AOGCC Pool Statistics

Endicott Unit, Eider Oil Pool

Operator: BP Exploration (Alaska) Inc.

Discovery Well: BP Exploration (Alaska) Inc.
Duck Island Unit MPU 2-56/EID
Permit #198-024
API No. 50-029-22863-00-00
Sec. 36, T12N, R16E, UM
Depth: 17,988' MD / 10,006' TVD
May 28, 1998

Status: **Producing**

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

Orders: Complete List

Summary: The Eider oil pool was discovered in 1998 by the Duck Island Unit MPI 2-56/EID well. This pool is located 1-1/2 miles offshore in the westernmost portion of the Duck Island Unit, and it consists of an oil accumulation below a gas cap within the Ivishak Formation. The pool was delineated by two wells, DIU MPI 2-56A/EID and DIU MPI 2-30A, which have 5 additional sidetracks or plugbacks. Two development wells are located within the pool, DIU MPI 2-56A/EID and DIU MPI 2-30A/E12. Initial production began from 2-56A/EID in June 1998, and averaged 1,850 bopd through December 1998. In January 1999, 2-30A/E12 was brought online. Production immediately jumped to 6,244 bopd in February 1999, but then declined rapidly to 1,189 bopd by September 1999, and the pool was shut in from October 1999 through May 2000. In June of 2000, 2-56A/EID was converted to a water injector, and production was restarted, relying on a single producer, 2-30A/E12. Production peaked in July 2001 at 2,254 bopd, and then declined to about 600 bopd in May 2004. During July 2004, 2-56A/EID was converted to production again, but during the last half of 2004, production from both wells averaged less than 100 bopd.

Geology: The Eider oil pool is situated in a fault-controlled anticline that is truncated by the Lower Cretaceous unconformity. The accumulation occupies about 300 acres. Within the pool, the Ivishak Formation consists of three regressive, stratigraphic units: the Lower Sand comprising upper shoreface or marine influenced fluvial and distributary sands, the Middle Shale comprises floodplain or bay fill, and Upper Sand that consisting of mostly fluvial sediments. The Lower Sand ranges from 80' to 125' thick, and averages 21% porosity and 30 md permeability. The Middle Shale is 75' to 90' thick and has average porosity and permeability values of 20% and 300 md, respectively. The Upper Sand ranges from 60' to 125' in thickness, has average porosity of 20%, and average permeability of 300 md. Faulting and fracturing causes these three stratigraphic units to be in pressure communication. API oil gravity ranges from 23.1 to 23.8 degrees, and original oil-in-place (OOIP) is estimated at 13.2 million barrels.

Strat Column Type Log

Orig. Oil in Place: 13.2 MMSTB (CO 449)

Production: Prod Chart Prod Report Prod Data

	Oil (bbls)	NGL (bbls)	Gas (mcf)	Water (bbls)
Cumulative	**2,686,972**	**0**	**23,323,028**	**3,183,376**
2001 Total	660,495	0	6,493,705	70,401
2002 Total	422,355	0	3,657,804	729,914
2003 Total	242,135	0	2,813,008	1,034,711
2004 Total	114,809	0	929,983	1,299,926
2003 Daily Rate	663	0	7,707	2,834
2004 Daily Rate	315	0	2548	3561
Change (%)	-52%	0	-67%	26%

Continued: 1 > 2 > 3

AOGCC Pool Statistics

Endicott Unit, Eider Oil Pool

EOR Injection:

Chart Report Data

	Gas (Mcf)	Water
Cumulative	**0**	**4,332,064**
2001 Total	0	959,057
2002 Total	0	1,298,915
2003 Total	0	1,386,087
2004 Total	0	495,335
2003 Rate (per day)	0	3,797
2004 Rate (per day)	0	1,357
Change (%)	0	-64%

Disposal Injection in Field:

Chart Report Data

	Disposed Fluids
Cumulative	**5,876,300**
2001 Total	3714
2002 Total	0
2003 Total	325
2004 Total	2,427
2003 Rate (per day)	1
2004 Rate (per day)	7
Change (%)	600%

Field Development Information:

Wells In Field

Type Well	Status	2004	2003	2002	2001	2000
Producer	Oil Producer	76	75	72	72	72
Injector	Water Injector	24	26	26	26	29
	Gas Injector	5	5	5	5	5
	WAG Injector	4	3	3	3	0
	Water Supply	1	1	1	1	1
	Disposal	1	1	1	1	1
Non-Operating	Suspended	1	1	4	4	1
	Abandoned	31	28	24	24	22
Total		**143**	**140**	**136**	**136**	**131**

Active Completions in Pool (Month of December):

Type Well	Status	2004	2003	2002	2001	2000
Oil Producer	Flowing	1	0	1	1	1
	Gas Lift	0	1	0	0	0
	Shut-In	1	0	0	0	0
Service Well	Water Injector	0	1	1	1	0
	Gas Injector	0	0	0	0	0
	WAG Injector	0	0	0	0	0
	Water Supply	0	0	0	0	0
	Shut-In	0	0	0	0	1
Disposal Undef.	Disposal Injector	0	0	0	0	0
	Shut-In	0	0	0	0	0
Total		**2**	**2**	**2**	**2**	**2**

Continued: 1 > 2 > 3

AOGCC Pool Statistics

Endicott Unit, Eider Oil Pool

Permitted Wells in Field:

Type Well	Status	2004	2003	2002	2001	2000
Development	New	0	0	0	0	0
	Sidetrack	0	7	0	0	0
	Multilateral	0	0	2	0	0
Service	New	0	0	0	0	0
	Sidetrack	0	0	0	0	0
	Multilateral	0	0	0	0	0
Exploration	New	0	0	0	0	0
	Sidetrack	0	0	0	0	0
Total		**0**	**7**	**2**	**0**	**0**

Reservoir Properties:

Description	2004	2003	2002	2001	2000
Reference Datum - ft. below sea level	9700	9700	9700	9700	9700
Temperature - ° F	206	206	206	206	0
Porosity - %	21	21	21	21	21
Permeability - md	134	134	134	134	134
Swi - %	-	-	-	-	-
Oil Viscosity @ Orig. Press. cp	-	-	-	-	-
Oil Viscosity @ Sat. Press. cp	-	-	-	-	-
Orig. Press. - psi	0	4635	4635	4635	4635
Bubble Point - psi	-	-	-	-	-
Current Reservoir Press. - psi	0	3700	3900	3900	-
Oil Gravity - ° API	0	23	23	23	23
Gas Specific Gravity (Air = 1.0)	0	.778	.778	.778	.778
Gross Pay - ft.	-	-	-	-	-
Net Pay - ft.	-	-	-	-	-
Orig. FVF - RB/STB	-	-	-	-	-
Bubble Point FVF - RB/STB	1.36	1.36	1.36	1.36	1.36
Orig. GOR - SCF/STB	769	769	769	769	769
GOR (current yr.) - SCF/STB	8100	11617	8660	9832	9806

References / Summary

Continued: 1 > 2 > 3

Colville River Unit
Alpine Oil Pool

Reservoir Properties

Property	2003	2002	2001	2000	1999
Reference Datum - feet below sea level	7000	7000	7000	7000	7000
Temperature - ° F	160	160	160	160	160
Porosity - %	19	19	19	19	19
Permeability - md	15	15	15	15	15
Swi - %	20	20	20	20	20
Oil Viscosity @ Original Pressure cp	0.46	0.46	0.46	0.46	0.46
Oil Viscosity @ Saturation Pressure cp	0.4	0.4	0.4	0.4	0.4
Original Pressure - psia	3215	3215	3215	3215	3215
Bubble Point - psia	2454	2454	2454	2454	2454
Current Reservoir Pressure - psia	2900	2900	2800	3215	3215
Oil Gravity - ° API	40	40	40	40	40
Gas Specific Gravity (Air = 1.0)	0.72	0.72	0.72	0.72	0.72
Gross Pay - feet	50	50	50	50	50
Net Pay - feet	48	48	48	48	48
Original FVF - RB/STB	1.44	1.44	1.44	1.469	1.469
Bubble Point FVF - RB/STB	1.461	1.461	1.461	1.54	1.54
Original Gas/Oil Ratio - SCF/STB	840	840	840	940	850
Gas/Oil Ratio (avg. December) - SCF/STB	1263	1263	1015	953	0

State of Alaska, Oil and Gas Conservation Commission

Production History for: ENDICOTT, EIDER OIL Pool

Jan 1958 Dec 2004

Month	DaysProd	Oil (BBL)	Gas (MCF)	Water (BBL	Producing Wells
Jun 1998	26	59504	58120	1973	1
Jul 1998	31	72393	151763	6724	1
Aug 1998	31	57864	322411	1901	1
Sep 1998	30	52505	351988	991	1
Oct 1998	31	55191	413066	2011	1
Nov 1998	30	49816	405519	1405	1
Dec 1998	30	47613	418657	1226	1
Year Total		**394886**	**2121524**	**16231**	
Jan 1999	39	99311	489270	1246	2
Feb 1999	46	174826	771322	8365	2
Mar 1999	38	94378	679946	1415	2
Apr 1999	32	57706	547393	2417	2
May 1999	37	49079	531541	1687	2
Jun 1999	30	33901	475834	1698	1
Jul 1999	31	35853	520825	1794	1
Aug 1999	23	23967	359036	898	1
Sep 1999	30	35683	503896	1215	1
Year Total		**604704**	**4879063**	**20735**	
Jun 2000	7	24648	90815	412	1
Jul 2000	31	41511	338731	1651	1
Aug 2000	31	38178	365522	867	1
Sep 2000	30	33328	380332	2647	1
Oct 2000	31	30636	402854	3844	1
Nov 2000	30	39442	400154	1377	1
Dec 2000	31	39845	449533	660	1
Year Total		**247588**	**2427941**	**11458**	
Jan 2001	31	35808	478989	667	1
Feb 2001	27	28236	347213	1285	1
Mar 2001	31	59588	610547	2450	1
Apr 2001	30	53621	523768	887	1
May 2001	29	57679	218426	0	1
Jun 2001	30	64013	605621	4702	1
Jul 2001	31	69862	697302	3957	1
Aug 2001	31	65523	644554	2536	1
Sep 2001	30	59340	554856	1782	1
Oct 2001	30	60062	593569	9590	1
Nov 2001	30	53698	600172	19594	1
Dec 2001	31	53065	618688	22951	1
Year Total		**660495**	**6493705**	**70401**	

State of Alaska, Oil and Gas Conservation Commission

Production History for: ENDICOTT, EIDER OIL Pool

Jan 1958 Dec 2004

Month	DaysProd	Oil (BBL)	Gas (MCF)	Water (BBL	Producing Wells
Jan 2002	31	48358	556860	30277	1
Feb 2002	28	40035	500884	28475	1
Mar 2002	31	38689	481651	36932	1
Apr 2002	30	37304	387767	39952	1
May 2002	31	34276	322210	50582	1
Jun 2002	30	32785	216551	58499	1
Jul 2002	29	29375	128633	63616	1
Aug 2002	31	28217	136381	68159	1
Sep 2002	30	32757	154899	89097	1
Oct 2002	30	35846	238081	96695	1
Nov 2002	27	24195	213430	69746	1
Dec 2002	31	40518	320457	97884	1
Year Total		**422355**	**3657804**	**729914**	
Jan 2003	31	33427	332114	88076	1
Feb 2003	28	29513	307251	75642	1
Mar 2003	31	27308	326690	75342	1
Apr 2003	30	23609	323623	72897	1
May 2003	30	25243	282694	72615	1
Jun 2003	30	18600	231806	89413	1
Jul 2003	31	21191	259347	91267	1
Aug 2003	31	17403	293643	97329	1
Sep 2003	26	13029	253436	79977	1
Oct 2003	23	1307	22684	43104	1
Nov 2003	30	12020	33752	123181	1
Dec 2003	31	19485	145968	125868	1
Year Total		**242135**	**2813008**	**1034711**	
Jan 2004	31	27346	179217	155813	1
Feb 2004	24	13857	134433	98811	1
Mar 2004	31	25180	101944	130548	1
Apr 2004	30	18553	116337	126834	1
May 2004	31	18203	126898	113590	1
Jun 2004	21	3169	13905	87711	1
Jul 2004	32	1427	55138	99603	2
Aug 2004	28	696	39483	114824	2
Sep 2004	25	2706	31086	104265	2
Oct 2004	14	736	36742	23686	2
Nov 2004	27	636	12846	129099	2
Dec 2004	25	2300	81954	115142	1
Year Total		**114809**	**929983**	**1299926**	
Pool Total		**2,686,972**	**23,323,028**	**3,183,376**	

Colville River Unit
Alpine Oil Pool

Permitted Wells

Year	Service			Development			Exploratory		Totals
	New	Sidetrack	Multilateral	New	Sidetrack	Multilateral	New	Sidetrack	
1999	8	0	0	8	0	0	0	0	**16**
2000	5	0	0	13	1	0	0	0	**19**
2001	3	0	0	8	1	0	1	1	**14**
2002	10	1	0	8	0	0	0	0	**19**
2003	12	0	0	5	0	1	0	0	**18**
Totals	**38**	**1**	**0**	**42**	**2**	**1**	**1**	**1**	**86**

State of Alaska, Oil and Gas Conservation Commission

Injection History for: ENDICOTT, EIDER OIL Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jun 2000	7	36874	0	1
Jul 2000	18	53928	0	1
Aug 2000	18	37620	0	1
Sep 2000	30	30190	0	1
Oct 2000	29	32606	0	1
Nov 2000	1	1452	0	1
Year Total		**192670**	**0**	
Feb 2001	20	51873	0	1
Mar 2001	31	69150	0	1
Apr 2001	30	87443	0	1
May 2001	31	88592	0	1
Jun 2001	30	99502	0	1
Jul 2001	31	95337	0	1
Aug 2001	31	106381	0	1
Sep 2001	30	82958	0	1
Oct 2001	31	91702	0	1
Nov 2001	30	88131	0	1
Dec 2001	31	97988	0	1
Year Total		**959057**	**0**	
Jan 2002	31	93866	0	1
Feb 2002	28	93378	0	1
Mar 2002	31	107434	0	1
Apr 2002	30	115410	0	1
May 2002	31	108632	0	1
Jun 2002	30	100535	0	1
Jul 2002	30	109422	0	1
Aug 2002	31	145883	0	1
Sep 2002	30	116651	0	1
Oct 2002	30	96508	0	1
Nov 2002	30	103556	0	1
Dec 2002	31	107640	0	1
Year Total		**1298915**	**0**	
Jan 2003	31	114826	0	1
Feb 2003	28	70080	0	1
Mar 2003	31	66577	0	1
Apr 2003	30	104683	0	1
May 2003	31	132908	0	1
Jun 2003	30	139490	0	1
Jul 2003	31	134973	0	1
Aug 2003	31	138361	0	1
Sep 2003	28	120790	0	1
Oct 2003	31	138521	0	1
Nov 2003	30	139366	0	1
Dec 2003	29	85512	0	1
Year Total		**1386087**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: ENDICOTT, EIDER OIL Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 2004	31	125585	0	1
Feb 2004	29	108340	0	1
Mar 2004	31	126990	0	1
Apr 2004	30	127514	0	1
May 2004	3	6906	0	1
Year Total		**495335**	**0**	
Pool Total		**4,332,064**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: ENDICOTT, UNDEFINED WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jul 1986	1	2702	0	1
Aug 1986	10	3499	0	1
Sep 1986	3	717	0	1
Oct 1986	16	13792	0	1
Nov 1986	15	7865	0	1
Dec 1986	27	15402	0	1
Year Total		**43977**	**0**	
Jan 1987	23	11627	0	1
Feb 1987	10	5392	0	1
Mar 1987	31	12077	0	1
Apr 1987	27	19449	0	1
May 1987	25	18525	0	1
Jun 1987	27	25066	0	1
Jul 1987	25	14746	0	1
Aug 1987	15	6303	0	1
Sep 1987	28	8866	0	1
Oct 1987	22	9788	0	1
Nov 1987	23	19678	0	1
Dec 1987	31	127197	0	2
Year Total		**278714**	**0**	
Jan 1988	31	165867	0	2
Feb 1988	29	195697	0	1
Mar 1988	31	156793	0	1
Apr 1988	30	165015	0	1
May 1988	40	184001	0	2
Jun 1988	30	143207	0	1
Jul 1988	31	176929	0	1
Aug 1988	31	200057	0	1
Sep 1988	30	221270	0	1
Oct 1988	31	294594	0	1
Nov 1988	30	289175	0	1
Dec 1988	31	378003	0	1
Year Total		**2570608**	**0**	
Jan 1989	31	51431	0	1
Feb 1989	28	54733	0	1
Mar 1989	31	363028	0	1
Apr 1989	30	233709	0	1
May 1989	31	34631	0	1
Jun 1989	30	25331	0	1
Jul 1989	30	46021	0	1
Aug 1989	31	38429	0	1
Sep 1989	27	123288	0	1
Oct 1989	28	19952	0	1
Nov 1989	25	18747	0	1
Dec 1989	29	58729	0	1
Year Total		**1068029**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: ENDICOTT, UNDEFINED WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1990	24	19163	0	1
Feb 1990	28	150904	0	1
Mar 1990	31	68399	0	1
Apr 1990	28	21297	0	1
May 1990	28	18205	0	1
Jun 1990	29	17933	0	1
Jul 1990	31	24074	0	1
Aug 1990	31	33559	0	1
Sep 1990	30	49825	0	1
Oct 1990	29	41611	0	1
Nov 1990	27	39229	0	1
Dec 1990	31	79157	0	1
Year Total		**563356**	**0**	
Jan 1991	30	35863	0	1
Feb 1991	25	27274	0	1
Mar 1991	8	7989	0	1
May 1991	5	2154	0	1
Jun 1991	27	38663	0	1
Jul 1991	19	25708	0	1
Aug 1991	13	5534	0	1
Sep 1991	20	9114	0	1
Oct 1991	13	4501	0	1
Nov 1991	10	3411	0	1
Dec 1991	14	13781	0	1
Year Total		**173992**	**0**	
Jan 1992	26	29032	0	1
Feb 1992	22	21755	0	1
Mar 1992	20	30921	0	1
Apr 1992	21	15262	0	1
May 1992	19	20182	0	1
Jun 1992	16	9825	0	1
Jul 1992	18	18283	0	1
Aug 1992	25	14955	0	1
Sep 1992	17	14561	0	1
Oct 1992	17	6049	0	1
Nov 1992	29	20182	0	1
Dec 1992	31	32464	0	1
Year Total		**233471**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: ENDICOTT, UNDEFINED WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1993	31	57417	0	1
Feb 1993	28	42144	0	1
Mar 1993	31	46891	0	1
Apr 1993	30	45152	0	1
May 1993	30	41102	0	1
Jun 1993	30	38501	0	1
Jul 1993	30	41806	0	1
Aug 1993	27	26126	0	1
Sep 1993	30	49614	0	1
Oct 1993	31	58673	0	1
Nov 1993	30	45971	0	1
Dec 1993	31	55334	0	1
Year Total		**548731**	**0**	
Jan 1994	31	60781	0	1
Feb 1994	28	68417	0	1
Mar 1994	18	15163	0	1
Apr 1994	16	2995	0	1
May 1994	21	5575	0	1
Jun 1994	23	10565	0	1
Jul 1994	16	5063	0	1
Aug 1994	24	14647	0	1
Sep 1994	16	9000	0	1
Oct 1994	14	5206	0	1
Nov 1994	13	3425	0	1
Dec 1994	9	1761	0	1
Year Total		**202598**	**0**	
Jan 1995	15	5324	0	1
Feb 1995	22	10741	0	1
Mar 1995	16	4400	0	1
Apr 1995	20	9013	0	1
May 1995	16	10637	0	1
Jun 1995	12	5948	0	1
Jul 1995	4	3250	0	1
Aug 1995	12	3200	0	1
Sep 1995	7	2057	0	1
Oct 1995	31	15275	0	1
Nov 1995	22	11904	0	1
Dec 1995	14	3825	0	1
Year Total		**85574**	**0**	

State of Alaska, Oil and Gas Conservation Commission

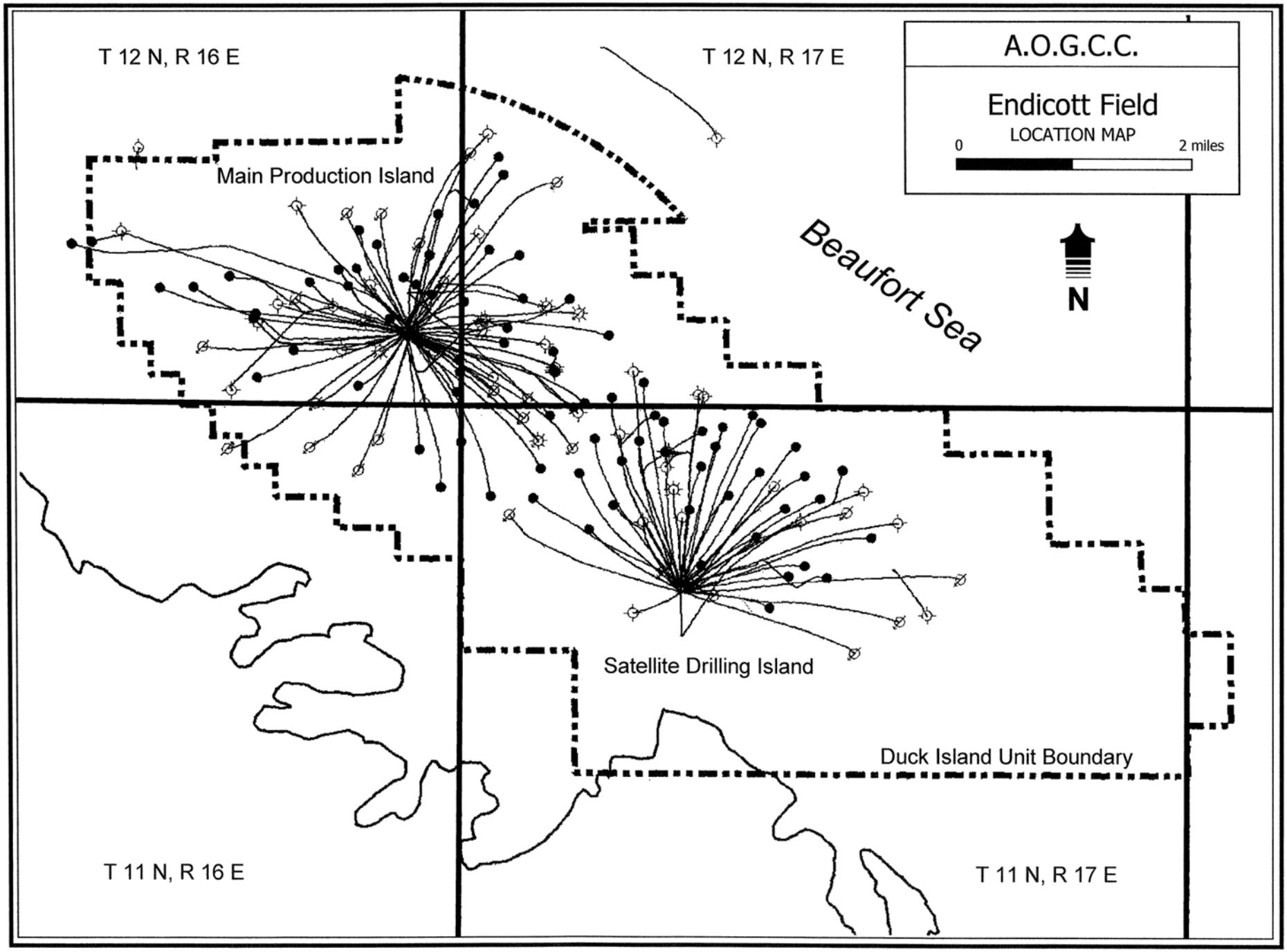
Injection History for: ENDICOTT, UNDEFINED WDSP Pool

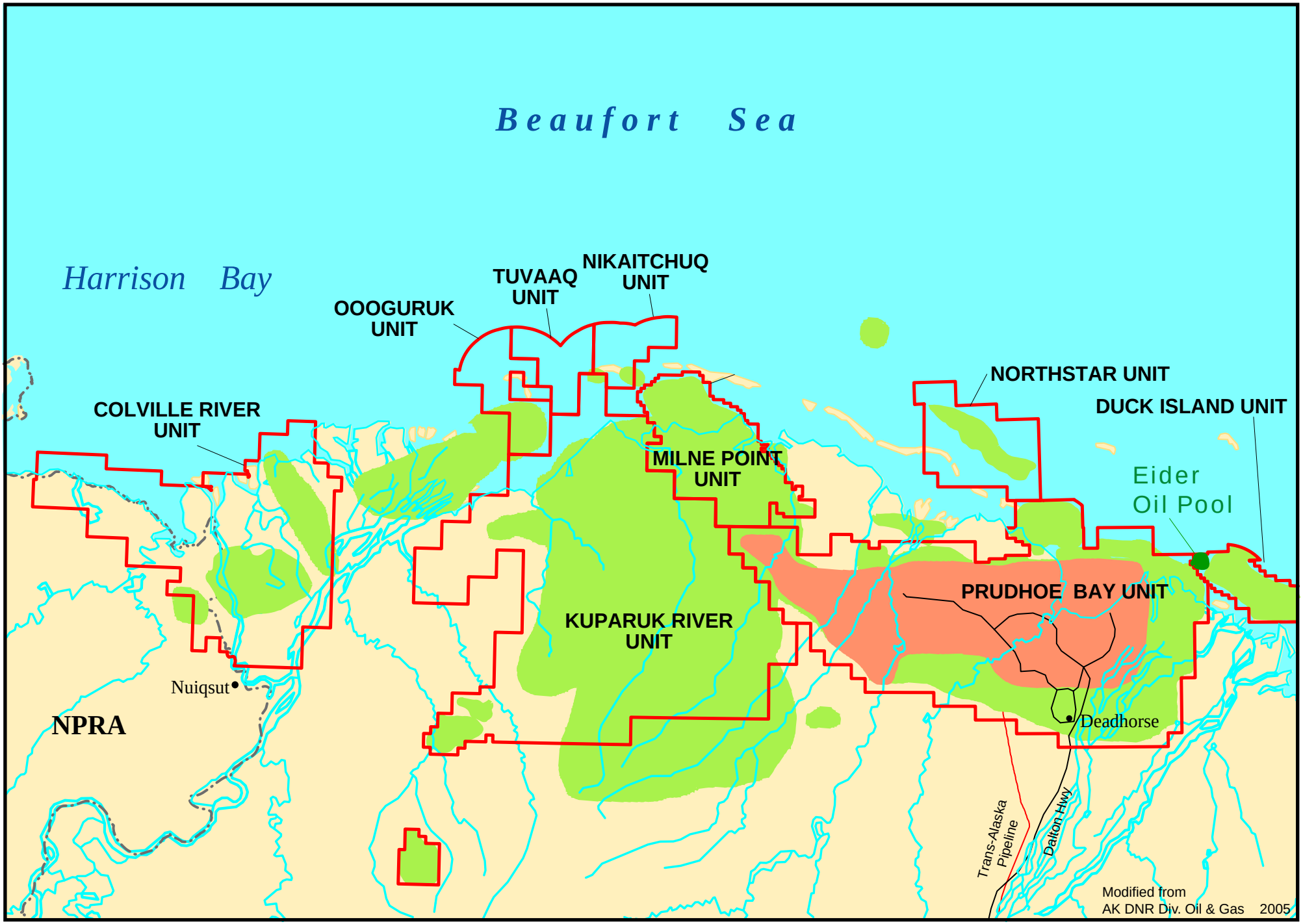
Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Jan 1996	14	9825	0	1
Feb 1996	8	4576	0	1
Mar 1996	17	7102	0	1
Apr 1996	12	4429	0	1
May 1996	5	1783	0	1
Jun 1996	9	6525	0	1
Jul 1996	12	9064	0	1
Aug 1996	6	6086	0	1
Sep 1996	8	3277	0	1
Oct 1996	2	889	0	1
Nov 1996	2	447	0	1
Dec 1996	7	1961	0	1
Year Total		**55964**	**0**	
Jan 1997	1	389	0	1
Feb 1997	2	1279	0	1
Mar 1997	6	1186	0	1
Apr 1997	6	3968	0	1
May 1997	6	1984	0	1
Jun 1997	6	4619	0	1
Jul 1997	7	3046	0	1
Aug 1997	2	4744	0	1
Sep 1997	3	1106	0	1
Oct 1997	5	769	0	1
Nov 1997	3	786	0	1
Dec 1997	1	196	0	1
Year Total		**24072**	**0**	
Jan 1998	31	1117	0	1
Mar 1998	3	2207	0	1
Apr 1998	3	1300	0	1
May 1998	2	260	0	1
Jul 1998	1	458	0	1
Aug 1998	2	508	0	1
Sep 1998	1	1799	0	1
Nov 1998	2	263	0	1
Dec 1998	7	2042	0	1
Year Total		**9954**	**0**	
Jan 1999	2	380	0	1
Mar 1999	2	631	0	1
Sep 1999	5	5864	0	1
Oct 1999	1	105	0	1
Dec 1999	4	3704	0	1
Year Total		**10684**	**0**	
Jan 2000	1	87	0	1
Oct 2000	1	23	0	1
Year Total		**110**	**0**	

State of Alaska, Oil and Gas Conservation Commission

Injection History for: ENDICOTT, UNDEFINED WDSP Pool

Month	DaysInj	Liquid (BBL)	Gas (MCF)	Injecting Wells
Apr 2001	1	200	0	1
May 2001	4	3514	0	1
Year Total		**3714**	**0**	
Jan 2003	1	325	0	1
Year Total		**325**	**0**	
Jul 2004	2	195	0	1
Aug 2004	4	2232	0	1
Year Total		**2427**	**0**	
Pool Total		**5,876,300**	**0**	


A.O.G.C.C.
Endicott Field
LOCATION MAP
0
2 miles
N
T 12 N, R 16 E
T 12 N, R 17 E
T 11 N, R 16 E
T 11 N, R 17 E
Main Production Island
Satellite Drilling Island
Beaufort Sea
Duck Island Unit Boundary



North Slope, Alaska

EXHIBIT B
TO
EIDER POOL RULES TESTIMONY

AGE	FM	EIDER FIELD ZONATION	Composite Gamma Ray	EIDER 1 MD	GROSS (ft)	NET -TO- GROSS (%)	CALC PORO (%)	CALC 1-Sw (%)	LITHOLOGY
CRETACEOUS	HRZ FORMATION	HRZ							Shale, tight.
		Lower Cretaceous Unconformity							
PERMO-TRIASSIC	SAG RIVER	SAG			0-75	0.80	0.24	0.80	Fine-grained, glauconitic sandstone, non-productive.
	SHUBLIK FORMATION	SHUBLIK			0-125	0.00	0.00	0.00	Calcareous shale, tight.
	IVISHAK FORMATION	UPPER SAND		17,338	60-125	0.80	0.20	0.80	Pebble to cobble conglomerate, with variable amounts of thin, interbedded sandstones.
		MIDDLE SHALE			75-90	0.50	0.16	0.65	Shale with sandy conglomerate.
		LOWER SAND		17,928	80-125	0.80	0.21	0.65	Fine- to medium-grained sandstone, locally pebbly - Eider productive interval.
		KAVIK		GOC at 9690 TVD ss					Shale, tight.
CARBONIFEROUS	LISBURNE FORMATION	*Pre-Kavik Unconformity*		50 ft					Finely crystalline limestone, dolomitic and oolitic in part, poor poro-perm, tight.

EMG 1199

EIDER FIELD
RESERVOIR TYPE LOG

ENDICOTT, EIDER OIL

Reference List

Alaska Oil and Gas Conservation Commission, 2000, Conservation Order No. 449, available online at:
http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co449.htm

Alaska Oil and Gas Conservation Commission, 2005, Production Database

Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000, AOGCC Conservation Order No. 449 file.

Endicott, Eider Oil Pool

Summary

The Eider oil pool was discovered in 1998[1] by the Duck Island Unit MPI 2-56/EID well. This pool is located 1-1/2 miles offshore in the westernmost portion of the Duck Island Unit, and it consists of oil below a gas cap within the Ivishak Formation. The pool delineated by two wells, DIU MPI 2-56A/EID and DIU MPI 2-30A, which have 5 additional sidetracks or plugbacks.[2]

Two development wells are located within the pool, DIU MPI 2-56A/EID and DIU MPI 2-30A/E12. Initial production began from 2-56A/EID in June 1998, and averaged 1,850 bopd through December 1998. In January 1999, 2-30A/E12 was brought online. Production immediately jumped to 6,244 bopd in February 1999, but then declined rapidly to 1,189 bopd by September 1999, and the pool was shut in from October 1999 through May 2000. In June of 2000, 2-56A/EID was converted to a water injector, and production was restarted, relying on a single producer, 2-30A/E12. Production peaked in July 2001 at 2,254 bopd, and then declined to about 600 bopd in May 2004. During July 2004, 2-56A/EID was converted to production again, but during the last half of 2004, production from both wells averaged less than 100 bopd.[3]

Geology

The Eider oil pool is situated in a fault-controlled anticline that is truncated by the Lower Cretaceous unconformity. The accumulation occupies about 300 acres.[4]

Within the pool, the Ivishak Formation consists of three regressive, stratigraphic units: the Lower Sand comprising upper shoreface or marine influenced fluvial and distributary sands, the Middle Shale comprises floodplain or bay fill, and Upper Sand that consisting of mostly fluvial sediments. The Lower Sand ranges from 80’ to 125’ thick, and averages 21% porosity and 30 md permeability. The Middle Shale is 75’ to 90’ thick and has average porosity and permeability values of 20% and 300 md, respectively. The Upper Sand ranges from 60’ to 125’ in thickness, has average porosity of 20%, and average permeability of 300 md. Faulting and fracturing causes these three stratigraphic units to be in pressure communication. API oil gravity ranges from 23.1 to 23.8 degrees, and original oil-in-place (OOIP) is estimated at 13.2 million barrels.[5]

SFD
Revised January 21, 2005

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[1] Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000; Alaska Oil and Gas Conservation Commission Conservation Order No. 449 file.

[2] Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000; Alaska Oil and Gas Conservation Commission Conservation Order No. 449 file.

[3] Alaska Oil and Gas Conservation Commission, 2004, Production Database

[4] Rathke, W., 2000, Testimony before the Alaska Oil and Gas Conservation Commission in support of the Application of BP Exploration (Alaska) Inc. to Define the Eider Oil Pool, May 25, 2000

[5] Alaska Oil and Gas Conservation Commission, 2000, Conservation Order No. 449, available online at: http://www.state.ak.us/local/akpages/ADMIN/ogc/orders/co/co400_499/co449.htm

ENDICOTT FIELD

EIDER OIL POOL

Current Orders

Order No.		AA	Operator	Date	Description	Current
CO	501	0	BP EXPLORATI	16-Oct-03	Rules regulating sustained casing pressures in development wells within the Endicott Field.	Y
CO	449	0	BP	21-Jul-00	Defines the Eider Oil Pool and establishing rules for it's operation and development. Amended by CO 501.	Y
AIO	19	0	BP EXPLORATI	02-Jun-00	Authorizes underground injection for enhanced oil recovery in the Eider Oil Pool in the Endicott Field	Y

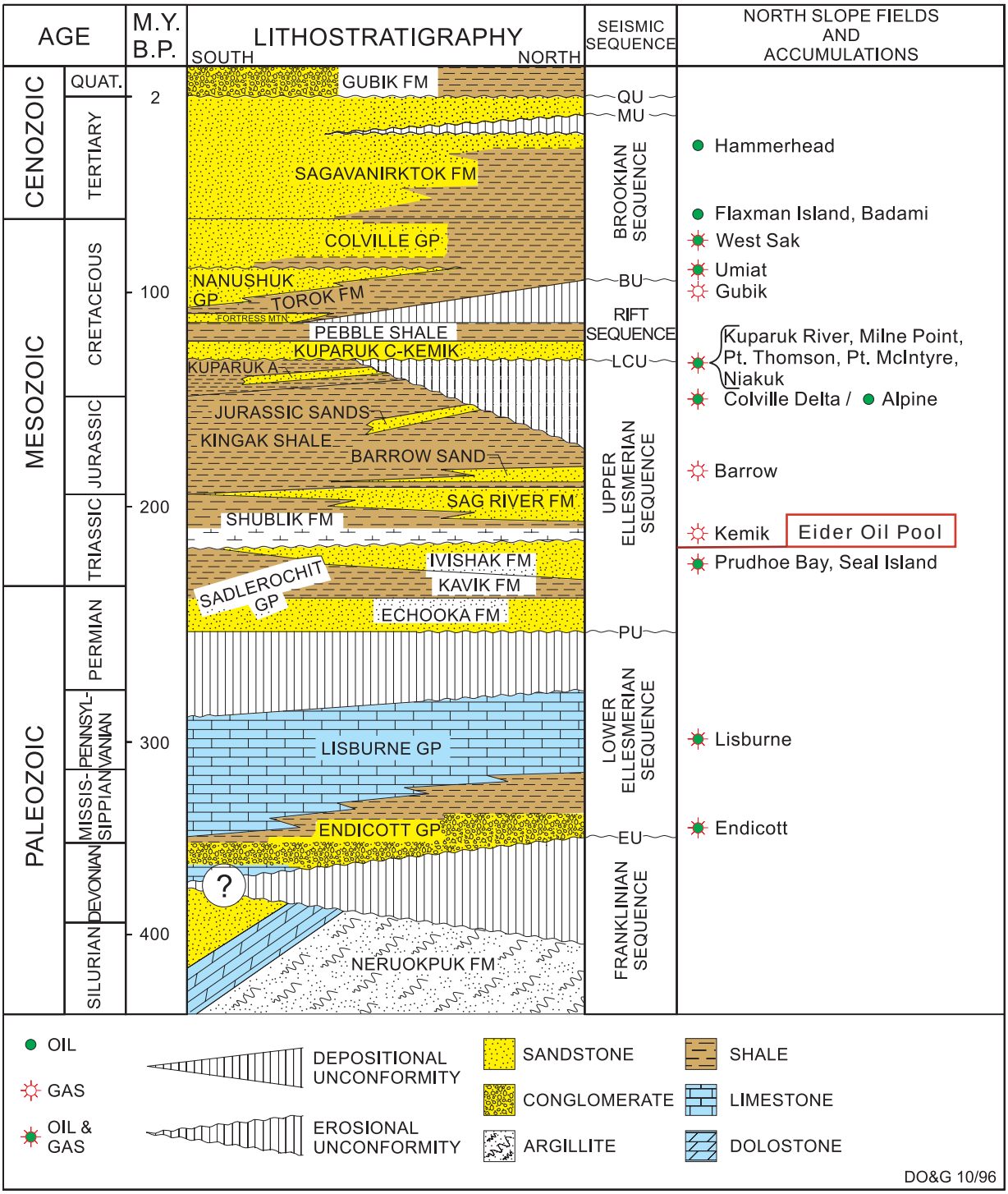
ENDICOTT FIELD

EIDER OIL POOL

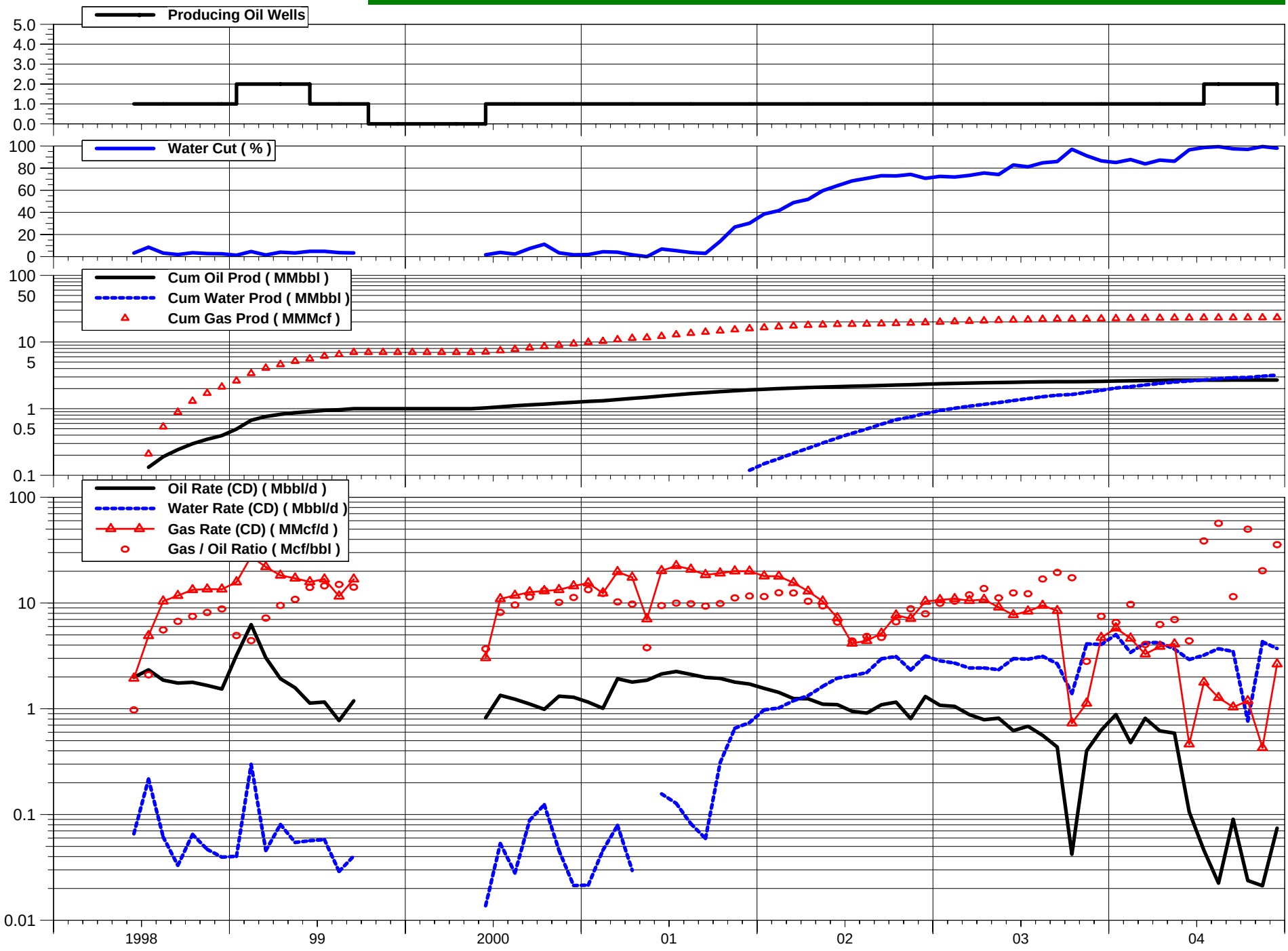
Spacing Exception Orders

Order No.		AA	Operator	Date	Description	Current
CO	437	0	BP	23-Dec-98	Spacing exception for Duck Island 2-30a/E1-02	Y
CO	434	0	BP	14-Oct-98	Spacing exception for Duck Island 2-30a/EI-02.	Y
CO	418	0	BP	14-Apr-98	Spacing exception FOR DIU 2-56.EI-01A OIL WELL IN AN UNDEFINED OIL POOL.	Y
CO	413	0	BP	26-Feb-98	Spacing exception FOR DIU 2-25/EIDER EXPLORATORY OIL WELL TO AN UNDEFINED OIL POOL.	Y

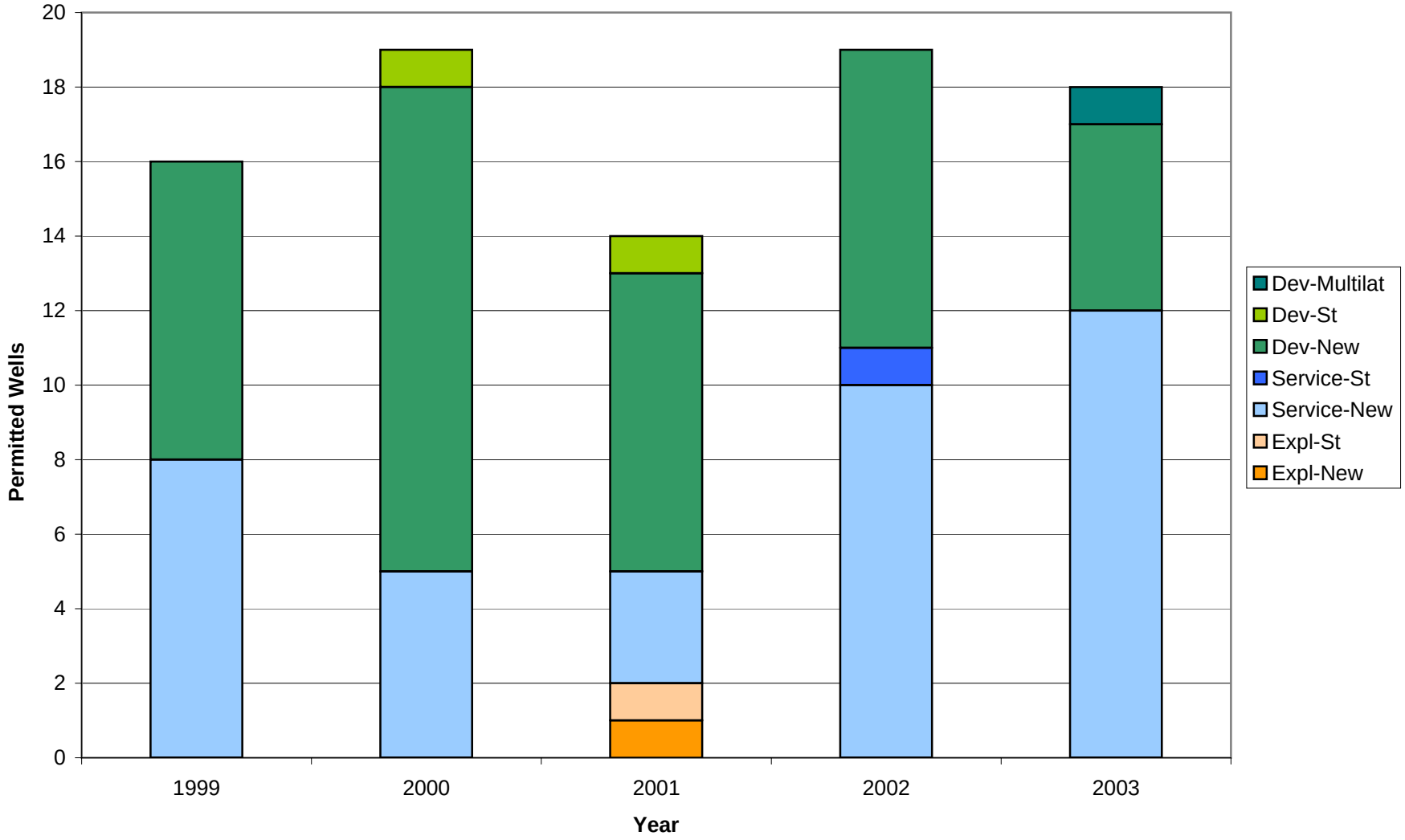
Generalized North Slope Stratigraphic Column displaying oil and gas reservoirs and associated accumulations.



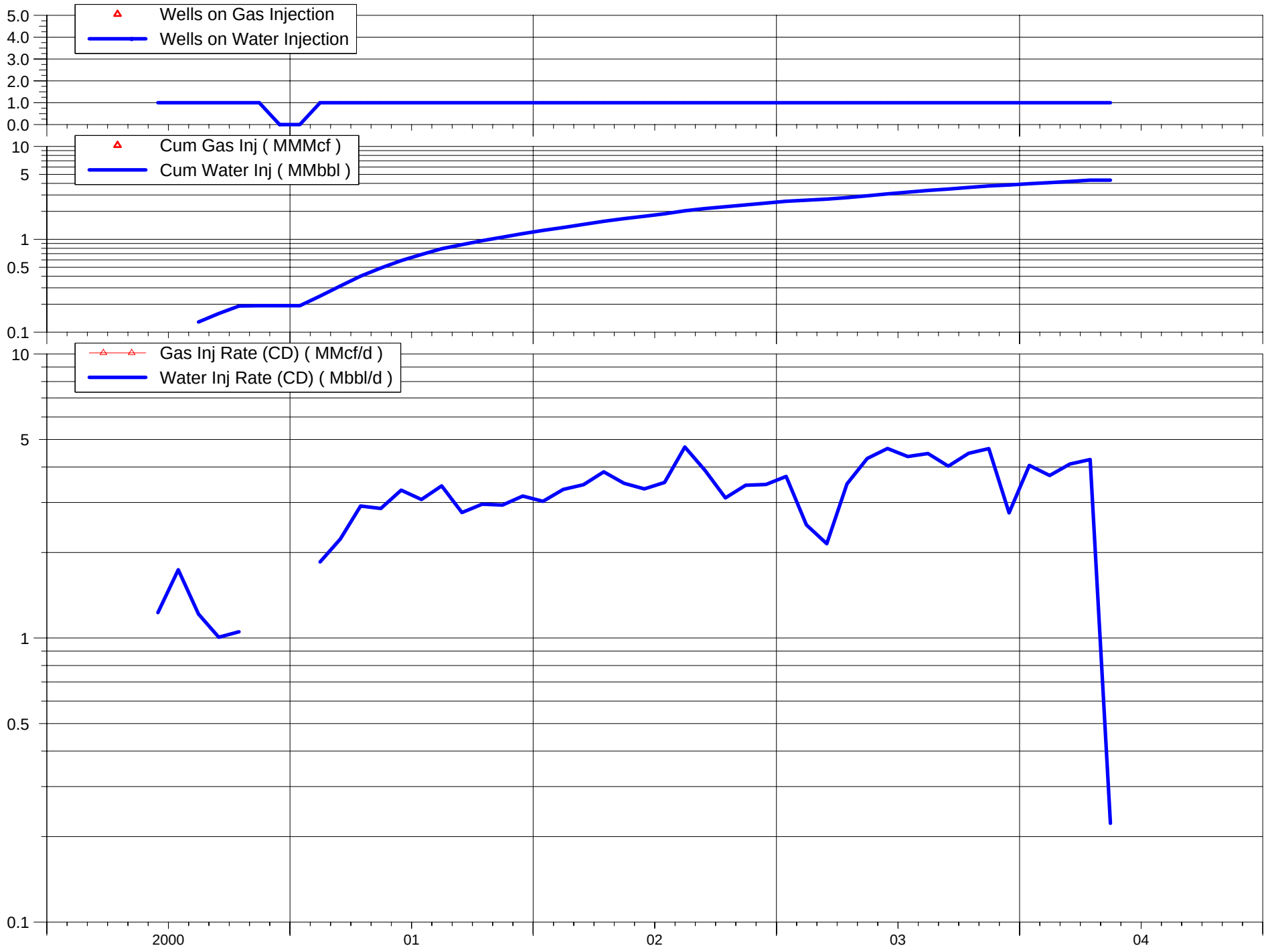
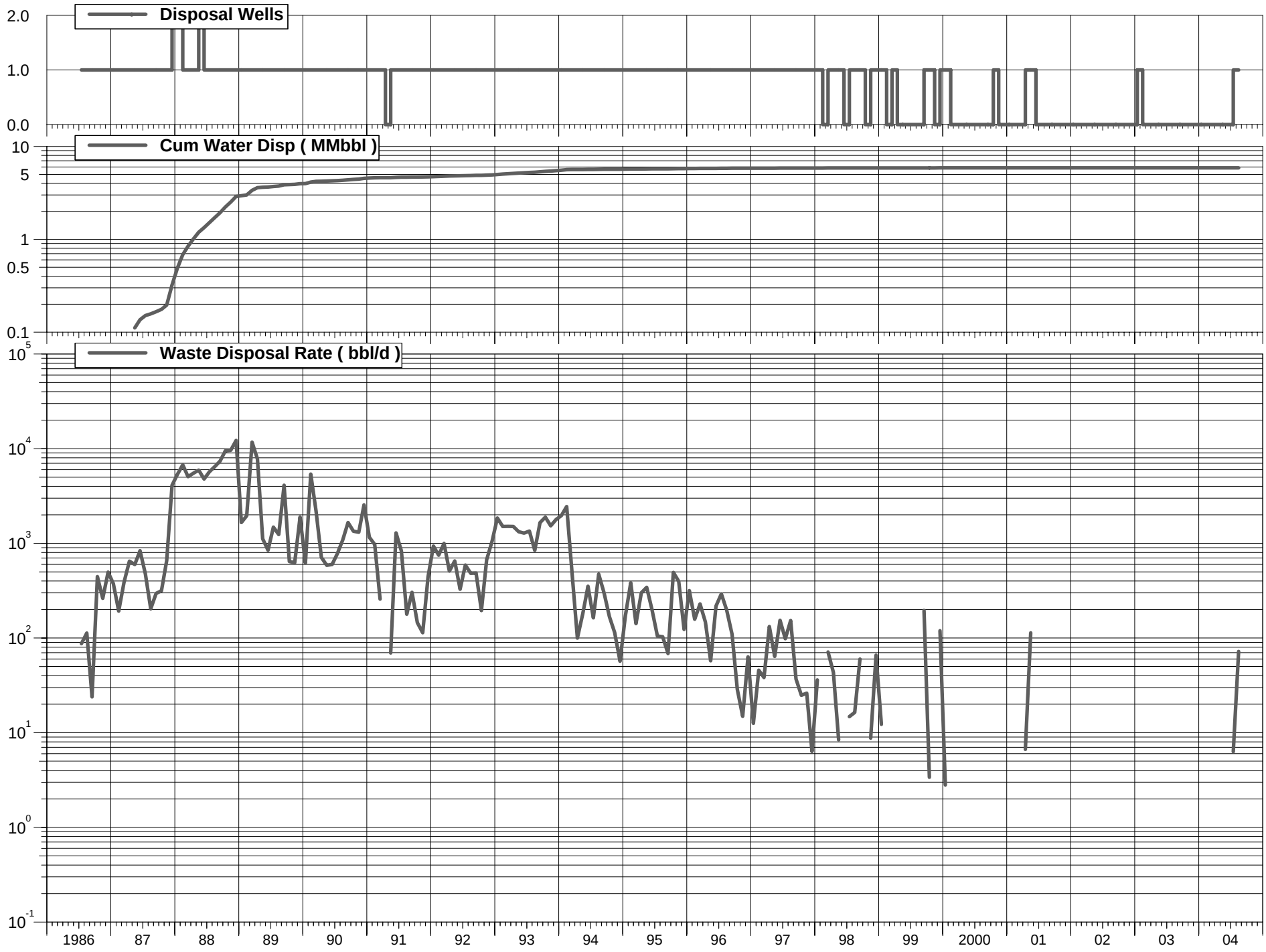
ENDICOTT FIELD, EIDER OIL POOL



Alpine Oil Pool - Permitted Wells



ENDICOTT FIELD, EIDER OIL POOL - EOR INJECTION



ENDICOTT FIELD, UNDEFINED WASTE DISPOSAL POOL