AOGCC Pool Statistics

Prudhoe Bay Unit, Aurora Oil Pool

Operator: BP Exploration (Alaska) Inc.

Discovery Well: Mobil Oil Corporation
North Kuparuk State No. 26-12-12
Permit #169-057
API No. 50-029-20032-00-00
Sec. 26, T12N, R12E, UM
Depth: 10,311' MD / TVD
August 24, 1969

Status: **Producing**

Location: **Central Arctic Slope** Area Location Map Pool Location Map

Orders: Complete List

Summary: The Aurora Oil Pool ("AOP") is located within the current boundaries of the Prudhoe Bay Unit ("PBU"), and it lies within the Kuparuk River Formation ("Kuparuk"). The pool comprises the accumulation of hydrocarbons that is common to, and correlates with, the interval between 6859' and 7254' measured depth in PBU V-200. The pool was discovered in 1969 by the Mobil Oil Corporation Mobil-Phillips North Kuparuk State No. 26-12-12, where the same accumulation lies between the measured depths of 6,765' and 7,765'. Development of the pool is from the PBU S-Pad. Production from pool began in November 2000, and has continued without interruption. As new producers have been added (from one in November 2000 to 14 in December 2004), production has steadily increased, but water production has also increased significantly since September 2003.

Geology: Within the pool, the Kuparuk comprises early Cretaceous-aged marine shoreface and offshore sediments that consist of very fine to medium grained, quartz-rich sandstone with interbedded siltstone and mudstone. The Kuparuk is stratigraphically complex, characterized by multiple unconformities, changes in thickness and sedimentary facies, and local diagenetic cementation. In the AOP, the Kuparuk reservoir is divided into three stratigraphic intervals, that are named, from deepest to shallowest, A, B and C. The A interval contains two reservoir quality sub-intervals, the A-4 and A-5 sands, which are typically 30' and 20' thick, respectively. The B interval is dominated by siltstone and sandy mudstone with numerous discontinuous thin sandstone lenses, which are up to 3' thick. The C interval, contains the primary reservoir sands of the pool, and it consists of thick, amalgamated sands, with high net to gross ratios. Average layer properties range between 16% for the A sand net pay interval, and 25% for C sand net pay intervals. The average permeabilities for these layers range from 12 md to 158 md. The AOP structure is a NW to SE-trending ridge that is broken by N-S trending faults having vertical displacements ranging up to hundreds of feet. The traps for oil and gas are created by a combination of structural and stratigraphic features: the accumulation is bounded to the W by several faults, to the E and SE by unconformities, and to the SW and N by oil-water contacts. The reservoir appears to be compartmentalized, and fluid contacts (oil/water and gas/oil) appear to be variable across the pool. The reservoir is compartmentalized, and fluid contacts (oil/water and gas/oil) appear to be variable across the pool. The reservoir temperature is about 150 degrees F at 6700' true vertical feet subsea. Oil gravity ranges from 25.2 to 29.1 degrees API. Original oil in place ("OOIP") is estimated to be 110 to 146 MMSTB.

Strat Column

Orig. Oil in Place: 110 to 146 MMSTB (CO 457)

Production: Prod Chart Prod Report Prod Data

	Oil (bbls)	NGL (bbls)	Gas (mcf)	Water (bbls)
Cumulative	**11,397,395**	**0**	**47,582,920**	**5,151,440**
2001 Total	1,737,981	0	12,051,741	389,741

2002 Total	2,397,003	0	12,609,285	660,338
2003 Total	3,782,231	0	11,970,575	1,229,997
2004 Total	3,219,105	0	9,868,761	2,869,485
2003 Rate (b/d)	10,362	0	32,796	3,370
2004 Rate (b/d)	8,819	0	27,038	7,862
Change (%)	-15%	0	-18%	133%

Continued: 1 > 2 > 3

AOGCC Pool Statistics

Prudhoe Bay Unit, Aurora Oil Pool

EOR Injection:

Chart Report Data

	Gas (Mcf)	Water
Cumulative	**5,751,940**	**16,285,476**
2001 Total	0	108,950
2002 Total	0	3,485,844
2003 Total	356,898	7,284,988
2004 Total	5,395,042	5,405,694
2003 Rate (per day)	978	19,959
2004 Rate (per day)	14,781	14,810
Change (%)	1,411%	-26%

Disposal Injection in Field:

Chart Report Data

	Disposed Fluids
Cumulative	**1,769,881,704**
2001 Total	95,999,818
2002 Total	86,728,378
2003 Total	65,920,644
2004 Total	56,340,325
2003 Rate (per day)	180,605
2004 Rate (per day)	154,357
Change (%)	-15%

Field Development Information:

		Wells In Field				
Type Well	**Status**	**2004**	**2003**	**2002**	**2001**	**2000**
Producer	Oil Producer	1326	1248	1231	1209	1145
Injector	Water Injector	99	81	74	62	57
	Gas Injector	38	38	38	40	41
	WAG Injector	176	161	156	144	138
	Water Supply	2	1	1	2	2
	Observation	12	12	11	12	12
	Disposal	20	20	20	21	21
Non-Operating	Op Shut Down	1	0	0	0	0
	Suspended	30	30	49	52	34
	Abandoned	853	771	692	627	583
Total		**2557**	**2362**	**2272**	**2169**	**2031**

Active Completions in Pool (Month of December):

Type Well	Status	2004	2003	2002	2001	2000
Oil Producer	Flowing	2	4	3	3	2
	Gas Lift	7	5	4	4	1
	Shut-In	5	1	2	2	0
Service Well	Water Injector	6	4	1	1	0
	Gas Injector	0	0	0	0	0
	WAG Injector	1	2	0	0	0
	Water Supply	0	0	0	0	0
	Shut-In	1	0	0	0	0
Disposal Undef.	Disposal Injector	13	13	16	16	16
	Shut-In	7	7	7	4	4
Total		**42**	**36**	**30**	**30**	**23**

Continued: 1 > 2 > 3

AOGCC Pool Statistics

Prudhoe Bay Unit, Aurora Oil Pool

Permitted Wells in Field:

Type Well	Status	2004	2003	2002	2001	2000
Development	New	9	12	17	19	8
	Sidetrack	62	62	58	67	67
	Multilateral	18	10	14	3	4
Service	New	12	7	17	6	1
	Sidetrack	8	3	1	8	7
	Multilateral	0	0	0	0	0
Exploration	New	0	0	1	0	0
	Sidetrack	0	0	0	0	0
Total		**109**	**94**	**108**	**103**	**87**

Reservoir Properties:

Description	2004	2003	2002	2001	2000
Reference Datum - ft. below sea level	6700	6700	6700	6700	6700
Temperature - ° F	150	150	150	150	150
Porosity - %	16-25	16-25	16-25	16-25	16-25
Permeability - md	10-200	10-200	10-200	10-200	10-200
Swi - %	14-60	14-60	14-60	14-60	30-60
Oil Viscosity @ Orig. Press. cp	.72	.72	.72	.72	.72
Oil Viscosity @ Sat. Press. cp	-	-	-	-	-
Orig. Press. - psi	3350-3433	3350-3433	3433	3433	3433
Bubble Point - psi	3300-3433	3300-3433	3433	3433	3433
Current Reservoir Press. - psi	2760-3100	2760-3100	2530-3430	2530-3430	-
Oil Gravity - ° API	25-30	25-30	25-30	25-30	25-30
Gas Specific Gravity (Air = 1.0)	.72	.72	.72	.72	.72
Gross Pay - ft.	95	95	95	95	95
Net Pay - ft.	60	60	60	60	60
Orig. FVF - RB/STB	1.35	1.35	1.35	1.35	1.35
Bubble Point FVF - RB/STB	-	-	-	-	-
Orig. GOR - SCF/STB	717	717	717	717	717
GOR (current yr.) - SCF/STB	3065	3165	5260	6934	4147

References / Summary

Continued: 1 > 2 > 3

State of Alaska, Oil and Gas Conservation Commission

Production History for: PRUDHOE BAY, AURORA OIL Pool

Jan 1999 Through Dec 2004

	Month	DaysProd	Oil (BBL)	Gas (MCF)	Water (BBL	Wells
PBU_S						
	Nov 2000	12	67004	82879	68	1
	Dec 2000	63	194071	999679	1811	3
	Jan 2001	71	175370	1153307	119	3
	Feb 2001	53	125310	971908	132	3
	Mar 2001	72	138305	1198643	2645	6
	Apr 2001	154	188696	1336778	3355	6
	May 2001	152	116191	796912	25085	6
	Jun 2001	136	123398	771320	3809	6
	Jul 2001	95	122764	807157	33746	5
	Aug 2001	136	138733	872625	55901	6
	Sep 2001	101	99629	672017	42643	6
	Oct 2001	165	188000	1140663	70016	9
	Nov 2001	157	149259	1072005	72711	9
	Dec 2001	159	172326	1258406	79579	9
	Jan 2002	182	163168	1455944	89838	9
	Feb 2002	136	120180	662643	85461	9
	Mar 2002	190	225107	1262013	71246	9
	Apr 2002	152	190077	1114180	63277	9
	May 2002	163	186534	1131368	41044	7
	Jun 2002	161	200555	1077855	44759	7
	Jul 2002	127	171466	783457	46460	7
	Aug 2002	206	251574	1209696	47143	8
	Sep 2002	110	150402	760616	27975	8
	Oct 2002	230	266704	1131750	48714	9
	Nov 2002	206	225338	765490	37951	9
	Dec 2002	235	245898	1254273	56470	10
	Jan 2003	182	236112	931786	64601	10
	Feb 2003	239	266831	1180495	60245	12
	Mar 2003	265	307379	1024039	67707	12
	Apr 2003	270	368908	1084649	71260	11
	May 2003	206	300348	840115	68268	12
	Jun 2003	208	337021	1477084	65690	12
	Jul 2003	223	316248	1132588	86411	10
	Aug 2003	194	276772	679345	75467	10
	Sep 2003	189	276179	646260	107448	10
	Oct 2003	203	342038	917404	103225	10
	Nov 2003	243	358499	952016	143804	10
	Dec 2003	279	395896	1104794	315871	10
	Jan 2004	271	346691	1045217	299429	10
	Feb 2004	245	307438	855616	255825	10
	Mar 2004	246	315311	842588	283906	10
	Apr 2004	268	316073	1070798	285698	11
	May 2004	282	348318	1033190	294990	13
	Jun 2004	267	316362	985796	251050	13
	Jul 2004	284	315320	1036021	244244	13
	Aug 2004	109	110729	469644	81348	13
	Sep 2004	104	132568	448881	136695	13
	Oct 2004	202	240842	807586	288268	13
	Nov 2004	180	218983	567358	226970	13

State of Alaska, Oil and Gas Conservation Commission

Production History for: PRUDHOE BAY, AURORA OIL Pool

Jan 1999 Through Dec 2004

Month	DaysProd	Oil (BBL)	Gas (MCF)	Water (BBL	Wells
Dec 2004	205	250470	706066	221062	14
Pad Total		**11397395**	**47582920**	**5151440**	
Pool Total		**11,397,395**	**47,582,920**	**5,151,440**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, AURORA OIL Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Dec 2001	23	108950	0	1
Year Total		**108950**	**0**	
Jan 2002	31	230370	0	1
Feb 2002	28	369690	0	1
Mar 2002	31	412062	0	1
Apr 2002	30	149381	0	1
May 2002	38	166567	0	3
Jun 2002	78	312947	0	3
Jul 2002	93	308387	0	3
Aug 2002	82	287135	0	3
Sep 2002	57	99474	0	3
Oct 2002	93	480263	0	3
Nov 2002	90	331693	0	3
Dec 2002	89	337875	0	3
Year Total		**3485844**	**0**	
Jan 2003	90	295195	0	3
Feb 2003	82	334565	0	3
Mar 2003	120	575520	0	4
Apr 2003	120	696598	0	4
May 2003	100	605187	0	4
Jun 2003	96	593120	0	5
Jul 2003	109	759950	0	4
Aug 2003	186	827891	0	6
Sep 2003	178	840855	0	6
Oct 2003	157	509207	0	6
Nov 2003	175	685471	0	6
Dec 2003	186	561429	356898	6
Year Total		**7284988**	**356898**	
Jan 2004	186	439352	582320	6
Feb 2004	174	377635	546765	6
Mar 2004	186	380085	809379	6
Apr 2004	180	351469	682790	6
May 2004	166	345507	505263	6
Jun 2004	170	529892	168754	6
Jul 2004	177	528660	328090	6
Aug 2004	65	181306	110330	7
Sep 2004	112	357492	237941	7
Oct 2004	216	571174	474461	8
Nov 2004	226	664387	511356	8
Dec 2004	217	678735	437593	7
Year Total		**5405694**	**5395042**	
Pool Total		**16,285,476**	**5,751,940**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jun 1977	14	24	0	1
Aug 1977	31	116	0	1
Sep 1977	6	5996	0	1
Oct 1977	8	4018	0	2
Nov 1977	21	15271	0	2
Dec 1977	27	11336	0	2
Year Total		**36761**	**0**	
Jan 1978	23	16047	0	2
Feb 1978	18	14489	0	2
Mar 1978	37	23778	0	2
Apr 1978	49	50185	0	2
May 1978	48	55681	0	2
Jun 1978	101	70174	0	4
Jul 1978	106	96961	0	4
Aug 1978	159	143915	0	6
Sep 1978	165	182225	0	6
Oct 1978	163	200149	0	6
Nov 1978	153	234590	0	6
Dec 1978	209	364987	0	8
Year Total		**1453181**	**0**	
Jan 1979	186	333153	0	6
Feb 1979	159	205402	0	6
Mar 1979	177	342092	0	7
Apr 1979	194	423094	0	7
May 1979	214	789621	0	7
Jun 1979	160	650649	0	7
Jul 1979	205	551123	0	7
Aug 1979	192	623887	0	8
Sep 1979	185	519533	0	7
Oct 1979	165	628153	0	7
Nov 1979	180	950728	0	6
Dec 1979	241	950475	0	8
Year Total		**6967910**	**0**	
Jan 1980	248	1056360	0	8
Feb 1980	229	828116	0	8
Mar 1980	247	913644	0	8
Apr 1980	235	873495	0	8
May 1980	246	966967	0	8
Jun 1980	217	900038	0	8
Jul 1980	256	805475	0	10
Aug 1980	277	775393	0	10
Sep 1980	269	811550	0	9
Oct 1980	245	806263	0	9
Nov 1980	252	712271	0	10
Dec 1980	340	1037675	0	12
Year Total		**10487247**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1981	286	1030645	0	10
Feb 1981	269	897687	0	10
Mar 1981	308	1583960	0	10
Apr 1981	288	745810	0	10
May 1981	260	944951	0	10
Jun 1981	239	920548	0	9
Jul 1981	264	1015870	0	9
Aug 1981	261	1031964	0	10
Sep 1981	206	913994	0	10
Oct 1981	261	1120701	0	9
Nov 1981	269	955284	0	9
Dec 1981	320	1139961	0	12
Year Total		**12301375**	**0**	
Jan 1982	266	1176058	0	10
Feb 1982	237	1113410	0	9
Mar 1982	260	1181865	0	9
Apr 1982	247	1019870	0	9
May 1982	265	1013475	0	10
Jun 1982	242	935270	0	9
Jul 1982	216	1010406	0	9
Aug 1982	213	813890	0	9
Sep 1982	219	685471	0	9
Oct 1982	245	942130	0	9
Nov 1982	233	741901	0	9
Dec 1982	313	847515	0	11
Year Total		**11481261**	**0**	
Jan 1983	258	915216	0	9
Feb 1983	229	732954	0	9
Mar 1983	263	605179	0	10
Apr 1983	249	606320	0	10
May 1983	276	753514	0	10
Jun 1983	244	583719	0	10
Jul 1983	230	543251	0	10
Aug 1983	181	337906	0	9
Sep 1983	205	557100	0	7
Oct 1983	216	629393	0	9
Nov 1983	242	545013	0	9
Dec 1983	313	728798	0	11
Year Total		**7538363**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1984	254	591240	0	9
Feb 1984	244	748856	0	9
Mar 1984	233	749050	0	9
Apr 1984	237	868403	0	8
May 1984	245	842018	0	8
Jun 1984	135	657818	0	6
Jul 1984	176	637934	0	6
Aug 1984	182	793503	0	6
Sep 1984	180	977779	0	6
Oct 1984	178	704279	0	6
Nov 1984	149	1163384	0	5
Dec 1984	217	1529912	0	7
Year Total		**10264176**	**0**	
Jan 1985	132	1218898	0	5
Feb 1985	137	1897716	0	5
Mar 1985	155	2038342	0	5
Apr 1985	149	1361191	0	5
May 1985	155	1729952	0	5
Jun 1985	150	1836574	0	5
Jul 1985	150	1648967	0	6
Aug 1985	124	1875496	0	5
Sep 1985	150	2114234	0	5
Oct 1985	155	2429002	0	5
Nov 1985	150	2339541	0	6
Dec 1985	186	2768539	0	6
Year Total		**23258452**	**0**	
Jan 1986	155	3363067	0	5
Feb 1986	112	1252054	0	4
Mar 1986	100	1150628	0	4
Apr 1986	120	1662727	0	4
May 1986	124	1584015	0	4
Jun 1986	120	1516993	0	5
Jul 1986	124	1356647	0	4
Aug 1986	190	1242331	0	7
Sep 1986	174	1108333	0	8
Oct 1986	195	1372134	0	8
Nov 1986	203	1710503	0	9
Dec 1986	255	2136407	0	10
Year Total		**19455839**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1987	194	2426322	0	8
Feb 1987	164	1907415	0	8
Mar 1987	189	1787665	0	8
Apr 1987	178	1901125	0	8
May 1987	193	1690215	0	8
Jun 1987	194	1751221	0	8
Jul 1987	140	2109697	0	6
Aug 1987	131	2129253	0	6
Sep 1987	174	1353772	0	8
Oct 1987	224	1352428	0	8
Nov 1987	215	1448521	0	9
Dec 1987	245	2219314	0	10
Year Total		**22076948**	**0**	
Jan 1988	203	2183650	0	8
Feb 1988	177	2798182	0	7
Mar 1988	197	3631650	0	8
Apr 1988	197	3107008	0	8
May 1988	224	3261334	0	9
Jun 1988	248	3639921	0	10
Jul 1988	279	4425072	0	10
Aug 1988	279	4681090	0	11
Sep 1988	275	5493891	0	11
Oct 1988	288	6163695	0	11
Nov 1988	268	7113825	0	11
Dec 1988	327	7911400	0	12
Year Total		**54410718**	**0**	
Jan 1989	316	7596746	0	12
Feb 1989	287	7148217	0	12
Mar 1989	305	7709831	0	12
Apr 1989	324	10183365	0	13
May 1989	344	10511672	0	13
Jun 1989	302	9271897	0	13
Jul 1989	291	8528607	0	13
Aug 1989	327	9233439	0	12
Sep 1989	301	8806862	0	13
Oct 1989	347	10628681	0	12
Nov 1989	314	10092181	0	11
Dec 1989	337	11602359	0	11
Year Total		**111313857**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1990	330	11071550	0	11
Feb 1990	289	10716147	0	12
Mar 1990	369	12210485	0	12
Apr 1990	336	8578669	0	13
May 1990	379	10066426	0	13
Jun 1990	358	8216402	0	14
Jul 1990	383	9303909	0	14
Aug 1990	366	9205078	0	14
Sep 1990	348	9894936	0	14
Oct 1990	371	12033347	0	13
Nov 1990	371	10536981	0	14
Dec 1990	387	11370769	0	13
Year Total		**123204699**	**0**	
Jan 1991	322	11694031	0	11
Feb 1991	296	11122755	0	12
Mar 1991	353	12019354	0	12
Apr 1991	346	10669450	0	12
May 1991	343	10726716	0	12
Jun 1991	389	9524444	0	13
Jul 1991	375	9281820	0	13
Aug 1991	379	8803281	0	13
Sep 1991	323	8025305	0	13
Oct 1991	306	8238332	0	11
Nov 1991	309	7797527	0	11
Dec 1991	313	7828425	0	11
Year Total		**115731440**	**0**	
Jan 1992	316	7794178	0	11
Feb 1992	301	7695525	0	11
Mar 1992	321	7825986	0	11
Apr 1992	327	7667838	0	12
May 1992	333	7298609	0	12
Jun 1992	385	8201627	0	13
Jul 1992	396	7868039	0	13
Aug 1992	346	6797642	0	13
Sep 1992	336	7415754	0	12
Oct 1992	323	7432898	0	13
Nov 1992	308	6668762	0	12
Dec 1992	324	6416632	0	11
Year Total		**89083490**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1993	310	7087992	0	11
Feb 1993	290	6848834	0	11
Mar 1993	326	7731559	0	11
Apr 1993	316	8061681	0	11
May 1993	341	7723277	0	11
Jun 1993	374	9007163	0	13
Jul 1993	355	7869557	0	13
Aug 1993	346	6982513	0	12
Sep 1993	330	6737095	0	12
Oct 1993	338	7303022	0	11
Nov 1993	311	6703842	0	11
Dec 1993	257	5729513	0	9
Year Total		**87786048**	**0**	
Jan 1994	221	4928114	0	8
Feb 1994	281	6851976	0	11
Mar 1994	338	7474070	0	11
Apr 1994	313	6637532	0	11
May 1994	319	7539329	0	11
Jun 1994	328	6360818	0	12
Jul 1994	310	3539785	0	11
Aug 1994	319	3503552	0	11
Sep 1994	326	4905305	0	12
Oct 1994	270	4555947	0	10
Nov 1994	320	4485769	0	12
Dec 1994	320	5412026	0	11
Year Total		**66194223**	**0**	
Jan 1995	319	6621454	0	11
Feb 1995	282	5509703	0	11
Mar 1995	333	7620904	0	12
Apr 1995	343	6447500	0	12
May 1995	364	6681419	0	12
Jun 1995	380	6513297	0	13
Jul 1995	364	6563831	0	13
Aug 1995	357	4938725	0	12
Sep 1995	353	4332785	0	13
Oct 1995	346	4652290	0	13
Nov 1995	347	5086812	0	12
Dec 1995	361	6587261	0	12
Year Total		**71555981**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1996	367	7056034	0	12
Feb 1996	342	7117641	0	12
Mar 1996	363	7888967	0	12
Apr 1996	356	6827592	0	12
May 1996	352	5663958	0	13
Jun 1996	364	7827567	0	13
Jul 1996	359	6967246	0	12
Aug 1996	329	4900409	0	12
Sep 1996	311	5777161	0	11
Oct 1996	319	5806923	0	11
Nov 1996	298	5222613	0	11
Dec 1996	364	6760233	0	12
Year Total		**77816344**	**0**	
Jan 1997	350	7102863	0	12
Feb 1997	273	5964187	0	12
Mar 1997	320	6271104	0	11
Apr 1997	348	6992767	0	12
May 1997	339	7352862	0	11
Jun 1997	330	7973804	0	11
Jul 1997	335	7469893	0	11
Aug 1997	339	5939504	0	11
Sep 1997	329	5812185	0	11
Oct 1997	336	5225904	0	11
Nov 1997	333	6089046	0	12
Dec 1997	372	7639303	0	12
Year Total		**79833422**	**0**	
Jan 1998	372	7869228	0	12
Feb 1998	336	6710090	0	12
Mar 1998	367	5315506	0	12
Apr 1998	388	6666241	0	14
May 1998	377	9105356	0	14
Jun 1998	400	8133439	0	14
Jul 1998	395	7603239	0	13
Aug 1998	385	6655314	0	14
Sep 1998	363	5715405	0	14
Oct 1998	392	7989021	0	15
Nov 1998	392	7972745	0	14
Dec 1998	391	7737343	0	14
Year Total		**87472927**	**0**	

State of Alaska, Oil and Gas Conservation Commission

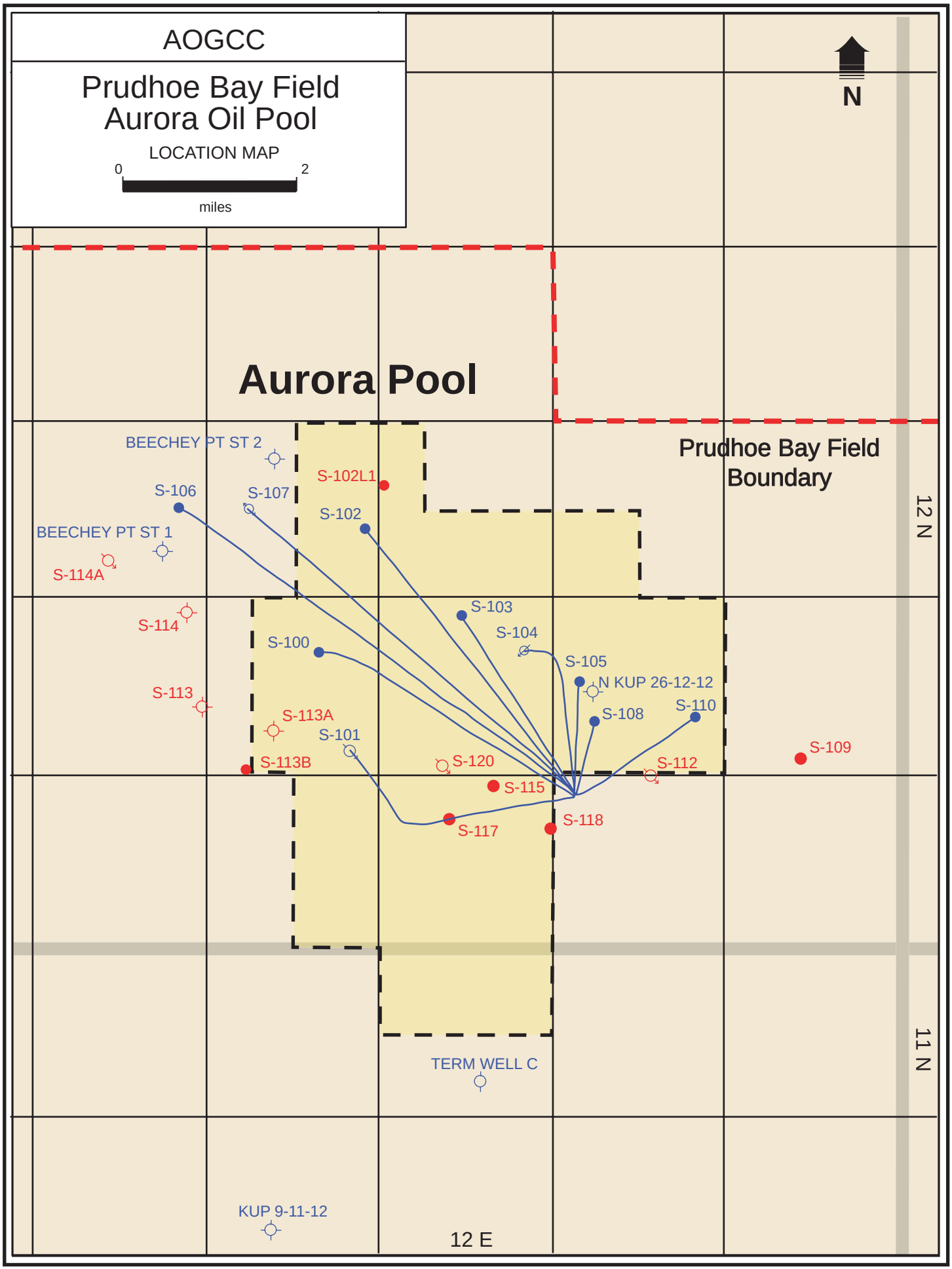
Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

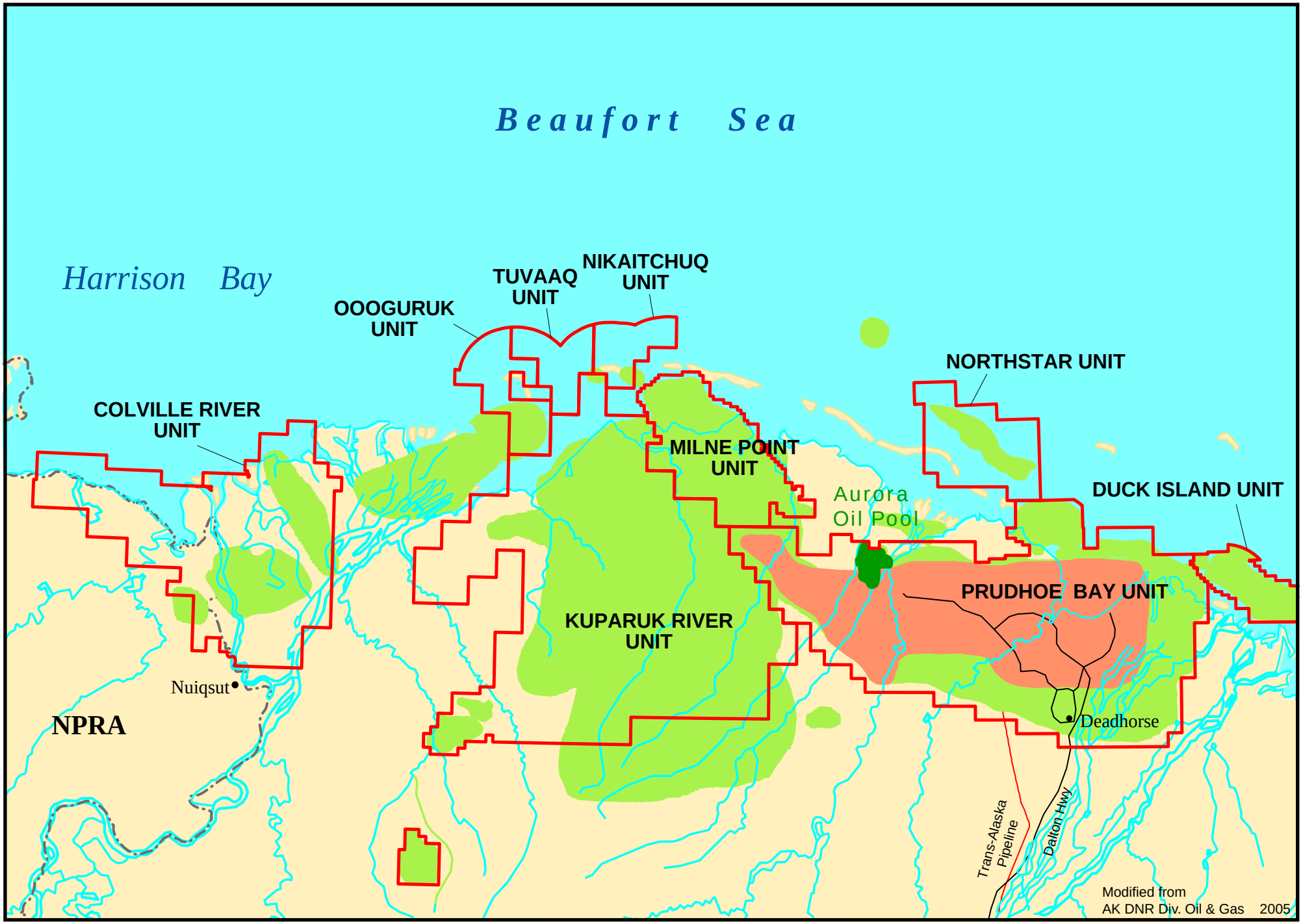
Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1999	401	7265882	0	14
Feb 1999	367	5869159	0	15
Mar 1999	404	7183727	0	15
Apr 1999	391	6094526	0	15
May 1999	403	6259634	0	15
Jun 1999	387	6313412	0	14
Jul 1999	343	6248134	0	13
Aug 1999	373	7047140	0	14
Sep 1999	329	5107836	0	14
Oct 1999	374	7245761	0	14
Nov 1999	352	7211140	0	14
Dec 1999	374	8349104	0	13
Year Total		**80195455**	**0**	
Jan 2000	374	8264654	0	14
Feb 2000	347	7622673	0	13
Mar 2000	372	7783396	0	14
Apr 2000	358	7295103	0	14
May 2000	371	7497121	0	14
Jun 2000	341	6986088	0	13
Jul 2000	342	6379962	0	12
Aug 2000	329	5509072	0	12
Sep 2000	329	6001699	0	12
Oct 2000	374	5946001	0	14
Nov 2000	362	6005143	0	14
Dec 2000	364	6330210	0	14
Year Total		**81621122**	**0**	
Jan 2001	374	6815796	0	13
Feb 2001	338	5614104	0	14
Mar 2001	371	5177464	0	15
Apr 2001	359	4787945	0	13
May 2001	346	5260006	0	14
Jun 2001	323	4609847	0	13
Jul 2001	334	5236241	0	13
Aug 2001	347	4512891	0	12
Sep 2001	300	4313292	0	13
Oct 2001	340	4872710	0	13
Nov 2001	358	5300088	0	14
Dec 2001	370	6156832	0	14
Year Total		**62657216**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: PRUDHOE BAY, PRUD UNDEFIN WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 2002	369	6040291	0	14
Feb 2002	334	4507218	0	14
Mar 2002	362	5512863	0	14
Apr 2002	349	6460584	0	14
May 2002	358	5993188	0	14
Jun 2002	358	5300007	0	12
Jul 2002	337	4705149	0	13
Aug 2002	366	4870990	0	15
Sep 2002	311	3931656	0	13
Oct 2002	339	5228125	0	13
Nov 2002	318	4819357	0	12
Dec 2002	350	4715724	0	14
Year Total		**62085152**	**0**	
Jan 2003	344	4045202	0	14
Feb 2003	287	3881272	0	14
Mar 2003	324	3643710	0	14
Apr 2003	290	3206247	0	12
May 2003	317	2950665	0	12
Jun 2003	269	2785427	0	11
Jul 2003	211	2041653	0	10
Aug 2003	207	2533250	0	10
Sep 2003	224	2119317	0	11
Oct 2003	244	2653587	0	11
Nov 2003	239	2430529	0	11
Dec 2003	273	3545408	0	11
Year Total		**35836267**	**0**	
Jan 2004	265	3257221	0	11
Feb 2004	239	2193863	0	10
Mar 2004	246	2434344	0	10
Apr 2004	246	3277570	0	11
May 2004	255	3647690	0	11
Jun 2004	259	4143818	0	10
Jul 2004	248	3790725	0	10
Aug 2004	237	3195134	0	12
Sep 2004	217	2924637	0	11
Oct 2004	234	3929154	0	10
Nov 2004	231	3246153	0	9
Dec 2004	243	4183012	0	11
Year Total		**40223321**	**0**	
Pool Total		**1,452,343,195**	**0**	


AOGCC
Prudhoe Bay Field
Aurora Oil Pool
LOCATION MAP
0
2
miles
N
Aurora Pool
Prudhoe Bay Field
Boundary
BEECHEY PT ST 2
S-102L1
S-106
S-107
S-102
BEECHEY PT ST 1
S-114A
S-114
S-103
S-104
S-100
S-105
N KUP 26-12-12
S-113
S-108
S-110
S-113A
S-101
S-109
S-113B
S-120
S-112
S-115
S-117
S-118
TERM WELL C
KUP 9-11-12
12 E
12 N
11 N



North Slope, Alaska

PRUDHOE BAY, AURORA OIL

Reference List

Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm

Alaska Oil and Gas Conservation Commission, 2005, Production Database

Bakun, F.E. and Pospisil, G., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Aurora Oil Pool, July 24, 2001, AOGCC Conservation Order No. 457 file.

Cerveny, P.F., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Aurora Oil Pool, July 24, 2001, AOGCC Conservation Order No. 457 file.

Aurora Oil Pool

Summary

The Aurora Oil Pool ("AOP") is located within the current boundaries of the Prudhoe Bay Unit ("PBU"), and it lies within the Kuparuk River Formation ("Kuparuk"). The pool comprises the accumulation of hydrocarbons that is common to, and correlates with, the interval between 6859' and 7254' measured depth in PBU V-200.[1] The structure lies between 6450' and 6850' below sea level.[2] The pool was discovered in 1969 by the Mobil Oil Corporation Mobil-Phillips North Kuparuk State No. 26-12-12, where the same accumulation lies between the depths of 6,765' and 7,765'.[3]

Geology

Within the pool, the Kuparuk comprises Early Cretaceous-aged marine shoreface and offshore sediments that consist very fine to medium grained, quartz-rich sandstone with interbedded siltstone and mudstone. The Kuparuk is stratigraphically complex, characterized by multiple unconformities, changes in thickness and sedimentary facies, and local diagenetic cementation. In the AOP, the Kuparuk reservoir is divided into three stratigraphic intervals, that are named, from deepest to shallowest, A, B and C. The A interval contains two reservoir quality sub-intervals, the A-4 and A-5 sands, which are typically 30' and 20' thick, respectively. The B interval is dominated by siltstone and sandy mudstone with numerous discontinuous thin sandstone lenses, which are up to 3' thick. The C interval contains the primary reservoir sands of the pool, and it consists of thick, amalgamated sands, with high net to gross ratios. Average layer properties range between 16% for the A sand net pay interval, and 25% for C sand net pay intervals. The average permeabilities for these layers range from 12 md to 158 md.[4] The AOP structure is a NW to SE-trending ridge that is broken by N-S trending faults[5] having vertical displacements ranging up to hundreds of feet.[6] The traps for oil and gas are created by a combination of structural and stratigraphic features: the accumulation is bounded to the W by several faults, to the E and SE by unconformities, and to the SW and N by oil-water contacts.[7] The reservoir is compartmentalized, and fluid contacts (oil-water and gas-oil) appear to be variable across the pool.[8] The reservoir temperature is about 150 degrees F at 6700' true vertical feet subsea.[9] Oil gravity ranges from 25.2 to 29.1 degrees API. Original oil in place ("OOIP") is estimated to be 110 to 146 MMSTB.[10]

Revised: Jan 25, 2005

---

[1] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm
[2] Cerveny, P.F., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Aurora Oil Pool, July 24, 2001, AOGCC Conservation Order No. 457 file.
[3] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm
[4] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm
[5] Cerveny, P.F., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Aurora Oil Pool, July 24, 2001, AOGCC Conservation Order No. 457 file.
[6] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm
[7] Cerveny, P.F., 2001, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Aurora Oil Pool, July 24, 2001, AOGCC Conservation Order No. 457 file.
[8] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm
[9] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm
[10] Alaska Oil and Gas Conservation Commission, 2001, Conservation Order No. 457, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co457.htm

PRUDHOE BAY FIELD

AURORA OIL POOL

Current Orders

Order No.		AA	Operator	Date	Description	Current
CO	457 a	4	BP EXPLORATI	10-Jan-05	Extend current pilot miscible injection (MI) operations in Aurora Oil Pool Wells S-112, S-110 and S-116.	Y
CO	457 a	4	BP EXPLORATI	22-Dec-04	Extend current pilot miscible injection (MI) operations in Aurora Oil Pool Wells S-112, S-110 and S-116. Corrected 1/10/05.	Y
CO	457 B	0	BP EXPLORATI	09-Aug-04	Pool rules for development of the Aurora Oil Pool.	Y
CO	457 B	0	BP EXPLORATI	25-Jun-04	Order expanding the affected area of the Aurora Oil Pool, Prudhoe Bay.	Y
AIO	22 B	2	BP EXPLORATI	22-Feb-04	Extend current pilot miscible injection (MI) operations in Aurora Oil Pool Wells S-112, S-110 and S-116.Corrected 1/10/05.	Y
CO	457 A	2	BP EXPLORATI	11-Aug-03	Authorization of the PBU Western Operating Metering Plan for allocation of production from Aurora Oil Pool.	Y
CO	457 A	1	BP EXPLORATI	29-Jul-03	Conservation Order 492 amended this conservation order. This amendment further clarifies paragraph 6 of that order.	Y
CO	457 A	0	BP EXPLORATI	15-May-03	Revision of Aurora Oil Pool Rules.	Y
AIO	22 B	0	BP EXPLORATI	06-May-03	Amended AIO 22A. Erratum Notice was issued on May 12, 2003.	Y
CO	483	0	BP EXPLORATI	16-Jan-03	A rule to govern the operation of development wells in all pools within the Prudhoe Bay field with pressures communication or leakage in any casing, tubing, or packer.	Y
CO	457	0	BP EXPLORATI	07-Sep-01	Pool rules for development of the Aurora Oil Pool.	Y

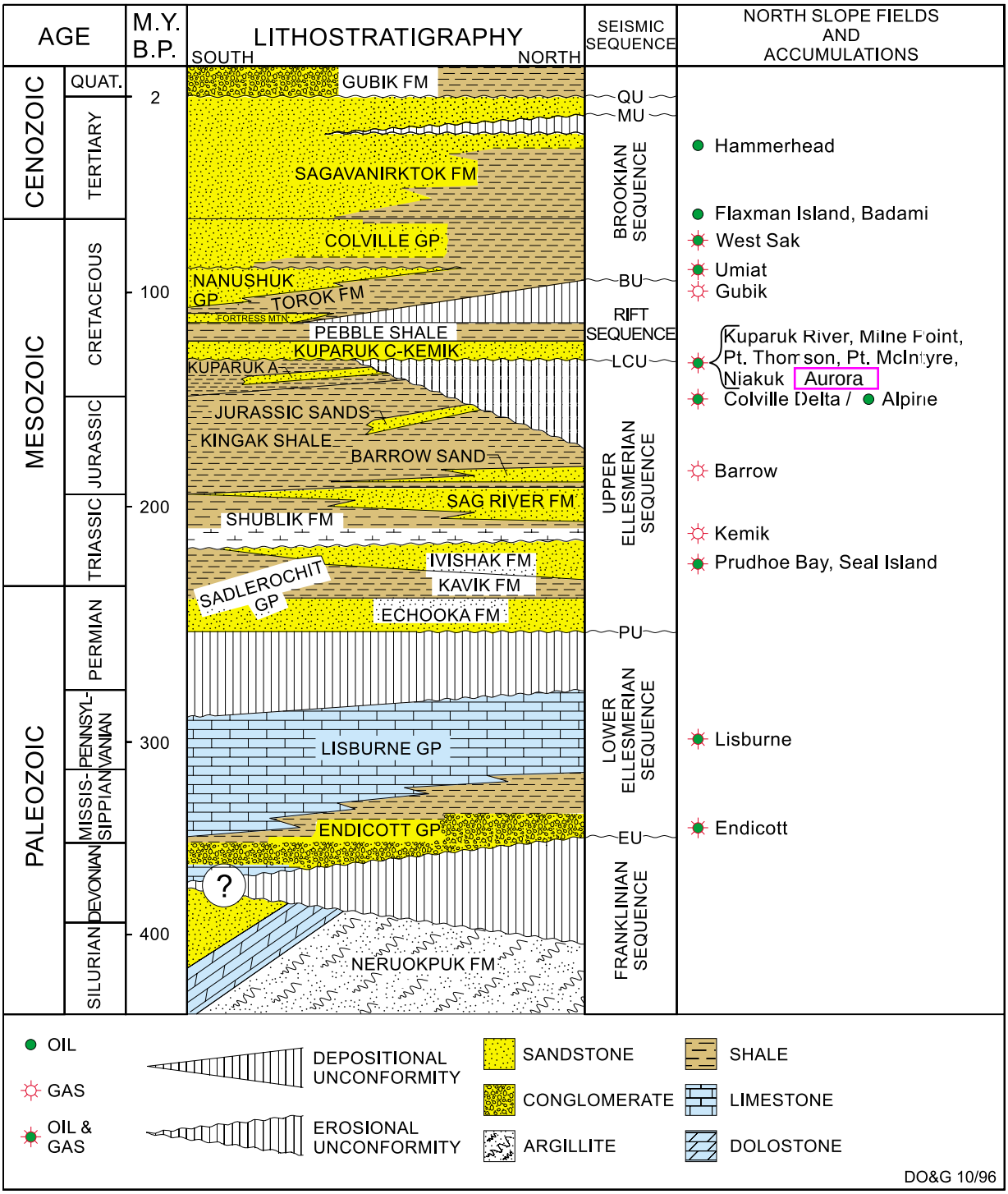
PRUDHOE BAY FIELD

AURORA OIL POOL

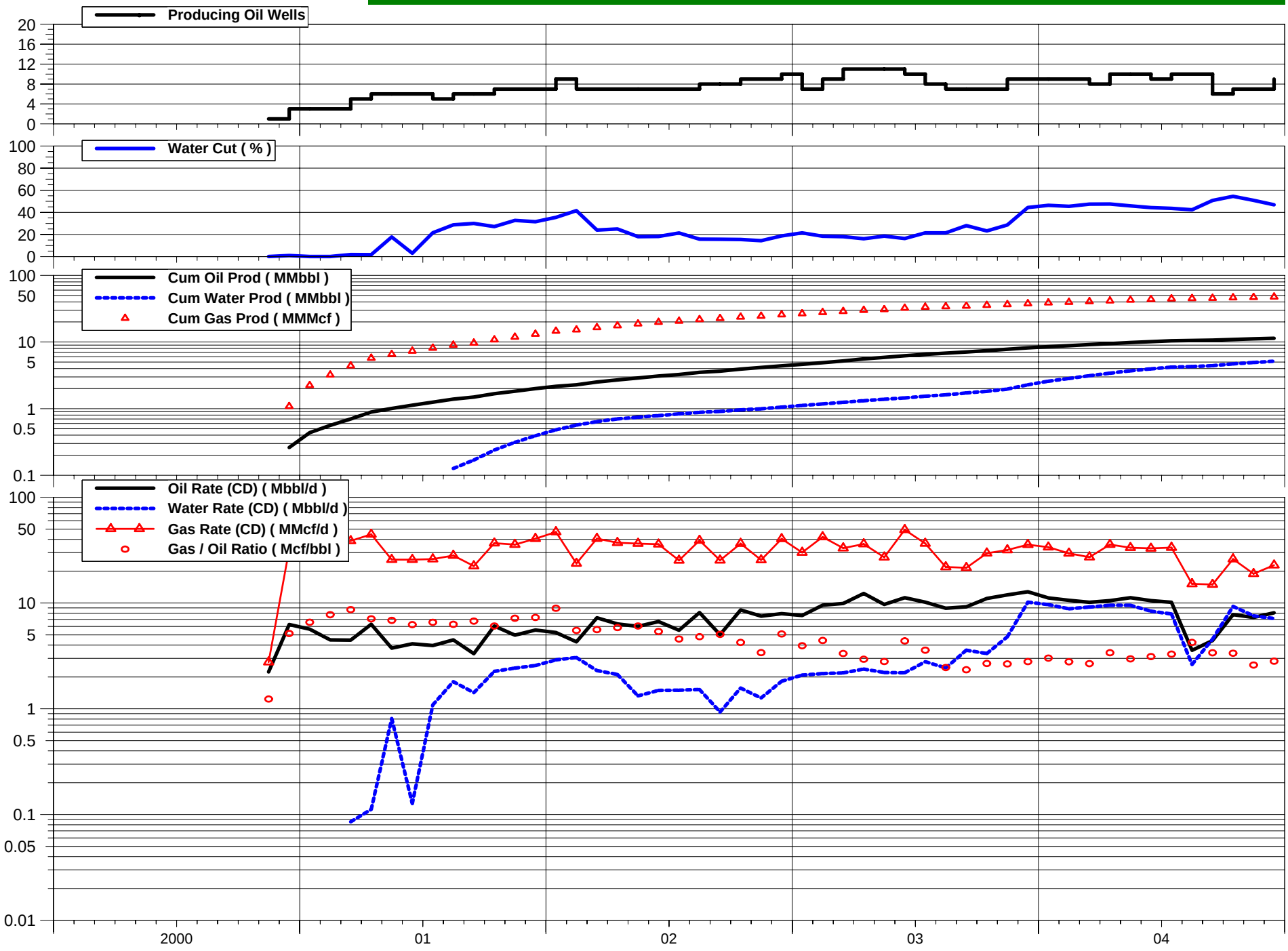
Obsolete Orders

Order No.		AA	Operator	Date	Description	Current
CO	457 A	3	BP EXPLORATI	11-Dec-04	Authorization to conduct a pilot miscible injection project in Aurora Oil Pool Wells S-112, S-110 and S-116. Amended by CO 492. Superseded and Replaced by CO 457B.	N
AIO	22 C	0	BP EXPLORATI	25-Jun-04	Order expanding the area in which injection is authorized in the Aurora Oil Pool, Prudhoe Bay Field	6
AIO	22 B	1	BP EXPLORATI	11-May-04	Authorization to conduct a pilot miscible injection project in Aurora Oil Pool Wells S-112, S-110 and S-116. Superseded by AIO 22B.	N
CO	492	0	BP EXPLORATI	26-Jun-03	Order adopting rules regulating sustained annulus pressures in Prudhoe Bay development wells. Superseded and Replaced by CO 457B.	N
AIO	22 A	0	BP EXPLORATI	03-Apr-03	Amendment to AIO 22 for an order allowing underground injection of fluids for enhanced oil recovery in Aurora Oil Pool. Superseded by AIO 22B	N
AIO	22	0	BP EXPLORATI	07-Sep-01	Authorizes underground injection of fluids for enhanced oil recovery in Aurora Oil Pool. Corrected Order distributed 9/17/02.	N

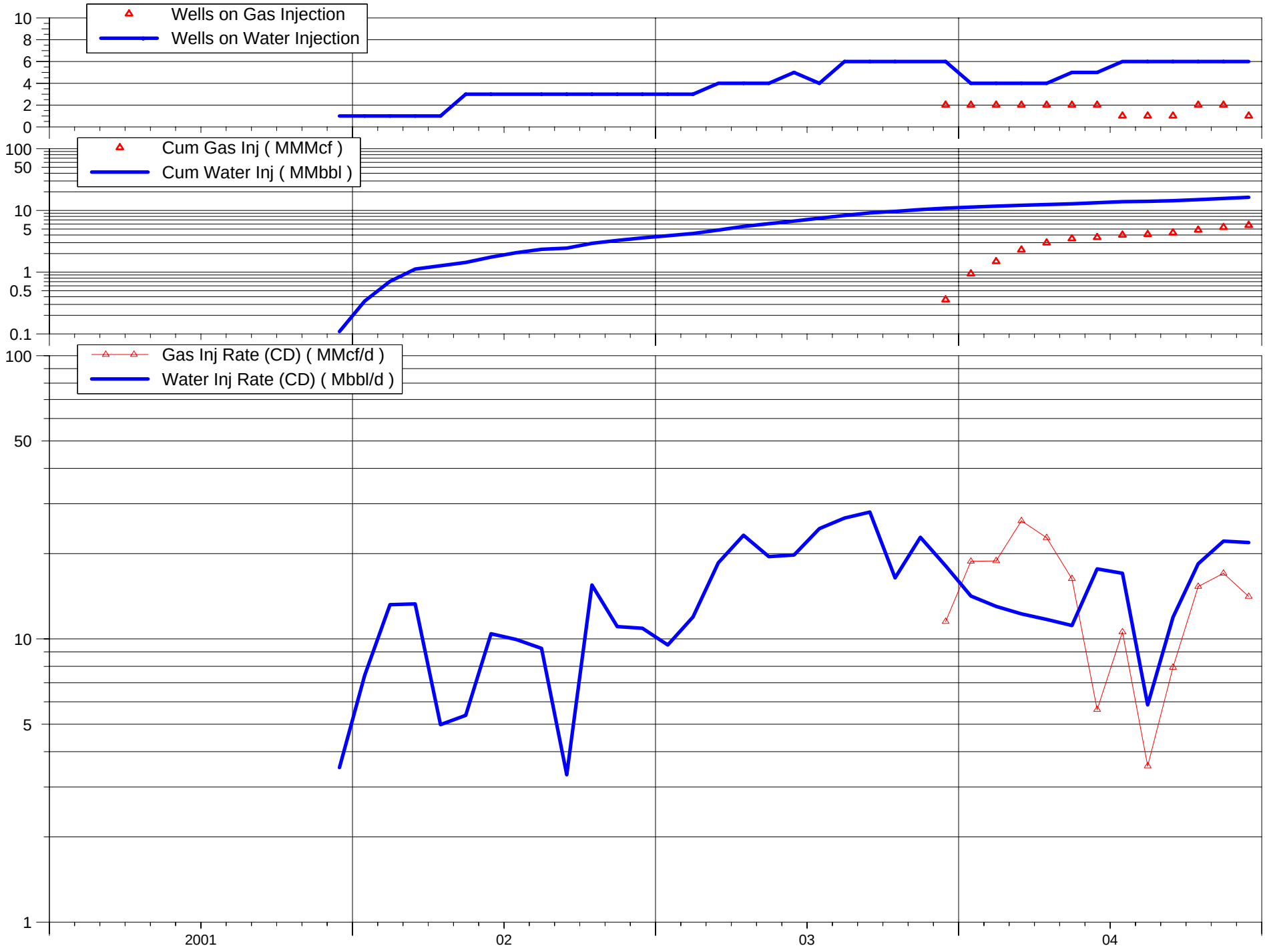
Generalized North Slope Stratigraphic Column displaying oil and gas reservoirs and associated accumulations.



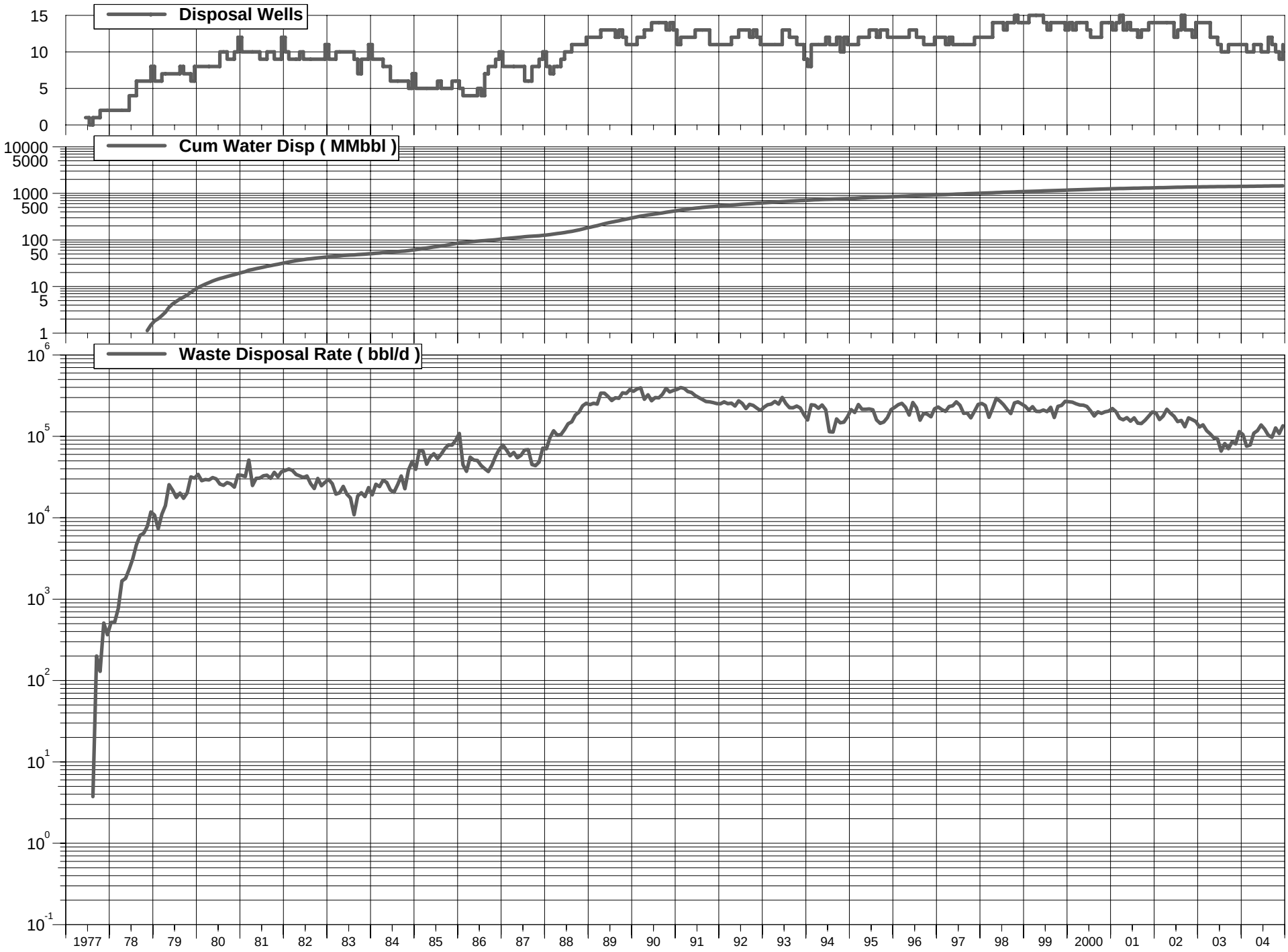
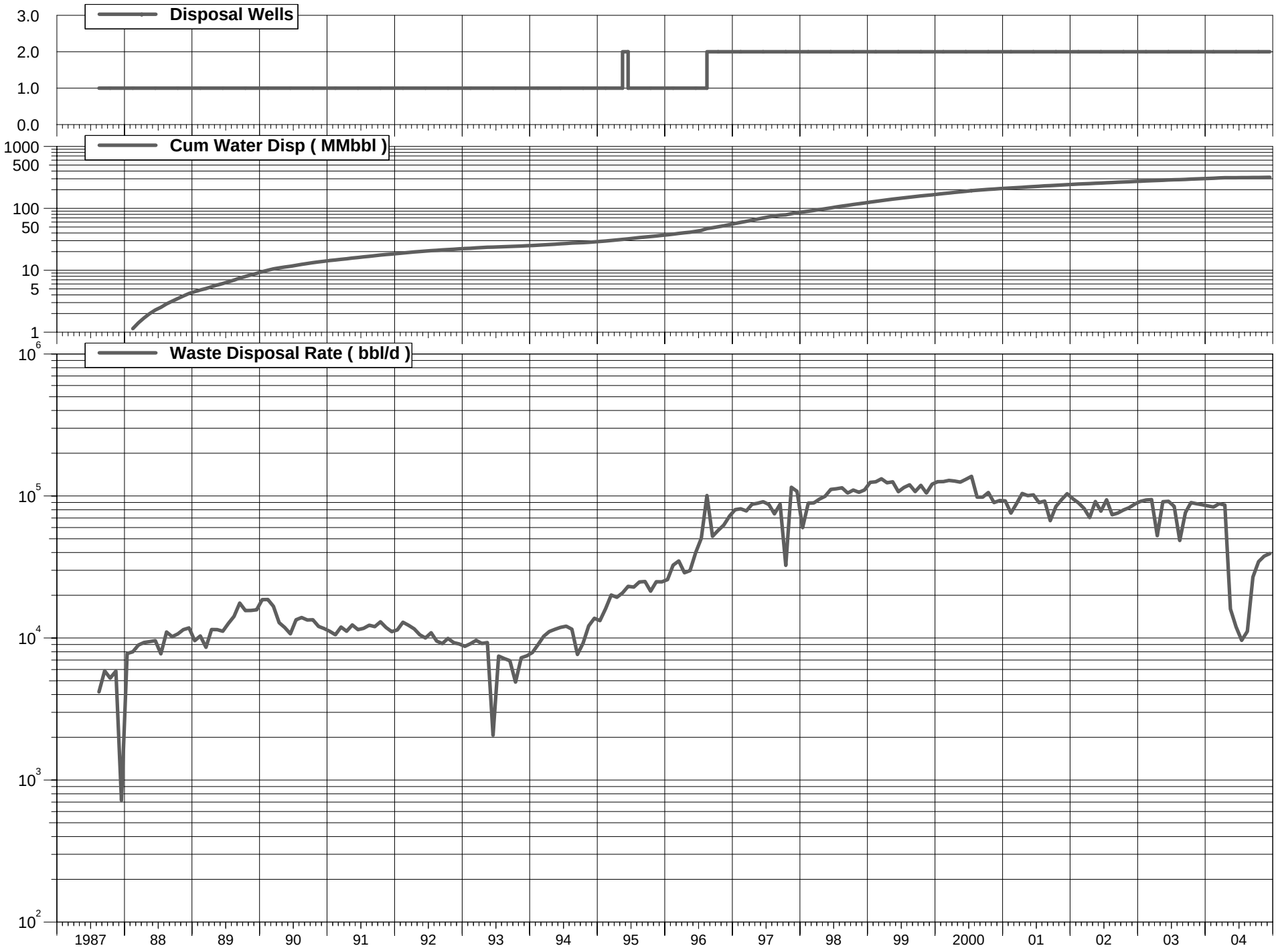
PRUDHOE BAY FIELD, AURORA OIL POOL



PRUDHOE BAY FIELD, AURORA OIL POOL - EOR INJECTION



PRUDHOE BAY FIELD, PRUDHOE UNDEFINED WASTE DISPOSAL POOL



PRUDHOE BAY FIELD, LISBURNE UNDEFINED WASTE DISPOSAL POOL