Appendix C

Drilling Activities in the Alaskan OCS & Canadian Arctic

C.0 DRILLING ACTIVITIES IN THE ALASKAN OCS & CANADIAN ARCTIC

Numerous exploratory drilling activities have been conducted in the Alaskan OCS, as summarized in the following Figure C-1. Table C-1, below, provides a listing of historical exploratory well data for the Beaufort and Chukchi Seas, as well as the Navarin Basin, Norton Sound, and St. George Basin of the Bering Sea.

An overview of annual drilling activity in the Canadian Beaufort Sea is provided in the following Table C-2 per the exploratory drilling structure or method utilized. Figure C-2 and Figure C-3 graphically present exploratory well locations for the Canadian Beaufort Sea and Arctic Islands, respectively.

Exploratory Drilling by Sale Area

Area	Wells Drilled
Beaufort Sea	31
Chukchi Sea	4
Norton Sound	6
Navarin Basin	8
St. George Basin	10
Cook Inlet	13
Gulf of Alaska	12
Total	**84**

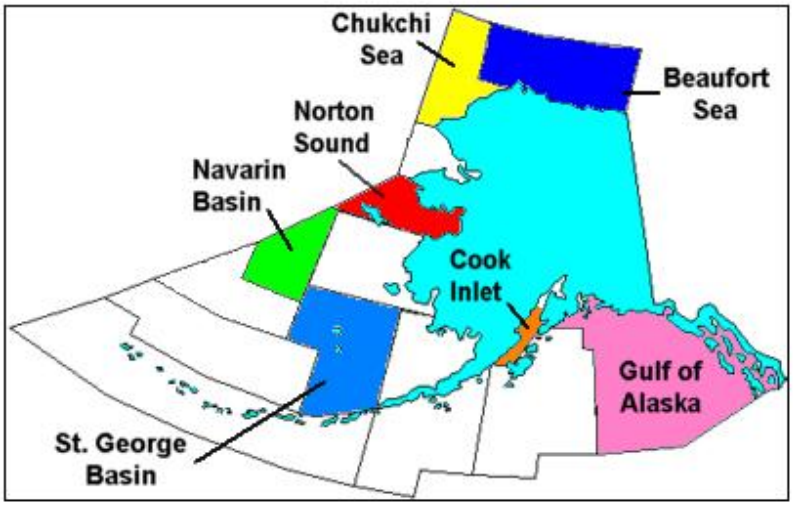

Figure C-1: Exploratory Drilling Summary by Lease Sale Area (MMS, 2007a)

Table C-1: Historical Alaskan OCS Exploratory Wells (MMS, 2007a)

Lease OCS	Well #	Operator	Prospect	Latitude (North)	Longitude (West)	Spud Date	End Date	Water Depth (ft)	Drilling Unit
Beaufort Sea Wells									
180	1	Shell Oil Company	Seal	70° 29' 31.77"	148° 41' 34.68"	22/02/1985	21/07/1985	39	P.N.J.V. Rig #1 Seal Gravel Island
181	1	Shell Western E&P Inc.	Seal	70° 29' 31.44"	148° 41' 35.80"	04/02/1984	30/06/1984	39	P.N.J.V. Rig #1 Seal Gravel Island
191	1	Exxon Corporation	Beechey Point	70° 23' 11.79"	147° 53' 27.98"	01/11/1981	31/03/1982	18	Nabors 27-E, BF-37 Gravel Island
191	2	Exxon Corporation	Beechey Point	70° 23' 11.79"	147° 53' 28.71"	27/12/1981	15/03/1982	18	Nabors 27-E, BF-37 Gravel Island
195	1	Shell Oil Company	Tern	70° 16' 46.02"	147° 29' 45.61"	28/05/1982	18/09/1982	21	Brinkerhoff #84, Tern Gravel Island
196	1	Shell Oil Company	Tern	70° 16' 46.33"	147° 29' 44.90"	16/10/1982	03/03/1983	21	Brinkerhoff #84, Tern Gravel Island
197	1	Shell Western E&P Inc.	Tern	70° 16' 46.33"	147° 29' 44.89"	10/02/1987	10/05/1987	22	Pool Arctic #5, Tern Gravel Island
267	1	Arco Alaska, Inc.	Fireweed	71° 05' 16.723"	152° 36' 11.479"	19/10/1990	25/12/1990	50	SSDC/MAT
280	1	Exxon Corporation	Antares	71° 02' 10.05"	152° 43' 25.28"	01/11/1984	18/01/1985	49	Beaufort Sea # 1, CIDS
280	2	Exxon Company USA	Antares	71° 02' 10.00"	152° 43' 25.46"	19/01/1985	12/04/1985	49	Beaufort Sea # 1, CIDS
302	1	Amoco	Mars	70° 50' 34.83"	152° 04' 17.98"	12/03/1986	27/04/1986	25	Spray Ice Island
334	1	SOHIO Alaska Petroleum	Mukluk	70° 41' 00.04"	150° 55' 11.89"	01/11/1983	24/01/1984	48	United Rig # 2, Mukluk Gravel Island
338	1	Tenneco	Phoenix	70° 43' 01.99"	150° 25' 40.15"	23/09/1986	19/12/1986	60	SSDC/MAT
370	1	Shell Oil Company	Harvard	70° 35' 05.4"	149° 05' 48.8"	02/09/1985	25/01/1986	49	PAA Rig #5, Sandpiper Gravel Island
371	1	Amoco	Sandpiper (Harvard)	70° 35' 05.45"	149° 05' 48.40"	08/02/1986	12/07/1986	49	PAA Rig #5, Sandpiper Gravel Island
742	1	Arco Alaska, Inc.	Cabot	71° 19' 25.44"	155° 12' 56.48"	01/11/1991	26/02/1992	55	SSDC
804	1	Exxon Company USA	Orion	70° 57' 22.3"	152° 03' 46.6"	10/11/1985	15/12/1985	50	GLOMAR BEAUFORT SEA #1 CIDS

849	1	Union Oil Company	Hammerhead	70° 21' 52.6"	146° 01'27.9"	10/08/1985	24/09/1985	103	Canmar Explorer II
849	2	Union Oil Company	Hammerhead	70° 22' 41.79"	146° 01' 52.41"	27/09/1986	11/10/1986	107	Explorer II Drillship
865	1	Arco Alaska, Inc.	Kuvlum	70° 18' 36"	145° 32' 18.2"	28/07/1993	30/08/1993	96	Beaudril Kulluk
866	1	Arco Alaska, Inc.	Kuvlum	70° 18' 57.38"	145° 25' 10.97"	22/08/1992	14/10/1992	110	Beaudril Kulluk
866	2	Arco Alaska, Inc.	Kuvlum	70° 19' 36.78"	145° 24'14.67"	07/09/1993	05/10/1993	107	Canmar Kulluk
871	1	Shell Western E&P Inc.	Corona	70° 18' 52.6"	144° 45' 32.9"	28/07/1986	18/09/1986	116	Canmar Explorer II
917	1	Amoco Production Company	Belcher	70° 16' 31.16"	141° 30' 46.49"	05/09/1988	29/08/1989	167	Beaudril Kulluk
943	1	Tenneco	Aurora	70° 06' 33.02"	142° 47' 05.88"	02/11/1987	30/08/1988	66	SSDC/MAT
1092	1	Amoco Production	Galahad	70° 33' 38.68"	144° 57' 35.75"	14/09/1991	13/10/1991	166	Canmar Explorer II
1578	1	EnCana Oil & Gas (USA) Inc.	McCovey	70° 31' 37.9"	148° 10' 48.2" (NAD83)	06/12/2002	27/01/2003	35	SDC/MATT
1597	1	Arco Alaska, Inc.	Wild Weasel	70° 13' 22.41"	145° 29' 57.11"	13/10/1993	09/11/1993	87	Canmar Kulluk
1650	1	British Petroleum Exploration	Liberty	70° 16' 45.113"	147° 29' 47.145"	07/02/1997	30/03/1997	21	PAA #4 Tern Gravel/Ice Island
1663	1	Arco Alaska, Inc.	Warthog	70° 02' 34"	144° 55' 02 (NAD83)	01/11/1997	05/12/1997	35	Glomar Beaufort Sea #1
Chukchi Sea Wells									
996	1	Chevron USA Inc.	Diamond	71° 19' 58.354"	161° 40' 47.928"	07/09/1991	05/10/1991	152	Canmar Explorer III
1275	1	Shell Western E&P Inc.	Popcorn	71° 51' 16.39"	165° 48' 24.893"	14/10/1989	23/09/1990	143	Explorer III Drillship
1320	1	Shell Western E&P Inc.	Crackerjack	71° 25' 7.14"	165° 32" 29.506"	23/09/1990	31/08/1991	137	Explorer III Drillship
1413	1	Shell Western E&P Inc.	Burger	71° 15' 05.00"	163° 11' 40.499"	22/09/1989	22/08/1990	149	Explorer III Drillship

1482	1	Shell Western E&P Inc.	Klondike	70° 42' 39.17"	165° 14' 59.11"	09/07/1989	15/09/1989	141	Explorer III Drillship
Bering Sea Navarin Basin Wells									
560	1	Amoco Production	George	60° 51' 35"	177° 56' 13.6"	22/08/1985	08/10/1985	480	SEDCO 708 Semi-submersible
583	1	Exxon	Redwood	60° 24' 25.01"	177° 07' 50.14"	31/08/1985	12/10/1985	481	Doo Sung Semi-submersible
586	1	Arco Alaska	Packard	60° 22' 26.6"	178° 16' 6.05"	05/08/1985	23/11/1985	541	SEDCO 712 Semi-submersible
599	1	Exxon	Redwood	60° 20' 34.18"	177° 15'20.48"	14/06/1985	30/08/1985	483	Doo Sung Semi-submersible
639	1	Amoco Production	Danielle	60° 47' 18.51"	176° 26' 19.95"	19/06/1985	21/08/1985	393	SEDCO 708 Semi-submersible
673	1	Amoco Production	Misha	59° 49' 01.3"	178° 17' 22.7"	31/08/1985	21/10/1985	473	Ocean Odyssey Semi-submersible
707	1	Amoco Production	Nicole	59° 35' 26.82"	175° 29' 32.09"	07/06/1985	28/08/1985	443	Ocean Odyssey Semi-submersible
719	1	Amoco Production	Nancy	59° 17' 03.93"	175° 25' 37.59"	12/10/1985	25/11/1985	450	SEDCO 708 Semi-submersible
Bering Sea Norton Sound Wells									
398	1	Exxon	*	63° 53' 28.76"	164° 03 '56.16"	02/07/1985	23/07/1985	55	Key Hawaii Jack-up
407	1	Exxon	*	63° 47' 15.79"	164° 25'56.92"	25/07/1985	11/08/1985	55	Key Hawaii Jack-up
414	1	Exxon	Teton South	63° 42' 42.80"	164° 43' 22.44"	19/06/1984	23/07/1984	54	Rowan Middletown Jack-up
425	1	Exxon	Chugach	63° 36' 06.11"	164° 09' 33.40"	13/08/1985	24/08/1985	40	Key Hawaii Jack-up
430	1	Exxon	*	63° 30' 40.34"	164° 14' 22.99"	25/07/1984	16/08/1984	35	Rowan Middletown Jack-up
436	1	Arco Alaska	Birch	64° 04' 47.56"	165° 37' 22.49"	25/06/1984	19/08/1984	65	Key Hawaii Jack-up
Bering Sea St. George Basin Wells									
454	1	Shell Western E&P Inc	Fern	55° 33' 15.71"	166° 19' 40.5"	20/11/1984	24/01/1985	420	Ocean Odyssey Semi-submersible
463	1	Shell Western E&P Inc	Monkshood	55° 26' 18.60"	165° 54' 39.06"	26/01/1985	31/03/1985	394	Ocean Odyssey Semi-submersible

466	1	Mobil Oil Corporation	Bertha	55° 26' 23.91"	165° 00' 16.64"	29/09/1984	03/11/1984	358	SEDCO 712 Semi-submersible
477	1	Gulf Oil Corporation	Camelot	55° 10' 20.37"	166° 56' 54.06"	27/11/1984	23/01/1985	476	Big Dipper (Doo Sung) Semi-submersible
511	1	Arco Alaska Inc	Segula	56° 20' 41.82"	167° 19' 45.68"	07/11/1984	14/12/1984	390	SEDCO 708 Semi-submersible
511	1A	Arco Alaska Inc.	Segula	56° 20' 41.82"	167° 19' 45.68"	17/12/1984	14/02/1985	390	SEDCO 708 Semi-submersible
519	1	Chevron USA Inc	Intrepid	56° 14' 24.80"	167° 41' 48.85"	20/07/1984	25/09/1984	437	SEDCO 712 Semi-submersible
527	1	Exxon Corporation	*	56° 12' 27.95"	167° 11' 18.13"	13/09/1984	19/11/1984	421	Big Dipper (Doo Sung) Semi-submersible
530	1	Exxon Corporation	*	56° 09' 53.18"	167° 09' 11.57"	29/06/1984	04/09/1984	420	Big Dipper (Doo Sung) Semi-submersible
537	1	Arco Alaska Inc	Rat	56° 04' 46.77"	167° 45' 15.13"	04/08/1984	30/10/1984	436	SEDCO 708 Semi-submersible

Table C-2: Overview of Drilling Activity in the Canadian Beaufort Sea (Timco, 1998)

Date	Island	Drillships	Tarsiut Caissons	SSDC	Kulluk	Caisson Retained Island	Molikpaq
1972	Roland Bay L-41						
1973	Immerk B-48 Adgo F-28 Pullen E-17 Pelly B-35						
1974	Unark L-24 Adgo P-25 Garry P-94						
1975	Nerlerk B-44 Adgo C-15 Ikattok J-17 Nerlerk F-40						
1976	Sarpik B-35 Kugmallit H-59 Unark L-24A Arnak L-30	Kopanoar D-14 Nektoralik K-59 Tingmiark K-91					
1977	Kannerk G-42 Isserk E-27	Ukalerk C-50 Kopanoar M-13 Nerlerk M-98					
1978	Garry G-07	Natsek E-56 Ukalerk 2C-50 Tarsiut A-25 Kaglulik M-64 Kaglulik A-75					
1979	Adgo J-27	Kenalooak J-94 Kopanoar L-44 Koakoak O-22 Kopanoar 2L-34					
1980	Issungnak 2O-61	Kilannik A-77 Kopanoar I-44 Kopanoar 2I-44					
1981	Alerk P-23	Issugnak L-86 Irkaluk B-35	Tarsiut N-44				
1982	Issugnak O-61 West Atkinson L-17 Itiyok I-27	Kiggavik A-43 Orviluk O-03 Aiverk I-45 Aiverk 2I-45	Tarsiut N-44	Uviluk P-66			
1983		Natiak O-44 Havik B-41 Siulik I-05 Arluk E-90		Kogyuk N-67	Pitsiulak A-05 Amauligak J-44 Nerlerk J-67	Kadluk O-07	
1984	Adgo H-29 Nipterk L-19				Akpak P-35	Amerk O-09	Tarsiut P-45
1985	Nipterk L-19A Adgo G-24 Minuk I-53 Ellice L-39	Adlartok P-09 Edlok K-56, N-56			Akpak 2P-35 Aagnerk E-56		Amauligak I-65
1986	Arnak K-06					Kaubvik I-43	Amauligak I-65A Amauligak I-65B
1987	Angasak L-03						Amauligak 2F-24
1988							Amauligak 2F-24A, 2F-24B Amauligak F-24, O-68
1989	Nipterk P-32	Kingark J-54					Isserk I-15

Notation: sacrificial beach island: sandbag retained island: hauled island: spray ice island.

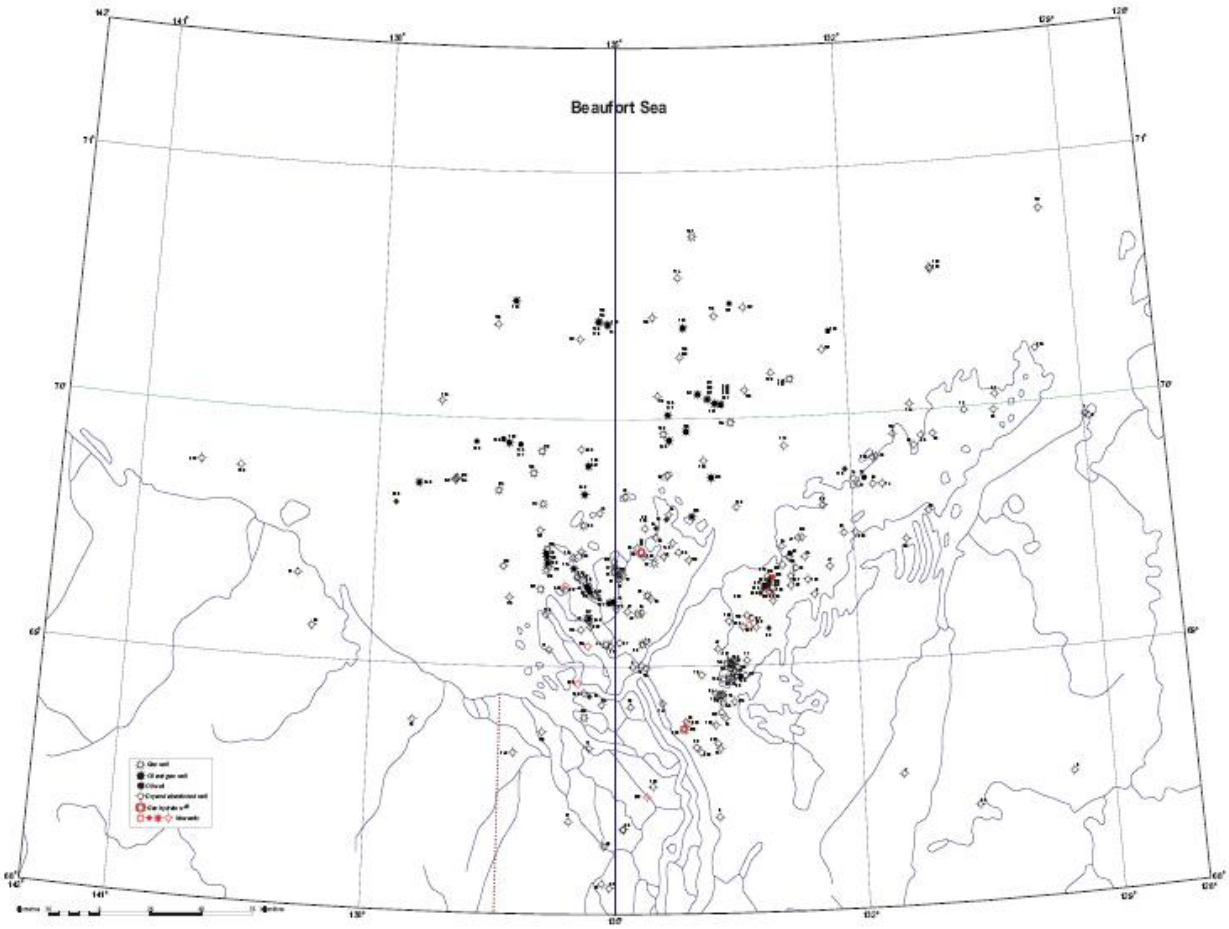

Figure C-2: Map of Canadian Beaufort Sea Region Well Locations (Osadetz et al., 2002)

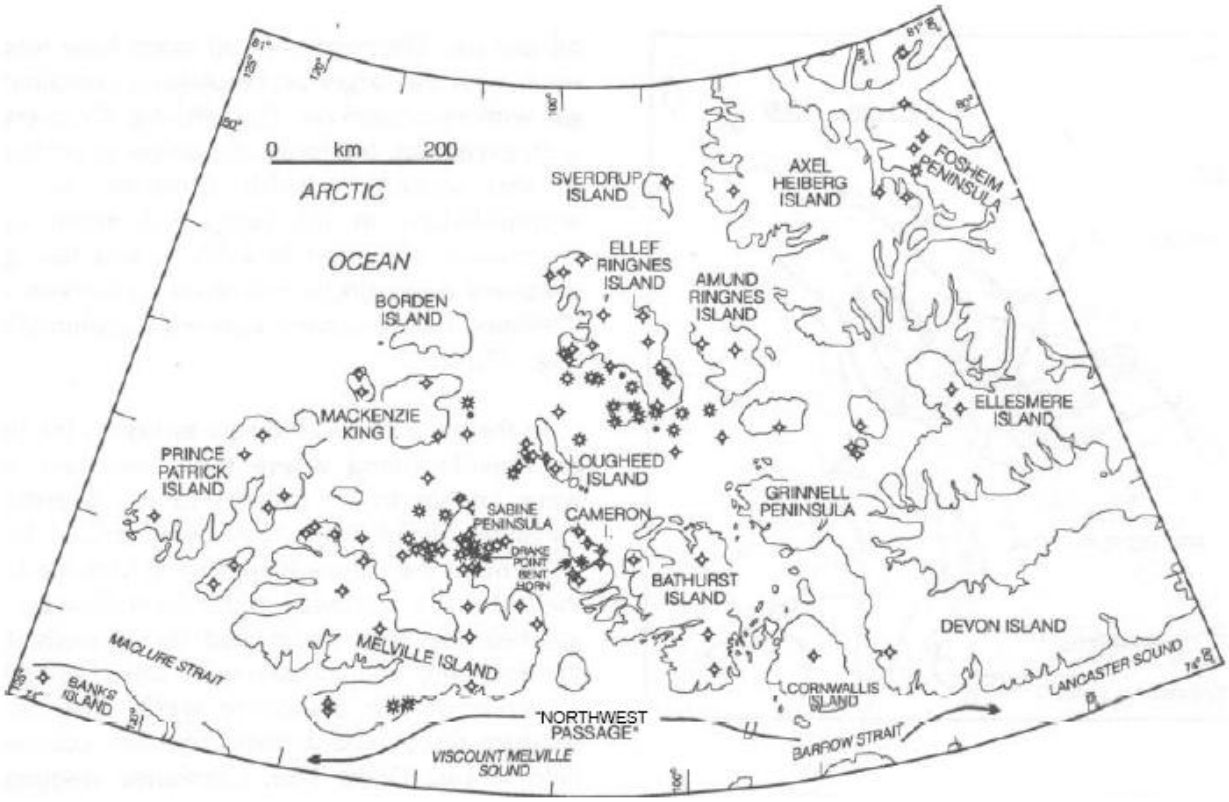

Figure C-3: Map of Canadian Arctic Islands Well Locations (Indian and Northern Affairs Canada, n.d.)