	-	1	1	10	5	2	4	-	-	-	-	-	-	-	-	-	
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	1	1	3	12	1	7	-	-	-	-	-	-	-	
37	ERA 37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	
42	Barrow Subsistence Area 2	7	21	1	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	Nuqsut Subsistence Area	-	-	-	-	-	-	-	-	-	1	-	13	1	1	2	-	-	-	-	-	-	-	-	-	
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	2	-	-	-	-	-	
55	Point Barrow, Plover Islands	1	6	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
65	Smith Bay	-	1	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
68	Harrison Bay	-	-	-	-	-	2	-	9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
69	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	13	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	-	1	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-	1	-	-	-	-	-	
80	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
86	Harrison Bay	-	-	-	-	-	2	1	17	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Colville River Delta	-	-	-	-	-	-	-	27	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Simpson Lagoon	-	-	-	-	-	-	-	1	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
96	Midway, Cross & Bartlett Islands	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

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**Table A.2-2. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	1	1	-	-	-	-	1	3	4	1	1	1	2	4	-	-	-
<b>2</b>	Point Barrow, Plover Islands	2	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
<b>8</b>	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
<b>9</b>	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
<b>12</b>	ERA 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-
<b>17</b>	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
<b>20</b>	Ice/Sea Segment 7	-	-	-	-	-	-	11	-	-	-	-	-	1	-	-	-	1
<b>21</b>	Ice/Sea Segment 8	-	-	-	-	-	-	1	-	-	-	-	-	8	-	-	-	-
<b>22</b>	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
<b>24</b>	Beaufort Spring Lead 6	10	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
<b>25</b>	Beaufort Spring Lead 7	18	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
<b>26</b>	Beaufort Spring Lead 8	2	4	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
<b>27</b>	Beaufort Spring Lead 9	4	11	-	-	-	-	-	7	-	-	-	-	-	1	-	-	-
<b>28</b>	Beaufort Spring Lead 10	-	3	5	-	-	-	-	-	3	-	-	-	-	9	-	-	-
<b>29</b>	Ice/Sea Segment 1	8	1	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
<b>30</b>	Ice/Sea Segment 2	1	6	-	-	-	-	-	8	1	-	-	-	-	-	-	-	-
<b>31</b>	Ice/Sea Segment 3	-	1	4	2	-	-	-	-	11	5	-	-	-	1	-	-	-
<b>32</b>	Ice/Sea Segment 4	-	-	4	17	5	-	-	-	-	12	12	-	-	-	-	-	-
<b>33</b>	Ice/Sea Segment 5	-	-	-	-	8	4	-	-	-	2	10	-	-	-	-	-	-
<b>34</b>	Ice/Sea Segment 6	-	-	-	-	-	6	4	-	-	-	2	10	-	-	-	1	-
<b>42</b>	Barrow Subsistence Area 2	14	1	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-
<b>43</b>	Nuqsut Subsistence Area	-	-	-	-	2	1	-	-	-	3	8	-	-	-	-	-	-
<b>44</b>	Kaktovik Subsistence Area	-	-	-	-	-	-	11	-	-	-	-	-	-	1	-	-	-
<b>55</b>	Point Barrow, Plover Islands	1	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
<b>68</b>	Harrison Bay	-	-	-	-	-	-	-	-	16	1	-	-	-	-	-	-	-
<b>69</b>	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-
<b>71</b>	Simpson Lagoon, Thetis and Jones Island	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-
<b>72</b>	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-
<b>75</b>	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
<b>79</b>	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
<b>80</b>	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
<b>86</b>	Harrison Bay	-	-	1	-	-	-	-	-	32	2	-	-	-	-	-	-	-
<b>87</b>	Colville River Delta	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	-
<b>88</b>	Simpson Lagoon	-	-	-	-	-	-	-	-	3	4	-	-	-	-	-	-	-
<b>92</b>	Thetis, Jones, Cottle and Return Islands West Dock	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-
<b>93</b>	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
<b>94</b>	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
<b>95</b>	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>96</b>	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-
<b>100</b>	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
<b>101</b>	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-3. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25									
-- LAND		6	16	4	15	4	13	3	12	-	5	-	6	-	1	7	1	10	22	7	9	1	-	-	-	-									
<b>2</b>	Point Barrow, Plover Islands	5	16	3	7	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<b>6</b>	ERA 6	5	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>8</b>	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	1	-	-	4	-	4	-	-	-	-	-	-	-	-	-									
<b>9</b>	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	2	-	-	3	-	1	-	-	-	-	-	-	-	-	-									
<b>12</b>	ERA 12	-	-	-	-	-	-	-	-	1	1	5	1	6	4	-	3	-	-	-	-	-	7	1	-	-									
<b>17</b>	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	2	2	-	-	-	-	-									
<b>19</b>	Chukchi Spring Lead System	4	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<b>20</b>	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	4	9	-	6	-	-	-	1	-	-	-								
<b>21</b>	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	6	13	8	-	-	1	-									
<b>22</b>	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	9	-	-	-	-	-									
<b>24</b>	Beaufort Spring Lead 6	17	8	5	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>25</b>	Beaufort Spring Lead 7	12	11	4	6	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>26</b>	Beaufort Spring Lead 8	2	3	15	5	12	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>27</b>	Beaufort Spring Lead 9	2	4	13	7	12	6	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>28</b>	Beaufort Spring Lead 10	-	-	1	1	6	4	16	5	11	3	4	-	1	-	-	-	-	-	-	-	2	2	-	-	-									
<b>29</b>	Ice/Sea Segment 1	6	12	3	5	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>30</b>	Ice/Sea Segment 2	1	4	3	10	4	9	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-									
<b>31</b>	Ice/Sea Segment 3	-	-	1	1	2	7	6	13	3	6	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-									
<b>32</b>	Ice/Sea Segment 4	-	-	-	-	-	-	1	2	2	13	6	5	3	1	1	-	-	-	-	-	-	-	-	-	-									
<b>33</b>	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	3	2	12	6	4	6	2	1	-	-	-	-	-	-	-	-	-									
<b>34</b>	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	3	1	4	13	3	9	-	-	-	-	-	-	-	-	-									
<b>35</b>	ERA 35	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-									
<b>37</b>	ERA 37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	2	1	-									
<b>41</b>	Barrow Subsistence Area 1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<b>42</b>	Barrow Subsistence Area 2	11	23	5	11	3	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-									
<b>43</b>	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	-	3	1	15	3	2	5	1	1	-	-	-	-	-	-	-	-									
<b>44</b>	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	7	1	4	-	-	-	-	-	-	-								
<b>55</b>	Point Barrow, Plover Islands	4	10	2	5	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
<b>64</b>	Pearl Bay Area	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
<b>65</b>	Smith Bay	-	3	1	6	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
<b>67</b>	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-								
<b>68</b>	Harrison Bay	-	-	-	-	1	4	2	13	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
<b>69</b>	Harrison Bay/Colville Delta	-	-	-	-	-	-	1	1	16	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-								
<b>71</b>	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	-	2	-	4	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-								
<b>72</b>	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	3	-	5	1	-	2	-	1	-	-	-	-	-	-	-	-	-	-								
<b>73</b>	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-								
<b>75</b>	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-								
<b>77</b>	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-								
<b>79</b>	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	1	7	-	-	-	-	-	-								
<b>80</b>	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-								
<b>84</b>	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-							
<b>85</b>	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-							
<b>86</b>	Harrison Bay	-	-	-	-	1	5	4	22	1	6	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
<b>87</b>	Colville River Delta	-	-	-	-	-	2	2	30	1	8	1	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-							
<b>88</b>	Simpson Lagoon	-	-	-	-	-	-	3	-	8	-	6	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-							
<b>92</b>	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	1	-	3	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
<b>93</b>	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
<b>94</b>	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-						
<b>95</b>	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-					
<b>96</b>	Midway, Cross & Bartlett Islands	-	-	-	-	-	-	-	-	1	-	5	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-					
<b>98</b>	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-				
<b>99</b>	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
<b>100</b>	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	1	3	-	-	-	-	-	-	-	-	-	-	-	-		
<b>101</b>	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-4. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	9	7	3	1	1	2	6	13	12	4	4	5	9	16	2	-	-
2	Point Barrow, Plover Islands	9	3	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
6	ERA 6	4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	1	1	-	-	-	-	1	6	-	-	-	-
9	Stockton Islands, McClure Islands	-	-	-	-	-	1	1	-	-	-	-	3	4	-	-	-	-
12	ERA 12	-	-	-	1	2	1	-	-	-	1	1	1	-	-	-	7	2
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
19	Chukchi Spring Lead System	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	2	12	-	-	-	-	-	3	1	-	-	2
21	Ice/Sea Segment 8	-	-	-	-	-	-	3	-	-	-	-	-	1	9	-	-	1
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
24	Beaufort Spring Lead 6	15	3	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-
25	Beaufort Spring Lead 7	20	4	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-
26	Beaufort Spring Lead 8	5	8	1	-	-	-	-	7	1	-	-	-	-	-	3	-	-
27	Beaufort Spring Lead 9	6	14	2	-	-	-	-	11	2	-	-	-	-	-	3	-	-
28	Beaufort Spring Lead 10	-	5	11	5	1	-	-	7	4	2	-	-	-	10	1	-	-
29	Ice/Sea Segment 1	10	3	-	-	-	-	-	7	-	-	-	-	-	-	1	-	-
30	Ice/Sea Segment 2	3	8	2	-	-	-	-	10	2	-	-	-	-	-	2	-	-
31	Ice/Sea Segment 3	1	2	6	5	2	-	-	1	13	8	3	1	-	-	2	-	-
32	Ice/Sea Segment 4	-	-	5	17	8	1	-	-	-	14	14	3	-	-	-	1	-
33	Ice/Sea Segment 5	-	-	-	1	10	7	1	-	-	1	5	12	3	-	-	1	1
34	Ice/Sea Segment 6	-	-	-	-	1	8	6	-	-	-	-	4	13	-	-	-	1
35	ERA 35	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	ERA 37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
41	Barrow Subsistence Area 1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	17	6	1	-	-	-	-	13	1	-	-	-	-	-	1	-	-
43	Nuiqsut Subsistence Area	-	-	-	1	4	4	1	-	-	1	5	11	3	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	1	13	-	-	-	-	3	3	-	-	1	-
55	Point Barrow, Plover Islands	6	2	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-
64	Pearl Bay Area	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Smith Bay	1	1	-	-	-	-	-	4	1	-	-	-	-	-	-	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
68	Harrison Bay	-	1	2	1	-	-	-	-	19	3	1	-	-	-	1	-	-
69	Harrison Bay/Colville Delta	-	-	2	2	1	-	-	-	5	5	2	1	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	-	1	1	1	-	-	-	3	4	2	1	-	-	-	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	1	1	1	-	-	1	4	4	2	-	-	-	-	-
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-
80	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
86	Harrison Bay	-	2	4	4	1	-	-	-	35	8	3	1	-	-	1	-	-
87	Colville River Delta	-	1	3	3	2	1	-	-	6	10	5	1	-	-	1	-	-
88	Simpson Lagoon	-	-	1	2	2	1	-	-	6	8	3	1	-	-	-	-	-
89	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	Thetis, Jones, Cottle and Return Islands	-	-	-	1	1	-	-	-	2	3	2	1	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	1	-	-	-	1	2	1	-	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	1	-	-	-	2	4	2	-	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	4	-	-	-	-	1	3	-	-	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-5. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	18	26	13	25	13	22	10	20	5	11	3	12	3	4	15	7	20	34	18	24	5	1	4	-	-
2	Point Barrow, Plover Islands	11	21	7	12	5	5	2	2	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
6	ERA 6	10	6	4	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	1	-	-	5	1	6	-	-	-	-	-	-	-	-	-
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	1	-	3	-	1	5	1	2	-	-	-	-	-	-	-	-	-
12	ERA 12	-	-	-	-	-	-	1	-	2	2	8	3	9	8	3	7	2	-	1	-	-	9	2	-	-
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8	4	4	-	-	1	-	-
19	Chukchi Spring Lead System	7	4	3	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	1	1	3	4	6	10	1	7	1	-	1	2	-	-	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	1	1	2	4	4	7	15	10	-	-	3	-	-	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	5	4	12	-	-	2	-	-
24	Beaufort Spring Lead 6	18	10	7	6	4	2	2	1	2	-	1	-	-	-	-	-	-	-	-	-	3	1	-	-	-
25	Beaufort Spring Lead 7	14	13	7	7	4	3	2	1	2	1	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-
26	Beaufort Spring Lead 8	3	4	16	7	14	6	4	2	3	1	2	1	1	1	-	-	-	-	-	-	2	2	-	1	-
27	Beaufort Spring Lead 9	2	5	14	9	13	8	5	3	4	2	3	1	1	1	-	-	-	-	-	-	2	2	-	1	-
28	Beaufort Spring Lead 10	-	1	2	2	8	7	20	9	17	11	12	6	9	6	3	3	1	-	-	-	3	7	1	1	-
29	Ice/Sea Segment 1	8	13	5	6	3	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
30	Ice/Sea Segment 2	2	5	5	11	6	10	3	2	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
31	Ice/Sea Segment 3	1	1	2	2	3	8	8	14	5	8	3	3	2	2	1	1	1	-	-	-	1	1	-	-	-
32	Ice/Sea Segment 4	-	-	-	-	-	1	2	3	4	15	7	7	4	2	2	1	1	-	-	-	1	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	-	-	-	1	1	1	4	3	13	8	6	8	3	2	-	-	-	1	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	1	1	4	3	6	14	5	10	-	1	-	-	-	-	-	-
35	ERA 35	7	3	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
37	ERA 37	-	-	-	-	-	-	-	1	-	1	-	1	1	-	-	-	-	-	-	-	3	3	2	2	-
41	Barrow Subsistence Area 1	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
42	Barrow Subsistence Area 2	15	24	10	14	7	6	3	2	1	1	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	1	1	4	2	16	4	4	7	2	2	-	-	-	-	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	1	1	2	4	4	9	1	6	1	-	-	1	-	-
50	Ice/Sea Segment 13	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	Ice/Sea Segment 14	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	7	12	5	7	3	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
56	ERA 56	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
64	Pearl Bay Area	5	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
65	Smith Bay	1	4	2	8	2	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	5	-	-	1	-	-
68	Harrison Bay	-	-	1	1	2	5	4	15	2	5	1	3	1	1	1	1	1	-	-	-	-	-	-	-	-
69	Harrison Bay/Colville Delta	-	-	1	1	1	2	3	17	1	6	1	3	1	1	2	1	1	-	-	-	-	-	-	-	-
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	1	3	-	6	1	5	1	1	3	1	1	-	-	-	-	-	-	-	-	-
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	4	-	7	1	1	5	1	2	-	1	-	-	-	-	-	-	-	-
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	1	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	-
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	19	5	12	-	-	1	-	-	-
80	ERA 80	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	3	1	5	1	-
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
85	Sagavanirkot River Delta	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	-
86	Harrison Bay	-	1	2	1	3	7	7	25	4	10	4	5	4	3	3	2	1	-	-	-	1	1	-	-	-
87	Colville River Delta	-	-	1	1	2	3	4	33	3	12	3	6	3	3	3	2	1	-	-	-	-	-	-	-	-
88	Simpson Lagoon	-	-	-	-	-	1	3	1	10	1	9	2	3	5	2	2	-	1	-	-	-	-	-	-	-
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	2	-	4	1	5	1	1	3	1	1	-	-	-	-	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	1	-	3	-	1	2	-	1	-	-	-	-	-	-	-	-	-
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	1	-	-	3	-	3	-	-	-	-	-	-	-	-	-
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-
96	Midway, Cross & Bartlett Islands	-	-	-	-	-	-	-	-	1	-	6	1	1	4	1	2	-	-	-	-	-	-	-	-	-
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	1	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	5	1	6	1	-	-	1
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	2	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-6 . Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	21	17	11	7	5	8	16	23	21	11	10	11	19	30	8	1	4
2	Point Barrow, Plover Islands	14	7	2	1	-	-	-	15	2	1	-	-	-	-	3	-	-
6	ERA 6	8	3	1	-	-	-	-	5	-	-	-	-	-	-	1	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	1	2	-	-	-	-	1	7	-	-	-	-
9	Stockton Islands, McClure Islands	-	-	-	-	-	1	2	-	-	-	1	3	6	-	-	-	-
12	ERA 12	-	-	1	3	5	5	3	-	-	2	3	4	2	-	-	9	4
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	1	-	-	-	-	-	-	6	-	-	-
19	Chukchi Spring Lead System	5	2	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
20	Ice/Sea Segment 7	-	-	-	-	1	4	14	-	-	-	-	1	5	2	-	-	3
21	Ice/Sea Segment 8	-	-	-	-	-	2	6	-	-	-	-	1	2	10	-	-	3
22	Ice/Sea Segment 9	-	-	-	-	-	1	1	-	-	-	-	-	1	7	-	-	1
24	Beaufort Spring Lead 6	16	6	2	1	-	-	-	9	1	1	-	-	-	-	3	-	-
25	Beaufort Spring Lead 7	21	6	2	1	-	-	-	10	2	1	1	-	-	-	2	-	-
26	Beaufort Spring Lead 8	6	11	4	2	1	-	-	9	3	2	1	-	-	-	5	1	-
27	Beaufort Spring Lead 9	7	16	4	3	2	1	-	12	4	3	2	1	-	-	5	1	-
28	Beaufort Spring Lead 10	-	7	17	13	9	4	1	1	10	12	9	5	2	-	12	6	2
29	Ice/Sea Segment 1	11	4	1	1	-	-	-	8	2	1	-	-	-	-	2	-	-
30	Ice/Sea Segment 2	4	9	3	1	-	-	-	10	4	2	1	-	-	-	4	-	-
31	Ice/Sea Segment 3	1	3	8	8	4	2	-	2	14	10	5	2	1	-	3	1	-
32	Ice/Sea Segment 4	-	-	6	18	10	2	1	-	1	15	15	4	1	-	-	1	1
33	Ice/Sea Segment 5	-	-	1	2	11	8	2	-	-	2	6	13	5	-	-	1	1
34	Ice/Sea Segment 6	-	-	-	1	2	10	8	-	-	-	1	5	14	-	-	1	2
35	ERA 35	4	2	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
37	ERA 37	-	-	-	1	1	-	-	-	-	-	-	-	-	-	3	2	-
41	Barrow Subsistence Area 1	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	20	9	3	1	-	-	-	16	4	1	-	-	-	-	4	-	-
43	Nuiqsut Subsistence Area	-	-	1	2	5	6	2	-	-	2	6	12	4	-	-	1	1
44	Kaktovik Subsistence Area	-	-	-	-	-	4	15	-	-	-	1	6	3	-	-	2	-
48	Ice/Sea Segment 11	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
50	Ice/Sea Segment 13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	Ice/Sea Segment 14	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	9	5	1	1	-	-	-	9	2	1	-	-	-	-	2	-	-
56	ERA 56	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
64	Pearl Bay Area	4	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
65	Smith Bay	2	3	1	1	-	-	-	6	2	1	-	-	-	-	1	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
68	Harrison Bay	1	2	4	4	2	1	1	1	20	6	3	2	1	-	2	-	-
69	Harrison Bay/Colville Delta	-	1	3	4	2	2	1	-	6	8	5	2	1	-	1	-	-
70	ERA 70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	1	2	2	2	1	-	1	4	6	4	3	-	-	-	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	1	2	3	2	-	-	2	5	6	4	-	-	1	-
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	1	1	-	-	-	-	1	2	2	-	-	-
76	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	1	-	-	-	1	2	2	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	1	-	-	-	-	-	-	13	-	-	-
80	ERA 80	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	7	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	-	1	-	-	-	1	2	2	-	-	-	-
86	Harrison Bay	1	3	8	9	5	3	1	1	38	13	7	4	2	-	3	1	1
87	Colville River Delta	1	2	5	7	5	3	1	1	9	14	9	4	2	-	2	1	1
88	Simpson Lagoon	-	-	1	3	4	4	2	-	1	7	11	6	4	-	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	1	1	2	2	1	-	3	5	4	3	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	1	1	-	-	-	1	3	1	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	1	1	-	-	-	-	1	4	-	-	-	-
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	1	1	2	2	-	-	1	2	6	4	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	1	2	-	-	-	-	1	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	2	6	-	-	-	-	-	2	4	-	-	1
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-7. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 60 Days, Beaufort Sea Sales 209, 217**

Appendix A

**Table A.2-8. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	28	24	17	13	11	15	25	30	27	17	16	17	27	40	13	4	11
2	Point Barrow, Plover Islands	17	10	3	2	1	-	-	18	4	2	1	1	-	-	4	1	-
6	ERA 6	10	5	2	1	1	-	-	7	1	1	1	-	-	3	1	-	
8	Maguire, Flaxman Islands	-	-	-	-	-	2	3	-	-	-	1	9	1	-	-	1	
9	Stockton Islands, McClure Islands	-	-	-	-	-	2	2	-	-	-	1	4	7	-	-	-	
12	ERA 12	-	-	1	4	6	7	4	-	-	3	4	5	3	1	-	9	6
17	Angun and Beaufort Lagoons	-	-	-	-	-	1	2	-	-	-	-	-	1	8	-	-	1
19	Chukchi Spring Lead System	7	3	1	-	-	-	-	4	1	-	-	-	-	2	1	-	
20	Ice/Sea Segment 7	-	-	-	1	2	5	15	-	-	1	1	3	6	2	-	1	4
21	Ice/Sea Segment 8	-	-	-	1	2	4	7	-	-	-	1	3	4	10	-	1	4
22	Ice/Sea Segment 9	-	-	-	-	1	2	4	-	-	-	1	2	8	-	1	2	
24	Beaufort Spring Lead 6	17	7	3	2	1	-	10	2	2	1	1	1	-	4	2	-	
25	Beaufort Spring Lead 7	21	8	3	2	2	1	1	11	2	2	2	1	1	-	4	2	1
26	Beaufort Spring Lead 8	7	12	6	4	3	2	1	9	4	4	2	2	1	-	6	3	1
27	Beaufort Spring Lead 9	7	16	6	5	4	3	1	13	5	4	3	2	1	-	5	3	1
28	Beaufort Spring Lead 10	1	7	18	15	13	10	5	2	12	14	12	9	5	-	12	8	5
29	Ice/Sea Segment 1	11	5	2	1	-	-	-	8	2	1	-	-	-	3	-	-	
30	Ice/Sea Segment 2	5	9	3	2	1	-	-	11	4	2	1	-	-	5	-	-	
31	Ice/Sea Segment 3	2	4	9	8	4	2	1	2	14	11	6	3	1	-	4	1	1
32	Ice/Sea Segment 4	-	-	6	19	10	3	1	-	2	15	16	5	1	-	1	1	1
33	Ice/Sea Segment 5	-	-	1	3	11	9	2	-	1	3	7	14	5	-	-	2	1
34	Ice/Sea Segment 6	-	-	-	1	3	10	8	-	-	1	2	6	14	-	-	1	2
35	ERA 35	5	3	1	1	-	-	-	4	1	1	-	-	-	2	-	-	
37	ERA 37	-	-	-	1	1	1	1	-	-	1	1	1	1	-	-	4	3
40	Wainwright Subsistence Area	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
41	Barrow Subsistence Area 1	3	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	
42	Barrow Subsistence Area 2	20	11	4	2	1	-	-	17	5	3	1	-	-	6	1	-	
43	Nuiqsut Subsistence Area	-	-	1	2	5	6	2	-	-	2	6	13	5	-	-	1	1
44	Kaktovik Subsistence Area	-	-	-	-	1	5	16	-	-	-	1	2	6	4	-	1	3
48	Ice/Sea Segment 11	1	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	
50	Ice/Sea Segment 13	2	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
51	Ice/Sea Segment 14	2	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	
52	Ice/Sea Segment 15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	Point Barrow, Plover Islands	9	5	2	1	-	-	-	10	2	1	1	-	-	3	-	-	
56	ERA 56	3	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	
58	Offshore Pt. Lay to Wainwright	2	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
64	Pearl Bay Area	5	2	1	-	-	-	-	3	-	1	-	-	-	1	1	-	
65	Smith Bay	3	4	2	1	1	-	-	6	2	1	1	-	-	2	-	-	
67	Herschel Island (Canada)	-	-	-	-	-	1	-	-	-	-	-	-	-	6	-	-	1
68	Harrison Bay	1	2	5	6	3	2	1	1	22	8	5	3	2	-	2	-	1
69	Harrison Bay/Colville Delta	1	2	4	5	3	3	1	1	8	9	6	3	2	-	2	-	1
71	Simpson Lagoon, Thetis and Jones Island	-	-	1	2	3	3	2	-	1	4	7	5	4	-	-	-	1
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	1	2	3	3	-	-	2	6	7	6	-	-	-	1
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
75	Water over Boulder Patch	-	-	-	-	-	1	1	-	-	-	1	2	2	-	-	-	
76	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
77	Sagavanirktoq River Delta/Foggy Island Bay	-	-	-	-	-	1	1	-	-	-	1	2	2	-	-	-	
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
79	Demarcation Bay Offshore	-	-	-	-	-	1	2	-	-	-	-	-	1	15	-	-	2
80	ERA 80	-	-	1	2	2	1	1	-	-	1	1	1	-	-	8	1	
84	Canning River Delta	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	
85	Sagavanirktoq River Delta	-	-	-	-	-	1	1	-	-	-	1	2	2	-	-	-	
86	Harrison Bay	1	4	10	11	7	5	2	2	39	15	9	6	3	-	4	2	2
87	Colville River Delta	1	2	7	9	6	5	3	1	10	16	10	6	3	-	2	1	1
88	Simpson Lagoon	-	-	1	3	5	5	4	-	1	7	11	8	5	1	-	-	1
89	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	1	2	2	3	2	-	1	3	6	5	4	-	-	-	1
93	Cross and No Name Island	-	-	-	-	1	1	1	-	-	-	1	3	1	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	1	2	-	-	-	1	5	-	-	-	-	-
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	1	1	3	3	-	-	1	2	7	5	-	-	-	1
97	Tigvariak Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	1	2	-	-	-	-	1	1	-	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	1	3	8	-	-	-	1	3	5	-	1	2	
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-9. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

Appendix A

**Table A.2-9. (Continued) Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	4	1	2	1	-	-	1	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	1	1	2	2	4	4	6	8	4	12	4	-	2	4	-	1	
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	8	3	5	-	-	1	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-10. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17	
--	LAND	42	40	34	32	32	40	52	46	47	37	36	41	53	70	27	21	41	
2	Point Barrow, Plover Islands	24	15	8	6	5	3	2	26	7	6	4	3	2	-	9	4	2	
6	ERA 6	14	7	5	3	3	2	2	10	3	3	3	3	2	-	6	4	2	
7	US Russia Maritime Boundary	3	1	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	
8	Maguire, Flaxman Islands	-	-	-	-	1	3	5	-	-	-	1	2	14	1	-	-	1	
9	Stockton Islands, McClure Islands	-	-	-	1	1	3	4	-	-	1	1	6	13	1	-	-	1	
12	ERA 12	-	-	1	4	7	8	6	-	-	3	5	6	4	1	-	10	8	
17	Angun and Beaufort Lagoons	-	-	-	-	1	2	3	-	-	-	1	2	12	-	-	2		
19	Chukchi Spring Lead System	9	4	2	1	1	1	1	5	1	1	1	1	1	-	-	3	2	1
20	Ice/Sea Segment 7	-	-	-	1	2	6	15	-	-	1	2	3	7	2	-	1	5	
21	Ice/Sea Segment 8	-	-	1	2	4	6	8	-	1	2	3	4	6	11	1	2	5	
22	Ice/Sea Segment 9	-	1	1	2	3	4	6	1	1	1	2	2	3	8	1	3	5	
24	Beaufort Spring Lead 6	19	9	4	3	2	2	1	12	2	2	2	1	1	-	6	3	2	
25	Beaufort Spring Lead 7	24	10	5	4	4	2	1	14	3	3	3	2	1	-	6	3	2	
26	Beaufort Spring Lead 8	8	13	8	6	6	4	2	11	5	6	4	3	2	-	7	5	3	
27	Beaufort Spring Lead 9	9	18	8	7	6	4	2	15	6	6	5	3	2	-	6	5	3	
28	Beaufort Spring Lead 10	1	8	20	18	16	13	8	2	15	17	15	12	7	1	14	11	9	
29	Ice/Sea Segment 1	12	5	2	2	1	1	-	9	2	2	1	-	-	-	4	1	-	
30	Ice/Sea Segment 2	5	10	4	2	1	1	-	11	4	2	1	1	1	-	5	1	-	
31	Ice/Sea Segment 3	2	4	9	9	4	2	1	2	14	11	6	3	1	-	4	1	1	
32	Ice/Sea Segment 4	-	1	6	19	10	3	1	-	2	15	16	5	1	-	1	1	1	
33	Ice/Sea Segment 5	-	-	1	3	12	9	2	-	1	3	7	14	5	-	-	2	1	
34	Ice/Sea Segment 6	-	-	-	1	3	10	8	-	-	1	2	6	14	1	-	1	2	
35	ERA 35	7	5	3	2	2	1	1	6	2	2	1	2	1	-	5	3	2	
36	ERA 36	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
37	ERA 37	-	-	1	1	2	2	1	-	-	1	1	1	1	1	-	4	4	
40	Wainwright Subsistence Area	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	1	1	
41	Barrow Subsistence Area 1	3	1	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	
42	Barrow Subsistence Area 2	21	12	6	4	2	2	1	18	5	4	3	2	1	-	9	3	2	
43	Nuqsut Subsistence Area	-	-	1	2	5	6	2	-	-	2	6	13	5	1	-	1	1	
44	Kaktovik Subsistence Area	-	-	-	1	2	6	16	-	-	1	1	3	7	4	-	1	4	
48	Ice/Sea Segment 11	4	2	1	1	1	1	-	3	1	1	1	1	-	-	2	1	1	
49	ERA 49	4	3	1	1	1	1	-	3	1	-	-	-	-	-	2	1	-	
50	Ice/Sea Segment 13	3	1	1	1	1	-	-	2	-	-	1	1	-	-	2	1	1	
51	Ice/Sea Segment 14	4	2	1	1	-	-	-	3	-	-	1	-	-	-	2	1	1	
52	Ice/Sea Segment 15	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
55	Point Barrow, Plover Islands	10	7	3	2	1	1	1	10	2	2	1	1	1	-	5	2	1	
56	ERA 56	5	3	1	1	1	1	-	4	-	-	1	1	-	-	3	2	1	
58	Offshore Pt. Lay to Wainwright	3	1	1	-	-	-	-	2	-	-	1	-	-	-	2	1	-	
60	King and Shingle Point	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2	
64	Pearl Bay Area	7	4	2	2	2	1	1	5	1	2	1	2	1	-	3	2	1	
65	Smith Bay	3	6	3	2	1	1	1	8	3	2	1	1	1	-	3	1	1	
67	Herschel Island (Canada)	-	-	-	1	2	3	-	-	-	-	1	2	9	-	1	4		
68	Harrison Bay	1	5	10	10	7	6	4	2	36	15	10	7	5	1	4	2	3	
69	Harrison Bay/Colville Delta	1	3	7	9	7	6	3	1	13	15	11	8	4	-	3	2	2	
70	ERA 70	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
71	Simpson Lagoon, Thetis and Jones Island	-	-	2	4	5	6	5	-	2	7	11	11	8	1	-	1	2	
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	2	3	5	5	-	-	3	8	10	10	1	-	1	2	
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
75	Water over Boulder Patch	-	-	-	-	-	1	1	-	-	-	1	2	2	-	-	-	-	
76	Kendall Island Bird Sanctuary (Canada)	-	-	-	1	1	1	2	-	-	1	1	1	1	3	-	1	6	
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	1	1	-	-	-	1	2	3	-	-	-	-	
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
79	Demarcation Bay Offshore	-	1	1	2	2	4	7	1	1	2	2	2	3	25	1	3	6	
80	ERA 80	-	-	1	2	2	1	1	-	-	1	2	1	1	-	1	8	2	
84	Canning River Delta	-	-	-	-	-	1	1	-	-	-	1	2	-	-	-	-	-	
85	Sagavanirktok River Delta	-	-	-	-	-	1	1	-	-	-	1	2	3	-	-	-	-	

Appendix A

**Table A.2-10(Continued). Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
86	Harrison Bay	2	5	12	13	9	8	5	2	41	18	12	9	5	1	5	3	4
87	Colville River Delta	1	4	9	11	9	8	4	2	14	18	13	9	5	1	4	2	3
88	Simpson Lagoon	-	-	2	4	6	7	6	-	2	8	13	12	9	1	-	1	3
89	Mackenzie River Delta	-	-	1	1	1	1	2	-	-	1	1	1	1	3	-	2	7
90	Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	1	3	3	5	4	-	1	4	9	8	7	1	-	1	1
93	Cross and No Name Island	-	-	-	-	1	1	1	-	-	-	1	3	1	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	1	2	3	-	-	-	1	8	1	-	-	1	
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	1	2	4	5	-	-	1	3	11	10	1	-	-	1
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	1	3	-	-	-	-	1	2	1	-	-	1
100	Jago and Tapkaurak Spits	-	-	-	1	2	5	11	-	-	1	1	3	5	9	-	1	4
101	Icy Reef	-	-	-	-	-	1	1	-	-	1	-	1	1	6	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-11. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	48	63	48	62	49	62	52	65	50	59	50	65	54	59	70	65	76	89	81	87	38	49	74	39	62
2	Point Barrow, Plover Islands	22	41	18	27	16	13	11	8	11	8	9	6	8	6	4	4	2	-	1	-	11	8	3	7	4
6	ERA 6	19	13	12	9	9	6	7	3	8	5	7	4	6	4	3	3	2	-	1	-	11	7	3	6	4
7	US Russia Maritime Boundary	6	3	4	3	2	1	1	-	1	1	1	1	1	1	1	-	-	-	-	4	1	-	1	-	
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	1	1	1	3	2	2	11	3	18	1	2	1	-	1	1	-	1
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	1	1	7	1	2	11	3	7	1	2	1	-	1	1	-	1	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	ERA 12	-	-	-	-	1	1	1	1	4	4	10	5	12	11	5	10	4	-	3	1	1	11	6	1	3
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	1	-	1	1	1	2	2	2	3	3	3	17	9	10	1	2	4	1	3
19	Chukchi Spring Lead System	11	7	6	5	4	2	3	1	3	1	2	1	2	1	1	1	-	-	-	4	3	1	2	1	
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	1	1	1	3	3	5	6	8	12	1	8	2	-	2	3	-	1
21	Ice/Sea Segment 8	-	-	-	1	1	1	1	2	2	3	3	5	5	6	6	8	7	8	16	11	1	3	5	1	2
22	Ice/Sea Segment 9	-	2	1	1	1	1	2	1	2	2	3	2	3	5	4	6	5	6	8	14	1	3	6	2	3
24	Beaufort Spring Lead 6	21	16	11	9	8	5	6	3	6	3	5	2	3	3	1	2	1	-	1	-	6	5	1	3	1
25	Beaufort Spring Lead 7	17	20	10	12	8	6	7	4	7	4	6	3	5	4	2	2	1	-	1	-	5	5	1	2	1
26	Beaufort Spring Lead 8	6	9	19	11	18	10	10	6	11	7	10	5	8	6	4	4	2	-	1	-	6	8	2	5	3
27	Beaufort Spring Lead 9	5	11	18	14	17	13	11	6	10	7	9	5	8	6	4	5	2	-	1	-	5	7	2	4	2
28	Beaufort Spring Lead 10	1	1	4	5	10	11	24	16	22	17	19	13	18	16	10	13	6	1	4	1	4	13	6	3	4
29	Ice/Sea Segment 1	9	14	6	7	5	3	3	2	2	1	1	1	1	1	1	1	-	-	-	5	1	-	3	1	
30	Ice/Sea Segment 2	4	6	6	12	7	11	4	3	2	2	1	1	1	1	1	1	1	-	-	4	1	-	3	1	
31	Ice/Sea Segment 3	2	2	3	2	4	8	9	14	6	9	4	4	3	3	2	2	1	-	1	1	2	2	1	1	
32	Ice/Sea Segment 4	1	-	1	-	1	1	3	4	4	15	8	8	5	3	2	2	1	-	-	1	1	-	-	-	
33	Ice/Sea Segment 5	-	-	-	-	-	1	1	2	5	4	14	8	6	8	3	3	-	1	1	-	1	1	-	-	
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	1	1	4	3	6	14	5	11	-	2	-	-	1	-	-	-	
35	ERA 35	12	7	8	6	7	3	5	2	5	3	4	3	3	3	3	2	1	-	1	-	8	5	2	6	4
36	ERA 36	1	1	1	1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
37	ERA 37	-	-	1	-	1	1	1	1	2	1	2	1	3	2	1	2	1	1	1	1	1	5	4	4	5
40	Wainwright Subsistence Area	2	2	1	1	1	-	-	1	-	1	1	1	1	1	-	-	-	-	-	1	1	-	1	1	-
41	Barrow Subsistence Area 1	4	2	2	2	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-
42	Barrow Subsistence Area 2	18	26	13	16	11	8	6	4	5	4	4	3	3	2	3	2	2	-	1	1	9	4	2	5	2
43	Nuqsut Subsistence Area	-	-	-	-	-	1	1	1	4	2	16	4	4	7	3	3	1	1	1	-	1	1	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	1	1	3	2	4	6	7	11	1	7	2	-	1	2	-	-	-	-
48	Ice/Sea Segment 11	5	3	4	2	3	1	2	1	2	1	1	1	1	1	1	-	-	-	4	2	-	2	1	-	-
49	ERA 49	6	4	5	4	4	3	2	1	1	1	1	1	1	1	1	-	-	-	5	1	-	3	1	-	3
50	Ice/Sea Segment 13	4	3	3	2	1	-	1	-	1	1	1	1	1	1	-	1	-	-	-	3	2	1	2	1	
51	Ice/Sea Segment 14	5	3	3	3	2	1	1	-	1	1	1	-	1	1	-	1	-	-	-	3	2	1	2	1	
52	Ice/Sea Segment 15	3	1	2	1	1	-	1	-	1	-	1	-	1	1	-	-	-	-	-	2	1	-	1	-	1
55	Point Barrow, Plover Islands	9	13	7	8	6	4	3	2	3	2	2	1	2	1	1	1	-	1	-	6	3	1	4	2	
56	ERA 56	7	5	5	4	3	1	1	1	2	1	1	1	1	1	1	1	-	-	-	4	2	1	3	2	
58	Offshore Pt. Lay to Wainwright	4	3	2	3	2	1	1	-	1	1	1	-	1	1	-	1	-	-	-	3	1	-	2	1	
60	King and Shingle Point	1	1	2	1	2	1	2	1	2	2	2	2	2	2	1	2	-	2	2	1	2	4	2	4	
62	Mackenzie River Estuary	-	-	1	-	1	-	1	1	1	1	1	1	1	1	-	1	-	-	-	-	1	1	-	1	
64	Pearl Bay Area	11	8	7	5	5	3	4	2	5	3	4	3	4	3	3	2	1	-	1	-	7	4	2	4	1
65	Smith Bay	3	7	5	16	5	8	4	3	3	3	2	2	2	2	2	1	-	1	-	3	2	1	1	1	
67	Herschel Island (Canada)	-	-	-	-	-	1	1	2	1	2	2	3	3	2	5	3	10	10	16	1	4	11	4	10	

Appendix A

**Table A.2-11 (Continued). Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
68	Harrison Bay	1	1	3	2	6	11	11	33	8	16	7	11	8	8	8	7	5	1	2	1	2	4	4	2	2
69	Harrison Bay/Colville Delta	1	1	3	2	4	7	8	36	6	16	6	12	7	8	7	6	4	-	2	1	2	3	3	2	2
70	ERA 70	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
71	Simpson Lag., Thetis & Jones Isl.	-	-	1	-	1	1	2	6	2	12	2	16	4	6	12	6	6	1	3	1	-	1	2	1	1
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	1	1	1	7	1	16	3	4	12	4	6	-	3	1	-	1	2	-	1
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	1	-	2	-	-	2	1	1	-	-	-	-	-	-	-	-	
76	Kendall Isl. Bird Sanctuary (Ca)	1	1	1	1	2	1	2	1	2	2	2	2	2	1	3	2	3	5	6	2	4	11	4	12	
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	1	-	3	-	-	3	1	2	-	-	-	-	-	-	-	-	
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	1	2	1	2	1	2	3	3	4	4	5	5	7	9	7	12	8	42	20	33	1	7	16	4	10
80	ERA 80	-	-	-	-	-	1	1	2	2	3	1	2	2	1	2	1	-	-	-	1	5	2	6	3	
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	4	-	-	-	-	-	-	-	-	
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	1	-	3	-	-	3	1	2	-	-	-	-	-	-	-	-	
86	Harrison Bay	2	1	4	3	6	11	11	34	9	17	8	11	9	9	9	7	5	1	2	1	3	4	4	2	2
87	Colville River Delta	1	1	3	2	5	7	8	37	7	18	7	13	8	9	8	7	4	-	2	1	2	3	3	2	2
88	Simpson Lagoon	-	-	1	-	1	1	2	6	2	12	3	16	4	6	12	6	6	1	3	1	-	1	2	1	1
89	Mackenzie River Delta	1	1	2	1	2	1	2	1	3	2	3	2	3	3	2	3	2	3	5	6	2	4	12	4	12
90	Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	2
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	1	1	1	3	1	8	2	13	3	4	9	4	5	-	2	1	-	1	1	-	1
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	1	-	3	1	1	2	1	1	-	-	-	-	-	-	-	
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	1	2	1	1	6	2	8	1	1	1	-	1	1	-	
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
96	Midway, Cross & Bartlett Islands	-	-	-	-	-	-	-	-	3	1	14	2	3	12	4	6	1	2	1	-	1	1	-	1	
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	1	1	1	1	2	2	5	1	3	1	-	1	2	-	1
100	Jago and Tapkaurak Spits	1	-	1	1	1	1	2	1	2	2	3	4	4	5	6	8	9	5	16	6	1	4	6	2	4
101	Icy Reef	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	2	1	9	3	7	-	1	2	1	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-12. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	53	54	54	54	55	63	72	58	65	58	58	65	74	87	45	47	67
2	Point Barrow, Plover Islands	27	19	11	10	8	6	2	30	9	9	7	6	3	-	13	8	4
6	ERA 6	16	9	7	6	6	4	2	11	4	5	5	5	2	-	8	7	3
7	US Russia Maritime Boundary	4	2	1	1	1	1	-	3	-	1	1	1	1	-	2	1	-
8	Maguire, Flaxman Islands	-	-	-	1	2	3	6	-	-	1	1	3	17	1	-	1	2
9	Stockton Islands, McClure Islands	-	-	-	1	1	3	6	-	-	1	1	7	15	1	-	1	2
12	ERA 12	-	-	2	5	8	8	6	-	1	4	5	6	4	1	1	11	8
17	Angun and Beaufort Lagoons	-	-	1	1	2	3	4	-	-	1	1	2	3	14	1	2	3
19	Chukchi Spring Lead System	9	5	2	1	1	1	1	6	1	1	1	1	1	-	3	2	1
20	Ice/Sea Segment 7	-	-	1	1	3	6	15	-	-	1	2	4	7	3	-	2	5
21	Ice/Sea Segment 8	-	1	2	3	4	6	9	-	2	3	4	5	6	11	1	3	6
22	Ice/Sea Segment 9	1	1	2	2	3	4	6	1	2	2	2	3	4	9	1	3	5
24	Beaufort Spring Lead 6	20	9	5	3	3	2	1	13	3	3	2	2	1	-	6	4	2
25	Beaufort Spring Lead 7	25	10	6	6	5	3	1	15	4	5	4	3	1	-	7	4	2
26	Beaufort Spring Lead 8	9	15	10	9	8	5	2	13	7	8	6	5	2	-	9	7	3
27	Beaufort Spring Lead 9	10	20	11	9	8	6	3	17	8	8	7	5	3	-	8	7	4
28	Beaufort Spring Lead 10	2	9	21	19	18	14	8	3	17	18	17	14	8	1	14	12	9
29	Ice/Sea Segment 1	12	5	2	2	1	1	1	9	2	2	1	1	1	-	4	1	-
30	Ice/Sea Segment 2	5	10	4	2	1	1	1	11	4	2	1	1	1	-	5	1	1
31	Ice/Sea Segment 3	2	4	9	9	4	2	1	2	14	11	6	3	1	-	4	2	1
32	Ice/Sea Segment 4	-	1	6	19	10	3	1	-	2	15	16	5	1	-	1	1	1
33	Ice/Sea Segment 5	-	-	1	3	12	9	2	-	1	3	7	14	5	1	-	2	1
34	Ice/Sea Segment 6	-	-	-	1	3	10	8	-	-	1	2	6	14	1	-	1	2
35	ERA 35	8	6	4	3	3	3	2	7	3	3	2	3	2	-	7	5	3
36	ERA 36	1	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-
37	ERA 37	-	1	1	2	2	2	2	1	1	1	1	2	1	1	1	4	4
40	Wainwright Subsistence Area	2	1	1	-	-	1	-	1	-	-	-	-	-	-	-	1	1
41	Barrow Subsistence Area 1	3	1	-	-	-	-	-	2	-	-	-	-	-	-	-	1	-
42	Barrow Subsistence Area 2	22	12	6	4	3	2	2	19	6	4	3	3	2	1	9	4	2
43	Nuqsut Subsistence Area	-	-	1	2	5	6	3	-	-	2	6	13	5	1	-	1	1
44	Kaktovik Subsistence Area	-	-	-	1	2	6	16	-	-	1	1	3	7	4	-	1	4
48	Ice/Sea Segment 11	4	2	1	1	1	1	-	3	1	1	1	1	1	-	3	1	1
49	ERA 49	6	4	2	1	1	1	-	4	1	1	1	1	1	-	3	1	-

Appendix A

**Table A.2-12 (Continued). Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
50	Ice/Sea Segment 13	3	1	1	1	1	1	-	2	-	1	1	1	-	-	2	1	1
51	Ice/Sea Segment 14	4	2	1	1	1	1	-	3	-	1	1	1	-	-	2	2	1
52	Ice/Sea Segment 15	2	1	1	1	1	-	-	1	-	-	-	-	-	-	1	1	-
55	Point Barrow, Plover Islands	10	7	3	2	2	1	1	11	3	2	2	1	1	-	6	3	1
56	ERA 56	6	3	1	1	1	1	1	5	1	1	1	1	1	-	3	2	1
58	Offshore Pt. Lay to Wainwright	4	2	1	1	1	1	-	3	-	1	1	1	-	-	2	1	1
60	King and Shingle Point	1	1	2	2	2	1	1	1	1	2	2	1	1	1	2	2	3
62	Mackenzie River Estuary	-	1	1	1	1	-	1	-	-	1	1	1	-	-	-	1	-
64	Pearl Bay Area	9	5	4	4	4	3	2	7	2	3	3	3	2	-	4	4	2
65	Smith Bay	4	7	4	3	2	2	2	10	4	3	2	2	2	-	4	2	1
67	Herschel Island (Canada)	-	-	1	2	2	3	5	-	1	1	1	2	2	11	1	3	8
68	Harrison Bay	2	5	12	14	10	9	6	2	41	18	13	10	7	1	5	4	5
69	Harrison Bay/Colville Delta	2	4	9	11	10	9	5	2	16	18	14	11	5	1	4	3	4
70	ERA 70	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	1	2	5	6	9	7	-	3	8	14	14	11	1	1	1	3
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	2	3	7	6	-	-	3	10	12	12	1	-	1	3
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	1	1	-	-	-	1	2	3	-	-	-	-
76	Kendall Island Bird Sanctuary (Canada)	1	1	2	2	2	2	3	1	1	2	2	2	1	4	2	3	8
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	1	1	-	-	-	1	3	4	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
79	Demarcation Bay Offshore	1	2	3	4	6	9	11	2	3	4	5	6	6	31	2	6	13
80	ERA 80	-	-	1	2	2	1	1	-	-	1	2	1	1	-	1	8	2
81	Simpson Cove	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
84	Canning River Delta	-	-	-	-	-	1	1	-	-	-	1	3	-	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	1	1	-	-	-	1	3	4	-	-	-	-
86	Harrison Bay	2	6	13	15	11	9	6	3	42	19	14	11	7	1	6	4	5
87	Colville River Delta	2	4	9	12	11	10	5	2	16	19	15	11	5	1	4	3	4
88	Simpson Lagoon	-	1	2	5	6	9	7	-	3	9	14	14	11	1	1	1	3
89	Mackenzie River Delta	1	1	2	2	3	2	3	1	1	2	2	2	4	2	4	9	-
90	Gary/Kendall	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	-
92	Thetis, Jones, Cottle and Return Islands	-	-	1	3	4	6	5	-	2	5	10	10	10	1	1	1	2
93	Cross and No Name Island	-	-	-	-	-	1	1	1	-	-	1	3	1	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	1	2	4	-	-	1	2	10	1	-	1	1
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	1	1	2	6	6	-	-	2	4	13	13	1	-	1	2
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	1	1	2	4	-	-	-	1	1	3	2	-	1	2
100	Jago and Tapkaurak Spits	1	1	2	2	3	6	13	1	1	2	3	4	7	11	1	3	7
101	Icy Reef	-	-	-	1	1	1	2	-	-	1	1	1	1	7	-	1	2

**Notes** - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-13. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
86	Dease Inlet, Plover Islands	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Igalik & Kulgurak Island	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
89	Ikpikpuk River Point Poleakoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	Drew Point, Kolovik, McLeod Point,	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R.	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	Cape Halkett, Garry Creek	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	Colville River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-

**Table A.2-14. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID		PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-

**Table A.2-15. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	2	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	Dease Inlet, Plover Islands	1	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Igalik & Kulgurak Island	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	-	3	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
89	Ikpikpuk River Point Poleakoon	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	-	1	1	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	-	1	2	1	5	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	Cape Halkett, Garry Creek	-	-	-	-	1	3	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	Colville River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-
98	Kuparuk River	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
102	Pt. Hopson, & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	1	-	-	-	-	-
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	1	3	-	-	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	2	-	-	-	-	-
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL =Pipeline, LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-16. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
85	Barrow, Browerville, Elson Lag.	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
86	Dease Inlet, Plover Islands	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-
87	Igalik & Kulgurak Island	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	1	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-
89	Ikpikpuk River Point Poleakoon	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	2	1	-	-	-	-	1	2	-	-	-	-	1	-	-
92	Cape Halkett, Garry Creek	-	1	1	-	-	-	-	-	5	1	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-
98	Kuparuk River	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-
107	Kaktovik	-	-	-	-	-	-	2	-	-	-	-	-	1	1	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

**Table A.2-17. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
84	Will Rogers & Wiley Post Mem.	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
85	Barrow, Browerville, Elson Lag.	5	4	2	2	1	1	-	-	-	-	-	-	-	-	-	1
86	Dease Inlet, Plover Islands	4	7	2	3	2	1	1	-	-	-	-	-	-	-	-	1
87	Igalik & Kulgurak Island	2	3	1	2	1	1	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	1	5	1	5	1	2	1	1	-	-	-	-	-	-	-	-
89	Ikpikpuk River Point Poleakoon	-	2	1	2	1	1	-	-	-	-	-	-	-	-	-	-
90	Drew Point, Kolovik, McLeod Point,	1	2	2	5	2	3	1	1	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R.	1	1	2	3	3	7	2	2	1	1	1	1	-	-	-	1
92	Cape Halkett, Garry Creek	-	-	1	1	2	4	3	5	1	2	-	1	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	1	1	3	-	1	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	1	1	1	4	-	1	-	-	-	-	-
95	Colville River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	2	-	3	-	1	2	-	1
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-
102	Pt. Hopson, & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	1
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	1	5	2	2
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	9	3	4
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	4
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	3
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	4
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL =Pipeline, LA = Launch Area. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.1-18. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
84	Will Rogers & Wiley Post Mem.	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
85	Barrow, Browerville, Elson Lag.	5	2	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
86	Dease Inlet, Plover Islands	5	2	1	-	-	-	-	4	1	-	-	-	-	-	1	-	-
87	Igalik & Kulgurak Island	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	2	2	1	-	-	-	-	5	1	-	-	-	-	-	1	-	-
89	Ilkipuk River Point Poleakoon	1	1	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	1	3	1	-	-	-	-	3	1	-	-	-	-	-	1	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	1	3	2	1	1	-	-	1	3	2	1	1	-	-	2	-	-
92	Cape Halkett, Garry Creek	-	2	3	2	1	-	-	-	7	2	1	-	-	-	2	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	1	-	-	-	-	-	3	1	-	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	1	1	1	-	-	-	-	2	2	1	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	1	1	1	-	-	1	2	2	1	-	-	-	-
98	Kuparuk River	-	-	-	-	-	1	1	-	-	1	1	2	2	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
107	Kaktovik	-	-	-	-	-	-	-	1	4	-	-	-	-	2	2	-	1
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	3	-	-	-	-	-	1	3	-	1
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	-	6	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

**Table A.2-19. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
84	Will Rogers & Wiley Post Mem.	2	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	7	6	3	3	2	2	1	1	1	1	1	-	-	-	-	-	-	-	-	2	1	-	-	-	
86	Dease Inlet, Plover Islands	4	8	3	4	2	2	1	1	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	
87	Igalik & Kulgurak Island	2	4	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
88	Cape Simpson, Piasuk River	2	5	2	6	2	3	1	1	1	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
89	Ilkipuk River Point Poleakoon	1	2	1	3	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	Drew Point, Kolovik, McLeod Point,	1	2	2	6	2	3	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R.	1	1	2	3	3	8	2	3	1	2	1	1	1	1	1	1	-	1	-	1	-	-	-	-	
92	Cape Halkett, Garry Creek	-	-	1	1	2	5	3	7	2	3	1	1	1	1	1	-	1	-	-	1	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	1	1	1	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	1	1	2	5	1	2	1	1	1	-	1	-	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	2	-	3	1	1	2	1	1	-	-	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	3	-	1	2	1	1	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
102	Pt. Hopson, & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	3	4	1	4	1	-	1	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	2	4	2	-	1	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	6	3	3	-	1	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	10	3	5	-	-	1	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8	2	5	-	-	1	-	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	6	3	4	-	-	1	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	3	5	-	-	1	-	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	1	-	-	-
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3	-	-	1	-	-	-	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix A

**Table A.1-20. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
84	Will Rogers & Wiley Post Mem.	2	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	6	3	1	1	-	-	-	4	1	1	-	-	-	-	2	-	
86	Dease Inlet, Plover Islands	6	3	1	-	-	-	-	5	1	-	-	-	-	-	1	-	
87	Igalik & Kulgurak Island	2	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	3	3	1	1	-	-	-	6	1	1	-	-	-	-	1	-	
89	Ilkipuk River Point Poleakoon	1	2	-	-	-	-	-	3	1	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	1	3	2	1	-	-	-	3	1	1	-	-	-	-	1	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	1	4	3	2	1	1	1	2	4	2	1	1	1	-	2	-	
92	Cape Halkett, Garry Creek	1	2	4	3	2	1	1	1	8	4	2	1	1	-	2	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	1	1	-	-	-	4	1	-	-	-	-	1	-	-	
94	Fish Creek, Tingmeachsiovik River	-	1	2	2	1	1	-	1	3	3	2	1	-	-	1	-	
96	Oliktok Point	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	1	1	1	1	-	-	1	3	2	2	-	-	-	
98	Kuparuk River	-	-	-	-	1	1	1	-	-	1	1	2	2	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	1	-	-	-	-	-	3	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	
107	Kaktovik	-	-	-	-	1	2	5	-	-	-	-	1	2	2	-	2	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	1	3	-	-	-	-	-	1	4	-	1	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	1	5	-	1	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	7	-	-	1	
111	Demarcation Bay & Point	-	-	-	-	-	1	1	-	-	-	-	-	6	-	-	1	
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	1	-	-	-	-	-	4	-	-	1	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	1	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-21. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
83	Nulavik, Loran Radio Station	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
84	Will Rogers & Wiley Post Mem.	3	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	
85	Barrow, Browerville, Elson Lag.	10	10	6	5	4	3	4	2	4	3	4	2	3	3	2	2	1	-	-	-	4	2	1	1	
86	Dease Inlet, Plover Islands	6	11	5	5	3	2	2	1	2	1	1	1	1	1	1	-	-	-	-	2	1	1	1	1	
87	Igalik & Kulgurak Island	2	5	2	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
88	Cape Simpson, Piasuk River	2	8	3	11	3	5	2	2	1	1	1	1	1	1	-	1	-	-	-	2	1	-	1	-	
89	Ilkipuk River Point Poleakoon	1	2	1	4	1	2	1	1	1	1	1	-	1	-	-	-	-	-	-	1	-	-	-	-	
90	Drew Point, Kolovik, McLeod Point,	1	2	3	7	3	4	2	1	1	1	1	1	1	-	-	1	1	-	-	1	1	-	1	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R.	2	2	3	5	5	13	5	6	3	4	3	3	3	3	2	2	2	2	2	2	2	2	2	2	
92	Cape Halkett, Garry Creek	1	1	2	1	3	8	5	11	3	5	2	4	3	3	3	3	2	1	1	1	1	2	1	1	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	1	2	1	4	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	2	2	3	9	2	4	2	3	2	2	1	1	1	-	-	1	1	-	-	-	
95	Colville River	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	2	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	3	-	5	1	1	4	1	2	-	1	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	3	1	1	2	1	1	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	1	-	-	-	-	-	-	-	
102	Pt. Hopson, & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	1	-	1	3	1	4	-	1	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	6	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	3	4	5	1	6	2	-	1	2	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	2	3	3	7	3	-	1	2	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	9	5	5	-	2	-	1	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	2	1	14	5	8	-	1	2	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	1	-	1	1	1	1	1	2	1	2	2	13	4	8	-	1	2	-	

## Appendix A

**Table A.2-21 (Continued). Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25		
112	Clarence Lagoon, Backhouse River	-	1	-	-	-	-	-	-	1	-	1	1	1	2	1	3	2	12	6	9	-	1	4	1	2		
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	1	1	1	1	2	1	7	5	9	-	1	4	1	3			
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3	-	-	2	-	1				
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	3	3	5	-	1	3	1	2			
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	1		
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	2	1	1		
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1		
119	Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1		
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-22. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17												
82	Skull Cliff	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-												
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-												
84	Will Rogers & Wiley Post Mem.	3	1	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-											
85	Barrow, Browerville, Elson Lag.	10	5	4	4	3	2	1	7	3	3	2	2	1	-	3	2	1											
86	Dease Inlet, Plover Islands	8	4	2	1	1	1	-	6	1	1	1	1	-	-	2	1	1											
87	Igalik & Kulgurak Island	3	2	1	-	-	-	-	4	1	-	-	-	-	-	1	-	-											
88	Cape Simpson, Piasuk River	3	5	2	2	1	1	-	9	3	1	1	-	-	-	2	1	-											
89	Ilkipikup River Point Poleakoon	1	2	1	1	1	-	-	3	1	1	1	-	-	-	1	-	-											
90	Drew & McLeod Point, Kolovik	2	4	2	1	1	-	-	4	2	1	1	-	1	-	2	1	-											
91	Lonely, Pitt Pt., Pogik Bay, Smith R	3	6	5	4	3	3	2	3	9	5	4	3	2	2	5	2	2											
92	Cape Halkett, Garry Creek	1	3	6	4	3	3	3	1	11	6	4	4	3	-	2	1	2											
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	2	1	1	-	-	-	5	2	1	1	-	-	1	-	-											
94	Fish Creek, Tingmeachsiovik River	1	2	3	4	3	2	1	1	6	5	4	3	1	-	1	1	1											
95	Colville River	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-											
96	Oliktok Point	-	-	-	-	1	1	1	-	-	1	1	1	1	-	-	-	-											
97	Milne Point, Simpson Lagoon	-	-	-	-	1	1	2	2	-	-	1	4	3	4	-	-	1											
98	Kuparuk River	-	-	-	-	-	1	1	1	-	-	1	1	3	3	-	-	-											
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-											
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-											
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	1	-	-	-	-	-	1	2	-	-	-											
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	1	2	-	-	-	-	1	5	-	-	-											
103	Brownlow Point, Canning River	-	-	-	-	-	-	1	1	-	-	-	-	1	3	-	-	-											
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-											
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-											
106	Arey Island, Barter Island,	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	-											
107	Kaktovik	-	-	-	-	1	3	7	-	-	-	-	-	2	4	3	-	1	3										
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	1	2	4	-	-	1	1	1	2	6	-	-	2											
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	1	2	-	-	-	-	-	1	1	7	-	-	1										
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	1	1	2	-	-	-	-	-	1	1	11	-	-	1										
111	Demarcation Bay & Point	-	-	1	1	1	2	2	-	1	1	1	1	1	9	-	1	2											
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	1	2	3	-	-	-	1	1	1	9	-	1	3										
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	1	2	-	-	-	-	1	1	7	-	1	3										
114	Nunaluk Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	1											
115	Herschel Island	-	-	-	-	-	1	1	-	-	-	-	-	1	3	-	1	2											
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1											
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1										
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1									
119	Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1								
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1							
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1							
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1				
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-23. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
81	Peard Bay, Point Franklin	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
83	Nulavik, Loran Radio Station	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
84	Will Rogers & Wiley Post Mem.	3	2	2	1	1	1	1	-	1	-	1	1	1	1	1	-	-	-	-	2	1	-	1	-	-	
85	Barrow, Browerville, Elson Lag.	13	13	9	8	7	6	7	4	8	6	8	4	7	5	3	3	1	-	-	7	6	2	4	1	-	
86	Dease Inlet, Plover Islands	7	12	5	6	4	3	2	2	2	2	1	2	1	1	1	-	-	-	-	2	1	1	1	1	-	
87	Igalik & Kulgurak Island	3	6	3	3	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	
88	Cape Simpson, Piasuk River	2	9	4	13	4	6	2	2	2	2	1	1	1	1	1	1	1	-	-	3	1	1	2	1	-	
89	Ikpikpuk River Point Poleakoon	1	3	2	4	2	3	1	1	1	1	1	1	1	1	1	1	-	-	-	1	1	-	1	-	-	
90	Drew Point, Kolovik, McLeod Point,	1	3	3	9	4	5	2	2	1	1	1	1	1	1	1	1	-	-	-	2	1	-	1	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R.	2	3	4	6	6	15	6	8	5	6	5	5	5	5	4	5	4	3	5	3	3	4	4	3	3	
92	Cape Halkett, Garry Creek	1	1	2	2	3	9	6	13	5	8	5	6	5	5	5	4	1	2	1	2	2	3	1	2	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	1	1	1	2	2	5	2	2	1	1	1	-	1	-	-	-	1	1	-	1	-	-		
94	Fish Creek, Tingmeachsiovik River	1	1	2	1	3	3	4	11	3	6	2	4	2	2	2	2	1	-	-	1	1	1	1	1	-	
95	Colville River	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	1	1	2	-	1	-	1	-	1	1	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	3	1	5	1	2	4	2	2	-	1	-	-	1	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	-	1	-	4	1	1	3	1	2	-	1	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	1	-	-	-	-	-	-	-	
102	Pt. Hopson, & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	4	1	5	-	1	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	8	-	1	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	-	-	-	-	-	-	-	-	
107	Kaktovik	-	-	1	-	1	-	1	1	1	1	2	2	3	4	4	6	6	2	8	2	1	3	4	2	2	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	-	1	1	1	2	1	2	2	3	3	4	9	4	1	1	3	1	2	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	1	-	1	1	1	1	1	2	2	2	11	6	6	-	1	3	1	2	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	1	1	1	1	2	2	2	3	2	17	7	11	-	1	3	1	2	
111	Demarcation Bay & Point	-	-	-	1	-	1	1	1	1	2	2	2	2	3	2	4	2	15	6	10	-	2	5	1	2	
112	Clarence Lagoon, Backhouse River	1	2	1	1	1	1	2	1	2	2	3	2	3	4	3	5	3	14	8	12	1	3	7	2	5	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	1	1	1	1	2	3	2	4	2	8	6	10	-	2	6	2	5	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	3	2	4	-	1	3	1	3	
115	Herschel Island	-	-	-	-	-	-	-	1	-	1	1	1	1	1	1	1	2	1	3	4	5	-	1	4	2	3
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	2	1	2	
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	2	1	
119	Shingle Point	1	-	1	-	1	1	1	1	2	1	2	1	2	1	1	1	-	1	1	1	2	2	1	2	-	
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	1	-	1	1	-	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	1	-	-	1	-	1	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	2	
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-24. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
82	Skull Cliff	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
84	Will Rogers & Wiley Post Mem.	3	1	1	-	1	1	-	2	-	-	-	1	-	-	1	1	-
85	Barrow, Browerville, Elson Lag.	12	8	7	7	7	5	2	9	4	6	5	5	2	-	7	6	2
86	Dease Inlet, Plover Islands	9	5	3	2	2	1	1	7	2	2	2	1	1	-	2	1	1
87	Igalik & Kulgurak Island	4	3	1	1	-	-	-	5	1	1	-	-	-	-	2	1	-
88	Cape Simpson, Piasuk River	4	6	3	2	1	1	1	10	3	2	1	1	1	-	3	2	1
89	Ikpikpuk River Point Poleakoon	2	3	1	1	1	1	1	4	2	1	1	1	1	-	1	1	1
90	Drew & McLeod Point, Kolovik	2	5	2	1	1	1	1	5	2	1	1	1	1	-	3	1	1
91	Lonely, Pitt Pt., Pogik Bay, Smith R	3	7	6	6	5	5	5	3	11	6	6	5	4	4	5	4	4
92	Cape Halkett, Garry Creek	1	4	7	7	6	5	4	1	13	8	7	6	5	1	3	2	4
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	2	2	1	1	-	1	6	3	1	1	1	-	1	1	-
94	Fish Creek, Tingmeachsiovik River	1	3	5	5	3	3	1	1	9	7	5	4	1	-	3	1	1
95	Colville River	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
96	Oliktok Point	-	-	1	1	1	1	-	-	2	1	1	1	1	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	1	3	3	-	-	1	5	4	5	-	-	-	1
98	Kuparuk River	-	-	-	-	1	1	2	-	-	1	2	3	3	-	-	-	1
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-

Appendix A

**Table A.2-24 (Continued). Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	1	1	-	-	-	-	1	3	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	2	-	-	-	-	1	6	-	-	-	1
103	Brownlow Point, Canning River	-	-	-	-	-	1	2	-	-	-	-	1	4	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	1	2	-	-	-	-	1	2	-	-	-	-
107	Kaktovik	-	1	1	1	2	4	9	-	1	1	2	3	5	4	1	2	4
108	Griffin Point, Oruktalik Lagoon	-	-	1	1	1	2	5	-	-	1	1	2	2	7	1	1	3
109	Angun Point, Beaufort Lagoon	-	-	1	1	1	2	3	-	-	1	1	1	2	9	-	1	2
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	1	1	1	2	3	-	-	1	1	2	2	14	-	1	3
111	Demarcation Bay & Point	-	-	1	2	2	3	3	-	2	2	2	2	2	11	-	2	4
112	Clarence Lagoon, Backhouse River	1	1	2	2	3	4	5	1	1	1	2	3	3	11	1	3	5
113	Komakuk Beach, Fish Creek	-	-	-	1	1	2	3	-	-	-	1	2	2	8	-	2	5
114	Nunaluk Spit	-	-	-	-	-	1	1	-	-	-	-	1	3	-	1	2	-
115	Herschel Island	-	-	1	1	1	1	2	-	1	1	1	1	1	4	1	1	3
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
119	Shingle Point	1	1	1	2	1	1	1	1	1	1	1	1	1	1	-	2	2
120	Trent and Shoalwater Bays	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-25. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
87	Igalik & Kulgurak Island	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-26. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Seasonal Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
107	Kaktovik	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-27. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	Ilkipikup River Point Poleakoon	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	-	1	2	1	5	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	

Appendix A

**Table A.2-27 (Continued). Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
102	Pt. Hopson, & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	1	-	-	-	-	-	-
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	2	-	-	-	-	-	-
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-

**Table A.2-28. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Seasonal Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17									
85	Barrow, Browerville, Elson Lag.	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-									
87	Igalik & Kulgurak Island	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-									
89	Ikpipluk River Point Poleakoon	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-									
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	2	1	-	-	-	-	1	2	-	-	-	-	-	1	-	-									
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-									
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-									
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-									
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-									
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-									
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-									
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-									
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-			
107	Kaktovik	-	-	-	-	-	-	-	2	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-		
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-		
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-29. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
85	Barrow, Browerville, Elson Lag.	3	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
87	Igalik & Kulgurak Island	2	3	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	Ikpipluk River Point Poleakoon	-	2	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	1	1	1	2	2	6	2	2	1	1	1	1	-	-	-	-	-	-	-	1	-	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	1	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	1	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	2	-	2	-	1	1	-	1	-	-	-	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	1	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadlershilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
102	Pt. Hopson, & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	-	3	-	-	1	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	-	-	-	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	2	-	-	-	-	-	-
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	3	-	-	-	-	-	-	-
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	3	-	-	-	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	4	-	-	-	-	-	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-

## Appendix A

**Table A.2-30. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
85	Barrow, Browerville, Elson Lag.	3	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	
89	Ilkipik River Point Poleakoon	1	1	-	-	-	-	-	2	1	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	1	3	2	1	1	-	-	1	3	2	1	1	-	-	2	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	1	-	-	-	-	-	3	1	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsvivik River	-	-	1	1	-	-	-	-	2	1	1	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	1	1	1	1	-	-	1	2	2	1	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	1	1	-	-	1	1	2	1	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	
107	Kaktovik	-	-	-	-	-	-	1	4	-	-	-	-	-	2	1	-	1
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	2	-	-	-	-	-	1	3	-	1
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	1	-	-	-	-	-	-	5	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-31. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	4	3	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
87	Igalik & Kulgurak Island	2	4	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	Ilkipik River Point Poleakoon	1	2	1	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	1	1	2	3	3	8	2	3	1	2	1	1	1	1	1	1	1	1	-	1	-	1	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	1	1	1	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsvivik River	-	-	-	-	-	-	1	1	4	1	2	1	1	1	-	1	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	2	-	3	1	1	2	1	1	-	1	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	3	-	1	2	1	1	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	
102	Pt. Hopson, & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	2	3	-	3	1	-	1	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	2	4	1	-	1	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	6	3	3	-	1	-	1	-	-
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	9	3	4	-	1	-	1	-	-
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	6	3	4	-	1	-	1	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	3	5	-	-	1	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-32. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Seasonal Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
85	Barrow, Browerville, Elson Lag.	3	1	1	-	-	-	-	2	1	-	-	-	-	-	1	-	-
87	Igalik & Kulgurak Island	2	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
89	Ikpikpuk River Point Poleakoon	1	1	-	-	-	-	-	3	1	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	1	3	2	2	1	1	1	2	4	2	1	1	1	-	2	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	1	1	-	-	-	4	1	-	-	-	-	1	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	1	1	2	1	1	-	-	3	2	2	1	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	1	1	1	-	-	1	3	2	2	-	-	-	-
98	Kuparuk River	-	-	-	-	1	1	1	-	-	1	1	2	2	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	1	-	-	-	-	-	3	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
107	Kaktovik	-	-	-	-	-	2	4	-	-	-	-	1	2	2	-	-	1
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	1	3	-	-	-	-	-	1	3	-	-	1
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	1	4	-	-	1
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	1
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	1
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	1
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; P = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-33. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	5	4	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	2	1	-	1	-
87	Igalik & Kulgurak Island	2	5	2	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
89	Ikpikpuk River Point Poleakoon	1	2	1	4	1	2	1	1	1	1	1	-	1	-	-	-	-	-	-	1	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	2	2	3	5	5	13	5	6	3	4	3	3	3	3	2	2	2	2	2	2	2	2	2	2	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	1	2	1	4	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	2	2	3	8	2	4	2	3	2	1	1	1	-	-	-	1	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	2	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	3	-	4	1	1	4	1	2	-	1	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	3	1	1	2	1	1	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	1	-	-	-	-	-	-	-	-	
102	Pt. Hopson, & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	1	-	1	3	1	4	-	1	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	6	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	1	1	1	2	3	4	5	1	5	1	-	1	2	-	1
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	1	-	1	1	2	2	3	6	3	-	-	2	-	1	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	9	4	5	-	-	1	-	1	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	13	4	7	-	-	2	-	1	
112	Clarence Lagoon , Backhouse R.	-	1	-	-	-	-	-	-	-	-	1	1	1	1	1	3	2	11	6	9	-	1	4	1	2
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	2	1	7	5	8	-	1	3	1	3
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	2	3	-	-	1	-	1	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-34. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Seasonal Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
85	Barrow, Browerville, Elson Lag.	4	2	1	1	1	-	-	2	1	1	1	1	-	-	1	1	-
87	Igalik & Kulgurak Island	3	2	1	-	-	-	-	4	1	-	-	-	-	1	-	-	
89	Ikpikpuk River Point Poleakoon	1	2	1	1	1	-	-	3	1	1	1	-	-	1	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	2	6	5	4	3	3	2	3	8	5	4	3	2	2	5	2	2
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	2	1	1	-	-	-	5	2	1	1	-	-	1	-	-
94	Fish Creek, Tingmeachsiovik River	-	2	3	3	2	2	1	1	6	4	3	3	1	-	1	-	1
95	Colville River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
96	Oliktok Point	-	-	-	1	1	1	-	-	1	1	1	1	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	1	2	2	-	-	1	4	3	4	-	-	-	1
98	Kuparuk River	-	-	-	-	1	1	1	-	-	1	1	3	3	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	1	-	-	-	-	1	2	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	2	-	-	-	-	1	4	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	1	1	-	-	-	-	1	3	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-
107	Kaktovik	-	-	-	-	1	3	6	-	-	-	-	1	3	3	-	1	2
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	1	4	-	-	-	-	1	1	6	-	-	1
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	1	2	-	-	-	-	-	1	7	-	-	1
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	1	1	2	-	-	-	-	1	1	10	-	-	1
112	Clarence Lagoon, Backhouse River	-	-	-	-	1	2	3	-	-	-	-	1	1	9	-	1	3
113	Komakuk Beach, Fish Creek	-	-	-	-	-	1	2	-	-	-	-	1	1	7	-	1	3
114	Nunaluk Spit	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	1	-
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; P = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-35. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Seasonal Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
85	Barrow, Browerville, Elson Lag.	7	6	5	4	4	3	4	3	5	4	5	3	4	3	2	2	1
87	Igalik & Kulgurak Island	3	6	2	3	2	1	1	1	1	-	1	-	-	-	-	-	1
89	Ikpikpuk River Point Poleakoon	1	3	2	4	2	3	1	1	1	1	1	1	1	1	1	1	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	2	3	4	5	6	15	6	8	5	6	5	5	5	5	4	5	3
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	1	1	1	2	2	5	2	2	1	1	1	-	-	-	1
94	Fish Creek, Tingmeachsiovik River	1	1	1	1	2	3	4	11	3	6	2	4	2	2	2	1	-
95	Colville River	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	1	1	2	-	1	-	1	1	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	3	1	5	1	2	4	2	2	-	1
98	Kuparuk River	-	-	-	-	-	-	-	1	-	4	1	1	3	1	2	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	1	-	2	-	1	-	-
102	Pt. Hopson, & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	1	-	1	4	1	5	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	1	-	2	1	7	-	1
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	-	-
107	Kaktovik	-	-	1	-	1	-	1	1	1	1	2	2	2	3	4	5	6
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	1	1	1	2	1	1	2	2	3	4
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	1	1	1	1	1	1	2	2	2	10
110	Iicy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	1	1	1	1	1	2	2	2	3	2
112	Clarence Lagoon , Backhouse R.	-	1	1	1	1	1	2	1	2	1	3	2	3	4	3	5	3
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	1	-	1	1	2	2	2	4	2	7
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	3	2
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

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**Table 2-36. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Seasonal Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
85	Barrow, Browerville, Elson Lag.	7	4	4	5	4	3	1	5	3	4	4	3	1	-	5	4	1
87	Igalik & Kulgurak Island	4	2	1	1	-	-	-	5	1	1	-	-	-	2	1	-	
89	Ikpikpuk River Point Poleakoon	2	3	1	1	1	1	1	4	1	1	1	1	1	-	1	1	1
91	Lonely, Pitt Pt., Pogik Bay, Smith R	3	7	6	6	5	5	5	3	10	6	6	5	4	4	5	4	4
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	2	2	1	1	-	1	5	3	1	1	1	-	1	1	-
94	Fish Creek, Tingmeachsirovik River	1	2	4	5	3	3	1	1	8	6	4	4	1	-	2	1	1
95	Colville River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	
96	Oliktok Point	-	-	1	1	1	1	-	-	2	1	1	1	1	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	1	1	3	3	-	-	1	5	4	5	-	-	1	
98	Kuparuk River	-	-	-	-	1	1	2	-	-	1	2	3	3	-	-	1	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	1	1	-	-	-	1	3	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	2	-	-	-	1	6	-	-	-	1	
103	Brownlow Point, Canning River	-	-	-	-	-	1	2	-	-	-	1	4	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	1	1	-	-	-	1	1	-	-	-	-	
107	Kaktovik	-	1	1	1	2	4	8	-	1	1	2	2	5	4	1	2	4
108	Griffin Point, Oruktalik Lagoon	-	-	-	1	1	2	4	-	-	1	1	2	2	7	1	1	3
109	Angun Point, Beaufort Lagoon	-	-	1	1	1	2	3	-	-	1	1	1	2	8	-	1	2
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	1	1	2	3	-	-	1	1	1	2	13	-	1	3
112	Clarence Lagoon, Backhouse River	1	1	2	1	3	4	4	1	1	1	2	2	3	11	1	3	5
113	Komakuk Beach, Fish Creek	-	-	-	1	1	2	3	-	-	1	2	2	8	-	2	5	
114	Nunaluk Spit	-	-	-	-	-	1	1	-	-	-	-	-	1	3	-	1	2
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; P = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-37. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	LA															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
135	National Petroleum Reserve AK	-	5	-	5	-	5	-	2	-	-	-	-	-	-	-	-
137	Teshekpuk Lake Special Area	-	-	-	3	-	5	-	2	-	-	-	-	-	-	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	3	8	1
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
144	United States Beaufort Coast	-	5	-	5	-	5	-	3	-	1	-	1	-	1	3	8
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-38. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	PL															
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
135	National Petroleum Reserve Alaska	1	1	-	-	-	-	-	3	3	-	-	-	-	-	-	-
137	Teshekpuk Lake Special Area (NPR-A)	-	1	-	-	-	-	-	1	3	-	-	-	-	-	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	1	-	-	-	-	1	4	-	-	-
144	United States Beaufort Coast	1	1	-	-	-	-	1	3	4	-	1	1	2	4	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-39. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve AK	3	13	3	14	3	12	2	7	-	1	-	-	-	-	-	-	1
137	Teshekpuk Lake Special Area	-	3	2	8	3	11	2	7	-	1	-	-	-	-	-	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	2	1	8	17	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	3	
144	United States Beaufort Coast	5	15	4	14	4	13	3	11	-	4	-	5	-	1	6	1	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	3	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

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**Table A.2-40. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	6	6	2	-	-	-	-	11	10	1	-	-	-	2	-	-	
137	Teshekpuk Lake Special Area (NPR-A)	1	4	2	-	-	-	-	4	10	1	-	-	-	2	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	1	5	-	-	-	-	-	4	13	-	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
144	United States Beaufort Coast	8	7	3	1	1	2	6	12	12	3	3	4	8	13	2	-	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-41. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	9	20	10	21	10	20	8	13	4	4	2	2	1	1	1	-	-	-	-	4	-	-	-	-	
137	Teshekpuk Lake Special Area	2	5	5	11	7	16	6	11	3	4	1	2	1	1	1	-	-	-	-	2	-	-	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	1	-	1	5	4	13	23	13	12	-	-	2	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	4	11	-	-	1	-	
143	United States Chukchi Coast	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
144	United States Beaufort Coast	14	24	12	23	12	22	10	19	5	10	2	10	3	4	13	6	17	23	14	12	4	1	2	-	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	4	11	-	-	1	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-42. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	13	14	8	4	2	1	-	19	17	6	2	1	1	-	7	-	-
137	Teshekpuk Lake Special Area (NPR-A)	4	9	7	4	2	1	-	7	15	5	2	1	1	-	5	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	3	11	-	-	-	-	1	7	20	-	-
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	1	-	-	-	-	-	9	-	-	-
143	United States Chukchi Coast	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
144	United States Beaufort Coast	18	17	11	6	4	7	14	21	21	10	8	9	16	20	8	1	3
145	Canada Beaufort Coast	-	-	-	-	-	-	1	-	-	-	-	-	-	9	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-43. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	12	24	14	26	14	25	11	16	7	8	5	4	3	2	2	2	2	-	1	1	7	2	-	1	-
137	Teshekpuk Lake Special Area	2	5	6	13	9	19	9	14	5	6	3	3	2	2	2	1	1	-	1	1	3	1	-	1	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	1	1	2	2	4	7	8	17	28	17	16	-	1	5	-	1
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	14	7	15	-	-	5	-	1
143	United States Chukchi Coast	4	3	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
144	United States Beaufort Coast	18	29	17	29	16	28	14	25	9	15	8	16	8	9	19	12	24	28	19	17	8	4	5	2	1
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	14	7	15	-	-	5	-	2

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-44. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	17	18	12	8	5	2	2	23	21	9	5	3	2	1	10	2	1
137	Teshekpuk Lake Special Area (NPR-A)	4	11	9	6	4	2	2	8	18	8	4	3	2	1	7	1	1
138	Arctic National Wildlife Refuge	-	-	-	-	1	5	14	-	-	-	1	3	9	24	-	1	5
139	Ivvavik National Park (Canada)	-	-	-	-	-	1	2	-	-	-	-	-	1	12	-	-	2
143	United States Chukchi Coast	4	1	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-
144	United States Beaufort Coast	22	22	16	12	10	13	20	26	26	16	14	15	22	26	12	4	7
145	Canada Beaufort Coast	-	-	-	-	-	1	2	-	-	-	-	-	1	12	-	-	3

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-45. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	18	34	22	39	22	37	19	27	14	15	11	11	10	9	8	9	6	2	4	2	12	8	6	6	4
137	Teshekpuk Lake Special Area	4	8	10	18	13	29	14	23	9	12	7	9	7	7	7	5	2	4	2	5	5	4	3	3	
138	Arctic National Wildlife Refuge	-	-	-	-	1	1	1	1	2	3	3	6	5	8	13	13	27	42	27	27	1	4	10	1	3
139	Ivvavik National Park (Canada)	-	1	-	-	-	-	1	-	1	1	2	2	2	4	3	7	5	24	16	27	-	3	12	2	8
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	2	-	2
143	United State Chukchi Coast	6	4	4	3	2	1	1	-	1	1	1	1	1	1	1	1	1	-	-	-	4	2	1	2	1
144	United States Beaufort Coast	26	43	27	44	28	44	27	44	22	31	20	33	22	25	37	28	43	45	35	30	15	14	18	8	9
145	Canada Beaufort Coast	-	1	-	-	-	-	1	-	1	1	2	2	3	4	4	8	5	24	17	28	-	4	15	3	12

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-46. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	24	27	20	15	11	9	7	33	32	18	12	10	7	3	17	8	7
137	Teshekpuk Lake Special Area (NPR-A)	7	16	15	11	8	7	6	11	27	14	10	8	6	2	11	5	5
138	Arctic National Wildlife Refuge	-	1	1	2	5	11	22	-	1	2	3	7	16	37	1	3	10
139	Ivvavik National Park (Canada)	-	-	1	1	2	4	7	1	-	1	1	2	4	22	-	3	9
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2
143	United States Chukchi Coast	5	2	1	1	1	1	1	4	1	1	1	1	1	1	-	2	2
144	United States Beaufort Coast	32	35	29	27	25	29	37	39	44	31	30	32	41	41	22	13	20
145	Canada Beaufort Coast	-	-	1	1	2	5	7	1	-	1	1	3	4	23	-	3	11

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-47. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	21	39	26	45	27	44	25	34	19	22	17	17	16	16	14	15	11	5	8	5	17	13	10	12	9
137	Teshekpuk Lake Special Area	6	9	12	21	16	34	18	29	14	18	12	14	12	12	12	12	10	5	7	5	8	8	6	6	
138	Arctic National Wildlife Refuge	1	1	2	1	2	2	4	3	5	6	7	10	10	13	18	19	34	50	36	35	2	9	18	5	10
139	Ivvavik National Park (Canada)	1	2	1	1	2	1	3	2	4	3	5	5	7	9	6	12	8	28	21	33	2	8	21	7	17
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	3	-	3	
143	United State Chukchi Coast	7	5	4	3	2	1	2	1	2	1	2	1	1	1	1	1	1	-	-	4	2	1	2	1	
144	United States Beaufort Coast	33	52	36	54	39	56	41	58	36	46	35	49	38	41	53	42	58	55	48	41	25	29	32	21	21
145	Canada Beaufort Coast	1	2	1	1	2	1	3	2	4	3	6	5	7	9	7	13	8	29	23	35	2	9	25	7	22

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-48. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Group of Land Segments Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	28	33	27	22	18	16	13	38	39	24	19	17	13	5	23	13	12
137	Teshekpuk Lake Special Area (NPR-A)	9	19	20	17	14	13	11	14	33	19	15	14	11	5	14	8	9
138	Arctic National Wildlife Refuge	1	2	4	6	9	16	28	1	3	5	7	11	21	46	3	8	17
139	Ivvavik National Park (Canada)	1	1	3	4	6	8	11	2	2	3	4	6	6	27	2	7	16
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	
143	United States Chukchi Coast	6	3	1	1	1	1	1	4	1	1	1	1	1	1	-	2	2
144	United States Beaufort Coast	40	45	43	42	40	45	51	48	58	46	45	48	56	53	34	29	34
145	Canada Beaufort Coast	1	2	3	4	6	9	11	2	2	3	4	6	6	28	2	8	19

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-49. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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Notes - All rows have all values less than 0.5 percent and are not shown

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**Table A.2-50. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-51. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-52. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-53. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
25	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
26	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	
27	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	
28	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-54. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17	
26	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
27	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
28	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-55. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25		
19	Chukchi Sea	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-			
20	Chukchi Sea	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-			
22	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-			
23	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-			
24	Beaufort Sea	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-			
25	Beaufort Sea	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-			
26	Beaufort Sea	1	1	1	1	1	1	1	-1	-1	-1	-	-	-	-	-	-	-	-	2	1	-1	1	-	-			
27	Beaufort Sea	1	-	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	-	1	1	-2	-	-	-			
28	Beaufort Sea	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	-	-	-	2	1	-2	-	-	-			
29	Beaufort Sea	-	-	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-			
30	Beaufort Sea	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-			
31	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-		
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-3
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown  
Arctic Multiple-Sale Draft EIS

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**Table A.2-56. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
19	Chukchi Sea	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
20	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
24	Beaufort Sea	1	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
25	Beaufort Sea	1	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
26	Beaufort Sea	1	1	1	-	-	-	1	1	-	-	-	-	-	1	1	-	
27	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	1	1	-	-	2	1	-
28	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	1	1	-	-	2	1	-
29	Beaufort Sea	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
30	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	

**Table A.2-57. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
16	Chukchi Sea	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-
19	Chukchi Sea	3	2	2	1	1	1	1	1	1	1	1	-	1	-	-	-	2
20	Chukchi Sea	3	2	2	1	2	1	1	1	1	-	-	-	-	-	-	-	2
21	Chukchi Sea	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	1
22	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
23	Beaufort Sea	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1
24	Beaufort Sea	1	1	2	1	1	1	1	1	1	1	-	-	-	-	-	-	2
25	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	-	-	-	-	-	-	2
26	Beaufort Sea	2	1	1	1	2	1	2	1	2	1	1	1	1	1	-	-	2
27	Beaufort Sea	1	1	2	1	2	1	2	1	2	2	2	1	2	2	-	-	2
28	Beaufort Sea	2	2	3	2	3	3	4	2	4	3	4	2	3	2	1	-	1
29	Beaufort Sea	1	1	2	1	3	2	2	2	2	2	1	2	2	1	-	-	1
30	Beaufort Sea	1	1	2	1	2	1	1	1	1	1	1	1	1	2	2	3	1
31	Beaufort Sea	1	1	1	1	1	-	1	1	1	1	1	-	1	1	-	-	2
32	Beaufort Sea	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
33	Beaufort Sea	-	-	-	-	-	-	1	-	1	1	1	-	-	-	-	-	-
34	Beaufort Sea	-	-	-	-	1	1	1	1	1	1	1	-	-	-	-	1	1
35	Beaufort Sea	-	-	1	-	1	1	2	1	1	1	2	1	-	1	-	1	2
36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	2
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	1	1	1	1	2	1	-	1
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	1	3
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1

**Table A.2-58. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
16	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
19	Chukchi Sea	2	1	1	1	1	-	-	2	1	1	1	-	-	1	1	-	
20	Chukchi Sea	2	2	1	1	-	-	-	2	1	-	-	-	-	1	-	-	
21	Chukchi Sea	1	1	1	-	-	-	-	1	-	-	-	-	-	1	-	-	
22	Chukchi Sea	1	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	
23	Beaufort Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-	
24	Beaufort Sea	1	1	1	1	-	-	-	1	1	1	-	-	-	1	-	-	
25	Beaufort Sea	1	1	1	1	1	-	-	1	-	1	1	-	-	1	1	-	
26	Beaufort Sea	2	1	2	1	1	1	1	1	1	1	1	1	-	2	2	1	
27	Beaufort Sea	1	1	2	2	2	1	1	1	2	2	2	2	1	-	2	3	1
28	Beaufort Sea	2	3	4	4	3	2	1	2	3	3	3	2	1	-	5	4	1
29	Beaufort Sea	1	2	2	2	1	1	1	1	2	1	1	1	1	-	3	2	1
30	Beaufort Sea	1	2	1	1	1	1	2	1	1	1	1	1	1	2	2	2	2
31	Beaufort Sea	1	1	1	1	1	-	-	1	-	1	-	-	-	1	1	1	
32	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
33	Beaufort Sea	-	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-	
34	Beaufort Sea	-	-	1	1	1	-	-	-	1	1	-	-	-	1	1	-	
35	Beaufort Sea	-	1	1	1	1	1	-	-	1	1	1	-	-	2	3	1	
36	Beaufort Sea	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	1	
37	Beaufort Sea	-	-	-	1	1	1	1	-	-	1	1	1	-	-	2	4	
38	Beaufort Sea	-	-	-	-	1	1	-	-	-	-	1	1	1	-	1	3	

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA= Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.2-59. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
16	Chukchi Sea	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
17	Chukchi Sea	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
18	Chukchi Sea	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
19	Chukchi Sea	3	2	2	2	1	1	1	1	2	1	1	1	1	-	-	-	-	-	-	2	1	-	1	-	
20	Chukchi Sea	4	2	3	2	2	1	2	1	1	-	1	-	-	-	-	-	-	-	-	3	1	-	1	-	
21	Chukchi Sea	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
22	Chukchi Sea	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
23	Beaufort Sea	2	1	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
24	Beaufort Sea	2	1	2	1	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	2	1	-	1	-	
25	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-	2	1	-	1	-	
26	Beaufort Sea	2	1	1	1	2	1	2	1	2	1	1	1	1	1	1	1	-	-	-	2	2	-	2	-	
27	Beaufort Sea	1	1	2	2	2	1	2	2	2	2	2	2	1	1	1	1	-	-	-	2	2	1	3	-	
28	Beaufort Sea	2	2	3	2	4	4	5	3	5	4	5	3	4	3	2	3	1	-	1	-	4	5	1	7	2
29	Beaufort Sea	1	1	2	1	3	2	3	2	3	2	2	1	2	2	1	2	1	-	1	-	2	3	1	2	1
30	Beaufort Sea	1	1	2	1	2	1	1	1	2	1	2	2	2	2	1	3	2	2	3	2	3	2	3	3	2
31	Beaufort Sea	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	2	1	1	3	1	
32	Beaufort Sea	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
33	Beaufort Sea	-	-	-	-	-	-	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	Beaufort Sea	1	1	2	1	2	2	2	1	2	2	2	1	1	-	-	-	-	-	-	3	2	-	5	1	
35	Beaufort Sea	1	1	1	1	2	1	2	1	2	1	2	1	3	2	1	1	-	-	-	2	3	1	3	1	
36	Beaufort Sea	1	-	-	-	-	-	1	-	1	1	1	1	1	1	1	1	-	1	-	1	1	1	2	3	
37	Beaufort Sea	1	-	1	1	1	1	1	1	2	2	2	2	2	1	2	1	-	1	1	1	3	3	5	9	
38	Beaufort Sea	-	-	-	1	-	1	1	1	1	1	1	1	1	1	1	1	-	1	1	-	1	3	1	6	
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-60. Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
16	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
19	Chukchi Sea	2	2	1	2	1	-	-	2	1	1	1	-	-	-	1	1	-
20	Chukchi Sea	3	2	1	1	-	-	-	2	1	-	-	-	-	-	2	-	-
21	Chukchi Sea	1	1	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-
22	Chukchi Sea	1	1	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-
23	Beaufort Sea	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
24	Beaufort Sea	2	1	1	1	1	-	-	1	1	1	1	-	-	-	1	-	-
25	Beaufort Sea	1	1	1	1	1	-	-	1	-	1	1	-	-	-	1	1	-
26	Beaufort Sea	2	1	2	1	1	1	1	1	1	1	1	1	1	-	2	2	1
27	Beaufort Sea	1	2	2	2	2	1	1	1	2	2	2	2	1	-	2	3	1
28	Beaufort Sea	2	4	5	5	4	3	2	2	4	5	4	3	2	-	5	5	2
29	Beaufort Sea	1	2	3	2	2	2	2	1	3	2	2	1	1	-	3	2	1
30	Beaufort Sea	1	2	1	1	2	2	2	1	1	1	1	2	1	2	2	2	3
31	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	-	1	1	-	1	2	1
32	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-
33	Beaufort Sea	-	-	1	1	1	-	-	-	1	1	-	-	-	-	-	-	-
34	Beaufort Sea	1	2	2	2	1	-	-	1	1	2	1	-	-	-	3	2	-
35	Beaufort Sea	1	1	2	1	2	1	-	1	1	1	1	2	1	-	2	3	1
36	Beaufort Sea	1	-	1	1	1	1	1	-	1	1	1	1	1	-	-	2	1
37	Beaufort Sea	1	1	1	2	2	2	1	1	1	2	2	2	1	-	1	4	4
38	Beaufort Sea	-	-	1	1	1	1	1	-	1	1	1	1	1	-	1	3	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-61. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	1	14	1	13	-	13	-	9	-	3	-	3	-	-	3	-	10	21	2	2	-	-	-	-	-
2	Point Barrow, Plover Islands	2	25	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	3	-	-	2	-	-	-	-	-	-	-	-	-	-	-
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	1	1	-	-	-	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	14	-	8	-	-	-	-	-	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	10	21	11	-	-	-	-	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	12	-	-	-	-	-	-
29	Ice/Sea Segment 1	9	22	2	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Ice/Sea Segment 2	1	5	4	18	5	16	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Ice/Sea Segment 3	-	-	-	1	2	11	8	22	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Ice/Sea Segment 4	-	-	-	-	-	-	-	1	3	2	23	7	5	1	-	-	-	-	-	-	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	2	2	20	9	4	8	-	-	-	-	-	-	-	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	2	1	5	23	3	14	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	20	55	3	19	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	3	-	35	3	1	4	-	-	-	-	-	-	-	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	11	-	3	-	-	-	-	-	-
55	Point Barrow, Plover Islands	2	18	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Smith Bay	-	4	-	10	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	Harrison Bay	-	-	-	-	-	5	1	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
69	Harrison Bay/Colville Delta	-	-	-	-	-	1	-	28	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	-	3	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	23	-	2	-	-	-	-	-	-
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-
85	Sagavanirktoq River Delta	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
86	Harrison Bay	-	-	-	-	-	5	1	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Colville River Delta	-	-	-	-	-	1	-	28	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Simpson Lagoon	-	-	-	-	-	-	-	3	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	-	2	-	3	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	1	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-62. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	2	2	-	-	-	-	3	8	9	2	4	2	6	9	-	-	-
2	Point Barrow, Plover Islands	4	1	-	-	-	-	-	10	-	-	-	-	-	-	-	-	-
6	ERA 6	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	1	7	-	-	-	-
9	Stockton Islands, McClure Islands	-	-	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	-	1	22	-	-	-	-	-	2	-	-	1
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	3	-	-	-	-	-	15	-	-	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-
25	Beaufort Spring Lead 7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Ice/Sea Segment 1	16	2	-	-	-	-	-	9	-	-	-	-	-	-	-	-	-
30	Ice/Sea Segment 2	3	13	1	-	-	-	-	17	2	-	-	-	-	-	1	-	-
31	Ice/Sea Segment 3	-	2	8	5	-	-	-	-	23	10	1	-	-	-	2	-	-
32	Ice/Sea Segment 4	-	-	8	33	11	-	-	-	-	24	24	1	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	-	16	9	-	-	-	-	5	20	1	-	-	1	-
34	Ice/Sea Segment 6	-	-	-	-	-	12	8	-	-	-	-	4	21	-	-	-	1
35	ERA 35	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	38	3	-	-	-	-	-	24	-	-	-	-	-	-	-	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	5	3	-	-	-	-	8	22	1	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	28	-	-	-	-	-	1	3	-	-	-
55	Point Barrow, Plover Islands	4	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-
65	Smith Bay	1	1	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-
68	Harrison Bay	-	-	1	-	-	-	-	-	34	1	-	-	-	-	-	-	-
69	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	-	6	3	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	-	-	-	-	-	-	-	3	4	-	-	-	-	-	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	-	-	-	-	-	-	1	5	2	-	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
85	Sagavanirktoq River Delta	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
86	Harrison Bay	-	-	1	-	-	-	-	-	34	1	-	-	-	-	-	-	-
87	Colville River Delta	-	-	-	-	-	-	-	-	6	3	-	-	-	-	-	-	-
88	Simpson Lagoon	-	-	-	-	-	-	-	-	-	3	4	-	-	-	-	-	-
92	Thetis, Jones, Cottle and Return Islands	-	-	-	-	-	-	-	-	-	2	4	-	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	2	4	-	-	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	3	-	-	-	-	-	-	2	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

**Notes** - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-63. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
--	LAND	19	45	12	41	10	36	7	30	1	12	1	15	1	2	18	3	26	53	16	22	2	-	1	-	-	
2	Point Barrow, Plover Islands	16	43	7	19	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
6	ERA 6	9	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	2	-	-	8	1	8	-	-	-	-	-	-	-	-	-	
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	1	-	6	-	1	7	-	3	-	-	-	-	-	-	-	-	-	
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	5	5	-	-	-	-	-	-	-	
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	6	18	-	11	-	-	1	-	-	-	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	4	14	27	15	-	-	2	-	-	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	4	21	-	-	1	-	-	
29	Ice/Sea Segment 1	15	25	7	11	4	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	
30	Ice/Sea Segment 2	4	9	10	22	11	20	4	4	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	
31	Ice/Sea Segment 3	1	1	2	3	5	15	13	26	6	13	4	3	2	1	-	-	-	-	-	-	1	-	-	-	-	
32	Ice/Sea Segment 4	-	-	-	-	-	1	3	6	5	27	12	11	7	3	1	1	-	-	-	-	-	-	-	-	-	
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	1	1	6	4	26	13	11	14	4	3	-	-	-	-	-	-	-	-	
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	1	1	5	3	8	27	7	20	-	1	-	-	-	-	-	-	
35	ERA 35	12	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	
42	Barrow Subsistence Area 2	34	62	16	32	8	9	1	2	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	
43	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	1	-	8	2	40	7	7	13	3	3	-	-	-	-	-	-	-	-	
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	6	4	19	1	9	-	-	-	-	-	
55	Point Barrow, Plover Islands	13	31	6	14	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
64	Pearl Bay Area	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
65	Smith Bay	2	10	2	18	1	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	-	-	
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	-	-	-	
68	Harrison Bay	-	-	1	1	2	10	4	28	1	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
69	Harrison Bay/Colville Delta	-	-	-	-	1	3	3	33	1	8	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	1	6	-	9	1	6	1	1	2	-	-	-	-	-	-	-	-	-	-	-	
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	1	-	6	-	11	1	1	5	-	1	-	-	-	-	-	-	-	-	
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	1	-	6	-	-	5	-	2	-	-	-	-	-	-	-	-	
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	1	-	3	-	-	3	-	1	-	-	-	-	-	-	-	-	
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	35	3	15	-	-	-	-	-	-	
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	1	-	3	-	-	3	-	1	-	-	-	-	-	-	-	-	
86	Harrison Bay	-	-	1	1	2	10	4	28	1	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Colville River Delta	-	-	-	1	3	3	33	1	8	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
88	Simpson Lagoon	-	-	-	-	-	-	-	1	6	-	9	1	6	1	1	2	-	-	-	-	-	-	-	-	-	
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	1	4	-	8	-	7	1	1	2	-	-	-	-	-	-	-	-	-	-	-	
93	Cross and No Name Island	-	-	-	-	-	-	-	-	1	-	5	-	1	3	-	1	-	-	-	-	-	-	-	-	-	
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	5	-	4	-	-	-	-	-	-	-	-	
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	1	-	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	3	-	10	1	1	5	-	1	-	-	-	-	-	-	-	-	-	
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	5	-	1	-	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	6	1	8	-	-	-	-	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	1	3	-	-	-	-	-	-	

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.2-64. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	26	20	8	3	2	6	16	37	33	11	11	13	24	39	5	-	1
2	Point Barrow, Plover Islands	24	7	-	-	-	-	-	26	1	-	-	-	-	-	1	-	-
6	ERA 6	6	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	1	2	-	-	-	1	2	13	-	-	-	-
9	Stockton Islands, McClure Islands	-	-	-	-	-	2	1	-	-	-	2	6	9	-	-	-	-
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	1	-	-	-	-	-	-	11	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	3	25	-	-	-	-	1	7	2	-	-	3
21	Ice/Sea Segment 8	-	-	-	-	-	1	8	-	-	-	-	-	2	20	-	-	1
22	Ice/Sea Segment 9	-	-	-	-	-	-	1	-	-	-	-	-	-	13	-	-	-
25	Beaufort Spring Lead 7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Ice/Sea Segment 1	21	7	1	-	-	-	-	14	1	-	-	-	-	-	1	-	-
30	Ice/Sea Segment 2	8	19	4	-	-	-	-	21	5	1	-	-	-	-	5	-	-
31	Ice/Sea Segment 3	2	5	14	12	5	1	-	2	26	17	7	1	-	-	5	1	-
32	Ice/Sea Segment 4	-	-	10	35	17	2	-	-	1	28	28	6	-	-	-	2	-
33	Ice/Sea Segment 5	-	-	1	2	19	15	2	-	-	3	10	25	6	-	-	2	2
34	Ice/Sea Segment 6	-	-	-	-	2	17	14	-	-	-	1	7	27	-	-	-	3
35	ERA 35	4	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	49	16	1	-	-	-	-	39	3	-	-	-	-	-	2	-	-
43	Nuiqsut Subsistence Area	-	-	-	3	9	11	2	-	-	3	14	29	8	-	-	1	1
44	Kaktovik Subsistence Area	-	-	-	-	-	4	33	-	-	-	1	8	6	-	-	2	-
55	Point Barrow, Plover Islands	18	6	-	-	-	-	-	19	1	-	-	-	-	1	-	-	-
64	Pearl Bay Area	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
65	Smith Bay	5	4	1	-	-	-	-	14	2	-	-	-	-	-	1	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
68	Harrison Bay	1	3	5	2	1	-	-	1	40	7	2	-	-	-	2	-	-
69	Harrison Bay/Colville Delta	-	1	3	3	1	-	-	-	12	9	5	1	-	-	1	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	1	2	2	1	-	-	1	7	8	4	1	-	-	-	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	1	2	2	1	-	-	4	8	8	4	-	-	-	-
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	-	1	1	-	-	1	2	6	6	-	-	-	-
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	-	-	-	-	1	3	3	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-
84	Canning River Delta	-	-	-	-	-	-	1	-	-	-	-	1	3	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	1	3	3	-	-	-	-
86	Harrison Bay	1	3	5	2	1	-	-	1	40	7	2	-	-	-	2	-	-
87	Colville River Delta	-	1	3	3	1	-	-	-	12	9	5	1	-	-	1	-	-
88	Simpson Lagoon	-	-	1	2	2	1	-	-	1	7	8	4	1	-	-	-	-
92	Thetis, Jones, Cottle and Return Islands	-	-	1	2	1	1	-	-	1	5	8	4	1	-	-	-	-
93	Cross and No Name Island	-	-	-	-	1	2	-	-	-	-	2	5	2	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	1	1	-	-	-	2	7	-	-	-	-	-
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	1	2	-	-	-	-	2	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	1	1	2	1	-	-	2	4	9	4	-	-	-	-
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	1	3	-	-	-	-	2	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	1	9	-	-	-	-	2	6	-	-	1	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline.** Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-65. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25		
-- LAND		48	68	39	65	37	60	29	51	14	28	7	29	8	11	36	18	47	80	47	58	16	3	10	1	-		
2 Point Barrow, Plover Islands		32	52	19	28	12	11	4	4	2	2	1	-	-	-	-	-	-	-	-	-	7	1	-	-	-		
6 ERA 6		17	9	6	5	4	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-		
8 Maguire, Flaxman Islands		-	-	-	-	-	-	-	-	1	-	4	1	1	10	2	11	-	1	-	-	-	-	-	-	-		
9 Stockton & McClure Islands		-	-	-	-	-	-	-	-	2	-	8	1	2	10	2	5	-	-	-	-	-	-	-	-	-		
17 Angun and Beaufort Lagoons		-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	18	10	9	-	-	2	-	-		
20 Ice/Sea Segment 7		-	-	-	-	-	-	-	-	-	1	1	3	3	8	10	14	23	1	16	2	-	2	3	-	-		
21 Ice/Sea Segment 8		-	-	-	-	-	-	-	-	1	1	2	2	5	5	11	11	16	33	20	-	1	8	-	1	-		
22 Ice/Sea Segment 9		-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	4	13	14	31	-	-	6	-	-	-	
29 Ice/Sea Segment 1		20	27	13	15	9	7	4	4	3	2	1	-	-	-	-	-	-	-	-	-	7	-	-	-	-		
30 Ice/Sea Segment 2		7	13	15	24	17	22	9	7	5	4	1	-	-	-	-	-	-	-	-	-	7	1	-	1	-		
31 Ice/Sea Segment 3		3	3	5	5	9	17	19	29	14	20	10	9	8	6	4	4	2	-	-	-	3	2	-	-	-		
32 Ice/Sea Segment 4		1	-	1	1	1	2	6	8	9	31	17	17	11	7	5	4	2	-	-	-	1	2	-	-	-		
33 Ice/Sea Segment 5		-	-	-	-	-	1	2	3	3	10	8	29	18	15	20	7	6	-	1	-	2	-	-	-	-		
34 Ice/Sea Segment 6		-	-	-	-	-	-	-	1	1	3	3	9	7	13	31	11	23	-	3	-	1	-	-	-	-		
35 ERA 35		21	9	10	6	6	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-		
40 Wainwright Subsistence Area		1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
42 Barrow Subsistence Area 2		48	68	32	44	22	19	9	8	4	3	1	-	-	-	-	-	-	-	-	-	14	1	-	1	-		
43 Nuiqsut Subsistence Area		-	-	-	-	-	-	1	2	2	11	5	43	11	11	19	7	6	-	1	-	-	1	-	-	-		
44 Kaktovik Subsistence Area		-	-	-	-	-	-	-	-	-	1	-	3	2	6	12	11	26	2	15	2	-	1	3	-	-		
48 Ice/Sea Segment 11		1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
49 ERA 49		1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
50 Ice/Sea Segment 13		1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
51 Ice/Sea Segment 14		4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
55 Point Barrow, Plover Islands		26	38	17	22	11	9	4	3	2	2	1	-	-	-	-	-	-	-	-	-	7	1	-	-	-		
56 ERA 56		4	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-		
58 Offshore Pt. Lay to Wainwright		1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
60 King and Shingle Point		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
64 Peard Bay Area		9	5	3	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-		
65 Smith Bay		5	13	7	21	5	8	3	3	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-		
67 Herschel Island (Canada)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	8	4	15	-	-	1	-		
68 Harrison Bay		1	2	3	3	5	13	11	33	6	12	3	5	3	2	2	1	1	-	-	-	1	-	-	-	-		
69 Harrison Bay/Colville Delta		1	1	3	2	4	5	6	36	4	12	3	6	3	3	3	2	1	-	-	-	1	-	-	-	-		
71 Simpson Lag., Thetis & Jones Isl.		-	-	-	-	-	1	2	8	1	11	2	10	3	3	5	2	2	-	1	-	-	-	-	-	-		
72 Gwyder Bay, Cottle & Return Isl.		-	-	-	-	-	-	1	1	8	1	15	3	4	9	3	4	-	1	-	-	-	-	-	-	-		
73 Prudhoe Bay		-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
75 Water over Boulder Patch		-	-	-	-	-	-	-	-	2	-	7	1	1	8	1	4	-	-	-	-	-	-	-	-	-		
76 Kendall Isl. Bird Sanctuary (Ca)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-		
77 Sag. River Delta, Foggy Isl. Bay		-	-	-	-	-	-	-	-	1	-	4	1	1	4	1	2	-	-	-	-	-	-	-	-	-		
78 Mikkelsen Bay		-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-		
79 Demarcation Bay Offshore		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	42	13	25	-	-	4	-	-	
81 Simpson Cove		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
84 Canning River Delta		-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	3	-	-	-	-	-	-	-	-	-	-	
85 Sagavanirktok River Delta		-	-	-	-	-	-	-	-	1	-	4	1	1	4	1	2	-	-	-	-	-	-	-	-	-		
86 Harrison Bay		1	2	3	3	5	13	11	33	6	12	3	5	3	2	2	1	1	-	-	-	1	-	-	-	-		
87 Colville River Delta		1	1	3	2	4	5	6	36	4	12	3	6	3	3	3	2	1	-	-	-	1	-	-	-	-		
88 Simpson Lagoon		-	-	-	-	-	1	2	8	1	11	2	10	3	3	5	2	2	-	1	-	-	-	-	-	-	-	
89 Mackenzie River Delta		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
92 Thetis, Jones, Cottle & Return Isl.		-	-	-	-	-	1	5	1	10	2	11	3	3	5	2	2	-	1	-	-	-	-	-	-	-	-	
93 Cross and No Name Island		-	-	-	-	-	-	-	2	1	6	1	2	4	1	2	-	-	-	-	-	-	-	-	-	-	-	
94 Maguire, Flaxman &, Barrier Isl.		-	-	-	-	-	-	-	-	-	2	-	1	6	1	6	-	-	-	-	-	-	-	-	-	-	-	
95 Arey & Barter Isl., Bernard Spit		-	-	-	-	-	-	-	-	-	1	-	1	2	1	5	-	1	-	-	-	-	-	-	-	-	-	
96 Midway, Cross and Bartlett Islands		-	-	-	-	-	-	-	1	4	1	12	2	3	7	2	3	-	-	-	-	-	-	-	-	-	-	
98 Anderson Point Barrier Islands		-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-
99 Arey & Barter Isl., Bernard Spit		-	-	-	-	-	-	-	-	-	-	1	-	1	3	1	6	-	1	-	-	-	-	-	-	-	-	
100 Jago and Tapkaurak Spits		-	-	-	-	-	-	-	-	-	-	1	1	3	5	7	13	2	14	2	-	-	2	-	-	-	-	
101 Icy Reef		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	2	6	-	-	1	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-66. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	56	49	30	18	11	20	40	62	55	29	23	26	44	71	25	1	10
2	Point Barrow, Plover Islands	38	18	5	2	-	-	-	37	5	2	1	-	-	-	7	-	-
6	ERA 6	13	5	1	-	-	-	-	7	1	-	-	-	-	-	2	-	-
7	US Russia Maritime Boundary	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	1	3	5	-	-	-	1	4	16	-	-	-	1
9	Stockton Islands, McClure Islands	-	-	-	1	1	4	4	-	-	1	3	8	12	-	-	-	1
17	Angun and Beaufort Lagoons	-	-	-	-	-	1	4	-	-	-	-	2	15	-	-	-	1
20	Ice/Sea Segment 7	-	-	-	1	2	10	31	-	-	1	1	4	13	4	-	1	7
21	Ice/Sea Segment 8	-	-	-	1	2	6	16	-	-	1	1	2	7	23	-	1	7
22	Ice/Sea Segment 9	-	-	-	-	-	2	6	-	-	-	-	-	3	19	-	-	3
25	Beaufort Spring Lead 7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Ice/Sea Segment 1	25	11	4	2	-	-	-	18	5	3	1	-	-	-	6	-	-
30	Ice/Sea Segment 2	12	23	9	4	1	-	-	23	9	5	2	-	-	-	12	-	-
31	Ice/Sea Segment 3	4	9	21	21	11	5	2	5	29	25	14	7	3	-	10	3	2
32	Ice/Sea Segment 4	1	1	13	39	23	6	2	-	4	31	33	11	3	-	1	3	2
33	Ice/Sea Segment 5	-	-	3	6	24	20	6	-	1	7	14	29	13	-	-	4	3
34	Ice/Sea Segment 6	-	-	1	2	6	21	18	-	-	1	4	12	30	1	-	2	5
35	ERA 35	13	6	1	-	-	-	-	9	1	-	-	-	-	3	-	-	-
40	Wainwright Subsistence Area	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	58	30	9	3	-	-	-	50	12	4	1	-	-	-	13	-	-
43	Nuiqsut Subsistence Area	-	-	2	6	14	16	6	-	1	6	17	34	13	-	-	2	3
44	Kaktovik Subsistence Area	-	-	-	-	2	11	39	-	-	1	1	5	16	8	-	-	6
48	Ice/Sea Segment 11	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
50	Ice/Sea Segment 13	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
51	Ice/Sea Segment 14	3	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	29	16	4	2	-	-	-	29	5	2	1	-	-	-	7	-	-
56	ERA 56	3	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
58	Offshore Pt. Lay to Wainwright	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	Peard Bay Area	7	2	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-
65	Smith Bay	8	9	3	-	-	-	-	17	5	1	-	-	-	-	3	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	1	-	-	-	-	-	-	9	-	-	-
68	Harrison Bay	2	6	12	10	5	3	1	3	44	15	7	4	1	-	5	1	-
69	Harrison Bay/Colville Delta	2	4	7	8	5	4	1	2	15	14	9	4	2	-	3	1	1
71	Simpson Lagoon, Thetis and Jones Island	-	-	2	4	5	5	2	-	2	9	12	7	4	-	-	-	1
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	3	4	6	4	-	-	6	10	12	7	-	-	1	1
73	Prudhoe Bay	-	-	-	-	-	-	1	-	-	-	-	2	1	-	-	-	-
75	Water over Boulder Patch	-	-	-	1	1	3	3	-	-	1	3	7	8	-	-	-	1
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	1	1	1	2	-	-	1	1	5	5	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	1	4	-	-	-	-	-	2	29	-	-	1
81	Simpson Cove	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-
84	Canning River Delta	-	-	-	-	-	-	1	1	-	-	-	1	3	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	1	1	1	2	-	-	1	1	5	5	-	-	-	-
86	Harrison Bay	2	6	12	10	5	3	1	3	44	15	7	4	1	-	5	1	-
87	Colville River Delta	2	4	7	8	5	4	1	2	15	14	9	4	2	-	3	1	1
88	Simpson Lagoon	-	-	2	4	5	5	2	-	2	9	12	7	4	-	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	1	3	4	5	2	-	1	7	11	8	4	-	-	-	1
93	Cross and No Name Island	-	-	-	1	3	2	-	-	-	1	3	7	4	-	-	-	1
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	1	2	3	-	-	-	1	2	9	-	-	-	-	1
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	1	3	-	-	-	-	1	3	1	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	1	2	2	5	2	-	-	3	5	12	6	-	-	-	1
98	Anderson Point Barrier Islands	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	2	4	-	-	-	-	1	4	1	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	5	16	-	-	-	-	1	6	8	-	-	3
101	Icy Reef	-	-	-	-	-	-	1	-	-	-	-	-	7	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-67. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25							
--	LAND	56	73	50	71	47	66	38	57	26	37	19	39	20	27	48	37	60	89	65	75	28	12	29	6	9							
2	Point Barrow, Plover Islands	35	54	23	29	14	12	6	5	5	3	3	-	1	-	-	-	-	-	-	-	-	11	2	-	2	-						
6	ERA 6	19	10	9	7	6	3	3	2	2	1	1	-	-	-	-	-	-	-	-	-	-	8	1	-	1	-						
7	US Russia Maritime Boundary	3	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-						
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	1	1	4	1	2	11	3	11	-	1	-	-	-	-	-	-	-	-						
9	Stockton & McClure Islands	-	-	-	-	-	-	-	1	-	2	1	8	2	2	11	2	5	-	-	-	-	-	-	-	-	-						
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	1	1	2	2	4	5	19	11	10	-	1	3	-	1	-							
20	Ice/Sea Segment 7	-	-	-	-	-	-	1	1	1	3	4	7	7	12	14	17	26	2	17	3	-	4	5	-	1	-						
21	Ice/Sea Segment 8	-	-	-	-	-	-	1	-	1	3	4	8	10	13	13	18	16	16	35	21	-	5	12	-	3	-						
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	1	2	3	7	7	11	11	16	23	34	-	3	15	1	6	-	-	-						
29	Ice/Sea Segment 1	22	28	16	16	11	8	6	5	5	3	2	-	-	-	-	-	-	-	-	-	10	1	-	2	-							
30	Ice/Sea Segment 2	9	14	17	25	20	24	11	8	7	5	3	1	1	-	-	1	-	-	-	-	10	2	-	2	-							
31	Ice/Sea Segment 3	4	4	7	6	11	18	22	30	18	23	14	10	10	8	5	5	3	-	1	-	6	5	1	1	-							
32	Ice/Sea Segment 4	2	1	2	1	2	2	8	10	11	33	18	19	13	8	6	5	3	-	1	-	2	4	1	-	-							
33	Ice/Sea Segment 5	-	-	1	1	1	2	3	5	5	12	10	31	19	17	21	8	7	-	2	1	-	3	1	-	-							
34	Ice/Sea Segment 6	-	-	-	-	-	1	1	1	4	4	11	8	14	31	12	24	-	5	1	-	2	1	-	-	-							
35	ERA 35	24	11	13	8	9	4	3	2	2	-	-	-	-	-	-	-	-	-	-	-	12	1	-	2	-							
36	ERA 36	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-							
40	Wainwright Subsistence Area	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-							
42	Barrow Subsistence Area 2	51	68	37	45	27	22	14	11	9	5	5	1	2	-	-	-	-	-	-	-	20	3	-	3	-							
43	Nuiqsut Subsistence Area	-	-	-	-	-	1	1	3	3	12	5	44	12	12	20	7	7	-	1	1	-	2	1	-	-	-						
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	1	2	3	7	6	11	16	15	29	3	17	3	-	3	5	-	1	-						
48	Ice/Sea Segment 11	2	2	2	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-							
49	ERA 49	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-							
50	Ice/Sea Segment 13	2	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-							
51	Ice/Sea Segment 14	5	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-							
52	Ice/Sea Segment 15	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
55	Point Barrow, Plover Islands	28	40	20	23	14	11	6	5	5	3	3	-	1	-	-	-	-	-	-	-	10	2	-	2	-							
56	ERA 56	8	5	7	3	4	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-							
58	Offshore Pt. Lay to Wainwright	3	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-							
60	King and Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-							
63	ERA 63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-							
64	Pearl Bay Area	11	5	5	4	3	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	5	-	-	1	-							
65	Smith Bay	5	13	8	22	7	9	4	4	1	1	1	-	-	-	-	-	-	-	-	-	3	-	-	-	-							
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
68	Harrison Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	2	14	9	23	-	-	6	-	2	-						
69	Harrison Bay/Colville Delta	2	2	4	4	6	14	13	34	9	14	5	6	4	4	3	2	1	-	-	3	1	-	-	-	-							
71	Simpson Lag., Thetis & Jones Isl.	2	2	4	3	5	6	8	37	7	14	5	7	4	3	4	2	1	-	-	2	1	-	1	-	-							
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-							
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	2	-	1	1	-	1	-	-	-	-	-	-	-	-	-							
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	2	1	7	1	2	8	2	4	-	-	-	-	-	-	-	-							
76	Kendall Isl. Bird Sanctuary (Ca)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-	5	3						
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	1	-	4	1	1	4	1	2	-	-	-	-	-	-	-	-	-	-						
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-					
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	1	1	4	4	7	6	43	19	28	-	1	9	-	3	-	-						
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-					
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	3	-	-	-	-	-	-	-	-	-	-	-					
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	1	-	4	1	1	4	1	2	-	-	-	-	-	-	-	-	-	-	-					
86	Harrison Bay	2	2	4	4	6	14	13	34	9	14	5	6	4	4	3	2	1	-	-	3	1	-	1	-	-	-						
87	Colville River Delta	2	2	4	3	5	7	9	37	7	14	5	7	4	4	4	2	2	-	1	-	2	1	-	1	-	-						
88	Simpson Lagoon	-	-	-	-	-	1	2	8	2	12	3	11	4	4	5	2	2	-	1	-	-	-	-	-	-	-	-					
89	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	-	-	5	-	3	-				
90	Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-				
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	1	5	1	11	3	12	4	4	6	2	3	-	1	-	-	-	-	-	-	-	-	-				
93	Cross and No Name Island	-	-	-	-	-	-	-	1	2	1	7	2	2	5	2	2	-	-	-	-	-	-	-	-	-	-	-	-				
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	2	1	1	6	2	6	-	-	-	-	-	-	-	-	-	-	-	-				
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	1	-	1	3	1	5	1	2	1	-	-	-	-	-	-	-	-	-				
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	1	1	4	1	13	3	3	8	2	3	-	-	-	-	-	-	-	-	-	-	-				
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	6	1	2	-	-	-	-	-	-	-	-	-			
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	10	4	6	-	-	2	4	-	1	-	-	-	-			
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	1	1	2	3	4	7	8	11	15	2	15	3	-	2	4	-	1	-	-	-	-	
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	10	4	6	-	-	2	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-68. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	63	58	40	29	23	36	56	68	61	38	33	37	56	83	35	9	27
2	Point Barrow, Plover Islands	40	20	6	3	1	-	-	38	7	3	2	-	-	-	9	1	-
6	ERA 6	14	7	3	1	-	-	-	9	2	1	1	-	-	-	5	-	-
7	US Russia Maritime Boundary	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
8	Maguire, Flaxman Islands	-	-	-	1	1	3	5	-	-	1	1	4	16	-	-	-	1
9	Stockton & McClure Islands	-	-	-	1	2	4	4	-	-	1	3	8	12	-	-	-	1
17	Angun and Beaufort Lagoons	-	-	-	-	1	2	7	-	-	-	2	3	15	-	-	-	3
20	Ice/Sea Segment 7	-	-	1	3	7	14	33	-	-	2	4	9	16	5	-	4	10
21	Ice/Sea Segment 8	-	-	1	3	7	14	20	-	-	2	5	10	13	23	-	5	13
22	Ice/Sea Segment 9	-	-	-	1	2	7	14	-	-	1	3	8	22	-	2	-	10
25	Beaufort Spring Lead 7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Ice/Sea Segment 1	27	13	6	4	1	-	-	19	6	4	2	-	-	-	9	-	-
30	Ice/Sea Segment 2	14	25	10	6	2	1	-	25	10	5	3	-	-	-	15	1	-
31	Ice/Sea Segment 3	5	10	23	24	13	7	3	6	30	27	17	9	4	-	12	4	2
32	Ice/Sea Segment 4	1	1	14	40	24	7	3	1	5	33	34	12	4	-	3	4	2
33	Ice/Sea Segment 5	-	1	4	9	25	21	7	1	3	9	16	30	14	1	-	5	4
34	Ice/Sea Segment 6	-	-	1	3	7	22	19	-	1	2	5	13	30	1	-	3	5
35	ERA 35	15	9	3	1	-	-	-	10	3	1	-	-	-	-	7	-	-
36	ERA 36	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
40	Wainwright Subsistence Area	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	60	34	13	7	2	-	-	52	15	7	3	-	-	-	19	1	-
43	Nuqsut Subsistence Area	-	-	2	6	15	17	7	-	1	7	18	34	13	1	-	2	3
44	Kaktovik Subsistence Area	-	-	1	1	5	14	41	-	-	1	3	9	19	8	-	3	9
48	Ice/Sea Segment 11	2	2	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
49	ERA 49	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
50	Ice/Sea Segment 13	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
51	Ice/Sea Segment 14	4	1	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
52	Ice/Sea Segment 15	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	31	18	6	3	1	-	-	30	6	3	2	-	-	-	9	1	-
56	ERA 56	7	3	1	-	-	-	-	5	1	-	-	-	-	-	3	-	-
58	Offshore Pt. Lay to Wainwright	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
64	Peard Bay Area	8	3	1	-	-	-	-	5	-	-	-	-	-	-	2	-	-
65	Smith Bay	8	10	4	1	-	-	-	18	6	2	-	-	-	-	5	-	-
67	Herschel Island (Canada)	-	-	-	-	-	1	3	-	-	-	-	-	2	16	-	-	3
68	Harrison Bay	3	7	14	13	7	4	1	4	45	17	9	5	2	-	6	2	1
69	Harrison Bay/Colville Delta	3	5	9	10	6	4	2	3	16	16	10	5	2	-	5	1	1
70	ERA 70	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	2	5	6	5	2	-	3	10	13	8	4	-	-	1	1
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	3	5	7	4	-	-	6	11	12	8	-	-	1	1
73	Prudhoe Bay	-	-	-	-	-	1	-	-	-	-	-	2	2	-	-	-	-
75	Water over Boulder Patch	-	-	-	1	1	3	3	-	-	1	3	7	8	-	-	1	-
76	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	1	1	2	2	-	-	1	1	5	5	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	1	4	8	-	-	-	1	2	4	30	-	1	7
81	Simpson Cove	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
84	Canning River Delta	-	-	-	-	-	-	1	1	-	-	-	-	1	3	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	1	1	2	2	-	-	1	1	5	5	-	-	-
86	Harrison Bay	3	7	14	13	7	4	1	4	45	17	9	5	2	-	7	2	1
87	Colville River Delta	3	5	10	11	7	4	2	3	16	16	11	6	2	-	5	1	1
88	Simpson Lagoon	-	-	2	5	6	5	2	-	3	10	13	8	4	-	-	1	1
89	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	3	-
92	Thetis, Jones, Cottle and Return Islands	-	-	2	4	5	5	3	-	1	8	12	9	5	-	-	1	1
93	Cross and No Name Island	-	-	-	1	2	3	2	-	2	3	7	4	-	-	-	1	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	1	2	3	-	-	1	3	10	-	-	-	1	-
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	2	3	-	-	-	1	3	1	-	-	1	-
96	Midway, Cross and Bartlett Islands	-	-	1	3	3	5	3	-	-	3	6	12	7	-	-	-	1
98	Anderson Point Barrier Islands	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	2	4	-	-	-	-	2	4	1	-	-	1
100	Jago and Tapkaurak Spits	-	-	-	-	1	3	8	18	-	-	1	2	5	9	8	-	2
101	Icy Reef	-	-	-	-	-	1	1	-	-	-	-	1	1	7	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-69. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25			
--	LAND	58	74	54	73	51	69	42	60	31	43	28	47	31	39	59	52	70	93	75	84	31	22	47	12	24			
2	Point Barrow, Plover Islands	35	54	23	30	15	13	7	5	5	3	3	-	1	1	-	-	-	-	-	-	11	2	-	2	-			
6	ERA 6	19	10	9	7	7	4	3	2	2	1	1	-	-	-	-	-	-	-	-	-	9	1	-	1	-			
7	US Russia Maritime Boundary	6	3	4	2	3	1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	5	1	-	1	-			
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	1	1	4	1	2	11	3	11	-	1	-	-	-	-	-	-	-			
9	Stockton & McClure Islands	-	-	-	-	-	-	-	1	-	2	1	8	2	2	11	2	5	-	-	-	-	-	-	-	-			
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	1	1	1	2	2	3	3	5	6	19	11	10	-	1	4	1	1	1			
20	Ice/Sea Segment 7	-	-	-	-	-	1	1	1	2	4	5	10	10	16	18	21	28	2	17	3	-	6	7	1	2			
21	Ice/Sea Segment 8	-	-	-	-	-	1	2	2	4	6	7	12	12	16	16	22	18	16	35	21	1	7	15	2	4			
22	Ice/Sea Segment 9	-	-	1	1	1	1	1	-	2	1	4	4	5	9	9	14	14	16	25	35	1	7	18	3	8			
29	Ice/Sea Segment 1	22	29	17	17	13	10	7	6	5	4	3	1	1	1	1	-	-	-	-	11	2	-	2	-				
30	Ice/Sea Segment 2	9	14	18	26	20	24	11	8	7	5	4	1	1	1	1	-	-	-	-	11	2	-	3	-				
31	Ice/Sea Segment 3	4	4	8	7	12	19	22	31	18	23	14	11	11	8	6	6	3	-	1	1	7	6	1	2	-			
32	Ice/Sea Segment 4	2	1	3	1	3	3	9	10	12	33	19	19	13	8	6	5	3	-	1	-	3	4	1	1	-			
33	Ice/Sea Segment 5	-	-	1	1	1	2	4	5	5	13	10	31	19	17	21	9	7	-	3	1	-	3	2	-	-			
34	Ice/Sea Segment 6	-	-	-	-	1	1	2	1	4	4	11	8	14	31	12	24	1	5	1	-	2	1	-	-	-			
35	ERA 35	24	11	14	8	10	4	4	2	2	-	-	-	-	-	-	-	-	-	-	13	1	-	2	-				
36	ERA 36	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-			
37	ERA 37	-	-	-	-	-	1	-	2	1	2	1	3	3	2	3	1	1	2	1	1	6	6	5	6	-			
40	Wainwright Subsistence Area	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-			
42	Barrow Subsistence Area 2	51	69	38	46	28	23	14	11	9	6	5	1	2	2	1	1	-	-	-	20	4	-	4	-	-			
43	Nuiqsut Subsistence Area	-	-	-	-	-	1	2	3	3	12	6	44	12	12	20	7	7	-	2	1	-	2	1	-	-			
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	1	1	3	4	10	8	14	20	19	31	3	17	3	-	4	5	1	2			
47	Ice/Sea Segment 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-				
48	Ice/Sea Segment 11	2	2	2	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-			
49	ERA 49	2	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-				
50	Ice/Sea Segment 13	3	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-			
51	Ice/Sea Segment 14	5	2	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-			
52	Ice/Sea Segment 15	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
55	Point Barrow, Plover Islands	28	40	21	24	15	11	7	5	5	3	3	-	1	1	-	-	-	-	-	11	2	-	2	-	-			
56	ERA 56	8	5	7	3	4	1	1	1	1	-	-	-	-	-	-	-	-	-	-	5	-	-	1	-	-			
58	Offshore Pt. Lay to Wainwright	4	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-			
60	King and Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	-			
63	ERA 63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-			
64	Pearl Bay Area	11	5	5	4	3	1	1	-	1	-	-	-	-	-	-	-	-	-	-	6	-	-	1	-	-			
65	Smith Bay	5	13	8	22	7	9	4	4	1	1	1	-	1	-	-	-	-	-	-	3	1	-	-	-	-			
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	1	1	1	2	2	5	4	16	15	27	-	2	10	1	5	-	-			
68	Harrison Bay	2	2	4	4	6	14	13	34	9	14	6	6	4	4	3	2	1	-	-	3	2	-	1	-	-			
69	Harrison Bay/Colville Delta	2	2	4	3	5	7	9	37	7	14	5	7	4	4	4	2	1	-	1	3	1	1	1	-	-			
70	ERA 70	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	1	2	8	2	12	3	11	4	4	5	3	2	-	1	1	-	1	1	-	-			
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	1	2	1	9	2	16	4	4	9	3	4	-	1	-	-	1	1	-	-			
73	Prudhoe Bay	-	-	-	-	-	-	-	-	1	-	2	-	1	1	-	1	-	-	-	-	-	-	-	-	-			
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	2	1	7	1	2	8	2	4	-	-	-	-	-	-	-	-	-			
76	Kendall Isl. Bird Sanctuary (Ca)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	5	-	-	9	-	5			
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	1	-	4	1	1	4	1	2	-	-	-	-	-	-	-	-	-			
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
79	Demarcation Bay Offshore	-	-	1	1	1	1	1	-	2	1	3	2	4	6	5	10	9	43	20	28	1	4	11	1	4			
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-			
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	1	3	-	-	-	-	-	-	-	-		
85	Sagavanirktoq River Delta	-	-	-	-	-	-	-	-	-	1	-	4	1	1	4	1	2	-	-	-	-	-	-	-	-			
86	Harrison Bay	3	3	5	4	7	15	14	35	11	15	7	7	5	4	3	2	1	-	-	4	3	1	2	1	-			
87	Colville River Delta	3	2	5	3	6	7	10	38	8	16	6	8	6	5	4	3	2	-	1	-	4	2	1	2	-			
88	Simpson Lagoon	-	-	-	-	-	1	2	8	2	13	3	11	5	5	6	4	3	-	2	1	-	1	2	-	-			
89	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	5	-	1	10	1		
90	Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	1	5	1	11	3	12	4	4	6	2	3	-	1	-	-	1	1	-	-	-		
93	Cross and No Name Island	-	-	-	-	-	-	-	1	1	2	1	7	2	2	5	2	2	-	-	-	-	-	-	-	-	-		
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	6	2	-	-	-	-	-	-	-	-	-		
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	5	1	2	1	-	-	-	-	-	
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	1	1	4	1	13	3	3	8	2	3	-	1	-	-	-	-	-	-	-	-	
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	2	6	1	2	1	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	1	1	1	2	3	6	6	10	12	14	17	2	15	3	-	3	5	-	1	-	-
101	Icy Reef	-	-	-	-	-	-	-	1	-	-	1	1	1	1	2	2	10	4	6	-	1	2	-	-	-	-	-	-

## Appendix A

**Table A.2-70. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	65	61	45	35	32	48	67	70	64	43	40	46	66	89	38	18	44
2	Point Barrow, Plover Islands	41	21	7	4	1	1	-	39	7	3	2	-	-	-	10	1	-
6	ERA 6	15	7	3	1	-	-	-	9	2	1	1	-	-	-	5	-	-
7	US Russia Maritime Boundary	5	2	1	-	-	-	-	3	-	-	-	-	-	-	3	-	-
8	Maguire, Flaxman Islands	-	-	-	1	2	3	5	-	-	1	2	4	16	-	-	-	1
9	Stockton & McClure Islands	-	-	-	1	2	4	4	-	-	1	3	8	12	-	-	-	1
17	Angun and Beaufort Lagoons	-	-	1	1	1	3	8	-	-	1	1	2	4	15	-	1	4
20	Ice/Sea Segment 7	-	-	2	4	8	18	35	-	1	3	6	11	20	5	-	5	12
21	Ice/Sea Segment 8	-	1	3	6	11	17	23	-	1	5	8	13	17	24	1	6	17
22	Ice/Sea Segment 9	-	1	1	2	4	10	17	-	-	1	2	5	10	22	1	6	14
25	Beaufort Spring Lead 7	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Ice/Sea Segment 1	28	14	7	5	1	1	-	20	7	5	2	-	-	-	10	1	-
30	Ice/Sea Segment 2	14	25	11	6	2	1	-	25	11	6	3	-	1	-	16	1	-
31	Ice/Sea Segment 3	5	11	24	25	14	7	3	6	31	28	17	9	4	1	13	5	3
32	Ice/Sea Segment 4	1	2	15	41	25	8	3	1	5	33	35	13	4	-	3	5	2
33	Ice/Sea Segment 5	-	1	4	9	25	21	7	1	3	9	16	30	14	1	1	5	4
34	Ice/Sea Segment 6	-	1	2	3	8	22	19	-	1	3	6	13	30	1	-	3	5
35	ERA 35	15	9	3	1	-	-	-	11	3	1	-	-	-	-	7	-	-
36	ERA 36	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
40	Wainwright Subsistence Area	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
42	Barrow Subsistence Area 2	61	35	14	7	2	1	-	53	15	8	4	1	1	-	20	2	-
43	Nuiqsut Subsistence Area	-	-	2	7	15	17	7	-	1	8	18	34	13	1	-	2	3
44	Kaktovik Subsistence Area	-	-	1	2	7	18	43	-	1	2	4	11	23	8	-	4	11
48	Ice/Sea Segment 11	2	2	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
49	ERA 49	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
50	Ice/Sea Segment 13	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
51	Ice/Sea Segment 14	4	1	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-
52	Ice/Sea Segment 15	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	32	19	7	4	1	1	-	31	7	3	2	-	-	-	10	1	-
56	ERA 56	7	4	1	-	-	-	-	5	1	-	-	-	-	-	4	-	-
58	Offshore Pt. Lay to Wainwright	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
64	Peard Bay Area	8	3	1	-	-	-	-	5	-	-	-	-	-	-	2	-	-
65	Smith Bay	8	10	4	1	-	-	-	18	6	2	-	-	-	-	5	-	-
67	Herschel Island (Canada)	-	-	-	-	1	2	6	-	-	-	1	3	19	-	1	6	
68	Harrison Bay	3	7	14	13	7	4	1	4	45	17	9	5	2	-	7	2	1
69	Harrison Bay/Colville Delta	3	5	10	11	7	4	2	3	16	17	11	6	2	-	5	1	1
70	ERA 70	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	3	5	6	5	2	-	3	10	13	8	4	-	-	1	1
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	4	5	7	4	-	6	11	12	8	-	-	1	1	
73	Prudhoe Bay	-	-	-	-	-	1	-	-	-	-	2	2	-	-	-	-	
75	Water over Boulder Patch	-	-	-	1	1	3	3	-	-	1	3	7	8	-	-	1	
76	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	5	
77	Sagavanirkotk River Delta/Foggy Island Bay	-	-	-	1	1	2	2	-	-	1	1	5	5	-	-	-	
79	Demarcation Bay Offshore	-	1	1	1	3	7	11	-	-	1	2	3	6	31	1	4	9
81	Simpson Cove	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
84	Canning River Delta	-	-	-	-	-	-	1	1	-	-	-	1	3	-	-	-	
85	Sagavanirkotk River Delta	-	-	-	-	1	1	2	2	-	-	1	1	5	5	-	-	
86	Harrison Bay	3	8	15	14	8	4	1	5	46	18	10	6	2	-	8	3	1
87	Colville River Delta	3	6	11	12	9	5	2	3	17	18	12	7	3	-	6	2	2
88	Simpson Lagoon	-	1	3	5	6	6	3	-	3	10	13	8	5	1	-	1	2
89	Mackenzie River Delta	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	1	6
92	Thetis, Jones, Cottle and Return Islands	-	-	2	4	5	5	3	-	1	8	12	9	5	-	-	1	1
93	Cross and No Name Island	-	-	-	1	2	3	2	-	2	3	7	4	-	-	-	1	
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	1	2	3	-	-	1	3	10	-	-	-	1	
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	1	2	3	-	-	-	2	3	1	-	-	1	
96	Midway, Cross and Bartlett Islands	-	-	1	3	3	5	3	-	-	3	6	12	7	-	-	-	1
98	Anderson Point Barrier Islands	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	1	2	4	-	-	-	2	4	1	-	-	1	
100	Jago and Tapkaurak Spits	-	-	1	2	5	12	20	-	-	2	3	7	13	8	-	3	8
101	Icy Reef	-	-	-	-	1	2	3	-	-	-	1	1	7	-	1	2	

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline.** Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-71. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
-- LAND		67	80	65	80	65	79	66	77	61	69	61	76	67	74	83	81	90	98	93	95	51	62	84	49	66	
2 Point Barrow, Plover Islands		36	55	25	32	17	14	10	8	9	7	7	3	5	3	2	1	-	-	-	-	13	5	-	5	1	
6 ERA 6		20	10	10	8	7	4	4	3	4	2	4	3	4	3	2	2	1	-	-	-	11	4	-	4	-	
7 US Russia Maritime Boundary		6	4	6	2	4	1	2	1	2	1	2	1	2	1	1	1	-	-	-	-	6	2	-	2	-	
8 Maguire, Flaxman Islands		-	-	-	-	-	-	-	1	1	1	2	2	5	3	4	12	4	12	-	1	-	2	1	1	1	
9 Stockton & McClure Islands		-	-	-	-	-	-	-	1	1	3	2	9	3	4	11	4	6	-	1	1	-	1	1	-	1	
12 ERA 12		-	-	1	-	1	1	2	2	2	2	2	1	1	1	-	-	-	-	-	-	1	-	-	-		
17 Angun and Beaufort Lagoons		-	-	-	-	-	-	-	1	1	2	2	3	4	5	6	5	8	7	19	12	10	1	4	6	2	6
19 Chukchi Spring Lead System		1	1	-	1	-	-	1	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
20 Ice/Sea Segment 7		-	-	-	-	-	1	1	1	2	4	5	10	10	16	18	21	28	2	17	3	-	6	7	1	2	
21 Ice/Sea Segment 8		-	-	-	-	-	1	2	2	4	6	7	12	12	16	16	22	18	16	35	21	1	7	15	2	4	
22 Ice/Sea Segment 9		-	-	1	1	1	1	1	-	2	1	4	4	5	9	9	15	14	16	25	35	1	7	18	3	8	
24 Beaufort Spring Lead 6		2	1	1	1	1	1	1	1	2	2	1	1	1	1	-	-	-	-	-	-	1	1	-	1	-	
25 Beaufort Spring Lead 7		2	1	1	1	1	1	2	2	2	2	2	2	1	1	-	-	-	-	-	-	1	1	-	1	-	
26 Beaufort Spring Lead 8		1	1	2	1	2	2	4	3	5	5	6	4	5	4	3	2	1	-	-	-	4	4	-	4	-	
27 Beaufort Spring Lead 9		1	1	2	1	2	1	3	2	4	3	5	3	4	3	2	2	1	-	-	-	3	4	-	4	-	
28 Beaufort Spring Lead 10		-	-	1	1	1	-	1	-	1	1	1	1	1	-	-	-	-	-	-	-	1	-	1	-	-	
29 Ice/Sea Segment 1		22	29	17	17	13	10	7	6	5	4	3	1	1	1	1	1	-	-	-	-	11	2	-	2	-	
30 Ice/Sea Segment 2		9	14	18	26	20	24	11	8	7	5	4	1	1	1	1	1	-	-	-	-	11	2	-	3	-	
31 Ice/Sea Segment 3		4	4	8	7	12	19	22	31	18	23	14	11	11	8	6	6	3	-	1	1	7	6	1	2	-	
32 Ice/Sea Segment 4		2	1	3	1	3	3	9	10	12	33	19	19	13	8	6	5	3	-	1	-	3	4	1	1	-	
33 Ice/Sea Segment 5		-	-	1	1	1	2	4	5	5	13	10	31	19	17	21	9	7	-	3	1	-	3	2	-	-	
34 Ice/Sea Segment 6		-	-	-	-	-	1	1	2	1	4	4	11	8	14	31	12	24	1	5	1	-	2	1	-	-	
35 ERA 35		24	11	14	8	10	4	4	2	4	2	3	2	3	3	2	2	1	-	-	-	14	4	-	5	-	
36 ERA 36		2	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
37 ERA 37		-	-	1	-	1	1	2	2	2	2	2	1	2	1	-	1	-	-	-	-	1	-	-	-	-	
40 Wainwright Subsistence Area		2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
42 Barrow Subsistence Area 2		51	69	38	46	28	23	14	11	9	6	5	1	2	2	1	1	-	-	-	-	20	4	-	4	-	
43 Nuiqsut Subsistence Area		-	-	-	-	-	1	2	3	3	12	6	44	12	12	20	8	7	-	2	1	-	2	2	-	-	
44 Kaktovik Subsistence Area		-	-	-	-	-	-	1	1	1	3	4	10	8	14	20	19	31	3	17	3	-	4	5	1	2	
47 Ice/Sea Segment 10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
48 Ice/Sea Segment 11		2	2	2	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	
49 ERA 49		2	-	2	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	2	-	-	2	-	
50 Ice/Sea Segment 13		3	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
51 Ice/Sea Segment 14		6	3	3	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	
52 Ice/Sea Segment 15		1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
55 Point Barrow, Plover Islands		28	40	21	24	15	11	7	5	5	3	3	-	1	1	-	-	-	-	-	-	11	2	-	2	-	
56 ERA 56		8	5	7	3	4	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	5	-	-	1	-	
58 Offshore Pt. Lay to Wainwright		4	2	2	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
60 King and Shingle Point		1	1	3	1	3	1	2	4	3	4	4	4	3	2	2	1	-	1	2	2	3	4	2	3	3	
62 Mackenzie River Estuary		-	-	1	-	1	1	-	1	1	1	2	2	2	2	1	1	-	1	-	-	1	1	-	1	-	
63 ERA 63		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
64 Peard Bay Area		11	6	6	4	3	2	2	1	2	1	3	2	4	3	2	2	1	-	-	-	7	3	-	3	-	
65 Smith Bay		5	14	8	22	7	9	4	4	2	1	1	1	1	1	1	-	-	-	-	-	4	1	-	1	-	
67 Herschel Island (Canada)		1	-	-	-	1	1	3	2	4	3	4	3	5	6	5	9	7	17	19	29	2	7	18	7	14	
68 Harrison Bay		3	3	5	5	7	15	14	35	11	16	8	8	7	6	5	4	2	-	1	-	4	4	2	2	2	
69 Harrison Bay/Colville Delta		3	2	5	3	6	8	10	38	9	16	7	9	7	6	5	4	2	-	1	-	4	3	2	2	2	
70 ERA 70		-	1	1	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
72 Gwyder Bay, Cottle & Return Isl.		-	-	-	-	-	-	1	1	1	6	1	16	2	4	13	4	6	-	3	1	-	1	2	1	1	
73 Prudhoe Bay		-	-	-	-	-	-	-	1	-	2	-	1	1	-	1	-	-	-	-	-	-	-	-	-	-	
75 Water over Boulder Patch		-	-	-	-	-	-	-	2	1	7	1	2	8	2	4	-	-	-	-	-	-	-	-	-	-	
76 Kendall Isl. Bird Sanctuary (Ca)		1	1	2	1	2	2	3	2	4	3	3	2	3	2	2	3	2	2	4	7	3	4	14	4	9	
77 Sag. River Delta, Foggy Isl. Bay		-	-	-	-	-	-	1	-	2	1	4	1	1	5	1	3	-	-	-	-	-	-	-	-	-	
78 Mikkelsen Bay		-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
79 Demarcation Bay Offshore		-	1	1	1	2	2	4	3	5	4	7	7	9	13	10	16	13	44	26	33	2	11	20	6	13	
80 ERA 80		-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
81 Simpson Cove		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
84 Canning River Delta		-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	1	3	-	-	-	-	-	-	-	-	
85 Sagavanirktoq River Delta		-	-	-	-	-	-	-	1	-	2	1	4	1	1	5	1	3	-	-	-	-	-	-	-	-	
86 Harrison Bay		3	3	5	5	8	15	15	35	11	16	8	8	8	6	5	4	2	-	1	-	5	4	2	2	2	
87 Colville River Delta		3	2	5	3	6	8	10	38	9	16	7	9	7	6	5	4	2	-	1	-	4	3	2	2	2	
88 Simpson Lagoon		-	-	-	-	-	1	2	8	2	13	4	12	5	6	7	5	3	1	2	1	1	2	3	-	-	
89 Mackenzie River Delta		1	1	2	1	2	2	3	2	4	3	3	2	3	2	2	3	2	2	4	7	3	4	14	4	9	
90 Gary/Kendall		-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	1	-	1	-	
92 Thetis, Jones, Cottle & Return Isl.		-	-	-	-	-	-	1	5	2	11	3	12	5	5	6	4	3	-	2	1</						

Appendix A

**Table A.2-71 (Continued). Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	1	1	5	2	13	4	4	9	4	4	-	1	1	-	1	1	-	1
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	1	1	2	2	3	5	3	7	1	3	1	-	2	2	2	2	
100	Jago and Tapkaurak Spits	2	1	2	1	2	2	3	3	4	5	7	9	9	13	14	17	20	3	18	4	3	8	8	6	6
101	Icy Reef	-	-	-	-	-	-	1	-	1	1	1	1	1	2	2	3	2	10	4	7	-	2	3	-	2

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-72. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	73	73	68	65	67	78	89	78	78	69	69	76	88	96	58	60	79
2	Point Barrow, Plover Islands	42	23	10	8	5	2	-	41	9	8	5	3	1	-	12	5	1
6	ERA 6	15	8	4	3	4	3	1	10	3	3	3	3	2	-	6	4	1
7	US Russia Maritime Boundary	5	3	2	1	2	1	-	4	1	1	2	1	1	-	4	2	-
8	Maguire, Flaxman Islands	-	-	1	1	3	5	7	-	-	1	3	6	17	-	-	2	2
9	Stockton & McClure Islands	-	-	1	2	3	5	5	-	-	2	4	9	13	-	-	1	2
12	ERA 12	-	1	2	2	2	-	-	-	2	1	1	1	-	-	1	1	-
17	Angun and Beaufort Lagoons	-	-	2	3	4	6	9	-	1	2	3	4	6	16	1	4	7
19	Chukchi Spring Lead System	1	-	1	-	-	-	-	1	1	1	-	1	-	-	-	-	-
20	Ice/Sea Segment 7	-	-	2	4	8	18	35	-	1	3	6	11	20	5	-	5	12
21	Ice/Sea Segment 8	-	1	3	6	11	17	23	-	1	5	8	13	17	24	1	6	17
22	Ice/Sea Segment 9	-	1	1	2	4	10	17	-	-	1	3	5	10	22	1	6	14
24	Beaufort Spring Lead 6	1	1	2	2	1	1	-	1	1	2	1	1	-	-	1	1	-
25	Beaufort Spring Lead 7	2	1	2	3	2	1	-	1	2	3	2	2	-	-	1	1	-
26	Beaufort Spring Lead 8	1	2	4	5	6	4	1	1	2	5	5	5	2	-	3	5	1
27	Beaufort Spring Lead 9	1	2	3	4	4	3	1	1	1	3	4	4	2	-	2	4	1
28	Beaufort Spring Lead 10	1	1	1	1	1	-	-	1	-	1	1	1	-	-	1	1	-
29	Ice/Sea Segment 1	28	14	7	5	1	1	-	20	7	5	2	-	-	-	10	1	-
30	Ice/Sea Segment 2	14	25	11	6	2	1	-	25	11	6	3	-	1	-	16	1	-
31	Ice/Sea Segment 3	5	11	24	25	14	7	3	6	31	28	17	9	4	1	13	5	3
32	Ice/Sea Segment 4	1	2	15	41	25	8	3	1	5	33	35	13	4	-	3	5	2
33	Ice/Sea Segment 5	-	1	4	9	25	21	7	1	3	9	16	30	14	1	1	5	4
34	Ice/Sea Segment 6	-	1	2	3	8	22	19	-	1	3	6	13	30	1	-	3	5
35	ERA 35	15	9	4	2	3	3	1	11	3	2	2	2	1	-	8	4	1
36	ERA 36	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
37	ERA 37	-	1	2	2	2	1	-	-	2	2	1	1	-	-	1	1	1
40	Wainwright Subsistence Area	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
42	Barrow Subsistence Area 2	61	35	14	7	2	1	-	53	15	8	4	1	1	-	20	2	-
43	Nuiqsut Subsistence Area	-	-	2	7	15	17	7	-	1	8	18	34	13	1	-	3	3
44	Kaktovik Subsistence Area	-	-	1	2	7	18	43	-	1	2	4	11	23	8	-	4	11
48	Ice/Sea Segment 11	2	2	1	-	-	-	-	2	-	-	-	-	-	-	2	-	-
49	ERA 49	1	1	-	1	1	-	-	1	-	1	-	-	-	-	1	1	-
50	Ice/Sea Segment 13	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
51	Ice/Sea Segment 14	4	1	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
52	Ice/Sea Segment 15	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
55	Point Barrow, Plover Islands	32	19	7	4	1	1	-	31	7	3	2	-	-	-	10	1	-
56	ERA 56	7	4	1	-	-	-	-	5	1	-	-	-	-	-	4	-	-
58	Offshore Pt. Lay to Wainwright	3	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
60	King and Shingle Point	1	2	3	4	4	2	1	1	2	3	4	4	2	-	4	3	2
62	Mackenzie River Estuary	1	1	1	1	2	1	1	-	1	2	2	1	-	-	1	1	-
63	ERA 63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	Pearl Bay Area	8	3	2	2	3	3	1	5	1	2	2	3	1	-	3	4	1
65	Smith Bay	9	10	4	2	1	1	-	18	6	2	1	-	-	-	5	1	-
67	Herschel Island (Canada)	-	-	3	4	4	6	9	-	2	3	2	4	5	20	2	7	14
68	Harrison Bay	4	8	16	15	10	6	2	5	46	18	12	7	4	-	8	4	3
69	Harrison Bay/Colville Delta	3	6	11	13	10	6	3	3	17	18	13	8	3	1	6	3	3
70	ERA 70	1	-	-	-	1	-	-	1	-	-	-	1	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	1	3	6	7	7	4	-	3	10	13	9	5	1	1	2	3
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	2	5	6	8	5	-	-	7	12	13	8	1	-	2	3
73	Prudhoe Bay	-	-	-	-	-	1	-	-	-	-	-	2	2	-	-	-	-
75	Water over Boulder Patch	-	-	-	-	1	1	3	3	-	-	1	3	7	8	-	-	1
76	Kendall Island Bird Sanctuary (Canada)	1	2	3	3	3	2	3	1	2	3	2	2	2	3	3	4	8
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	1	1	2	2	-	-	1	2	5	5	-	-	1
79	Demarcation Bay Offshore	1	2	4	4	8	13	17	1	3	3	6	8	10	33	3	10	17
80	ERA 80	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-
81	Simpson Cove	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-72 (Continued). Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17	
84	Canning River Delta	-	-	-	-	-	-	1	2	-	-	-	2	4	-	-	-	1	
85	Sagavanirktoq River Delta	-	-	-	1	1	2	2	-	-	1	2	5	5	-	-	1	1	
86	Harrison Bay	4	8	16	16	10	7	2	5	46	19	12	8	4	-	8	4	3	
87	Colville River Delta	3	6	11	13	10	7	3	3	17	18	13	8	3	1	6	3	3	
88	Simpson Lagoon	-	1	3	6	7	7	4	-	3	10	13	9	5	1	1	2	3	
89	Mackenzie River Delta	1	2	3	3	3	2	3	1	2	3	2	2	2	3	3	4	9	
90	Gary/Kendall	-	-	-	-	-	-	1	1	-	-	-	1	1	-	-	-	1	
92	Thetis, Jones, Cottle and Return Islands	-	-	2	5	6	6	3	-	1	8	12	9	5	1	-	1	2	
93	Cross and No Name Island	-	-	-	1	2	3	2	-	-	2	3	7	4	-	-	-	1	
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	1	1	2	3	4	-	-	1	1	4	10	-	-	-	1	2
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	1	2	3	-	-	-	-	2	3	1	-	-	1	
96	Midway, Cross and Bartlett Islands	-	-	1	3	4	6	4	-	-	4	6	13	8	1	-	1	2	
98	Anderson Point Barrier Islands	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	
99	Arey and Barter Islands, Bernard Spit	-	-	-	1	2	3	5	-	-	-	1	2	5	2	-	2	2	
100	Jago and Tapkaurak Spits	1	2	3	5	9	14	23	1	2	4	7	10	16	10	3	7	11	
101	Icy Reef	-	-	-	1	1	2	3	-	-	1	1	1	1	7	-	1	3	

**Table A.2-73. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
86	Dease Inlet, Plover Islands	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	-	4	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	Ilkipuk River Point Poleakoon	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	1	-	6	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	-	-	2	-	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
92	Cape Halkett, Garry Creek	-	-	-	-	4	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	1	-	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	

**Table A.2-74. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
89	Ilkipuk River Point Poleakoon	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
98	Kuparuk River	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

Appendix A

**Table A.2-75 . Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	6	6	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
86	Dease Inlet, Plover Islands	4	11	2	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Igalik & Kulgurak Island	2	7	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	2	10	1	8	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
89	Ilkipikuk River Point Poleakoon	-	4	1	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	1	3	2	12	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	2	2	6	4	14	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
92	Cape Halkett, Garry Creek	-	-	1	1	2	9	3	9	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	1	2	1	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiiovik River	-	-	-	-	-	1	1	5	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
95	Colville River	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	3	-	4	-	-	1	-	-	-	-	-	-	-	-	-	-	-
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	4	-	-	2	-	1	-	-	-	-	-	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	2	-	-	-	-	-	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	4	-	-	-	-	-	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	5	-	-	-	-	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	-	-	-	-	-	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	5	1	-	-	-	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	3	3	-	-	-	-	-	-
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15	2	5	-	-	-	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	1	5	-	-	-	-	-
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	1	4	-	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	3	-	-	-	-	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-76. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
85	Barrow, Browerville, Elson Lag.	6	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
86	Dease Inlet, Plover Islands	6	2	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
87	Igalik & Kulgurak Island	3	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	4	2	-	-	-	-	-	10	1	-	-	-	-	-	-	-	-
89	Ilkipikuk River Point Poleakoon	2	1	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	2	4	-	-	-	-	-	6	1	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	1	5	2	-	-	-	-	2	4	-	-	-	-	-	2	-	-
92	Cape Halkett, Garry Creek	-	3	3	1	-	-	-	1	13	2	-	-	-	-	1	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	1	-	-	-	-	7	1	-	-	-	-	1	-	-	-
94	Fish Creek, Tingmeachsiiovik River	-	-	1	-	-	-	-	4	1	1	-	-	-	-	-	-	-
95	Colville River	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	-	1	-	-	-	1	4	3	1	-	-	-	-
98	Kuparuk River	-	-	-	-	-	-	-	-	-	1	2	4	2	-	-	-	-
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	1	-	-	-	1	4	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	1	-	-	-	1	3	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	1	1	-	-	-	2	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	1	6	-	-	-	-	1	2	-	1	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	3	-	-	-	-	-	5	-	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-77. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
84	Will Rogers & Wiley Post Mem.	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	12	9	5	5	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	
86	Dease Inlet, Plover Islands	10	16	6	7	4	3	1	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
87	Igalik & Kulgurak Island	6	9	3	4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
88	Cape Simpson, Piasuk River	5	12	4	12	3	5	1	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
89	Ilkipikuk River Point Poleakoon	2	6	3	7	2	3	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
90	Drew & McLeod Point, Kolovik	2	5	6	15	6	8	3	2	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	2	3	5	8	8	18	5	4	3	2	1	-	-	-	-	-	-	-	-	3	-	-	-	-	
92	Cape Halkett, Garry Creek	1	1	2	2	5	13	9	13	5	5	2	1	1	-	-	-	-	-	-	1	-	-	-	-	
93	Atigaru Pt., Eskimo Isl., Kogru R.	-	1	1	1	1	4	2	9	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsvivik River	1	1	1	1	2	3	3	8	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	3	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	3	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	1	-	4	1	6	1	1	3	1	1	-	1	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	1	-	2	-	5	1	1	4	1	2	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	1	-	2	-	-	2	-	1	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	1	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	3	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	5	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	3	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	1	6	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	4	8	1	7	1	-	-	1	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	5	4	9	2	-	-	1	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	12	6	6	-	-	1	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	18	6	9	-	-	1	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	16	4	10	-	-	1	-	-	
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	12	5	8	-	-	1	-	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	4	10	-	-	1	-	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	4	-	-	-	-	-	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	5	-	-	1	-	-	

**Table A.2-78. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
84	Will Rogers & Wiley Post Mem.	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	10	3	1	-	-	-	-	6	1	1	-	-	-	2	-	-	
86	Dease Inlet, Plover Islands	13	6	1	-	-	-	-	9	2	-	-	-	2	-	-	-	
87	Igalik & Kulgurak Island	7	3	1	-	-	-	-	6	1	-	-	-	1	-	-	-	
88	Cape Simpson, Piasuk River	6	6	1	1	-	-	-	13	2	1	-	-	-	2	-	-	
89	Ilkipikuk River Point Poleakoon	4	4	1	-	-	-	-	8	2	-	-	-	-	1	-	-	
90	Drew & McLeod Point, Kolovik	4	8	3	-	-	-	-	9	3	-	-	-	-	3	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	3	9	5	2	1	-	-	4	6	2	1	-	-	5	-	-	
92	Cape Halkett, Garry Creek	1	5	10	5	2	-	-	2	19	6	2	1	-	5	-	-	
93	Atigaru Pt., Eskimo Isl., Kogru R.	-	1	3	2	1	-	-	1	9	3	1	1	-	1	-	-	
94	Fish Creek, Tingmeachsvivik River	1	2	3	2	1	1	-	1	6	4	2	1	1	-	1	-	
95	Colville River	-	-	-	-	1	-	-	-	1	-	1	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	1	1	2	3	1	-	2	6	5	3	-	-	-	-	
98	Kuparuk River	-	-	-	-	1	2	2	-	-	2	2	5	4	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	1	-	-	1	1	2	2	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	1	-	-	-	1	1	2	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	2	-	-	-	1	5	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	1	2	-	-	-	1	4	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	1	-	-	-	-	2	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	2	2	-	-	-	1	3	-	-	-	-	
107	Kaktovik	-	-	-	-	-	3	10	-	-	-	-	1	4	4	-	2	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	2	7	-	-	-	-	1	2	7	-	2	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	1	3	-	-	-	-	1	9	-	-	1	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	2	-	-	-	-	-	14	-	-	1	
111	Demarcation Bay & Point	-	-	-	-	-	-	1	-	-	-	-	-	11	-	-	-	
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	1	-	-	-	-	1	8	-	-	-	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	1	-	-	-	-	-	9	-	-	-	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	

Appendix A

**Table A.2-79. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25		
80	Eluksingiak Point, Kugrua Bay	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
81	Peard Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
84	Will Rogers & Wiley Post Mem.	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
85	Barrow, Browerville, Elson Lag.	13	10	6	6	4	3	2	2	1	1	-	-	-	-	-	-	-	-	-	4	-	-	-	-			
86	Dease Inlet, Plover Islands	11	17	8	7	5	3	2	2	2	1	1	-	-	-	-	-	-	-	-	3	1	-	1	-			
87	Igalik & Kulgurak Island	6	10	4	5	3	2	1	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-			
88	Cape Simpson, Piasuk River	5	13	5	12	4	5	1	1	1	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-			
89	Ikpikpuk River Point Poleakoon	2	6	3	8	2	3	1	2	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-			
90	Drew & McLeod Point, Kolovik	2	5	7	15	7	8	4	3	1	1	-	-	-	-	-	-	-	-	-	2	-	-	1	-			
91	Lonely, Pitt Pt, Pogik Bay, Smith R	3	4	6	8	9	19	6	5	4	2	2	1	1	-	-	-	-	-	-	4	1	-	1	-			
92	Cape Halkett, Garry Creek	1	2	3	3	6	13	10	14	7	7	3	2	2	1	-	-	-	-	-	2	1	-	-	-			
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	1	1	1	4	3	9	2	3	1	1	1	-	-	-	-	-	-	1	-	-	-	-			
94	Fish Creek, Tingmeachsiovik River	1	1	2	2	3	3	4	9	3	5	2	2	1	1	1	1	-	-	-	1	-	-	-	-			
95	Colville River	-	-	-	-	-	-	-	3	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-		
96	Oliktok Point	-	-	-	-	-	-	-	3	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-		
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	1	-	5	1	7	2	2	3	1	2	-	1	-	-	-	-	-	-		
98	Kuparuk River	-	-	-	-	-	-	-	1	-	2	1	6	1	2	4	1	2	-	-	-	-	-	-	-	-		
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	1	-	2	1	-	2	-	1	-	-	-	-	-	-	-	-		
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-		
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	1	-	-	-	-	-	-	-	-		
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	5	-	-	-	-	-	-		
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	-	-	-	-	-	-		
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-		
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	1	6	-	1	-	-	-		
107	Kaktovik	-	-	-	-	-	-	-	-	-	1	2	2	3	5	5	7	9	1	8	1	-	2	2	-	-		
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	1	1	1	1	3	3	5	7	4	10	2	-	1	3	-	1		
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	1	1	1	2	2	3	12	7	6	-	-	2	-	1	-		
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3	3	19	7	10	-	1	2	-	-	-		
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	3	2	16	6	10	-	-	3	-	-	
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	2	12	7	8	-	-	3	-	1	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	11	6	12	-	-	3	-	1	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	2	5	-	-	1	-	1	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	4	7	-	-	2	-	-	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	-	-	-	
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-80. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Pipeline Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
80	Eluksingiak Point, Kugrua Bay	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
82	Skull Cliff	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
84	Will Rogers & Wiley Post Mem.	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
85	Barrow, Browerville, Elson Lag.	11	4	2	1	-	-	-	7	2	1	-	-	-	-	3	-	-
86	Dease Inlet, Plover Islands	14	6	2	1	-	-	-	10	2	1	-	-	-	-	3	1	-
87	Igalik & Kulgurak Island	7	3	1	-	-	-	-	7	1	-	-	-	-	-	1	-	-
88	Cape Simpson, Piasuk River	7	6	1	1	-	-	-	14	2	1	-	-	-	-	2	-	-
89	Ikpikpuk River Point Poleakoon	4	4	1	-	-	-	-	8	3	1	-	-	-	-	1	-	-
90	Drew & McLeod Point, Kolovik	4	9	4	1	-	-	-	9	4	1	-	-	-	-	5	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	4	10	5	3	2	-	-	5	7	3	1	-	-	-	7	-	-
92	Cape Halkett, Garry Creek	2	6	11	8	3	1	-	2	19	9	4	1	-	-	6	1	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	1	2	4	2	1	-	-	1	10	4	1	1	-	-	2	-	-
94	Fish Creek, Tingmeachsiovik River	2	3	5	4	2	1	-	2	7	6	4	1	1	-	2	1	-
95	Colville River	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	1	2	2	3	2	-	-	2	6	5	3	-	-	-	-
98	Kuparuk River	-	-	-	-	1	2	2	-	-	2	2	6	4	-	-	-	1
99	Point Brower, Prudhoe Bay	-	-	-	-	1	1	-	-	1	1	2	2	-	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	1	1	-	-	1	1	1	-	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	1	1	-	-	1	1	2	-	-	-	-	-

Appendix A

**Table A.2-80 (Continued). Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	1	1	2	-	-	-	1	2	5	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	1	2	-	-	-	-	1	4	-	-	-	1
104	Collinson Point, Konganevik Point	-	-	-	-	-	1	1	-	-	-	-	-	2	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	1	1	-	-	-	-	-	2	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	2	2	-	-	-	-	1	4	-	-	-	-
107	Kaktovik	-	-	-	1	2	5	12	-	-	-	1	3	6	4	-	2	4
108	Griffin Point, Oruktalik Lagoon	-	-	-	1	1	4	9	-	-	1	1	2	4	7	-	1	4
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	1	4	-	-	-	-	1	2	10	-	-	2
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	2	4	-	-	-	-	1	2	14	-	-	2
111	Demarcation Bay & Point	-	-	-	-	-	2	3	-	-	-	-	1	2	12	-	-	2
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	1	3	-	-	-	-	-	2	9	-	-	2
113	Komakuk Beach, Fish Creek	-	-	-	-	-	1	2	-	-	-	-	1	1	11	-	-	2
114	Nunaluk Spit	-	-	-	-	-	1	-	-	-	-	-	-	4	-	-	1	-
115	Herschel Island	-	-	-	-	-	-	1	-	-	-	-	-	1	5	-	-	1
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	1	-
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-81. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
80	Eluksingiak Point, Kugrua Bay	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
81	Peard Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
84	Will Rogers & Wiley Post Mem.	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	13	10	6	6	4	3	2	2	1	1	-	-	-	-	-	-	-	-	-	4	-	-	-	-	
86	Dease Inlet, Plover Islands	11	17	8	8	5	3	2	2	2	1	1	-	-	-	-	-	-	-	-	3	1	-	1	-	
87	Igalik & Kulgurak Island	6	10	4	5	3	2	1	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
88	Cape Simpson, Piasuk River	5	13	5	13	4	5	2	1	1	1	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
89	Ikpikpuk River Point Poleakoon	2	6	3	8	2	3	1	2	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
90	Drew & McLeod Point, Kolovik	2	5	7	15	7	8	4	3	1	1	-	-	-	-	-	-	-	-	-	3	-	-	1	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	3	4	7	8	10	19	6	5	4	2	3	1	1	1	-	-	-	-	-	5	1	-	1	-	
92	Cape Halkett, Garry Creek	1	2	3	3	6	13	10	14	7	7	3	2	2	1	1	1	-	-	-	2	1	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	1	1	2	4	3	9	2	3	1	1	1	1	-	-	-	-	-	1	-	-	-	-	
94	Fish Creek, Tingmeachsirovik River	1	1	2	2	3	3	4	9	3	5	2	2	1	1	1	-	-	-	-	1	-	-	-	-	
95	Colville River	-	-	-	-	-	-	3	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	3	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	1	1	5	1	7	2	2	3	1	2	-	1	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	1	-	2	1	6	1	2	4	1	2	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	1	-	2	1	-	2	-	1	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	1	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	3	-	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	1	-	-	3	1	5	-	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	3	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	1	-	1	3	1	6	-	1	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	1	2	4	4	4	7	8	10	11	1	8	2	-	2	2	-	1
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	1	1	2	1	2	2	3	4	6	7	4	10	2	-	1	3	-	1
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	1	-	1	1	1	2	3	4	12	8	6	-	1	3	1	1	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	1	1	1	1	2	2	3	3	2	4	4	19	7	10	-	1	3	-	1
111	Demarcation Bay & Point	-	-	-	-	1	1	-	1	1	1	1	2	2	3	4	3	16	7	10	-	2	4	-	1	
112	Clarence Lagoon , Backhouse R.	-	-	-	1	-	-	-	-	1	1	1	2	2	3	3	13	8	9	-	2	4	1	2	-	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	1	1	2	2	3	2	11	7	12	-	1	4	1	2	-	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	4	3	6	-	2	-	1	-
115	Herschel Island	-	-	-	-	-	-	-	1	-	1	1	1	1	1	2	2	5	6	8	-	1	4	-	2	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	2	-	-	1	-	-	1	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	3	-	1	3	-	2	
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	2	-	2	
119	Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	

Appendix A

**Table A.2-82. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
80	Eluksingiak Point, Kugrua Bay	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
82	Skull Cliff	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
84	Will Rogers & Wiley Post Mem.	2	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	11	5	2	1	-	-	-	7	2	1	-	-	-	3	-	-	
86	Dease Inlet, Plover Islands	14	6	2	1	-	-	-	10	2	1	-	-	-	3	1	-	
87	Igalik & Kulgurak Island	7	3	1	-	-	-	-	7	1	-	-	-	-	1	-	-	
88	Cape Simpson, Piasuk River	7	6	2	1	1	-	-	14	2	1	1	-	-	2	-	-	
89	Ikpikpuk River Point Poleakoon	4	4	1	-	-	-	-	8	3	1	-	-	-	1	-	-	
90	Drew & McLeod Point, Kolovik	4	9	4	1	-	-	-	9	4	1	-	-	-	5	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	4	10	5	3	2	-	-	5	7	3	1	-	-	7	1	-	
92	Cape Halkett, Garry Creek	2	6	11	8	3	1	-	2	19	9	4	1	-	6	1	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	1	2	4	3	2	-	-	1	10	4	2	1	-	2	-	-	
94	Fish Creek, Tingmeachsirovik River	2	3	5	4	2	1	-	2	7	6	4	2	1	-	2	1	
95	Colville River	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	1	2	2	3	2	-	-	2	6	5	3	-	-	1	
98	Kuparuk River	-	-	-	1	1	2	2	-	-	2	2	6	4	-	-	1	
99	Point Brower, Prudhoe Bay	-	-	-	-	1	1	-	-	-	1	1	2	2	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	1	-	-	-	1	1	1	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	1	1	-	-	-	1	1	2	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	1	2	-	-	-	1	2	5	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	1	2	-	-	-	-	1	4	-	1	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	1	1	-	-	-	-	2	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	1	-	-	-	-	2	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	2	2	-	-	-	-	-	1	4	-	-	
107	Kaktovik	-	-	-	1	4	8	13	-	-	-	1	5	9	4	-	2	
108	Griffin Point, Oruktalik Lagoon	-	-	1	1	1	4	9	-	-	2	2	2	5	7	-	1	
109	Angun Point, Beaufort Lagoon	-	-	-	-	1	2	5	-	-	-	1	1	3	10	-	3	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	1	1	2	2	5	-	-	1	2	2	2	14	-	1	
111	Demarcation Bay & Point	-	-	1	1	1	3	4	-	-	1	1	2	3	12	1	3	
112	Clarence Lagoon, Backhouse River	-	1	-	-	1	2	4	-	-	-	1	1	2	9	-	2	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	2	2	-	-	-	-	1	2	11	-	1	
114	Nunaluk Spit	-	-	-	-	-	-	1	1	-	-	-	-	1	4	-	1	
115	Herschel Island	-	-	-	1	1	1	2	-	-	-	-	1	1	6	-	1	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	2	
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	
119	Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-83. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
80	Eluksingiak Point, Kugrua Bay	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
81	Peard Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
83	Nulavik, Loran Radio Station	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
84	Will Rogers & Wiley Post Mem.	2	1	1	1	1	-	-	-	-	1	-	1	-	-	-	-	-	-	1	1	-	1	-	-	
85	Barrow, Browerville, Elson Lag.	15	11	7	7	4	4	5	4	5	5	5	4	5	4	3	2	1	-	-	7	4	1	3	1	
86	Dease Inlet, Plover Islands	11	17	8	8	5	4	3	2	3	1	1	1	1	1	-	-	-	-	-	4	1	-	2	-	
87	Igalik & Kulgurak Island	6	10	5	5	3	2	1	1	1	1	1	-	1	-	-	-	-	-	-	2	1	-	1	-	
88	Cape Simpson, Piasuk River	6	13	5	13	4	5	2	1	1	1	2	-	1	1	-	-	-	-	-	2	1	-	1	-	
89	Ikpikpuk River Point Poleakoon	2	6	3	8	3	3	1	2	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	
90	Drew & McLeod Point, Kolovik	3	6	7	15	7	8	4	3	1	1	-	-	-	-	-	-	-	-	-	3	1	-	1	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	3	4	7	8	10	19	6	5	5	3	4	2	2	3	2	3	3	1	2	1	5	3	2	2	
92	Cape Halkett, Garry Creek	2	2	4	3	7	13	11	15	8	9	5	4	5	4	3	3	2	-	1	-	4	3	1	1	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	1	1	2	4	4	9	3	4	2	1	1	1	-	-	-	-	-	1	1	-	1	-	
94	Fish Creek, Tingmeachsirovik River	2	2	3	2	4	4	6	10	5	6	3	3	2	1	2	1	1	-	-	3	1	1	1	1	
95	Colville River	-	-	-	-	-	-	3	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	3	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	1	1	5	1	7	2	2	4	2	2	-	1	-	-	-	1	-	-	
98	Kuparuk River	-	-	-	-	-	-	1	1	3	1	6	2	2	4	2	2	-	1	-	-	1	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	1	-	2	1	-	2	-	1	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	1	-	2	-	-	1	-	-	-	-	-	-	-	-	-	

Appendix A

**Table A.2-83 (Continued). Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	2	1	1	3	1	3	-	-	-	-	-	-	-	-		
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	5	-	-	-	-	-	-	-	-		
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	-	-	-	-	-	-	-	-		
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	3	-	-	-	-	-	-	-	-		
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	6	-	1	-	-	-	-	-	-		
107	Kaktovik	1	1	2	1	2	1	2	2	2	3	4	6	6	9	10	11	13	1	9	2	2	5	4	5	3	
108	Griffin Point, Oruktalik Lagoon	-	-	1	-	1	1	1	1	2	2	2	3	3	4	5	7	7	4	11	3	1	3	5	2	3	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	1	1	1	2	2	3	3	3	4	5	5	12	8	6	-	3	4	1	4	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	1	1	1	2	2	3	3	5	5	3	6	5	19	8	10	1	3	5	1	4		
111	Demarcation Bay & Point	-	-	-	-	-	1	2	1	2	2	3	3	3	5	4	17	7	11	-	4	6	2	3			
112	Clarence Lagoon, Backhouse R.	-	1	1	1	1	1	2	2	2	4	4	4	6	5	6	5	13	9	10	1	5	8	2	6		
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	1	1	1	2	2	4	3	5	4	11	9	13	-	2	7	3	6		
114	Nunaluk Spit	-	-	-	-	-	-	1	-	1	1	1	1	1	1	2	2	4	4	6	1	2	4	2	4		
115	Herschel Island	-	-	-	-	-	-	1	1	2	2	3	2	4	3	2	4	3	5	7	8	1	3	6	3	4	
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	1	-	-	2	-	1	
117	Roland & Phillips Bay, Kay Point	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	3	-	1	4	1	
118	Sabine Point	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	2	1	3	
119	Shingle Point	1	1	2	1	3	1	3	2	3	3	3	3	3	2	1	1	1	-	-	1	2	3	2	2	2	
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-	-	-	1	1	-	-	1	-	1	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	1	1	1	1	1	1	1	1	-	1	1	-	1	1	-	1	1	-	-	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1

**Table A.2-84. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
80	Eluksingiak Point, Kugrua Bay	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
82	Skull Cliff	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
84	Will Rogers & Wiley Post Mem.	2	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-
85	Barrow, Browerville, Elson Lag.	13	5	5	5	5	4	1	8	4	5	4	4	2	-	4	5	1
86	Dease Inlet, Plover Islands	14	7	3	2	1	-	-	10	2	2	1	-	-	-	4	1	-
87	Igalik & Kulgurak Island	8	4	1	1	1	-	-	8	1	1	1	-	-	-	1	1	-
88	Cape Simpson, Piasuk River	7	7	2	1	1	1	-	14	2	1	1	-	-	-	3	1	-
89	Ilkipik River Point Poleakoon	4	4	1	-	-	-	-	8	3	1	-	-	-	-	2	-	-
90	Drew & McLeod Point, Kolovik	4	9	4	1	-	-	-	9	4	1	-	-	-	-	5	1	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	5	10	6	4	3	3	3	5	7	4	3	2	2	2	7	3	2
92	Cape Halkett, Garry Creek	2	6	12	10	6	4	2	2	20	10	6	4	3	1	8	3	2
93	Atigaru Pt, Eskimo Isl., Kogru R.	1	2	4	3	2	1	-	1	10	5	2	1	-	-	3	1	-
94	Fish Creek, Tingmeachsiovik River	3	4	6	5	3	2	1	2	8	7	5	2	1	-	4	1	1
95	Colville River	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-	-	-
96	Oliktok Point	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	1	2	2	3	2	-	-	3	6	5	3	-	-	1	-
98	Kuparuk River	-	-	1	1	2	2	2	-	-	3	2	6	4	-	-	1	1
99	Point Brower, Prudhoe Bay	-	-	-	-	1	1	-	-	-	1	1	2	2	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	1	1	-	-	-	1	1	2	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	1	1	2	-	-	-	1	2	5	-	-	-	1
103	Brownlow Point, Canning River	-	-	-	-	1	1	2	-	-	-	1	1	4	-	-	-	1
104	Collinson Point, Konganevik Point	-	-	-	-	-	1	1	-	-	-	-	-	2	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	1	-	-	-	-	2	-	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	2	2	-	-	-	-	-	1	4	-	-	-
107	Kaktovik	1	1	2	3	6	10	15	1	2	2	4	7	11	5	2	5	6
108	Griffin Point, Oruktalik Lagoon	-	1	2	2	3	5	10	-	1	2	3	4	5	7	1	2	6
109	Angun Point, Beaufort Lagoon	-	-	1	2	3	4	6	-	-	1	2	3	4	10	-	2	5
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	1	2	3	5	6	-	1	2	3	4	3	14	-	3	6
111	Demarcation Bay & Point	-	-	2	2	2	4	5	-	1	1	1	2	3	12	1	4	5
112	Clarence Lagoon, Backhouse River	-	1	2	2	4	5	6	1	2	2	4	4	4	10	2	4	7
113	Komakuk Beach, Fish Creek	-	-	-	2	4	5	-	-	-	1	2	3	11	1	3	5	
114	Nunaluk Spit	-	-	1	1	1	1	2	-	-	-	1	1	5	-	2	3	
115	Herschel Island	-	-	2	3	3	3	3	-	1	2	1	2	3	6	1	3	4
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	1	-	-	-	-	-	2	-	1	3	
118	Sabine Point	-	-	1	-	-	-	-	-	-	-	1	-	1	1	1	2	
119	Shingle Point	1	2	3	3	3	2	1	1	1	3	3	2	1	-	3	3	2
120	Trent and Shoalwater Bays	-	-	-	1	1	-	-	-	-	1	1	-	-	-	1	1	1
123	Outer Shallow Bay, Olivier Islands	-	-	1	1	1	-	1	-	1	1	-	-	-	1	1	1	1

## Appendix A

**Table A.2-84 (Continued). Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-85. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	1	13	1	13	-	13	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
137	Teshekpuk Lake Special Area	-	1	-	9	-	13	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8	18	2	2	-	-	-	-
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
144	United States Beaufort Coast	1	13	1	13	-	13	-	9	-	2	-	2	-	-	2	-	9	18	2	2	-	-	-	-	-
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-86. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	2	2	-	-	-	-	-	8	8	-	-	-	-	-	-	-	-
137	Teshekpuk Lake Special Area (NPR-A)	-	2	-	-	-	-	-	3	8	-	-	-	-	-	-	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	3	-	-	-	-	-	2	9	-	-
144	United States Beaufort Coast	2	2	-	-	-	-	3	8	9	1	3	2	4	9	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-87. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	9	37	10	38	10	34	6	18	1	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
137	Teshekpuk Lake Special Area	1	9	6	24	8	31	5	18	1	2	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	1	-	1	7	2	20	39	16	13	-	1	-	-	-
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	1	9	-	-	-	-	-
144	United States Beaufort Coast	15	43	11	40	10	36	7	29	1	9	-	13	1	2	15	3	23	39	16	13	2	-	1	-	-
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	13	1	9	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-88. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17							
135	National Petroleum Reserve Alaska	18	18	6	1	-	-	-	33	27	3	-	-	-	-	4	-	-							
137	Teshekpuk Lake Special Area (NPR-A)	5	14	6	1	-	-	-	14	26	3	-	-	-	-	4	-	-							
138	Arctic National Wildlife Refuge	-	-	-	-	-	3	14	-	-	-	1	10	31	-	-	1	-							
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-							
144	United States Beaufort Coast	23	19	8	3	1	5	15	36	33	8	9	11	20	31	5	-	1	-	-	-	-	-	-	-
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-89. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
135	National Petroleum Reserve AK	29	55	30	57	31	54	23	32	11	11	4	2	1	-	-	-	-	-	11	1	-	1	-	-	-	
137	Teshekpuk Lake Special Area	7	16	17	33	22	45	20	30	10	10	3	2	1	-	-	-	-	-	6	1	-	-	-	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	4	2	4	14	12	33	51	33	27	-	1	6	-	-	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	28	11	27	-	3	-	-	-	-	
143	United States Chukchi Coast	4	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
144	United States Beaufort Coast	40	63	36	63	35	59	27	48	14	24	6	25	7	10	31	16	41	51	34	28	14	3	6	1	-	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	28	11	27	-	3	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

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**Table A.2-90. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve Alaska	40	41	24	11	3	-	-	53	44	14	5	1	-	-	21	-	-
137	Teshekpuk Lake Special Area (NPR-A)	13	27	21	10	3	-	-	23	40	13	4	1	-	-	16	-	-
138	Arctic National Wildlife Refuge	-	-	-	-	1	9	28	-	-	-	1	5	20	45	-	-	7
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	2	-	-	-	-	-	1	23	-	-	1
143	United States Chukchi Coast	3	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
144	United States Beaufort Coast	50	47	29	17	9	17	34	59	54	25	20	23	37	46	24	1	8
145	Canada Beaufort Coast	-	-	-	-	-	-	2	-	-	-	-	-	1	23	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-91. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve AK	34	58	38	61	38	57	29	35	17	15	10	4	5	2	1	1	-
137	Teshekpuk Lake Special Area	8	17	20	35	26	47	24	32	14	13	7	3	4	2	1	1	-
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	1	2	3	9	7	13	22	23	40	31
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	1	1	3	3	5	5	33	19
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
143	United States Chukchi Coast	5	3	3	2	1	1	-	-	-	-	-	-	-	-	-	-	3
144	United States Beaufort Coast	45	67	45	67	44	64	36	54	24	33	17	33	18	22	40	29	50
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	1	1	3	3	5	5	33

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-92. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve Alaska	45	46	29	16	7	2	-	57	47	19	9	3	1	-	28	3	-
137	Teshekpuk Lake Special Area (NPR-A)	15	30	25	14	6	1	-	25	42	17	7	2	1	-	21	2	-
138	Arctic National Wildlife Refuge	-	-	-	2	5	18	38	-	-	1	3	11	27	47	-	3	15
139	Ivvavik National Park (Canada)	-	-	-	-	1	3	6	-	-	-	-	1	4	30	-	-	6
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
143	United States Chukchi Coast	4	2	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
144	United States Beaufort Coast	55	54	38	27	20	29	45	64	59	34	29	32	46	48	32	8	18
145	Canada Beaufort Coast	-	-	-	-	1	3	6	-	-	-	-	1	4	30	-	-	7

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-93. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve AK	35	58	40	62	40	58	29	36	18	15	10	4	5	3	1	1	-
137	Teshekpuk Lake Special Area	9	17	21	35	27	47	24	32	15	13	8	4	4	2	1	1	-
138	Arctic National Wildlife Refuge	-	-	-	-	1	2	2	3	5	7	14	12	18	28	30	45	52
139	Ivvavik National Park (Canada)	-	-	1	-	1	-	-	1	1	3	2	4	7	6	10	9	34
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-
143	United States Chukchi Coast	5	3	3	2	2	1	-	-	-	-	-	-	-	-	-	4	-
144	United States Beaufort Coast	46	68	47	68	46	66	39	57	28	37	22	39	24	28	47	36	55
145	Canada Beaufort Coast	-	-	1	-	1	-	-	1	1	3	2	4	7	6	10	9	34

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-94. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve Alaska	45	48	30	17	8	2	-	58	48	20	9	3	1	-	29	4	1
137	Teshekpul Lake Special Area (NPR-A)	15	31	25	15	7	2	-	25	42	18	8	3	1	-	21	3	-
138	Arctic National Wildlife Refuge	-	1	3	5	10	24	43	-	1	4	7	16	33	48	1	6	19
139	Ivvavik National Park (Canada)	-	1	-	1	3	6	10	-	-	1	3	7	32	1	4	10	-
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
143	United States Chukchi Coast	4	2	-	-	-	-	3	-	-	-	-	-	-	1	-	-	-
144	United States Beaufort Coast	56	56	42	32	26	36	51	65	61	38	34	38	52	48	34	12	22
145	Canada Beaufort Coast	-	1	-	1	3	6	10	-	-	1	3	7	32	1	4	13	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

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**Table A.2-95. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	36	59	43	63	42	59	33	38	22	20	15	9	11	9	6	7	5	2	4	1	25	12	3	11	4
137	Teshekpuk Lake Special Area	10	18	23	36	29	48	27	34	18	17	12	8	9	8	6	6	5	2	4	1	14	8	3	7	4
138	Arctic National Wildlife Refuge	2	1	3	2	3	3	8	5	10	11	14	21	21	27	34	37	50	53	45	33	5	19	25	11	17
139	Ivvavik National Park (Canada)	-	1	1	1	2	2	5	3	6	5	9	8	11	14	11	17	14	35	30	40	3	13	26	11	22
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	2
143	United States Chukchi Coast	5	3	4	2	2	1	1	-	1	-	1	-	1	-	-	-	-	-	-	-	4	1	-	1	-
144	United States Beaufort Coast	52	72	54	72	53	71	52	65	44	53	41	57	45	49	61	52	66	55	51	35	36	37	30	27	23
145	Canada Beaufort Coast	-	1	1	1	2	2	5	3	6	5	9	8	11	14	11	18	14	35	30	40	3	13	30	11	25

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-96. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	47	50	34	23	13	8	5	59	49	25	14	8	6	2	33	11	4
137	Teshekpuk Lake Special Area (NPR-A)	16	32	28	19	11	7	5	26	44	21	12	7	6	2	24	7	4
138	Arctic National Wildlife Refuge	2	3	8	11	18	32	48	1	5	9	14	23	38	49	5	18	30
139	Ivvavik National Park (Canada)	1	2	5	6	9	14	16	1	4	5	6	9	12	34	4	13	21
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
143	United States Chukchi Coast	4	2	-	-	-	-	-	3	-	-	-	-	-	-	1	1	-
144	United States Beaufort Coast	61	62	54	49	46	54	62	69	68	54	51	56	65	52	45	36	38
145	Canada Beaufort Coast	1	2	5	6	10	14	16	1	4	5	6	9	12	34	4	13	24

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-97. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-98. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-99. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-100. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-101. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-102. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

## Appendix A

**Table A.2-103. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
24	Beaufort Sea	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
25	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
26	Beaufort Sea	2	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-		
27	Beaufort Sea	-	1	1	-	1	-	1	1	1	1	1	1	1	1	-	-	-	-	-	1	1	-	-	-		
28	Beaufort Sea	-	-	-	-	-	-	1	-	1	1	1	1	1	1	1	1	1	-	-	1	2	-	2	-		
29	Beaufort Sea	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-		
30	Beaufort Sea	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-		
31	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-		
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2		
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	5	
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-104. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
24	Beaufort Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
26	Beaufort Sea	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-
27	Beaufort Sea	-	1	1	1	1	-	-	1	1	1	1	1	-	-	1	-	-
28	Beaufort Sea	-	-	1	1	1	1	1	-	-	1	1	1	1	-	1	2	1
29	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
30	Beaufort Sea	-	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-105. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
16	Chukchi Sea	1	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
18	Chukchi Sea	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
19	Chukchi Sea	1	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	
20	Chukchi Sea	2	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	
21	Chukchi Sea	2	2	2	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	
23	Beaufort Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
24	Beaufort Sea	1	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	
25	Beaufort Sea	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	1	-	-	1	-	
26	Beaufort Sea	3	2	1	1	1	-	1	1	1	1	-	1	-	-	-	-	-	-	-	1	1	-	1	-	
27	Beaufort Sea	-	1	1	1	1	1	2	1	2	2	3	1	2	1	1	-	1	-	1	1	2	1	1	-	
28	Beaufort Sea	-	-	-	-	-	2	1	3	2	3	2	3	2	2	1	-	1	-	1	1	5	2	5	2	
29	Beaufort Sea	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	
30	Beaufort Sea	1	1	3	2	4	1	1	1	-	-	-	-	-	-	-	-	-	-	3	1	-	4	-	-	
31	Beaufort Sea	2	1	2	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	3	1	-	4	-	-	
32	Beaufort Sea	-	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
33	Beaufort Sea	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	1	-	2	1	-	
36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	3
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-	-	1	2	1	9	-	-
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	-	-	-	2	-	6	-	-
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-106. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
16	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
18	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
19	Chukchi Sea	1	1	1	-	-	-	-	1	-	-	-	-	-	-	2	-	-
20	Chukchi Sea	1	1	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-
21	Chukchi Sea	2	2	1	-	-	-	-	2	1	-	-	-	-	-	2	-	-
24	Beaufort Sea	1	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
25	Beaufort Sea	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-
26	Beaufort Sea	2	-	1	1	-	-	-	1	1	1	1	-	-	-	1	1	-
27	Beaufort Sea	1	1	2	2	2	1	-	1	1	2	2	2	1	-	2	1	1
28	Beaufort Sea	-	1	2	2	3	2	1	-	2	2	2	1	-	1	5	2	-
29	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-
30	Beaufort Sea	2	2	1	-	-	-	-	2	1	-	-	-	-	-	3	1	-
31	Beaufort Sea	1	-	-	1	-	-	-	1	-	1	-	-	-	-	1	2	-
32	Beaufort Sea	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-
33	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-
36	Beaufort Sea	-	-	-	-	1	-	-	-	-	-	1	-	-	-	1	-	-
37	Beaufort Sea	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	1	3
38	Beaufort Sea	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	-	2

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-107. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
16	Chukchi Sea	1	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
17	Chukchi Sea	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
18	Chukchi Sea	1	1	2	1	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	2	-	-	1	-	
19	Chukchi Sea	1	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	
20	Chukchi Sea	3	2	2	1	2	1	1	-	1	-	1	-	-	-	-	-	-	-	-	3	-	-	1	-	
21	Chukchi Sea	2	2	2	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	
23	Beaufort Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
24	Beaufort Sea	1	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	
25	Beaufort Sea	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	1	-	-	1	-	
26	Beaufort Sea	3	2	1	1	1	-	1	1	1	1	-	1	-	-	-	-	-	-	-	1	1	-	1	-	
27	Beaufort Sea	-	1	1	1	1	1	2	1	2	2	3	1	2	1	1	1	-	1	-	1	2	1	1	-	
28	Beaufort Sea	-	-	-	1	1	1	2	1	3	2	4	3	4	4	3	4	2	-	1	-	2	6	2	5	
29	Beaufort Sea	-	-	1	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	
30	Beaufort Sea	1	1	3	2	4	1	1	1	1	1	1	1	-	-	-	-	-	-	1	-	3	1	1	4	
31	Beaufort Sea	2	1	2	1	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	3	1	1	4	-	
32	Beaufort Sea	-	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
33	Beaufort Sea	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	Beaufort Sea	1	1	1	1	2	1	1	1	2	1	1	-	-	-	-	-	-	-	-	3	1	-	5	-	
35	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	1	-	1	1	-	-	-	-	-	1	-	2	1	-	
36	Beaufort Sea	-	-	-	-	-	-	1	-	1	1	1	1	1	-	-	-	-	-	-	1	-	2	3	-	
37	Beaufort Sea	1	-	-	-	1	-	2	1	2	2	3	3	3	2	2	1	-	-	-	1	4	3	3	10	
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	-	-	-	1	2	
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-108. Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
16	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-
17	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
18	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	1	-	-	-	1	-	-
19	Chukchi Sea	1	1	1	-	-	-	-	1	-	-	-	-	-	-	2	-	-
20	Chukchi Sea	3	1	1	1	1	-	-	2	1	-	1	-	-	-	2	-	-
21	Chukchi Sea	2	2	1	-	-	-	-	2	1	-	-	-	-	-	2	-	-
24	Beaufort Sea	1	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-
25	Beaufort Sea	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-
26	Beaufort Sea	2	-	1	1	-	-	-	1	1	1	1	-	-	-	1	1	-
27	Beaufort Sea	1	1	2	2	2	1	-	1	1	2	2	2	1	-	2	1	1
28	Beaufort Sea	-	1	2	2	3	3	3	-	1	2	3	3	2	-	2	6	3
29	Beaufort Sea	-	1	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-
30	Beaufort Sea	2	2	1	1	1	-	-	1	2	1	1	1	-	-	3	2	1
31	Beaufort Sea	1	-	-	1	-	-	-	1	-	1	-	-	-	-	1	2	1
32	Beaufort Sea	-	-	1	-	-	-	-	-	1	-	-	-	-	-	1	-	-
33	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
34	Beaufort Sea	1	1	1	1	-	-	-	1	1	1	-	-	-	-	2	2	-
35	Beaufort Sea	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	2	-
36	Beaufort Sea	-	-	1	1	1	-	-	-	-	1	1	1	-	-	-	2	-
37	Beaufort Sea	-	-	1	3	3	2	-	-	1	2	3	3	1	-	1	4	4
38	Beaufort Sea	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-109. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	-	2	-	2	-	2	-	2	-	1	-	1	-	-	1	-	2	5	1	1	-	-	-	-	
2	Point Barrow, Plover Islands	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	ERA 12	-	-	-	-	-	-	-	-	-	-	-	4	-	3	1	-	-	-	-	-	-	7	-	-	
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	3	-	-	-	
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	7	4	-	-	-	-	
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	
24	Beaufort Spring Lead 6	19	4	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	Beaufort Spring Lead 7	13	10	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
26	Beaufort Spring Lead 8	2	1	16	2	13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	Beaufort Spring Lead 9	1	2	16	5	13	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
28	Beaufort Spring Lead 10	-	-	-	-	6	2	14	2	5	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-	
29	Ice/Sea Segment 1	2	8	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	Ice/Sea Segment 2	-	1	1	6	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Ice/Sea Segment 3	-	-	-	-	-	4	2	8	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
32	Ice/Sea Segment 4	-	-	-	-	-	-	-	-	1	1	8	3	2	-	-	-	-	-	-	-	-	-	-	-	
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	-	1	1	7	3	1	3	-	-	-	-	-	-	-	-	-	
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	1	-	2	8	1	5	-	-	-	-	-	-	-	
37	ERA 37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1
42	Barrow Subsistence Area 2	3	9	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	6	1	-	1	-	-	-	-	-	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	
55	Point Barrow, Plover Islands	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
65	Smith Bay	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
68	Harrison Bay	-	-	-	-	-	1	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
69	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	9	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	1	-	-	-	-	-	
80	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
86	Harrison Bay	-	-	-	-	-	1	1	16	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Colville River Delta	-	-	-	-	-	-	-	26	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Simpson Lagoon	-	-	-	-	-	-	-	1	-	4	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-110. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	-	-	-	-	-	-	1	1	2	-	1	-	1	3	-	-	-
<b>2</b>	Point Barrow, Plover Islands	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
<b>8</b>	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
<b>9</b>	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
<b>12</b>	ERA 12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-
<b>17</b>	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
<b>19</b>	Chukchi Spring Lead System	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>20</b>	Ice/Sea Segment 7	-	-	-	-	-	-	7	-	-	-	-	-	-	-	-	-	-
<b>21</b>	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
<b>22</b>	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
<b>24</b>	Beaufort Spring Lead 6	13	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
<b>25</b>	Beaufort Spring Lead 7	24	1	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-
<b>26</b>	Beaufort Spring Lead 8	3	5	-	-	-	-	-	4	-	-	-	-	-	1	-	-	-
<b>27</b>	Beaufort Spring Lead 9	6	15	-	-	-	-	-	10	-	-	-	-	-	1	-	-	-
<b>28</b>	Beaufort Spring Lead 10	-	4	6	-	-	-	-	-	4	-	-	-	-	11	-	-	-
<b>29</b>	Ice/Sea Segment 1	5	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
<b>30</b>	Ice/Sea Segment 2	-	3	-	-	-	-	-	5	1	-	-	-	-	-	-	-	-
<b>31</b>	Ice/Sea Segment 3	-	-	2	1	-	-	-	8	3	-	-	-	-	-	-	-	-
<b>32</b>	Ice/Sea Segment 4	-	-	3	12	4	-	-	-	8	8	-	-	-	-	-	-	-
<b>33</b>	Ice/Sea Segment 5	-	-	-	-	6	3	-	-	-	1	7	-	-	-	-	-	-
<b>34</b>	Ice/Sea Segment 6	-	-	-	-	-	4	3	-	-	-	1	7	-	-	-	-	-
<b>42</b>	Barrow Subsistence Area 2	6	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
<b>43</b>	Nuiqsut Subsistence Area	-	-	-	-	1	1	-	-	-	-	1	4	-	-	-	-	-
<b>44</b>	Kaktovik Subsistence Area	-	-	-	-	-	-	5	-	-	-	-	-	1	-	-	-	-
<b>55</b>	Point Barrow, Plover Islands	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
<b>65</b>	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
<b>68</b>	Harrison Bay	-	-	-	-	-	-	-	-	11	-	-	-	-	-	-	-	-
<b>69</b>	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-
<b>70</b>	ERA 70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>71</b>	Simpson Lagoon, Thetis and Jones Island	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
<b>72</b>	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-
<b>79</b>	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
<b>80</b>	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-
<b>86</b>	Harrison Bay	-	-	1	-	-	-	-	31	2	-	-	-	-	-	-	-	-
<b>87</b>	Colville River Delta	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	-
<b>88</b>	Simpson Lagoon	-	-	-	-	-	-	-	-	3	4	-	-	-	-	-	-	-
<b>92</b>	Thetis, Jones, Cottle and Return Islands	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
<b>93</b>	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
<b>94</b>	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
<b>96</b>	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
<b>100</b>	Jago and Tapkaurak Spits	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-

**Notes** - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-111. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	2	6	1	6	1	5	1	5	-	2	-	3	-	-	3	-	5	12	3	5	-	-	-	-	-
2	Point Barrow, Plover Islands	2	7	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6	ERA 6	4	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	1	-	-	-	-	-	-	-	-
12	ERA 12	-	-	-	-	-	-	-	-	2	1	7	1	8	6	1	4	-	-	-	-	10	1	-	-	-
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	1	-	-	-	-	-
19	Chukchi Spring Lead System	5	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	3	6	-	4	-	-	-	-	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	8	5	-	-	1	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	5	-	-	-
24	Beaufort Spring Lead 6	22	10	7	6	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
25	Beaufort Spring Lead 7	16	15	6	8	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
26	Beaufort Spring Lead 8	3	4	19	6	16	5	2	1	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
27	Beaufort Spring Lead 9	2	5	18	10	16	8	3	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
28	Beaufort Spring Lead 10	-	-	1	1	8	6	21	7	15	4	6	-	2	-	-	-	-	-	-	-	3	3	-	-	-
29	Ice/Sea Segment 1	3	8	2	3	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Ice/Sea Segment 2	-	2	1	6	2	6	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Ice/Sea Segment 3	-	-	-	1	1	4	4	8	1	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
32	Ice/Sea Segment 4	-	-	-	-	-	-	1	1	2	9	3	3	1	1	-	-	-	-	-	-	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	-	2	1	8	4	2	4	1	1	-	-	-	-	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	2	1	3	9	2	6	-	-	-	-	-	-	-	-	
35	ERA 35	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	ERA 37	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	2	2	1	-
41	Barrow Subsistence Area 1	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	4	10	2	4	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	-	1	-	7	1	1	2	-	-	-	-	-	-	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	1	2	-	-	-	-
55	Point Barrow, Plover Islands	1	3	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	Pearl Bay Area	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Smith Bay	-	1	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
68	Harrison Bay	-	-	-	-	-	2	1	8	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
69	Harrison Bay/Colville Delta	-	-	-	-	-	1	1	10	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	-	1	-	3	-	2	-	-	1	-	-	-	-	-	-	-	-	-	-
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	-	2	-	3	-	-	1	-	-	-	-	-	-	-	-	-	-
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	1	4	-	-	-	-	-
80	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	5	-	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
85	Sagavanirktoq River Delta	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
86	Harrison Bay	-	-	-	-	1	3	3	20	2	6	1	2	1	-	-	-	-	-	-	-	-	-	-	-	-
87	Colville River Delta	-	-	-	-	-	1	2	30	1	8	1	2	1	-	1	-	-	-	-	-	-	-	-	-	-
88	Simpson Lagoon	-	-	-	-	-	-	1	-	8	-	5	1	1	1	-	-	-	-	-	-	-	-	-	-	-
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-	-	-
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.2-112. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
--	LAND	3	3	1	1	-	1	3	5	5	2	2	2	4	8	1	-	-
2	Point Barrow, Plover Islands	3	1	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
6	ERA 6	3	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-
12	ERA 12	-	-	-	1	3	2	-	-	-	1	1	1	-	-	-	10	2
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
19	Chukchi Spring Lead System	3	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	1	8	-	-	-	-	2	1	-	-	1	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	1	-	-	-	-	-	6	-	-	-	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
24	Beaufort Spring Lead 6	19	4	-	-	-	-	-	8	-	-	-	-	-	-	1	-	-
25	Beaufort Spring Lead 7	27	5	-	-	-	-	-	11	-	-	-	-	-	-	-	-	-
26	Beaufort Spring Lead 8	6	11	2	-	-	-	-	9	2	-	-	-	-	4	-	-	-
27	Beaufort Spring Lead 9	8	19	2	-	-	-	-	14	2	-	-	-	-	4	-	-	-
28	Beaufort Spring Lead 10	-	6	15	6	2	-	-	1	10	6	2	-	-	14	1	-	-
29	Ice/Sea Segment 1	6	2	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-
30	Ice/Sea Segment 2	1	4	1	-	-	-	-	6	1	-	-	-	-	1	-	-	-
31	Ice/Sea Segment 3	-	1	4	3	1	-	-	-	8	5	1	-	-	1	-	-	-
32	Ice/Sea Segment 4	-	-	3	12	5	-	-	-	-	9	9	1	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	1	7	4	-	-	-	1	3	8	1	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	-	6	4	-	-	-	-	2	8	-	-	1	-
35	ERA 35	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
37	ERA 37	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	-	-
41	Barrow Subsistence Area 1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	6	2	-	-	-	-	-	5	1	-	-	-	-	-	-	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	2	2	-	-	-	-	2	5	1	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	6	-	-	-	-	1	1	-	-	-	-
55	Point Barrow, Plover Islands	2	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
64	Peard Bay Area	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Smith Bay	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
68	Harrison Bay	-	-	1	1	-	-	-	-	12	2	1	-	-	-	-	-	-
69	Harrison Bay/Colville Delta	-	-	1	1	-	-	-	-	2	4	2	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	-	1	1	-	-	-	2	3	1	-	-	-	-	-	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	-	1	1	-	-	-	1	3	2	1	-	-	-	-
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
80	ERA 80	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
86	Harrison Bay	-	1	4	5	2	-	-	-	34	8	4	1	-	1	-	-	-
87	Colville River Delta	-	1	3	3	2	1	-	-	4	10	5	1	-	-	-	-	-
88	Simpson Lagoon	-	-	1	2	2	1	-	-	5	8	3	1	-	-	-	-	-
92	Thetis, Jones, Cottle and Return Islands	-	-	-	1	-	-	-	-	1	2	1	-	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	2	-	-	-	-	-	2	-	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline.** Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-113. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
--	LAND	8	12	5	11	5	10	4	10	2	5	1	6	2	2	8	3	10	19	9	13	2	-	2	-	-	
2	Point Barrow, Plover Islands	4	11	3	6	2	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
6	ERA 6	8	5	3	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	4	-	-	-	-	-	-	-	-	
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	2	-	-	3	-	1	-	-	-	-	-	-	-	-	-	
12	ERA 12	-	-	-	-	-	-	1	-	3	3	11	4	12	11	3	9	3	-	1	-	-	12	3	-	-	
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	2	2	-	-	-	-	-	
19	Chukchi Spring Lead System	9	5	4	3	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	4	6	1	4	1	-	-	1	-	-	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	9	6	-	-	1	-	
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	6	-	-	-	
24	Beaufort Spring Lead 6	24	13	10	8	6	3	3	1	2	1	1	-	-	-	-	-	-	-	-	-	3	1	-	-	-	
25	Beaufort Spring Lead 7	18	17	9	10	6	4	3	1	2	1	1	-	-	-	-	-	-	-	-	-	3	1	-	-	-	
26	Beaufort Spring Lead 8	4	6	21	9	18	8	5	3	5	2	3	1	2	1	-	-	-	-	-	-	3	2	-	1	-	
27	Beaufort Spring Lead 9	3	7	19	11	17	10	6	4	5	3	4	1	2	1	1	-	-	-	-	3	2	-	1	-		
28	Beaufort Spring Lead 10	-	1	3	2	10	9	27	13	23	14	16	7	12	8	4	4	1	-	-	4	9	1	1	-		
29	Ice/Sea Segment 1	4	8	2	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
30	Ice/Sea Segment 2	1	2	2	7	2	6	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Ice/Sea Segment 3	-	-	1	1	1	5	4	8	2	4	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
32	Ice/Sea Segment 4	-	-	-	-	-	-	1	2	2	9	4	4	2	1	1	-	-	-	-	-	-	-	-	-	-	
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	2	2	8	4	3	4	1	1	-	-	-	-	-	-	-	-	-	
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	ERA 35	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37	ERA 37	-	-	-	-	-	-	-	1	-	1	-	1	1	-	-	-	-	-	-	4	3	3	3	-	-	
41	Barrow Subsistence Area 1	4	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
42	Barrow Subsistence Area 2	4	10	2	4	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
43	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	1	1	7	1	1	2	1	1	-	-	-	-	-	-	-	-	-	
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	4	1	3	1	-	1	-	-	-	
50	Ice/Sea Segment 13	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
51	Ice/Sea Segment 14	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
55	Point Barrow, Plover Islands	1	4	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
64	Peard Bay Area	4	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
65	Smith Bay	-	1	1	3	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	
68	Harrison Bay	-	-	-	-	1	2	1	9	-	3	1	2	1	1	1	1	-	-	-	-	-	-	-	-	-	
69	Harrison Bay/Colville Delta	-	-	-	-	1	1	1	11	1	4	1	1	2	1	1	1	-	-	-	-	-	-	-	-	-	
71	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	1	-	4	-	4	1	1	3	1	1	-	1	-	-	-	-	-	-	-	
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	2	-	5	1	1	3	1	2	-	-	-	-	-	-	-	-	-	-	
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	2	7	-	-	1	-	-	-	
80	ERA 80	-	-	-	-	-	1	-	1	1	1	-	1	-	-	-	-	-	-	-	4	1	6	1	-	-	
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
86	Harrison Bay	-	-	1	-	2	4	5	22	4	10	4	5	4	3	3	2	1	-	-	1	1	-	-	-	-	
87	Colville River Delta	-	-	1	-	1	2	4	32	3	12	3	6	3	3	3	2	1	-	-	-	-	-	-	-	-	
88	Simpson Lagoon	-	-	-	-	-	-	1	2	1	9	1	8	2	3	5	2	2	-	1	-	-	-	-	-	-	-
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	-	2	-	3	-	1	2	-	1	-	-	-	-	-	-	-	-	-	-	
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	-	4	-	-	3	1	2	-	-	-	-	-	-	-	-	-	-
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	3	1	-	1	-	-	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.2-114. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	9	7	4	3	2	4	8	10	10	5	5	6	10	16	3	-	2
2	Point Barrow, Plover Islands	6	4	1	-	-	-	-	7	1	-	-	-	-	-	1	-	-
6	ERA 6	6	3	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-
8	Maguire, Flaxman Islands	-	-	-	-	-	1	1	-	-	-	-	-	5	-	-	-	-
9	Stockton & McClure Islands	-	-	-	-	-	1	1	-	-	-	-	2	4	-	-	-	-
12	ERA 12	-	-	1	4	7	6	4	-	-	3	4	5	3	-	-	11	6
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
19	Chukchi Spring Lead System	7	3	-	-	-	-	-	4	-	-	-	-	-	-	1	-	-
20	Ice/Sea Segment 7	-	-	-	-	-	2	8	-	-	-	-	1	3	1	-	-	2
21	Ice/Sea Segment 8	-	-	-	-	-	-	2	-	-	-	-	-	-	1	6	-	-
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
24	Beaufort Spring Lead 6	21	8	2	1	1	-	-	12	2	1	1	-	-	-	3	-	-
25	Beaufort Spring Lead 7	27	8	3	2	1	-	-	13	2	1	1	-	-	-	3	-	-
26	Beaufort Spring Lead 8	8	14	5	3	2	1	-	12	4	3	1	1	-	-	6	2	-
27	Beaufort Spring Lead 9	9	21	6	4	2	1	-	16	5	3	2	1	-	-	6	2	-
28	Beaufort Spring Lead 10	1	9	22	17	13	6	2	2	14	16	12	7	2	-	16	8	2
29	Ice/Sea Segment 1	6	2	1	-	-	-	4	-	-	-	-	-	-	-	1	-	-
30	Ice/Sea Segment 2	2	4	1	-	-	-	6	2	1	-	-	-	-	-	1	-	-
31	Ice/Sea Segment 3	1	2	4	3	1	-	-	1	8	5	2	1	-	-	1	-	-
32	Ice/Sea Segment 4	-	-	4	12	6	1	-	-	9	9	2	-	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	1	7	5	1	-	-	1	4	8	2	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	1	6	4	-	-	1	3	8	-	-	-	1	-
35	ERA 35	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
37	ERA 37	-	-	-	1	1	-	-	-	-	-	1	1	-	-	-	4	2
41	Barrow Subsistence Area 1	3	1	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
42	Barrow Subsistence Area 2	7	2	1	-	-	-	5	1	-	-	-	-	-	-	1	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	2	2	1	-	-	-	2	5	1	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	1	7	-	-	-	-	2	2	-	-	1	-
50	Ice/Sea Segment 13	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
51	Ice/Sea Segment 14	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	2	1	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-
64	Peard Bay Area	3	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
65	Smith Bay	1	1	1	1	-	-	-	2	1	1	-	-	-	-	-	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
68	Harrison Bay	-	1	2	2	1	1	1	-	12	4	2	1	1	-	1	-	-
69	Harrison Bay/Colville Delta	-	-	2	3	1	1	1	-	3	5	3	2	1	-	-	-	-
70	ERA 70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	-	1	1	2	1	-	-	2	4	3	3	-	-	-	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	-	1	2	2	-	-	1	3	4	3	-	-	-	-
77	Sagavanirktoq River Delta/Foggy Island Bay	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	-
80	ERA 80	-	-	1	1	1	-	-	-	-	1	-	-	-	-	9	1	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
85	Sagavanirktoq River Delta	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
86	Harrison Bay	-	2	7	9	5	3	2	1	36	12	7	4	2	-	2	1	1
87	Colville River Delta	-	1	5	7	5	3	1	-	6	14	9	4	2	-	1	1	1
88	Simpson Lagoon	-	-	1	2	4	4	2	-	-	6	10	6	4	-	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	-	1	1	1	1	-	-	1	3	2	2	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	1	1	-	-	-	1	4	3	-	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	1	3	-	-	-	-	-	1	3	-	-	1
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-115. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
-- LAND		14	20	10	18	9	16	8	16	5	11	5	12	5	5	14	7	18	29	17	23	5	3	7	1	2	
<b>2</b>	Point Barrow, Plover Islands	7	15	5	10	4	4	2	2	2	1	2	1	1	1	-	-	-	-	-	-	2	1	-	-	-	
<b>6</b>	ERA 6	11	6	6	4	3	2	2	1	1	1	1	1	1	1	-	-	-	-	-	-	4	2	-	1	-	
<b>8</b>	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	6	-	1	-	-	-	-	-	-	
<b>9</b>	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	2	-	-	4	-	2	-	1	-	-	-	-	-	-	-	
<b>12</b>	ERA 12	-	-	-	-	-	-	1	1	4	4	12	5	14	13	5	12	4	-	3	1	-	13	6	-	1	
<b>17</b>	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	4	-	-	1	-	-	
<b>19</b>	Chukchi Spring Lead System	11	6	6	4	4	2	1	-	1	-	1	-	1	-	-	-	-	-	-	3	2	-	1	-	-	
<b>20</b>	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	4	6	1	4	1	-	-	1	-	-	-
<b>21</b>	Ice/Sea Segment 8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	4	9	6	-	-	1	-	
<b>22</b>	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	6	-	-	-	-	-	
<b>24</b>	Beaufort Spring Lead 6	25	15	12	10	8	4	5	2	4	2	3	1	2	2	1	1	1	-	-	5	3	-	2	-	-	
<b>25</b>	Beaufort Spring Lead 7	19	19	10	11	8	5	5	2	4	2	3	1	3	2	1	2	1	-	-	4	3	-	1	-	-	
<b>26</b>	Beaufort Spring Lead 8	5	7	22	10	20	9	8	5	7	4	6	2	4	4	2	3	1	-	-	4	5	1	2	1	-	
<b>27</b>	Beaufort Spring Lead 9	4	8	20	13	18	12	8	5	8	5	6	3	5	4	3	3	1	-	1	3	4	1	1	1	-	
<b>28</b>	Beaufort Spring Lead 10	-	1	3	3	11	10	28	14	25	17	20	12	18	15	9	11	5	-	2	-	5	12	4	2	1	
<b>29</b>	Ice/Sea Segment 1	4	8	2	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>30</b>	Ice/Sea Segment 2	1	2	2	7	2	6	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>31</b>	Ice/Sea Segment 3	-	-	1	1	1	5	4	8	2	4	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
<b>32</b>	Ice/Sea Segment 4	-	-	-	-	-	-	1	2	2	9	4	4	2	1	1	-	-	-	-	-	-	-	-	-	-	
<b>33</b>	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	2	2	8	4	3	4	1	1	-	-	-	-	-	-	-	-	-	
<b>34</b>	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>35</b>	ERA 35	3	2	1	1	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
<b>37</b>	ERA 37	-	-	-	-	-	1	-	2	1	2	1	2	2	1	2	1	-	1	1	-	6	5	3	4	-	
<b>41</b>	Barrow Subsistence Area 1	4	2	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
<b>42</b>	Barrow Subsistence Area 2	4	10	3	5	2	2	1	1	1	1	1	1	1	1	-	-	-	-	-	-	1	1	-	-	-	
<b>43</b>	Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	-	-	1	1	7	2	1	3	1	1	-	-	-	-	-	-	-	
<b>44</b>	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	4	1	3	1	-	-	1	-	-
<b>48</b>	Ice/Sea Segment 11	2	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
<b>49</b>	ERA 49	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>50</b>	Ice/Sea Segment 13	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>51</b>	Ice/Sea Segment 14	2	2	1	1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
<b>52</b>	Ice/Sea Segment 15	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
<b>55</b>	Point Barrow, Plover Islands	1	4	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>56</b>	ERA 56	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
<b>58</b>	Offshore Pt. Lay to Wainwright	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>64</b>	Pearl Bay Area	5	3	3	2	2	1	1	-	1	-	1	-	1	-	-	-	-	-	-	2	1	-	1	-	-	
<b>65</b>	Smith Bay	-	2	1	5	1	3	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>67</b>	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	4	-	-	2	-	
<b>68</b>	Harrison Bay	-	-	1	-	1	3	2	12	1	5	1	3	1	1	2	1	1	-	-	-	-	-	-	-	-	
<b>69</b>	Harrison Bay/Colville Delta	-	-	-	-	1	2	2	13	1	6	1	3	1	1	2	1	1	-	-	-	-	-	-	-	-	
<b>71</b>	Simpson Lag., Thetis & Jones Isl.	-	-	-	-	-	-	1	-	4	1	6	1	1	4	1	2	-	1	-	-	-	-	-	-	-	
<b>72</b>	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	2	-	6	1	1	5	1	3	-	1	-	-	-	-	-	-	-	
<b>76</b>	Kendall Isl. Bird Sanctuary (Ca)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	1	-	
<b>77</b>	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	
<b>78</b>	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
<b>79</b>	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	14	3	9	-	-	1	-	
<b>80</b>	ERA 80	-	-	-	-	-	1	1	2	2	3	1	2	2	1	1	1	-	-	-	-	6	2	7	3	-	
<b>81</b>	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
<b>84</b>	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
<b>85</b>	Sagavanirkto River Delta	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	
<b>86</b>	Harrison Bay	-	2	1	4	6	7	25	5	12	5	6	5	5	4	4	3	-	1	-	1	2	1	-	-	-	
<b>87</b>	Colville River Delta	-	-	1	1	2	3	5	33	4	13	4	7	4	4	4	3	2	-	1	-	-	1	1	-	-	
<b>88</b>	Simpson Lagoon	-	-	-	-	-	-	1	2	1	9	1	10	3	4	7	3	4	-	2	-	-	1	-	-	-	
<b>89</b>	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	1	-	
<b>90</b>	Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>92</b>	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	-	-	1	-	3	-	5	1	1	4	1	2	-	1	-	-	-	-	-	-	-
<b>93</b>	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-
<b>94</b>	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	3	-	1	-	-	-	-	-
<b>95</b>	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
<b>96</b>	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	-	-	-	5	1	1	4	1	3	-	1	-	-	-	-	-	-	-
<b>99</b>	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
<b>100</b>	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	2	5	2	-	-	1	-
<b>101</b>	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	2	-	-	-	-	-	-	-

**Notes** - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-116. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	16	13	9	8	7	8	14	17	16	10	11	11	17	26	6	2	6
2	Point Barrow, Plover Islands	10	6	2	2	1	-	-	11	3	2	1	1	-	-	2	1	-
6	ERA 6	9	4	1	1	1	1	-	6	1	1	1	1	-	-	2	1	-
8	Maguire, Flaxman Islands	-	-	-	-	-	1	2	-	-	-	-	-	6	1	-	-	-
9	Stockton & McClure Islands	-	-	-	-	-	1	2	-	-	-	-	2	6	-	-	-	-
12	ERA 12	-	-	2	5	9	9	6	-	-	4	6	6	4	1	-	12	8
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-
19	Chukchi Spring Lead System	9	4	1	-	-	-	-	6	1	-	-	-	-	-	2	1	-
20	Ice/Sea Segment 7	-	-	-	-	-	2	8	-	-	-	1	3	1	-	-	2	-
21	Ice/Sea Segment 8	-	-	-	-	-	-	2	-	-	-	-	-	1	6	-	-	1
22	Ice/Sea Segment 9	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
24	Beaufort Spring Lead 6	23	10	4	2	2	1	1	14	3	2	1	1	1	-	6	3	1
25	Beaufort Spring Lead 7	28	10	5	3	3	2	1	15	3	3	2	2	1	-	5	2	1
26	Beaufort Spring Lead 8	9	15	8	6	5	3	2	13	6	5	3	3	2	-	8	4	2
27	Beaufort Spring Lead 9	10	22	8	6	5	4	2	17	6	6	4	3	2	-	7	3	2
28	Beaufort Spring Lead 10	1	10	24	20	18	13	6	3	15	18	15	12	6	-	16	11	7
29	Ice/Sea Segment 1	6	2	1	-	-	-	4	-	-	-	-	-	-	1	-	-	-
30	Ice/Sea Segment 2	2	4	1	-	-	-	6	2	1	-	-	-	-	1	-	-	-
31	Ice/Sea Segment 3	1	2	4	3	1	-	-	1	8	5	2	1	-	-	1	-	-
32	Ice/Sea Segment 4	-	-	4	12	6	1	-	-	9	9	2	-	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	1	7	5	1	-	-	1	4	8	2	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	1	6	4	-	-	-	1	3	8	-	-	-	1
35	ERA 35	2	1	1	1	1	-	-	2	-	1	1	-	-	-	-	-	-
37	ERA 37	-	-	1	1	2	2	1	-	-	1	1	1	1	-	-	5	4
41	Barrow Subsistence Area 1	4	2	-	-	-	-	-	3	-	-	-	-	-	1	-	-	-
42	Barrow Subsistence Area 2	7	3	1	1	-	-	-	5	1	1	1	1	-	-	1	-	-
43	Nuiqsut Subsistence Area	-	-	-	-	2	2	1	-	-	-	2	5	2	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	1	7	-	-	-	-	2	2	-	-	1	-
48	Ice/Sea Segment 11	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
50	Ice/Sea Segment 13	2	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
51	Ice/Sea Segment 14	2	1	1	-	-	-	-	1	-	-	-	-	-	1	-	-	-
52	Ice/Sea Segment 15	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
55	Point Barrow, Plover Islands	2	1	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
56	ERA 56	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
58	Offshore Pt. Lay to Wainwright	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
64	Pearl Bay Area	4	2	1	1	1	-	-	3	-	1	-	-	-	-	1	1	-
65	Smith Bay	1	2	1	1	1	-	-	3	1	1	1	-	-	-	1	-	-
67	Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1
68	Harrison Bay	-	1	3	3	2	2	2	-	15	5	4	2	2	-	1	-	1
69	Harrison Bay/Colville Delta	-	1	2	4	2	2	1	-	5	7	4	3	2	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	1	2	2	3	2	-	3	5	5	4	-	-	-	1	-
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	-	-	1	2	3	-	1	4	5	5	-	-	-	1	-
76	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	-	-
80	ERA 80	-	-	1	2	2	1	1	-	2	2	1	1	-	-	10	2	-
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-
86	Harrison Bay	-	3	8	10	6	5	3	1	37	14	9	6	3	-	3	2	2
87	Colville River Delta	-	2	6	8	6	5	3	-	8	15	10	6	3	-	1	1	1
88	Simpson Lagoon	-	-	1	3	4	5	4	-	1	6	11	8	6	1	-	-	1
89	Mackenzie River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	-	1	2	2	2	-	1	4	4	4	-	-	-	-	-
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	1	1	-	-	-	-	-	4	-	-	-	-
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	1	2	3	-	-	-	1	5	5	-	-	-
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	1	4	-	-	-	-	-	1	4	-	-
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-117. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
-- LAND	30	43	28	41	28	40	29	42	26	35	27	41	30	34	45	38	50	66	54	62	18	24	44	16	33	
2 Point Barrow, Plover Islands	13	30	13	20	11	10	8	6	8	6	7	4	6	5	3	4	2	-	1	-	7	5	2	3	2	
6 ERA 6	17	11	10	7	7	4	6	2	6	3	5	3	4	4	3	3	1	-	1	-	8	6	2	4	3	
7 US Russia Maritime Boundary	3	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	
8 Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	-	-	1	1	1	8	2	15	1	2	1	-	-	1	-	-	
9 Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	5	1	1	9	2	5	1	2	1	-	-	1	-	-	-	
12 ERA 12	-	-	-	-	-	-	1	1	4	5	13	6	15	14	6	14	5	1	4	1	1	14	8	2	3	
17 Angun and Beaufort Lagoons	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	13	6	8	-	-	2	-	1	-	
19 Chukchi Spring Lead System	14	8	7	5	5	2	3	1	3	1	2	1	2	1	1	1	1	-	-	5	4	1	2	1	-	
20 Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	4	6	1	5	1	-	1	1	-	-	
21 Ice/Sea Segment 8	-	-	-	-	-	-	1	1	1	1	1	2	1	2	2	3	2	4	10	7	-	1	2	-	-	
22 Ice/Sea Segment 9	-	1	-	1	-	-	1	1	1	1	2	1	2	2	2	2	1	2	2	7	-	2	2	1	1	
24 Beaufort Spring Lead 6	27	19	14	11	10	6	7	3	7	3	5	2	4	3	1	2	1	-	1	-	7	6	2	3	2	
25 Beaufort Spring Lead 7	22	24	13	14	10	7	8	4	8	4	7	2	5	4	2	3	1	-	1	-	6	6	2	2	1	
26 Beaufort Spring Lead 8	6	10	23	12	22	11	11	6	11	6	10	4	8	6	4	5	2	-	1	-	5	8	3	4	3	
27 Beaufort Spring Lead 9	5	12	21	16	20	14	11	7	10	7	9	5	7	6	4	5	2	-	1	-	4	7	3	3	3	
28 Beaufort Spring Lead 10	1	2	5	5	13	13	31	19	28	21	24	16	22	20	12	16	8	1	5	1	6	16	8	4	5	
29 Ice/Sea Segment 1	5	9	3	4	2	1	1	1	1	-	1	-	1	-	-	-	-	-	-	2	1	-	1	-	-	
30 Ice/Sea Segment 2	2	3	2	7	2	6	1	1	1	1	-	1	-	-	-	-	-	-	-	1	-	-	1	1	-	
31 Ice/Sea Segment 3	1	1	1	1	1	5	4	8	2	4	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	
32 Ice/Sea Segment 4	-	-	-	-	-	1	2	2	9	4	4	2	1	1	1	-	-	-	-	-	-	-	-	-	-	
33 Ice/Sea Segment 5	-	-	-	-	-	-	-	-	-	2	2	8	4	3	4	1	1	-	-	-	-	-	-	-	-	
34 Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35 ERA 35	6	5	4	3	4	2	3	1	3	2	3	2	2	2	1	2	1	-	-	4	4	2	4	3	-	
36 ERA 36	1	1	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
37 ERA 37	-	-	-	-	-	-	1	-	2	1	2	1	3	3	2	3	1	1	1	2	1	1	6	6	5	6
40 Wainwright Subsistence Area	2	1	1	1	1	-	1	-	1	-	1	-	1	1	-	1	-	-	-	1	1	1	1	1	-	
41 Barrow Subsistence Area 1	5	2	3	2	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	2	1	-	1	-	-	
42 Barrow Subsistence Area 2	6	11	4	5	5	3	4	2	3	2	3	2	3	2	2	2	2	1	-	1	-	4	4	2	3	2
43 Nuiqsut Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
44 Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	
48 Ice/Sea Segment 11	6	3	4	2	2	1	2	1	2	1	2	1	1	1	1	1	1	-	-	-	4	2	-	1	-	
49 ERA 49	6	3	4	3	3	2	1	1	1	1	-	1	1	1	-	-	-	-	-	4	1	-	1	-	-	
50 Ice/Sea Segment 13	4	3	3	2	2	-	1	-	1	1	1	1	1	1	-	-	-	-	-	3	2	1	2	1	-	
51 Ice/Sea Segment 14	4	2	3	2	2	1	1	-	2	1	1	-	1	1	-	-	-	-	-	3	2	1	2	1	-	
52 Ice/Sea Segment 15	2	1	1	1	1	-	1	-	1	-	1	-	1	-	-	-	-	-	-	1	1	-	-	-	-	
55 Point Barrow, Plover Islands	2	4	2	3	3	2	2	1	1	1	2	1	2	1	1	1	1	-	1	-	3	2	1	2	1	
56 ERA 56	5	3	4	3	3	1	1	-	1	1	2	1	1	1	1	-	-	-	-	4	2	1	3	1	-	
58 Offshore Pt. Lay to Wainwright	4	3	2	2	2	1	1	-	1	-	1	-	1	1	-	-	-	-	-	3	1	-	2	1	-	
60 King and Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	2	
62 Mackenzie River Estuary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	
64 Peard Bay Area	9	6	5	4	3	2	3	1	3	2	3	2	2	2	2	2	1	-	-	-	4	3	1	2	1	
65 Smith Bay	1	3	3	11	3	6	3	2	2	2	2	1	2	1	1	2	1	-	1	-	2	1	1	1	-	
67 Herschel Island (Canada)	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	2	5	6	10	-	1	6	2	5	
68 Harrison Bay	1	-	2	1	4	7	7	26	4	12	4	8	5	6	7	5	4	1	2	1	1	2	3	1	1	
69 Harrison Bay/Colville Delta	-	-	1	1	3	5	5	29	4	13	4	9	5	6	6	5	3	-	2	1	1	2	2	-	1	
70 ERA 70	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
71 Simpson Lag., Thetis & Jones Isl.	-	-	-	-	1	1	1	4	1	9	2	13	3	5	10	4	5	-	3	1	-	1	2	-	1	
72 Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	-	-	5	1	13	2	3	10	3	5	-	2	1	-	-	1	-	-	-	
73 Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
76 Kendall Isl. Bird Sanctuary (Ca)	-	-	-	-	-	1	-	1	1	1	1	2	1	2	2	2	5	5	-	2	9	1	9	-	-	
77 Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	
78 Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
79 Demarcation Bay Offshore	-	1	-	1	-	-	1	1	1	2	2	2	2	4	3	6	3	33	11	24	-	2	7	2	4	-
80 ERA 80	-	-	-	-	-	1	1	2	2	3	1	3	2	1	2	1	-	1	-	1	6	2	8	4	-	
81 Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
84 Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	
85 Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	
86 Harrison Bay	1	1	3	2	5	8	9	31	7	16	7	10	7	8	8	7	5	1	2	1	2	3	3	1	2	
87 Colville River Delta	1	1	2	1	3	6	7	36	5	17	5	11	7	7	7	6	4	-	2	1	1	2	2	1	1	
88 Simpson Lagoon	-	-	-	-	1	1	1	4	1	11	2	15	4	5	11	5	6	-	3	1	-	1	2	-	1	
89 Mackenzie River Delta	-	-	-	-	-	1	-	1	1	1	2	2	1	3	2	2	5	5	-	3	9	1	10	-	-	
90 Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	1	-	2	
92 Thetis, Jones, Cottle & Return Isl.	-	-	-	-	-	1	2	1	6	1	11	2	3	8	3	4	-	2	1	-	-	1	-	-	-	
93 Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	
94 Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
95 Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
96 Midway, Cross and Bartlett Islands																										

Appendix A

**Table A.2-117 (Continued). Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	1	2	1	-	-	1	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	-	-	-	-	1	1	2	2	4	5	5	10	5	-	1	3	-	1	
101	Icy Reef	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	7	2	5	-	-	1	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-118. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	34	33	30	30	31	37	47	38	41	35	35	40	49	63	23	23	39
2	Point Barrow, Plover Islands	18	14	8	7	6	4	2	22	7	7	5	4	2	-	8	5	3
6	ERA 6	14	8	5	4	4	3	2	10	3	4	3	3	2	-	6	5	3
7	US Russia Maritime Boundary	2	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
8	Maguire, Flaxman Islands	-	-	-	-	1	2	4	-	-	-	1	2	13	1	-	-	1
9	Stockton & McClure Islands	-	-	-	-	-	2	4	-	-	-	-	5	13	1	-	-	1
12	ERA 12	-	-	2	5	10	10	7	-	-	4	6	8	5	1	1	14	10
17	Angun and Beaufort Lagoons	-	-	-	-	-	1	2	-	-	-	-	1	1	10	-	-	1
19	Chukchi Spring Lead System	11	6	2	1	1	1	1	7	2	1	1	1	1	-	4	3	1
20	Ice/Sea Segment 7	-	-	-	-	1	2	9	-	-	-	-	1	3	2	-	-	2
21	Ice/Sea Segment 8	-	-	1	1	1	2	3	-	1	1	1	2	2	7	1	1	2
22	Ice/Sea Segment 9	-	-	1	1	2	2	2	1	1	2	1	2	1	4	1	2	2
24	Beaufort Spring Lead 6	25	12	6	4	3	2	1	16	3	3	2	2	1	-	8	4	2
25	Beaufort Spring Lead 7	31	13	7	6	5	3	2	18	4	4	4	3	1	-	8	4	3
26	Beaufort Spring Lead 8	11	17	10	9	8	5	3	15	7	7	6	4	3	-	10	7	4
27	Beaufort Spring Lead 9	12	24	11	9	8	6	3	20	8	8	6	5	3	-	9	6	4
28	Beaufort Spring Lead 10	2	11	27	23	22	18	10	3	20	22	20	17	9	1	18	15	11
29	Ice/Sea Segment 1	7	2	1	-	-	-	-	5	1	-	-	-	-	-	2	1	-
30	Ice/Sea Segment 2	2	4	1	1	1	-	1	6	2	1	1	1	1	-	1	-	-
31	Ice/Sea Segment 3	1	2	4	3	1	1	-	1	8	5	2	1	-	-	1	-	-
32	Ice/Sea Segment 4	-	-	4	12	6	1	-	-	1	9	9	2	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	1	7	5	1	-	-	1	4	8	2	-	-	-	-
34	Ice/Sea Segment 6	-	-	-	-	1	6	4	-	-	-	1	3	8	-	-	-	1
35	ERA 35	4	3	3	2	2	1	1	4	2	2	2	2	1	-	4	4	2
36	ERA 36	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
37	ERA 37	-	-	1	1	2	2	2	-	-	1	1	2	1	1	1	5	5
40	Wainwright Subsistence Area	1	1	1	1	-	1	-	1	-	-	-	1	-	-	1	1	1
41	Barrow Subsistence Area 1	4	2	1	-	-	-	-	3	-	-	-	-	-	-	1	1	-
42	Barrow Subsistence Area 2	8	4	3	3	2	2	2	6	2	2	2	2	1	-	5	3	2
43	Nuiqsut Subsistence Area	-	-	-	-	2	2	1	-	-	-	2	5	2	1	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	2	7	-	-	-	-	2	2	-	-	1	1
48	Ice/Sea Segment 11	5	2	2	1	1	1	-	3	1	1	1	1	1	-	3	1	1
49	ERA 49	5	4	1	1	1	1	-	4	1	-	1	-	1	-	2	1	-
50	Ice/Sea Segment 13	4	1	1	1	1	1	-	3	-	1	1	1	-	-	2	2	1
51	Ice/Sea Segment 14	3	2	1	1	1	1	1	3	-	1	1	1	-	-	2	2	1
52	Ice/Sea Segment 15	2	1	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-
55	Point Barrow, Plover Islands	3	2	2	1	1	1	1	4	1	1	1	1	1	-	3	2	1
56	ERA 56	4	2	1	1	1	1	-	3	-	1	1	1	-	-	2	2	1
58	Offshore Pt. Lay to Wainwright	4	2	1	1	1	1	-	2	-	-	1	-	-	-	2	1	-
60	King and Shingle Point	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	2
62	Mackenzie River Estuary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
64	Pearl Bay Area	7	4	3	3	2	2	1	5	1	2	2	2	1	-	3	3	2
65	Smith Bay	2	5	3	2	2	1	1	5	2	2	2	1	1	-	2	1	1
67	Herschel Island (Canada)	-	-	-	1	2	3	-	-	-	-	1	1	6	-	1	4	-
68	Harrison Bay	1	4	8	9	7	7	5	1	32	14	10	8	6	1	3	2	4
69	Harrison Bay/Colville Delta	-	3	6	9	7	7	4	1	12	14	11	9	4	1	2	2	3
70	ERA 70	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	-	1	3	4	7	6	-	2	6	11	12	9	1	-	1	2
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	1	2	5	5	-	-	2	7	9	10	1	-	1	2
76	Kendall Island Bird Sanctuary (Canada)	-	-	1	1	1	1	2	-	-	1	1	1	1	3	-	2	7
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	1	-	-	-	1	3	-	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
79	Demarcation Bay Offshore	-	-	1	2	2	4	5	1	1	2	2	2	3	24	1	2	6
80	ERA 80	-	-	1	2	3	2	1	-	-	2	2	1	1	-	1	11	2
84	Canning River Delta	-	-	-	-	-	1	1	-	-	-	-	-	2	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	1	-	-	-	-	1	3	-	-	-	-	-
86	Harrison Bay	1	4	11	13	9	9	6	1	39	18	12	9	7	1	4	3	5
87	Colville River Delta	1	3	8	11	9	9	5	1	13	19	13	10	5	1	3	2	4

Appendix A

**Table A.2-118 (Continued). Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
88	Simpson Lagoon	-	-	2	4	5	8	6	-	2	7	13	13	10	1	-	1	3
89	Mackenzie River Delta	-	-	1	1	1	2	3	-	-	1	1	1	1	3	-	2	7
90	Gary/Kendall	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
92	Thetis, Jones, Cottle and Return Islands	-	-	1	2	3	5	4	-	1	3	8	8	8	1	-	1	2
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	-	1	3	-	-	-	1	8	1	-	-	1	
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	-	1	4	6	-	-	1	2	11	12	1	-	-	1
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	-	1	3	-	-	-	-	1	1	-	-	1	
100	Jago and Tapkaurak Spits	-	-	-	-	1	2	7	-	-	-	1	3	9	-	1	3	
101	Icy Reef	-	-	-	-	-	1	1	-	-	1	-	1	1	5	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-119. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
--	LAND	41	57	42	56	44	56	47	61	46	55	46	61	50	54	65	59	71	86	77	85	33	45	71	36	60
2	Point Barrow, Plover Islands	17	37	16	25	15	13	12	8	11	8	10	7	9	8	5	5	3	-	1	-	11	9	3	8	5
6	ERA 6	19	14	13	9	10	6	8	4	9	5	8	5	6	5	4	4	2	-	1	-	11	9	3	7	5
7	US Russia Maritime Boundary	5	3	3	3	2	1	1	-	1	-	1	1	1	1	1	1	-	-	-	-	4	1	-	1	-
8	Maguire, Flaxman Islands	-	-	-	-	-	-	-	-	-	1	-	2	1	2	10	2	19	1	3	1	-	-	1	-	1
9	Stockton & McClure Islands	-	-	-	-	-	-	-	-	-	-	6	1	1	11	2	7	1	2	1	-	-	1	-	1	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
12	ERA 12	-	-	-	-	-	-	1	1	5	5	13	6	15	15	6	14	5	1	4	1	1	15	8	2	3
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	1	-	1	-	1	1	1	1	2	2	2	16	8	11	-	1	4	1	2
19	Chukchi Spring Lead System	15	9	8	6	6	3	3	1	3	1	3	1	2	2	1	1	1	-	-	6	4	1	2	1	
20	Ice/Sea Segment 7	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	4	6	1	5	1	-	1	1	-	1
21	Ice/Sea Segment 8	-	-	-	1	1	1	1	2	1	2	2	3	2	2	2	3	3	5	10	7	1	1	2	1	1
22	Ice/Sea Segment 9	1	2	1	1	1	1	2	2	2	2	3	2	3	3	2	3	2	7	1	2	2	2	2	2	2
24	Beaufort Spring Lead 6	27	21	14	12	10	6	7	3	7	3	6	2	4	3	2	2	1	-	1	-	7	6	2	3	2
25	Beaufort Spring Lead 7	22	26	13	15	11	8	8	4	9	5	7	3	6	5	2	3	1	-	1	-	7	6	2	2	2
26	Beaufort Spring Lead 8	8	12	25	14	23	12	13	7	13	8	11	5	9	7	4	5	2	-	1	-	7	9	3	5	3
27	Beaufort Spring Lead 9	7	14	23	19	22	17	13	8	12	9	10	5	9	7	5	6	3	-	1	-	6	8	3	4	3
28	Beaufort Spring Lead 10	1	2	5	6	14	15	32	22	29	23	25	18	24	21	13	18	9	1	5	1	6	17	8	4	5
29	Ice/Sea Segment 1	5	9	3	4	2	1	1	1	1	1	1	1	1	1	1	1	1	-	1	-	3	1	-	3	1
30	Ice/Sea Segment 2	2	3	2	7	2	6	1	1	1	1	1	1	1	1	1	1	1	-	1	-	2	1	1	3	1
31	Ice/Sea Segment 3	1	1	1	1	1	5	4	8	2	4	1	1	1	1	-	1	-	-	-	-	1	-	-	1	
32	Ice/Sea Segment 4	-	-	-	-	-	-	1	2	2	9	4	4	2	1	1	1	-	-	-	-	-	-	-	-	
33	Ice/Sea Segment 5	-	-	-	-	-	-	-	-	1	2	2	8	5	3	4	1	1	-	1	-	-	-	-	-	
34	Ice/Sea Segment 6	-	-	-	-	-	-	-	-	-	-	-	2	1	3	9	2	6	-	1	-	-	-	-	-	
35	ERA 35	8	6	6	5	6	3	5	2	5	3	4	3	3	3	3	1	-	1	-	6	6	3	6	5	
36	ERA 36	1	1	1	1	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
37	ERA 37	1	-	1	1	1	1	1	1	2	1	2	1	3	3	2	3	1	1	2	1	1	6	6	5	6
40	Wainwright Subsistence Area	2	2	1	1	1	-	1	-	1	-	1	-	1	1	-	1	-	-	-	-	1	1	1	1	1
41	Barrow Subsistence Area 1	5	2	3	2	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	2	1	-	1	-
42	Barrow Subsistence Area 2	6	11	5	6	5	3	4	2	4	3	4	3	4	3	3	3	2	1	2	1	5	5	3	5	3
43	Nuqsut Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
48	Ice/Sea Segment 11	7	4	4	3	3	1	2	1	2	1	2	1	2	1	1	1	1	-	-	-	5	2	1	2	1
49	ERA 49	7	5	6	5	5	4	2	1	2	1	2	1	1	1	1	1	1	-	-	-	6	2	-	3	1
50	Ice/Sea Segment 13	4	4	3	2	2	1	1	-	2	1	1	1	1	1	1	1	-	-	-	3	2	1	2	2	
51	Ice/Sea Segment 14	5	3	3	3	2	1	2	-	2	1	1	1	1	1	1	1	-	-	-	3	2	1	2	2	
52	Ice/Sea Segment 15	3	2	2	1	1	-	1	-	1	-	1	1	1	1	1	1	-	-	-	2	1	-	1	-	
55	Point Barrow, Plover Islands	2	4	3	3	4	2	2	1	2	1	2	2	2	2	1	1	-	1	-	4	3	1	4	2	
56	ERA 56	6	5	5	4	3	1	1	1	2	1	2	1	2	1	1	1	1	-	-	4	3	1	4	2	
58	Offshore Pt. Lay to Wainwright	4	4	3	3	2	1	1	-	2	1	1	1	1	1	1	1	-	-	-	3	2	1	2	2	
60	King and Shingle Point	1	1	1	1	1	1	1	2	1	2	1	1	1	1	1	2	1	-	2	2	1	2	4	2	5
62	Mackenzie River Estuary	-	-	1	-	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-	1	1	1	1	
64	Peard Bay Area	11	9	7	5	5	4	5	2	5	3	5	3	4	3	3	3	2	-	1	-	6	5	2	4	2
65	Smith Bay	2	4	4	14	4	8	4	3	3	3	3	3	2	3	2	2	2	-	1	-	3	2	1	1	1
67	Herschel Island (Canada)	-	-	-	-	-	-	1	-	1	1	1	2	2	2	4	2	7	7	12	1	3	9	4	8	
68	Harrison Bay	1	1	3	2	5	9	9	33	7	16	7	12	8	9	9	8	6	1	3	1	2	4	4	1	3
69	Harrison Bay/Colville Delta	1	1	2	1	4	7	7	36	5	16	6	12	8	9	8	7	4	-	2	1	1	3	3	2	2
70	ERA 70	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
71	Simpson Lag., Thetis & Jones Isl.	-	-	1	-	1	1	2	5	2	12	2	18	4	6	13	6	7	1	3	1	-	1	2	1	1

## Appendix A

**Table A.2-119 (Continued). Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
72	Gwyder Bay, Cottle & Return Isl.	-	-	-	-	-	-	1	1	1	6	1	16	2	4	13	4	6	-	3	1	-	1	2	1	1
73	Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
75	Water over Boulder Patch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	
76	Kendall Isl. Bird Sanctuary (Ca)	1	1	1	1	1	1	1	1	2	2	2	1	2	2	1	3	2	3	5	6	2	4	11	3	13
77	Sag. River Delta, Foggy Isl. Bay	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	1	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	1	3	1	2	1	1	3	2	3	4	5	4	6	8	5	11	6	41	18	34	1	5	15	3	9
80	ERA 80	-	-	-	-	-	-	2	1	2	2	3	1	3	2	1	2	1	-	1	-	1	6	2	8	4
81	Simpson Cove	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	
84	Canning River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	5	-	1	-	-	-	-	-	
85	Sagavanirktok River Delta	-	-	-	-	-	-	-	-	-	-	2	-	-	2	-	1	-	-	-	-	-	-	-	-	
86	Harrison Bay	1	1	3	2	5	10	10	34	8	18	8	12	9	9	10	9	6	1	3	1	2	4	4	1	3
87	Colville River Delta	1	1	2	2	4	7	8	37	6	18	7	14	8	9	9	7	5	-	3	1	2	3	3	2	2
88	Simpson Lagoon	-	-	1	-	1	1	2	5	2	12	2	18	4	6	13	6	7	1	4	1	-	1	2	1	1
89	Mackenzie River Delta	1	1	1	1	1	1	1	1	2	2	3	2	3	3	2	4	2	3	6	6	2	4	11	4	13
90	Gary/Kendall	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	-	2
92	Thetis, Jones, Cottle & Return Isl.	-	-	-	-	1	1	1	2	1	7	1	14	3	4	10	4	5	-	3	1	-	1	1	1	1
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
94	Maguire, Flaxman &, Barrier Isl.	-	-	-	-	-	-	-	-	-	-	1	1	1	6	1	9	1	2	1	-	-	1	-	-	
95	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Midway, Cross and Bartlett Islands	-	-	-	-	-	-	-	-	2	-	14	2	3	13	4	7	1	3	1	-	-	1	-	1	
98	Anderson Point Barrier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
99	Arey & Barter Isl., Bernard Spit	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	4	1	3	2	-	1	2	-	1	
100	Jago and Tapkaurak Spits	-	-	1	-	1	-	1	-	2	1	2	2	2	3	3	5	6	6	15	6	1	2	6	1	3
101	Icy Reef	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	1	9	3	7	-	1	2	1	1

**Table A.2-120. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
--	LAND	46	48	49	50	51	58	67	51	60	54	55	61	70	84	41	43	64
2	Point Barrow, Plover Islands	22	18	11	10	9	7	3	27	9	9	8	7	4	-	13	8	5
6	ERA 6	16	10	8	7	6	4	3	12	5	6	5	5	3	-	9	8	4
7	US Russia Maritime Boundary	4	2	1	1	1	-	-	3	-	-	1	1	1	-	2	1	-
8	Maguire, Flaxman Islands	-	-	-	-	1	3	6	-	-	-	1	2	16	1	-	-	2
9	Stockton & McClure Islands	-	-	-	-	-	3	6	-	-	-	6	16	1	-	-	1	
12	ERA 12	-	-	2	6	10	11	8	-	-	5	7	8	5	1	1	14	10
17	Angun and Beaufort Lagoons	-	-	1	1	1	2	3	-	-	1	-	1	2	14	1	1	2
19	Chukchi Spring Lead System	12	6	3	2	2	1	1	8	2	2	2	1	1	-	4	3	2
20	Ice/Sea Segment 7	-	-	-	-	1	2	9	-	-	-	1	3	2	-	1	2	
21	Ice/Sea Segment 8	-	1	1	2	2	2	4	-	2	2	2	3	3	7	1	1	2
22	Ice/Sea Segment 9	1	1	2	2	3	3	2	2	2	2	2	2	4	1	3	2	
24	Beaufort Spring Lead 6	26	12	6	4	3	2	1	17	4	3	3	2	1	-	8	5	2
25	Beaufort Spring Lead 7	32	13	8	6	6	4	2	20	4	5	5	3	1	-	9	5	3
26	Beaufort Spring Lead 8	12	19	12	10	9	6	3	17	8	9	7	5	3	-	12	8	4
27	Beaufort Spring Lead 9	13	26	13	11	9	7	4	22	10	10	8	6	3	-	11	7	5
28	Beaufort Spring Lead 10	2	12	28	25	24	19	11	3	22	24	22	18	10	1	18	16	12
29	Ice/Sea Segment 1	7	3	1	1	1	1	1	5	1	-	1	1	1	-	2	1	1
30	Ice/Sea Segment 2	2	4	1	1	1	1	1	6	2	1	1	1	1	-	2	1	1
31	Ice/Sea Segment 3	1	2	4	4	1	1	-	1	8	5	2	1	-	1	-	-	-
32	Ice/Sea Segment 4	-	-	4	12	6	1	-	-	1	9	9	2	-	-	-	-	-
33	Ice/Sea Segment 5	-	-	-	1	7	5	1	-	-	1	4	8	2	-	-	1	1
34	Ice/Sea Segment 6	-	-	-	-	1	6	4	-	-	-	1	3	8	-	-	-	1
35	ERA 35	6	5	5	4	3	3	2	5	3	3	3	4	2	-	6	5	3
36	ERA 36	1	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-
37	ERA 37	1	1	1	1	2	2	2	1	-	1	2	2	1	1	1	6	5
40	Wainwright Subsistence Area	2	1	1	1	1	1	-	1	-	-	1	-	-	-	-	1	1
41	Barrow Subsistence Area 1	4	2	1	-	-	-	-	3	-	-	-	-	-	-	-	1	1
42	Barrow Subsistence Area 2	9	5	3	3	3	3	2	7	2	3	3	3	1	6	5	3	
43	Nuqsut Subsistence Area	-	-	-	-	2	2	1	-	-	-	2	5	2	1	-	-	-
44	Kaktovik Subsistence Area	-	-	-	-	-	2	7	-	-	-	-	2	2	-	-	1	
48	Ice/Sea Segment 11	5	3	2	2	2	2	1	4	1	1	2	2	1	-	3	2	1
49	ERA 49	7	5	2	1	1	1	1	6	2	1	1	1	1	-	4	2	1
50	Ice/Sea Segment 13	4	2	1	1	1	1	1	3	-	1	1	1	1	-	2	2	1
51	Ice/Sea Segment 14	4	2	1	1	1	1	1	3	1	1	1	1	1	-	2	2	1
52	Ice/Sea Segment 15	3	1	1	1	1	1	-	2	-	1	1	1	-	-	1	1	-
55	Point Barrow, Plover Islands	3	3	2	1	2	1	1	4	1	1	2	1	1	-	4	3	2
56	ERA 56	5	3	1	1	2	1	1	-	3	1	1	1	1	-	3	3	1
58	Offshore Pt. Lay to Wainwright	4	2	1	1	1	1	-	3	1	1	1	1	-	-	2	2	1

Appendix A

**Table A.2-120 (Continued). Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Environmental Resource Area Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
60	King and Shingle Point	1	1	1	2	1	1	1	1	1	1	1	1	-	1	1	2	4
62	Mackenzie River Estuary	-	1	1	1	-	-	-	-	-	1	1	-	-	1	-	1	-
64	Peard Bay Area	9	6	5	4	4	3	2	7	3	4	3	4	2	-	5	5	2
65	Smith Bay	3	6	4	3	3	2	2	7	3	3	3	2	2	-	4	2	2
67	Herschel Island (Canada)	-	-	1	1	1	2	3	-	1	1	1	2	1	7	1	2	6
68	Harrison Bay	1	5	11	13	10	10	7	1	39	18	14	11	8	1	4	3	6
69	Harrison Bay/Colville Delta	1	3	8	11	10	10	5	1	15	17	14	12	6	1	3	3	4
70	ERA 70	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
71	Simpson Lagoon, Thetis and Jones Island	-	1	2	4	6	9	8	-	3	8	14	16	12	1	1	1	3
72	Gwyder Bay, West Dock, Cottle and Return Islands	-	-	1	2	3	7	7	-	-	2	9	12	14	1	-	1	2
75	Water over Boulder Patch	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
76	Kendall Island Bird Sanctuary (Canada)	1	1	2	2	2	2	3	1	1	1	2	1	1	4	1	3	8
77	Sagavanirktok River Delta/Foggy Island Bay	-	-	-	-	-	-	1	-	-	-	2	3	-	-	-	-	-
78	Mikkelsen Bay	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-
79	Demarcation Bay Offshore	1	1	3	4	5	8	9	2	3	4	4	5	5	31	1	5	11
80	ERA 80	-	-	1	2	3	2	1	-	1	2	2	1	1	-	1	11	2
84	Canning River Delta	-	-	-	-	-	1	1	-	-	-	-	3	-	-	-	-	-
85	Sagavanirktok River Delta	-	-	-	-	-	-	1	-	-	-	2	3	-	-	-	-	-
86	Harrison Bay	1	5	12	14	11	10	7	2	40	20	15	12	9	1	5	4	6
87	Colville River Delta	1	4	9	12	11	11	6	2	16	20	16	13	6	1	4	3	5
88	Simpson Lagoon	-	1	2	4	6	10	8	-	3	8	14	16	13	1	1	1	3
89	Mackenzie River Delta	1	1	2	2	2	3	3	1	1	2	2	2	4	2	4	9	-
90	Gary/Kendall	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	1	-
92	Thetis, Jones, Cottle and Return Islands	-	-	1	3	3	6	6	-	2	4	10	11	11	1	1	1	2
93	Cross and No Name Island	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-
94	Maguire Islands, Flaxman Island, Barrier Islands	-	-	-	-	1	2	3	-	-	-	1	10	1	-	-	1	-
95	Arey and Barter Islands and Bernard Spit	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
96	Midway, Cross and Bartlett Islands	-	-	-	1	2	6	7	-	-	1	3	13	14	2	-	-	2
99	Arey and Barter Islands, Bernard Spit	-	-	-	-	1	1	4	-	-	-	1	2	2	-	1	2	-
100	Jago and Tapkaurak Spits	-	1	1	1	2	3	10	-	-	1	1	2	4	11	1	2	5
101	Icy Reef	-	-	-	1	1	1	1	-	-	1	1	1	1	7	-	1	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-121. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
86	Dease Inlet, Plover Islands	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
92	Cape Halkett, Garry Creek	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
112	Clarence Lagoon , Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-122. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-123. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
85	Barrow, Browerville, Elson Lag.	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
86	Dease Inlet, Plover Islands	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	-	1	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	Ikpikpuk River Point Poleakoon	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	-	-	1	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
92	Cape Halkett, Garry Creek	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	1	-	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	2	-	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	1	-	-	-	-	
112	Clarence Lagoon, Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-124. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
86	Dease Inlet, Plover Islands	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**A.2-125. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25		
84	Will Rogers & Wiley Post Mem.	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
85	Barrow, Browerville, Elson Lag.	3	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
86	Dease Inlet, Plover Islands	1	3	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
87	Igalik & Kulgurak Island	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
88	Cape Simpson, Piasuk River	-	2	1	3	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
89	Ilkipikuk River Point Poleakoon	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
90	Drew & McLeod Point, Kolovik	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	1	1	3	1	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-		
92	Cape Halkett, Garry Creek	-	-	-	-	-	2	1	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
93	Atigaru Pt., Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
95	Colville River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-		
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-		
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-		
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-		
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-		
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	-	-	-	-	-		
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	1	-	-	-	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	1	2	-	-	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	2	-	-	-	-	-	-	
112	Clarence Lagoon, Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	2	-	-	-	-	-	-	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-126. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17									
84	Will Rogers & Wiley Post Mem.	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-									
85	Barrow, Browerville, Elson Lag.	3	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-									
86	Dease Inlet, Plover Islands	2	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-									
87	Igalik & Kulgurak Island	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-									
88	Cape Simpson, Piasuk River	1	1	1	-	-	-	-	-	2	1	-	-	-	-	-	-	-									
89	Ilkipikuk River Point Poleakoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-									
90	Drew & McLeod Point, Kolovik	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-									
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	1	1	1	1	1	-	1	2	1	1	1	1	-	-	-	-									
92	Cape Halkett, Garry Creek	-	1	1	-	-	-	-	-	3	1	-	-	-	-	-	-	-									
93	Atigaru Pt., Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-									
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	-	-	-	-	1	1	1	-	-	-	-	-	-									
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-									
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	1	2	-	-	-	-	-	-	-	1	1	-	1	-	-	-	-	-	-	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-127. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
84	Will Rogers & Wiley Post Mem.	2	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	5	5	3	2	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	1	1	-	-	-	
86	Dease Inlet, Plover Islands	2	5	2	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Igalik & Kulgurak Island	1	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	-	3	1	4	1	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
89	Ilkipikupuk River Point Poleakoon	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	1	-	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	1	1	1	5	1	3	1	2	1	1	1	1	1	1	1	-	1	1	-	-	-	-	
92	Cape Halkett, Garry Creek	-	-	-	-	1	3	1	4	1	2	1	1	1	1	1	1	-	-	-	-	-	-	-	-	
93	Atigaru Pt., Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	1	1	3	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	1	-	2	-	-	2	1	1	-	1	-	-	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	1	-	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	1	2	1	-	1	-	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	3	1	-	-	-	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	2	-	-	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	2	4	-	-	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	1	3	-	-	-	-
112	Clarence Lagoon, Backhouse R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	1	3	-	-	-	-	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	3	-	-	1	-	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	1	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-128. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
84	Will Rogers & Wiley Post Mem.	2	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
85	Barrow, Browerville, Elson Lag.	5	2	1	1	-	-	-	3	1	1	-	-	-	-	1	1	-
86	Dease Inlet, Plover Islands	4	2	1	-	-	-	-	3	-	-	-	-	-	-	1	-	
87	Igalik & Kulgurak Island	1	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	1	2	1	1	-	-	-	3	1	1	-	-	-	-	-	-	
89	Ilkipikupuk River Point Poleakoon	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	1	1	-	-	-	-	1	1	1	-	-	-	-	-	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	2	2	1	1	1	1	1	3	2	1	1	1	1	1	-	
92	Cape Halkett, Garry Creek	-	1	2	1	1	1	1	-	4	2	2	1	1	-	-	-	
93	Atigaru Pt., Eskimo Isl., Kogru R.	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	1	-	-	2	2	1	1	-	-	-	-	-	
96	Oliktok Point	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	1	1	1	-	-	2	1	2	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	1	-	-	-	-	2	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	1	3	-	-	-	-	-	1	2	-	1	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	1	-	-	-	-	-	-	-	3	-	-	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	
111	Demarcation Bay & Point	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	
112	Clarence Lagoon, Backhouse River	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-129. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
81	Peard Bay, Point Franklin	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
83	Nulavik, Loran Radio Station	1	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
84	Will Rogers & Wiley Post Mem.	3	3	2	2	1	1	1	-	1	-	1	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-
85	Barrow, Browerville, Elson Lag.	9	10	6	5	5	4	4	2	5	3	5	3	4	3	2	2	1	-	-	3	3	1	1	1	1	1
86	Dease Inlet, Plover Islands	5	9	3	5	3	2	1	1	1	1	1	1	1	1	1	1	1	-	-	1	1	1	1	1	1	1
87	Igalik & Kulgurak Island	1	4	1	2	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	1	7	3	11	3	5	2	2	2	1	1	1	1	1	-	1	1	-	-	2	1	1	1	1	1	1
89	Ilkipikpuk River Point Poleakoon	-	1	1	3	1	2	1	-	1	1	1	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-
90	Drew & McLeod Point, Kolovik	-	1	1	5	2	3	1	1	1	1	1	1	1	1	1	1	1	-	-	1	1	-	-	-	-	-
91	Lonely, Pitt Pt, Pogik Bay, Smith R	1	2	2	4	4	12	5	7	3	5	3	4	4	4	3	3	3	2	3	2	1	3	2	2	2	2
92	Cape Halkett, Garry Creek	-	1	1	1	2	6	3	10	2	4	2	5	3	3	4	4	3	1	1	-	1	2	1	1	1	1
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	-	-	1	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	2	2	2	8	2	4	2	3	2	2	2	1	1	-	-	-	1	-	-	-	-	
95	Colville River	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	-	-	-	1	-	1	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	-	2	-	4	1	1	4	1	2	-	1	-	-	-	1	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	3	-	1	2	1	1	-	1	-	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	1	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	1	4	-	1	-	-	-	-	-	-	-
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	7	-	-	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	-
107	Kaktovik	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	3	1	5	2	-	1	2	-	1	-
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	1	3	6	4	-	-	2	-	1	-
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	4	5	-	-	1	-	-	
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	13	4	8	-	-	2	-	1	-
111	Demarcation Bay & Point	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	2	1	12	3	7	-	1	2	1	1	-
112	Clarence Lagoon , Backhouse R.	-	1	-	-	-	-	1	-	1	-	1	1	1	1	1	1	3	2	11	5	9	-	1	4	1	2
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	2	1	5	4	8	-	1	3	-	3
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	-	-	1	-	1	
115	Herschel Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	2	2	3	-	1	2	1	2	-
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	1	1	
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
119	Shingle Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	1	-	1	
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	1	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-130. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
82	Skull Cliff	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
84	Will Rogers & Wiley Post Mem.	3	1	-	-	-	-	-	2	-	-	-	-	-	-	1	1	-
85	Barrow, Browerville, Elson Lag.	9	6	5	5	4	3	1	7	3	4	3	3	2	-	4	2	2
86	Dease Inlet, Plover Islands	6	3	2	1	1	1	1	5	1	1	1	1	1	-	1	1	1
87	Igalik & Kulgurak Island	2	2	-	-	-	-	-	3	-	-	-	-	-	-	1	-	-
88	Cape Simpson, Piasuk River	2	5	2	2	1	1	1	7	3	2	1	1	1	-	2	1	1
89	Ilkipikpuk River Point Poleakoon	1	1	1	1	1	-	1	2	1	1	1	1	-	1	-	-	-
90	Drew & McLeod Point, Kolovik	1	2	1	1	1	1	1	2	1	1	1	-	1	-	1	1	1
91	Lonely, Pitt Pt., Pogik Bay, Smith R	2	4	5	4	4	4	3	2	9	5	4	4	3	2	4	3	3
92	Cape Halkett, Garry Creek	1	2	4	3	3	4	3	1	9	5	4	5	4	1	1	1	3
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	1	1	-	-	-	-	3	1	1	-	-	-	-	-	-
94	Fish Creek, Tingmeachsiovik River	-	2	3	3	3	2	1	1	6	4	4	3	1	-	1	1	1
95	Colville River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
96	Oliktok Point	-	-	-	1	1	1	-	-	1	1	1	1	1	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	1	2	2	-	-	1	4	3	4	-	-	-	1
98	Kuparuk River	-	-	-	-	-	-	1	1	-	-	1	2	2	-	-	-	-

Appendix A

**Table A.2-130 (Continued). Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	1	-	-	-	-	1	2	-	-	-	
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	1	2	-	-	-	-	1	5	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	1	1	-	-	-	-	3	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	
107	Kaktovik	-	-	-	-	-	2	5	-	-	-	-	1	2	3	-	2	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	1	3	-	-	-	1	1	6	-	1	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	1	-	-	-	-	1	6	-	-	1	
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	-	1	1	-	-	-	-	1	10	-	-	1	
111	Demarcation Bay & Point	-	-	1	1	1	1	2	-	1	1	1	1	1	8	-	1	2
112	Clarence Lagoon, Backhouse River	-	-	1	-	1	2	3	1	-	1	-	1	1	9	-	1	3
113	Komakuk Beach, Fish Creek	-	-	-	-	-	1	2	-	-	-	-	1	1	6	-	1	3
114	Nunaluk Spit	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	1	
115	Herschel Island	-	-	-	-	-	1	1	-	-	-	-	-	2	-	-	2	
119	Shingle Point	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-131. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
81	Peard Bay, Point Franklin	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
82	Skull Cliff	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	
83	Nulavik, Loran Radio Station	1	1	1	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	
84	Will Rogers & Wiley Post Mem.	4	3	2	2	1	1	1	-	1	1	1	1	1	1	1	1	-	-	-	2	1	-	1	-	
85	Barrow, Browerville, Elson Lag.	13	13	9	8	8	6	8	4	9	6	9	5	7	5	4	3	2	-	1	-	7	6	2	4	2
86	Dease Inlet, Plover Islands	5	11	4	6	3	2	2	2	2	2	2	2	2	1	1	1	-	-	-	2	2	1	1	1	
87	Igalik & Kulgurak Island	2	5	2	3	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	1	1	-	1	1	
88	Cape Simpson, Piasuk River	1	8	4	13	4	6	3	3	2	2	1	1	1	1	1	1	-	-	3	1	1	3	1		
89	Ikpikpuk River Point Poleakoon	1	2	1	3	1	3	1	1	1	1	1	1	1	1	1	1	-	-	1	1	-	1	-	1	
90	Drew & McLeod Point, Kolovik	1	2	2	7	2	4	2	1	1	1	1	1	1	1	1	1	1	2	-	-	1	1	1	1	
91	Lonely, Pitt Pt, Pogik Bay, Smith R	2	2	3	5	5	14	6	9	5	7	5	6	6	6	5	6	4	4	5	4	2	4	4	3	
92	Cape Halkett, Garry Creek	1	1	2	1	2	7	4	13	4	7	5	7	5	5	6	6	4	2	3	2	1	2	3	1	
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	-	1	-	1	1	1	3	1	1	-	1	-	1	1	-	-	1	-	-	-	-	-	-	
94	Fish Creek, Tingmeachsiovik River	-	-	1	1	2	3	4	12	3	6	2	4	2	3	2	2	1	-	-	1	1	1	1	1	
95	Colville River	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
96	Oliktok Point	-	-	-	-	1	1	1	2	1	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	
97	Milne Point, Simpson Lagoon	-	-	-	-	-	-	-	3	-	5	1	2	5	2	2	-	1	-	-	1	-	-	-	-	
98	Kuparuk River	-	-	-	-	-	-	-	-	1	-	3	-	1	3	1	2	-	1	-	-	-	-	-	-	
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	-	
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	1	-	-	-	-	-	-	-	-	
102	Pt. Hopson & Sweeney, Staines R.	-	-	-	-	-	-	-	-	-	-	-	-	1	4	1	5	-	1	-	-	-	-	-	-	
103	Brownlow Point, Canning River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	9	-	1	-	-	-	-	-	
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	-	-	-	-	
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	1	-	1	-	1	1	1	1	2	2	2	4	4	2	7	2	1	2	3	1	2	
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	-	-	-	-	1	1	1	1	1	1	2	2	4	9	4	-	1	3	1	1	
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	10	5	7	-	1	2	-	1		
110	Icy Reef, Kongakut R., Siku Lag.	-	-	-	-	-	-	-	-	-	-	1	1	2	2	2	2	17	6	11	-	1	3	1	2	
111	Demarcation Bay & Point	-	-	-	1	-	-	1	1	1	2	2	2	2	3	2	3	2	15	5	10	-	2	4	1	2
112	Clarence Lagoon , Backhouse R.	1	2	1	1	1	1	2	1	2	1	2	2	2	3	2	5	3	14	8	13	1	3	7	2	4
113	Komakuk Beach, Fish Creek	-	-	-	-	-	-	-	1	1	1	1	2	2	1	3	2	6	5	9	-	2	6	1	5	
114	Nunaluk Spit	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	2	3	-	1	3	1	
115	Herschel Island	-	-	-	-	-	-	1	-	-	-	-	1	1	1	1	3	3	4	-	1	3	1	3		
116	Ptarmigan Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	1	1	1		
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	1	-	1		
119	Shingle Point	1	-	1	-	1	1	1	1	1	1	1	1	1	1	1	1	-	1	1	1	1	2	1	2	

Appendix A

**Table A.2-131 (Continued). Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
120	Trent and Shoalwater Bays	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	-	1
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	2	-	2
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	2

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-132. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Land Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
82	Skull Cliff	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
83	Nulavik, Loran Radio Station	1	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1	-
84	Will Rogers & Wiley Post Mem.	3	1	1	-	1	1	-	2	-	1	1	1	-	-	1	1	-
85	Barrow, Browerville, Elson Lag.	12	9	8	8	7	5	2	10	4	6	6	5	2	-	8	6	3
86	Dease Inlet, Plover Islands	7	4	2	2	2	2	1	7	2	2	2	2	1	-	2	1	1
87	Igalik & Kulgrak Island	3	2	1	1	-	-	-	4	1	1	-	-	-	-	2	1	-
88	Cape Simpson, Piasuk River	3	6	3	2	1	1	1	8	4	2	1	1	1	-	4	2	1
89	Ikpikpuk River Point Poleakoon	1	2	2	1	1	1	1	2	1	1	1	1	1	-	1	1	1
90	Drew & McLeod Point, Kolovik	2	3	2	1	1	1	1	3	2	1	1	1	1	-	2	1	1
91	Lonely, Pitt Pt., Pogik Bay, Smith R	3	6	7	6	6	6	5	3	12	7	7	6	4	5	5	4	5
92	Cape Halkett, Garry Creek	1	3	5	6	6	6	5	1	11	7	7	7	6	1	2	2	4
93	Atigaru Pt, Eskimo Isl., Kogru R.	-	1	2	2	-	1	1	-	4	2	1	1	1	-	1	-	-
94	Fish Creek, Tingmeachsiovik River	1	2	4	5	3	3	1	1	9	6	5	4	1	-	2	1	1
95	Colville River	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-
96	Oliktok Point	-	-	1	1	1	1	-	-	2	1	1	1	1	-	-	-	-
97	Milne Point, Simpson Lagoon	-	-	-	1	1	3	3	-	-	1	4	4	5	-	-	-	1
98	Kuparuk River	-	-	-	-	1	1	2	-	-	-	1	2	3	-	-	-	1
99	Point Brower, Prudhoe Bay	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
100	Foggy Island Bay, Kadleroshilik R.	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-
101	Bullen, Gordon & Reliance Points	-	-	-	-	-	-	-	1	-	-	-	1	3	-	-	-	-
102	Pt. Hopson & Sweeney, Staines R	-	-	-	-	-	-	1	2	-	-	-	1	6	1	-	-	1
103	Brownlow Point, Canning River	-	-	-	-	-	-	1	2	-	-	-	-	3	-	-	-	-
104	Collinson Point, Konganevik Point	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-
105	Anderson Point, Sadlerochit River	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
106	Arey Island, Barter Island,	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-
107	Kaktovik	-	1	1	1	1	3	6	-	-	1	1	1	3	4	1	1	3
108	Griffin Point, Oruktalik Lagoon	-	-	-	-	1	1	3	-	-	-	1	1	1	8	-	1	2
109	Angun Point, Beaufort Lagoon	-	-	-	-	-	1	1	2	-	-	-	1	1	8	-	1	1
110	Icy Reef, Kongakut River, Siku Lagoon	-	-	-	-	1	2	2	-	-	-	-	1	2	13	-	1	2
111	Demarcation Bay & Point	-	-	1	2	2	2	3	-	2	2	2	2	2	10	-	2	3
112	Clarence Lagoon, Backhouse River	1	1	2	1	2	3	4	2	1	1	2	2	2	12	1	2	5
113	Komakuk Beach, Fish Creek	-	-	-	1	1	2	2	-	-	-	1	2	1	7	-	1	5
114	Nunaluk Spit	-	-	-	-	-	1	1	-	-	-	-	-	2	-	1	2	-
115	Herschel Island	-	-	-	-	-	1	1	-	-	-	-	1	1	3	-	1	3
117	Roland & Phillips Bay, Kay Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1
118	Sabine Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
119	Shingle Point	1	1	1	1	1	1	1	-	1	1	1	1	-	-	1	1	2
120	Trent and Shoalwater Bays	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1
123	Outer Shallow Bay, Olivier Islands	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
124	Middle Channel, Gary Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
125	Kendall Island	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
126	North Point, Pullen Island	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-133. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
135	National Petroleum Reserve AK	-	2	-	2	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
137	Teshekpuk Lake Special Area	-	-	-	1	-	2	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	1	1	-	-	-	-	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
144	United States Beaufort Coast	-	2	-	2	-	2	-	2	-	-	-	1	-	-	-	-	2	5	1	1	-	-	-	-	-	-
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

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**Table A.2-134. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name		PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	
137	Teshekpuk Lake Special Area (NPR-A)	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	
144	United States Beaufort Coast	-	-	-	-	-	-	-	1	2	-	1	-	1	3	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-135. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name		LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	1	5	1	5	1	5	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
137	Teshekpuk Lake Special Area	-	1	-	3	1	4	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	4	10	3	4	-	-	-	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	
144	United States Beaufort Coast	2	6	1	6	1	5	1	5	-	2	-	2	-	-	2	-	5	10	3	4	-	-	-	-	-	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	1	-	-	-	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-136. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name		PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	2	2	1	-	-	-	-	4	5	-	-	-	-	-	1	-	-	
137	Teshekpuk Lake Special Area (NPR-A)	-	1	1	-	-	-	-	1	5	-	-	-	-	-	1	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	2	-	-	-	-	-	1	7	-	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
144	United States Beaufort Coast	3	3	1	1	-	1	3	4	5	1	2	2	4	7	1	-	-	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-137. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name		LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	3	8	3	9	3	9	3	6	1	2	1	1	1	1	1	-	-	-	1	-	-	-	-	-		
137	Teshekpuk Lake Special Area	-	1	1	4	2	6	2	5	1	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-		
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	2	7	14	7	7	-	-	1	-		
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	5	-	-	1	-	-	-		
143	United States Chukchi Coast	2	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
144	United States Beaufort Coast	5	11	4	10	4	10	4	9	2	5	1	6	1	2	6	3	9	14	7	7	1	-	1	-		
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	2	5	-	-	1	-		

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-138. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name		PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
135	National Petroleum Reserve Alaska	5	5	3	2	1	1	-	8	8	3	2	1	1	-	2	-	-	
137	Teshekpuk Lake Special Area (NPR-A)	1	3	2	1	1	1	-	2	7	2	1	1	1	-	1	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	3	12	-	1	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	
143	United States Chukchi Coast	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
144	United States Beaufort Coast	7	6	4	3	2	3	7	9	9	5	4	5	9	12	3	-	1	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-139. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name		LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
135	National Petroleum Reserve AK	5	12	6	14	5	14	5	10	3	5	3	4	3	3	2	2	2	-	1	1	2	1	-	1	-	
137	Teshekpuk Lake Special Area (NPRA)	1	2	2	6	3	10	4	9	2	4	2	3	2	2	2	2	2	-	1	1	1	-	-	-	-	
138	Arctic National Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	2	9	20	10	12	-	-	2	-	
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	7	3	8	-	-	3	
143	United States Chukchi Coast	4	2	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
144	United States Beaufort Coast	8	16	8	16	7	16	7	15	5	9	4	10	5	5	11	6	15	20	12	13	3	2	3	1	-	
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	8	4	9	-	-	3	

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**Table A.2-140. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve Alaska	7	9	6	5	4	3	2	11	12	6	4	3	2	1	3	1	1
137	Teshekpuk Lake Special Area (NPR-A)	1	4	4	3	3	2	2	3	10	5	3	3	2	1	2	1	1
138	Arctic National Wildlife Refuge	-	-	-	-	-	1	7	-	-	-	-	-	3	17	-	-	2
139	Ivvavik National Park (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	1	
143	United States Chukchi Coast	3	1	-	-	-	-	-	2	-	-	-	-	-	1	-	-	
144	United States Beaufort Coast	11	11	8	7	6	7	12	14	15	9	9	9	14	18	5	2	4
145	Canada Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	7	-	-	1	

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-141. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve AK	12	26	15	31	16	31	16	24	12	15	11	13	11	11	11	8	3
137	Teshekpuk Lake Special Area	3	5	6	12	8	23	11	20	8	12	7	10	8	8	9	8	7
138	Arctic National Wildlife Refuge	-	-	-	-	1	-	1	1	1	2	2	3	3	5	8	8	21
139	Ivvavik National Park (Canada)	-	1	-	-	-	-	1	-	1	1	2	2	2	3	3	6	4
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
143	United States Chukchi Coast	6	5	4	3	2	1	1	1	2	1	2	1	1	1	1	1	-
144	United States Beaufort Coast	19	35	21	36	22	37	23	39	20	29	19	31	22	23	34	25	39
145	Canada Beaufort Coast	-	1	-	-	-	-	1	-	2	1	2	2	2	4	3	7	4

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-142. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve Alaska	17	21	17	14	12	11	10	24	27	17	13	12	10	3	13	9	9
137	Teshekpuk Lake Special Area (NPR-A)	4	10	12	10	9	9	8	7	22	13	10	10	8	3	8	5	7
138	Arctic National Wildlife Refuge	-	1	1	2	3	6	15	-	1	2	2	4	10	34	1	2	6
139	Ivvavik National Park (Canada)	-	-	1	1	2	4	6	1	-	1	1	2	3	19	-	2	8
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1
143	United States Chukchi Coast	6	2	1	1	1	1	1	4	1	1	1	1	1	-	2	2	1
144	United States Beaufort Coast	25	28	25	25	24	27	32	31	38	29	28	30	37	39	18	13	20
145	Canada Beaufort Coast	-	-	1	1	2	4	7	1	-	1	1	2	3	20	-	3	11

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-143. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Group of Land Segments Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	LA																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve AK	16	32	20	39	22	39	22	33	18	23	17	20	18	18	17	17	13
137	Teshekpuk Lake Special Area	5	7	9	16	12	29	15	27	12	18	12	16	13	14	14	14	11
138	Arctic National Wildlife Refuge	1	1	1	1	2	1	2	2	4	4	5	6	7	9	12	13	28
139	Ivvavik National Park (Canada)	1	2	1	1	1	1	3	1	3	2	4	4	5	7	5	11	6
140	Kendall Isl. Bird Sanctuary (Can)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-
143	United States Chukchi Coast	7	5	4	3	3	1	2	1	2	1	2	1	2	1	1	-	4
144	United States Beaufort Coast	27	45	31	48	34	50	37	56	34	44	33	47	35	38	50	39	55
145	Canada Beaufort Coast	1	3	1	1	1	1	3	2	3	3	4	4	6	7	5	12	7

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-144. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Group of Land Segments Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	PL																
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
135	National Petroleum Reserve Alaska	21	27	24	22	19	18	15	30	36	24	20	19	15	6	19	14	14
137	Teshekpuk Lake Special Area (NPR-A)	7	14	17	16	15	14	13	10	29	19	16	16	13	6	11	9	11
138	Arctic National Wildlife Refuge	1	2	3	4	6	10	21	1	3	4	5	7	16	45	2	5	13
139	Ivvavik National Park (Canada)	1	1	2	3	4	7	9	2	1	2	3	5	4	24	2	5	15
140	Kendall Island Bird Sanctuary (Canada)	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	2	2
143	United States Chukchi Coast	6	3	2	2	1	1	1	4	1	1	1	1	1	-	2	2	1
144	United States Beaufort Coast	33	40	39	40	38	42	47	41	55	44	43	46	54	53	31	26	32
145	Canada Beaufort Coast	1	1	3	3	5	7	10	2	1	3	3	5	5	26	2	7	18

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-145. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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Notes – All rows have all values less than 0.5 percent and are not shown

**Table A.2-146. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 3 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-147. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-148. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 10 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
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Notes - All rows have all values less than 0.5 percent and are not shown

**Table A.2-149. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
24	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
25	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
26	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
27	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-
28	Beaufort Sea	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

**Table A.2-150. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 30 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17	
26	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
27	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
28	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown

**Table A.2-151. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
19	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
20	Chukchi Sea	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
21	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
22	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
23	Beaufort Sea	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
24	Beaufort Sea	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
25	Beaufort Sea	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	-
26	Beaufort Sea	1	1	1	1	1	1	1	-	1	-	1	-	-	-	-	-	-	-	2	1	-	1	-	-	-
27	Beaufort Sea	1	-	1	1	1	1	1	1	1	1	1	1	-	-	1	-	-	-	2	1	-	2	-	-	-
28	Beaufort Sea	1	1	2	1	2	2	2	1	2	1	2	1	1	1	-	-	-	-	2	1	-	3	-	-	-
29	Beaufort Sea	-	-	1	-	1	-	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-
30	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-
31	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.2-152. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 60 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
19	Chukchi Sea	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
20	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
22	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
23	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
24	Beaufort Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
25	Beaufort Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
26	Beaufort Sea	1	1	1	-	-	-	-	1	1	-	-	-	-	-	2	1	-
27	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	1	-	-	-	2	1	-
28	Beaufort Sea	1	2	2	1	1	1	-	1	1	1	1	1	-	-	3	1	-
29	Beaufort Sea	1	1	1	-	-	-	-	1	1	-	-	-	-	-	1	-	-
30	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
37	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Table A.2-153. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25	
17	Chukchi Sea	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	
19	Chukchi Sea	3	2	2	1	1	1	1	1	2	1	1	1	1	-	-	-	-	-	-	2	1	-	1	-	-	
20	Chukchi Sea	3	2	3	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	
21	Chukchi Sea	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
22	Chukchi Sea	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
23	Beaufort Sea	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
24	Beaufort Sea	2	1	2	1	2	1	1	1	1	1	-	-	-	-	-	-	-	-	-	2	-	1	-	1	-	
25	Beaufort Sea	1	1	2	1	1	1	1	-	1	1	1	-	-	-	-	-	-	-	-	2	1	-	1	-	-	
26	Beaufort Sea	2	1	1	1	2	1	2	1	2	1	2	1	2	2	1	1	1	-	-	3	2	-	2	-	-	
27	Beaufort Sea	1	1	2	1	2	1	2	1	2	2	2	1	2	2	1	1	-	-	-	2	3	-	3	1	-	
28	Beaufort Sea	3	2	3	2	4	4	5	3	5	4	4	2	3	2	1	1	1	-	-	5	4	1	7	1	-	
29	Beaufort Sea	1	1	3	1	3	2	3	2	3	2	2	2	1	2	2	1	1	-	1	3	3	1	2	1	-	
30	Beaufort Sea	1	1	2	1	2	1	2	1	2	1	2	1	2	2	1	2	1	2	3	2	2	2	3	2	-	
31	Beaufort Sea	1	1	1	1	-	-	1	1	1	1	1	1	1	1	1	1	-	-	-	1	1	-	2	1	-	
32	Beaufort Sea	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
33	Beaufort Sea	-	-	-	-	-	-	-	1	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	Beaufort Sea	-	-	1	-	1	1	1	1	1	1	1	1	1	-	-	-	-	-	-	1	1	-	3	1	-	
35	Beaufort Sea	-	-	1	1	1	1	1	2	1	2	1	2	1	2	2	1	1	-	-	1	3	1	2	1	-	
36	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	1	1	-	1	1	2	3
37	Beaufort Sea	-	-	-	-	1	-	1	-	1	1	1	1	1	1	1	2	1	-	1	1	-	2	3	3	8	
38	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	2	1	-	1	4	1	5
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	1

**Table A.2-154. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 180 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17	
16	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
19	Chukchi Sea	2	1	1	2	1	-	-	2	1	2	1	-	-	-	1	1	-	
20	Chukchi Sea	3	2	1	1	-	-	-	2	1	-	-	-	-	-	2	-	-	
21	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
22	Chukchi Sea	1	1	1	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
23	Beaufort Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	
24	Beaufort Sea	1	1	1	1	-	-	-	2	1	1	1	-	-	-	2	-	-	
25	Beaufort Sea	1	1	1	1	1	-	-	1	1	1	1	-	-	-	1	1	-	
26	Beaufort Sea	1	1	2	1	2	2	1	1	1	1	1	2	1	-	2	2	1	
27	Beaufort Sea	1	1	2	2	2	2	1	1	2	2	1	2	1	-	2	3	1	
28	Beaufort Sea	2	4	4	4	4	2	1	3	3	4	4	2	1	-	6	4	1	
29	Beaufort Sea	2	3	3	2	2	2	2	2	3	2	2	2	1	1	-	3	2	2
30	Beaufort Sea	1	1	1	1	2	2	2	1	1	1	1	1	2	1	2	2	2	
31	Beaufort Sea	1	1	1	1	1	1	-	1	-	1	-	1	1	-	1	1	1	
32	Beaufort Sea	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
33	Beaufort Sea	-	-	1	1	1	1	-	-	-	1	1	-	-	-	-	-	-	
34	Beaufort Sea	-	-	1	1	1	1	-	-	-	1	1	-	-	-	1	1	-	
35	Beaufort Sea	-	1	2	1	2	1	-	1	1	1	1	1	-	-	2	3	1	
36	Beaufort Sea	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	1	1	
37	Beaufort Sea	-	-	1	1	1	1	1	-	-	1	1	1	1	-	1	2	4	
38	Beaufort Sea	-	-	-	-	1	1	1	-	-	1	1	1	1	-	1	3	1	

Appendix A

**Table A.2-155. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Launch Area Will Contact a Certain Boundary Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	LA 16	LA 17	LA 18	LA 19	LA 20	LA 21	LA 22	LA 23	LA 24	LA 25
17	Chukchi Sea	1	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
18	Chukchi Sea	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
19	Chukchi Sea	4	2	2	2	1	1	2	1	2	2	2	1	1	1	-	-	-	-	2	1	-	1	-	-	
20	Chukchi Sea	4	2	3	2	3	2	2	1	1	1	1	-	-	-	-	-	-	-	3	1	-	1	-	-	
21	Chukchi Sea	1	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
22	Chukchi Sea	1	1	1	1	1	1	1	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
23	Beaufort Sea	2	1	2	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	
24	Beaufort Sea	2	1	2	1	2	1	1	1	1	1	1	-	1	-	-	-	-	-	2	1	-	1	-	-	
25	Beaufort Sea	1	1	2	1	1	1	1	-	1	1	1	-	1	-	-	-	-	-	2	1	-	1	-	-	
26	Beaufort Sea	2	1	2	1	2	1	2	1	2	1	2	2	2	1	1	1	-	-	3	2	-	2	-	-	
27	Beaufort Sea	2	1	2	2	2	2	2	2	2	2	2	2	2	1	2	1	-	-	3	3	-	3	1	-	
28	Beaufort Sea	3	2	4	3	5	5	6	4	6	5	6	3	4	3	2	2	1	-	1	-	5	4	1	7	2
29	Beaufort Sea	1	1	3	1	3	2	4	3	4	2	3	2	3	3	2	3	1	-	1	1	3	3	1	2	1
30	Beaufort Sea	1	1	2	1	2	1	2	1	2	1	2	2	2	2	2	3	2	2	4	3	2	2	4	3	3
31	Beaufort Sea	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	1	-	2	1	1	2	1
32	Beaufort Sea	-	1	-	1	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1
33	Beaufort Sea	-	-	-	-	-	-	1	-	1	1	1	-	1	-	-	-	-	-	-	-	-	-	-	1	-
34	Beaufort Sea	2	1	2	1	2	2	2	1	2	2	2	1	1	-	-	-	-	-	3	2	-	5	1	-	-
35	Beaufort Sea	1	1	2	1	2	2	3	1	2	1	3	2	3	2	1	1	-	-	-	2	3	1	3	2	-
36	Beaufort Sea	1	1	-	-	-	-	1	-	-	1	-	1	1	1	1	1	-	1	-	1	1	1	3	3	-
37	Beaufort Sea	1	1	1	1	1	1	1	1	1	2	2	2	2	1	2	1	-	1	1	1	3	4	5	9	-
38	Beaufort Sea	-	-	-	1	1	1	1	2	1	1	2	1	1	1	1	1	-	1	1	-	1	4	1	5	-
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	1	-	1

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area. Rows with all values less than 0.5 percent are not shown.

**Table A.2-156. Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Pipeline Will Contact a Certain Boundary Segment Within 360 Days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	PL 12	PL 13	PL 14	PL 15	PL 16	PL 17
16	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
19	Chukchi Sea	3	2	2	2	2	1	-	2	1	2	1	1	-	-	1	1	-
20	Chukchi Sea	3	2	1	1	-	-	-	2	1	-	-	-	-	-	2	1	-
21	Chukchi Sea	1	1	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-
22	Chukchi Sea	1	1	1	-	-	-	-	1	1	-	-	-	-	-	1	-	-
23	Beaufort Sea	2	2	1	-	-	-	-	2	1	-	-	-	-	-	1	-	-
24	Beaufort Sea	2	2	1	1	1	-	-	2	1	1	1	-	-	-	2	-	-
25	Beaufort Sea	1	1	1	1	1	1	-	1	1	1	1	-	-	-	1	1	-
26	Beaufort Sea	2	1	2	1	2	2	1	1	1	1	1	1	2	1	-	2	2
27	Beaufort Sea	1	2	2	2	2	2	1	2	2	2	2	2	1	-	3	3	1
28	Beaufort Sea	3	5	6	6	5	3	2	3	5	5	5	3	1	-	7	5	2
29	Beaufort Sea	2	3	4	3	2	2	2	2	4	3	2	2	1	1	3	3	2
30	Beaufort Sea	1	1	2	1	2	2	3	1	1	1	1	1	2	2	3	2	2
31	Beaufort Sea	1	1	1	1	1	1	-	2	1	1	1	1	1	-	1	2	1
32	Beaufort Sea	1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-
33	Beaufort Sea	-	-	1	1	1	1	-	-	-	1	1	-	-	-	-	1	-
34	Beaufort Sea	2	2	2	2	1	-	-	1	1	2	2	1	-	-	3	2	-
35	Beaufort Sea	1	2	2	2	2	2	-	1	2	2	2	2	1	-	3	4	1
36	Beaufort Sea	1	-	1	-	1	1	1	-	-	1	1	-	1	-	1	1	2
37	Beaufort Sea	1	1	1	2	2	2	1	1	1	2	2	2	1	-	1	4	4
38	Beaufort Sea	-	1	1	1	1	1	1	-	1	2	1	1	1	-	1	3	-
39	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; PL = Pipeline. Rows with all values less than 0.5 percent are not shown.

**Table A.2-157. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Environmental Resources Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Beaufort Sea Sales 209, 217**

ID	Environmental Resource Area Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
	Land	1	0.01	2	0.02	4	0.05	6	0.07	12	0.13	17	0.19
2	Point Barrow, Plover Islands	-	0.00	-	0.00	1	0.01	1	0.01	2	0.02	3	0.03
6	ERA 6	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
8	Maguire, Flaxman Islands	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
9	Stockton & McClure Islands	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
12	ERA 12	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
17	Angun and Beaufort Lagoons	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
19	Chukchi Spring Lead System	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
20	Ice/Sea Segment 7	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
21	Ice/Sea Segment 8	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
22	Ice/Sea Segment 9	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
24	Beaufort Spring Lead 6	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
25	Beaufort Spring Lead 7	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
26	Beaufort Spring Lead 8	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	2	0.02
27	Beaufort Spring Lead 9	-	0.00	1	0.01	1	0.01	1	0.01	2	0.02	2	0.02
28	Beaufort Spring Lead 10	-	0.00	1	0.01	2	0.02	2	0.02	3	0.03	3	0.03
29	Ice/Sea Segment 1	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
30	Ice/Sea Segment 2	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
31	Ice/Sea Segment 3	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
32	Ice/Sea Segment 4	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
33	Ice/Sea Segment 5	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
34	Ice/Sea Segment 6	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
35	ERA 35	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
42	Barrow Subsistence Area 2	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01	2	0.02
43	Nuiqsut Subsistence Area	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
44	Kaktovik Subsistence Area	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
55	Point Barrow, Plover Islands	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
64	Pearl Bay Area	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
65	Smith Bay	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
67	Herschel Island (Canada)	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
68	Harrison Bay	-	0.00	1	0.01	1	0.01	1	0.01	2	0.02	3	0.03
69	Harrison Bay/Colville Delta	-	0.00	-	0.00	1	0.01	1	0.01	2	0.02	2	0.02
71	Simpson Lag., Thetis & Jones Isl.	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	2	0.02
72	Gwyder Bay, Cottle & Return Isl.	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
76	Kendall Isl. Bird Sanctuary (Ca)	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
79	Demarcation Bay Offshore	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	2	0.02
86	Harrison Bay	1	0.01	1	0.01	2	0.02	2	0.02	3	0.03	3	0.03
87	Colville River Delta	-	0.00	1	0.01	1	0.01	2	0.02	2	0.02	3	0.03
88	Simpson Lagoon	-	0.00	-	0.00	1	0.01	1	0.01	2	0.02	2	0.02
89	Mackenzie River Delta	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
92	Thetis, Jones, Cottle & Return Isl.	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
94	Maguire, Flaxman & Barrier Isl.	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
96	Midway, Cross & Bartlett Islands	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
100	Jago and Tapkaurak Spits	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01

**Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.**

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**Table A.2-158. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Land Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Beaufort Sea Sales 209, 217**

ID	Land Segment Name Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
85	Barrow, Browerville, Elson Lag.	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
86	Dease Inlet, Plover Islands	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
88	Cape Simpson, Piasuk River	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
90	Drew & McLeod Point, Kolovik	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	2	0.02
92	Cape Halkett, Garry Creek	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	2	0.02
94	Fish Creek, Tingmeachsiovik River	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
97	Milne Point, Simpson Lagoon	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
107	Kaktovik	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
108	Griffin Point, Oruktalik Lagoon	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
109	Angun Point, Beaufort Lagoon	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
110	Icy Reef, Kongakut R., Siku Lag.	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
111	Demarcation Bay & Point	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
112	Clarence Lagoon , Backhouse R.	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
113	Komakuk Beach, Fish Creek	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01

Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

**Table A.2-159. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Seasonal Land Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Beaufort Sea Sales 209, 217**

ID	Seasonal Land Segment Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
85	Barrow, Browerville, Elson Lag.	-	0.00	-	0.00	-	0.00	-	0.00	-	0.0-	1	0.01
91	Lonely, Pitt Pt, Pogik Bay, Smith R	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	2	0.02
94	Fish Creek, Tingmeachsiovik River	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
97	Milne Point, Simpson Lagoon	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
107	Kaktovik	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
108	Griffin Point, Oruktalik Lagoon	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
110	Icy Reef, Kongakut R., Siku Lag.	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
112	Clarence Lagoon , Backhouse R.	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
113	Komakuk Beach, Fish Creek	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01

Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

**Table A.2-160. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Grouped Land Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Beaufort Sea Sales 209, 217**

ID	Grouped Land Segment Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
135	National Petroleum Reserve Alaska	-	0.00	1	0.01	2	0.02	2	0.02	4	0.04	6	0.06
137	Teshekpuk Lake Special Area	-	0.00	1	0.01	1	0.01	2	0.02	3	0.03	4	0.04
138	Arctic National Wildlife Refuge	-	0.00	1	0.01	1	0.01	2	0.02	3	0.03	4	0.04
139	Ivvavik National Park (Canada)	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	2	0.02
144	United States Beaufort Coast	-	0.00	2	0.02	4	0.04	5	0.06	10	0.10	13	0.14
145	Canada Beaufort Coast	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	2	0.02

Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

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**Table A.2-161. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Boundary Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Beaufort Sea Sales 209, 217**

ID	Boundary Segment Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
28	Beaufort Sea	-	0.00	0	0.00	0	0.00	0	0.00	1	0.01	1	0.01

**Notes** - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

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## **APPENDIX A.3**

### **CHUKCHI SEA SALES 212, 221 SUPPORTING TABLES**

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**Appendix A.3 Table List**

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**Table A.3-1 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-	1	-	-	7	-	-	2	-	2	
1	Kasegaluk Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	ERA 6	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	16	-	16
7	US Russia Maritime Boundary	33	1	-	33	1	-	-	-	35	1	-	-	-	-	5	25	35	2	6	-	-	-	-	-	-	-	-
10	Ledyard Bay SPEI Critical Habitat	-	-	-	-	-	-	-	-	-	9	8	-	-	-	-	-	-	9	-	-	20	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	5	6	-	-	-	-	-	16	-	11	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
19	Chukchi Spring Lead System	-	-	-	-	-	-	-	-	-	5	6	1	1	-	-	3	-	5	-	-	13	-	-	9	-	11	
35	ERA 35	-	-	-	-	-	-	-	-	-	2	16	11	-	-	-	-	-	-	-	-	-	-	6	20	-	21	
36	ERA 36	-	-	-	-	2	-	-	-	-	9	13	-	-	-	-	-	-	-	-	-	10	17	-	-	-	-	
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	-	3	-	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	22	-	-	-	-	-	
40	Wainwright Subsistence Area	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	-	-	27	-	1	
41	Barrow Subsistence Area 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
45	ERA 45	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	11	-	6	-	-	-	-	-	-	-	-	
46	Herald Shoal Polynya	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	Ice/Sea Segment 10	1	-	-	5	7	-	-	-	-	-	-	-	-	-	-	-	2	-	4	-	-	-	-	-	-	-	
48	Ice/Sea Segment 11	-	-	-	-	1	12	-	-	-	1	-	-	-	-	-	-	-	-	-	-	8	11	-	-	-	-	
49	ERA 49	-	-	8	-	-	1	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	1	-	-	-	-	
50	Ice/Sea Segment 13	-	-	-	-	-	-	-	-	-	1	10	-	-	-	-	-	-	-	-	-	-	-	-	15	1	-	
51	Ice/Sea Segment 14	-	-	-	-	-	-	-	-	-	-	6	5	-	-	-	-	-	-	-	-	-	-	-	-	-	18	
52	Ice/Sea Segment 15	-	-	-	-	2	6	-	-	-	4	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	
56	ERA 56	-	-	-	-	-	8	5	-	-	1	16	1	-	-	-	-	-	-	-	-	-	5	17	2	-	1	
58	Offshore Pt. Lay to Wainwright	-	-	-	-	2	1	-	-	-	22	37	23	-	-	-	-	1	2	-	19	38	-	14	30	-	-	
64	Peard Bay Area	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	13	
70	ERA 70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-2 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	-	-	-	-	-	-	-	1	3	5	5	2	3	-	-	7	-	4	-	-	16	-	-	9	-	10	
1	Kasegaluk Lagoon	-	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	1	-	-	10	-	-	1	-	-		
2	Point Barrow, Plover Islands	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-		
6	ERA 6	-	-	-	-	-	-	-	1	-	-	1	5	7	-	-	-	-	-	-	-	-	-	1	22	1	23	
7	US Russia Maritime Boundary	53	13	2	55	8	2	-	-	66	11	1	-	-	-	15	58	57	22	23	4	2	2	-	-	-	-	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	1	1	-	-	-	1	14	10	-	-	-	-	2	1	13	-	1	24	-	-	-	-		
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-		
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	8	9	1	-	-	-	-	20	-	15	-	-	1	-	-	-	-		
18	Murre Rearing and Molting Area	-	-	-	1	-	-	-	-	13	2	-	-	-	-	-	12	1	3	-	-	-	-	-	-	-		
19	Chukchi Spring Lead System	-	-	-	-	-	-	-	-	1	-	8	8	3	3	-	4	-	6	-	1	16	-	-	13	-	13	
24	Beaufort Spring Lead 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
29	Ice/Sea Segment 1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-		
35	ERA 35	-	-	-	-	-	1	1	2	-	-	5	18	14	-	-	-	-	-	-	1	1	-	9	22	2	23	
36	ERA 36	-	-	-	3	5	1	-	-	11	16	2	-	-	-	-	3	2	-	13	19	-	2	3	-	-		
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	10	-	5	-	-	-	-	-	-	-		
39	Point Lay Subsistence Area	-	-	-	-	-	-	-	-	-	7	8	-	-	-	-	-	3	-	1	29	-	-	-	-	-		
40	Wainwright Subsistence Area	-	-	-	-	-	-	-	-	-	1	4	3	-	-	-	-	-	-	-	1	9	-	1	33	-	3	
41	Barrow Subsistence Area 1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	5	
42	Barrow Subsistence Area 2	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
45	ERA 45	-	-	-	-	-	-	-	-	9	3	-	-	-	-	-	19	-	9	-	-	-	-	-	-	-	-	
46	Herald Shoal Polynya	1	-	-	7	1	-	-	-	-	-	-	-	-	-	-	-	6	-	-	-	-	-	-	-	-	-	
47	Ice/Sea Segment 10	2	-	-	7	11	1	-	-	1	1	-	-	-	-	-	5	-	2	9	1	-	1	-	-	-		
48	Ice/Sea Segment 11	-	2	2	-	3	17	2	-	-	3	2	-	-	-	-	-	2	2	-	12	16	-	-	-	-		
49	ERA 49	-	1	11	-	-	2	3	1	-	-	-	-	-	-	5	2	-	-	-	-	4	-	-	1	-		
50	Ice/Sea Segment 13	-	-	-	-	-	2	1	-	-	3	15	1	-	-	-	-	-	-	-	-	1	20	3	-	3		
51	Ice/Sea Segment 14	-	-	-	-	-	-	-	-	-	9	7	-	-	-	-	-	-	-	-	-	1	2	1	24	-		
52	Ice/Sea Segment 15	-	1	-	-	5	9	-	-	1	8	2	-	-	-	-	-	2	8	2	1	6	2	-	-	-		
56	ERA 56	-	1	2	-	1	11	8	-	-	3	18	4	-	-	-	-	-	1	1	-	7	20	6	3	6		
58	Offshore Pt. Lay to Wainwright	-	-	-	3	9	4	-	-	1	26	41	27	1	-	-	-	3	7	1	24	42	1	21	34	-	2	
64	Pearl Bay Area	-	-	-	-	-	-	-	1	-	-	-	1	4	-	-	-	-	-	-	-	-	-	-	-	1	-	18
70	ERA 70	2	2	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	2	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-3 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11			
--	LAND	6	1	-	15	4	1	2	5	38	22	15	10	10	1	-	44	13	26	2	5	27	-	4	21	3	19			
1	Kasegaluk Lagoon	-	-	-	1	1	-	-	-	1	6	8	1	-	-	-	1	1	3	-	3	16	-	1	3	-	-			
2	Point Barrow, Plover Islands	-	-	-	-	-	-	-	2	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	1	1			
3	ERA 3	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-			
4	ERA 4	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	-			
6	ERA 6	-	-	-	-	2	2	2	5	-	1	5	13	13	1	-	-	-	-	3	2	1	5	30	4	28				
7	US Russia Maritime Boundary	66	30	10	68	24	11	3	1	81	29	10	3	1	2	28	76	71	46	41	18	11	11	6	3	2	1			
10	Ledyard Bay SPEI Critical Habitat	-	-	-	3	2	1	-	-	4	19	13	1	-	-	-	4	2	19	-	4	27	-	1	2	-	-			
11	Wrangel Island 12 nmi buffer	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-			
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	7	-	1	-	-	-	-	-	-	-	-			
15	Cape Lisburne Seabird Colony Area	-	-	-	1	1	-	-	-	12	13	3	-	-	-	-	23	1	19	-	1	3	-	-	-	-	-			
16	ERA 16	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-			
18	Murre Rearing and Molting Area	1	-	-	8	3	-	-	-	25	10	2	-	-	-	-	24	6	14	1	3	3	-	-	-	-	-			
19	Chukchi Spring Lead System	-	-	-	1	2	1	-	2	2	13	12	7	5	-	-	5	1	11	-	4	19	-	3	18	-	14			
23	Offshore Wrangel Island	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-			
24	Beaufort Spring Lead 6	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-			
25	Beaufort Spring Lead 7	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
29	Ice/Sea Segment 1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
35	ERA 35	1	1	1	1	2	4	5	6	-	-	7	22	17	1	-	-	1	-	1	3	2	2	13	24	6	25			
36	ERA 36	1	1	1	6	9	3	1	-	2	13	18	5	1	-	-	1	6	5	2	16	21	1	5	7	-	1			
38	Point Hope Subsistence Area	-	-	-	1	-	-	-	-	5	3	1	-	-	-	-	14	-	7	-	-	1	-	-	-	-	-			
39	Point Lay Subsistence Area	-	-	-	2	2	-	-	-	1	16	13	1	-	-	-	1	2	11	-	4	36	-	1	2	-	-			
40	Wainwright Subsistence Area	-	-	-	1	3	1	-	-	6	11	11	2	-	-	-	1	3	-	5	16	-	4	44	-	6				
41	Barrow Subsistence Area 1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5			
42	Barrow Subsistence Area 2	-	-	-	-	-	-	3	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1			
45	ERA 45	-	-	-	1	1	-	-	-	15	7	2	-	-	-	-	25	1	14	-	1	3	-	-	-	-	-			
46	Herald Shoal Polynya	4	1	-	13	4	1	-	-	2	2	1	-	-	-	-	1	13	3	2	3	1	-	1	-	-	-			
47	Ice/Sea Segment 10	4	2	1	10	15	4	1	-	-	2	4	2	-	-	-	-	8	1	4	13	3	1	2	2	-	-			
48	Ice/Sea Segment 11	3	6	7	1	7	23	7	1	-	1	7	6	3	1	2	-	1	-	5	7	2	17	22	2	4	2			
49	ERA 49	1	3	15	-	1	5	7	3	-	-	1	1	9	6	-	-	-	-	2	1	-	7	2	-	5	-			
50	Ice/Sea Segment 13	-	1	1	-	1	5	3	1	-	-	4	20	5	-	-	-	-	-	-	1	1	-	3	24	6	2	9		
51	Ice/Sea Segment 14	-	-	-	1	2	2	1	-	-	2	14	10	-	-	-	-	-	-	-	-	-	1	5	8	2	28			
52	Ice/Sea Segment 15	2	3	1	2	10	13	2	-	-	3	13	6	1	-	-	-	2	-	4	13	5	3	11	5	1	1			
55	Point Barrow, Plover Islands	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1			
56	ERA 56	2	4	6	-	3	14	13	3	-	-	6	22	8	2	2	-	1	-	3	2	1	10	24	10	8	10			
58	Offshore Pt. Lay to Wainwright	3	3	2	10	18	11	3	1	4	31	45	33	3	-	-	2	10	12	4	32	45	4	27	41	2	8			
59	Ostrov Kolyuchin	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-			
61	ERA 61	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-			
63	ERA 63	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-			
64	Pearl Bay Area	-	-	-	-	-	-	1	1	3	-	-	1	5	9	-	-	-	-	-	-	-	-	-	-	-	2	3	2	22
66	Herald Island	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
70	ERA 70	3	3	2	-	-	1	-	-	-	-	-	-	-	-	-	11	-	-	4	-	-	2	1	-	-	-	-		
74	Offshore Herald Island	2	1	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	-		
91	Hope Sea Valley	1	-	-	1	1	-	-	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-		

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-4 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	7	3	1	17	8	4	5	10	40	30	21	17	16	3	1	45	15	34	4	10	34	2	9	30	7	24	
1	Kasegaluk Lagoon	-	-	-	2	3	1	-	-	1	8	10	2	-	-	-	1	2	5	-	5	19	-	2	4	-	-	
2	Point Barrow, Plover Islands	-	-	-	-	-	-	1	4	-	-	-	-	3	2	-	-	-	-	-	-	-	-	-	-	1	1	
3	ERA 3	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	
4	ERA 4	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	-	
6	ERA 6	1	1	2	1	4	4	6	9	-	2	8	19	16	2	-	-	1	-	1	5	4	2	10	36	7	32	
7	US Russia Maritime Boundary	69	36	15	72	31	16	7	3	83	36	17	7	4	4	33	78	74	52	47	26	18	17	11	5	5	3	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	4	4	1	-	-	5	21	14	2	-	-	-	5	3	20	-	5	29	1	2	3	-	-	
11	Wrangel Island 12 nmi buffer	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	7	-	2	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	2	1	-	-	-	12	15	3	-	-	-	-	23	1	21	-	2	4	-	-	1	-	-	
16	ERA 16	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	1	-	-	8	3	-	-	-	25	12	3	-	-	-	-	25	6	16	1	3	4	-	-	-	-	-	
19	Chukchi Spring Lead System	-	-	-	3	4	2	1	2	3	16	15	11	6	-	-	6	2	14	-	6	22	1	4	22	1	16	
23	Offshore Wrangel Island	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
24	Beaufort Spring Lead 6	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	Ice/Sea Segment 1	-	-	-	-	-	-	1	2	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	1	1
30	Ice/Sea Segment 2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Ice/Sea Segment 3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	ERA 35	1	2	3	1	4	7	8	9	-	1	8	25	19	4	1	-	1	-	2	4	2	4	16	26	9	27	
36	ERA 36	2	2	1	7	11	4	2	-	2	14	20	7	1	-	-	1	7	5	2	18	22	2	7	9	1	2	
38	Point Hope Subsistence Area	-	-	-	1	-	-	-	-	5	4	1	-	-	-	-	14	-	8	-	1	2	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	3	4	1	-	-	2	19	15	2	-	-	-	2	3	14	-	5	39	-	2	3	-	-	
40	Wainwright Subsistence Area	1	1	-	3	5	3	1	1	1	9	16	17	3	-	-	1	3	5	1	8	20	1	8	50	1	8	
41	Barrow Subsistence Area 1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	5	
42	Barrow Subsistence Area 2	-	-	-	-	-	-	1	5	-	-	-	4	2	-	-	-	-	-	-	-	-	-	-	-	-	1	2
45	ERA 45	-	-	-	1	1	-	-	-	15	9	3	-	-	-	-	26	1	15	-	1	4	-	-	-	-	-	
46	Herald Shoal Polynya	4	1	-	14	5	1	-	-	2	3	2	-	-	-	-	1	13	3	2	4	2	1	1	1	-	-	
47	Ice/Sea Segment 10	5	3	1	11	17	5	1	-	3	6	3	1	-	1	-	9	1	5	15	4	2	4	3	1	1		
48	Ice/Sea Segment 11	4	9	10	1	9	26	11	4	-	2	9	10	6	3	4	-	1	-	8	9	4	20	25	5	8	6	
49	ERA 49	2	5	17	-	1	6	9	6	-	1	1	3	12	8	-	-	3	1	-	9	3	-	7	1	-	-	
50	Ice/Sea Segment 13	2	3	3	-	3	8	6	2	-	-	6	23	7	1	1	-	1	-	3	3	1	5	26	9	4	12	
51	Ice/Sea Segment 14	1	1	2	-	2	4	5	3	-	3	17	13	1	-	-	-	1	2	-	3	9	12	5	30	-	-	
52	Ice/Sea Segment 15	3	4	3	3	13	16	3	1	-	4	16	9	2	1	1	-	3	1	6	17	7	5	16	7	2	3	
55	Point Barrow, Plover Islands	-	-	-	-	-	-	-	2	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	1	1	
56	ERA 56	3	6	9	1	4	17	17	6	-	1	7	24	11	5	3	-	1	-	5	4	2	13	27	12	12	14	
58	Offshore Pt. Lay to Wainwright	4	5	3	14	24	15	6	2	5	34	48	38	6	1	1	3	13	15	6	36	47	6	32	45	4	13	
59	Ostrov Kolyuchin	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
61	ERA 61	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
63	ERA 63	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	1	-	-	1	-	-	-	-	
64	Peard Bay Area	-	1	1	-	1	2	4	5	-	2	8	11	1	-	-	-	1	1	-	1	4	6	5	25	-	-	
66	Herald Island	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
70	ERA 70	4	4	3	-	1	2	1	1	-	-	-	1	1	1	12	-	-	4	-	-	3	1	-	1	-	-	
74	Offshore Herald Island	2	1	-	1	1	-	-	-	-	-	1	-	-	-	-	1	-	1	1	-	-	1	-	-	1	-	
91	Hope Sea Valley	1	-	-	1	1	-	-	-	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-5 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
--	LAND	9	5	4	21	14	8	10	17	41	36	28	26	23	8	3	47	19	39	6	16	41	5	14	41	12	33
<b>1</b>	Kasegaluk Lagoon	-	-	-	4	5	1	-	-	2	11	12	3	-	-	1	4	7	-	7	22	-	2	5	-	-	
<b>2</b>	Point Barrow, Plover Islands	1	1	2	-	1	1	3	7	-	-	-	2	5	4	2	-	-	1	-	-	1	1	1	3	3	
<b>3</b>	ERA 3	-	-	-	1	-	-	-	-	3	1	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	
<b>4</b>	ERA 4	-	-	-	-	-	-	-	-	4	1	-	-	-	-	5	-	1	-	-	-	-	-	-	-	-	
<b>6</b>	ERA 6	1	2	3	3	7	7	9	12	-	4	13	25	22	5	1	-	3	2	3	10	8	4	14	42	11	39
<b>7</b>	US Russia Maritime Boundary	73	44	25	76	41	27	16	9	84	43	26	15	11	12	40	79	78	57	54	36	25	27	21	11	14	11
<b>10</b>	Ledyard Bay SPEI Critical Habitat	1	-	-	5	5	1	-	-	6	23	16	2	-	-	5	4	22	-	7	31	1	2	3	-	-	
<b>11</b>	Wrangel Island 12 nmi buffer	1	1	-	1	1	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
<b>14</b>	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	3	1	-	-	-	-	9	-	2	-	-	-	-	-	-	-	-	
<b>15</b>	Cape Lisburne Seabird Colony Area	-	-	-	2	2	-	-	-	13	15	4	-	-	-	24	2	22	-	2	5	-	-	1	-	-	
<b>16</b>	ERA 16	-	-	-	-	-	-	-	-	3	1	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
<b>18</b>	Murre Rearing and Molting Area	1	-	-	8	3	-	-	-	25	13	3	-	-	-	25	6	17	1	3	4	-	-	-	-	-	
<b>19</b>	Chukchi Spring Lead System	-	1	1	4	6	2	2	3	3	19	17	15	8	1	-	8	4	17	1	9	24	1	6	25	2	20
<b>23</b>	Offshore Wrangel Island	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
<b>24</b>	Beaufort Spring Lead 6	-	-	-	-	-	-	-	2	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	1
<b>25</b>	Beaufort Spring Lead 7	-	-	-	-	-	-	-	2	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	1
<b>26</b>	Beaufort Spring Lead 8	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>27</b>	Beaufort Spring Lead 9	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>29</b>	Ice/Sea Segment 1	-	-	-	-	-	-	1	3	-	-	-	1	2	2	-	-	-	-	-	-	-	-	1	-	2	2
<b>30</b>	Ice/Sea Segment 2	-	1	1	-	-	1	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	1	-	1
<b>31</b>	Ice/Sea Segment 3	-	1	1	-	-	1	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	1	1	-	1	
<b>32</b>	Ice/Sea Segment 4	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
<b>35</b>	ERA 35	4	6	6	2	7	11	13	12	-	1	11	29	24	7	3	-	2	-	5	7	3	8	20	29	14	32
<b>36</b>	ERA 36	3	3	2	8	13	6	3	1	2	15	22	9	2	-	1	1	8	6	4	21	24	3	10	12	2	4
<b>38</b>	Point Hope Subsistence Area	-	-	-	1	1	-	-	-	5	4	1	-	-	-	15	1	9	-	1	2	-	-	-	-	-	
<b>39</b>	Point Lay Subsistence Area	-	-	-	5	6	1	-	-	3	22	17	3	-	-	2	5	16	1	7	41	1	2	4	-	-	
<b>40</b>	Wainwright Subsistence Area	1	1	1	6	9	4	2	2	1	13	20	20	4	1	-	1	5	8	2	12	25	1	10	54	2	11
<b>41</b>	Barrow Subsistence Area 1	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-	-	-	-	-	-	-	2	-	7	
<b>42</b>	Barrow Subsistence Area 2	1	1	2	-	1	1	3	7	-	-	-	2	5	4	2	-	-	1	-	-	2	1	1	4	3	
<b>45</b>	ERA 45	-	-	-	2	1	-	-	-	16	10	3	-	-	-	28	1	17	-	2	4	-	-	1	-	-	
<b>46</b>	Herald Shoal Polynya	4	1	-	14	5	1	-	-	2	3	2	-	-	-	1	14	4	2	4	3	1	1	-	-		
<b>47</b>	Ice/Sea Segment 10	6	5	2	12	19	7	2	-	1	4	8	5	1	-	1	-	9	2	7	17	5	4	7	5	1	
<b>48</b>	Ice/Sea Segment 11	7	14	15	3	13	31	17	8	1	5	14	17	12	7	8	1	3	2	12	13	7	25	31	11	14	13
<b>49</b>	ERA 49	4	9	22	1	3	10	15	12	-	1	3	4	8	18	12	-	1	-	6	3	1	14	5	2	13	4
<b>50</b>	Ice/Sea Segment 13	3	5	4	1	6	11	8	4	-	2	8	26	10	2	2	-	2	1	5	6	3	7	29	13	7	16
<b>51</b>	Ice/Sea Segment 14	1	3	3	1	4	6	7	5	-	1	5	21	16	2	1	-	1	1	3	4	2	4	12	16	8	34
<b>52</b>	Ice/Sea Segment 15	6	9	6	5	18	20	7	3	1	7	20	15	6	2	3	-	5	2	10	21	11	10	21	13	5	8
<b>55</b>	Point Barrow, Plover Islands	1	1	2	-	1	1	2	4	-	-	-	1	3	2	1	-	-	1	-	-	1	1	1	2	2	
<b>56</b>	ERA 56	6	11	15	2	7	23	23	10	-	1	9	29	17	9	7	-	2	-	9	6	3	19	31	16	19	19
<b>58</b>	Offshore Pt. Lay to Wainwright	7	9	6	17	30	20	9	4	6	38	54	44	10	2	2	3	16	18	11	43	52	10	38	52	7	18
<b>59</b>	Ostrov Kolyuchin	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
<b>61</b>	ERA 61	-	-	-	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
<b>63</b>	ERA 63	2	2	1	-	-	1	1	-	-	-	-	-	1	2	-	-	2	-	-	1	-	-	1	-	-	
<b>64</b>	Pearl Bay Area	1	1	2	-	2	4	6	8	-	1	4	12	15	3	-	-	-	1	3	1	3	7	10	8	31	
<b>65</b>	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>66</b>	Herald Island	1	1	1	-	-	1	1	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1	-	-	-	
<b>68</b>	Harrison Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>69</b>	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
<b>70</b>	ERA 70	4	6	4	-	2	3	3	2	-	1	2	2	2	2	13	-	-	5	2	1	5	3	1	2	1	
<b>74</b>	Offshore Herald Island	2	1	1	1	1	1	1	-	-	-	1	1	-	1	-	1	-	1	1	-	1	1	-	1	1	
<b>86</b>	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
<b>87</b>	Colville River Delta	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
<b>91</b>	Hope Sea Valley	1	-	-	1	1	-	-	1	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.3-6 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
-- LAND		9	6	6	22	15	10	13	25	41	37	30	29	28	13	3	47	20	40	8	17	43	7	16	43	16	36	
1 Kasegaluk Lagoon		-	-	-	4	5	1	-	-	2	11	12	3	-	-	-	1	4	7	-	7	22	-	2	5	-	-	
2 Point Barrow, Plover Islands		1	2	2	1	1	2	3	8	-	1	1	2	6	5	2	-	1	-	2	1	1	2	2	4	4	-	
3 ERA 3		-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	
4 ERA 4		-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	-	
6 ERA 6		1	3	4	3	8	8	10	14	-	4	13	26	23	6	1	-	3	2	3	10	8	5	14	43	12	40	
7 US Russia Maritime Boundary		73	45	27	76	42	29	19	11	84	44	28	19	14	14	41	79	78	58	55	37	27	29	25	15	16	14	
10 Ledyard Bay SPEI Critical Habitat		1	-	-	5	5	1	-	-	6	24	16	2	-	-	-	5	5	22	-	7	31	1	2	3	-	-	
11 Wrangel Island 12 nmi buffer		1	1	-	1	1	1	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
14 Cape Thompson Seabird Colony Area		-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	9	-	2	-	-	-	-	-	-	-	-	
15 Cape Lisburne Seabird Colony Area		-	-	-	2	2	-	-	-	13	15	4	-	-	-	-	24	2	22	-	2	5	-	-	1	-	-	
16 ERA 16		-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
18 Murre Rearing and Molting Area		1	-	-	8	3	-	-	-	25	13	3	-	-	-	-	25	6	17	1	3	4	-	-	-	-	-	
19 Chukchi Spring Lead System		1	1	1	4	6	2	2	3	3	19	18	15	9	1	-	8	4	17	1	9	24	1	6	26	2	21	
23 Offshore Wrangel Island		1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
24 Beaufort Spring Lead 6		-	-	-	-	-	-	1	3	-	-	-	1	3	1	-	-	-	-	-	-	-	-	-	1	1	1	
25 Beaufort Spring Lead 7		-	-	-	-	-	-	1	3	-	-	-	1	3	1	-	-	-	-	-	-	-	-	-	1	1	2	
26 Beaufort Spring Lead 8		-	-	1	-	-	1	2	2	-	-	-	1	1	2	-	-	-	-	-	-	-	-	1	1	1	2	
27 Beaufort Spring Lead 9		-	-	1	-	-	1	2	2	-	-	-	1	1	2	-	-	-	-	-	-	-	-	1	1	-	1	
28 Beaufort Spring Lead 10		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29 Ice/Sea Segment 1		-	-	1	-	-	1	2	3	-	-	-	1	3	2	-	-	-	-	-	-	-	-	1	1	-	2	2
30 Ice/Sea Segment 2		-	1	1	-	-	1	2	2	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	1	-	2	-
31 Ice/Sea Segment 3		-	1	1	-	-	1	2	2	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	1	-	2	-
32 Ice/Sea Segment 4		-	-	1	-	-	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-
35 ERA 35		4	6	7	2	7	12	15	14	-	2	11	30	24	9	3	-	2	1	6	8	4	8	21	30	16	32	
36 ERA 36		3	3	2	8	13	6	3	1	2	15	22	10	2	-	1	1	8	6	4	21	24	3	10	12	2	4	
38 Point Hope Subsistence Area		-	-	-	1	1	-	-	-	5	4	1	-	-	-	-	15	1	9	-	1	2	-	-	-	-	-	-
39 Point Lay Subsistence Area		-	-	-	5	6	1	-	-	3	22	17	3	-	-	-	2	5	16	1	7	41	1	2	4	-	-	
40 Wainwright Subsistence Area		1	1	1	6	9	4	2	2	1	13	20	20	4	1	-	1	5	8	2	12	25	1	10	54	2	11	
41 Barrow Subsistence Area 1		-	-	-	-	-	-	1	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	2	-	7	-	
42 Barrow Subsistence Area 2		1	2	3	1	2	2	4	7	-	1	2	3	6	5	2	-	1	1	2	1	1	3	2	2	5	4	
45 ERA 45		-	-	-	2	1	-	-	-	16	10	3	-	-	-	-	28	1	17	-	2	4	-	-	1	-	-	
46 Herald Shoal Polynya		4	1	-	14	5	1	-	-	2	3	2	-	-	-	-	1	14	4	2	5	3	1	1	1	-	-	
47 Ice/Sea Segment 10		6	5	2	12	19	7	2	-	1	4	8	5	1	-	1	-	9	2	7	17	6	4	7	6	1	2	
48 Ice/Sea Segment 11		7	14	15	3	14	31	17	9	1	5	15	18	13	7	8	1	3	2	13	14	8	25	32	12	14	14	
49 ERA 49		4	9	23	1	4	11	15	13	-	2	4	5	9	19	13	-	1	1	6	4	2	15	7	3	14	6	
50 Ice/Sea Segment 13		3	5	4	2	6	11	8	4	-	2	9	26	10	2	2	-	2	1	5	6	3	7	29	13	7	16	
51 Ice/Sea Segment 14		1	3	3	1	4	6	7	5	-	1	5	21	16	3	1	-	1	1	3	4	2	12	16	8	34	-	
52 Ice/Sea Segment 15		6	9	6	5	18	20	7	3	1	7	21	16	6	2	3	-	5	3	10	21	11	10	22	14	5	9	
55 Point Barrow, Plover Islands		1	2	2	1	1	2	3	4	-	-	1	2	3	3	2	-	1	-	2	1	1	2	2	2	3	2	
56 ERA 56		6	11	15	2	8	23	24	11	-	2	10	29	18	10	7	-	2	1	9	7	4	20	32	16	19	20	
58 Offshore Pt. Lay to Wainwright		7	9	6	17	31	20	9	4	6	38	54	45	10	2	2	3	16	18	11	43	53	10	38	53	7	19	
59 Ostrov Kolyuchin		-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
61 ERA 61		-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
63 ERA 63		2	2	1	-	1	1	1	1	-	-	-	1	1	1	2	-	-	2	-	-	1	1	1	1	1	-	
64 Peard Bay Area		1	2	2	-	2	5	7	9	-	1	4	13	16	4	1	-	-	2	3	2	3	7	10	8	31	-	
65 Smith Bay		-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-
66 Herald Island		1	1	1	-	-	1	1	-	-	-	-	-	-	-	-	1	-	1	-	-	1	1	-	-	-	-	
67 Herschel Island (Canada)		-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
68 Harrison Bay		-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	
69 Harrison Bay/Colville Delta		-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	
70 ERA 70		4	6	5	-	2	4	3	2	-	1	2	3	2	2	13	-	1	-	6	2	1	5	3	1	2	2	
74 Offshore Herald Island		2	1	1	1	1	1	1	-	-	1	1	1	-	1	-	1	-	1	1	-	1	1	-	1	1	-	
79 Demarcation Bay Offshore		-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
86 Harrison Bay		-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	
87 Colville River Delta		-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	
91 Hope Sea Valley		1	-	-	1	1	-	-	-	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	
100 Jago and Tapkaurak Spits		-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-7 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	

**Table A.3-8 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	
66	Ayugataki Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
71	Kukpuk River, Sitkok Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	6	-	-	-	-	-	
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	5	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3	-	-	-	-	-	-	
75	Akeonik, Icy Cape	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
78	Point Collie, Sigekruk Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	4	-	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	2	-	-	
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	3
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-9 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
8	E. Wrangel Island, Skeletov	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
24	LS 24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
25	Laguna Amguema, Yulinu	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
27	Laguna Nut, Rigo'l'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
28	Vankarem, Vankarem Laguna	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	
30	Nutepynmin, Pyngopil'gyn	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	
31	Alyatki, Zaliv Tasytkhin	-	-	-	1	-	-	-	-	2	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
34	Tepken, Memino	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	-	
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	-	
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
71	Kukpuk River, Sitkok Point	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	2	-	2	-	-	7	-	-	-	-	
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	2	-	1	6	-	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	1	-	-	-	-	2	2	-	-	-	-	-	1	-	1	5	-	-	-	-	-	-	
75	Akeonik, Icy Cape	-	-	-	-	1	-	-	-	-	1	2	-	-	-	-	-	1	-	1	3	-	-	1	-	-	-	
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	
77	Nivat Point, Nokotlek Point	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
78	Point Collie, Sigeakruk Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	1	7	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	1	4	-	
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	4	-	
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	-	1	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	-	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-10 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
7	Kosa Bruch	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	E. Wrangel Island, Skeletov	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
24	LS 24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
25	Laguna Amguema, Yulinu	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
27	Laguna Nut, Rigol'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
28	Vankarem, Vankarem Laguna	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	2	1	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-
31	Alyatki, Zaliv Tasytkhin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-
34	Tepken, Memino	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	3	-	3	-	-	1	-	-	-	-
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	3	-	7	-	-	-	-	-	-	-
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	3	2	-	-	-	-	-	-	1	2	-	1	7	-	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	3	3	-	-	-	-	-	-	1	2	-	1	6	-	-	1	-	-
75	Akeonik, Icy Cape	-	-	-	1	1	-	-	-	2	3	1	-	-	-	-	-	1	1	-	1	4	-	-	1	-	-
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-
77	Nivat Point, Nokotlek Point	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	1	-	-	-	-	-
78	Point Collie, Sigekrak Point	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	1	1	-	1	7	-	-	-	-	-
79	Point Belcher, Wainwright	-	-	-	-	1	-	-	-	1	3	-	-	-	-	-	-	1	1	-	1	9	-	1	-	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	1	-	-	1	3	1	-	-	-	-	-	1	-	2	6	-	2	-	-	-	-
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	1	2	-	2	-
82	Skull Cliff	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	1	-	5
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	1	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	4
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	1	1	-	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	6
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	1	3	-	1	4	1	-	-	-	-	-	-	-	-	-	-	-	-	2	3
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-11 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
7	Kosa Bruch	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	E. Wrangel Island, Skeletov	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
24	LS 24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
25	Laguna Amguema, Yulinu	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	
27	Laguna Nut, Rigol'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	
28	Vankarem, Vankarem Laguna	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	2	1	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	
31	Alyatki, Zaliv Tasytkhin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-	
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	
34	Tepken, Memino	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	-	4	-	3	-	-	1	-	-	-	-	
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	1	-	-	-	-	4	2	-	-	-	-	-	-	1	3	-	1	8	-	-	-	-	-	
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	1	4	3	-	-	-	-	-	1	3	-	1	7	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	3	3	-	-	-	-	-	-	1	2	-	2	7	-	-	1	-	-	
75	Akeonik, Icy Cape	-	-	-	1	2	-	-	-	3	3	1	-	-	-	-	-	1	1	-	2	5	-	1	1	-	-	
76	Avak Inlet, Tunaliq River	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	1	1	-	1	-	-	1	-	-	-	
77	Nivat Point, Nokotlek Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	1	-	-	1	-	-	-	
78	Point Collie, Sigekrak Point	-	-	-	1	-	-	-	-	1	2	2	-	-	-	-	-	1	1	-	1	8	-	-	-	-	-	
79	Point Belcher, Wainwright	-	-	-	1	1	-	-	-	1	2	4	1	-	-	-	-	1	1	-	2	10	-	1	-	-	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	1	1	1	1	-	1	2	5	1	-	-	-	-	1	1	-	3	9	1	3	-	-	-	
81	Pearl Bay, Point Franklin	-	-	-	1	1	-	-	-	-	1	2	1	-	-	-	-	-	1	1	-	1	3	-	2	-	-	-
82	Skull Cliff	-	-	-	-	-	1	1	1	-	-	1	2	2	-	-	-	-	-	-	-	-	1	-	-	1	3	1
83	Nulavik, Loran Radio Station	-	-	-	-	-	1	1	1	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	1	1	5
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	1	2	2	-	-	2	4	1	-	-	-	-	-	-	-	-	-	-	-	1	1	2
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	1	2	5	-	-	2	6	1	-	-	-	-	-	-	-	-	1	1	1	3	5	
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	1	2	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	-	1	1	1
87	Igalik & Kulgurak Island	1	1	1	-	-	1	1	1	-	-	-	1	1	1	-	-	1	-	-	1	1	-	1	-	1	1	1
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-12 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
7	Kosa Bruch	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	E. Wrangel Island, Skeletov	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
24	LS 24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
25	Laguna Amguema, Yulinu	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
27	Laguna Nut, Rigol'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
28	Vankarem, Vankarem Laguna	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	2	1	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-	-	
31	Alyatk, Zaliv Tasytikhin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-	-	
32	Mys Dzhenretlen, Eynenevkyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
34	Tepken, Memino	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-	
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-	
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	4	-	3	-	-	1	-	-	-	-	-	
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	3	-	2	-	-	-	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	1	-	-	-	-	-	4	2	-	-	-	-	-	1	3	-	1	8	-	-	-	-	-	
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	1	4	3	-	-	-	-	-	1	3	-	1	7	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	3	3	-	-	-	-	-	1	2	-	2	7	-	-	1	-	-		
75	Akeonik, Icy Cape	-	-	-	1	2	-	-	-	3	3	1	-	-	-	-	1	1	-	2	5	-	1	1	-	-	-	
76	Avak Inlet, Tunaliq River	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	
77	Nivat Point, Nokotek Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	
78	Point Collie, Siegakruk Point	-	-	-	-	1	-	-	-	1	2	2	-	-	-	-	-	1	1	-	1	8	-	-	-	-	-	
79	Point Belcher, Wainwright	-	-	-	-	1	1	-	-	1	2	4	1	-	-	-	-	1	1	-	2	10	-	1	-	-	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	1	1	1	-	1	2	5	1	-	-	-	-	1	1	-	3	9	1	3	-	-	
81	Peard Bay, Point Franklin	-	-	-	-	1	1	-	-	-	1	2	1	-	-	-	-	-	1	1	-	1	3	-	2	-	-	
82	Skull Cliff	-	-	-	-	1	1	1	1	-	1	2	2	-	-	-	-	-	1	-	-	1	3	1	6	-	-	
83	Nulavik, Loran Radio Station	-	-	-	-	-	1	1	1	-	-	2	2	-	-	-	-	-	-	-	-	-	1	1	1	5	-	-
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	1	2	2	-	-	2	4	1	-	-	-	-	-	-	-	1	1	1	2	7	-
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	1	3	6	-	-	2	7	3	-	-	-	-	-	-	-	-	1	1	1	4	6	-
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	1	2	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	1	1	1	-
87	Igalik & Kulgurak Island	1	1	2	-	1	1	1	1	-	1	1	1	1	1	-	-	1	1	-	1	1	-	1	1	-	1	1
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	1
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
94	Fish Creek, Tingmeachsiowik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
107	Kaktovik	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table A.3-13 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Seasonal Land Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-14 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Seasonal Land Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Table A.3-15 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Seasonal Land Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
29	Mys Onman, Vel'may	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Alyatki, Zaliv Tasytikhin	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	-	4	-	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	3	-	1
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	1	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	1	1

**Table A.3-16 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Seasonal Land Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
29	Mys Onman, Vel'may	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Alyatki, Zaliv Tasytikhin	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	-	-	-	-	-	1	2	-	-	-	-	-	-	1	-	1	3	-	-	-	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	1	-	-	-	-	1	3	1	-	-	-	-	-	1	-	-	2	3	-	2	-
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	1	3	-	-	-	4	1	-	-	-	-	-	-	-	-	-	-	-	2	2	-
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table A.3-17 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Seasonal Land Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
29	Mys Onman, Vel'may	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Alyatki, Zaliv Tasytikhin	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	1	-	4	-	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	-	2	2	-	-	-	-	-	1	1	-	1	3	-	-	1	-	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	1	1	1	-	-	1	3	1	-	-	-	-	-	1	-	-	2	5	1	3	-	
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	1	2	4	-	-	2	5	2	-	-	-	-	-	-	-	-	-	1	1	-	3	4
87	Igalik & Kulgurak Island	1	1	1	-	-	1	1	1	-	-	1	1	1	-	-	-	-	1	-	-	1	1	-	1	1	-	
91	Lonely, Pitt Pt., Pogik Bay, Smith R.	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-18 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Seasonal Land Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
29	Mys Onman, Vel'may	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Alyatki, Zaliv Tasytkhin	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	2	-	-	2	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	1	-	4	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	-	2	2	-	-	-	-	-	1	1	-	1	3	-	-	1	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	1	1	1	-	-	1	3	1	-	-	-	-	-	-	1	-	2	5	1	3	
85	Barrow, Browerville, Elson Lag.	-	1	1	-	-	1	3	6	-	-	2	7	3	-	-	-	-	-	-	-	-	1	1	1	4	5
87	Igalik & Kulgurak Island	1	1	2	-	1	1	1	1	-	-	1	1	1	1	1	-	-	-	1	1	-	2	1	-	1	1
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Table A.3-19 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
134	Cape Lisburne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	
143	United States Chukchi Coast	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	3	-	1	-	7	-	2	-	2	-	

**Table A.3-20 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	
134	Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	2	-	6
141	Russia Chukchi Coast	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
142	Russia Chukchi Coast Marine Mammals	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
143	United States Chukchi Coast	-	-	-	-	-	-	-	-	1	5	5	2	2	-	-	5	-	4	-	16	-	-	9	-	9	
144	United States Beaufort Coast	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-21 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
129	Ostrov Idlidya	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	4	-	2	-	-	-	-	-	-	-	-
134	Cape Lisburne	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	4	-	4	-	1	-	-	-	-	-	-
135	National Petroleum Reserve Alaska	-	-	-	-	-	1	1	2	-	-	2	5	4	1	-	-	-	-	1	1	-	2	7	1	11	
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	1	-	-	1	-	-	
141	Russia Chukchi Coast	4	1	-	11	1	-	-	-	29	5	-	-	-	-	-	31	9	11	1	-	-	-	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	2	1	-	5	1	-	-	-	13	3	-	-	-	-	-	13	4	6	1	-	-	-	-	-	-	-
143	United States Chukchi Coast	-	-	-	2	3	1	1	1	5	16	15	10	6	-	-	9	2	14	-	5	27	-	4	21	1	16
144	United States Beaufort Coast	-	-	-	-	-	-	1	4	-	-	-	5	1	-	-	-	-	-	-	-	-	-	-	-	1	2

**Table A.3-22 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
129	Ostrov Idlidya	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	4	-	3	-	-	1	-	-	-	-	-
134	Cape Lisburne	-	-	-	-	-	-	-	-	2	3	1	-	-	-	-	4	-	5	-	-	2	-	-	-	-	-
135	National Petroleum Reserve Alaska	-	-	1	-	1	2	2	5	-	1	4	8	7	2	-	-	-	-	-	2	2	1	5	11	3	14
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	1	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	1	2	-	-	2	-
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
141	Russia Chukchi Coast	5	2	-	11	2	-	-	-	30	7	1	-	-	-	-	1	31	10	13	2	1	1	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	3	1	-	6	2	1	-	-	13	4	1	-	-	-	-	13	5	6	2	1	1	-	-	-	-	-
143	United States Chukchi Coast	-	1	1	4	6	3	2	3	6	22	20	16	9	1	-	10	3	19	1	9	33	1	8	30	3	20
144	United States Beaufort Coast	-	-	-	-	-	-	2	7	-	-	-	1	7	2	-	-	-	-	-	-	-	-	-	-	3	4

**Table A.3-23 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
129	Ostrov Idlidya	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	4	-	3	-	-	1	-	-	-	-	-
134	Cape Lisburne	-	-	-	1	1	-	-	-	2	4	1	-	-	-	-	4	-	5	-	1	2	-	-	-	-	-
135	National Petroleum Reserve Alaska	1	2	2	2	4	4	4	8	-	2	7	13	10	4	2	-	1	1	2	5	4	3	8	18	5	19
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	1	1	-	-	-	-	1	2	1	-	-	-	-	-	-	-	2	2	-	-	2	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-
141	Russia Chukchi Coast	5	2	1	12	2	1	-	1	30	7	1	-	-	-	-	1	31	10	14	3	1	1	1	-	-	-
142	Russia Chukchi Coast Marine Mammals	3	1	1	6	2	1	-	1	13	4	1	-	-	-	-	13	5	7	2	1	1	1	1	-	-	-
143	United States Chukchi Coast	1	1	1	7	11	5	4	5	7	27	26	23	12	2	-	12	7	24	2	14	39	2	12	39	5	25
144	United States Beaufort Coast	1	1	2	-	1	2	5	12	-	-	1	4	11	6	2	-	-	-	1	1	-	2	2	2	7	8

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.3-24 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
129	Ostrov Idlidya	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	2	2	1	-	-	-	-	4	-	3	-	-	1	-	-	-	-	-
134	Cape Lisburne	-	-	-	1	1	-	-	-	2	4	1	-	-	-	-	4	-	5	-	1	2	-	-	-	-	-
135	National Petroleum Reserve Alaska	2	3	3	2	5	6	6	10	-	3	8	15	12	6	2	-	2	2	3	6	6	4	9	19	7	20
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	1	1	-	-	-	-	1	2	1	-	-	-	-	-	-	2	2	-	-	2	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	1	-	1	2	-	1	1	1	1	2	-	-	-	-	-	-	1	-	-	-	1	1
141	Russia Chukchi Coast	5	2	1	12	2	1	-	2	30	7	1	-	1	1	1	31	10	14	3	1	1	1	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	3	1	1	6	2	1	1	3	13	4	1	-	2	2	1	13	5	7	2	1	1	1	1	-	1	1
143	United States Chukchi Coast	1	1	1	7	11	6	4	6	7	28	26	23	12	2	-	12	7	24	2	14	40	2	12	40	5	25
144	United States Beaufort Coast	1	2	4	1	2	4	7	16	-	1	2	5	15	9	2	-	1	1	2	2	3	4	4	9	10	

**Table A.3-25 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
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Notes –All rows have all values less than 0.5 percent and are not shown

**Table A.3-26 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
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Notes –All rows have all values less than 0.5 percent and are not shown

**Table A.3-27 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
16	Chukchi Sea	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-
17	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
18	Chukchi Sea	1	2	3	-	1	2	1	-	-	1	-	-	2	4	-	-	-	1	1	-	3	1	-	1	-	-
19	Chukchi Sea	1	2	3	-	1	1	2	1	-	-	-	-	1	3	4	-	-	-	1	-	2	1	-	1	-	-
20	Chukchi Sea	-	1	2	-	-	1	1	1	-	-	-	-	3	2	-	-	-	1	-	-	1	-	-	1	-	-
21	Chukchi Sea	-	-	1	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
22	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
23	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
24	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
25	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-28 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Chukchi Sea	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-
16	Chukchi Sea	1	1	1	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	2	-	-	1	-	-	-	-
17	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	1	-	-	-	-
18	Chukchi Sea	3	6	8	1	3	6	5	3	-	2	3	2	3	5	9	-	1	-	4	4	2	7	5	1	5	2
19	Chukchi Sea	4	7	8	1	4	6	6	3	-	1	2	2	4	7	9	-	1	1	6	3	2	8	4	1	6	3
20	Chukchi Sea	2	3	5	-	2	3	4	3	-	1	1	1	2	6	5	-	-	3	2	1	4	2	-	4	1	-
21	Chukchi Sea	-	1	2	-	-	1	1	1	-	-	-	-	1	2	2	-	-	-	1	1	-	1	-	-	1	-
22	Chukchi Sea	-	-	1	-	-	-	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	1	-
23	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	1	1
24	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-
25	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
26	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table A.3-29 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
15	Chukchi Sea	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	
16	Chukchi Sea	2	3	2	-	1	2	1	1	-	1	1	1	1	1	4	-	-	-	3	1	1	2	1	-	1	1	
17	Chukchi Sea	2	2	2	1	1	2	1	1	-	1	1	1	1	1	3	-	1	-	2	1	1	2	1	1	1	1	
18	Chukchi Sea	5	9	11	2	7	9	9	5	-	4	7	6	6	9	12	-	2	2	7	7	5	11	9	4	9	5	
19	Chukchi Sea	7	12	14	3	9	13	15	8	-	5	8	9	10	12	14	-	3	3	10	9	6	14	11	6	15	9	
20	Chukchi Sea	5	8	10	1	7	9	9	7	-	3	5	6	7	10	9	-	1	1	8	6	4	10	9	5	9	7	
21	Chukchi Sea	1	2	3	-	1	2	2	3	-	1	1	2	2	4	3	-	-	-	1	2	1	3	2	1	3	1	
22	Chukchi Sea	-	-	1	-	-	1	1	2	-	-	-	1	3	1	-	-	-	-	1	1	-	1	1	-	1	1	
23	Beaufort Sea	-	-	2	-	-	1	2	2	-	-	-	-	2	3	1	-	-	-	-	-	-	-	-	1	-	2	1
24	Beaufort Sea	-	-	1	-	-	-	1	2	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	1	1	1
25	Beaufort Sea	-	-	-	-	-	-	1	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	1	1	-	1
26	Beaufort Sea	-	1	1	-	-	1	1	1	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	1	1	-	1
27	Beaufort Sea	-	-	1	-	-	-	1	1	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	1	-	1	-
28	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
29	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table A.3-30 Annual Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
15	Chukchi Sea	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-
16	Chukchi Sea	2	3	2	-	1	2	1	1	-	1	1	1	1	1	4	-	-	-	3	1	1	2	1	-	1	1	
17	Chukchi Sea	2	3	3	1	2	2	2	1	-	1	1	2	1	2	4	-	1	1	3	2	1	3	2	2	1	1	
18	Chukchi Sea	5	10	12	2	7	11	11	6	-	4	8	7	7	10	13	-	2	2	8	8	6	12	10	4	10	6	
19	Chukchi Sea	7	13	15	3	9	13	15	9	1	5	8	10	11	13	15	-	3	3	11	9	6	14	11	7	15	10	
20	Chukchi Sea	5	9	10	1	7	10	10	8	-	3	5	7	7	11	9	-	1	1	8	7	4	10	9	5	10	8	
21	Chukchi Sea	1	2	3	-	1	2	2	3	-	1	1	2	2	4	3	-	-	-	1	2	1	3	2	1	3	1	-
22	Chukchi Sea	-	-	1	-	-	1	2	2	-	-	1	1	1	3	1	-	-	-	1	1	1	1	1	1	2	1	-
23	Beaufort Sea	1	1	3	-	1	2	3	3	-	-	1	1	2	4	2	-	-	-	1	1	-	2	1	-	3	1	-
24	Beaufort Sea	-	-	1	-	-	1	1	2	-	-	-	1	1	2	1	-	-	-	-	-	-	-	-	2	1	-	-
25	Beaufort Sea	-	-	-	-	-	-	1	-	-	-	1	1	1	1	1	-	-	-	-	-	-	-	-	1	1	-	1
26	Beaufort Sea	-	1	1	-	-	1	1	2	-	-	-	1	1	1	1	-	-	-	-	-	-	-	-	1	1	-	1
27	Beaufort Sea	-	-	1	-	-	1	1	2	-	-	-	1	1	2	1	-	-	-	-	-	-	-	-	1	1	-	1
28	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Beaufort Sea	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
34	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-31 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11		
--	LAND	-	-	-	-	-	-	-	-	-	1	-	-	-	-	4	-	2	-	-	8	-	-	3	-	3			
1	Kasegaluk Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	9	-	-	-	-	-			
6	ERA 6	-	-	-	-	-	-	-	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	28	-	29		
7	US Russia Maritime Boundary	31	2	-	27	1	-	-	-	26	1	-	-	-	-	8	18	29	3	10	-	-	-	-	-	-	-	-	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	-	-	-	-	-	-	17	15	-	-	-	-	-	-	17	-	-	39	-	-	-	-	-		
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	10	12	1	-	-	-	33	-	23	-	-	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	-	-	-	-	-	-	-	-	3	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	
19	Chukchi Spring Lead System	-	-	-	-	-	-	-	-	-	4	5	1	1	-	3	-	4	-	11	-	-	8	-	9	-	-		
35	ERA 35	-	-	-	-	-	-	-	1	-	-	6	37	26	-	-	-	-	-	-	-	-	-	-	13	47	1	50	
36	ERA 36	-	-	-	1	6	1	-	-	21	31	1	-	-	-	-	1	1	-	23	41	-	-	1	-	-	-		
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	-	3	-	-	-	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-	-	-	
40	Wainwright Subsistence Area	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	3	-	-	28	-	1	-	-	
45	ERA 45	-	-	-	-	-	-	-	-	6	1	-	-	-	-	20	-	11	-	-	-	-	-	-	-	-	-	-	-
46	Herald Shoal Polynya	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
47	Ice/Sea Segment 10	2	-	-	10	14	-	-	-	-	-	-	-	-	-	-	4	-	1	9	-	-	-	-	-	-	-	-	
48	Ice/Sea Segment 11	-	-	-	-	1	23	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	17	22	-	-	-	
49	ERA 49	-	-	18	-	-	1	3	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	2	-	-	-	-	-
50	Ice/Sea Segment 13	-	-	-	-	-	1	-	-	-	3	21	-	-	-	-	-	-	-	-	-	-	-	31	2	-	1	-	
51	Ice/Sea Segment 14	-	-	-	-	-	-	-	-	-	-	11	10	-	-	-	-	-	-	-	-	-	-	-	1	-	36	-	
52	Ice/Sea Segment 15	-	-	-	-	3	11	-	-	-	9	1	-	-	-	-	-	-	-	1	5	-	-	3	-	-	-	-	
56	ERA 56	-	-	1	-	-	18	12	-	-	3	38	2	-	-	-	-	-	-	-	-	-	-	11	41	6	1	3	
58	Offshore Pt. Lay to Wainwright	-	-	-	1	5	2	-	-	44	74	45	-	-	-	-	1	4	-	37	75	-	29	59	-	-	-	-	
64	Peard Bay Area	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	27	-	
70	ERA 70	1	-	-	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	1	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-32 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11			
--	LAND	-	-	-	-	-	-	-	2	3	6	7	4	7	-	-	11	-	7	-	1	19	-	-	14	-	18			
1	Kasegaluk Lagoon	-	-	-	-	-	-	-	-	4	7	1	-	-	-	-	-	2	-	1	20	-	-	2	-	-	-			
2	Point Barrow, Plover Islands	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
3	ERA 3	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-		
6	ERA 6	-	-	-	-	-	-	-	2	-	3	10	13	-	-	-	-	-	-	-	1	1	-	2	39	1	41			
7	US Russia Maritime Boundary	54	21	4	52	16	4	1	-	55	15	3	-	-	-	22	47	53	24	32	10	4	4	1	-	-	-			
10	Ledyard Bay SPEI Critical Habitat	-	-	-	1	1	-	-	3	27	20	-	-	-	-	4	1	25	-	2	47	-	-	1	-	-	-			
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	2	-	-	-	-	-	-	11	-	1	-	-	-	-	-	-	-	-	-	-		
15	Cape Lisburne Seabird Colony Area	-	-	-	1	-	-	-	-	17	18	2	-	-	-	40	-	30	-	-	2	-	-	-	-	-	-	-		
18	Murre Rearing and Molting Area	-	-	-	3	-	-	-	22	4	-	-	-	-	-	21	1	6	-	-	-	-	-	-	-	-	-	-		
19	Chukchi Spring Lead System	-	-	-	-	-	-	1	1	7	7	3	3	-	-	4	-	5	-	1	13	-	-	11	-	11	-			
29	Ice/Sea Segment 1	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
35	ERA 35	-	-	-	1	2	3	5	-	11	44	32	-	-	-	-	-	-	-	2	2	1	21	51	5	55				
36	ERA 36	1	-	-	6	12	3	-	-	1	26	37	5	-	-	-	7	5	1	30	46	1	5	8	-	-	-			
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	3	2	-	-	-	-	-	15	-	6	-	-	-	-	-	-	-	-	-	-		
39	Point Lay Subsistence Area	-	-	-	-	-	-	-	-	6	9	-	-	-	-	-	3	-	1	33	-	-	1	-	-	-	-	-		
40	Wainwright Subsistence Area	-	-	-	-	-	-	-	-	1	6	6	1	-	-	-	-	-	1	10	-	1	37	-	6	-	-	-		
42	Barrow Subsistence Area 2	-	-	-	-	-	-	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1		
45	ERA 45	-	-	-	-	-	-	-	17	6	1	-	-	-	-	34	-	16	-	-	1	-	-	-	-	-	-	-		
46	Herald Shoal Polynya	2	-	-	9	2	-	-	-	-	-	-	-	-	-	-	7	1	-	1	-	-	-	-	-	-	-	-		
47	Ice/Sea Segment 10	5	1	-	15	21	3	-	-	1	3	-	-	-	-	-	11	-	4	18	2	-	1	1	-	-	-			
48	Ice/Sea Segment 11	1	4	5	-	6	34	4	-	-	5	3	1	-	-	-	-	4	4	-	24	29	1	1	1	-	-	-		
49	ERA 49	-	2	27	-	-	5	8	2	-	-	-	-	-	-	12	6	-	-	-	-	-	9	1	-	3	-	-		
50	Ice/Sea Segment 13	-	-	-	-	-	4	2	-	-	5	30	3	-	-	-	-	-	-	-	2	40	6	1	6	-	-	-		
51	Ice/Sea Segment 14	-	-	-	-	-	-	1	-	-	-	18	15	-	-	-	-	-	-	-	-	3	5	2	47	-	-	-		
52	Ice/Sea Segment 15	1	1	1	1	10	18	1	-	2	15	4	-	-	-	-	1	-	3	15	3	2	11	3	-	-	-	-		
55	Point Barrow, Plover Islands	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
56	ERA 56	1	3	5	-	2	25	19	1	-	7	44	9	-	-	-	-	-	2	2	1	17	49	13	7	14	-	-		
58	Offshore Pt. Lay to Wainwright	1	-	-	7	17	9	1	-	2	51	80	53	1	-	-	1	8	14	1	48	80	2	41	66	-	5	-	-	-
63	ERA 63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
64	Pearl Bay Area	-	-	-	-	-	-	-	1	-	-	-	3	10	-	-	-	-	-	-	-	-	-	-	-	-	-	2	1	38
70	ERA 70	4	4	1	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	5	-	-	1	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-33 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	3	2	1	11	7	3	4	12	30	27	23	19	22	3	-	39	9	29	2	9	36	1	9	33	7	34	
1	Kasegaluk Lagoon	-	-	-	2	3	1	-	-	1	11	15	3	-	-	-	1	2	6	-	6	31	-	2	7	-	-	
2	Point Barrow, Plover Islands	-	-	-	-	-	-	1	5	-	-	-	-	4	2	-	-	-	-	-	-	-	-	-	-	2	1	
3	ERA 3	-	-	-	2	-	-	-	-	7	3	-	-	-	-	-	7	1	4	-	-	1	-	-	-	-	-	
4	ERA 4	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
6	ERA 6	-	-	-	1	3	4	5	10	-	2	11	26	26	2	-	-	1	-	1	6	4	1	11	53	8	52	
7	US Russia Maritime Boundary	71	45	19	71	41	21	6	2	75	41	20	6	3	4	39	68	72	52	55	33	23	22	12	6	3	2	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	6	6	2	-	-	10	39	27	3	-	-	-	10	5	37	-	9	54	1	3	5	-	-	
11	Wrangel Island 12 nmi buffer	2	1	-	1	1	-	-	-	-	-	-	-	-	-	-	2	-	2	1	-	1	-	-	-	-	-	
13	ERA 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	5	2	-	-	-	-	-	14	-	3	-	-	1	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	3	2	-	-	-	24	25	6	-	-	-	-	45	3	36	-	2	7	-	-	1	-	-	
16	ERA 16	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	3	1	-	16	7	1	-	-	43	19	5	-	-	-	-	41	11	24	2	6	8	-	1	1	-	-	
19	Chukchi Spring Lead System	-	-	-	-	1	1	1	1	1	8	9	6	5	-	-	5	-	7	-	3	14	-	2	12	1	12	
23	Offshore Wrangel Island	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	
24	Beaufort Spring Lead 6	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	Ice/Sea Segment 1	-	-	-	-	-	-	1	3	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2
30	Ice/Sea Segment 2	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
31	Ice/Sea Segment 3	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
35	ERA 35	2	3	2	1	5	10	11	15	-	1	16	53	40	3	1	-	1	-	3	6	4	5	32	57	14	60	
36	ERA 36	3	2	2	14	21	8	2	-	4	31	43	12	1	-	-	2	14	12	4	39	50	3	13	17	1	2	
38	Point Hope Subsistence Area	-	-	-	1	1	-	-	-	8	6	2	-	-	-	-	20	1	10	-	1	2	-	-	-	-	-	-
39	Point Lay Subsistence Area	-	-	-	2	3	1	-	-	2	14	16	2	-	-	-	1	2	8	-	5	41	-	2	4	-	-	
40	Wainwright Subsistence Area	-	-	-	2	4	2	1	-	1	6	17	19	4	-	-	2	2	1	8	18	-	8	51	1	12		
42	Barrow Subsistence Area 2	-	-	-	-	-	-	1	8	-	-	-	1	7	2	-	-	-	-	-	-	-	-	-	-	-	2	3
45	ERA 45	-	-	-	3	1	-	-	-	27	15	4	-	-	-	-	44	2	25	-	1	6	-	-	-	-	-	-
46	Herald Shoal Polynya	6	3	1	20	9	2	-	-	3	4	3	1	-	-	-	1	1	17	5	4	8	4	1	1	1	-	-
47	Ice/Sea Segment 10	9	4	1	20	29	7	1	-	1	4	8	3	1	-	1	-	17	1	8	26	5	3	5	4	1	1	
48	Ice/Sea Segment 11	5	12	13	1	12	41	11	2	-	1	10	8	4	2	3	-	1	-	10	11	3	31	37	4	7	3	
49	ERA 49	3	8	36	-	2	11	16	8	-	1	1	3	21	14	-	-	-	4	1	-	17	4	-	11	1	-	-
50	Ice/Sea Segment 13	1	3	2	-	3	11	7	2	-	-	9	37	8	-	-	-	-	2	3	1	6	47	11	5	14	-	-
51	Ice/Sea Segment 14	-	1	1	-	1	4	5	3	-	-	3	27	21	-	-	-	-	1	1	-	2	11	15	6	53	-	-
52	Ice/Sea Segment 15	4	5	3	4	18	24	4	1	-	4	22	10	2	1	1	-	5	-	8	24	8	6	20	8	2	3	
55	Point Barrow, Plover Islands	-	-	-	-	-	-	-	3	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1
56	ERA 56	5	9	14	1	6	34	31	7	-	1	13	51	19	6	4	-	1	-	8	6	3	25	56	24	19	25	
58	Offshore Pt. Lay to Wainwright	5	5	3	20	33	21	7	1	8	57	84	61	7	1	1	5	19	24	8	58	82	7	53	73	4	14	
59	Ostrov Kolyuchin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-
61	ERA 61	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-
63	ERA 63	2	2	1	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	2	-	-	1	-	-	-	-	-
64	Peard Bay Area	-	-	-	-	1	2	3	6	-	-	2	10	18	1	-	-	-	-	1	-	1	-	1	5	6	5	45
66	Herald Island	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
70	ERA 70	8	8	5	-	1	2	1	-	-	-	-	-	1	26	-	-	-	9	-	-	6	1	-	1	-	-	-
74	Offshore Herald Island	4	1	-	2	2	1	-	-	-	-	1	-	-	-	-	1	-	3	-	2	1	-	1	1	-	-	-
82	ERA 82	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
91	Hope Sea Valley	2	-	-	3	1	-	-	-	1	1	1	-	-	-	-	1	3	1	1	1	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-34 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
--	LAND	4	3	3	13	11	8	10	21	31	34	30	27	31	7	2	40	11	34	4	15	43	4	16	40	14	42
1	Kasegaluk Lagoon	-	-	-	3	4	1	-	-	2	13	17	4	-	-	-	1	3	7	-	7	34	-	3	9	-	
2	Point Barrow, Plover Islands	-	-	1	-	-	-	2	9	-	-	-	6	4	-	-	-	-	-	-	-	-	-	-	-	3	3
3	ERA 3	-	-	-	2	-	-	-	-	7	3	-	-	-	-	-	7	1	4	-	-	1	-	-	-	-	
4	ERA 4	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	
6	ERA 6	1	2	3	2	7	9	12	17	-	3	15	33	32	5	1	-	2	1	3	9	6	5	18	57	16	56
7	US Russia Maritime Boundary	74	50	25	75	48	27	11	5	77	48	26	12	6	7	44	69	76	57	60	40	27	28	19	9	8	6
10	Ledyard Bay SPEI Critical Habitat	1	-	1	7	8	3	1	-	11	42	28	4	-	-	-	11	6	39	1	11	56	1	3	6	-	-
11	Wrangel Island 12 nmi buffer	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	2	-	2	1	-	1	-	-	-	-	
13	ERA 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	5	3	-	-	-	-	-	14	-	4	-	-	1	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	4	3	-	-	-	24	28	6	-	-	-	-	46	3	38	-	3	9	-	-	1	-	
16	ERA 16	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	3	1	-	16	7	1	-	-	43	20	6	1	-	-	-	41	11	25	2	6	8	-	1	1	-	
19	Chukchi Spring Lead System	-	-	-	-	1	1	1	1	1	8	9	6	5	-	-	5	-	7	-	3	14	-	2	12	1	12
23	Offshore Wrangel Island	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	
24	Beaufort Spring Lead 6	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	Ice/Sea Segment 1	-	-	-	-	-	-	1	5	-	-	-	1	5	2	-	-	-	-	-	-	-	-	-	-	2	3
30	Ice/Sea Segment 2	-	-	-	-	-	-	-	1	2	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-
31	Ice/Sea Segment 3	-	-	-	-	-	-	-	1	2	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-
32	Ice/Sea Segment 4	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	ERA 35	4	6	7	2	9	16	20	21	-	2	20	59	46	9	2	-	2	-	6	11	5	10	38	62	23	65
36	ERA 36	4	4	3	17	25	10	4	1	4	33	47	17	3	1	1	2	16	12	6	43	53	4	17	22	3	5
38	Point Hope Subsistence Area	-	-	-	1	1	-	-	-	8	7	2	-	-	-	-	20	1	11	-	1	3	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	3	5	2	1	-	2	17	19	3	-	-	-	2	3	10	-	7	44	1	3	5	-	
40	Wainwright Subsistence Area	1	1	1	3	8	5	3	2	1	8	22	24	6	-	-	1	3	3	2	12	22	2	14	56	3	15
42	Barrow Subsistence Area 2	-	-	-	-	-	-	2	12	-	-	-	1	9	5	-	-	-	-	-	-	-	-	-	1	3	5
45	ERA 45	-	-	-	3	2	-	-	-	27	17	5	-	-	-	-	44	2	26	-	2	7	-	-	-	-	
46	Herald Shoal Polynya	6	3	1	21	10	3	-	-	3	5	4	1	-	-	1	1	18	6	4	9	5	1	2	1	-	
47	Ice/Sea Segment 10	10	5	2	21	30	9	2	1	1	4	10	5	1	-	1	-	18	1	10	27	6	3	6	6	1	1
48	Ice/Sea Segment 11	7	14	16	2	14	44	15	4	-	2	13	12	6	5	5	-	2	-	12	14	3	34	41	5	10	6
49	ERA 49	5	12	40	-	3	14	21	12	-	-	2	3	6	27	18	-	-	-	7	2	-	22	6	1	16	2
50	Ice/Sea Segment 13	2	5	5	1	5	14	11	4	-	1	10	40	11	2	1	-	1	-	4	5	1	9	50	14	8	17
51	Ice/Sea Segment 14	1	2	3	-	3	7	9	5	-	-	5	31	24	2	1	-	2	2	1	5	16	19	10	55	-	
52	Ice/Sea Segment 15	5	6	3	5	21	26	5	1	-	5	24	13	3	1	2	-	6	-	9	27	9	7	23	10	3	4
55	Point Barrow, Plover Islands	-	-	-	-	-	-	1	6	-	-	-	4	2	-	-	-	-	-	-	-	-	-	-	-	1	2
56	ERA 56	8	13	21	2	10	41	40	13	-	1	17	58	28	12	7	-	2	-	11	9	4	32	64	29	29	33
58	Offshore Pt. Lay to Wainwright	7	8	6	23	37	25	10	3	9	58	85	63	10	3	2	6	22	25	10	61	82	11	57	74	7	18
59	Ostrov Kolyuchin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	
61	ERA 61	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	
63	ERA 63	3	2	1	-	-	-	1	1	-	-	-	-	-	1	4	-	-	3	-	-	1	-	-	1	-	
64	Pearl Bay Area	-	1	1	-	2	4	7	10	-	-	3	14	22	3	-	-	-	1	2	-	3	8	9	10	48	-
65	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
66	Herald Island	1	1	-	1	1	1	-	-	-	-	-	-	-	-	-	1	-	1	1	-	1	1	-	-	-	
68	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
69	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
70	ERA 70	8	9	7	-	1	3	2	1	-	-	1	1	1	1	28	-	1	-	10	1	-	7	2	1	1	1
74	Offshore Herald Island	4	1	1	2	2	1	-	-	1	1	1	-	1	-	3	-	2	1	1	1	2	1	-	2	-	
82	ERA 82	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
86	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
87	Colville River Delta	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
91	Hope Sea Valley	2	-	-	3	1	-	-	-	1	1	1	-	-	-	-	1	3	1	1	1	1	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-35 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
--	LAND	5	4	4	14	13	9	13	25	31	35	32	31	34	11	2	40	12	34	5	17	45	5	17	44	18	45
<b>1</b>	Kasegaluk Lagoon	-	-	-	3	5	1	-	-	2	13	17	5	-	1	-	1	3	7	-	8	34	-	3	9	-	-
<b>2</b>	Point Barrow, Plover Islands	-	-	1	-	-	-	2	10	-	-	-	1	7	4	-	-	-	-	-	-	-	-	-	1	4	3
<b>3</b>	ERA 3	-	-	-	2	-	-	-	-	7	3	-	-	-	-	-	7	1	4	-	-	1	-	-	-	-	-
<b>4</b>	ERA 4	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-
<b>6</b>	ERA 6	2	3	4	3	8	10	15	19	-	3	16	34	34	7	1	-	3	1	4	10	7	6	20	58	19	58
<b>7</b>	US Russia Maritime Boundary	75	52	29	76	50	30	15	8	77	49	28	14	10	11	46	70	77	59	61	42	28	32	22	11	12	9
<b>10</b>	Ledyard Bay SPEI Critical Habitat	1	-	1	8	8	3	1	-	11	42	29	4	-	1	-	11	6	39	1	11	56	1	4	6	-	-
<b>11</b>	Wrangel Island 12 nmi buffer	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	-	2	-	2	1	1	1	-	-	-	-
<b>13</b>	ERA 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
<b>14</b>	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	5	3	1	-	-	-	-	14	-	4	-	-	1	-	-	-	-	-
<b>15</b>	Cape Lisburne Seabird Colony Area	-	-	-	4	3	-	-	-	24	28	7	-	-	-	-	46	3	38	-	3	9	-	-	1	-	-
<b>16</b>	ERA 16	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-
<b>18</b>	Murre Rearing and Molting Area	3	1	-	16	7	1	-	-	43	21	6	1	-	-	-	41	12	26	2	6	8	-	1	1	-	-
<b>19</b>	Chukchi Spring Lead System	-	-	-	-	1	1	1	1	1	8	9	6	5	-	-	5	-	7	-	3	14	-	2	12	1	12
<b>23</b>	Offshore Wrangel Island	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-
<b>24</b>	Beaufort Spring Lead 6	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>25</b>	Beaufort Spring Lead 7	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>29</b>	Ice/Sea Segment 1	-	-	-	-	-	1	3	6	-	-	-	1	6	3	-	-	-	-	-	-	-	-	1	-	4	4
<b>30</b>	Ice/Sea Segment 2	-	-	1	-	-	1	2	3	-	-	-	-	1	3	-	-	-	-	-	-	-	1	1	-	2	-
<b>31</b>	Ice/Sea Segment 3	-	-	1	-	-	1	2	3	-	-	-	-	1	3	-	-	-	-	-	-	-	1	1	-	2	-
<b>32</b>	Ice/Sea Segment 4	-	-	-	-	-	1	1	2	-	-	-	-	2	-	-	-	-	-	-	-	-	1	-	1	-	-
<b>35</b>	ERA 35	5	7	9	3	10	18	24	24	-	2	21	61	48	12	3	-	3	-	7	12	6	11	40	63	26	67
<b>36</b>	ERA 36	5	4	3	17	26	11	4	1	5	34	48	18	3	1	1	2	17	13	6	44	53	5	18	23	3	5
<b>38</b>	Point Hope Subsistence Area	-	-	-	2	1	-	-	-	8	7	2	-	-	-	-	20	1	11	-	2	4	-	-	-	-	-
<b>39</b>	Point Lay Subsistence Area	-	-	-	4	5	2	1	-	2	18	19	3	-	1	-	2	3	10	-	7	44	1	3	5	-	-
<b>40</b>	Wainwright Subsistence Area	1	1	1	5	9	6	3	3	1	9	23	26	7	1	-	1	5	4	2	14	23	2	15	57	4	16
<b>42</b>	Barrow Subsistence Area 2	-	-	1	-	-	1	3	13	-	-	2	10	6	-	-	-	-	-	-	-	-	1	1	1	5	6
<b>45</b>	ERA 45	-	-	-	4	2	-	-	27	17	5	-	-	-	-	44	2	26	-	3	8	-	-	-	-	-	-
<b>46</b>	Herald Shoal Polynya	6	3	1	21	10	3	1	-	3	6	4	1	-	-	1	1	19	6	4	9	5	1	2	1	-	-
<b>47</b>	Ice/Sea Segment 10	10	6	2	21	30	9	2	1	1	4	10	5	1	-	1	-	18	1	10	28	6	4	7	6	1	2
<b>48</b>	Ice/Sea Segment 11	8	15	16	2	15	45	15	5	-	2	13	13	7	6	5	-	2	-	13	14	4	35	41	6	11	7
<b>49</b>	ERA 49	6	13	41	-	3	15	22	13	-	-	2	4	7	28	19	-	-	-	8	2	1	23	7	1	18	3
<b>50</b>	Ice/Sea Segment 13	3	6	5	1	6	16	12	5	-	1	11	40	12	2	1	-	1	-	5	2	10	50	14	9	18	-
<b>51</b>	Ice/Sea Segment 14	2	3	4	1	3	9	12	7	-	-	6	32	26	4	1	-	1	-	3	3	1	6	17	20	12	56
<b>52</b>	Ice/Sea Segment 15	5	7	4	5	21	27	5	1	-	5	25	14	3	1	2	-	6	-	9	27	10	8	24	11	3	5
<b>55</b>	Point Barrow, Plover Islands	-	-	-	-	-	1	7	-	-	1	5	3	-	-	-	-	-	-	-	-	-	1	2	3	-	-
<b>56</b>	ERA 56	9	16	23	2	11	43	42	15	-	2	18	59	29	14	9	-	3	-	12	10	4	34	65	30	31	34
<b>58</b>	Offshore Pt. Lay to Wainwright	8	9	7	23	38	26	11	4	9	58	85	64	11	3	2	6	22	25	11	61	82	12	58	75	8	19
<b>59</b>	Ostrov Kolyuchin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
<b>61</b>	ERA 61	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-
<b>63</b>	ERA 63	3	2	1	-	-	1	2	-	-	-	-	-	1	4	-	-	3	-	-	1	-	-	1	-	-	-
<b>64</b>	Pearl Bay Area	1	2	2	-	2	5	10	11	-	3	16	23	5	-	-	-	2	2	-	3	9	9	12	49	-	-
<b>65</b>	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>66</b>	Herald Island	1	1	-	1	1	1	1	-	-	-	1	1	-	-	-	1	-	1	1	-	1	1	-	1	-	1
<b>68</b>	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1
<b>69</b>	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
<b>70</b>	ERA 70	8	10	7	-	2	4	2	1	-	-	1	1	1	2	28	-	1	-	10	1	-	7	2	1	1	1
<b>74</b>	Offshore Herald Island	4	1	1	2	2	1	-	-	1	2	1	-	1	-	3	-	2	2	1	2	2	1	-	2	-	-
<b>82</b>	ERA 82	-	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-
<b>86</b>	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1
<b>87</b>	Colville River Delta	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-
<b>91</b>	Hope Sea Valley	2	-	-	3	1	-	-	-	1	1	1	-	-	-	-	1	3	1	1	1	1	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-36 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	5	5	6	14	13	11	18	38	31	35	33	33	41	21	3	40	13	35	5	17	45	7	19	45	24	49	
1	Kasegaluk Lagoon	-	-	-	3	5	1	-	-	2	13	17	5	-	1	-	1	3	7	-	8	34	-	3	9	-	-	
2	Point Barrow, Plover Islands	-	-	2	-	-	1	3	12	-	-	-	1	9	6	1	-	-	-	-	-	-	1	1	1	5	4	
3	ERA 3	-	-	-	2	-	-	-	-	7	3	-	-	-	-	-	7	1	4	-	-	1	-	-	-	-	-	
4	ERA 4	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
6	ERA 6	2	4	5	3	8	11	17	21	-	3	16	36	35	10	2	-	3	1	4	11	7	6	21	58	21	58	
7	US Russia Maritime Boundary	75	53	31	76	51	33	19	10	77	49	29	18	12	13	47	70	77	59	62	43	29	33	25	14	15	12	
10	Ledyard Bay SPEI Critical Habitat	1	-	1	8	8	3	1	-	11	42	29	4	-	1	-	11	6	39	1	11	56	1	4	6	-	-	
11	Wrangel Island 12 nmi buffer	2	2	1	1	1	1	-	-	-	-	-	-	-	-	-	2	-	2	1	1	1	-	-	-	-	-	
13	ERA 13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	5	3	1	-	-	-	-	14	-	4	-	-	1	-	-	-	-	-	
15	Cape Lisburne Seabird Colony	-	-	-	4	3	-	-	-	24	28	7	-	-	-	-	46	3	38	-	3	9	-	-	1	-	-	
16	ERA 16	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-	
17	Angun and Beaufort Lagoons	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
18	Murre Rearing & Molting Area	3	1	-	16	7	1	-	-	43	21	6	1	-	-	-	41	12	26	2	6	8	-	1	1	-	-	
19	Chukchi Spring Lead System	-	-	-	-	1	1	1	2	1	8	10	6	5	-	-	5	-	7	-	3	14	-	2	13	1	12	
23	Offshore Wrangel Island	1	1	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	-	-	-	-	
24	Beaufort Spring Lead 6	-	-	-	-	-	-	1	2	-	-	-	1	3	1	-	-	-	-	-	-	-	-	-	1	1	-	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	1	3	-	-	-	1	3	2	-	-	-	-	-	-	-	-	-	-	1	1	
26	Beaufort Spring Lead 8	-	1	3	-	-	2	4	3	-	-	1	2	3	4	1	-	-	-	-	-	-	-	2	2	1	4	1
27	Beaufort Spring Lead 9	-	1	2	-	-	2	4	3	-	-	1	2	2	4	1	-	-	-	-	-	-	-	2	2	1	3	1
29	Ice/Sea Segment 1	-	-	1	-	-	1	3	7	-	-	-	1	6	4	-	-	-	-	-	-	-	-	1	1	-	4	4
30	Ice/Sea Segment 2	-	-	1	-	-	1	2	3	-	-	-	1	3	-	-	-	-	-	-	-	-	1	1	-	2	-	
31	Ice/Sea Segment 3	-	-	1	-	-	1	2	3	-	-	-	1	3	-	-	-	-	-	-	-	-	1	1	-	2	-	
32	Ice/Sea Segment 4	-	-	-	-	-	1	1	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-	1	-	1	-	-
35	ERA 35	5	8	11	3	10	20	26	26	-	2	21	61	49	15	3	-	3	-	7	12	6	13	41	63	28	67	
36	ERA 36	5	4	3	17	26	11	4	1	5	34	48	18	3	1	1	2	17	13	6	44	53	5	18	23	3	5	
38	Point Hope Subsistence Area	-	-	-	2	1	-	-	-	8	7	2	-	-	-	-	20	1	11	-	2	4	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	4	5	2	1	-	2	18	19	3	-	1	-	2	3	10	-	7	44	1	3	5	-	-	
40	Wainwright Subsistence Area	1	1	1	5	9	6	3	3	1	9	23	26	7	1	-	1	5	4	2	14	23	2	15	57	4	16	
42	Barrow Subsistence Area 2	-	-	2	-	-	1	4	13	-	-	1	2	10	7	1	-	-	-	-	-	-	2	2	1	6	6	
45	ERA 45	-	-	-	4	2	-	-	27	17	5	-	-	-	-	44	2	26	-	3	8	-	-	-	-	-	-	
46	Herald Shoal Polynya	6	3	1	21	10	3	1	-	3	6	4	1	-	-	1	1	19	6	4	9	5	1	2	1	-	-	
47	Ice/Sea Segment 10	10	6	2	21	30	9	2	1	1	4	10	5	1	-	1	-	18	1	10	28	6	4	7	6	1	2	
48	Ice/Sea Segment 11	8	16	16	2	15	45	15	5	-	2	13	14	8	6	5	-	2	-	13	14	4	35	42	8	11	8	
49	ERA 49	6	14	41	-	4	16	23	13	-	-	3	5	8	28	19	-	-	8	3	1	23	8	2	18	4	-	
50	Ice/Sea Segment 13	3	6	5	1	6	16	12	5	-	1	11	40	12	2	1	-	1	-	5	5	2	10	50	15	9	18	
51	Ice/Sea Segment 14	2	3	4	1	3	9	12	7	-	-	6	32	26	4	1	-	1	-	3	3	1	6	17	20	12	56	
52	Ice/Sea Segment 15	5	7	4	5	21	27	5	1	-	5	25	14	3	1	2	-	6	-	9	27	10	8	24	11	3	5	
55	Point Barrow, Plover Islands	-	-	1	-	-	1	2	7	-	-	-	1	5	4	-	-	-	-	-	-	-	1	1	1	3	3	
56	ERA 56	9	16	23	2	11	43	42	15	-	2	18	59	29	14	9	-	3	-	12	10	4	34	65	30	31	34	
58	Offshore Pt. Lay to Wainwright	8	9	7	23	38	26	11	5	9	58	85	64	11	3	2	6	22	25	11	61	82	12	58	75	8	19	
59	Ostrov Kolyuchin	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	
61	ERA 61	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	
63	ERA 63	3	2	1	-	-	-	1	2	-	-	-	1	1	1	4	-	-	3	-	-	1	-	1	1	-	-	
64	Pearl Bay Area	1	2	3	-	3	6	12	14	-	-	3	17	25	7	1	-	-	2	2	-	4	10	10	14	50	-	
65	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-
66	Herald Island	1	1	-	1	1	1	-	-	-	-	1	1	-	-	-	1	-	1	1	-	1	1	-	1	-	1	
67	Herschel Island (Canada)	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
68	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	
69	Harrison Bay/Colville Delta	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
70	ERA 70	8	10	7	-	2	4	2	1	-	-	1	2	1	2	28	-	1	-	10	1	-	7	3	2	2	1	
74	Offshore Herald Island	4	1	1	2	2	2	1	-	-	-	1	2	1	-	1	-	3	-	2	2	1	2	2	1	-	2	
76	Kendall Isl. Bird Sanctuary (Ca)	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
79	Demarcation Bay Offshore	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	
82	ERA 82	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
86	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	
87	Colville River Delta	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
89	Mackenzie River Delta	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
91	Hope Sea Valley	2	-	-	3	1	-	-	-	1	1	1	-	-	-	-	1	3	1	1	1	-	-	-	-	-	-	
100	Jago and Tapkaurak Spits	-	-	-	-	-	-	1	2	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.3-37 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	
78	Point Collie, Sigekruk Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Table A.3-38 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	4	-	3	-	-	-	-	-	-	-	-	-
66	Ayugataki Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
71	Kukpuk River, Sitkok Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	7	-	-	-	-	-	-
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
75	Akeonik, Icy Cape	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-
76	Avak Inlet, Tunalik River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
78	Point Collie, Sigekruk Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	7	-	-	
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	3	-	1	
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	4
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	4
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	-	1	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-39 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11			
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
27	Laguna Nut, Rigol'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
28	Vankarem, Vankarem Laguna	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-			
30	Nutepynmin, Pyngopil'gyn	-	-	-	1	-	-	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-			
31	Alyatki, Zaliv Tasytkhin	-	-	-	1	-	-	-	-	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-			
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-			
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	2	1	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-			
34	Tepken, Memino	-	-	-	-	-	-	-	-	2	1	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-			
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	3	1	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-	-			
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	2	1	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-			
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	2	1	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-			
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	3	1	-	-	-	-	8	-	2	-	1	-	-	-	-	-	-	-			
65	Buckland, Cape Lisburne	-	-	-	1	-	-	-	-	3	2	1	-	-	-	6	-	4	-	1	-	-	-	-	-	-	-			
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	2	1	-	-	-	1	-	2	-	1	-	-	-	-	-	-	-			
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-			
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-			
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-			
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-			
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	2	2	-	-	-	-	2	-	3	-	-	-	-	-	-	-	-	-			
72	Point Lay, Siksirkpak Point	-	-	-	-	-	-	-	-	2	2	-	-	-	-	1	-	9	-	-	-	-	-	-	-	-	-			
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	2	2	-	-	-	-	1	-	1	7	-	-	1	-	-	-	-	-			
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	2	3	-	-	-	-	1	1	-	1	5	-	-	1	-	-	-	-			
75	Akeonik, Icy Cape	-	-	-	-	1	-	-	-	1	3	1	-	-	-	1	-	1	4	-	-	1	-	-	-	-	-			
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-			
77	Nivat Point, Nokotlek Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-			
78	Point Collie, Siegakruk Point	-	-	-	1	-	-	-	-	2	2	-	-	-	-	-	-	-	1	1	-	8	-	-	-	-	-			
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	2	4	1	-	-	-	-	-	-	1	-	2	10	-	1	-	-	-			
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	-	-	-	1	4	1	-	-	-	-	-	1	-	2	6	-	3	-	-	-	-			
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	1	2	-	3	-	-	-	-		
82	Skull Cliff	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	1	1	-	8	-		
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	1	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	-	1	6	-		
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	1	2	-	-	1	4	-	-	-	-	-	-	-	-	-	-	-	-	-	1	7	-		
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	1	6	-	-	1	8	1	-	-	-	-	-	-	-	-	-	-	-	-	3	4	-		
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
87	Igalik & Kulgurak Island	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-40 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11				
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-				
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
27	Laguna Nut, Rigo'l'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
28	Vankarem, Vankarem Laguna	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-				
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-				
30	Nutepynmin, Pyngopil'gyn	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-				
31	Alyatki, Zaliv Tasytkhin	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-				
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-				
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-				
34	Tepken, Memino	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-				
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-				
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-				
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-				
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	8	-	2	-	1	-	-	-	-	-	-	-			
65	Buckland, Cape Lisburne	-	-	-	1	-	-	-	-	3	3	1	-	-	-	-	6	1	5	-	1	1	-	-	-	-	-	-			
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	1	-	3	-	1	-	-	-	-	-	-	-			
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	2	-	1	-	-	-	-	-	-	-			
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-			
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-			
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-			
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	2	-	3	-	-	-	-	-	-	-	-			
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	2	-	9	-	1	-	-	-	-	-	-			
73	Tungaich Point, Tungak Creek	-	-	-	-	-	1	-	-	-	3	3	-	-	-	-	-	1	2	-	1	7	-	-	1	-	-	-			
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	3	3	-	-	-	-	-	1	1	-	2	6	-	-	1	-	-	-	-			
75	Akeonik, Icy Cape	-	-	-	1	1	-	-	-	2	4	1	-	-	-	-	1	-	2	5	-	1	1	-	-	-	-	-			
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-			
77	Nivat Point, Nokotlek Point	-	-	-	1	-	-	-	-	1	2	1	-	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-			
78	Point Collie, Sigekrak Point	-	-	-	1	-	-	-	-	-	2	2	-	-	-	-	-	-	1	1	-	1	8	-	1	-	-	-			
79	Point Belcher, Wainwright	-	-	-	1	1	1	1	-	-	2	5	1	-	-	-	-	-	2	1	-	2	11	1	1	-	-	-			
80	Eluksingiak Point, Kugrua Bay	-	-	-	1	1	1	1	-	-	2	5	2	-	-	-	-	-	1	-	1	4	7	1	4	-	-	-			
81	Pearl Bay, Point Franklin	-	-	-	-	-	1	-	-	-	1	3	2	-	-	-	-	-	1	-	-	2	3	1	4	-	-	-			
82	Skull Cliff	-	-	-	-	-	1	1	1	-	1	3	3	-	-	-	-	-	-	-	-	-	1	2	1	10	-	-	-		
83	Nulavik, Loran Radio Station	-	-	-	-	-	1	1	1	-	-	2	3	-	-	-	-	-	-	-	-	-	1	-	1	7	-	-	-		
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	2	3	-	-	2	5	1	-	-	-	-	-	-	-	-	1	-	2	8	-	-	-		
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	-	3	8	-	-	1	10	2	-	-	-	-	-	-	-	-	-	-	-	-	5	6	-	-	
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	-	1	3	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-41 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11						
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-						
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
27	Laguna Nut, Rigo'l'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
28	Vankarem, Vankarem Laguna	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-						
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-						
30	Nutepynmin, Pyngopil'gyn	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-						
31	Alyatki, Zaliv Tasytkhin	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-						
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-						
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-						
34	Tepken, Memino	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-						
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-						
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-						
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-						
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-						
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	8	-	2	-	1	-	-	-	-	-	-	-					
65	Buckland, Cape Lisburne	-	-	-	1	1	-	-	-	3	3	1	-	-	-	-	6	1	5	-	1	2	-	-	-	-	-	-					
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	1	-	3	-	-	1	-	-	-	-	-	-					
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	2	-	-	1	-	-	-	-	-	-					
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-					
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-					
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-					
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	2	-	3	-	-	-	-	-	-	-	-					
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	2	-	9	-	1	-	-	-	-	-	-					
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	3	3	-	-	-	-	-	1	2	-	1	7	-	-	1	-	-	-	-					
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	3	3	-	-	-	-	-	1	2	-	2	6	-	-	1	-	-	-	-					
75	Akeonik, Icy Cape	-	-	-	1	1	-	-	-	2	4	1	-	-	-	-	1	-	2	6	-	1	1	-	-	-	-	-					
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-					
77	Nivat Point, Nokotlek Point	-	-	-	1	-	-	-	-	1	2	1	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-	-					
78	Point Collie, Sigekrak Point	-	-	-	1	-	-	-	-	2	2	-	-	-	-	-	-	2	1	-	1	9	-	1	-	-	-	-					
79	Point Belcher, Wainwright	-	-	-	1	1	1	1	1	-	3	5	1	-	-	-	1	-	2	1	-	3	11	1	1	-	-	-					
80	Eluksingiak Point, Kugrua Bay	-	-	-	1	2	1	1	-	2	6	3	-	-	-	-	-	1	-	1	4	8	1	5	-	-	-	-					
81	Peard Bay, Point Franklin	-	-	-	-	1	1	-	-	1	4	2	-	-	-	-	-	1	-	-	2	3	1	4	-	-	-	-					
82	Skull Cliff	-	-	-	-	-	1	1	1	-	1	3	3	-	-	-	-	-	-	-	-	-	1	2	1	10	-	-	-				
83	Nulavik, Loran Radio Station	-	-	-	-	-	1	1	1	-	-	2	3	-	-	-	-	-	-	-	-	-	1	1	2	7	-	-	-				
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	1	2	3	-	-	2	6	1	-	-	-	-	-	-	-	-	1	1	1	3	8	-	-				
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	1	4	9	-	-	2	11	3	-	-	-	-	-	-	-	-	-	1	1	1	6	7	-	-			
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	1	3	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-			
87	Igalik & Kulgurak Island	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
90	Drew & McLeod Point, Kolovik	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
94	Fish Creek, Tingmeachsiovik River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-42 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11									
7	Kosa Bruch	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-									
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
10	Bukhta Davidova	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1									
12	Bukhta Predatel'skaya	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-									
15	Billings, Laguna Adtaynung	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
24	LS 24	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
27	Laguna Nut, Rigol'	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
28	Vankarem, Vankarem Laguna	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-									
29	Mys Onman, Vel'may	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-									
30	Nutepynmin, Pyngopil'gyn	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-									
31	Alyatki, Zaliv Tasytikhin	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-									
32	Mys Dzhenretlen, Eynenekvyl	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-									
33	Neskan, Laguna Neskan	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-									
34	Tepken, Memino	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-									
35	Enurmino, Mys Neten	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-									
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-									
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-									
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-									
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-									
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	8	-	2	-	1	-	-	-	-	-	-	-								
65	Buckland, Cape Lisburne	-	-	-	1	1	-	-	-	3	3	1	-	-	-	-	6	1	5	-	1	2	-	-	-	-	-	-								
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	1	-	3	-	-	1	-	-	-	-	-	-								
67	Cape Sabine, Pitmegea River	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	2	-	-	1	-	-	-	-	-	-								
68	Agiak Lagoon, Punuk Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-								
69	Cape Beaufort, Omalik Lagoon	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-								
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-								
71	Kukpowruk River, Sitsok Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	2	-	-	3	-	-	-	-	-	-	-								
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	2	-	-	9	-	1	-	-	-	-	-								
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	-	3	3	-	-	-	-	-	1	2	-	1	7	-	-	1	-	-	-								
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	-	3	3	-	-	-	-	-	1	2	-	2	6	-	-	1	-	-	-								
75	Akeonik, Icy Cape	-	-	-	1	1	-	-	-	-	2	4	1	-	-	-	-	1	-	-	2	6	-	1	1	-	-	-								
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-								
77	Nivat Point, Nokotek Point	-	-	-	-	1	-	-	-	-	1	2	1	-	-	-	-	-	-	1	1	-	2	-	-	-	-	-	-							
78	Point Collie, Siegakruk Point	-	-	-	-	1	-	-	-	-	-	2	2	-	-	-	-	-	-	2	1	-	1	9	-	1	-	-	-							
79	Point Belcher, Wainwright	-	-	-	1	1	1	1	1	-	-	3	5	1	-	-	-	1	-	-	2	1	-	3	11	1	1	-	-							
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	2	1	1	-	-	2	6	3	-	-	-	-	-	1	-	1	4	8	1	5	-	-	-							
81	Pearl Bay, Point Franklin	-	-	-	-	-	1	1	-	-	-	1	4	2	-	-	-	-	-	-	1	-	-	2	3	1	4	-	-	-						
82	Skull Cliff	-	-	-	-	-	-	1	1	1	-	-	1	3	3	-	-	-	-	-	-	-	-	-	-	1	2	1	10	-	-	-				
83	Nulavik, Loran Radio Station	-	-	-	-	-	1	1	1	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	7	-	-	-				
84	Will Rogers & Wiley Post Mem.	-	-	1	-	-	1	2	3	-	-	2	6	2	-	-	-	-	-	-	-	-	-	-	-	1	1	1	3	8	-	-	-			
85	Barrow, Browerville, Elson Lag.	-	1	2	-	-	2	6	12	-	-	3	13	6	1	-	-	1	-	-	1	-	-	1	1	1	8	8	-	-	-	-	-			
86	Dease Inlet, Plover Islands	-	-	-	-	-	1	3	-	-	-	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-		
87	Igalik & Kulgurak Island	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
88	Cape Simpson, Piasuk River	-	-	1	-	-	-	2	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
90	Drew & McLeod Point, Kolovik	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
92	Cape Halkett, Garry Creek	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
94	Fish Creek, Tingmeachiovik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Table A.3-43 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11							
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
134	Cape Lisburne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-
143	United States Chukchi Coast	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	4	-	2	-	8	-	-	3	-	3	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-44 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	1	1	-	-	-	-	4	-	3	-	-	-	-	-	-	-	-	-
134	Cape Lisburne	-	-	-	-	-	-	-	-	1	2	-	-	-	-	4	-	4	-	-	-	-	-	-	-	-	-
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	1	2	2	-	-	-	-	-	-	-	-	-	-	4	-	12
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
141	Russia Chukchi Coast	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
143	United States Chukchi Coast	-	-	-	-	-	-	-	-	2	6	7	4	3	-	-	10	-	7	-	1	19	-	-	14	-	16
144	United States Beaufort Coast	-	-	-	-	-	-	-	1	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	2

**Table A.3-45 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
129	Ostrov Idlidya	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-	-
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	1	-	-	-	-	3	2	1	-	-	-	-	7	-	4	-	-	1	-	-	-	-	-
134	Cape Lisburne	-	-	-	1	-	-	-	-	4	5	2	-	-	-	-	7	1	8	-	1	2	-	-	-	-	-
135	National Petroleum Reserve Alaska	-	-	-	-	1	1	2	5	-	1	4	10	9	1	-	-	-	-	2	2	-	5	12	2	21	
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	1	2	-	-	3	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
141	Russia Chukchi Coast	3	2	-	8	2	-	-	-	21	6	1	-	-	-	-	21	6	10	2	1	1	1	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	2	1	-	7	2	-	-	-	20	6	1	-	-	-	-	20	5	10	1	1	1	1	-	-	-	-
143	United States Chukchi Coast	-	-	-	3	5	2	2	3	9	20	22	18	11	-	-	17	3	19	-	9	35	-	9	33	3	29
144	United States Beaufort Coast	-	-	-	-	-	-	2	9	-	-	1	10	2	-	-	-	-	-	-	-	-	-	-	-	3	5

**Table A.3-46 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
129	Ostrov Idlidya	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-	-
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	6	1	2	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	1	-	-	-	-	3	3	1	-	-	-	-	7	1	5	-	1	1	-	-	-	-	-
134	Cape Lisburne	-	-	-	1	1	-	-	-	4	6	2	-	-	-	-	7	1	9	-	1	3	-	-	-	-	-
135	National Petroleum Reserve Alaska	-	1	1	1	3	4	4	10	-	1	7	15	14	4	-	-	-	-	1	4	3	1	9	16	6	27
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	1	-	-	-	-	1	3	1	-	-	-	-	-	-	2	3	-	-	3	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-
141	Russia Chukchi Coast	3	2	1	8	3	1	-	-	21	7	1	-	-	-	-	1	21	7	11	2	1	2	1	-	-	-
142	Russia Chukchi Coast Marine Mammals	2	2	1	7	2	1	-	-	20	7	1	-	-	-	-	1	20	5	10	2	1	1	1	-	-	-
143	United States Chukchi Coast	1	1	1	5	9	6	5	6	10	26	29	26	16	1	-	18	4	23	2	14	42	3	15	39	7	35
144	United States Beaufort Coast	-	-	1	-	-	1	4	15	-	-	2	14	6	-	-	-	-	-	-	-	-	-	-	1	7	7

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-47 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
127	Mys Blossom	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
129	Ostrov Idlidya	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-	-	
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	6	1	2	-	-	-	-	-	-	-	-	
133	Alaska Maritime Wildlife Refuge	-	-	-	1	1	-	-	-	3	3	1	-	-	-	-	7	1	5	-	1	2	-	-	-	-	-	
134	Cape Lisburne	-	-	-	1	1	-	-	-	4	6	2	-	-	-	-	8	1	9	-	1	4	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	1	2	1	3	4	6	12	-	1	7	17	15	6	1	-	1	-	1	4	3	2	10	18	8	28	
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	1	-	-	-	-	1	3	1	-	-	-	-	-	-	2	3	-	-	3	-	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	1	2	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	-
141	Russia Chukchi Coast	3	2	1	8	3	1	1	1	21	7	1	-	1	1	1	22	7	11	2	1	2	1	1	-	1	-	-
142	Russia Chukchi Coast Marine Mammals	2	2	1	7	2	1	1	1	20	7	2	-	1	1	1	20	6	10	2	1	2	1	1	-	1	-	-
143	United States Chukchi Coast	1	1	2	6	10	7	7	8	10	27	30	28	18	3	-	18	6	23	2	15	43	3	16	42	8	37	-
144	United States Beaufort Coast	-	-	2	-	-	1	6	17	-	-	-	3	16	8	1	-	-	-	-	-	1	1	2	10	9	-	-

**Table A.3-48 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
127	Mys Blossom	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
129	Ostrov Idlidya	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-	-	
130	Mys Serditse Kamen	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	6	1	2	-	-	-	-	-	-	-	-	
133	Alaska Maritime Wildlife Refuge	-	-	-	1	1	-	-	-	3	3	1	-	-	-	-	7	1	5	-	1	2	-	-	-	-	-	
134	Cape Lisburne	-	-	-	1	1	-	-	-	4	6	2	-	-	-	-	8	1	9	-	1	4	-	-	-	-	-	
135	National Petroleum Reserve Alaska	1	1	2	1	3	5	7	14	-	2	7	17	16	8	1	-	1	1	1	4	4	3	11	18	9	29	
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	1	-	-	-	-	1	3	1	-	-	-	-	-	-	2	3	-	1	3	-	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	1	4	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	-	2	1	
141	Russia Chukchi Coast	3	2	1	8	3	1	1	4	21	7	1	-	2	2	1	22	7	11	2	1	2	1	1	-	1	1	
142	Russia Chukchi Coast Marine Mammals	2	2	1	7	2	1	2	7	20	7	2	1	4	5	1	20	6	10	2	1	2	1	1	-	3	2	
143	United States Chukchi Coast	1	1	2	6	10	7	7	8	10	27	31	28	18	3	1	18	6	23	2	15	43	3	16	42	9	37	
144	United States Beaufort Coast	-	1	3	-	-	2	9	23	-	-	1	4	20	13	1	-	-	1	-	-	2	2	2	13	11	-	-

**Table A.3-49 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
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Notes –All rows have all values less than 0.5 percent and are not shown

**Table A.3-50 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
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Notes –All rows have all values less than 0.5 percent and are not shown

Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-51 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	-	-	-	-
17	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
18	Chukchi Sea	-	1	1	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	1	-	-	-	
19	Chukchi Sea	-	-	1	-	-	1	1	-	-	-	-	-	-	1	2	-	-	-	-	1	-	-	1	-	-	
20	Chukchi Sea	-	-	1	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	
22	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	

**Table A.3-52 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
16	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	1	-	-	1	-	-	-	-
17	Chukchi Sea	1	1	1	-	-	1	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	1	-	-	-	-
18	Chukchi Sea	1	3	4	-	1	3	3	1	-	1	1	1	1	3	5	-	-	2	1	1	4	2	-	3	1	
19	Chukchi Sea	1	2	3	-	1	2	3	2	-	-	1	1	2	3	3	-	-	1	1	-	3	2	-	3	1	
20	Chukchi Sea	1	1	1	-	-	1	1	-	-	-	-	-	-	-	2	-	-	1	-	-	1	-	-	-	-	
21	Chukchi Sea	-	-	1	-	-	1	1	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	
22	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
23	Beaufort Sea	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
24	Beaufort Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	
25	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
26	Beaufort Sea	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	
27	Beaufort Sea	-	-	-	-	-	-	-	-	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	-	2	
28	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
30	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Table A.3-53 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	
16	Chukchi Sea	2	2	2	-	-	1	-	1	-	-	-	-	-	1	1	4	-	-	2	-	-	1	-	-	1	
17	Chukchi Sea	1	2	3	-	1	2	1	-	-	-	-	-	-	1	-	1	3	-	-	2	1	-	3	1	1	
18	Chukchi Sea	3	7	10	1	5	9	10	5	-	3	7	7	6	9	9	-	1	1	5	6	5	9	9	5	6	
19	Chukchi Sea	3	6	9	1	4	7	12	6	-	3	5	9	8	9	8	-	1	1	4	5	5	8	7	7	13	
20	Chukchi Sea	4	7	7	1	5	7	6	3	-	1	4	6	4	5	7	-	1	-	6	4	2	7	8	6	5	
21	Chukchi Sea	1	1	3	-	-	1	2	2	-	-	1	1	2	4	4	-	-	1	-	-	3	1	1	2	1	
22	Chukchi Sea	-	-	1	-	-	1	1	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	1	
23	Beaufort Sea	-	1	3	-	-	1	3	2	-	-	-	-	-	1	3	2	-	-	-	-	-	2	-	-	3	1
24	Beaufort Sea	-	-	1	-	-	1	1	-	-	-	-	-	-	1	2	1	-	-	-	-	-	-	-	1	-	
25	Beaufort Sea	-	1	-	-	1	1	1	1	-	-	1	2	1	1	-	-	-	-	-	-	-	1	2	2	1	
26	Beaufort Sea	-	1	2	-	-	2	3	2	-	-	-	1	2	1	1	-	-	-	-	-	-	2	1	-	3	2
27	Beaufort Sea	-	-	1	-	-	-	1	1	-	-	-	-	-	1	2	-	-	-	-	-	-	-	1	-	2	
28	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
30	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-54 Summer Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Chukchi Sea	2	2	2	-	-	1	-	1	-	-	-	-	-	1	1	4	-	-	2	-	-	1	-	-	1	-
17	Chukchi Sea	1	2	3	-	1	2	2	-	-	-	1	2	1	1	3	-	-	2	1	1	3	2	2	1	1	
18	Chukchi Sea	4	8	11	1	5	10	12	7	-	3	7	8	7	10	9	-	1	1	6	6	5	11	9	5	11	
19	Chukchi Sea	3	7	9	2	5	8	12	6	-	3	6	9	8	9	8	-	1	1	5	5	5	9	8	8	13	
20	Chukchi Sea	5	7	7	1	5	7	6	4	-	1	4	7	5	6	7	-	1	-	6	5	2	7	8	6	7	
21	Chukchi Sea	1	1	4	-	-	1	2	2	-	-	1	1	2	4	4	-	-	1	-	3	1	1	2	1		
22	Chukchi Sea	-	-	1	-	-	-	1	1	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	1	1	
23	Beaufort Sea	-	1	3	-	-	1	3	2	-	-	-	-	1	3	2	-	-	-	-	-	2	-	-	3	1	
24	Beaufort Sea	-	-	1	-	-	-	1	1	-	-	-	-	1	2	1	-	-	-	-	-	1	-	-	1	1	
25	Beaufort Sea	-	1	-	-	1	1	1	1	-	-	1	2	1	1	-	-	-	-	-	-	1	2	2	1	1	
26	Beaufort Sea	-	1	2	-	-	2	3	2	-	-	-	1	2	1	1	-	-	-	-	-	2	1	-	3	2	
27	Beaufort Sea	-	-	1	-	-	-	1	1	-	-	-	-	1	2	-	-	-	-	-	-	1	-	-	2	-	
28	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
30	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
31	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
34	Beaufort Sea	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-
35	Beaufort Sea	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Table A.3-55 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	7	-	-	1	-	1	
1	Kasegaluk Lagoon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	ERA 6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	-	7	
7	US Russia Maritime Boundary	34	-	-	37	-	-	-	-	41	1	-	-	-	-	3	30	39	2	4	-	-	-	-	-	-	-	-
10	Ledyard Bay SPEI Critical Habitat	-	-	-	-	-	-	-	-	-	3	3	-	-	-	-	-	-	3	-	-	7	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	4	-	3	-	-	-	-	-	-	-	-	
19	Chukchi Spring Lead System	-	-	-	-	-	-	-	-	-	5	7	1	1	-	-	4	-	5	-	-	14	-	-	10	-	12	
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	3	-	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	21	-	-	-	-	-	
40	Wainwright Subsistence Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	26	-	-	
41	Barrow Subsistence Area 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
45	ERA 45	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	5	-	3	-	-	-	-	-	-	-	-	
46	Herald Shoal Polynya	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
47	Ice/Sea Segment 10	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
48	Ice/Sea Segment 11	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	4	-	-	-	-	
50	Ice/Sea Segment 13	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	
51	Ice/Sea Segment 14	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	
52	Ice/Sea Segment 15	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	
58	Offshore Pt. Lay to Wainwright	-	-	-	-	1	-	-	-	-	6	11	7	-	-	-	-	-	-	-	-	5	11	-	4	9	-	
64	Pearl Bay Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-56 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	-	-	-	-	-	-	-	-	3	4	4	1	1	-	-	4	-	2	-	-	14	-	-	4	-	5	
1	Kasegaluk Lagoon	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
6	ERA 6	-	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	9	-	9	
7	US Russia Maritime Boundary	52	7	-	57	3	-	-	-	73	9	-	-	-	-	10	66	60	21	17	1	-	-	-	-	-	-	-
10	Ledyard Bay SPEI Critical Habitat	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-	-	-	4	-	-	7	-	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	5	-	4	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	-	-	-	-	-	-	-	-	6	1	-	-	-	-	-	6	-	1	-	-	-	-	-	-	-	-	
19	Chukchi Spring Lead System	-	-	-	-	-	-	-	1	-	9	9	3	3	-	-	4	-	7	-	1	17	-	-	14	-	14	
24	Beaufort Spring Lead 6	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	7	-	4	-	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	-	-	-	-	-	7	7	-	-	-	-	-	4	-	1	27	-	-	-	-	-	-		
40	Wainwright Subsistence Area	-	-	-	-	-	-	-	-	2	3	2	-	-	-	-	-	-	-	8	-	-	29	-	1	-		
41	Barrow Subsistence Area 1	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
45	ERA 45	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	9	-	4	-	-	-	-	-	-	-	-	
46	Herald Shoal Polynya	1	-	-	5	-	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	-	-	
47	Ice/Sea Segment 10	-	-	-	2	3	-	-	-	-	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-	-	-	
48	Ice/Sea Segment 11	-	1	1	-	1	6	1	-	-	1	1	-	-	-	-	-	-	-	1	-	4	6	-	-	-	-	
50	Ice/Sea Segment 13	-	-	-	-	-	-	-	-	-	1	5	-	-	-	-	-	-	-	-	-	-	5	1	-	1	-	
51	Ice/Sea Segment 14	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	8	
52	Ice/Sea Segment 15	-	-	-	-	2	2	-	-	-	3	1	-	-	-	-	-	-	-	3	1	-	2	1	-	-	-	
58	Offshore Pt. Lay to Wainwright	-	-	-	-	2	1	-	-	8	14	9	-	-	-	-	1	-	8	14	-	6	12	-	1	-		
64	Peard Bay Area	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-57 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
--	LAND	7	1	-	17	2	-	-	1	44	19	9	3	2	-	-	48	15	24	2	2	21	-	1	12	-	7
1	Kasegaluk Lagoon	-	-	-	-	1	-	-	-	3	2	-	-	-	-	-	-	1	-	1	5	-	-	-	-	-	-
4	ERA 4	-	-	-	-	-	-	-	-	5	-	-	-	-	-	-	7	-	1	-	-	-	-	-	-	-	-
6	ERA 6	-	-	-	-	-	-	-	1	-	-	1	4	3	-	-	-	-	-	-	1	1	-	1	15	-	11
7	US Russia Maritime Boundary	62	20	3	66	11	3	1	-	85	21	3	-	-	-	20	82	70	42	31	7	3	4	1	-	-	-
10	Ledyard Bay SPEI Critical Habitat	-	-	-	-	-	-	-	-	5	3	-	-	-	-	-	-	5	-	-	7	-	-	-	-	-	-
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	3	4	1	-	-	-	-	6	-	6	-	-	-	-	-	-	-	-
16	ERA 16	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
18	Murre Rearing and Molting Area	-	-	-	2	-	-	-	-	12	4	-	-	-	-	-	12	1	7	-	-	-	-	-	-	-	-
19	Chukchi Spring Lead System	-	-	-	1	3	1	-	2	2	16	14	8	5	-	-	6	2	14	-	5	23	-	3	23	-	16
24	Beaufort Spring Lead 6	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
25	Beaufort Spring Lead 7	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	2	1	-	-	-	-	-	9	-	5	-	-	-	-	-	-	-	-	-
39	Point Lay Subsistence Area	-	-	-	1	2	-	-	-	1	16	11	1	-	-	-	1	2	13	-	2	32	-	-	-	-	-
40	Wainwright Subsistence Area	-	-	-	1	2	-	-	-	7	8	6	-	-	-	-	1	4	-	2	14	-	1	38	-	2	
41	Barrow Subsistence Area 1	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	1	-	9
45	ERA 45	-	-	-	-	-	-	-	7	2	-	-	-	-	-	12	-	6	-	-	-	-	-	-	-	-	-
46	Herald Shoal Polynya	3	-	-	9	1	-	-	-	2	-	-	-	-	-	-	1	9	1	-	-	-	-	-	-	-	-
47	Ice/Sea Segment 10	1	1	-	3	5	1	-	-	1	1	-	-	-	-	-	2	-	1	5	1	-	1	-	-	-	-
48	Ice/Sea Segment 11	1	3	3	-	3	9	4	-	1	4	4	2	-	1	-	-	2	3	2	7	10	2	2	2	-	-
50	Ice/Sea Segment 13	-	-	-	-	-	1	1	-	-	1	7	2	-	-	-	-	-	-	-	-	1	7	3	-	6	-
51	Ice/Sea Segment 14	-	-	-	-	-	-	-	-	-	4	3	-	-	-	-	-	-	-	-	-	-	-	1	2	-	9
52	Ice/Sea Segment 15	1	1	1	-	4	5	-	-	2	7	3	-	-	-	-	-	2	6	3	1	5	3	-	-	-	-
58	Offshore Pt. Lay to Wainwright	1	1	1	3	8	4	-	-	1	12	18	13	1	-	-	-	3	4	2	13	19	1	9	18	-	4
61	ERA 61	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-
64	Peard Bay Area	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	2	-	6

**Notes** - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-58 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
--	LAND	9	3	-	21	6	2	1	3	46	27	15	10	5	-	-	50	19	34	4	6	28	1	4	23	1	11
1	Kasegaluk Lagoon	-	-	-	1	2	-	-	-	1	5	4	1	-	-	-	-	1	3	-	2	8	-	1	1	-	-
2	Point Barrow, Plover Islands	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4	ERA 4	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	7	-	1	-	-	-	-	-	-	-	-
6	ERA 6	-	-	1	1	2	2	1	3	-	1	4	9	5	1	-	-	-	1	3	2	1	4	22	1	14	
7	US Russia Maritime Boundary	66	26	8	70	19	8	3	1	87	28	10	3	2	3	26	84	73	48	38	15	11	9	6	2	3	1
10	Ledyard Bay SPEI Critical Habitat	-	-	-	1	1	-	-	-	1	7	4	-	-	-	-	1	1	7	-	1	9	-	-	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	-	-	-	-	-	3	5	1	-	-	-	-	7	-	8	-	1	1	-	-	1	-	
16	ERA 16	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	-	-	-	3	-	-	-	-	12	6	1	-	-	-	-	13	2	9	-	-	1	-	-	-	-	
19	Chukchi Spring Lead System	-	-	1	4	6	2	1	3	4	21	19	14	7	-	-	7	4	19	1	9	27	1	6	28	1	19
24	Beaufort Spring Lead 6	-	-	-	-	-	-	2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	10	-	6	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	-	-	-	3	4	1	-	-	2	21	13	1	-	-	-	1	3	17	-	4	35	-	1	2	-	
40	Wainwright Subsistence Area	-	-	-	3	4	1	-	-	1	10	12	11	1	-	-	1	3	7	-	5	19	-	4	46	-	4
41	Barrow Subsistence Area 1	-	-	-	-	-	-	1	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	2	-	9	
45	ERA 45	-	-	-	-	-	-	-	7	4	1	-	-	-	-	13	-	8	-	1	1	-	-	-	-	-	
46	Herald Shoal Polynya	3	-	-	9	1	-	-	-	2	1	-	-	-	-	-	1	10	2	-	1	1	-	-	-	-	
47	Ice/Sea Segment 10	2	2	1	3	7	2	1	-	-	2	3	1	-	-	-	-	2	-	2	7	2	2	1	-	-	
48	Ice/Sea Segment 11	2	6	7	1	5	13	8	3	-	2	7	8	6	2	3	-	1	1	5	6	4	10	14	4	7	6
49	ERA 49	-	-	1	-	-	-	1	1	-	-	-	-	-	-	2	1	-	-	-	-	-	1	-	-	1	
50	Ice/Sea Segment 13	1	2	1	-	1	3	3	1	-	-	2	10	4	-	-	-	-	-	2	1	-	3	9	6	2	9
51	Ice/Sea Segment 14	-	1	1	-	1	2	1	1	-	-	1	7	4	-	-	-	-	-	1	1	-	1	4	6	1	12
52	Ice/Sea Segment 15	2	3	2	1	8	8	2	-	-	4	10	6	2	-	-	-	1	1	4	10	6	4	10	5	1	2
58	Offshore Pt. Lay to Wainwright	2	3	1	8	15	7	2	1	1	16	23	20	4	-	-	-	7	7	4	19	23	3	14	24	1	10
61	ERA 61	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
64	Peard Bay Area	-	-	1	-	-	1	1	2	-	-	1	3	3	-	-	-	-	-	-	1	-	1	2	4	1	8
70	ERA 70	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	1	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-59 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
--	LAND	11	6	4	26	14	7	7	11	48	36	25	23	16	6	3	52	24	43	8	15	38	5	12	40	8	25	
1	Kasegaluk Lagoon	-	-	-	5	6	1	-	-	1	10	8	2	-	-	-	1	4	7	1	6	13	-	2	3	-	-	
2	Point Barrow, Plover Islands	1	2	2	-	1	2	3	4	-	-	1	2	4	3	2	-	-	-	2	1	-	2	2	3	3	-	
4	ERA 4	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	7	-	1	-	-	-	-	-	-	-	-	
6	ERA 6	1	2	2	3	7	5	5	7	1	5	11	19	14	3	1	-	2	2	2	9	9	3	10	30	6	26	
7	US Russia Maritime Boundary	72	38	22	76	35	24	16	10	89	39	25	16	12	13	37	87	79	56	49	31	23	23	21	12	15	12	
10	Ledyard Bay SPEI Critical Habitat	-	-	-	3	3	-	-	-	2	10	6	1	-	-	-	1	3	10	-	3	13	-	1	1	-	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	1	1	-	-	-	4	7	2	1	-	-	-	9	-	10	-	1	2	-	-	1	-	-	
16	ERA 16	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	-	-	-	3	1	-	-	-	13	7	1	-	-	-	-	14	2	10	-	-	1	-	-	-	-	-	
19	Chukchi Spring Lead System	1	1	1	7	10	3	2	4	5	26	23	21	11	1	-	10	6	25	1	13	31	1	9	35	2	27	
24	Beaufort Spring Lead 6	-	-	-	-	-	1	2	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	1	1	2	-	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	1	2	-	-	-	1	2	1	-	-	-	-	-	-	-	-	-	-	1	1	2
26	Beaufort Spring Lead 8	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
27	Beaufort Spring Lead 9	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	Ice/Sea Segment 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	1	-
30	Ice/Sea Segment 2	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
31	Ice/Sea Segment 3	-	1	1	-	-	1	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
32	Ice/Sea Segment 4	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	ERA 35	3	5	4	1	4	6	6	5	-	1	3	6	6	4	2	-	1	-	4	4	1	5	6	6	6	7	
36	ERA 36	1	2	1	2	4	3	2	-	-	2	3	3	2	-	1	-	1	1	3	5	3	2	3	4	1	3	
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	11	-	7	-	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	1	-	-	6	7	1	-	-	3	25	16	3	-	-	-	2	6	21	1	7	39	-	2	3	-	-	
40	Wainwright Subsistence Area	1	1	-	6	9	2	1	1	2	15	18	17	2	-	-	1	6	10	1	11	26	1	7	52	1	7	
41	Barrow Subsistence Area 1	-	-	-	-	-	-	2	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	3	-	12	-	
42	Barrow Subsistence Area 2	2	2	3	-	1	2	3	2	-	-	1	2	2	3	3	-	1	-	2	1	-	2	2	2	3	1	
45	ERA 45	-	-	-	1	-	-	-	-	8	5	1	-	-	-	-	16	-	10	-	1	1	-	-	1	-	-	
46	Herald Shoal Polynya	3	-	-	10	2	-	-	-	2	2	1	-	-	-	-	1	10	2	-	1	1	-	-	-	-	-	
47	Ice/Sea Segment 10	3	4	2	5	10	5	2	-	-	4	6	5	1	-	2	-	3	2	4	10	5	4	6	5	1	2	
48	Ice/Sea Segment 11	7	13	14	3	12	21	18	10	2	7	14	19	16	8	9	1	3	4	12	13	10	18	23	14	16	18	
49	ERA 49	2	5	9	1	3	6	9	11	-	1	3	3	8	11	8	-	1	-	4	3	2	7	4	2	9	5	
50	Ice/Sea Segment 13	3	5	3	2	6	7	6	3	-	3	7	15	8	1	2	-	2	1	5	6	4	5	13	12	5	14	
51	Ice/Sea Segment 14	1	2	2	1	4	4	4	3	-	2	5	13	8	2	1	-	1	1	2	4	3	3	8	13	4	18	
52	Ice/Sea Segment 15	6	10	8	4	15	16	8	4	1	8	17	16	8	3	4	1	4	4	10	17	11	11	19	14	7	11	
55	Point Barrow, Plover Islands	1	2	2	-	1	2	2	1	-	-	1	1	1	2	2	-	-	2	1	-	2	2	1	2	1	-	
56	ERA 56	4	7	8	1	4	8	10	7	-	1	3	7	8	6	6	-	1	1	6	4	2	9	7	6	10	8	
58	Offshore Pt. Lay to Wainwright	6	9	5	13	25	16	8	4	3	24	32	30	9	2	2	2	11	13	11	30	31	9	23	35	6	18	
61	ERA 61	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	-	
63	ERA 63	1	1	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-	-	-	
64	Peard Bay Area	-	1	2	1	2	3	4	5	-	1	4	9	9	2	-	-	1	1	3	2	2	5	10	4	17		
65	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
66	Herald Island	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
70	ERA 70	1	3	3	-	2	3	3	3	-	1	2	2	3	2	2	-	-	1	2	2	2	3	3	1	3	2	
74	Offshore Herald Island	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	1	-	-	1	-	-	1	-	-	1	-	
87	Colville River Delta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-60 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Environmental Resource Area Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
--	LAND	12	8	6	27	17	9	9	15	48	39	27	26	19	8	4	53	25	44	9	18	41	7	14	42	10	28
1	Kasegaluk Lagoon	-	-	-	5	6	1	-	-	2	10	8	2	-	-	1	4	7	1	6	13	-	2	3	-	-	
2	Point Barrow, Plover Islands	2	3	3	1	2	3	3	6	-	1	2	3	5	4	3	-	1	1	3	2	1	3	3	3	4	
4	ERA 4	-	-	-	-	-	-	-	5	1	-	-	-	-	-	7	-	1	-	-	-	-	-	-	-	-	
6	ERA 6	1	2	2	3	7	5	5	8	1	5	11	19	15	3	1	-	2	3	2	9	9	3	10	31	6	26
7	US Russia Maritime Boundary	72	40	24	77	36	26	18	12	89	41	28	20	15	14	38	87	79	57	50	33	26	25	25	15	17	16
10	Ledyard Bay SPEI Critical Habitat	-	-	-	3	3	-	-	-	2	11	6	1	-	-	-	1	3	10	-	3	13	-	1	1	-	
14	Cape Thompson Seabird Colony Area	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
15	Cape Lisburne Seabird Colony Area	-	-	-	1	1	-	-	-	4	7	2	1	-	-	-	9	-	10	-	1	2	-	-	1	-	
16	ERA 16	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
18	Murre Rearing and Molting Area	-	-	-	3	1	-	-	-	13	7	1	-	-	-	-	14	2	10	-	-	1	-	-	-	-	
19	Chukchi Spring Lead System	1	1	1	7	10	3	2	4	5	26	23	21	12	1	-	10	6	25	1	13	31	1	9	35	3	27
24	Beaufort Spring Lead 6	-	-	-	-	-	1	3	-	-	1	3	1	-	-	-	-	-	-	-	-	-	-	1	1	2	
25	Beaufort Spring Lead 7	-	-	-	-	-	-	1	3	-	-	-	1	3	1	-	-	-	-	-	-	-	-	-	1	1	
26	Beaufort Spring Lead 8	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	
27	Beaufort Spring Lead 9	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
28	Beaufort Spring Lead 10	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
29	Ice/Sea Segment 1	-	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-	1	1
30	Ice/Sea Segment 2	-	1	1	-	-	1	1	1	-	-	-	-	1	1	-	-	-	1	-	-	1	1	-	1	-	
31	Ice/Sea Segment 3	-	1	1	-	-	1	1	1	-	-	-	-	1	1	-	-	-	1	-	-	1	1	-	1	-	
32	Ice/Sea Segment 4	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
35	ERA 35	3	5	5	2	5	7	7	5	-	2	4	7	7	4	3	-	1	1	5	5	2	6	7	7	8	
36	ERA 36	1	2	1	2	4	3	2	-	-	2	4	4	2	-	1	-	2	1	3	5	3	2	3	5	1	4
38	Point Hope Subsistence Area	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	11	-	7	-	-	-	-	-	-	-	
39	Point Lay Subsistence Area	1	-	-	6	7	1	-	-	3	25	16	3	-	-	-	2	6	21	1	7	39	-	2	3	-	
40	Wainwright Subsistence Area	1	1	-	6	9	2	1	1	2	15	18	17	2	-	-	1	6	10	1	11	26	1	7	52	1	7
41	Barrow Subsistence Area 1	-	-	-	-	-	-	2	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	3	-	12	
42	Barrow Subsistence Area 2	2	3	3	1	2	3	4	3	-	1	2	3	3	4	3	-	1	1	3	2	2	3	3	4	3	
45	ERA 45	-	-	-	-	1	-	-	-	8	5	1	-	-	-	-	16	-	10	-	1	1	-	-	1	-	
46	Herald Shoal Polynya	3	-	-	10	2	-	-	-	2	2	1	-	-	-	-	1	10	2	-	1	2	-	-	-	-	
47	Ice/Sea Segment 10	3	4	2	5	11	5	2	-	-	5	7	5	1	-	2	-	3	2	4	10	6	4	6	6	1	2
48	Ice/Sea Segment 11	7	13	15	4	13	22	18	11	2	8	15	21	17	8	9	1	3	4	12	14	12	18	25	16	17	19
49	ERA 49	3	6	10	2	4	7	10	13	-	2	4	5	10	12	8	-	1	1	5	4	3	8	6	3	10	
50	Ice/Sea Segment 13	3	5	3	2	6	7	6	3	-	3	7	16	8	1	2	-	2	2	5	6	4	5	14	13	5	14
51	Ice/Sea Segment 14	1	2	2	1	4	4	4	4	-	2	5	13	9	2	1	-	1	1	2	5	3	3	8	14	5	19
52	Ice/Sea Segment 15	6	10	8	5	16	16	8	5	1	9	18	17	8	3	4	1	4	4	10	17	12	11	19	17	7	12
55	Point Barrow, Plover Islands	2	3	3	1	2	3	3	2	-	1	2	2	2	3	3	-	1	-	3	2	1	3	3	2	3	1
56	ERA 56	4	8	9	2	6	9	11	8	-	3	5	8	10	7	6	-	2	2	7	5	4	9	8	7	11	10
58	Offshore Pt. Lay to Wainwright	6	9	5	13	26	16	8	4	3	25	33	31	10	2	2	2	11	13	11	30	32	9	24	37	6	19
61	ERA 61	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	4	-	1	-	-	-	-	-	-	-	
63	ERA 63	1	1	1	-	1	1	1	1	-	1	1	1	1	1	1	-	-	1	1	-	1	1	-	1	2	
64	Peard Bay Area	-	1	2	1	2	3	4	5	-	1	4	9	10	2	-	-	1	1	1	3	3	2	6	11	4	18
65	Smith Bay	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
66	Herald Island	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
68	Harrison Bay	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
69	Harrison Bay/Colville Delta	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	
70	ERA 70	1	3	3	-	3	3	3	3	-	2	3	3	3	2	2	-	1	2	3	2	3	1	3	3		
74	Offshore Herald Island	-	1	1	-	-	1	1	-	-	-	1	-	-	1	-	-	1	-	-	1	-	-	-	-	-	
86	Harrison Bay	-	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	
87	Colville River Delta	-	-	-	-	-	-	1	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-61 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-

**Table A.3-62 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
71	Kukpowruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	5	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-
75	Akeonik, Icy Cape	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
78	Point Collie, Sigekruk Point	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
80	Eluksingiaq Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-63 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
23	Emuem, Tenkergin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
24	LS 24	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
25	Laguna Amguema, Yulinu	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-
26	Ekugvaam, Kepin, Pil'khin	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
27	Laguna Nut, Rigol'	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
28	Vankarem, Vankarem Laguna	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
29	Mys Onman, Vel'may	-	-	-	2	-	-	-	-	2	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	2	-	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-
31	Alyatki, Zaliv Tasytkhin	-	-	-	2	-	-	-	-	3	-	-	-	-	-	-	-	2	1	1	-	-	-	-	-	-	-
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	-	4	1	1	-	-	-	-	-	-	-
34	Tepken, Memino	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-
35	Enurmino, Mys Neten	-	-	-	-	1	-	-	-	6	1	-	-	-	-	-	-	6	-	1	-	-	-	-	-	-	-
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
66	Ayugatak Lagoon	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-
72	Point Lay, Siksriksak Point	-	-	-	-	-	-	-	-	-	3	2	-	-	-	-	-	-	2	-	6	-	-	-	-	-	-
73	Tungaich Point, Tungak Creek	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	2	-	6	-	-	-	-	-	-
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	1	-	1	5	-	-	-	-	-
75	Akeonik, Icy Cape	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	2	-	-	-	-	-	-
78	Point Collie, Siegapruk Point	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	5	-	-	-	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-
81	Peard Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
82	Skull Cliff	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-64 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
7	Kosa Bruch	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	
23	Emuem, Tenkergin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
24	LS 24	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
25	Laguna Amguema, Yulinu	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	
26	Ekugvaam, Kepin, Pil'khin	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	
27	Laguna Nut, Rigol'	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	
28	Vankarem, Vankarem Laguna	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	
29	Mys Onman, Vel'may	-	-	-	2	-	-	-	-	2	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	3	1	-	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-	
31	Alyatki, Zaliv Tasytkhin	-	-	-	2	-	-	-	-	3	1	-	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-	
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	3	1	1	-	-	-	-	-	-	-	
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-	
34	Tepken, Memino	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	
35	Enurmino, Mys Neten	-	-	-	1	-	-	-	-	6	1	-	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-	
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-	
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
71	Kukpuk River, Sitkok Point	-	-	-	-	-	-	-	-	-	3	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-
72	Point Lay, Siksrikpak Point	-	-	-	-	-	-	-	-	-	4	2	-	-	-	-	-	-	3	-	6	-	-	-	-	-	-	-
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	-	4	2	-	-	-	-	-	1	3	-	1	7	-	-	-	-	-	
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	1	-	-	-	-	3	2	-	-	-	-	-	1	2	-	1	6	-	-	-	-	-	
75	Akeonik, Icy Cape	-	-	-	1	1	-	-	-	-	2	2	-	-	-	-	-	1	1	-	1	3	-	1	-	-	-	
76	Avak Inlet, Tunaliq River	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
78	Point Collie, Siegakruk Point	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	1	-	5	-	-	-	-	-
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	-	-	-	1	-	1	7	-	1	-	-
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	1	5	-	1	-	
81	Pearl Bay, Point Franklin	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	
82	Skull Cliff	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	
83	Nulavik, Loran Radio Station	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1	-	2	
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	-	-	1	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	4	
85	Barrow, Browerville, Elson Lag.	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	1	

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-65 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11		
7	Kosa Bruch	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-		
23	Emuem, Tenkergin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-		
24	LS 24	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-		
25	Laguna Amguema, Yulinu	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-		
26	Ekugvaam, Kepin, Pil'khin	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-		
27	Laguna Nut, Rigol'	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-		
28	Vankarem, Vankarem Laguna	1	-	-	2	-	-	-	-	1	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-		
29	Mys Onman, Vel'may	-	-	-	2	-	-	-	-	2	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-		
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	3	1	-	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-		
31	Alyatki, Zaliv Tasytkhin	-	-	-	2	-	-	-	-	3	1	-	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-		
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	-	3	1	2	-	-	-	-	-	-	-		
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-		
34	Tepken, Memino	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-		
35	Enurmino, Mys Neten	-	-	-	1	-	-	-	-	6	1	-	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-		
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-		
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-		
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-		
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-		
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-		
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-		
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	-	4	-	2	-	-	-	-	-	-		
72	Point Lay, Siksrikpak Point	-	-	-	1	1	-	-	-	1	4	2	-	-	-	-	-	1	4	-	1	7	-	-	-	-	-		
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	1	5	3	-	-	-	-	-	1	4	-	1	7	-	-	-	-	-		
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	2	-	-	-	-	4	3	-	-	-	-	-	2	3	-	2	7	-	-	1	-	-		
75	Akeonik, Icy Cape	-	-	-	2	2	-	-	-	-	3	3	1	-	-	-	-	1	2	-	2	4	-	1	1	-	-		
76	Avak Inlet, Tunaliq River	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-		
77	Nivat Point, Nokotlek Point	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-		
78	Point Collie, Sigekrak Point	-	-	-	-	1	-	-	-	-	1	1	2	-	-	-	-	-	-	1	2	-	1	7	-	-	-	-	
79	Point Belcher, Wainwright	-	-	-	-	-	-	-	-	-	1	1	3	-	-	-	-	-	1	-	1	1	-	1	9	-	1		
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	-	-	-	-	1	2	4	1	-	-	-	-	1	1	-	2	9	-	2	-	-		
81	Pearl Bay, Point Franklin	-	-	-	-	1	1	-	-	-	1	1	1	-	-	-	-	-	-	1	1	-	1	2	-	1	-	-	
82	Skull Cliff	-	-	-	-	1	1	-	1	-	1	2	1	-	-	-	-	-	-	1	1	-	1	3	-	3	-	-	
83	Nulavik, Loran Radio Station	-	-	-	-	-	1	-	1	-	1	2	2	-	-	-	-	-	-	-	-	-	-	1	1	1	4	-	
84	Will Rogers & Wiley Post Mem.	-	-	-	-	-	-	1	2	-	-	2	3	1	-	-	-	-	-	-	-	-	-	-	1	1	1	6	-
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	1	2	5	-	-	2	6	2	-	-	-	-	-	-	-	-	-	-	1	1	1	3	5
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	1	1	-	-	1	1	1	1	-	-	-	-	-	-	-	-	-	1	1	1	2	-
87	Igalik & Kulgurak Island	1	1	2	-	-	1	1	1	-	-	-	1	1	1	-	-	-	1	-	2	1	-	1	-	-	-	-	
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-66 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Land Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11				
7	Kosa Bruch	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
8	E. Wrangel Island, Skeletov	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-				
23	Emuem, Tenkergin	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-				
24	LS 24	1	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-				
25	Laguna Amguema, Yulinu	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-				
26	Ekugvaam, Kepin, Pil'khin	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-				
27	Laguna Nut, Rigol'	1	-	-	1	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-				
28	Vankarem, Vankarem Laguna	1	-	-	2	-	-	-	-	1	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-				
29	Mys Onman, Vel'may	-	-	-	2	-	-	-	-	2	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-				
30	Nutepynmin, Pyngopil'gyn	-	-	-	2	-	-	-	-	3	1	-	-	-	-	-	2	2	2	-	-	-	-	-	-	-	-				
31	Alyatki, Zaliv Tasytkhin	-	-	-	2	-	-	-	-	3	1	-	-	-	-	-	2	1	2	-	-	-	-	-	-	-	-				
32	Mys Dzhenretlen, Eynenekvyk	-	-	-	1	-	-	-	-	3	1	-	-	-	-	-	3	1	2	-	-	-	-	-	-	-	-				
33	Neskan, Laguna Neskan	-	-	-	1	-	-	-	-	4	1	-	-	-	-	-	4	1	2	-	-	-	-	-	-	-	-				
34	Tepken, Memino	-	-	-	1	-	-	-	-	5	1	-	-	-	-	-	5	-	2	-	-	-	-	-	-	-	-				
35	Enurmino, Mys Neten	-	-	-	1	-	-	-	-	6	1	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-	-				
36	Mys Serdtse-Kamen	-	-	-	-	-	-	-	-	5	1	-	-	-	-	-	6	-	2	-	-	-	-	-	-	-	-				
37	Chegitun, Utkan	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	5	-	1	-	-	-	-	-	-	-	-				
38	Enmytagyn, Inchoun, Mitkulen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-				
39	Cape Dezhnev, Naukan, Uelen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
64	Kukpuk River, Point Hope	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	3	-	1	-	-	-	-	-	-	-	-				
65	Buckland, Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-				
70	Kuchaurak and Kuchiak Creek	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-				
71	Kukpovruk River, Sitkok Point	-	-	-	-	-	-	-	-	-	4	1	-	-	-	-	-	4	-	2	-	-	-	-	-	-	-				
72	Point Lay, Siksrikpak Point	-	-	-	1	1	-	-	-	1	4	2	-	-	-	-	1	4	-	1	7	-	-	-	-	-	-				
73	Tungaich Point, Tungak Creek	-	-	-	1	1	-	-	-	1	5	3	-	-	-	-	1	4	-	1	7	-	-	-	-	-	-				
74	Kasegaluk Lagoon, Solivik Isl.	-	-	-	1	2	-	-	-	-	4	3	-	-	-	-	-	2	3	-	2	7	-	-	1	-	-				
75	Akeonik, Icy Cape	-	-	-	2	2	-	-	-	-	3	3	1	-	-	-	-	1	2	-	2	4	-	1	1	-	-				
76	Avak Inlet, Tunaliq River	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	1	1	-	-	1	-	-	-	-				
77	Nivat Point, Nokotlek Point	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-				
78	Point Collie, Sigekrak Point	-	-	-	-	1	-	-	-	-	1	1	2	-	-	-	-	-	-	1	2	-	1	7	-	-	-	-			
79	Point Belcher, Wainwright	-	-	-	-	1	-	-	-	-	1	1	3	-	-	-	-	1	-	1	1	-	1	9	-	1	-	-			
80	Eluksingiak Point, Kugrua Bay	-	-	-	-	1	-	-	-	-	1	2	4	1	-	-	-	1	-	1	1	-	2	9	-	2	-	-			
81	Pearl Bay, Point Franklin	-	-	-	-	1	1	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	1	1	-	1	2	-			
82	Skull Cliff	-	-	-	-	1	1	-	1	-	1	2	1	-	-	-	-	-	-	-	-	-	1	1	-	1	3	-			
83	Nulavik, Loran Radio Station	-	-	-	-	1	1	1	-	-	1	2	2	-	-	-	-	-	-	-	-	-	-	1	2	1	4	-	-		
84	Will Rogers & Wiley Post Mem.	-	-	-	-	1	1	2	-	-	2	3	1	-	-	-	-	-	-	-	-	-	-	1	1	1	6	-	-		
85	Barrow, Browerville, Elson Lag.	-	-	1	-	-	1	2	5	-	-	3	6	2	-	-	-	-	-	-	-	-	-	-	1	1	2	3	6	-	
86	Dease Inlet, Plover Islands	-	-	-	-	-	-	1	1	1	-	-	1	2	1	1	-	-	-	-	-	-	-	-	1	1	1	2	-	-	
87	Igalik & Kulgurak Island	2	2	2	1	1	2	2	1	-	-	1	1	1	2	2	-	1	-	2	1	1	2	2	1	1	1	1	-	-	
88	Cape Simpson, Piasuk River	-	-	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
91	Lonely, Pitt Pt., Pogik Bay, Smith R	-	-	-	-	-	-	-	-	-	1	-	1	1	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	-	1
94	Fish Creek, Tingmeachsvik River	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	1

**Table A.3-67 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
134	Cape Lisburne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
143	United States Chukchi Coast	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	-	-	-	-	7	-	-	1	-	1

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-68 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
134	Cape Lisburne	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2
141	Russia Chukchi Coast	-	-	-	-	-	-	-	-	2	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
143	United States Chukchi Coast	-	-	-	-	-	-	-	-	1	4	4	1	1	-	2	-	2	-	14	-	-	4	-	5	-	

**Table A.3-69 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
130	Mys Serditse Kamen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	
134	Cape Lisburne	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	1	-	-	-	-	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	1	-	4	-	3
141	Russia Chukchi Coast	5	-	-	13	-	-	-	-	35	5	-	-	-	-	-	38	11	11	1	-	-	-	-	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	3	1	-	4	-	-	-	-	8	1	-	-	-	-	8	4	3	1	-	-	-	-	-	-	-	-	
143	United States Chukchi Coast	-	-	-	1	1	-	-	-	2	13	9	3	2	-	4	1	10	-	2	21	-	1	12	-	7	-	
144	United States Beaufort Coast	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	

**Table A.3-70 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
130	Mys Serditse Kamen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-	-	
134	Cape Lisburne	-	-	-	-	-	-	-	-	1	1	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-	-	
135	National Petroleum Reserve Alaska	-	-	-	-	1	1	-	1	-	1	2	4	2	-	-	-	-	-	-	1	1	-	2	8	-	5	
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	
141	Russia Chukchi Coast	6	1	-	14	1	-	-	-	36	7	-	-	-	-	38	12	15	2	-	-	-	-	-	-	-	-	-
142	Russia Chukchi Coast Marine Mammals	3	1	-	5	1	1	-	-	8	2	1	-	-	-	9	4	4	2	1	1	-	-	-	-	-	-	
143	United States Chukchi Coast	-	-	-	3	4	1	-	1	3	19	14	9	3	-	5	3	16	-	5	27	-	4	23	1	10	-	
144	United States Beaufort Coast	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	2	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-71 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
130	Mys Serditse Kamen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-
134	Cape Lisburne	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	2	-	3	-	-	1	-	-	-	-	-
135	National Petroleum Reserve Alaska	2	3	3	2	4	4	4	5	-	3	6	11	6	3	2	-	1	1	3	5	5	3	7	18	3	12
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	1	1	-	-	-	-	1	2	1	-	-	-	-	-	-	1	2	-	-	1	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
141	Russia Chukchi Coast	7	2	-	14	1	-	-	-	36	7	-	-	-	-	-	38	12	15	3	-	-	-	-	-	-	
142	Russia Chukchi Coast Marine Mammals	3	1	-	5	1	1	-	-	8	2	1	-	-	-	-	9	5	4	2	1	1	-	1	-	-	
143	United States Chukchi Coast	1	1	1	8	11	4	3	3	5	27	23	19	7	1	-	7	7	24	2	13	37	2	9	37	3	17
144	United States Beaufort Coast	1	2	3	-	1	2	4	8	-	-	1	4	8	5	2	-	-	-	2	1	-	3	3	3	5	8

**Table A.3-72 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Group of Land Segments Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segments Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
130	Mys Serditse Kamen	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	2	-	1	-	-	-	-	-	-	-	-
133	Alaska Maritime Wildlife Refuge	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	2	-	2	-	-	-	-	-	-	-	-
134	Cape Lisburne	-	-	-	-	-	-	-	-	1	2	-	-	-	-	-	2	-	3	-	-	1	-	-	-	-	-
135	National Petroleum Reserve Alaska	3	4	4	3	7	6	5	7	1	5	8	13	8	5	3	-	2	3	4	7	7	5	8	20	5	14
136	Kasegaluk Lagoon Special Area (NPR-A)	-	-	-	1	1	-	-	-	-	1	2	1	-	-	-	-	-	-	1	2	-	-	1	-	-	
137	Teshekpul Lake Special Area (NPR-A)	-	-	-	1	1	1	1	2	-	1	1	1	1	1	-	-	-	1	-	1	1	-	1	-	1	
141	Russia Chukchi Coast	7	2	-	14	1	-	-	-	36	7	1	-	-	-	-	38	12	15	3	-	-	-	-	-	-	
142	Russia Chukchi Coast Marine Mammals	3	1	-	5	1	1	-	1	8	2	1	-	-	-	-	9	5	4	2	1	1	-	1	1	-	
143	United States Chukchi Coast	1	1	1	8	11	4	3	4	5	28	23	19	8	1	-	7	7	25	2	13	37	2	9	38	3	17
144	United States Beaufort Coast	2	4	4	1	3	4	6	11	-	2	3	6	11	7	3	-	1	1	3	3	2	4	5	4	7	10

**Table A.3-73 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 3 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
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Notes –All rows have all values less than 0.5 percent and are not shown

**Table A.3-74 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 10 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
18	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	

Notes –All rows have all values less than 0.5 percent and are not shown

**Notes - \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown**

Appendix A

**Table A.3-75 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 30 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
16	Chukchi Sea	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-
17	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
18	Chukchi Sea	1	3	4	-	1	2	2	1	-	-	1	-	-	3	5	-	-	2	2	1	4	1	-	2	-	
19	Chukchi Sea	1	3	4	-	1	2	2	1	-	-	1	-	1	4	6	-	-	2	1	-	3	1	-	2	-	
20	Chukchi Sea	1	2	3	-	1	1	1	1	-	-	-	-	-	4	3	-	-	1	-	-	2	-	-	1	-	
21	Chukchi Sea	-	-	1	-	-	-	-	-	-	-	-	-	-	2	1	-	-	-	-	-	-	-	-	-	-	-
22	Chukchi Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
23	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
24	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
25	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-

**Table A.3-76 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 60 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
15	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	1	-	-	-	-	-	-	-	-	
16	Chukchi Sea	1	1	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	1	-	-	-	-	-	
17	Chukchi Sea	1	2	1	-	1	1	-	-	-	-	-	-	-	-	2	-	-	1	-	-	1	-	-	-	-	-	
18	Chukchi Sea	1	1	1	-	-	-	-	-	-	-	-	-	-	-	1	2	-	1	1	6	5	3	10	7	1	6	3
19	Chukchi Sea	4	8	10	1	5	8	7	4	-	2	5	3	4	7	12	-	1	1	9	5	2	11	5	1	7	4	
20	Chukchi Sea	6	11	12	1	6	9	9	4	-	2	3	3	5	9	13	-	-	4	3	1	7	4	1	6	2		
21	Chukchi Sea	2	5	8	-	4	5	6	5	-	1	2	2	3	9	6	-	-	1	1	-	2	1	-	2	1		
22	Chukchi Sea	-	1	2	-	1	1	2	2	-	-	-	-	1	3	2	-	-	-	-	-	-	1	-	-	1	-	
23	Beaufort Sea	-	-	1	-	-	1	1	2	-	-	-	-	1	3	-	-	-	-	-	-	-	-	-	-	-	1	
24	Beaufort Sea	-	-	-	-	-	-	1	1	-	-	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	1	
25	Beaufort Sea	-	-	-	-	-	-	1	1	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	
26	Beaufort Sea	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Table A.3-77 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 180 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11
2	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-
15	Chukchi Sea	1	1	1	-	1	1	-	-	-	-	-	-	-	-	2	1	-	-	1	-	-	1	1	-	-	-
16	Chukchi Sea	3	3	3	1	2	2	2	1	-	1	2	1	2	1	4	3	-	1	-	4	2	1	3	2	1	2
17	Chukchi Sea	2	3	2	1	2	2	1	1	-	1	1	1	1	2	3	2	-	1	1	3	2	1	2	1	1	1
18	Chukchi Sea	6	10	12	3	8	10	9	5	1	4	7	6	6	9	14	6	-	3	2	9	8	6	11	9	3	8
19	Chukchi Sea	10	17	18	4	13	16	17	10	1	7	9	10	11	15	19	10	-	4	4	15	12	7	17	13	5	16
20	Chukchi Sea	5	10	12	1	8	11	12	10	-	4	6	7	9	14	10	5	-	1	1	9	8	5	12	9	5	12
21	Chukchi Sea	1	2	3	-	2	2	3	3	-	1	2	2	2	4	3	1	-	-	2	2	1	2	2	1	3	
22	Chukchi Sea	-	-	2	-	-	1	1	2	-	-	1	1	1	3	-	-	-	-	-	-	-	1	1	1	1	2
23	Beaufort Sea	-	-	1	-	-	1	1	2	-	-	-	-	2	3	1	-	-	-	-	-	-	-	1	-	-	2
24	Beaufort Sea	-	-	-	-	-	-	1	2	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	1
25	Beaufort Sea	-	-	-	-	-	-	-	2	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	1
26	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	1
27	Beaufort Sea	-	-	1	-	-	-	1	1	-	-	-	-	1	1	1	-	-	-	1	-	-	1	1	-	-	-
28	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
29	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-78 Winter Conditional Probabilities (Expressed as Percent Chance) that a Large Oil Spill Starting at a Particular Location Will Contact a Certain Boundary Segment Within 360 Days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	LA 1	LA 2	LA 3	LA 4	LA 5	LA 6	LA 7	LA 8	LA 9	LA 10	LA 11	LA 12	LA 13	LA 14	LA 15	PL 1	PL 2	PL 3	PL 4	PL 5	PL 6	PL 7	PL 8	PL 9	PL 10	PL 11	
<b>2</b>	Bering Strait	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>14</b>	Chukchi Sea	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	
<b>15</b>	Chukchi Sea	1	1	1	-	1	1	-	-	-	-	-	-	-	-	2	-	-	-	1	-	-	1	1	-	-	-	
<b>16</b>	Chukchi Sea	3	3	3	1	2	2	2	1	-	1	2	1	2	1	4	-	1	1	4	2	1	3	2	1	2	2	
<b>17</b>	Chukchi Sea	2	3	2	1	2	2	2	1	-	1	2	2	1	2	4	-	1	1	3	2	1	2	2	1	1	1	
<b>18</b>	Chukchi Sea	7	12	13	3	8	11	10	6	1	4	8	6	6	10	15	-	3	2	10	8	6	13	10	4	9	5	
<b>19</b>	Chukchi Sea	10	17	18	4	13	17	17	10	1	7	10	10	12	16	19	-	4	4	15	12	7	18	14	6	17	10	
<b>20</b>	Chukchi Sea	5	10	13	1	9	11	12	10	-	4	6	7	9	14	10	-	1	2	9	8	5	12	9	5	12	8	
<b>21</b>	Chukchi Sea	1	2	3	-	2	2	3	3	-	1	2	2	2	4	3	-	-	2	3	1	2	2	2	3	2	2	
<b>22</b>	Chukchi Sea	-	1	2	-	1	1	2	3	-	-	1	1	2	4	1	-	-	-	1	1	1	1	1	2	1	1	
<b>23</b>	Beaufort Sea	1	1	2	1	1	2	3	4	-	1	1	1	3	4	2	-	-	1	1	1	2	1	1	3	2	2	
<b>24</b>	Beaufort Sea	-	-	1	-	-	1	2	3	-	-	-	1	2	2	1	-	-	-	-	-	-	1	-	2	1	1	
<b>25</b>	Beaufort Sea	-	-	-	-	-	-	-	2	-	-	-	-	-	1	1	-	-	-	-	-	-	1	1	1	-	-	
<b>26</b>	Beaufort Sea	-	-	-	-	-	-	-	1	1	1	-	-	-	1	1	1	-	-	-	-	-	-	1	1	-	1	1
<b>27</b>	Beaufort Sea	-	-	-	1	-	-	1	1	2	-	-	-	1	2	1	1	-	-	1	-	-	1	1	-	-	-	
<b>28</b>	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>29</b>	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<b>30</b>	Beaufort Sea	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

**Notes -** \*\* = Greater than 99.5 percent; - = less than 0.5 percent; LA = Launch Area, PL = Pipeline. Rows with all values less than 0.5 percent are not shown

Appendix A

**Table A.3-79. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Environmental Resources Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Chukchi Sea Sales 212, 221**

ID	Environmental Resource Area Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
	Land	1	0.01	3	0.03	8	0.08	10	0.11	13	0.14	14	0.15
1	Kasegaluk Lagoon	-	0.00	1	0.01	3	0.03	3	0.03	4	0.04	4	0.04
2	Point Barrow-Plover Islands	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
6	ERA 6	1	0.01	1	0.01	3	0.03	4	0.04	6	0.06	6	0.06
7	US Russia Maritime Boundary	2	0.02	5	0.05	11	0.11	13	0.14	16	0.18	17	0.19
10	Ledyard Bay SPEI Critical Habitat Area	3	0.03	4	0.04	5	0.05	6	0.06	6	0.06	6	0.06
15	Cape Lisburne Seabird Colony Area	1	0.01	1	0.01	2	0.02	2	0.02	3	0.03	3	0.03
18	Murre Rearing and Molting Area	-	0.00	-	0.00	2	0.02	2	0.03	3	0.03	3	0.03
19	Chukchi Spring Lead System	2	0.02	3	0.03	5	0.05	6	0.06	7	0.07	7	0.07
35	ERA 35	2	0.02	2	0.02	3	0.03	4	0.04	5	0.05	5	0.05
36	ERA 36	3	0.03	4	0.04	5	0.05	6	0.06	7	0.07	7	0.07
38	Point Hope Subsistence Area	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
39	Point Lay Subsistence Area	2	0.02	4	0.04	5	0.05	6	0.06	7	0.07	7	0.07
40	Wainwright Subsistence Area	1	0.01	3	0.03	5	0.05	6	0.07	8	0.08	8	0.08
42	Barrow Subsistence Area 2	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
45	ERA 45	-	0.00	1	0.01	2	0.02	2	0.02	2	0.02	2	0.02
46	Herald Shoal Polynya	-	0.00	-	0.00	1	0.01	2	0.02	2	0.02	2	0.02
47	Ice/Sea Segment 10	1	0.01	1	0.01	2	0.02	3	0.03	4	0.04	4	0.04
48	Ice/Sea Segment 11	1	0.01	1	0.01	3	0.03	4	0.04	6	0.06	6	0.06
49	ERA 49	-	0.00	-	0.00	-	0.00	1	0.01	2	0.02	2	0.02
50	Ice/Sea Segment 13	1	0.01	1	0.01	2	0.02	2	0.02	4	0.04	4	0.04
51	Ice/Sea Segment 14	-	0.00	1	0.01	1	0.01	2	0.02	3	0.03	3	0.03
52	Ice/Sea Segment 15	1	0.01	2	0.02	3	0.03	4	0.04	6	0.06	6	0.07
55	Point Barrow-Plover Islands	-	0.00	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01
56	ERA 56	1	0.01	2	0.02	3	0.03	3	0.03	5	0.05	5	0.05
58	Offshore Pt. Lay to Wainwright	8	0.09	10	0.11	13	0.14	14	0.15	16	0.18	17	0.18
64	Peard Bay Area	-	0.00	-	0.00	1	0.01	1	0.01	2	0.02	2	0.02
70	ERA 70	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01

Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

**Table A.2-80. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Land Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Chukchi Sea Sales 212, 221**

ID	Land Segment Name Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
71	Kukpowruk River, Sitkok Point	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
72	Point Lay, Siksrikpak Point	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
73	Tungaich Point, Tungak Creek	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01	1	0.01
74	Kasegaluk Lagoon, Solivik Isl.	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
75	Akeonik, Icy Cape	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
78	Point Collie, Sigeakruk Point	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
79	Point Belcher, Wainwright	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
80	Eluksingiak Point, Kugrua Bay	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01

Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

Notes - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown

## Appendix A

**Table A.2-81. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Seasonal Land Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Chukchi Sea Sales 212, 221**

ID	Seasonal Land Segment Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
72	Point Lay, Siksikpak Point	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
74	Kasegaluk Lagoon, Solivik Isl.	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
80	Eluksingiak Point, Kugrua Bay	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01

**Notes** - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

**Table A.2-82. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Grouped Land Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Chukchi Sea Sales 212, 221**

ID	Grouped Land Segment Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
134	Cape Lisburne	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01
135	National Petroleum Reserve Alaska	-	0.00	-	0.01	1	0.01	2	0.02	3	0.03	3	0.04
136	Kasegaluk Lagoon Special Area (NPR-A)	-	0.00	-	0.01	-	0.00	-	0.00	1	0.01	1	0.01
141	Russia Chukchi Coast	-	0.00	-	0.00	2	0.02	2	0.02	2	0.02	2	0.02
142	Russia Chukchi Coast Marine Mammals	-	0.00	-	0.00	1	0.01	1	0.01	1	0.01	1	0.01
143	United States Chukchi Coast	1	0.01	3	0.03	6	0.06	8	0.09	11	0.11	11	0.11
144	United States Beaufort Coast	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01

**Notes** - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

**Table A.2-83. Probabilities (Expressed As Percent Chance) Of One Or More Spills Greater than Or Equal To 1,000 Barrels, And The Estimated Number Of Spills (Mean), Occurring And Contacting A Certain Boundary Segment Over The Assumed Production Life Of The Lease Area, within 3, 10, 30, 60, 180 or 360 days, Chukchi Sea Sales 212, 221**

ID	Boundary Segment Name	3 days		10 days		30 days		60 days		180 days		360 days	
		%	mean	%	mean	%	mean	%	mean	%	mean	%	mean
17	Chukchi Sea	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01
18	Chukchi Sea	-	0.00	-	0.00	-	0.00	1	0.01	3	0.03	3	0.03
19	Chukchi Sea	-	0.00	-	0.00	-	0.00	1	0.01	4	0.04	4	0.04
20	Chukchi Sea	-	0.00	-	0.00	-	0.00	1	0.01	2	0.03	3	0.03
21	Chukchi Sea	-	0.00	-	0.00	-	0.00	-	0.00	1	0.01	1	0.01

**Notes** - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown.

**Notes** - % = Percent, \*\* = Greater than 99.5 percent; - = less than 0.5 percent; Rows with all values less than 0.5 percent are not shown





