AOGCC Pool Statistics

Kuparuk River Unit, Meltwater Oil Pool

Operator: ConocoPhillips Alaska, Inc.

Discovery Well: ARCO Alaska Inc.
Meltwater North No. 1
Permit #200-012
API No. 50-103-20326-00-00
Sec. 20, T08N, R07E, UM
Depth: 6,122' MD / 6,121' TVD
April 26, 2000

Status: **Producing**

Location: **Central Arctic Slope** Area Location Map PA Location Map DNR Unit Map

Orders: Complete List

Summary: The Meltwater Oil Pool is located within and adjacent to the current boundaries of the Kuparuk River Unit ("KRU"). This is one of the satellite pools that have been discovered and developed utilizing the infrastructure built to develop the Kuparuk River Oil Pool within the KRU. The pool occurs in the Bermuda Interval ("Bermuda") of the late Cretaceous-aged (Cenomanian-Turonian) Seabee Formation. It was discovered in 2000 by the Meltwater North 1 exploratory well, and delineated by Meltwater 2 and 2A. This pool is defined as the accumulation of hydrocarbons common to, and correlating with, the interval between the 6,785 and 6,974 feet measured depth in the Meltwater North #2A well. It lies between about 4,700' and 5,500' true vertical depth subsea. Bermuda crude oil gravity is 37° API, and original oil in place ("OOIP") within the pool is estimated to be 125 million stock tank barrels of oil ("MMSTB"). No gas cap or water has been encountered within the pool. Meltwater development has been from the KRU 2P-Pad, using wells spaced approximately 10 acres apart. Regular production from the pool began in November 2001 and peaked in May 2002 at 10,863 barrels of oil per day ("BOPD"). In December 2004, production averaged 7,888 barrels BOPD.

Geology: Meltwater is the stratigraphic equivalent to the Tarn oil pool to the north, and both share similar lithology. The Bermuda consists of channel fill and lobate sandstones deposed in a turbidite fan system located on a slope-apron environment below an incised, Cenomanian-age shelf. Reservoir sandstones at Meltwater are fine to very fine-grained, lithic-rich, have common mudstone laminations and interbeds, and average about 20% porosity and 12 millidarcies air permeability. Clay content of the sandstone ranges from 15 to 25%, but the clay minerals occur dominantly as framework grains rather than as matrix. The top of the Bermuda dips approximately 2 to 3 degrees to the east-southeast, and complex faulting occurs along the western (updip) margin of the pool. Hydrocarbons are stratigraphically trapped, and their distribution is controlled by the distribution of sand. Shale filled channel complexes and stratigraphic pinch-outs act as lateral boundaries. Bermuda reservoirs are compartmentalized, primarily due to discontinuous sandstone distribution.

Strat Column

Orig. Oil in Place: 125 MMSTB (CO 456)

Production: Prod Chart Prod Report Prod Data

	Oil (bbls)	NGL (bbls)	Gas (mcf)	Water (bbls)
Cumulative	**7,657,769**	**0**	**17,140,364**	**250,433**
2001 Total	148,855	0	80,612	41,167
2002 Total	2,901,883	0	4,144,959	43,533
2003 Total	2,124,967	0	5,596,451	32,032
2004 Total	2,480,670	0	7,318,342	133,701
2003 Daily Rate	5,822	0	15,333	88
2004 Daily Rate	6,796	0	20,050	366
Change (%)	17%	0	31%	316%

Continued: 1 > 2 > 3

AOGCC Pool Statistics

Kuparuk River Unit, Meltwater Oil Pool

EOR Injection:

Chart Report Data

	Gas (Mcf)	Water
Cumulative	**23,502,556**	**5,364,490**
2001 Total	0	0
2002 Total	6,344,699	0
2003 Total	5,561,714	1,737,460
2004 Total	11,596,143	3,627,030
2003 Rate (per day)	15,238	4,760
2004 Rate (per day)	31,770	9,937
Change (%)	108%	109%

Disposal Injection in Field:

Chart Report Data

	Disposed Fluids
Cumulative	**20,085,168**
2001 Total	714,325
2002 Total	468,872
2003 Total	552,674
2004 Total	684,182
2003 Rate (per day)	1,514
2004 Rate (per day)	1,874
Change (%)	24%

Field Development Information:

Wells In Field

Type Well	Status	2004	2003	2002	2001	2000
Producer	Oil Producer	619	593	573	556	541
Injector	Water Injector	149	156	167	203	201
	Gas Injector	0	0	3	3	7
	WAG Injector	333	319	295	237	221
	Observation	1	1	1	1	1
	Disposal	15	15	15	15	15
Non-Operating	Suspended	11	10	13	9	9
	Abandoned	149	143	134	127	121
Total		**1277**	**1237**	**1201**	**1151**	**1125**

Active Completions in Pool (Month of December):

Type Well	Status	2004	2003	2002	2001	2000
Oil Producer	Flowing	0	0	0	0	-
	Gas Lift	12	6	8	2	-
	Pump	1	1	1	0	-
	Shut-In	0	2	0	0	-
Service Well	Water Injector	0	0	0	0	-
	Gas Injector	0	0	0	0	-
	WAG Injector	6	2	2	0	-
	Water Supply	0	0	0	0	-
	Shut-In	0	0	0	0	-
Disposal Undef.	Disposal Injector	1	1	1	2	-
	Shut-In	14	13	13	12	-
Total		**34**	**25**	**25**	**16**	**-**

Continued: 1 > 2 > 3

AOGCC Pool Statistics

Kuparuk River Unit, Meltwater Oil Pool

Permitted Wells in Field:

Type Well	Status	2004	2003	2002	2001	2000
Development	New	11	19	9	24	22
	Sidetrack	7	3	5	5	10
	Multilateral	16	5	1	2	3
Service	New	6	11	6	15	11
	Sidetrack	1	3	0		6
	Multilateral	6	0	0	0	0
Exploration	New	1	0	2	0	0
	Sidetrack	0	0	0	1	0
Total		**48**	**41**	**19**	**48**	**52**

Reservoir Properties:

Description	2004	2003	2002	2001	2000
Reference Datum - ft. below sea level	5400	5400	5400	5400	-
Temperature - ° F	140	140	140	140	-
Porosity - %	20	20	20	20	-
Permeability - md	10	10	10	10	-
Swi - %	40	40	40	40	-
Oil Viscosity @ Orig. Press. cp	.75	.75	75	75	-
Oil Viscosity @ Sat. Press. cp	-	-	.-	-	-
Orig. Press. - psi	2370	2370	2370	2370	-
Bubble Point - psi	2067	2067	2067	2067	-
Current Reservoir Press. - psi	2000	2200	2400	2067	-
Oil Gravity - ° API	36	36	36	36	-
Gas Specific Gravity (Air = 1.0)	.8	.8	.8	.8	-
Gross Pay - ft.	100-300	100-300	100-300	100-300	-
Net Pay - ft.	40-150	40-150	40-150	40-150	-
Orig. FVF - RB/STB	1.34	1.34	1.34	1.34	-
Bubble Point FVF - RB/STB	-	-	-	-	-
Orig. GOR - SCF/STB	620	620	620	620	-
GOR (current yr.) - SCF/STB	2950	2632	1428	542	-

References / Summary

Continued: 1 > 2 > 3

State of Alaska, Oil and Gas Conservation Commission

Production History for: KUPARUK RIVER, MELTWATER OIL Pool

Jan 1958 Dec 2004

Month	DaysProd	Oil (BBL)	Gas (MCF)	Water (BBL	Producing Wells
Nov 2001	3	5234	595	3128	1
Dec 2001	44	143621	80017	38039	2
Year Total		**148855**	**80612**	**41167**	
Jan 2002	67	126520	135975	1683	3
Feb 2002	75	130574	132860	1051	4
Mar 2002	123	170124	167934	1824	4
Apr 2002	172	258973	322971	9694	6
May 2002	226	336766	417908	5707	8
Jun 2002	224	281862	391736	5675	8
Jul 2002	229	253255	393907	7621	8
Aug 2002	248	287931	418014	980	8
Sep 2002	240	243142	370733	580	8
Oct 2002	245	245899	387578	102	8
Nov 2002	227	279878	469148	6120	9
Dec 2002	279	286959	536195	2496	9
Year Total		**2901883**	**4144959**	**43533**	
Jan 2003	275	257051	534437	952	9
Feb 2003	238	204943	464781	662	9
Mar 2003	277	227656	503539	935	9
Apr 2003	270	210384	586851	533	9
May 2003	253	194586	586032	1749	9
Jun 2003	231	164517	389090	2504	8
Jul 2003	246	171659	415760	2308	8
Aug 2003	245	159516	429069	3439	8
Sep 2003	206	134400	371812	2776	8
Oct 2003	213	143753	449780	6044	7
Nov 2003	209	127007	442292	4956	7
Dec 2003	217	130889	423008	5174	7
Year Total		**2126361**	**5596451**	**32032**	
Jan 2004	238	176944	526944	6014	8
Feb 2004	232	160297	551335	4648	8
Mar 2004	286	183113	633813	13323	10
Apr 2004	286	177480	596992	6871	10
May 2004	312	190855	575193	10290	12
Jun 2004	360	211225	591920	13311	12
Jul 2004	370	194289	548816	6020	12
Aug 2004	368	219626	680485	9156	12
Sep 2004	360	233104	791030	11366	12
Oct 2004	372	266237	649301	11097	12
Nov 2004	360	222984	548456	20138	12
Dec 2004	387	244516	624057	21467	13
Year Total		**2480670**	**7318342**	**133701**	
Pool Total		**7,657,769**	**17,140,364**	**250,433**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: KUPARUK RIVER, MELTWATER OIL Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 2002	29	0	551328	2
Feb 2002	56	0	904030	2
Mar 2002	32	0	303047	2
Apr 2002	60	0	361922	2
May 2002	29	0	293116	2
Jun 2002	43	0	564548	2
Jul 2002	62	0	799479	2
Aug 2002	62	0	804250	2
Sep 2002	60	0	777765	2
Oct 2002	26	0	382104	2
Nov 2002	4	0	64773	1
Dec 2002	56	0	538337	2
Year Total		**0**	**6344699**	
Jan 2003	62	0	567649	2
Feb 2003	56	0	600534	2
Mar 2003	62	0	677891	2
Apr 2003	60	0	712784	2
May 2003	55	230444	360997	2
Jun 2003	57	296388	145895	2
Jul 2003	62	397013	257177	2
Aug 2003	60	349035	358409	2
Sep 2003	60	197040	453523	2
Oct 2003	62	195492	619127	2
Nov 2003	46	72048	424324	2
Dec 2003	33	0	383404	2
Year Total		**1737460**	**5561714**	
Jan 2004	57	0	624948	2
Feb 2004	58	0	648582	2
Mar 2004	128	80358	1019245	5
Apr 2004	146	152980	1238079	5
May 2004	182	509759	1126698	6
Jun 2004	180	423744	1108633	6
Jul 2004	179	294967	1013750	6
Aug 2004	186	375532	1021912	6
Sep 2004	179	344022	1107087	6
Oct 2004	179	348868	1134463	6
Nov 2004	177	522965	850904	6
Dec 2004	184	573835	701842	6
Year Total		**3627030**	**11596143**	
Pool Total		**5,364,490**	**23,502,556**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Apr 1982	30	18024	0	1
May 1982	23	14292	0	1
Jun 1982	30	12643	0	1
Jul 1982	31	15259	0	1
Aug 1982	30	22348	0	1
Sep 1982	31	27175	0	1
Oct 1982	30	13731	0	1
Nov 1982	30	2895	0	1
Dec 1982	31	825	0	1
Year Total		**127192**	**0**	
Jan 1983	31	2004	0	1
Feb 1983	28	6549	0	1
Mar 1983	31	8846	0	1
Apr 1983	30	18223	0	1
May 1983	31	39076	0	1
Jun 1983	30	48507	0	1
Jul 1983	31	49670	0	1
Aug 1983	31	57968	0	1
Sep 1983	30	91688	0	1
Oct 1983	31	104766	0	1
Nov 1983	30	85334	0	1
Dec 1983	31	92638	0	1
Year Total		**605269**	**0**	
Jan 1984	31	99362	0	1
Feb 1984	29	101283	0	1
Mar 1984	31	123472	0	1
Apr 1984	30	169478	0	1
May 1984	31	221495	0	1
Jun 1984	30	209499	0	1
Jul 1984	31	213715	0	1
Nov 1984	30	9933	0	1
Year Total		**1148237**	**0**	
Jun 1986	60	92314	0	2
Jul 1986	45	65039	0	2
Aug 1986	45	78742	0	2
Sep 1986	33	22721	0	2
Oct 1986	9	2994	0	1
Nov 1986	2	181	0	1
Dec 1986	3	1466	0	1
Year Total		**263457**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1987	35	23209	0	2
Feb 1987	31	19867	0	2
Mar 1987	40	25900	0	2
Apr 1987	40	19308	0	2
May 1987	51	21848	0	2
Jun 1987	43	41421	0	2
Jul 1987	52	45896	0	2
Aug 1987	45	30063	0	2
Sep 1987	40	60763	0	2
Oct 1987	42	14935	0	2
Nov 1987	53	35988	0	2
Dec 1987	42	21397	0	2
Year Total		**360595**	**0**	
Jan 1988	31	27173	0	1
Feb 1988	29	20692	0	1
Mar 1988	31	19351	0	1
Apr 1988	30	17864	0	1
May 1988	30	21209	0	1
Jun 1988	53	70768	0	3
Jul 1988	31	42991	0	1
Aug 1988	30	42437	0	1
Sep 1988	39	61179	0	2
Oct 1988	29	22197	0	1
Nov 1988	24	11650	0	1
Dec 1988	27	15287	0	1
Year Total		**372798**	**0**	
Jan 1989	28	19062	0	1
Feb 1989	23	16832	0	1
Mar 1989	29	18471	0	1
Apr 1989	30	38398	0	1
May 1989	31	49183	0	1
Jun 1989	30	59425	0	1
Jul 1989	31	28335	0	1
Aug 1989	39	52219	0	2
Sep 1989	30	75356	0	1
Oct 1989	31	36890	0	1
Nov 1989	28	24224	0	1
Dec 1989	31	25380	0	1
Year Total		**443775**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1990	31	24735	0	1
Feb 1990	25	28980	0	1
Mar 1990	30	35995	0	1
Apr 1990	30	35585	0	1
May 1990	55	130943	0	9
Jun 1990	270	1143291	0	9
Jul 1990	135	396686	0	9
Aug 1990	31	84540	0	1
Sep 1990	30	49185	0	1
Oct 1990	28	27690	0	1
Nov 1990	30	20950	0	1
Dec 1990	30	23850	0	1
Year Total		**2002430**	**0**	
Jan 1991	37	31265	0	2
Feb 1991	31	24588	0	2
Mar 1991	42	37067	0	2
Apr 1991	36	36158	0	3
May 1991	30	40144	0	1
Jun 1991	261	833116	0	9
Jul 1991	283	1032021	0	10
Aug 1991	79	135310	0	10
Sep 1991	58	72725	0	2
Oct 1991	60	56607	0	3
Nov 1991	59	47655	0	2
Dec 1991	61	63261	0	3
Year Total		**2409917**	**0**	
Jan 1992	63	58821	0	3
Feb 1992	87	79120	0	4
Mar 1992	120	130882	0	4
Apr 1992	114	113728	0	4
May 1992	69	70386	0	4
Jun 1992	290	1246638	0	11
Jul 1992	100	230965	0	10
Aug 1992	31	32712	0	1
Sep 1992	28	34181	0	1
Oct 1992	31	28891	0	1
Nov 1992	28	21260	0	1
Dec 1992	48	42818	0	2
Year Total		**2090402**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1993	66	65534	0	3
Feb 1993	80	96858	0	3
Mar 1993	86	92664	0	3
Apr 1993	64	103002	0	3
May 1993	59	80928	0	2
Jun 1993	189	742848	0	9
Jul 1993	157	648729	0	9
Aug 1993	27	26195	0	2
Sep 1993	45	44602	0	2
Oct 1993	28	30627	0	2
Nov 1993	39	45721	0	2
Dec 1993	38	40465	0	2
Year Total		**2018173**	**0**	
Jan 1994	28	26877	0	2
Feb 1994	48	46530	0	3
Mar 1994	57	56629	0	3
Apr 1994	53	52519	0	2
May 1994	31	37390	0	1
Jun 1994	177	809031	0	9
Jul 1994	197	963869	0	8
Aug 1994	27	21040	0	1
Sep 1994	22	16845	0	1
Oct 1994	24	16275	0	1
Nov 1994	20	13520	0	1
Dec 1994	49	45933	0	2
Year Total		**2106458**	**0**	
Jan 1995	51	45473	0	3
Feb 1995	37	36906	0	2
Mar 1995	42	34570	0	2
Apr 1995	38	24815	0	2
May 1995	29	20496	0	2
Jun 1995	77	212537	0	5
Jul 1995	20	15060	0	1
Aug 1995	34	76102	0	4
Sep 1995	27	17520	0	2
Oct 1995	20	15288	0	2
Nov 1995	25	21755	0	2
Dec 1995	51	46863	0	2
Year Total		**567385**	**0**	

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Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1996	31	31187	0	2
Feb 1996	44	41157	0	3
Mar 1996	49	39553	0	2
Apr 1996	47	46355	0	2
May 1996	27	25341	0	1
Jun 1996	25	22318	0	2
Jul 1996	30	27346	0	2
Aug 1996	48	131324	0	4
Sep 1996	22	26263	0	1
Oct 1996	6	8503	0	2
Nov 1996	9	12139	0	1
Dec 1996	31	37944	0	3
Year Total		**449430**	**0**	
Jan 1997	43	27016	0	2
Feb 1997	42	37282	0	3
Mar 1997	49	46553	0	3
Apr 1997	35	35423	0	2
May 1997	31	31119	0	3
Jun 1997	36	49049	0	2
Jul 1997	41	53566	0	2
Aug 1997	30	19620	0	2
Sep 1997	35	195492	0	6
Oct 1997	36	40484	0	2
Nov 1997	46	60432	0	2
Dec 1997	50	76538	0	2
Year Total		**672574**	**0**	
Jan 1998	48	58560	0	2
Feb 1998	44	50144	0	3
Mar 1998	43	71032	0	2
Apr 1998	50	78197	0	3
May 1998	50	48338	0	2
Jun 1998	52	75187	0	3
Jul 1998	43	38424	0	2
Aug 1998	43	69453	0	6
Sep 1998	57	126422	0	6
Oct 1998	49	62825	0	2
Nov 1998	42	43230	0	2
Dec 1998	49	86379	0	2
Year Total		**808191**	**0**	

State of Alaska, Oil and Gas Conservation Commission

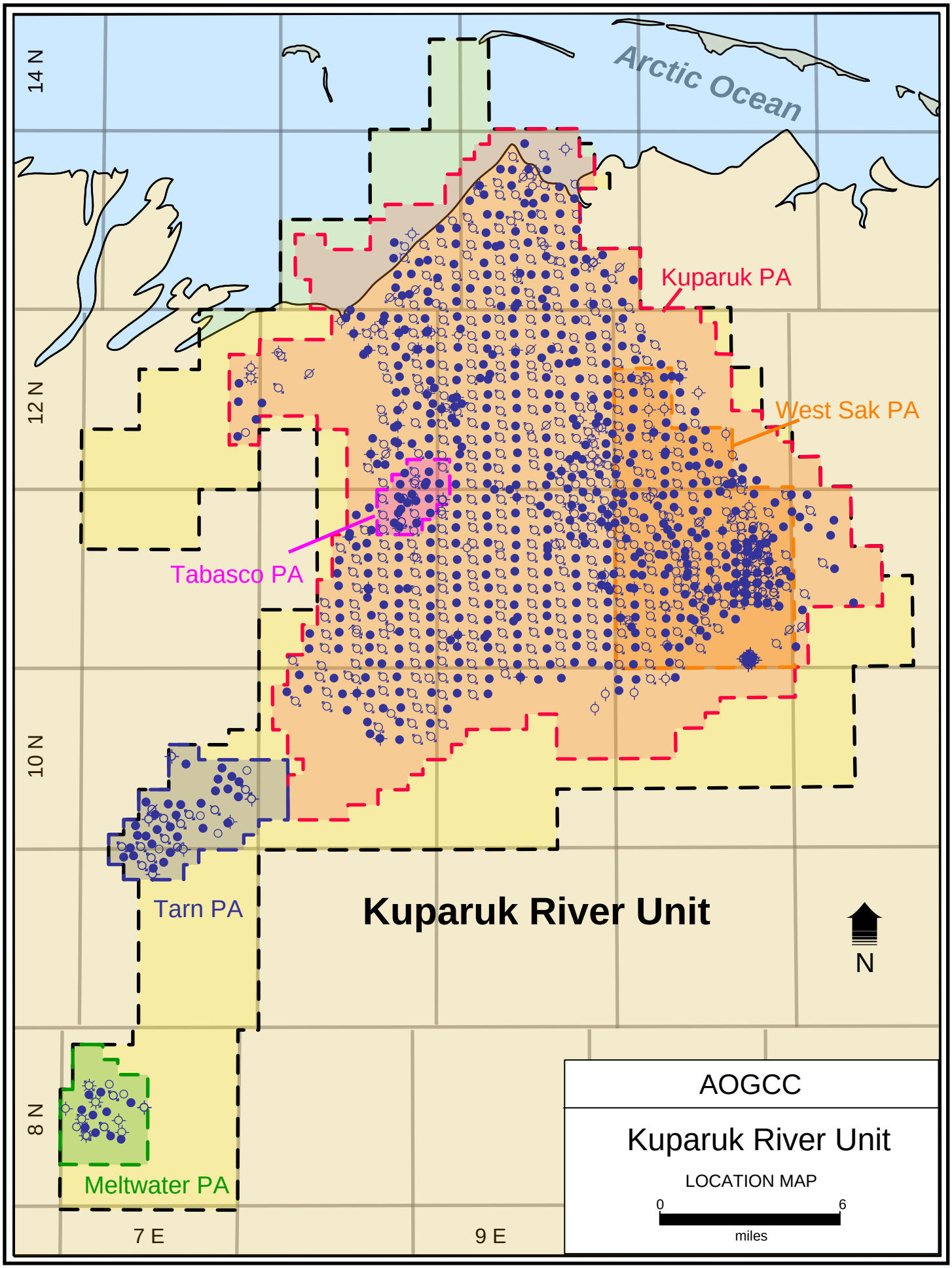
Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1999	48	60899	0	2
Feb 1999	27	27979	0	1
Mar 1999	39	54647	0	2
Apr 1999	44	42163	0	2
May 1999	41	24714	0	2
Jun 1999	41	25136	0	2
Jul 1999	28	19960	0	2
Aug 1999	34	23241	0	2
Sep 1999	39	47500	0	2
Oct 1999	37	22625	0	2
Nov 1999	37	44215	0	2
Dec 1999	41	28100	0	2
Year Total		**421179**	**0**	
Jan 2000	47	54945	0	2
Feb 2000	43	42510	0	2
Mar 2000	44	58762	0	2
Apr 2000	46	62560	0	2
May 2000	44	54197	0	2
Jun 2000	41	51946	0	2
Jul 2000	48	98563	0	4
Aug 2000	65	165462	0	5
Sep 2000	35	49944	0	2
Oct 2000	41	59235	0	2
Nov 2000	38	51703	0	3
Dec 2000	41	47826	0	2
Year Total		**797653**	**0**	
Jan 2001	41	41502	0	2
Feb 2001	35	73510	0	2
Mar 2001	45	72758	0	2
Apr 2001	43	55982	0	2
May 2001	50	64773	0	2
Jun 2001	48	69020	0	3
Jul 2001	35	65315	0	2
Aug 2001	40	50240	0	3
Sep 2001	42	45411	0	2
Oct 2001	40	56438	0	2
Nov 2001	38	53841	0	2
Dec 2001	40	65535	0	2
Year Total		**714325**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: KUPARUK RIVER, CRETACEO U WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 2002	39	44173	0	2
Feb 2002	37	44135	0	3
Mar 2002	44	65221	0	2
Apr 2002	39	37600	0	2
May 2002	37	42845	0	2
Jun 2002	30	43411	0	1
Jul 2002	27	30549	0	1
Aug 2002	27	41685	0	1
Sep 2002	28	21635	0	1
Oct 2002	30	29783	0	1
Nov 2002	24	26415	0	1
Dec 2002	28	41420	0	1
Year Total		**468872**	**0**	
Jan 2003	31	35776	0	2
Feb 2003	29	51754	0	2
Mar 2003	31	86226	0	1
Apr 2003	30	72975	0	1
May 2003	30	48587	0	1
Jun 2003	32	34944	0	2
Jul 2003	31	60628	0	1
Aug 2003	30	44341	0	1
Sep 2003	29	41574	0	1
Oct 2003	25	26107	0	1
Nov 2003	23	18782	0	1
Dec 2003	26	30980	0	1
Year Total		**552674**	**0**	
Jan 2004	30	34700	0	1
Feb 2004	28	58826	0	1
Mar 2004	31	98377	0	1
Apr 2004	30	73684	0	1
May 2004	31	52856	0	1
Jun 2004	29	40480	0	1
Jul 2004	28	40793	0	1
Aug 2004	29	53779	0	1
Sep 2004	29	38873	0	1
Oct 2004	31	56287	0	1
Nov 2004	30	70730	0	1
Dec 2004	31	64797	0	1
Year Total		**684182**	**0**	
Pool Total		**20,085,168**	**0**	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Kuparuk PA
West Sak PA
Tabasco PA
Tarn PA
Meltwater PA
Kuparuk River Unit
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Kuparuk River Unit
LOCATION MAP
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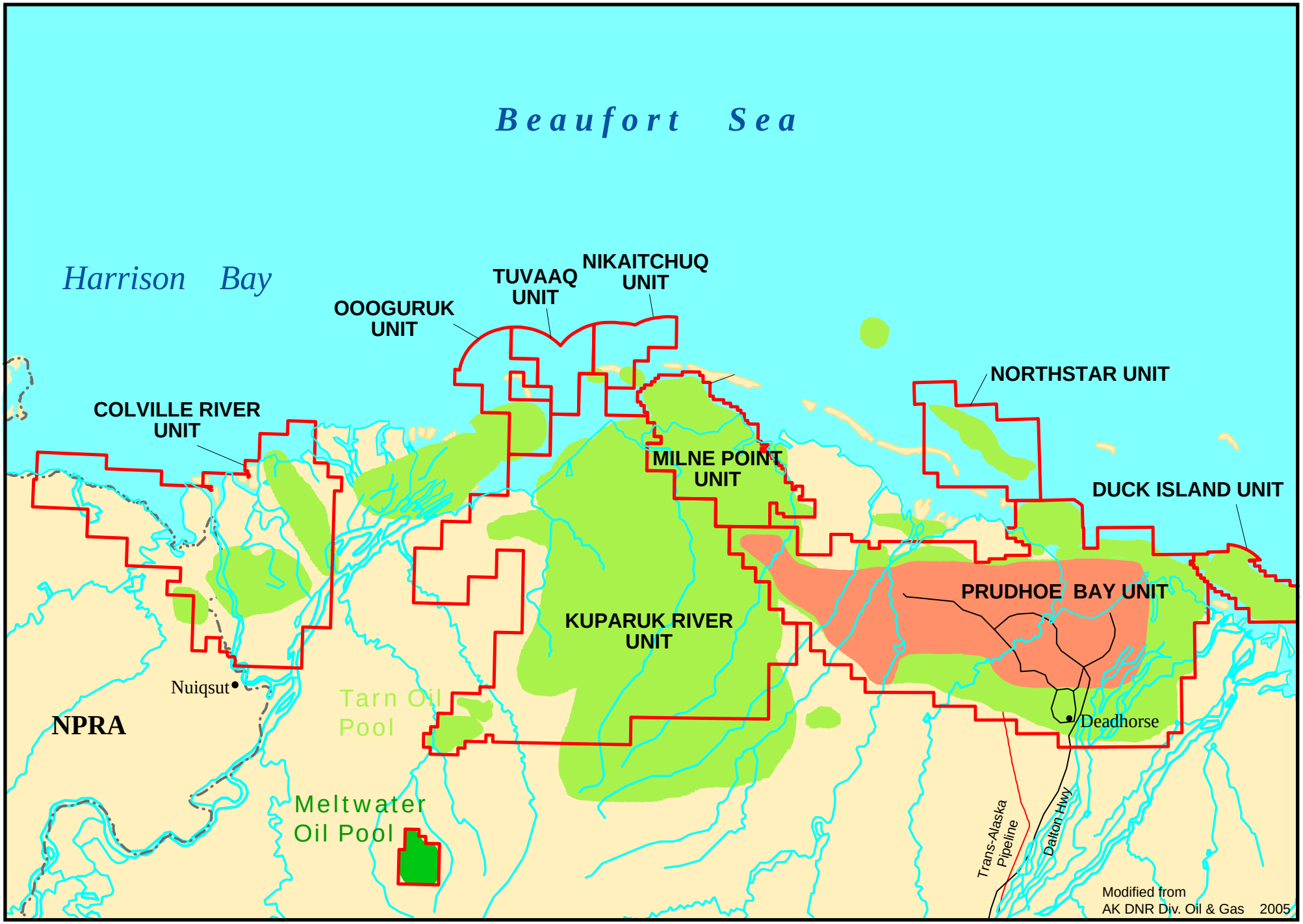

North Slope, Alaska

KUPARUK RIVER, MELTWATER OIL

Reference List

Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 456, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456.htm

Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 456a, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456a.htm

Moothart, S., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of ConocoPhillips Alaska Inc. to Define the Aurora Oil Pool, May 7, 2001, AOGCC Conservation Order No. 456 file.

Nelson, K., 2001, First development well spud at Phillips Alaska's Meltwater development, in Petroleum News Alaska, Vol. 6, No. 5, Week of May 28, 2001

Meltwater Oil Pool

Summary

The Meltwater Oil Pool is located within and adjacent to the current boundaries of the Kuparuk River Unit ("KRU"). This is one of the satellite pools that have been discovered and developed utilizing the infrastructure built to develop the Kuparuk River Oil Pool within the KRU.[1] The pool occurs in the Bermuda Interval ("Bermuda") of the late Cretaceous-aged (Cenomanian-Turonian) Seabee Formation. It was discovered in 2000 by the Meltwater North 1 exploratory well, and delineated by Meltwater 2 and 2A.[2] This pool is defined as the accumulation of hydrocarbons common to, and correlating with, the interval between the 6,785 and 6,974 feet measured depth in the Meltwater North #2A well.[3] It lies between about 4,700' and 5,500' true vertical depth subsea.[4] Bermuda crude oil gravity is 37° API, and original oil in place ("OOIP") within the pool is estimated to be 125 million stock tank barrels of oil ("MMSTB"). No gas cap or oil-water contact have been encountered within the pool.[5] Meltwater development has been from the KRU 2P-Pad, using wells spaced approximately 10 acres apart.[6] Regular production from the pool began in November 2001 and peaked in May 2002 at 10,863 barrels of oil per day ("BOPD"). In December 2004, production averaged 7,888 barrels BOPD.[7]

Geology

Meltwater is the stratigraphic equivalent to the Tarn oil pool to the north, and both share similar lithology. The Bermuda consists of channel fill and lobate sandstones deposed in a turbidite fan system located on a slope-apron environment below an incised, Cenomanian-age shelf. Reservoir sandstones at Meltwater are fine to very fine-grained, lithic-rich, have common mudstone laminations and interbeds, and average about 20% porosity and 12 millidarcies air permeability. Clay content of the sandstone ranges from 15 to 25%, but the clay minerals occur dominantly as framework grains rather than as matrix. The top of the Bermuda dips approximately 2 to 3 degrees to the east-southeast, and complex faulting occurs along the western (updip) margin of the pool. Hydrocarbons are stratigraphically trapped, and their distribution is controlled by the distribution of sand. Shale filled channel complexes and stratigraphic pinch-outs act as lateral boundaries. Bermuda reservoirs are compartmentalized, primarily due to discontinuous sandstone distribution.[8]

S. Davies Revised 2/6/2005

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[1] Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 456a, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456a.htm
[2] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 456, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456.htm
[3] Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 456a, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456a.htm
[4] Moothart, S., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of ConocoPhillips Alaska Inc. to Define the Aurora Oil Pool, May 7, 2001, AOGCC Conservation Order No. 456 file.
[5] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 456, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456.htm
[6] Alaska Oil and Gas Conservation Commission, 2003, Conservation Order No. 456a, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456a.htm
[7] Alaska Oil and Gas Conservation Commission, 2005, Production Database
[8] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 456, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co450_499/co456.htm

KUPARUK RIVER FIELD
MELTWATER OIL POOL

Current Orders

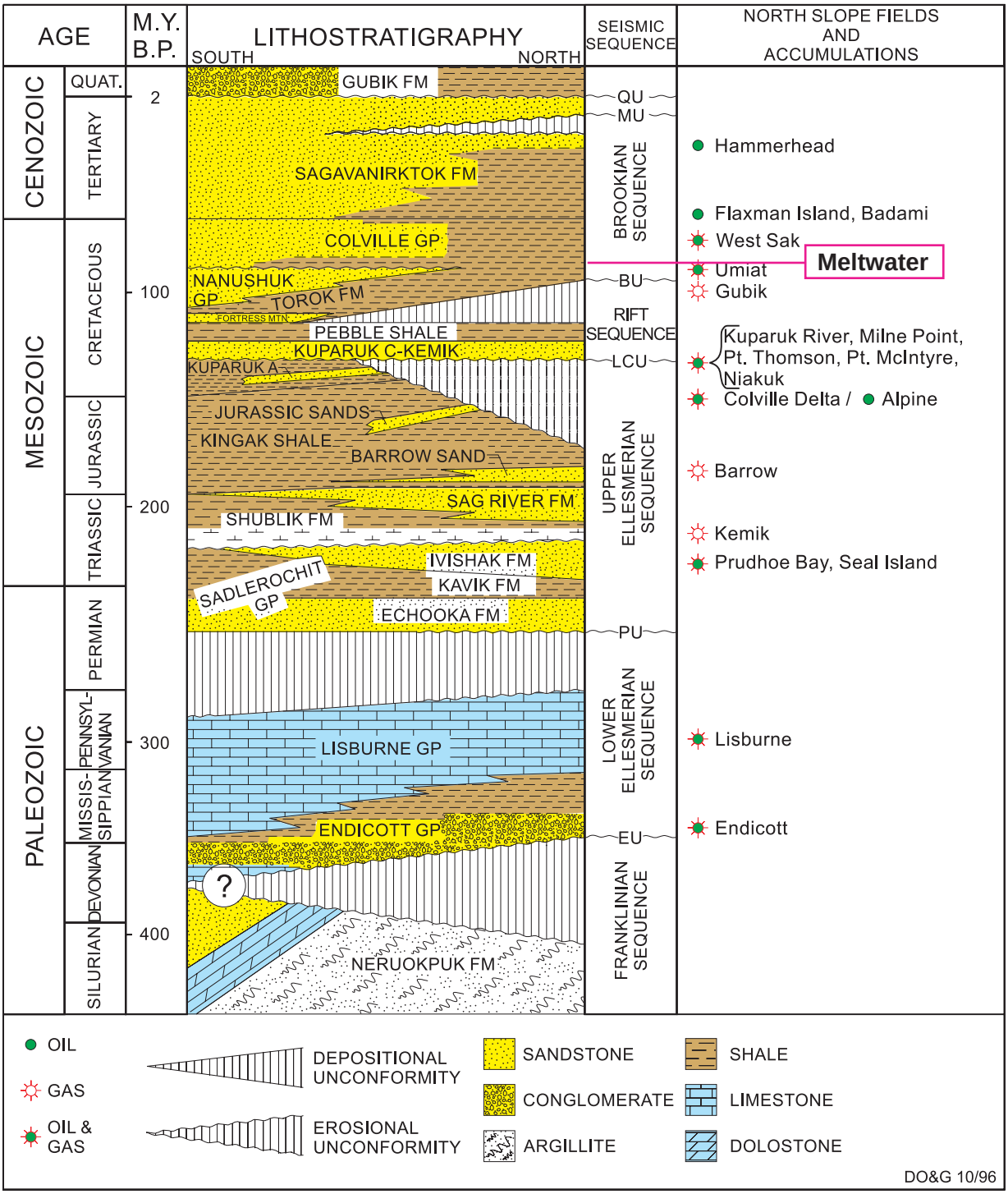
Order No.		AA	Operator	Date	Description	Current
CO	494	0	CONOCOPHILLI	04-Sep-03	AOGCC on its own motion, adopted rules regulating sustained casing pressures in development wells in all pools within the Kuparuk River Field.	Y
CO	456 A	0	CONOCOPHILLI	27-Aug-03	Authorization to changes to Rule 6 Conservation Order 456 pertaining to Common Production Facilities and Surface Commingling allocation methods affecting the Meltwater Oil Pool producing with the Kuparuk River Unit.	Y
AIO	21	0	Phillips	01-Aug-01	Authorizes underground injection of fluids for enhanced oil recovery in the Meltwater Oil Pool.	Y

KUPARUK RIVER FIELD
MELTWATER OIL POOL

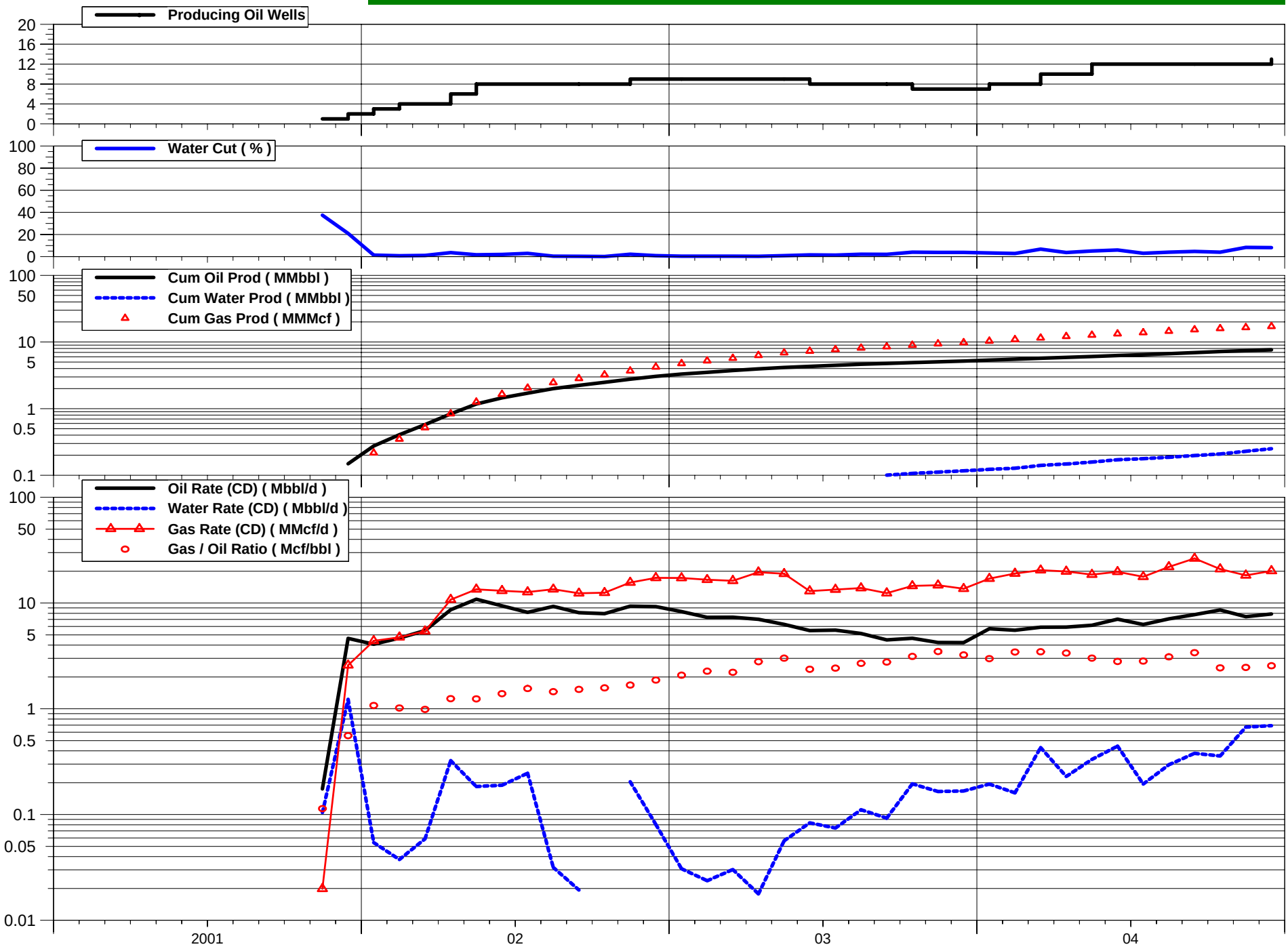
Obsolete Orders

Order No.		AA	Operator	Date	Description	Current
CO	456	0	CONOCOPHILLI	01-Aug-01	Pool Rules for the Meltwater Oil Pool. Amended by CO 494 and CO 456A/Superseded by CO 456A.	N

Generalized North Slope Stratigraphic Column displaying oil and gas reservoirs and associated accumulations.



KUPARUK RIVER FIELD, MELTWATER OIL POOL



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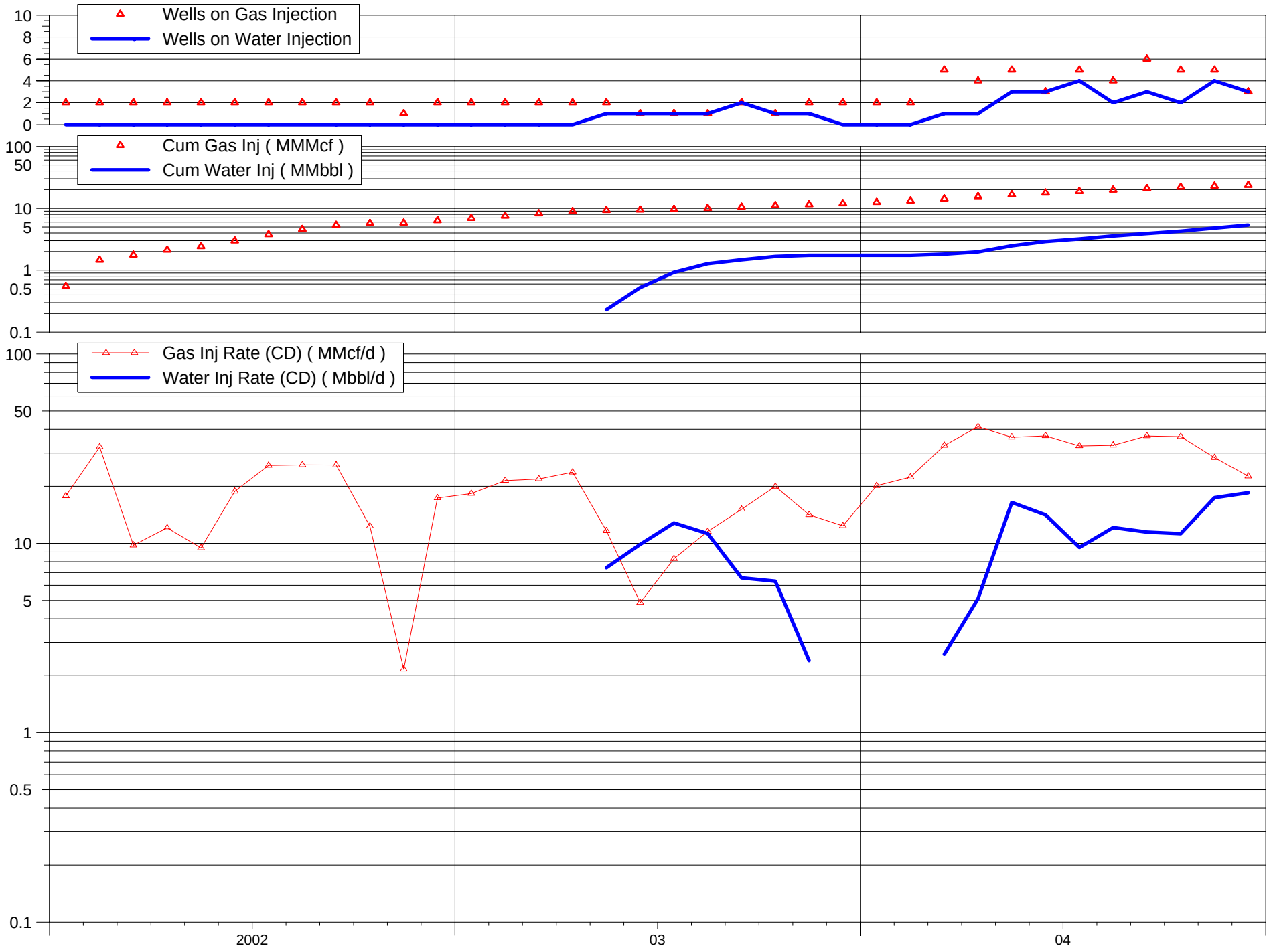
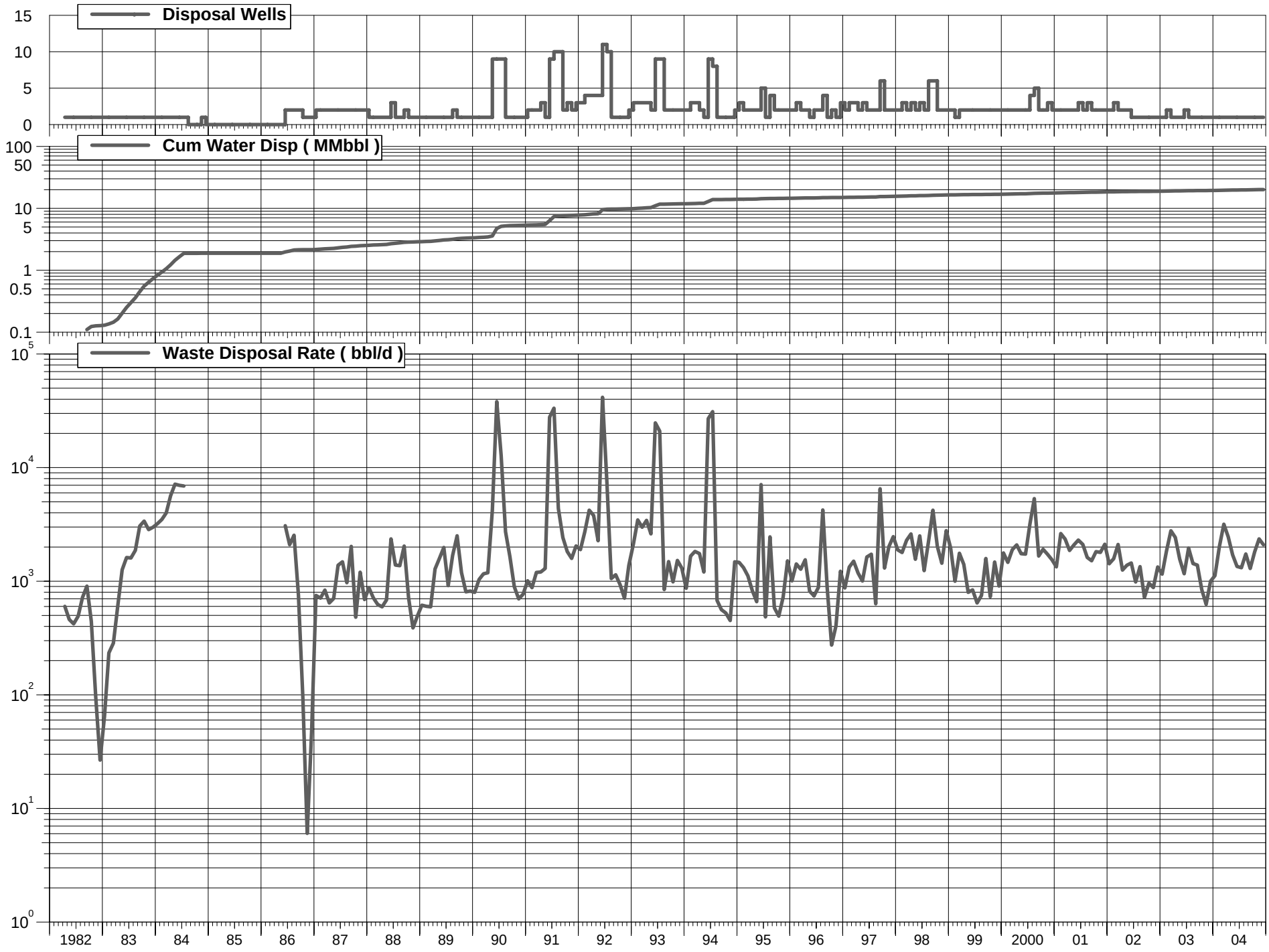
KUPARUK RIVER FIELD, CRETACEOUS UNDEFINED WASTE DISPOSAL POOI