APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
110	TDM VI	TDM 6	1/10/86					0.001								72	18							2.3	22					7.42			1.7		1.7		0.001		180		518	4.1		29			5137.38	
110	TDM VI	TDM 6	4/22/86					0.001								87	21							1.2	220					7.6			0.9		1.4		0.001		252		686	2.5		32				
110	TDM VI	TDM 6	7/16/86					0.001								75	23							0.6	23					7.53			1.2		1.4		0.001		220		624	0.7		106				
110	TDM VI	TDM 6	10/20/86					0.001								91	230							1.4	268					7.35			0.9		1.2		0.001		270		645	0.6		11				
110	TDM VI	TDM 6	1/2/87					0.001								80	23							0.8	29					7.45			2.6		1.5		0.001		226		617	0.6		13				
110	TDM VI	TDM 6	4/10/87					0.001								95	26							1.4	28					7.61			1.6		0.8		0.001		254		628	0.7		103				
110	TDM VI	TDM 6	8/12/87					0.001								269	90							1.3	85					7.02			0.7		3.7		0.188		820		1383	1.1		17				
110	TDM VI	TDM 6	10/31/87					0.001								216	60							0.8	51					7.74			0.7		1.3		0.001		540		1261	0.9		8.3				
110	TDM VI	TDM 6	1/27/88					0.001								345	105							1.3	92					7.32			1.2		2		0.001		710		1839	0.6		0.1				
110	TDM VI	TDM 6	4/30/88					0.001								321	120							1.1	98					7.23			1.2		1.5		0.004		750		1456	1.3		8				
110	TDM VI	TDM 6	7/20/88					0.001								253	90							0.4	46					7.16			0.4		1.4		0.004		396		1158	1.4		14				
110	TDM VI	TDM 6	10/15/88					0.001								245	298							1.4	39					7.5			1.7		0.8		0.001		410		1200	0.8		6.9			5090.26	
111	TDM VI-R	TDM 6-R	1/14/86					0.001								513	260							2.7	229					6.68			1.2		1.7		0.001		1550		3739	1.5		281				
111	TDM VI-R	TDM 6-R	4/25/86					0.001								521	265							2.7	256					6.61			1.4		1.6		0.001		1720		2655	5.4		402				
111	TDM VI-R	TDM 6-R	7/21/86					0.001								461	260							0.9	244					6.57			1		1.3		0.001		1510		2730	2.4		198				
111	TDM VI-R	TDM 6-R	10/29/86					0.001								521	260							0.9	268					6.45			1		0.3		0.001		1570		3126	1.6		239				
111	TDM VI-R	TDM 6-R	1/9/87					0.001								521	270							1.5	268					6.64			0.8		0.9		0.001		1480		3609	1.4		284				
111	TDM VI-R	TDM 6-R	8/13/87					0.001								713	300							1.3	249					6.63			1.6		1		0.0002		1690		2640	2.8		344				
111	TDM VI-R	TDM 6-R	10/31/87					0.001								453	63							2.1	261					6.85			0.9		0.9		0.001		1390		2785	4.6		264				
111	TDM VI-R	TDM 6-R	1/27/88					0.001								505	295							1.1	254					6.7			0.8		0.5		0.002		1370		3060	0.6		1.4				
111	TDM VI-R	TDM 6-R	4/30/88					0.001								762	310							1.6	224					6.73			1.1		1.9		0.025		1370		3519	2.1		204				
111	TDM VI-R	TDM 6-R	7/20/88					0.001								721	360							1.2	280					6.59			0.9		1.5		0.007		1300		29995	2.7		257				
111	TDM VI-R	TDM 6-R	10/19/88					0.001								778	343							1.4	229					6.67			0.6		0.9		0.003		980		3768	2.8		216				
112	TDM VII	TDM 7	10/20/81	TDSS																																											5154.65	
112	TDM VII	TDM 7	11/13/81	TDSS																																											5154.71	
112	TDM VII	TDM 7	12/8/81	TDSS																																											5154.28	
112	TDM VII	TDM 7	3/16/82	TDSS																																											5154.72	
112	TDM VII	TDM 7	4/14/82	TDSS																																											5154.69	
112	TDM VII	TDM 7	8/26/82	TDSS																																											5154.05	
112	TDM VII	TDM 7	11/16/82	TDSS																																											5153.97	
112	TDM VII	TDM 7	1/14/86	TDSS		0.13		0.001	0.1					0.14	0.008	393	205	0.02	0.01	0.01			0.05	1.1	176		0.0002	0.01		7.24			1.1		1.5		0.001	0.01		1470		3463	2.2		40	0.01		5149.05	0.057
112	TDM VII	TDM 7	2/19/86	TDSS				0.001																7								0.003													5148.7	
112	TDM VII	TDM 7	3/19/86	TDSS				0.001																7.12								0.002													5153.9	
112	TDM VII	TDM 7	4/25/86	TDSS		0.1		0.001	0.1					0.18	0.006	465	205	0.01	0.01	0.01			0.05	1.3	176		0.002	0.1		7.16			1		1.5		0.001	0.01		1820		2952	1.8		37	0.1		5148.6	0.01
112	TDM VII	TDM 7	5/26/86	TDSS				0.001																7.12								0.001													5148.45	
112	TDM VII	TDM 7	6/23/86	TDSS				0.001																7.08								0.001													5147.9	
112	TDM VII	TDM 7	7/23/86	TDSS		0.1		0.001	0.1					0.04	0.002	489	233	0.01	0.01	0.01			0.05	1.3	171		0.0002	0.1		7.01			0.8		1.5		0.001	0.01		1700		3908	1.2		28.1	0.1		5147.95	0.013
112	TDM VII	TDM 7	8/13/86	TDSS				0.002																7.07								0.002													5148.1	
112	TDM VII	TDM 7	9/25/86	TDSS				0.001																6.91								0.001													5146.75	
112	TDM VII	TDM 7	10/28/86	TDSS		0.1		0.001	0.1					0.14	0.008	433	205	0.01	0.01	0.01			0.05	1.3	176		0.0002	0.1		7			2.2		1.3		0.001	0.01		1390		3035	0.7		37	0.1		5146.5	0.02
112	TDM VII	TDM 7	11/14/86	TDSS				0.001																7.1								0.001													5146.7	
112	TDM VII	TDM 7	12/5/86	TDSS				0.001																7.2								0.001													5145.8	
112	TDM VII	TDM 7	1/14/87	TDSS		0.1		0.002	0.1					0.22	0.011	489	210	0.01	0.03	0.02			0.05	1.2	195		0.0002	0.1		7.09			1		1.3		0.011	0.01		1450		3474	0.3		45	0.1		5145.6	0.011
112	TDM VII	TDM 7	2/12/87	TDSS				0.001																7.15								0.001													5145	
112	TDM VII	TDM 7	3/17/87	TDSS				0.001																7								0.312													5145.1	
112	TDM VII	TDM 7	4/13/87	TDSS		0.1		0.001	0.1					0.2	0.008	393	230	0.1	0.1	0.01			0.08	0.8	215		0.0002	0.1		7.1			1.7		6.5		0.001	0.01		1670		3963	12.5		21.3	0.1		5144.8	0.02
112	TDM VII	TDM 7	5/27/87	TDSS				0.001																7								0.605													5144.2	
112	TDM VII	TDM 7	6/23/87	TDSS				0.001																7.1								0.303													5143.75	
112	TDM VII	TDM 7	8/6/87	TDSS		0.1		0.001	0.1					0.09	0.006	521	220	0.01	0.01	0.02			0.05	0	195		0.0002	0.1		7.95			0		1.3		0.244	0.1		2120		2805	0.7		34	0.1		5143.72	0.025
112	TDM VII	TDM 7	8/10/87	TDSS				0.001																7.22								0.068															
112	TDM VII	TDM 7	8/27/87	TDSS				0.001																7.83								0.18													5143.21	
112	TDM VII	TDM 7	9/30/87	TDSS				0.001																7.02								0.429													5142.8	
112	TDM VII	TDM 7	10/28/87	TDSS		0.1		0.001	0.1					0.1	0.002	497	208	0.01	0.01	0.01			0.05	1	203		0.0002	0.1		7.12			0.7		4.1		0.47	0.1		1670		2666	1.5		34	0.1		5142.45	0.005
112	TDM VII	TDM 7	11/30/87	TDSS				0.001																7.19								0.35													5142.23	
112	TDM VII	TDM 7	1/13/88	TDSS		0.1		0.001	0.1					0.27	0.004	389	206	0.1	0.03	0.02			0.05	0	163		0.0002	0.1		7.1			0		0.9		0.1	0.01		1340		3479	0.7		0.1	0.1		5141.58	0.005
112	TDM VII	TDM 7	4/6/88	TDSS		0.1		0.001	0.1					0.21	0.007	577	220	0.01	0.03	0.02			0.05	0.9	180		0.0002	0.1		7.14			0.7		1.2		0.027			1840		3432	2.1		29	0.1		5140.63	0.027
112	TDM VII	TDM 7	7/8/88	TDSS		0.1		0.001	0.1					0.16	0.012	593	215	0.03	0.05	0.03			0.05	1	195		0.0002	0.1		7.04			2.2		0.8		0.195	0.01		1500		3715	1		15	0.1		5139.55	0.013
112	TDM VII	TDM 7	8/31/88	TDSS				0.001		0.005					0.006		242	0.02			0.14		0.05				0.0002	0.1	0.02	7.33					0.7	4.1	0.139	0.01		1750		3487	0.4		33	0.1		5139	
112	TDM VII	TDM 7	9/15/88	TDSS				0.001																7.13								0.256													5138.9	
112	TDM VII	TDM 7	9/29/88	TDSS				0.001								585						0.06			205					7.19				6			0.195		252								5138.48	
112	TDM VII	TDM 7	10/14/88	TDSS				0.001																7.18								0.277															
112	TDM VII	TDM 7	1/26/89	TDSS				0.001		0.005		488			0.007	521	319	0.01			0.17	0.14	0.05	0.9	229		0.0002	0.1	0.03	7.23			2	8	1.5	4	0.097	0.01	245	1990		3208	0.6		18	0.1		5137.33	
112	TDM VII	TDM 7	4/6/89	TDSS				0.001				540.46																		7.48							0.157													
112	TDM VII	TDM 7	7/18/89	TDSS				0.001				544.12			0.01	474	260	0.01				0.08	0.05		201				0.06	7.25					1.4	0.9	0.26		244	1830		3045	0.8		6.5			5135.71	
112	TDM VII	TDM 7	10/18/89	TDSS								561.2																		7									309	1900		3108						5134.99	
112	TDM VII	TDM 7	1/19/90	TDSS				0.001				553.88			0.012	553	220	0.01				0.08	0.05		106				0.02	7.03					1.2	3.3	0.177		259	1630		2350	0.1		11			5134.51	
112	TDM VII	TDM 7	5/1/90	TDSS								578.28				581	225								115					7.22									227	1730		3528						5133.77	
112	TDM VII	TDM 7	8/23/90	TDSS				0.001				580.72			0.009	649	202	0.01				0.04	0.05		144				0.02	7.25					0.7	1.6	0.169		263	1520		3203	0.2		10			5133.67	
112	TDM VII	TDM 7	10/19/90	TDSS								468.42				518	216								153					7									253	1680		3578						5132.3	
112	TDM VII	TDM 7	1/11/91	TDSS				0.001				508			0.01		207	0.05				0.11	0.05		157				0.05		7.1			0.6	4.2	0.148		249	2043	3593.5		0.2		10.0196				
112	TDM VII	TDM 7	10/10/91	TDSS								502.88					204								151						7.3									246	2039	3593.564							
112	TDM VII	TDM 7	1/8/92	TDSS				0.001				461.89			0.01		184	0.05				0.05	0.05		151				0.02		7.4			1	1	0.11		244	1942	3407.0521		0.2		9.48			5131.18	
112	TDM VII	TDM 7	4/23/92	TDSS								539					193								135						7.1			10.8						280	1923	3438.128			3.921				5130.78	
112	TDM VII	TDM 7	7/9/92	TDSS				0.001				308.9			0.01		175	0.05				0.05	0.05		164.74		0.001		0.02		8			0.3	2	0.106		308.74	2038	3316.61		0.2		11.51			5130.48	
112	TDM VII	TDM 7	10/27/92	TDSS								514					179								138						7.5									281	2004	3526.2439							5130.12	
112	TDM VII	TDM 7	1/11/93	TDSS				0.001				512			0.01		176	0.05				0.05	0.05		133				0.02		8			2.5	12.6	0.058		279	2008	3568.337		0.2		0.2031			5130	
112	TDM VII	TDM 7	1/14/93	TDSS																																												5128.77	
112	TDM VII	TDM 7	4/26/93	TDSS								505					173								123						7									246	1984	3475.067							5058.8	
112	TDM VII	TDM 7	4/27/93	TDSS																																												5129.15	
112	TDM VII	TDM 7	7/15/93	TDSS				0.001				514			0.01		191	0.05				0.05	0.05		141				0.02		6.8			6.9	3	0.105		292	2026	3714.621		0.2		8.124			5129.3	
112	TDM VII	TDM 7	10/27/93	TDSS																																												5128.85	
112	TDM VII	TDM 7	1/14/94	TDSS																																												5128.77	
112	TDM VII	TDM 7	4/25/94	TDSS																																												5128.29	
112	TDM VII	TDM 7	7/8/94	TDSS				0.001		560					0.01	648	170	0.05				0.05	0.05		114				0.02	7.6					1.6	3.3	0.196		254	1997	3489.63		0.2		17.602			5128.17	
112	TDM VII	TDM 7	10/27/94	TDSS																																												5127.9	
112	TDM VII	TDM 7	1/30/95	TDSS				0.001				533			0.01	675	179	0.05				0.05	0.05		150				0.02		7.1			1.9	3.2	0.126		264	2111	3675.9398		0.2		10.8			5127.65	
112	TDM VII	TDM 7	4/24/95	TDSS																																												5127.52	
112	TDM VII	TDM 7	5/4/95	TDSS								532				656	201								133						7.4									239	2072	3597.124							
112	TDM VII	TDM 7	7/21/95	TDSS				0.001				535			0.01	690	193	0.05				0.05	0.05		123				0.02		7			0.9	5	0.1		242	1974	3519.2753		0.2		12.3				
112	TDM VII	TDM 7	7/24/95	TDSS																																												5127.65	
112	TDM VII	TDM 7	11/22/95	TDSS								521				645	170								128						7									253	1986	3481.7055							5127.25	
112	TDM VII	TDM 7	1/25/96	TDSS																																												5127.3	
112	TDM VII	TDM 7	1/26/96	TDSS				0.001				574			0.01	698	167	0.05				0.05	0.05		128				0.02		7.4					1.3	2.3	0.061		265	1950	3526.9332		0.2		11.3				
112	TDM VII	TDM 7	4/30/96	TDSS								589				664	181								126						7.5									274	2042	3612.3086							5126.75	
112	TDM VII	TDM 7	7/9/96	TDSS				0.005				567			0.01	662	180	0.05				0.05	0.05		134				0.02		7.4			0.9	1	0.052		266	2047	3585.9729		0.5		15.9			5126.9	
112	TDM VII	TDM 7	11/12/96	TDSS								508				744	190								155						7.1				10.1					252	2075	3695.5607							5126.5	
112	TDM VII	TDM 7	2/4/97	TDSS				0.002				555			0.01	740	215	0.05				0.06	0.05		160				0.02		7.2			0.2	2.4	0.062		263	2080	3474.1695		0.2		12.863			5126.6	
112	TDM VII	TDM 7	4/21/97	TDSS								548				568	165								137						7.6									252	1773	3187.606							5126.15	
112	TDM VII	TDM 7	7/1/97	TDSS				0.001				554			0.01	730	196	0.05				0.05	0.05		150				0.02		7.2			1	3	0.066		252	1923	3546		0.2		17.6			5126.3	
112	TDM VII	TDM 7	10/9/97	TDSS								544				655	182								127						7.1									250	2040	3545							5126.9	
112	TDM VII	TDM 7	1/1/98	TDSS				0.002				536			0.005	671	199	0.05				0.05	0.05		139				0.02		7.2			2.2	1	0.069		253	2000	3548		0.2		13.8			5126.35	
112	TDM VII	TDM 7	4/4/98	TDSS								535				598	183								131						7.4				10.3					324	1850	3369							5125.64	
112	TDM VII	TDM 7	7/1/98	TDSS				0.003				529			0.005	636	170	0.05				0.05	0.05		134				0.02		7			0.9	1	0.074		250	1910	3381		0.2		13.4			5126.03	
112	TDM VII	TDM 7	10/12/98	TDSS								511				696	170								121						7.2									253	1830	3344							5125.7	
112	TDM VII	TDM 7	1/6/99	TDSS				0.002				523			0.005	627	175	0.05				0.05	0.05		109				0.02		7.2			3.5	1	0.054		200	1800	3189.7892		0.2		14.6			5125.3	
112	TDM VII	TDM 7	4/19/99	TDSS								537				667	187								117						7.4									229	1850	3335.3405							5125	
112	TDM VII	TDM 7	7/9/99	TDSS				0.001				526			0.005	665	181	0.05				0.07	0.05		147				0.02		7.2			0.2	1	0.036		229	1890	3386.6388		0.2		16.1			5124.8	
112	TDM VII	TDM 7	10/5/99	TDSS								525				632	167								14						7.1									233	1750								5188.8	
112	TDM VII	TDM 7	1/6/00	TDSS				0.001				507			0.01	556	151	0.05				0.05	0.05		117				0.02		7.1			1.2	1.8	0.011		246	1700	3032		0.2		12.7				
112	TDM VII	TDM 7	1/16/00	TDSS																																												5125.4	
112	TDM VII	TDM 7	4/10/00	TDSS								519				584	186								112						7.1									244	1790	3184							5124.8	
112	TDM VII	TDM 7	7/5/00	TDSS				0.001				509			0.01	601	150	0.05				0.05	0.05		108				0.02		7.1			0.2	2.5	0.001		233	1600	2956	3570	0.2		13			5125.8	
112	TDM VII	TDM 7	10/26/00	TDSS								498				607	176								110						7.1									225	1760		3580						5124.7	
112	TDM VII	TDM 7	1/3/01	TDSS				0.002				499			0.01	623	158	0.05				0.05	0.05		101				0.02		7.1			0.8	2.2	0.035		216	1810	3169		0.2		12.5			5124.55	
112	TDM VII	TDM 7	4/11/01	TDSS								501				547	154								117						7.1									192	1490	2762							
112	TDM VII	TDM 7	4/12/01	TDSS																																												5125	
112	TDM VII	TDM 7	8/1/01	TDSS				0.0004				480				618	162	0.001				0.005	0.05		130				0.022		7.1			1.6	3.9	0.024		230	1700	3050		0.2		16.9			5124.7	
112	TDM VII	TDM 7	10/29/01	TDSS								520				634	148								130						7.1									244	1800	3222							5122.26	
112	TDM VII	TDM 7	2/26/02	TDSS				0.001				510			0.01	582	160	0.05				0.03	0.05		122				0.02		7.1			1.3	1	0.01		237	1840

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
112	TDM VII	TDM 7	7/15/03	TDSS				0.001							0.0005		150	0.0011					0.001						0.006		7.28	7.32			1.1		0.00406		234	1890		3610			13.54			
112	TDM VII	TDM 7	10/21/03	TDSS													160														7.21	7.5							242	1920		3510						
112a	TDM VII-a	TDM 7-a	9/15/88					0.005		0.005					0.008		202	0.01			0.15		0.06			0.0002	0.1	0.03	7.07					1.3	5.6	0.096	0.01		1910		3748	0.3		20	0.1		5138.48	
112a	TDM VII-a	TDM 7-a	9/29/88					0.001		0.005					0.008		211	0.01			0.17		0.05			0.0002	0.1	0.04	7.2					1.4	3.4	0.181	0.01		1780		3977	0.7		17	0.1			
112a	TDM VII-a	TDM 7-a	10/14/88			0.1		0.001	0.1	0.005				0.45	0.008	248	220	0.01	0.01	0.02	0.17		0.05	0.9	285	0.0002		0.02	7.18			1		0.6	4.6	0.172	0.01		1770		4392	1		11	0.1	4.6	5138.53	0.005
112a	TDM VII-a	TDM 7-a	4/6/89					0.001							0.007	507	260	0.01				0.06	0.05		204			0.02	7.48				7	0.9	2	0.001		250	1810		3192	0.3		4.9			5136.57	
114	TDM IX	TDM 9	7/10/81	TDSS	Tailings Impact Endmember																																									5189.52	
114	TDM IX	TDM 9	10/19/81	TDSS	Tailings Impact Endmember																																										5190.3	
114	TDM IX	TDM 9	2/11/82	TDSS	Tailings Impact Endmember																																										5159.95	
114	TDM IX	TDM 9	3/23/82	TDSS	Tailings Impact Endmember																																										5160.31	
114	TDM IX	TDM 9	4/14/82	TDSS	Tailings Impact Endmember																																										5160.8	
114	TDM IX	TDM 9	8/30/82	TDSS	Tailings Impact Endmember																																										5190.36	
114	TDM IX	TDM 9	10/20/82	TDSS	Tailings Impact Endmember																																										5162.41	
114	TDM IX	TDM 9	1/15/86	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.15	0.01	321	335	0.34	0.4	0.01			0.09	1.1	488		0.0002	0.1		6.35			1		1.6		0.001	0.01		2300		5114	2.6		1	0.1		5153.44	0.033
114	TDM IX	TDM 9	2/28/86	TDSS	Tailings Impact Endmember			0.001																						6.3							0.001											5152.39	
114	TDM IX	TDM 9	3/19/86	TDSS	Tailings Impact Endmember			0.001																						6.38							0.001											5152.44	
114	TDM IX	TDM 9	4/29/86	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.16	0.007	361	350	0.41	0.62	0.01			0.12	2.1	488		0.002	0.1		6.36			1.7		2.3		0.001	0.01		2980		3951	12.5		5	0.1		5151.09	0.023
114	TDM IX	TDM 9	5/26/86	TDSS	Tailings Impact Endmember			0.001																						6.2							0.001											5152.44	
114	TDM IX	TDM 9	6/23/86	TDSS	Tailings Impact Endmember			0.001																						6.23							0.001											5152.69	
114	TDM IX	TDM 9	7/18/86	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.01	0.005	421	350	0.62	1.31	0.01			0.05	0.9	476		0.0002	0.1		6.25			0.7		2.5		0.001	0.01		3080		4787	0.9		7.8	0.1		5151.89	0.032
114	TDM IX	TDM 9	8/13/86	TDSS	Tailings Impact Endmember			0.001																						6.37							0.001											5151.29	
114	TDM IX	TDM 9	9/25/86	TDSS	Tailings Impact Endmember			0.001																						6.16							0.001											5147.19	
114	TDM IX	TDM 9	10/28/86	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.29	0.013	421	365	0.36	0.01	0.02			0.05	0.8	427		0.0002	0.1		6			1.7		1.5		0.001	0.01		3020		4846	2.7		2.5	0.1		5146.39	0.041
114	TDM IX	TDM 9	11/14/86	TDSS	Tailings Impact Endmember			0.001																						6.29							0.001											5146.09	
114	TDM IX	TDM 9	12/6/86	TDSS	Tailings Impact Endmember			0.001																						6.23							0.001											5145.09	
114	TDM IX	TDM 9	1/9/87	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.24	0.014	381	360	0.3	0.78	0.02			0.09	1.3	549		0.0002	0.1		6.4			1		1.6		0.0003	0.01		3000		5645	2		2.6	0.1		5144.29	0.058
114	TDM IX	TDM 9	2/12/87	TDSS	Tailings Impact Endmember			0.001																						6.36							0.001											5143.29	
114	TDM IX	TDM 9	3/17/87	TDSS	Tailings Impact Endmember			0.001																						6.4							0.008											5143.39	
114	TDM IX	TDM 9	4/27/87	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.2	0.006	297	300	0.03	0.03	0.02			0.05	0.9	468		0.0002	0.1		6.3			0.7		1.6		0.001	0.01		2460		4865	1.4		1.7	0.1		5141.19	0.53
114	TDM IX	TDM 9	5/28/87	TDSS	Tailings Impact Endmember			0.001																						6.1							0.001											5141.17	
114	TDM IX	TDM 9	6/25/87	TDSS	Tailings Impact Endmember			0.001																						6.34							0.007											5140.79	
114	TDM IX	TDM 9	8/9/87	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.51	0.008	441	390	0.37	0.65	0.02			0.12	0.7	561		0.0002	0.1		6.55			0.2		1.3		0.017	0.1		2840		4564	0.5		1	0.1		5139.85	0.103
114	TDM IX	TDM 9	8/30/87	TDSS	Tailings Impact Endmember			0.001																						6.59							0.001											5138.78	
114	TDM IX	TDM 9	10/4/87	TDSS	Tailings Impact Endmember			0.001																						6.33							0.001											5138.05	
114	TDM IX	TDM 9	10/25/87	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.48	0.002	285	420	0.55	0.16	0.01			0.05	0.9	586		0.0002	0.1		6.39			0.9		2.4		0.002	0.1		3460		3165	1.2		0.1	0.1		5137.4	0.005
114	TDM IX	TDM 9	11/30/87	TDSS	Tailings Impact Endmember			0.001																						6.42							0.006											5136.75	
114	TDM IX	TDM 9	1/19/88	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.43	0.013	192	360	0.1	0.78	0.03			0.05	0.9	439		0.0002	0.1		6.45			0.9		1.5		0.007			3700		6616	0.6		0.1	0.1		5135.24	0.005
114	TDM IX	TDM 9	4/6/88	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.34	0.013	641	400	0.01	0.51	0.02			0.05	0.8	488		0.0002	0.1		6.28			0.9		1.4		0.003			5400		7203	1.3			0.1		5133.52	0.049
114	TDM IX	TDM 9	7/8/88	TDSS	Tailings Impact Endmember	0.1		0.001	0.1					0.16	0.016	681	275	0.02	0.52	0.02			0.09	1.5	336		0.0002	0.1		6.12			2.2		1.3		0.014	0.01		2140		5899	1.5		0.2	0.1		5131.53	0.06
114	TDM IX	TDM 9	8/25/88	TDSS	Tailings Impact Endmember			0.001		0.005					0.008		387	0.61			0.13		0.08			0.0002	0.1	0.71	6.06					0.7	5.4	0.002	0.01		4420		6310	0.5		0.1	0.1			
114	TDM IX	TDM 9	9/15/88	TDSS	Tailings Impact Endmember			0.001		0.005					0.011		388	0.62			0.14		0.1			0.0002	0.1	0.82	5.99					0.9	4.3	0.008	0.01		5300		7240	0.7		0.05	0.1		5130.4	
114	TDM IX	TDM 9	9/29/88	TDSS	Tailings Impact Endmember			0.001		0.005	12				0.012	497	376	0.6			0.14		0.11			0.0002	0.1	0.02	5.98					0.8	6.8	0.001	0.01		5140		7216	0.4		1	0.1		5129.84	
114	TDM IX	TDM 9	10/6/88	TDSS	Tailings Impact Endmember	0.1		0.001	0.1	0.005			12	1.2	0.02	482	359	0.12	0.01	0.02	0.001	214	0.05	0.9	649		0.0002	0.1	0.02	6.13	8	1.3	0.7	8	1.3	8.8	0.001	0.01	339	5010		6802	0.8		0.05	0.1		5129.87	0.01
114	TDM IX	TDM 9	1/12/89	TDSS	Tailings Impact Endmember			0.001		0.005		290.36			0.01	384	391	0.2			0.15	262	0.05	1.7	49		0.0002	0.1	0.51	6.34		1.5	8	1.5	4	0.004	0.01	302	4420		5394	0.7		1.1	0.1		5127.88	
114	TDM IX	TDM 9	4/6/89	TDSS	Tailings Impact Endmember			0.001				366			0.01	380	390	0.79				220	0.05		672				0.69	6.4			7	1.3	1.5	0.002		328	3050		5342	0.7		0.3			5126.75	
114	TDM IX	TDM 9	7/12/89	TDSS	Tailings Impact Endmember			0.001				351.36			0.01	340	400	0.47				297	0.05		701				0.41	6.26				1.1	0.9	0.002		313	4300		6797	0.8		0.2			5124.4	
114	TDM IX	TDM 9	10/20/89	TDSS	Tailings Impact Endmember							285.48					390								696					6.18										390	3980		6676						5125.23	
114	TDM IX	TDM 9	12/12/89	TDSS	Tailings Impact Endmember			0.001				241.56			0.014	433	400	2.08				318	0.05		734				1.17	6.05				1	3.6	0.001		313	2350		5861	1.8		0.2			5116.04	
114	TDM IX	TDM 9	1/16/90	TDSS	Tailings Impact Endmember			0.001				241.56			0.013	472	420	1.88				298	0.05		638				1.2	5.81				1.4	3.6	0.001		328	3260		3347	0.8		0.2			5125.35	
114	TDM IX	TDM 9	5/1/90	TDSS	Tailings Impact Endmember							270.84				641	600								708					6.24										286	3940		6086						5124.36	
114	TDM IX	TDM 9	8/27/90	TDSS	Tailings Impact Endmember			0.001				375.76			0.012	752	400	0.5				312	0.05		260				0.97	6.3				1.8	1.6	0.002		318	3100		5634	0.3		0.2			5123.08	
114	TDM IX	TDM 9	10/19/90	TDSS	Tailings Impact Endmember							463.6				358	380								540					6.3										279	3600		6306						5123.09	
114	TDM IX	TDM 9	1/13/91	TDSS	Tailings Impact Endmember			0.001				254			0.01		320	0.05				339	0.05		581				1.17		5.7			3.2	7.4	0.001		368	4757	6667.01		0.2		0.2031				
114	TDM IX	TDM 9	10/14/91	TDSS	Tailings Impact Endmember							424.32					232								491						6.2										304	4059									
114	TDM IX	TDM 9	1/8/92	TDSS	Tailings Impact Endmember			0.001				537.53			0.01		239	0.05				240	0.05		612				1.28		6			2	6.6	0.001		307	3823	5941.278		0.2		0.68			5118.75	
114	TDM IX	TDM 9	4/9/92	TDSS	Tailings Impact Endmember																																											5117.96	
114	TDM IX	TDM 9	4/23/92	TDSS	Tailings Impact Endmember							571					344								660						6.1			0.3						301	3596	5629.986								
114	TDM IX	TDM 9	7/24/92	TDSS	Tailings Impact Endmember			0.001				269.6			0.01		337	0.05				205.52	0.05		598.63		0.001		1.205		6.3			1.7	4.9	0.001		303	4100	5910.95		0.2		0.68			5116.98	
114	TDM IX	TDM 9	10/12/92	TDSS	Tailings Impact Endmember																																											5116.75	
114	TDM IX	TDM 9	10/27/92	TDSS	Tailings Impact Endmember							419					348								600						6.3										293	3424	5333.943								
114	TDM IX	TDM 9	1/4/93	TDSS	Tailings Impact Endmember																																											5116.14	
114	TDM IX	TDM 9	1/11/93	TDSS	Tailings Impact Endmember			0.001				332			0.01		329	0.05				195	0.05		551				1.49		6			4.2	8.1	0.001		333	4305	6367.443		0.2		0.2031				
114	TDM IX	TDM 9	1/12/93	TDSS	Tailings Impact Endmember																																											5113.59	
114	TDM IX	TDM 9	4/26/93	TDSS	Tailings Impact Endmember																																											5115.09	
114	TDM IX	TDM 9	4/27/93	TDSS	Tailings Impact Endmember							293					295								411						5.7										260	3877									
114	TDM IX	TDM 9	7/13/93	TDSS	Tailings Impact Endmember			0.001				310			0.01		336	0.05				171	0.05		572				1.41		5.7			8.1	9.6	0.004		341	4113	6196.7466		0.2		0.677			5114.59	
114	TDM IX	TDM 9	10/28/93	TDSS	Tailings Impact Endmember																																											5113.24	
114	TDM IX	TDM 9	1/12/94	TDSS	Tailings Impact Endmember																																											5113.59	
114	TDM IX	TDM 9	4/16/94	TDSS	Tailings Impact Endmember																																											5114.79	
114	TDM IX	TDM 9	7/8/94	TDSS	Tailings Impact Endmember			0.001			776				0.01	430	344	0.05				751	0.05		448				0.4	6.6				2.8	29	0.001		324	4881	7566.443		0.2		1.354			5111.84	
114	TDM IX	TDM 9	10/12/94	TDSS	Tailings Impact Endmember																																											5111.49	
114	TDM IX	TDM 9	1/23/95	TDSS	Tailings Impact Endmember																																											5111.59	
114	TDM IX	TDM 9	1/30/95	TDSS	Tailings Impact Endmember			0.001				388			0.01	470	327	0.05				462	0.05		605				0.49		6.4			10	11.9	0.001		335	5220	7613.443		0.2		2				
114	TDM IX	TDM 9	4/3/95	TDSS	Tailings Impact Endmember																																											5110.89	
114	TDM IX	TDM 9	5/4/95	TDSS	Tailings Impact Endmember							332				442	372								538						6.4										310	4783	6611.5316								
114	TDM IX	TDM 9	7/24/95	TDSS	Tailings Impact Endmember			0.001				313			0.01	474	339	0.05				523	0.05		580				0.65		6			3	4.2	0.001		307	4819	7198.943		0.2		0.2			5110.59	
114	TDM IX	TDM 9	11/21/95	TDSS	Tailings Impact Endmember							267				440	299								520						5.9										295	4305	5993.1202								
114	TDM IX	TDM 9	1/15/96	TDSS	Tailings Impact Endmember																																												5110.27	
114	TDM IX	TDM 9	1/26/96	TDSS	Tailings Impact Endmember			0.001				282			0.01	440	295	0.05				470	0.05		525				1.41		6.2			5.7	5.2	0.001		330	4285	6512.843		0.2		0.2				
114	TDM IX	TDM 9	4/30/96	TDSS	Tailings Impact Endmember																																												5109.59	
114	TDM IX	TDM 9	7/9/96	TDSS	Tailings Impact Endmember			0.001				226			0.01	465	317	0.05				500	0.05		550				0.4		6.2			2.1	9.8	0.001		330	4820	7095.443		1.7		0.5				
114	TDM IX	TDM 9	7/10/96	TDSS	Tailings Impact Endmember																																												5109.99	
114	TDM IX	TDM 9	11/12/96	TDSS	Tailings Impact Endmember							212				491	337								594						6						12.7				292	4769	6602.6746							5109.19	
114	TDM IX	TDM 9	2/4/97	TDSS	Tailings Impact Endmember			0.007				272			0.01	510	350	0.05				525	0.05		575				1.62		6.2			0.7	4.5	0.002		325	4835	6731.443		0.2		0.2			5109.39	
114	TDM IX	TDM 9	3/20/97	TDSS	Tailings Impact Endmember																																												5110.59	
114	TDM IX	TDM 9	4/26/97	TDSS	Tailings Impact Endmember							296				475	289								540						6.3										308	4475	6235.443								
114	TDM IX	TDM 9	7/8/97	TDSS	Tailings Impact Endmember			0.001				199			0.01	465	297	0.05				355	0.05		510						6.3			1.4	4.6	0.001		293	4385	6049.943		0.2		0.68			5110.8	
114	TDM IX	TDM 9	10/7/97	TDSS	Tailings Impact Endmember							235				457	325								515						5.9										292	4550	6257							5109.99	
114	TDM IX	TDM 9	1/5/98	TDSS	Tailings Impact Endmember			0.001				309			0.005	438	322	0.05				481	0.05		521				1.05		5.9			2.7	3.6	0.004		307	4200	6424		0.2		0.2				
114	TDM IX	TDM 9	1/6/98	TDSS	Tailings Impact Endmember																																												5109.39	
114	TDM IX	TDM 9	4/10/98	TDSS	Tailings Impact Endmember							276				413	332								504						5.9						12.1				298	4300	5988							5109.62	
114	TDM IX	TDM 9	7/2/98	TDSS	Tailings Impact Endmember			0.001				379			0.005	445	290	0.05				469	0.05		523				0.26		6.2			0.4	3.5	0.003		307	4380	6604		0.2		0.3			5110.59	
114	TDM IX	TDM 9	10/22/98	TDSS	Tailings Impact Endmember							373				443	293								537						6										321	4120	5910							5109.14	
114	TDM IX	TDM 9	1/7/99	TDSS	Tailings Impact Endmember			0.001				272			0.005	435	327	0.05				393	0.05		502				0.93		5.9			1.4	1	0.001		270	3770	5835.443		0.2		0.2			5109.29	
114	TDM IX	TDM 9	4/19/99	TDSS	Tailings Impact Endmember							311				466	319								513						6.1										284	4000	5741.9808							5109.21	
114	TDM IX	TDM 9	7/5/99	TDSS	Tailings Impact Endmember																																												5110.44	
114	TDM IX	TDM 9	7/9/99	TDSS	Tailings Impact Endmember			0.001				320			0.005	487	326	0.05				422	0.05		540				0.48		6.2			1.1	5.3	0.001		280	4190	6408.9935		0.2		0.4739				
114	TDM IX	TDM 9	10/11/99	TDSS	Tailings Impact Endmember							245				446	334								50						6										283	3720								5109.21	
114	TDM IX	TDM 9	1/11/00	TDSS	Tailings Impact Endmember			0.001				297			0.005	364	303	0.05				392	0.05		498				0.55		5.9			0.9	1	0.001		278	4000	5990		0.2		0.3			5109.19	
114	TDM IX	TDM 9	4/11/00	TDSS	Tailings Impact Endmember							300				448	370					356			448						5.9										308	3600	5688							5109.29	
114	TDM IX	TDM 9	7/11/00	TDSS	Tailings Impact Endmember			0.001				349			0.01	446	287	0.05				336	0.05		439				0.37		6.1			1.3	4.7	0.001		296	3490	5471	6350	0.2		0.6			5109.09	
114	TDM IX	TDM 9	10/26/00	TDSS	Tailings Impact Endmember																																												5109.34	
114	TDM IX	TDM 9	10/27/00	TDSS	Tailings Impact Endmember							285				479	308								447						6										280	3780		6260							
114	TDM IX	TDM 9	1/5/01	TDSS	Tailings Impact Endmember			0.001				274			0.01	455	296	0.05				373	0.05		418				0.3		6			1.1	4.2	0.005		259	3570	5511		0.2		0.41			5109.24	
114	TDM IX	TDM 9	4/11/01	TDSS	Tailings Impact Endmember							345				450	278								402						6.1										329	3010	4646								
114	TDM IX	TDM 9	4/12/01	TDSS	Tailings Impact Endmember																																												5109.29	
114	TDM IX	TDM 9	7/17/01	TDSS	Tailings Impact Endmember																																												5109.29	
114	TDM IX	TDM 9	7/31/01	TDSS	Tailings Impact Endmember			0.0002				330			0.01	450	290	0.003				380	0.05		420				0.29		6			0.8	3.6	0.0009		280	3200	4810		0.2		1.69				
114	TDM IX	TDM 9	10/17/

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
115	TDM X	TDM 10	4/27/87					0.001								321	350							1.3	283					7.2			0.9		1.4		0.029			1130		4009	2.9		144				
115	TDM X	TDM 10	8/5/87					0.001								786	590							0.8	273					7.5			1.3		1.6		0.044			1860		2808	0.5		77				
115	TDM X	TDM 10	10/25/87					0.001								501	480							1.2	290					7.29			0.9		1.9		0.069			1640		3230	2.2		253				
115	TDM X	TDM 10	1/27/88					0.001								517	473							1	237					7.32			1.8		0.4		0.019			1910		3666	1		239				
115	TDM X	TDM 10	4/28/88					0.001								737	470							0.9	253					7.3			0.9		1.9		0.055			2150		4492	2		204				
115	TDM X	TDM 10	7/14/88					0.001								705	420							0.9	224					7.25			2.9		0.6		0.017			150		3547	3.9		243				
115	TDM X	TDM 10	10/19/88					0.001								697	409							1.6	239					7.52			0.8		0.7		0.028			170		3790	1.15		224			5174.68	
115	TDM X	TDM 10	1/26/89					0.001								601	391							2.6	244					7.29			1.8		1		0.009			1510		4742	1.3		185			5172.62	
116	TDM XI	TDM 11	7/16/81	OBSS	OBSS Key well - Cl Mixing model																																											5067.72	
116	TDM XI	TDM 11	10/19/81	OBSS	OBSS Key well - Cl Mixing model																																											5067.6	
116	TDM XI	TDM 11	2/2/82	OBSS	OBSS Key well - Cl Mixing model																																											5067.57	
116	TDM XI	TDM 11	3/23/82	OBSS	OBSS Key well - Cl Mixing model																																											5068.15	
116	TDM XI	TDM 11	8/30/82	OBSS	OBSS Key well - Cl Mixing model																																											5070.2	
116	TDM XI	TDM 11	10/20/82	OBSS	OBSS Key well - Cl Mixing model																																											5069.33	
116	TDM XI	TDM 11	1/15/86	OBSS	OBSS Key well - Cl Mixing model			0.001								57	22							2.7	17					7.71			1.2		0.5		0.001			147		474	1.3		3			5074.3	
116	TDM XI	TDM 11	4/29/86	OBSS	OBSS Key well - Cl Mixing model			0.001								64	20							0.6	14								0.7		0.8		0.001			161		505	1.1		3			5073.6	
116	TDM XI	TDM 11	7/18/86	OBSS	OBSS Key well - Cl Mixing model			0.001								48	20							1.4	14					7.56			1.6		0.9		0.001			138		391	1		3.4			5078.9	
116	TDM XI	TDM 11	10/28/86	OBSS	OBSS Key well - Cl Mixing model			0.001								63	16							1	16					7.52			0.6		0.8		0.002			160		446	0.3		3.9			5073	
116	TDM XI	TDM 11	1/9/87	OBSS	OBSS Key well - Cl Mixing model			0.002								58	23							0.8	20					7.62			0		1.2		0.001			157		471	0.3		9.8			5073	
116	TDM XI	TDM 11	4/27/87	OBSS	OBSS Key well - Cl Mixing model			0.001								59	28							0.8	20					7.7			2.1		1.2		0.006			184		471	0.9		3.4			5072.5	
116	TDM XI	TDM 11	8/3/87	OBSS	OBSS Key well - Cl Mixing model			0.001								34	10							0.8	9					7.7			1.3		1.6		0.002			270		825	0.6		77			5074.64	
116	TDM XI	TDM 11	10/25/87	OBSS	OBSS Key well - Cl Mixing model			0.001								74	30							1	17					7.72			0.9		1.2		0.002			212		521	0.3		3.2			5072.1	
116	TDM XI	TDM 11	1/19/88	OBSS	OBSS Key well - Cl Mixing model			0.001								85	34							1	17					7.45			1.2		1.4		0.001			233		562	1.4		0.1			5071.73	
116	TDM XI	TDM 11	4/6/88	OBSS	OBSS Key well - Cl Mixing model			0.001								104	36							0.8	20					7.44			1.8		0.9		0.006			240		571	1.5		3.6			5071.23	
116	TDM XI	TDM 11	7/8/88	OBSS	OBSS Key well - Cl Mixing model			0.001								99	29							0.8	18					7.39			0.8		2.8		0.014			208		544	0.8		0.5			5070.43	
116	TDM XI	TDM 11	10/6/88	OBSS	OBSS Key well - Cl Mixing model			0.001								122	29							1.1	7					7.71			0.9		2.2		0.001			254		460	0.6		1.1			5069.81	
116	TDM XI	TDM 11	1/12/89	OBSS	OBSS Key well - Cl Mixing model			0.001								469	31							1.2	16								1.8		1.1		0.001			248		469	0.4		4.4			5069.04	
116	TDM XI	TDM 11	4/6/89	OBSS	OBSS Key well - Cl Mixing model			0.001							0.0002	97	50	0.01					0.05	2.9	25				0.02	7.45			1.8		2.4	1.3	0.001		63	2510		522	0.5		0.2			5068.58	
116	TDM XI	TDM 11	5/1/90	OBSS	OBSS Key well - Cl Mixing model							217.16				128	85								22					7.79											67	290		566						5066.5	
116	TDM XI	TDM 11	8/23/90	OBSS	OBSS Key well - Cl Mixing model			0.001				261.08			0.002	135	40	0.01				0.23	0.05		13				0.02	7.6					0.9	2	0.001		75	220		580	0.3		2			5065.53	
116	TDM XI	TDM 11	10/19/90	OBSS	OBSS Key well - Cl Mixing model							251.32				120	42								21					7.6											78	238		689						5064.57	
116	TDM XI	TDM 11	1/11/91	OBSS	OBSS Key well - Cl Mixing model			0.001				232			0.01		37.6	0.05				0.25	0.05		29.04				0.05		6.9					1.4	1.9	0.001		77.6	359	744.26		0.6		3.7235				
116	TDM XI	TDM 11	10/14/91	OBSS	OBSS Key well - Cl Mixing model							151					46.3								28.4						6.2										80.6	318	650.82							
116	TDM XI	TDM 11	1/14/92	OBSS	OBSS Key well - Cl Mixing model			0.001				270.84			0.01		36.1	0.05				1.59	0.05		31				0.02		6.7					0.6	5.3	0.001		74.2	408			0.2		4.74			5061.19	
116	TDM XI	TDM 11	4/23/92	OBSS	OBSS Key well - Cl Mixing model							267					35.3								24.3						7										85.9	343	741.443							5060.41
116	TDM XI	TDM 11	7/10/92	OBSS	OBSS Key well - Cl Mixing model			0.001				159			0.01		46	0.05				0.176	0.05		28.36		0.001		0.02		8.4					1	3.8	0.001		92.29	410	771.96		0.2		5.42			5059.96	
116	TDM XI	TDM 11	10/27/92	OBSS	OBSS Key well - Cl Mixing model							250					41.1								35.8						7.5										81.9		793.243							5060.31
116	TDM XI	TDM 11	1/11/93	OBSS	OBSS Key well - Cl Mixing model			0.001				229			0.01		41.9	0.05				0.5	0.05		25.6				0.02		7.5					5.1	3.9	0.001		76	347	740.943		0.7		2.71			5060.48	
116	TDM XI	TDM 11	4/27/93	OBSS	OBSS Key well - Cl Mixing model							249					42.6								27.4						7.5										65.7	348	736.643							5059.79
116	TDM XI	TDM 11	7/13/93	OBSS	OBSS Key well - Cl Mixing model			0.001				269			0.01		56.1	0.05				0.9	0.05		29.6				0.02		7					1.9	4.2	0.001		84.2	430	892.743		0.2		3.385			5059.71	
116	TDM XI	TDM 11	10/28/93	OBSS	OBSS Key well - Cl Mixing model																																													5058.89	
116	TDM XI	TDM 11	1/14/94	OBSS	OBSS Key well - Cl Mixing model																																													5059.11	
116	TDM XI	TDM 11	4/24/94	OBSS	OBSS Key well - Cl Mixing model																																													5059.26	
116	TDM XI	TDM 11	7/10/94	OBSS	OBSS Key well - Cl Mixing model			0.001			267				0.01	135	39.4	0.05				0.6	0.05		23.1				0.02	6.8						2.2	5	0.001		68.1	353	753.143		0.2		6.093			5059.01	
116	TDM XI	TDM 11	10/27/94	OBSS	OBSS Key well - Cl Mixing model																																													5058.76	
116	TDM XI	TDM 11	1/30/95	OBSS	OBSS Key well - Cl Mixing model			0.001				236			0.01	149	46.3	0.05				0.5	0.05		32				0.02		7.3					2	3.6	0.001		75	431	852.243		0.2		5.5			5058.16	
116	TDM XI	TDM 11	5/4/95	OBSS	OBSS Key well - Cl Mixing model							262				159	47								34.8						7.6										80	416	868.243							5058.01
116	TDM XI	TDM 11	7/24/95	OBSS	OBSS Key well - Cl Mixing model																																													5057.93	
116	TDM XI	TDM 11	7/25/95	OBSS	OBSS Key well - Cl Mixing model			0.001				268			0.01	161	47	0.05				1.48	0.05		33.6				0.02		7.2					3.5	3.1	0.001		79	429	885.523		0.2		5.5				
116	TDM XI	TDM 11	11/21/95	OBSS	OBSS Key well - Cl Mixing model							276				175	44.5								34.7						7.5										80.5	449	922.143							5057.31
116	TDM XI	TDM 11	1/26/96	OBSS	OBSS Key well - Cl Mixing model			0.002				278			0.01	154	39.6	0.05				0.76	0.05		31.3				0.02		7.5					1.8	1	0.001		79	396	855.803		0.2		5			5057.67	
116	TDM XI	TDM 11	4/30/96	OBSS	OBSS Key well - Cl Mixing model																																													5057.41	
116	TDM XI	TDM 11	7/10/96	OBSS	OBSS Key well - Cl Mixing model			0.001				280			0.01	171	48.2	0.05				0.7	0.05		34.4				0.02		7.8					1.5	1	0.001		82.3	449	926.043		0.5		6.4			5057.41	
116	TDM XI	TDM 11	11/13/96	OBSS	OBSS Key well - Cl Mixing model							295					171	50							33.8						7.8		8.75								75.2	428	914.693							5057.31
116	TDM XI	TDM 11	1/28/97	OBSS	OBSS Key well - Cl Mixing model			0.001				268			0.01	171	51	0.05				8.15	0.05		40.8				0.02		7.6					1.3	5.4	0.002		78.6	485	960.843		0.2		4.1			5057.51	
116	TDM XI	TDM 11	4/4/97	OBSS	OBSS Key well - Cl Mixing model																																													5056.88	
116	TDM XI	TDM 11	4/26/97	OBSS	OBSS Key well - Cl Mixing model							262				154	47								33.4						7.7										78	425	868.843							5056.91
116	TDM XI	TDM 11	7/7/97	OBSS	OBSS Key well - Cl Mixing model			0.001				290			0.01	167	41.2	0.05				0.66	0.05		33.2						7.7					1.9	3	0.001		80.4	397	864.243		0.2		5.42			5057.3	
116	TDM XI	TDM 11	10/7/97	OBSS	OBSS Key well - Cl Mixing model							269				184	57.7								44.8						7.5										81	430	933							5057.41
116	TDM XI	TDM 11	1/5/98	OBSS	OBSS Key well - Cl Mixing model			0.001				268			0.005	170	50	0.05				3.61	0.05		37.1				0.02		7.5					1.7	2.4	0.001		82.3	487	965		0.2		7			5057.11	
116	TDM XI	TDM 11	4/4/98	OBSS	OBSS Key well - Cl Mixing model							263				168	48.5								33.7						7.5		8.5								78.4	459	920							
116	TDM XI	TDM 11	7/2/98	OBSS	OBSS Key well - Cl Mixing model			0.001				264			0.005	159	42	0.05				2.28	0.05		34				0.02		7.5					1.5	2	0.001		80	442	892		0.2		5.5			5056.91	
116	TDM XI	TDM 11	10/22/98	OBSS	OBSS Key well - Cl Mixing model							269				156	42.6								35.9						7.6										82	464	917							5056.56
116	TDM XI	TDM 11	1/6/99	OBSS	OBSS Key well - Cl Mixing model			0.001				264			0.005	153	46.3	0.05				0.07	0.05		30.7				0.02		7.6					3.5	3.1	0.001		69.1	419	852.613		0.2		5.5			5056.86	
116	TDM XI	TDM 11	4/17/99	OBSS	OBSS Key well - Cl Mixing model							256				163	48.1								32.9						7.6										76.9	410	861.4759							5056.61
116	TDM XI	TDM 11	7/5/99	OBSS	OBSS Key well - Cl Mixing model			0.001				254			0.005	155	45	0.05				0.09	0.05		32				0.02		7.5					1	3.1	0.001		74	391	826.533		0.2		6.4992			5056.61	
116	TDM XI	TDM 11	10/6/99	OBSS	OBSS Key well - Cl Mixing model							257				173	55								34						7.6										80	484								5056.41	
116	TDM XI	TDM 11	1/6/00	OBSS	OBSS Key well - Cl Mixing model			0.001				253			0.01	152	51.4	0.05				0.07	0.05		31.5				0.02		7.5					1.1	2.5	0.001		76.9	422	863		0.7		5.75			5056.41	
116	TDM XI	TDM 11	4/10/00	OBSS	OBSS Key well - Cl Mixing model							265				157	62.6								39.5						7.5										79.8	459	933							5056.61
116	TDM XI	TDM 11	7/11/00	OBSS	OBSS Key well - Cl Mixing model			0.001				255			0.01	165	50.7	0.05				5.53	0.05		39.6				0.02		7.5					1.1	1	0.001		82.5	439	912	934	0.2		6			5056.71	
116	TDM XI	TDM 11	10/26/00	OBSS	OBSS Key well - Cl Mixing model							259				148	56.9								33.2						7.5										73.8	450		992						
116	TDM XI	TDM 11	10/27/00	OBSS	OBSS Key well - Cl Mixing model																																													5056.66	
116	TDM XI	TDM 11	1/2/01	OBSS	OBSS Key well - Cl Mixing model			0.001				256			0.01	158	57.9	0.05				5.93	0.05		36.6				0.02		7.5					1.2	5.4	0.001		76.1	478	943		0.2		5.2			5056.86	
116	TDM XI	TDM 11	4/11/01	OBSS	OBSS Key well - Cl Mixing model							263				168	45.8								42						7.5										86	482	958							
116	TDM XI	TDM 11	4/12/01	OBSS	OBSS Key well - Cl Mixing model																																													5057.41	
116	TDM XI	TDM 11	7/17/01	OBSS	OBSS Key well - Cl Mixing model			0.0003				260			0.01	180	59	0.0007				14	0.05		48				0.02		7.5					1.7	2.3	0.001		81	510	1000		0.2		5.48			5056.61	
116	TDM XI	TDM 11	10/18/01	OBSS	OBSS Key well - Cl Mixing model							260				182	56								40						7.5										84	483	976							5055.15
116	TDM XI	TDM 11	2/22/02	OBSS	OBSS Key well - Cl Mixing model			0.001				261			0.01	172	58.3	0.05				2.94	0.05		36.5				0.02		7.5					1.3	2.8	0.00184		78.4	479	957.32		0.2		6.8				
116	TDM XI	TDM 11	5/7/02	OBSS	OBSS Key well - Cl Mixing model							276				192	62.4								45						0										85	534	1056.88							
116	TDM XI	TDM 11	10/2/02	OBSS	OBSS Key well - Cl Mixing model			0.001				267			0.01	166.1	50.4	0.05				4.92	0.05		38.11				0.02		7.5					1.1	2.9	0.001262		78.2	469.4	940.66		0.2	0.00839				5055.9	
116	TDM XI	TDM 11	12/3/02	OBSS	OBSS Key well - Cl Mixing model			0.001							0.0005		43	0.001					0.001							0.0012	7.5							0.00175		80.5	474		1070						5055.7	
116	TDM XI	TDM 11	1/23/03	OBSS	OBSS Key well - Cl Mixing model			0.001							0.0005		52	0.001					0.001							0.0019	7.59	7.64			2.7	1	0.001		80.3	418		790			6.77			5055.18	
116	TDM XI	TDM 11	4/29/03	OBSS	OBSS Key well - Cl Mixing model			0.001							0.0005		47	0.001					0.001							0.001	7.5	7.44					0.00179		75.6	485		1120						5055.19	
116	TDM XI	TDM 11	7/16/03	OBSS	OBSS Key well - Cl Mixing model			0.001							0.0005		48	0.001					0.001							0.0017		7.53	7.4		2.2	4.1	0.001		90.6	503		1020			6.534404				
116	TDM XI	TDM 11	10/21/03	OBSS	OBSS Key well - Cl Mixing model												52														7.71	7.76							75.5	496		1090							
116R	TDM XIR	TDM 11R	9/26/89					0.001				68.3			0.002	74	170	0.01				0.01	0.05		17				0.02	7.58					1.5	0.8	0.007		82	308		687	1.5		1.6			5067.57	
116R	TDM XIR	TDM 11R	10/20/89									190.32				76	48								22					8.49										86	308		634						5067.41	
116R	TDM XIR	TDM 11R	1/19/90					0.001				190.32			0.002	104	44	0.01				0.03	0.05		18				0.02	7.42					1.2	2.6	0.002		77	260		606	1.3		8			5067.07	
117	TDM XII	TDM 12	7/16/81	TDSS																																													5180.93	
117	TDM XII	TDM 12	10/23/81	TDSS																																													5170.8	
117	TDM XII	TDM 12	11/23/81	TDSS																																													5170.8	
117	TDM XII	TDM 12	12/10/81	TDSS																																													5170.71	
117	TDM XII	TDM 12	3/26/82	TDSS																																													5170.6	
117	TDM XII	TDM 12	4/14/82	TDSS																																													5170.31	
117	TDM XII	TDM 12	7/26/82	TDSS																																													5169.16	
117	TDM XII	TDM 12	11/16/82	TDSS																																													5174.04	
117	TDM XII	TDM 12	1/15/86	TDSS		0.1		0.001	0.1					0.18	0.011	401	230	0.01	0.01	0.01			0.05	2.3	366		0.0002	0.1		6.51			1.9		1.4		0.001	0.01		2170		4347	3.1		113	0.1		5157.5	0.028
117	TDM XII	TDM 12	2/19/86	TDSS				0.001																						6.5							0.002										5157.3	
117	TDM XII	TDM 12	3/19/86	TDSS				0.001																						6.48							0.001										5157.5	
117	TDM XII	TDM 12	4/24/86	TDSS		0.1		0.001	0.01					0.35	0.009	461	250	0.01	0.02	0.01			0.05	2.2	354		0.002			6.26			1.9		2.3		0.001			2200		2614	6		92			5156.5	
117	TDM XII	TDM 12	5/26/86	TDSS				0.001																						6.29							0.001										5160.05	
117	TDM XII	TDM 12	6/23/86	TDSS				0.001																						6.35							0.001										5159.5	
117	TDM XII	TDM 12	7/21/86	TDSS		0.1		0.001	0.1					0.1	0.003	501	240	0.01	0.01	0.01			0.05	1	354		0.0002	0.1		6.43			0.7		2.1		0.001			2120		4007	0.9		119	0.1		5160.5	0.019
117	TDM XII	TDM 12	8/13/86	TDSS				0.001																						6.39							0.001										5157.9	
117	TDM XII	TDM 12	9/25/86	TDSS				0.001																						6.25							0.001										5153.9	
117	TDM XII	TDM 12	10/22/86	TDSS		0.1		0.001	0.1					0.27	0.011	421	245	0.01	0.01	0.02			0.05	0.9	342		0.0002	0.1		6.36			0.9		1.6		0.001	0.01		2170		3377	2.7		124	0.1		5153.4	0.034
117	TDM XII	TDM 12	11/14/86	TDSS				0.001																						6.28							0.001										5152.8	
117	TDM XII	TDM 12	12/5/86	TDSS				0.001																						6.33							0.001										5151.65	
117	TDM XII	TDM 12	1/15/87	TDSS		0.1		0.001	0.1					0.3	0.016	541	240	0.01	0.01	0.02			0.08	2	378		0.0002	0.1		6.43			1.8		1.3		0.001	0.01		2110		4768	2.1		89	0.1		5151.3	0.055
117	TDM XII	TDM 12	2/12/87	TDSS				0.001																						6.41	

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
117	TDM XII	TDM 12	9/23/88	TDSS				0.001		0.005					0.011		308	0.02			0.13		0.06					0.0002	0.1	0.02	6.17					1.3	6.7	0.001	0.01		2740		4243	0.4			51	0.1		5142.61	
117	TDM XII	TDM 12	10/13/88	TDSS		0.1		0.001	0.1	0.005	281		281	0.85	0.01	520	352	0.01	0.01	0.02	0.15	0.04	0.05	1.2	466		0.0002	0.1	0.02	6.21			0.8	14	1.4	7.7	0.001	0.01	275	2360		4664	0.6			28	0.1	7.7	5141.67	0.008
117	TDM XII	TDM 12	1/19/89	TDSS																																													
117	TDM XII	TDM 12	4/6/89	TDSS				0.002		0.005		573.4	342		0.016	492	305	0.01			0.21	0.54	0.05	0.9	370		0.0002	0.1	0.02	6.4			1.6	17	1.1	1.8	0.001	0.01	277	2510		3676	1.2			24	0.1		5145.85	
117	TDM XII	TDM 12	7/12/89	TDSS				0.001				544.12			0.008	514	350	0.01				0.5	0.05		336				0.08	6.34					1.2	0.6	0.003		267	2650		4214	0.9			14			5137.26	
117	TDM XII	TDM 12	10/20/89	TDSS								468.48				471	295						0.05		355					6.39									340	2560		3941							5136.59	
117	TDM XII	TDM 12	12/18/89	TDSS				0.001				583.16			0.013	553	350	0.04				1.29	0.05		322				0.09	6.4					1.4	1.9	0.001		282	2150		3277	1.4			46			5133.4	
117	TDM XII	TDM 12	1/18/90	TDSS				0.001				605.12			0.012	581	310	0.01				0.78	0.05		305				0.02	6.21					1.2	3.3	0.001		273	2120		2812	1.7			22			5132.47	
117	TDM XII	TDM 12	5/1/90	TDSS								480.68				549	255								259					6.3									256	2260		4344							5136.08	
117	TDM XII	TDM 12	8/22/90	TDSS				0.001				414.8			0.009	673	228	0.01				1.24	0.05		161				0.07	6.52					0.8	1.3	0.001		269	1410		3698	0.2			19			5131.28	
117	TDM XII	TDM 12	10/19/90	TDSS								578.28				473	260								286					6.4									267	2380		4339							5134.5	
117	TDM XII	TDM 12	1/13/91	TDSS				0.001				593			0.01		245	0.05				0.05	0.05		296				0.05		6.6				0.6	4.7	0.001		264	2449	4203.87		0.2			45.0882				
117	TDM XII	TDM 12	10/14/91	TDSS								678.08					276								295						6.5									235	2448	4234.49									
117	TDM XII	TDM 12	1/14/92	TDSS				0.001				681.98			0.01		249	0.05				0.59	0.05		287				0.04		6.6				1	6.8	0.001		238	2390	4175.1564		0.2			60.3			5127.4	
117	TDM XII	TDM 12	4/23/92	TDSS								696					255								277						6.6									266	2169	3930.2652								5121.26	
117	TDM XII	TDM 12	7/24/92	TDSS				0.001				588			0.01		240	0.05				1.445	0.05		320.8		0.001		0.032		6.3				0.8	3.2	0.001		301.71	2413	4210.22		0.2			46.71			5127	
117	TDM XII	TDM 12	10/27/92	TDSS								588					235								272						6.9									277	2406	4121.632								5128.8	
117	TDM XII	TDM 12	1/11/93	TDSS				0.001				576			0.01		259	0.05				0.19	0.05		281				0.02		6.4				2	5.2	0.001		254	2435	4251.8964		0.2			13.54			5127.29	
117	TDM XII	TDM 12	4/27/93	TDSS								672					251								250						6.2									225	2342	4088.352								5125.85	
117	TDM XII	TDM 12	7/14/93	TDSS				0.001				780			0.01		257	0.05				0.41	0.05		312				0.08		6.2				3.3	5	0.001		249	2449	4390.5033		0.2			52.806				
117	TDM XII	TDM 12	7/15/93	TDSS																																													5128.35	
117	TDM XII	TDM 12	10/27/93	TDSS																																													5128.6	
117	TDM XII	TDM 12	1/12/94	TDSS																																													5127.38	
117	TDM XII	TDM 12	4/25/94	TDSS																																													5124.38	
117	TDM XII	TDM 12	7/7/94	TDSS				0.001			715				0.01	645	269	0.05				0.08	0.05		407				0.02	6.5					5.2	1.5	0.01		217	2694	4618.0649		0.2			20.987			5127.4	
117	TDM XII	TDM 12	10/25/94	TDSS																																													5123.2	
117	TDM XII	TDM 12	1/23/95	TDSS																																													5126.98	
117	TDM XII	TDM 12	1/26/95	TDSS				0.001				692			0.01	620	287	0.05				1.61	0.05		310				0.02		6.7				1.2	2.1	0.001		220	2415	4215.6023		0.2			53.6				
117	TDM XII	TDM 12	5/4/95	TDSS								760				720	318								274						7.3									234	2603	4547.163								5123.7	
117	TDM XII	TDM 12	7/24/95	TDSS				0.001				728			0.01	739	271	0.05				1	0.05		291				0.02		6.4				1.4	2.8	0.001		230	2248	4161.8972		0.2			39.3			5124.9	
117	TDM XII	TDM 12	11/21/95	TDSS								714				665	278								284						6.4									232	2167	4002.5363								5125.85	
117	TDM XII	TDM 12	1/15/96	TDSS																																													5126.05	
117	TDM XII	TDM 12	1/26/96	TDSS				0.001				803			0.01	730	253	0.05				12.4	0.05		298				0.02		6.9				1.2	3.8	0.001		270	2325	4311.043		0.2			80.7				
117	TDM XII	TDM 12	4/30/96	TDSS																																													5125.2	
117	TDM XII	TDM 12	7/10/96	TDSS				0.001				818			0.01	755	301	0.05				2.22	0.05		285				0.07		7				1.5	12.2	0.001		250	2386	4389.106		0.8			58.9				
117	TDM XII	TDM 12	7/11/96	TDSS																																													5125.9	
117	TDM XII	TDM 12	11/12/96	TDSS								678				801	313								306						6.6		17.4							218	2439	4468.1755								5122.7	
117	TDM XII	TDM 12	1/31/97	TDSS				0.001				876			0.01	830	303	0.05				1.56	0.05		300				0.02		7.4				0.6	5	0.002		240	2500	4617.7779		0.2			62.3			5122.6	
117	TDM XII	TDM 12	4/26/97	TDSS								832				740	280								270						7									225	2050	3990.2144								5122.9	
117	TDM XII	TDM 12	7/1/97	TDSS				0.001				774			0.01	785	289	0.05				0.17	0.05		275						6.7				0.9	4.6	0.001		229	2153	4163		0.2			30.5			5123.1	
117	TDM XII	TDM 12	10/6/97	TDSS								687				680	278								273						6.5									218	2470	4309								5125.9	
117	TDM XII	TDM 12	1/1/98	TDSS				0.001				793			0.005	730	349	0.05				0.05	0.05		273				0.02		6.5				1.5	1	0.006		221	2200	4205		0.2			43.3			5122.4	
117	TDM XII	TDM 12	4/6/98	TDSS								820				659	310								260						6.5		17.3							230	2250	4129								5123.61	
117	TDM XII	TDM 12	7/1/98	TDSS				0.001				783			0.005	710	264	0.05				0.05	0.05		271				0.02		6.5				0.7	2.1	0.006		228	2150	4036		2.1			45.2			5123.8	
117	TDM XII	TDM 12	10/22/98	TDSS								793				722	265								265						6.5									239	2240	4151								5125.4	
117	TDM XII	TDM 12	1/7/99	TDSS				0.001				799			0.005	712	303	0.05				0.92	0.05		267				0.02		6.6				0.8	1	0.001		195	2150	4040.8937		0.2			25.3			5124.9	
117	TDM XII	TDM 12	4/17/99	TDSS								773				765	302								276						6.6									208	2100	4045.9235								5124.4	
117	TDM XII	TDM 12	7/5/99	TDSS				0.001				760			0.005	766	302	0.05				0.05	0.05		274				0.02		6.6				1	3.8	0.001		202	2240	4177.568		0.2			20.4454			5124	
117	TDM XII	TDM 12	10/11/99	TDSS								737				686	301								262						6.6									191	2050									5124.4	
117	TDM XII	TDM 12	1/11/00	TDSS				0.001				727			0.005	667	293	0.05				13	0.05		292				0.03		6.6				0.6	4.9	0.001		200	2310	4149		0.2			18.3			5125.4	
117	TDM XII	TDM 12	4/11/00	TDSS								664				604	321								271						6.6									228	1980	3761								5124.3	
117	TDM XII	TDM 12	7/11/00	TDSS				0.001				652			0.01	577	289	0.05				0.05	0.05		261				0.02		6.7				1	3.9	0.001		227	1820	3522	4180	0.2			17.7			5125.5	
117	TDM XII	TDM 12	10/27/00	TDSS								604				601	286								278						6.7									202	1830		4150							5124.25	
117	TDM XII	TDM 12	1/5/01	TDSS				0.001				542			0.01	565	258	0.05				0.05	0.05		250				0.02		6.9				0.6	1	0.007		181	1820	3383		0.2			15.8			5124.1	
117	TDM XII	TDM 12	4/12/01	TDSS								516				573	246								258						6.9									249	2230	3870								5124.5	
117	TDM XII	TDM 12	8/1/01	TDSS																																														
117	TDM XII	TDM 12	10/17/01	TDSS																																													5121.8	
118	TDM XIX	TDM 19	1/16/86					0.001								42	17						2.3	10					7.65		1		0.7		0.001			250		619	2.3			1					
118	TDM XIX	TDM 19	4/29/86					0.001								46	19						0.7						7.9		0.7		0.5		0.001			318		629				0.7					
118	TDM XIX	TDM 19	7/22/86					0.001								50	19						2	60					7.7		1		0.8		0.001			276		733	1.7			1					
118	TDM XIX	TDM 19	10/28/86					0.001								43	16						1.1	10					7.72		0.9		0.7		0.001			308		609	0.9			1.8					
118	TDM XIX	TDM 19	1/15/87					0.001								48	17						2.4	14					7.9		0.5		1		0.001			290		664	0.4			0.9					
118	TDM XIX	TDM 19	4/17/87					0.001								43	17						1.8	11					76		2.4		0.6		0.001			288		649	1.6			1					
118	TDM XIX	TDM 19	8/3/87					0.001								82	18						0.7	37					8.14		1.2		1.7		0.006			240		612	0.5			2					
118	TDM XIX	TDM 19	10/25/87					0.001								40	14						1	11					7.92		1.1		0.5		0.001			320		621	0.6			0.1					
118	TDM XIX	TDM 19	1/30/88					0.001								52	16						1	2					7.5		1.2		1.1		0.001			334		624	0.5			0.1					
118	TDM XIX	TDM 19	4/28/88					0.001								46	28						0.9	15					7.66		1.1		1.5		0.002			356		633	0.9								
118	TDM XIX	TDM 19	7/28/88					0.001								36	15						0.4	14					7.44		1.6		1.6		0.005			194		565	0.6			6.4					
118	TDM XIX	TDM 19	10/19/88					0.001								50	32						1.1	6					8		0.9		1.3		0.01			242		430	0.44			0.05			5163.5		
118	TDM XIX	TDM 19	1/27/89					0.001								48	17						1.5	4					7.58		1.7		1.5		0.001			280		514	1.1			0.4			5161.88		
119	TDM XX	TDM 20	1/16/86					0.001								90	17						2.6	10					7.53		1		0.7		0.001			250		665	1.9			1					
119	TDM XX	TDM 20	4/29/86					0.001								99	39						1	23					7.7		0.9		1.2		0.001			322		692	5			1.4					
119	TDM XX	TDM 20	7/22/86					0.001								111	39						0.8	18					7.45		0.5		0.8		0.001			270		851	0.4			1.5					
119	TDM XX	TDM 20	10/29/86					0.001								117	43						1.1	23					7.41		1		1.4		0.001			340		781	0.8			2.2					
119	TDM XX	TDM 20	1/15/87					0.001								116	43						1.1	32					7.54		1.4		1.7		0.001			296		789	0.8			1					
119	TDM XX	TDM 20	4/17/87					0.001								124	52						1	29					7.5		0.4		1.1		0.001			398		877	1.7			1.3					
119	TDM XX	TDM 20	8/3/87					0.001								126	50						1.2	27					7.51		0.9		2.5		0.011			384		825	0.8			1					
119	TDM XX	TDM 20	10/25/87					0.001								146	55						1.3	24					7.61		1.4		2.2		0.002			428		921	2.7			0.9					
119	TDM XX	TDM 20	2/11/88					0.001								160	58						1.2	36					7.9		1.1		2.2		0.005			450		1013	0.2			0.3					
119	TDM XX	TDM 20	4/30/88					0.002								160	54						0.9	48					7.4		1		1.1		0.002			486		990	0.5								
119	TDM XX	TDM 20	7/13/88					0.001								161							0	40					7.52		0.4		1.3		0.002			370		1000	0.6			0.5					
119	TDM XX	TDM 20	10/6/88					0.001								109	67						1.2	56					7.59		0.9		2.5		0.001			500		967	1.2			0.05			5077.22		
120	TDM XXI	TDM 21	10/22/81	TDSS																																													5162.88	
120	TDM XXI	TDM 21	11/23/81	TDSS																																													5162.87	
120	TDM XXI	TDM 21	12/10/81	TDSS																																													5162.92	
120	TDM XXI	TDM 21	3/26/82	TDSS																																													5162.18	
120	TDM XXI	TDM 21	8/27/82	TDSS																																													5162.3	
120	TDM XXI	TDM 21	10/28/82	TDSS																																													5162.43	
120	TDM XXI	TDM 21	1/16/86	TDSS		0.1		0.001	0.1					0.17	0.007	529	195	0.01	0.01	0.01			0.05	0.9	166		0.0002	0.1		7.06		1.1		1.2		0.001	0.01		1510		3278	0.9			80	0.1		5148.57	0.013
120	TDM XXI	TDM 21	2/19/86	TDSS				0.001																						7.2						0.001												5147.62	
120	TDM XXI	TDM 21	3/19/86	TDSS				0.001																						7.08						0.001												5147.97	
120	TDM XXI	TDM 21	4/29/86	TDSS		0.1		0.001	0.1					0.12	0.007	649	200	0.01	0.02	0.01			0.05	1.3	161		0.002	0.1		7.17		0.8		2.3		0.001	0.01		1920		3149	2.9			60	0.1		5149.52	0.011
120	TDM XXI	TDM 21	5/26/86	TDSS				0.001																						7.1						0.001												5148.32	
120	TDM XXI	TDM 21	6/23/86	TDSS				0.001																						7.12						0.001												5148.42	
120	TDM XXI	TDM 21	7/22/86	TDSS		0.1		0.001	0.1					0.01	0.002	601	300	0.01	0.01	0.01			0.05	1.9	159		0.0002	0.1		6.87		0.8		1.1		0.001			1510		3686	1.4			5.2	0.1		5146.82	0.015
120	TDM XXI	TDM 21	8/13/86	TDSS				0.002																						7.07						0.001												5146.32	
120	TDM XXI	TDM 21	9/25/86	TDSS				0.001																						6.96						0.001												5144.52	
120	TDM XXI	TDM 21	10/29/86	TDSS		0.1		0.001	0.1					0.17	0.012	521	190	0.01	0.01	0.02			0.05	0.9	195		0.002	0.1		7		1.3		0.7		0.001	0.01		1570		3049	2.1			4.9	0.1		5143.62	0.014
120	TDM XXI	TDM 21	11/14/86	TDSS				0.001																						7.13						0.001												5142.72	
120	TDM XXI	TDM 21	12/5/86	TDSS				0.001																						7.21						0.001												5141.72	
120	TDM XXI	TDM 21	1/15/87	TDSS		0.1		0.001	0.1					0.17	0.015	581	180	0.01	0.01	0.01			0.08	2.9	220		0.0002	0.1		7.18		1		1.7		0.001	0.01		1570		3568	0.9			5.7	0.1		5141.02	
120	TDM XXI	TDM 21	2/12/87	TDSS				0.003																						7.13						0.001												5139.82	
120	TDM XXI	TDM 21	3/17/87	TDSS				0.001																						7.06						0.009												5139.72	
120	TDM XXI	TDM 21	4/17/87	TDSS		0.1		0.001	0.1					0.1	0.014	561	220	0.1	0.1	0.04			0.06	0.1	195		0.0002	0.1		7.2		0.4		1.3		0.001	0.01		1230		3689	1.8			6	0.1		5138.72	0.017
120	TDM XXI	TDM 21	5/28/87	TDSS				0.001																						6.95						0.002												5138.82	
120	TDM XXI	TDM 21	6/23/87	TDSS				0.003																						7.5						0.005												5137.07	
120	TDM XXI	TDM 21	8/6/87	TDSS		0.1		0.001	0.1					0.13	0.006	657	320	0.01	0.06	0.02			0.05	0.6	166		0.0002	0.1		7.52		1		1.3		0.002	0.1		1900		2591	1.6			5	0.1		5136.85	0.017
120	TDM XXI	TDM 21	8/27/87	TDSS				0.002																						7.65						0.001												5135.81	
120	TDM XXI	TDM 21	9/30/87	TDSS				0.002																						7.2						0.001												5135.07	
120	TDM XXI	TDM 21	10/25/87	TDSS		0.1		0.001	0.1					0.15	0.002	481	400	0.01	0.01	0.06			0.05	1.1	207		0.0002	0.1		7.3		1		2		0.001	0.1		1450		2334	1.1			47	0.1		5134.37	0.005
120	TDM XXI	TDM 21	11/30/87	TDSS				0.002																						7						0.001												5133.57	
120	TDM XXI	TDM 21	1/19/88	TDSS		0.1		0.002	0.1					0.42	0.008	541	260	0.1	0.07	0.03			0.05	1	161		0.0002	0.1		6.95		0.8		1.4		0.004	0.01		1460		3736	0.5			0.2	0.1		5147.02	0.005
120	TDM XXI	TDM 21	4/6/88	TDSS		0.1		0.001	0.1					0.21	0.009	881	280	0.01	0.02	0.02			0.05	0.7	190		0.0002	0.1		7.03		1.2		1.1		0.002			1850		2844	2.5			78	0.1		5145.19	0.031
120	TDM XXI	TDM 21	7/8/88	TDSS		0.1		0.001	0.1					0.25	0.015	857	235	0.02	0.01	0.02			0.09	0.8	161		0.0002	0.1		7.19		1.6		1.4		0.002	0.01		1660		2890	1.1			0.2	0.1		5143.01	0.014
120	TDM XXI	TDM 21	8/25/88	TDSS				0.002		0.005					0.007		273	0.04			0.12		0.08				0.0002	0.1	0.02	6.9				0.4	3.9	0.001	0.01		1610		3286	0.6			60	0.1		5141.99	

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
120	TDM XXI	TDM 21	8/23/90	TDSS				0.005				805.2			0.005	810	265	0.04				0.97	0.05		161				0.03	7.09					1.1	1.2	0.001		184	1410		3397	0.5		25			5132.52	
120	TDM XXI	TDM 21	10/18/90	TDSS								807.64				545	395								181					7.2									202	1850		3697						5130.07	
120	TDM XXI	TDM 21	1/11/91	TDSS				0.008				722			0.01		285	0.05				2.31	0.05		207				0.05		6.5				0.9	2.4	0.001		205	2019	3866.01		0.2		49.421				
120	TDM XXI	TDM 21	10/10/91	TDSS								728.09					263								194					7									196	2063	3832.0893								
120	TDM XXI	TDM 21	1/8/92	TDSS				0.008				782.99			0.01		257	0.05				2.04	0.05		194				0.04		7.2				0.5	5.1	0.001		193	2068	3893.628		0.2		32.5			5126.96	
120	TDM XXI	TDM 21	4/22/92	TDSS								774					261								206					7									201	2050	3853.443							5126.51	
120	TDM XXI	TDM 21	4/23/92	TDSS								774					261								206				7									231	1950	3803.443								
120	TDM XXI	TDM 21	7/9/92	TDSS				0.007				634			0.01		261	0.05				2.092	0.08		205.56		0.001		0.02		7.3				0.3	2.7	0.002		221.9	2185	3847.7		0.2		20.99				
120	TDM XXI	TDM 21	8/14/92	TDSS																																												5126.17	
120	TDM XXI	TDM 21	10/26/92	TDSS								766					298								189					7.2									221	2120	4036.443							5125.5	
120	TDM XXI	TDM 21	1/11/93	TDSS				0.006				761			0.01		284	0.05				1.52	0.05		191				0.024		7				1.3	4.4	0.001		218	2083	3995.463		0.2		50.1			5125.22	
120	TDM XXI	TDM 21	4/26/93	TDSS								756					275								181					7.2									196	2120	3884.443							5124.07	
120	TDM XXI	TDM 21	7/10/93	TDSS				0.004				906			0.01		284	0.05				2.02	0.05		196				0.02		6.7				20.5	8.2	0.002		228	2102	4111.463		0.2		64.992			5124.22	
120	TDM XXI	TDM 21	10/25/93	TDSS																																												5123.52	
120	TDM XXI	TDM 21	1/13/94	TDSS																																												5123.17	
120	TDM XXI	TDM 21	4/24/94	TDSS																																												5123.05	
120	TDM XXI	TDM 21	7/5/94	TDSS				0.001			809				0.01	781	264	0.05				2.68	0.05		182				0.02	7.4					2.2	4.4	0.001		265	2354	4253.623		0.2		20.987			5123.97	
120	TDM XXI	TDM 21	10/24/94	TDSS																																												5122.27	
120	TDM XXI	TDM 21	1/26/95	TDSS				0.003				840			0.01	890	304	0.05				3.36	0.05		225				0.02		7.4				2.8	3.8	0.001		205	2365	4412.803		0.2		44.3			5122.02	
120	TDM XXI	TDM 21	4/24/95	TDSS								910				834	370								219					7.2									188	2112	4178.443							5121.82	
120	TDM XXI	TDM 21	7/21/95	TDSS				0.004				899			0.01	884	316	0.05				3.22	0.05		219				0.02		6.7				1.4	5.3	0.001		184	2134	4190.163		0.2		52.2			5121.71	
120	TDM XXI	TDM 21	11/20/95	TDSS								853				865	293								208					7									177	2095	4064.943							5120.82	
120	TDM XXI	TDM 21	1/24/96	TDSS				0.002				987			0.01	920	278	0.05				3.17	0.05		230				0.02		7.3				1.9	1.6	0.001		191	2163	4299.613		0.2		13.4			5121.07	
120	TDM XXI	TDM 21	4/30/96	TDSS																																												5120.42	
120	TDM XXI	TDM 21	7/9/96	TDSS																																												5120.62	
120	TDM XXI	TDM 21	7/11/96	TDSS				0.001				880			0.01	966	340	0.05				2.58	0.05		233				0.02		7.3				1.3	7.1	0.001		193	2418	4593.023		0.5		1.2				
120	TDM XXI	TDM 21	11/12/96	TDSS								748				995	370								244					6.9			14.6						170	2421	4589.043							5120.02	
120	TDM XXI	TDM 21	1/27/97	TDSS				0.001				934			0.01	1030	363	0.05				2.39	0.05		240				0.02		6.9				0.9	1	0.001		190	2298	4588.443		0.2		2.7			5119.02	
120	TDM XXI	TDM 21	4/21/97	TDSS								949				794	75								99					7									189	1995	3626.943							5119.52	
120	TDM XXI	TDM 21	7/1/97	TDSS				0.001				1009			0.01	1000	364	0.05				3.09	0.05		230						7				0.6	3.6	0.001		189	2287	4575		0.2		0.54			5119.32	
120	TDM XXI	TDM 21	10/9/97	TDSS								1040				925	410								205					7.2									184	2300	4545							5120.62	
120	TDM XXI	TDM 21	11/1/97	TDSS																																												5118.95	
120	TDM XXI	TDM 21	1/5/98	TDSS				0.001				1100			0.005	956	416	0.05				3.39	0.05		235				0.02		6.7				2.4	1	0.007		206	2200	4567		0.2		0.2			5119.05	
120	TDM XXI	TDM 21	4/10/98	TDSS								1090				873	421								242					6.8			15.1						204	2350	4636							5119.02	
120	TDM XXI	TDM 21	7/1/98	TDSS				0.002				1113			0.005	926	371	0.05				0.09	0.05		241				0.02		6.7				0.6	1	0.006		222	2310	4627		1.6		1.2			5118.34	
120	TDM XXI	TDM 21	10/22/98	TDSS								1200				936	381								244					6.6									212	2270	4645							5120.12	
120	TDM XXI	TDM 21	1/5/99	TDSS				0.001				1230			0.005	959	441	0.05				2.03	0.05		244				0.02		6.7				1.3	1	0.001		170	2100	4533.473		0.2		0.2			5135.5	
120	TDM XXI	TDM 21	4/17/99	TDSS								1230				1000	402								258					6.7									190	2050	4517.443							5135	
120	TDM XXI	TDM 21	7/9/99	TDSS				0.001				1220			0.005	989	405	0.05				8.8	0.05		264				0.02		6.7				1.6	3.7	0.001		179	2300	4758.243		0.2		0.2708			5134.3	
120	TDM XXI	TDM 21	10/5/99	TDSS								1230				929	379								245					6.7									172	1830								5134.5	
120	TDM XXI	TDM 21	1/5/00	TDSS				0.001				1220			0.01	846	287	0.05				2.46	0.05		220				0.02		6.7				1.4	2.7	0.008		121	1770	3859		0.2		0.339			5134.2	
120	TDM XXI	TDM 21	4/4/00	TDSS								1234				922	415								249					6.7									213	2090	4509							5134.9	
120	TDM XXI	TDM 21	7/6/00	TDSS																																												5136.6	
120	TDM XXI	TDM 21	7/11/00	TDSS				0.001				1238			0.01	928	416	0.05				2.49	0.05		243				0.02		6.7				1.2	4.1	0.001		201	1916	4327	5070	0.2		0.7				
120	TDM XXI	TDM 21	9/9/00	TDSS																																											5157.62	
120	TDM XXI	TDM 21	10/25/00	TDSS								1190				935	398								258					6.7									187	1910		4980							
120	TDM XXI	TDM 21	10/26/00	TDSS																																												5124.8	
120	TDM XXI	TDM 21	1/2/01	TDSS				0.002				1211			0.01	925	364	0.05				0.09	0.05		240				0.02		6.7				1	2	0.009		184	1960	4281		0.2		0.5			5118.32	
120	TDM XXI	TDM 21	4/11/01	TDSS								1205				919	356								234					6.7									235	2320	4669								
120	TDM XXI	TDM 21	4/12/01	TDSS																																												5134.9	
120	TDM XXI	TDM 21	7/17/01	TDSS				0.0007				1200			0.0002	840	380	0.004				0.15	6E-05		230				0.036		6.7				1.4	3.7	0.0009		190	1900	4070		0.2		0.339			5118.42	
120	TDM XXI	TDM 21	10/18/01	TDSS								1200				956	402								249					6.7									210	2090	4493							5114.97	
120	TDM XXI	TDM 21	2/22/02	TDSS				0.00114				1200			0.01	856	408	0.05				0.22	0.05		231				0.02		6.7				1	3.1	0.00483		198	1970	4262.95		0.2		0.84				
120	TDM XXI	TDM 21	4/30/02	TDSS								1171				929	377								237					0									210	1950	4287.9								
120	TDM XXI	TDM 21	9/30/02	TDSS				0.00225				1166			0.01	871	335.3	0.05				1.44	0.05		238.4				0.04		6.7				0.6	3.9	0.00598		200.3	2032	4261.49		0.2	0.00056				5117.46	
120	TDM XXI	TDM 21	12/5/02	TDSS				0.001							0.0005		360	0.001					0.001							0.0058	6.6						0.00494		249	2130		4900						5117.07	
120	TDM XXI	TDM 21	1/23/03	TDSS				0.00107							0.0005		410	0.001					0.001							0.0087	6.75	6.61			4.4	1	0.00528		246	1740		1480			0.14			5115.98	
120	TDM XXI	TDM 21	4/29/03	TDSS				0.00172							0.0005		320	0.0021					0.001							0.0065	6.8	6.61					0.00813		225	1870		4540						5115.98	
120	TDM XXI	TDM 21	7/11/03	TDSS				0.001							0.0005		370	0.00295					0.0173							0.0091		6.73	6.78			1.1	11.1	0.137		204	1970		4740			0.2031				
120	TDM XXI	TDM 21	10/20/03	TDSS													380														6.69	6.93							223	1830		4460							
125	TDM XXVI	TDM 26	11/13/81	TDSS																																												5144.22	
125	TDM XXVI	TDM 26	3/29/82	TDSS																																												5144.56	
125	TDM XXVI	TDM 26	8/26/82	TDSS																																												5143.74	
125	TDM XXVI	TDM 26	11/18/82	TDSS																																												5143.84	
125	TDM XXVI	TDM 26	1/17/86	TDSS				0.001								473	210						1	151					7.32			1		0.8		0.007			1550		3512	1.4		39			5141.45	
125	TDM XXVI	TDM 26	4/25/86	TDSS				0.01								473	220						1.4	161					7.28		1.2			1.6		0.001			1690		3029	0.3		35			5141.1	
125	TDM XXVI	TDM 26	7/23/86	TDSS				0.001								473	220						0.8	151					7.2		0.8			1.5		0.006			1660		2792			35			5141	
125	TDM XXVI	TDM 26	10/28/86	TDSS				0.001								417	215						1.2	151					7.12		1			2.5		0.012			1450		2784	0.7		29			5139.6	
125	TDM XXVI	TDM 26	1/14/87	TDSS				0.002								441	215						2.2	171					7.23		1.3			0.9		0.009			1410		3169	1.6		53			5139.2	
125	TDM XXVI	TDM 26	4/13/87	TDSS				0.001								425	225						1.4	181					7.3		1.2			0.9		0.001			1410		4011	0.7		35			5138.6	
125	TDM XXVI	TDM 26	8/6/87	TDSS				0.001								585	207						1.1	151					7.38		1			1.5		0.044			1750		3014	0.9		51			5137.99	
125	TDM XXVI	TDM 26	10/31/87	TDSS				0.001								417	215						0.6	178					7.47		0.7			15.3		0.001			1730		3058	1.8		51			5137.27	
125	TDM XXVI	TDM 26	2/20/88	TDSS				0.001								545	190						1.2	166					7.37		1.2			0.7		0.001			1650		3614	0.7		0.7			5136.18	
125	TDM XXVI	TDM 26	5/12/88	TDSS				0.001								593	195						1	156					7.48		0.6			3.5		0.007			2300		3784	0.5		18			5135.58	
125	TDM XXVI	TDM 26	8/30/88	TDSS				0.001		0.005					0.005	561	208	0.02			0.22		0.1	1.3	156		0.0002	0.1	0.08	7.33		1.2			0.2	1.8	0.049	0.01		1790		3298	0.9		63	0.1		5134.76	
125	TDM XXVI	TDM 26	9/15/88	TDSS				0.001		0.005					0.007		211	0.06			0.16		0.09				0.0002	0.1	0.08	7.35					0.8	1.2	0.038	0.01		1810		3567	0.4		59	0.1		5134.66	
125	TDM XXVI	TDM 26	9/29/88	TDSS				0.001		0.005					0.009		211	0.01			0.22		0.05				0.0002	0.1	0.02	7.38					0.3	3.4	0.331	0.01		1670		3565	0.5		59	0.1		5134.53	
125	TDM XXVI	TDM 26	10/14/88	TDSS				0.001		0.005			305		0.008	437	211	0.01			0.22		0.05		168		0.0002	0.1	0.02	7.55			6		0.7	3.1	0.049	0.01	283	1380		3117	0.8		58	0.1		5134.25	
125	TDM XXVI	TDM 26	11/7/88	TDSS				0.001								489	308						1.1	171					7.56		1.4			1.9		0.049					3108	1.2		38			5134.08	
125	TDM XXVI	TDM 26	2/13/89	TDSS				0.001		0.005		484.34	488		0.002	457	209	0.01			0.27	0.11	0.05	0.8	122		0.0002	0.1	0.02	7.46		0.8	7		1.5	1.7	0.038	0.01	317	1480		3141	0.5		29	0.1		5133.34	
125	TDM XXVI	TDM 26	5/10/89	TDSS				0.002				484.34				362	215	0.01				0.4	0.05		132				0.02	7.62			6		0.3	1.2	0.001		369	1710		2747	0.4		26			5132.6	
125	TDM XXVI	TDM 26	7/14/89	TDSS				0.001				477.02			0.003	362	180	0.01				0.01	0.05		173				0.02	7.53					1	0.7	0.038		249	1840		2414	0.7		34			5132.48	
125	TDM XXVI	TDM 26	10/18/89	TDSS								636.84				398	230								125					7.42									340	1570		2672						5131.76	
125	TDM XXVI	TDM 26	1/19/90	TDSS				0.001				397.72			0.01	485	145	0.01				0.11	0.05		115				0.02	7.34				0.9	2.6	0.008		232	1380		2871	0.7		22			5131.22	
125	TDM XXVI	TDM 26	5/1/90	TDSS								353.8				369	125								81					7.71									152	1140		2228						5131.24	
125	TDM XXVI	TDM 26	8/22/90	TDSS				0.001				436.76			0.004	465	145	0.01				0.12	0.05		93				0.02	7.54				0.4	1.5	0.001		227	1500		2506	0.2		32			5130.57	
125	TDM XXVI	TDM 26	10/18/90	TDSS								463.6				389	140								95					7.5									228	1300		2667						5130.3	
125	TDM XXVI	TDM 26	1/10/91	TDSS				0.001				561			0.01		117	0.05				0.07	0.05		128				0.05		7.2				0.2	1	0.001		235	1531	2690.54		0.2		30.6681				
125	TDM XXVI	TDM 26	10/10/91	TDSS								372.34					106								130					7.4									194	1279	2239.8788								
125	TDM XXVI	TDM 26	1/8/92	TDSS				0.001				349.4			0.01		87.7	0.05				0.24	0.05		117				0.02		7.3				0.2	2.2	0.001		186	1351	2281.313		0.2		31.1			5129.2	
125	TDM XXVI	TDM 26	4/9/92	TDSS																																												5128.84	
125	TDM XXVI	TDM 26	4/23/92	TDSS								407					96.3								116					7.3									200	1220	2139.243								
125	TDM XXVI	TDM 26	7/23/92	TDSS				0.001				384			0.01		89.7	0.05				0.148	0.05		130.9		0.001		0.02		7.2				0.2	1	0.001		212.57	1230	2167.42		0.2		22.34			5128.49	
125	TDM XXVI	TDM 26	10/12/92	TDSS																																												5128.36	
125	TDM XXVI	TDM 26	10/26/92	TDSS								364					93.4								101					7.5									191	1295	2176.728								
125	TDM XXVI	TDM 26	1/4/93	TDSS																																												5128.12	
125	TDM XXVI	TDM 26	1/11/93	TDSS				0.001				284			0.01		91.9	0.05				0.21	0.05		107				0.02		7.3				0.8	1.9	0.001		183	1234	2121.553		0.2		7.45				
125	TDM XXVI	TDM 26	4/10/93	TDSS																																												5128.27	
125	TDM XXVI	TDM 26	4/26/93	TDSS								386					96.3								101					7.2									167	1117	1990.743								
125	TDM XXVI	TDM 26	7/10/93	TDSS				0.001				421			0.01		92.3	0.05				0.07	0.05		104				0.02		7				1.3	6.3	0.001		173	1155	2074.313		0.2		22.341			5126.8	
125	TDM XXVI	TDM 26	10/25/93	TDSS																																												5127.93	
125	TDM XXVI	TDM 26	1/12/94	TDSS																																												5127.65	
125	TDM XXVI	TDM 26	4/16/94	TDSS																																												5127.3	
125	TDM XXVI	TDM 26	7/8/94	TDSS				0.001			388				0.01	328	88.4	0.05				0.14	0.05		102				0.02	7.8					1.5	1	0.001		146	1124	1982.983		0.2		37.235			5127	
125	TDM XXVI	TDM 26	10/12/94	TDSS																																												5126.98	
125	TDM XXVI	TDM 26	1/23/95	TDSS																																												5126.8	
125	TDM XXVI	TDM 26	1/26/95	TDSS				0.001				327			0.01	322	88.6	0.05				0.33	0.05		108				0.02		7.4				0.3	1	0.002		145	1183	2010.873		0.2		27				
125	TDM XXVI	TDM 26	4/3/95	TDSS																																												5126.62	
125	TDM XXVI	TDM 26	5/4/95	TDSS				0.001				383			0.01	352	92	0.05				0.29	0.05		113				0.02		7.8				0.5	1.6	0.001		155	1161	2065.233		0.2		23.018				
125	TDM XXVI	TDM 26	7/24/95	TDSS				0.001				370			0.01	313	92	0.05				0.09	0.05		98				0.02		7.1				0.8	2.6	0.001		144	1080	1912.533		0.2		30			5127.9	
125	TDM XXVI	TDM 26	11/20/95	TDSS								346				311	72.9								99					7.2									142	1023	1822.5834							5126.88	
125	TDM XXVI	TDM 26	1/26/96	TDSS				0.001				362			0.01	297	69.2	0.05				0.25	0.05		100				0.02		7.5				0.2	1	0.001		143	1014	1819.593		0.2		28.5			5126.5	
125	TDM XXVI	TDM 26	4/15/96	TDSS																																													5126.25	
125	TDM XXVI	TDM 26	7/9/96	TDSS				0.001				359			0.01	305	69	0.05				0.33	0.05		97				0.02		7.8				0.3	1	0.001		140	1034	1825.273		0.4		28.9			5126.4	
125	TDM XXVI	TDM 26	11/11/96	TDSS								324				326	80								100					7.4			5.9						126	1084	1884.343							5126.13	
125	TDM XXVI	TDM 26	1/3/97	TDSS																																												5126.1	
125	TDM XXVI	TDM 26	1/27/97	TDSS				0.001				346			0.01	291	71	0.05

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
125	TDM XXVI	TDM 26	10/13/98	TDSS								312				219	44.7							73.9					7.4									122	781	1399							5125.15	
125	TDM XXVI	TDM 26	1/5/99	TDSS				0.001				299			0.005	203	49.5	0.05				0.05	0.05		65.3				0.02		7.4				0.8	1	0.001		101	747	1317.793		0.2		18.8			5125	
125	TDM XXVI	TDM 26	4/17/99	TDSS								307				227	53.1							73.9					7.5									115	798	1422.943							5124.8	
125	TDM XXVI	TDM 26	7/9/99	TDSS				0.001				294			0.005	201	46	0.05				0.39	0.05		74				0.02		7.5				0.2	1	0.001		121	779	1370.833		0.2		18.7529			5124.8	
125	TDM XXVI	TDM 26	10/6/99	TDSS								303				220	51							71					7.5									112	814								5125.1	
125	TDM XXVI	TDM 26	1/6/00	TDSS				0.001				299			0.01	198	47.3	0.05				0.06	0.05		65.8				0.02		7.5				0.4	1	0.003		112	693	1268		0.2		19.5			5124.75	
125	TDM XXVI	TDM 26	4/4/00	TDSS								301				185	48.5							62.6					7.5									110	674	1233							5124.8	
125	TDM XXVI	TDM 26	7/11/00	TDSS				0.001				293			0.01	196	41.6	0.05				0.15	0.05		67				0.02		7.5				0.2	1.9	0.001		110	634	1198	1370	0.2		18.5			5125.3	
125	TDM XXVI	TDM 26	10/25/00	TDSS																																											5118.42	
125	TDM XXVI	TDM 26	10/26/00	TDSS								294				184	44.03							63.4					7.5									102	708		1350							
125	TDM XXVI	TDM 26	1/3/01	TDSS				0.001				291			0.01	183	42.1	0.05				0.07	0.05		59.1				0.02		7.5				0.2	1	0.002		98.2	681	1211		0.2		17.5			5124.7	
125	TDM XXVI	TDM 26	4/12/01	TDSS								294				206	31.7							70					7.5									116	729	1302							5124.8	
125	TDM XXVI	TDM 26	7/17/01	TDSS				0.0005				380			0.0002	410	120	0.001				0.031	0.0002		120				0.028		7.5				1.1	2.7	0.0036		110	1200	2130		0.2		23			5124.8	
125	TDM XXVI	TDM 26	10/30/01	TDSS								290				188	36.7							61.1					7.5									106	650	1188							5119.8	
125	TDM XXVI	TDM 26	2/22/02	TDSS				0.001				272			0.01	189	37.7	0.05				0.03	0.05		60.5				0.02		7.5				0.2	1	0.001		102	661	1186.05		0.2		13.5				
125	TDM XXVI	TDM 26	5/6/02	TDSS								308				194	38							64.3					0									105	644	1199.02								
125	TDM XXVI	TDM 26	10/10/02	TDSS				0.001				330			0.01	172.7	36.32	0.05				1.09	0.05		57.3				0.02		7.5				0.6	1.8	0.001908		96.9	581	1110.35		0.2	0.01				5123.4	
125	TDM XXVI	TDM 26	12/5/02	TDSS				0.001							0.0005		27	0.001					0.001							0.0018	7.6						0.00171		99.8	600		1260						5122.8	
125	TDM XXVI	TDM 26	1/24/03	TDSS				0.001							0.0005		29	0.001					0.001							0.003	7.63	7.65				1.3	1	0.00199		102	525		4720			17.81			5122.8	
125	TDM XXVI	TDM 26	4/30/03	TDSS				0.001							0.0005		23	0.001					0.001							0.0013	7.6	7.57						0.00169		92.8	585		1270						5124.48	
125	TDM XXVI	TDM 26	7/21/03	TDSS				0.00123							0.0005		28	0.001					0.001							0.0013		7.62	7.7			0.7	1	0.001		104	560		1350			13.54				
125	TDM XXVI	TDM 26	10/22/03	TDSS													24								7.53	7.62				99.5	524		1170															
126	TDM XXVII	TDM 27	1/13/86					0.006								116	13						2.2	46					7.56		1.9		2.4		0.002		344		885	2.1		72				5162.22	
126	TDM XXVII	TDM 27	4/21/86					0.001								104	11						1.4	46					7.7		0.9		1.4		0.001		372		658	0.7		57				5162.17	
126	TDM XXVII	TDM 27	7/16/86					0.001								96	11						1.5	43					7.72		1.3		0.9		0.001		302		762	1.4		37.9					
126	TDM XXVII	TDM 27	10/20/86					0.001								108	13						1.1	41					7.5		2.5		1.4		0.001		340		792	0.1		31					
126	TDM XXVII	TDM 27	1/2/87													96	14						2.1						7.65		1.5		1.2		0.001		282		747	0.9		49					
126	TDM XXVII	TDM 27	8/12/87					0.001								164	12						0.9	51					7.7		1.1		1		0.188		386		810	0.9		49					
126	TDM XXVII	TDM 27	10/31/87					0.001								124	11						0.8	51					7.78		0.6		1		0.001		410		947	0.8		55					
126	TDM XXVII	TDM 27	2/29/88					0.001								158	11						0.9	34					7.3		0.9		1.3		0.001		420		934	1.1		0.5					
126	TDM XXVII	TDM 27	5/28/88					0.001								180	20						0.9	44					7.4		0.6		2		0.005		500		926	0.4		45					
126	TDM XXVII	TDM 27	8/30/88					0.001								168	13						1.1	39					7.43		0.8		1.6		0.001		470		890	1.4		48					
126	TDM XXVII	TDM 27	1/10/91					0.001							0.01		92.6	0.05				0.27	0.05		43.3				0.05						0.7	1	0.001		216	819	1371.92		0.2		0.2031				
126	TDM XXVII	TDM 27	10/14/91									372.34					272							287						7.4								361	2460									
127	TDM XXVIII	TDM 28	11/13/81	TDSS																																										5156.4	
127	TDM XXVIII	TDM 28	12/8/81	TDSS																																										5155.57	
127	TDM XXVIII	TDM 28	3/29/82	TDSS																																										5156.71	
127	TDM XXVIII	TDM 28	8/25/82	TDSS																																										5155.32	
127	TDM XXVIII	TDM 28	11/18/82	TDSS																																										5155.74	
127	TDM XXVIII	TDM 28	1/17/86	TDSS				0.001								184	11						1	56					7.5		1		1.2		0.001		468		1202	0.8		55				5150.6	
127	TDM XXVIII	TDM 28	4/28/86	TDSS				0.001								180	12						0.9	54					7.47		1.1		9		0.001		565		990	0.5		47				5149.65	
127	TDM XXVIII	TDM 28	7/23/86	TDSS				0.001								188	12						1.5	44					7.54		1.3		1.3		0.001		443		1340	1.4		42.5				5149.8	
127	TDM XXVIII	TDM 28	10/28/86	TDSS				0.001								152	11						1.9	51					7.47		1.3		0.5		0.001		483		1026	0.5		37				5152.7	
127	TDM XXVIII	TDM 28	1/14/87	TDSS				0.001								136	13						2.1	59					7.56		1.5		0.9		0.001		430		1017	0.4		48				5145.4	
127	TDM XXVIII	TDM 28	4/13/87	TDSS				0.001								144	12						0.9	54					7.6		0.9		0.6		0.024		446		931	2		34				5146.2	
127	TDM XXVIII	TDM 28	8/6/87	TDSS				0.001								160	19						0.9	49					8.13		0.7		1.3		0.006		256		933	0.5		43				5145.59	
127	TDM XXVIII	TDM 28	10/31/87	TDSS				0.001								138	15						1.6	50					8.04		1.2		1.2		0.001		428		987	1		40				5144.39	
127	TDM XXVIII	TDM 28	2/20/88	TDSS				0.001								184	12						0.9	63					7.65		0.9		0.8		0.018		933		982	1.1		0.5				5142.64	
127	TDM XXVIII	TDM 28	5/12/88	TDSS				0.001								164	14						1	56					7.59		1.2		1.5		0.017		348		931	0.1		33				5141.92	
127	TDM XXVIII	TDM 28	8/31/88	TDSS				0.001		0.005					172		13	0.01			0.44		0.05	1	40		0.0002	0.1	0.02	7.72		0.9		0.7	1.7	0.001	0.01	410		909	0.4		49	0.1			5140.7	
127	TDM XXVIII	TDM 28	9/15/88	TDSS				0.001		0.005					0.002		22	0.01			0.35		0.05				0.0002	0.1	0.02	7.74				0.8	1.1	0.001	0.01	394		911	0.5		57	0.1			5140.66	
127	TDM XXVIII	TDM 28	9/29/88	TDSS				0.001		0.005					0.003		11	0.01			0.38		0.05				0.0002	0.1	0.02	7.83				0.8	3.6	0.042	0.01	390		1051	0.5		60	0.1			5140.47	
127	TDM XXVIII	TDM 28	10/14/88	TDSS				0.001		0.005			240		0.003	116	12	0.01			0.4	0.01	0.05		49		0.0002	0.1	0.02	7.8			6	0.9		0.002	0.01	82	394		818		31	0.1	2.8	5140.07	
127	TDM XXVIII	TDM 28	11/7/88	TDSS				0.001								127	16						1	43					7.52		0.9		1.7		0.016		221		875	1.1		32				5140.08	
127	TDM XXVIII	TDM 28	2/13/89	TDSS				0.001		0.005		344.04	390		0.002	164	15	0.01			0.48	0.1	0.05	0.9	29		0.0002		0.02	8.17		1.1	3	1.8	1.9	0.001	0.01	128	400		969	0.5		33	0.1		5139.07	
127	TDM XXVIII	TDM 28	5/10/89	TDSS				0.001				378.2			0.002	138	14	0.01				0.01	0.05		60				0.02	7.92			3	1.5	1.8	0.001		112	490		920	0.5		25			5137.74	
127	TDM XXVIII	TDM 28	7/14/89	TDSS				0.001				363.56			0.002	112	16	0.01				0.01	0.05		48				0.02	7.93				0.9		0.001		83	530		873	0.6		42		0.7	5137.06	
127	TDM XXVIII	TDM 28	10/18/89	TDSS								368.44				98	15							42					7.88									91	440		879						5136.49	
127	TDM XXVIII	TDM 28	1/15/90	TDSS				0.001				307.44			0.004	144	17	0.01				0.04	0.05		48				0.02	7.7				0.7	1.5	0.002		84	390		747	0.7		56			5135.64	
127	TDM XXVIII	TDM 28	4/23/90	TDSS								297.68				156	55							34					7.99									79	410		852						5135.19	
127	TDM XXVIII	TDM 28	8/23/90	TDSS				0.001				339.16			0.002	156	30	0.01				0.01	0.05		26				0.02	7.8				0.6	1.3	0.001		86	298		759	0.2		26			5134.47	
127	TDM XXVIII	TDM 28	10/19/90	TDSS								344.04				88	16							33					7.7									89	340		861						5134.65	
127	TDM XXVIII	TDM 28	1/11/91	TDSS				0.001				332			0.01		9.4	0.05				0.09	0.05		42.1				0.05		7				1.6	3.7	0.001		94.4	451	909.92		0.2		34.4593				
127	TDM XXVIII	TDM 28	10/1/91	TDSS								373.322					4.7							39.3						7.2									82.9	423	904.611								
127	TDM XXVIII	TDM 28	1/8/92	TDSS				0.001				378.44			0.01		10.2	0.05				0.05	0.05		36.5				0.02		7.6				0.2	1	0.001		85.1	424	945.143		0.2		34.5			5132.28	
127	TDM XXVIII	TDM 28	4/9/92	TDSS																																											5131.79	
127	TDM XXVIII	TDM 28	4/22/92	TDSS								313					9.6							42.8					7.3									92.6	416	851.943								
127	TDM XXVIII	TDM 28	7/23/92	TDSS				0.001				358			0.01		10.8	0.05				0.05	0.05		44.4		0.001		0.02	7.4				0.2	1	0.001		93.94	435	894.24		0.2		29.79			5130.76	
127	TDM XXVIII	TDM 28	10/12/92	TDSS																																											5130.75	
127	TDM XXVIII	TDM 28	10/26/92	TDSS								260					14.8							37.3					7.4									96.1	452	868.528								
127	TDM XXVIII	TDM 28	1/4/93	TDSS																																											5130.45	
127	TDM XXVIII	TDM 28	1/11/93	TDSS				0.001				322			0.01		13	0.05				0.1	0.05		34.2				0.02		7.5				0.2	1	0.001		86	410	848.743		0.2		46.51				
127	TDM XXVIII	TDM 28	4/10/93	TDSS																																											5129.93	
127	TDM XXVIII	TDM 28	4/26/93	TDSS								293					12.5							38.2					7.4									72	396	796.643								
127	TDM XXVIII	TDM 28	7/10/93	TDSS				0.001				319			0.01		11.5	0.05				0.05	0.05		36				0.02		7				0.5	3.8	0.001		76	433	863.493		0.2		26.403			5130.4	
127	TDM XXVIII	TDM 28	10/25/93	TDSS																																											5129.56	
127	TDM XXVIII	TDM 28	1/22/94	TDSS																																											5129.5	
127	TDM XXVIII	TDM 28	4/16/94	TDSS																																											5128.89	
127	TDM XXVIII	TDM 28	7/6/94	TDSS				0.001			336				0.01	160	10.4	0.05				0.17	0.05		31				0.02	7.8				0.5	1	0.001		70.4	388	828.413		0.2		56.191			5128.48	
127	TDM XXVIII	TDM 28	10/12/94	TDSS																																											5128.63	
127	TDM XXVIII	TDM 28	1/23/95	TDSS																																											5128.25	
127	TDM XXVIII	TDM 28	1/26/95	TDSS				0.001				317			0.01	141	24.6	0.05				0.05	0.05		37.1				0.02		7.2				0.4	1	0.007		67	364	793.0917		0.2		39.9				
127	TDM XXVIII	TDM 28	4/3/95	TDSS																																											5127.89	
127	TDM XXVIII	TDM 28	5/4/95	TDSS								331				143	33							40					7.6									67	339	787.943								
127	TDM XXVIII	TDM 28	7/21/95	TDSS				0.001				316			0.01	145	41	0.05				0.05	0.05		38				0.02		7.5				0.8	2.6	0.007		69	333	784.7145		0.2		42.5			5128.45	
127	TDM XXVIII	TDM 28	11/20/95	TDSS								326				145	44.2							38.9					7.7									70.2	308	770.5404							5127.37	
127	TDM XXVIII	TDM 28	1/24/96	TDSS				0.001				388			0.01	144	44	0.05				0.05	0.05		40				0.02		7.8				0.2	1	0.001		69.5	310	813.5917		0.2		41.1				
127	TDM XXVIII	TDM 28	4/15/96	TDSS																																												5127.4	
127	TDM XXVIII	TDM 28	7/9/96	TDSS				0.001				335			0.01	158	47	0.05				0.05	0.05		42.3				0.02		8				0.2	1	0.001		71	348	834.293		0.2		40.8			5127.55	
127	TDM XXVIII	TDM 28	11/11/96	TDSS								325				165	55							44.5					7.6			3.5						64.6	356	851.543							5127.2	
127	TDM XXVIII	TDM 28	1/3/97	TDSS				0.001				326			0.01	165	55.1	0.05				0.06	0.05		42.4				0.02		7.7				0.2	1	0.006		67	369	862.0759		1		33.2			5127.1	
127	TDM XXVIII	TDM 28	4/11/97	TDSS																																											5126.7	
127	TDM XXVIII	TDM 28	4/21/97	TDSS								328				146	47.7							40.7					7.7									69.2	345	813.0873								
127	TDM XXVIII	TDM 28	7/8/97	TDSS				0.001				357			0.01	151	52.8	0.05				0.32	0.05		41.2					7.8				0.2	1	0.006		69.7	332	825.643		0.2		30.5			5125.6	
127	TDM XXVIII	TDM 28	10/6/97	TDSS								339				182	59.7							44.4					7.4									63.1	358	877							5127.55	
127	TDM XXVIII	TDM 28	11/1/97	TDSS																																											5126.43	
127	TDM XXVIII	TDM 28	1/6/98	TDSS				0.001				350			0.005	173	62.8	0.05				0.05	0.05		45.4				0.02		7.4				0.2	1	0.007		72.1	389	918		0.2		47.7			5126.92	
127	TDM XXVIII	TDM 28	4/10/98	TDSS								356				164	63.5							44					7.5			4.4						68	364	882							5126.11	
127	TDM XXVIII	TDM 28	7/7/98	TDSS				0.001				371			0.005	161	44	0.05				0.05	0.05		44				0.02		7.5				0.2	1	0.008		73	376	885		0.2		39.3			5127.27	
127	TDM XXVIII	TDM 28	10/13/98	TDSS								353				164	64.6							45.3					7.5									72	375	902							5126.03	
127	TDM XXVIII	TDM 28	1/5/99	TDSS																																											5125.8	
127	TDM XXVIII	TDM 28	1/11/99	TDSS				0.001				404			0.005	168	67.8	0.05				0.05	0.05		44.2				0.02		7.4				0.7	1	0.008		62.7	362	911.408		0.2		38.0474				
127	TDM XXVIII	TDM 28	4/19/99	TDSS								379				187	70							51.4					7.7									73.8	384	960.2251							5125.47	
127	TDM XXVIII	TDM 28	7/9/99	TDSS				0.001				396			0.005	182	71	0.05				0.05	0.05		50				0.02		7.6				0.2	1	0.009		75	381	961.6194		0.2		44.005			5125.85	
127	TDM XXVIII	TDM 28	10/11/99	TDSS								388				185	80							51					7.6									71	440								5125.6	
127	TDM XXVIII	TDM 28	1/11/00	TDSS				0.001				378			0.005	197	85.9	0.05				0.04	0.05		56.4				0.02		7.4				0.2	1	0.008		78.9	432	1044		0.2		42.3			5126	
127	TDM XXVIII	TDM 28	4/11/00	TDSS								388				196	102							58.4					7.4									79.1	423	1057							5125.47	
127	TDM XXVIII	TDM 28	7/11/00	TDSS				0.001				381			0.01	191	83.6	0.05				0.09	0.05		54.1				0.02		7.6				0.2	1.7	0.001		75.2	370	969	1070	0.2		46.1			5126	
127	TDM XXVIII	TDM 28	10/27/00	TDSS								344				172	99.5							51.7					7.6									71.7	421		1040							
127	TDM XXVIII	TDM 28	1/5/01	TDSS				0.001				340			0.01	182	96.8	0.05				0.05	0.05		50.2				0.02		7.6				0.2	1	0.008		72.7	448	1023		0.2		41.4			5124.5	
127	TDM XXVIII	TDM 28	4/12/01	TDSS								377				188	91.7							54					7.6									80	459	1064							5125.5	
127	TDM XXVIII	TDM 28	7/17/01	TDSS																																											5125.47	
127	TDM XXVIII	TDM 28	8/1/01	TDSS				0.0009				450			0.01	190	120	0.0002				0.01	0.0002		58				0.01		7.6						0.0074		78	490	1160				53.5				
127	TDM XXVIII	TDM 28	10/29/01	TDSS																																													
128	TDM XXIX	TDM 29	11/13/81	OBSS																																											5096.45	
128	TDM XXIX	TDM 29	3/29/82	OBSS																																											5103.33	
128	TDM XXIX	TDM 29	8/25/82	OBSS																																											5103.55

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
128	TDM XXIX	TDM 29	8/30/87	OBSS				0.001								44	315						1.6	9					11.75			1.4		2.8		0.001				47		531	0.9		5			5091.63	
128	TDM XXIX	TDM 29	10/31/87	OBSS				0.001								0.8	69						1.1	2					11.4			1.1		0.9		0.001				51		401	1.2		1.1			5082.46	
128	TDM XXIX	TDM 29	2/20/88	OBSS				0.001								0	13						1	146					11.05			1.2		5.5		0.001				42		424	0.2					5093.27	
128	TDM XXIX	TDM 29	5/12/88	OBSS				0.001								7	10						1.2	7					12.11			1.3		1.5		0.001				54		373	0.7		3.7			5088.5	
128	TDM XXIX	TDM 29	8/31/88	OBSS				0.001								24	75						0.9	6					12.27			1.2		1.4		0.001				58		401	1.2		1.5			5087.82	
128	TDM XXIX	TDM 29	11/7/88	OBSS				0.001								24	18						0.9	7					11.94			1		0.7		0.003				60		303	0.6		0.8			5086.44	
128	TDM XXIX	TDM 29	2/13/89	OBSS				0.001		0.005		409.8	195		0.002	26	82	0.01		0.45	0.15	0.05	1.3	3		0.0002	0.1	0.02	11.46			1	12	1.9	1.8	0.002	0.01	159	166	589	0.6		0.2	0.1		5086.23	
128	TDM XXIX	TDM 29	5/10/89	OBSS				0.002							0.002	20	70	0.01			0.02	0.05		5				0.53	11.59				11	0.8	1.8	0.001		147	64		383	0.4		0.3			5086.57	
128	TDM XXIX	TDM 29	7/14/89	OBSS				0.001							0.002	7	71	0.01			0.11	0.05						0.02	11.18					0.6	0.2	0.004		101	36		290	0.3		0.4			5082.59	
128	TDM XXIX	TDM 29	10/18/89	OBSS												4	55							4					11.6									116	67		311						5086.83	
128	TDM XXIX	TDM 29	1/15/90	OBSS				0.001							0.003	4	59	0.01			0.03	0.05		1				0.02	11.46					1	1.5	0.002		109	75		335	0.6		2.2			5085.45	
128	TDM XXIX	TDM 29	4/23/90	OBSS												2	110							2					11.37									108	78		268						5085.29	
128	TDM XXIX	TDM 29	8/22/90	OBSS				0.001							0.002	22	68	0.01			0.09	0.05		4				0.02	11					0.5	1.3	0.001		124	60		362	0.2		0.2			5087.69	
128	TDM XXIX	TDM 29	10/18/90	OBSS												0.01	67							0					11.2									128	70		420						5081.78	
128	TDM XXIX	TDM 29	1/10/91	OBSS				0.001							0.01		61.2	0.05			0.09	0.05		0.11				0.05		11.6			0.2	1	0.001		136	120	395.44		0.2		3.7235				
128	TDM XXIX	TDM 29	7/19/91	OBSS				0.001							0.01		53	0.05			0.05	0.05		0.25				0.05		11			0.3	2.7	0.001		128	142	391.96		0.2		1.8				
128	TDM XXIX	TDM 29	10/14/91	OBSS								192.76					64.4							0.5					8.9									117.6	160									
128	TDM XXIX	TDM 29	1/8/92	OBSS				0.001				11.71			0.01		55	0.05			0.07	0.05		0.6				0.02		10.3			0.2	1	0.001		127	151	421.678		0.2		1.35			5081.3	
128	TDM XXIX	TDM 29	4/9/92	OBSS																																											5080.68	
128	TDM XXIX	TDM 29	4/22/92	OBSS								12					60.3							0.39						10.1								139		454.433							
128	TDM XXIX	TDM 29	7/23/92	OBSS				0.001							0.01		57.4	0.05			0.05	0.05		0.73		0.001		0.02		10			0.2	1	0.001		144.25	197	420.16		0.2		0.68			5079.49	
128	TDM XXIX	TDM 29	10/12/92	OBSS																																											5079.3	
128	TDM XXIX	TDM 29	10/26/92	OBSS								41					65.6							3.9						9.2								151.5	267	537.428							
128	TDM XXIX	TDM 29	1/4/93	OBSS																																											5078.02	
128	TDM XXIX	TDM 29	1/11/93	OBSS				0.001				76.9			0.01		57.8	0.05			0.05	0.05		5.1				0.02		8.1			0.3	1	0.001		133	244	505.743		0.2		0.2				
128	TDM XXIX	TDM 29	4/10/93	OBSS																																											5079.02	
128	TDM XXIX	TDM 29	4/26/93	OBSS								107					75.9							7.3						8.2								123	238	551.643							
128	TDM XXIX	TDM 29	7/10/93	OBSS																																											5078.3	
128	TDM XXIX	TDM 29	10/5/93	OBSS																																											5075.25	
128	TDM XXIX	TDM 29	1/12/94	OBSS																																											5077.92	
128	TDM XXIX	TDM 29	4/16/94	OBSS																																											5077.9	
128	TDM XXIX	TDM 29	7/1/94	OBSS				0.001			167				0.01	51	52.9	0.05			0.05	0.05		9.9				0.02	7.6					0.5	8.2	0.001		159	305	661.793		0.2		2.708			5078.8	
128	TDM XXIX	TDM 29	10/12/94	OBSS																																											5078	
128	TDM XXIX	TDM 29	1/23/95	OBSS																																											5077.35	
128	TDM XXIX	TDM 29	1/26/95	OBSS				0.001				191			0.01	75	50.6	0.05			0.05	0.05		15.8				0.02		7.1			0.2	1	0.001		134	324	695.393		0.2		2				
128	TDM XXIX	TDM 29	4/3/95	OBSS																																											5076.6	
128	TDM XXIX	TDM 29	4/24/95	OBSS								218				73	50							15.8						7.9								138	319	706.3948							
128	TDM XXIX	TDM 29	7/21/95	OBSS				0.001				202			0.01	69	47	0.05			0.05	0.05		15.1				0.02		7.6			0.2	1	0.001		137	321	690.593		0.2		2.6			5077	
128	TDM XXIX	TDM 29	11/20/95	OBSS								238				77.2	40.6							15.3						7.3								136	274	662.6316							5076.45
128	TDM XXIX	TDM 29	1/15/96	OBSS																																											5075.38	
128	TDM XXIX	TDM 29	1/24/96	OBSS				0.001				269			0.01	73	38	0.05			0.05	0.05		15.3				0.02		7.9			1.5	1	0.001		133	278	689.493		0.2		2.1				
128	TDM XXIX	TDM 29	4/15/96	OBSS																																											5075.95	
128	TDM XXIX	TDM 29	7/9/96	OBSS		0.1		0.002				246			0.01	78.9	36.1	0.05			0.05	0.05		15.2				0.02		7.8			0.2	1	0.001		131		684.693		0.2		3.9266			5075.75	
128	TDM XXIX	TDM 29	11/11/96	OBSS								230				92.6	40.7							15.9						7.5		7.4						127	315	714.043							5072.3
128	TDM XXIX	TDM 29	1/3/97	OBSS																																											5074.9	
128	TDM XXIX	TDM 29	1/27/97	OBSS				0.001				252			0.01	83	36.3	0.05			0.05	0.05		14.4				0.02		7.6			0.2	1	0.001		124	294	678.143		0.2		2.031				
128	TDM XXIX	TDM 29	4/11/97	OBSS																																											5074.9	
128	TDM XXIX	TDM 29	4/21/97	OBSS								250				74.9	32.3							14.3						7.6								121	268	635.943							
128	TDM XXIX	TDM 29	7/8/97	OBSS				0.001				288			0.01	128	51.4	0.05			0.51	0.05		28.5						7.8			0.2	1	0.001		132	398	882.343		0.2		2.71			5074.6	
128	TDM XXIX	TDM 29	10/9/97	OBSS								253				83	42							14						7.7								113	260	639							5075.75
128	TDM XXIX	TDM 29	1/6/98	OBSS				0.001				266			0.005	87.3	36.1	0.05			0.05	0.05		14				0.02		7.5			0.2	1	0.001		128	303	702		0.2		3.1			5074.6	
128	TDM XXIX	TDM 29	4/10/98	OBSS								262				84.2	36.2							14.3						7.5		6.4						120	281	667							5074.87
128	TDM XXIX	TDM 29	7/7/98	OBSS				0.001				241			0.005	79	32.2	0.05			0.26	0.05		13.6				0.02		7.4			0.2	1	0.001		128	287	661		0.2		2.2			5073.32	
128	TDM XXIX	TDM 29	10/13/98	OBSS								264				80.2	34.3							13.9						7.4								123	264	650							5075.53
128	TDM XXIX	TDM 29	1/5/99	OBSS																																											5074.5	
128	TDM XXIX	TDM 29	1/11/99	OBSS				0.001				242			0.005	81.3	33.9	0.05			0.05	0.05		12.8				0.02		7.5			0.2	1	0.001		118	256	625.493		0.2		2.3				
128	TDM XXIX	TDM 29	4/19/99	OBSS								430				435	122							78.4						7.5								184	1220	2265.0385							5073.82
128	TDM XXIX	TDM 29	7/9/99	OBSS				0.001				250			0.005	82	35	0.05			0.05	0.05		15				0.02		7.5			0.2	1	0.001		119	254	632.493		0.2		3.7235			5073	
128	TDM XXIX	TDM 29	10/11/99	OBSS								270				87	34							15						7.5								114	288								5073.82	
128	TDM XXIX	TDM 29	1/11/00	OBSS				0.001				275			0.005	87.1	33.1	0.05			0.06	0.05		14.5				0.02		7.5			0.2	1	0.001		123	283	681		0.2		3.2			5075.5	
128	TDM XXIX	TDM 29	4/11/00	OBSS								291				88	31.9							14						7.5								119	246	647							5073.8	
128	TDM XXIX	TDM 29	7/1/00	OBSS																																											5075.4	
128	TDM XXIX	TDM 29	7/11/00	OBSS				0.001				277			0.01	81	29.7	0.05			0.06	0.05		13.4				0.02		7.5			0.2	1	0.001		116	227	608	639	0.2		2.8				
128	TDM XXIX	TDM 29	10/27/00	OBSS								300				91.5	44.17							17.8						7.5								108	306		660						5073.7	
128	TDM XXIX	TDM 29	1/5/01	OBSS				0.001				308			0.01	87.9	30.7	0.05			0.05	0.05		12.8				0.02		7.5			0.2	1	0.001		111	255	654		0.2		3.7			5073.8	
128	TDM XXIX	TDM 29	4/11/01	OBSS								308				96	28.2							14						7.5								127	250	672							
128	TDM XXIX	TDM 29	4/12/01	OBSS																																											5073.8	
128	TDM XXIX	TDM 29	7/17/01	OBSS																																											5065.7	
128	TDM XXIX	TDM 29	7/31/01	OBSS				0.0003				310			0.01	91	30	0.0008			0.02	0.0001		14				0.006		7.5			0.3	1	0.0005		110	230	627		0.2		2.44				
128	TDM XXIX	TDM 29	10/17/01	OBSS																																											5069.98	
128	TDM XXIX	TDM 29	10/29/01	OBSS								310				86.2	23							14						7.5								118	243	637							
128	TDM XXIX	TDM 29	12/8/01	OBSS																																											5096.8	
128	TDM XXIX	TDM 29	2/27/02	OBSS				0.001				338			0.01	92.1	23.8	0.05			0.24	0.05		12.1				0.02		7.5			0.2	1	0.00127		117	235	649.24		0.2		2.97				
128	TDM XXIX	TDM 29	5/6/02	OBSS								335				97.9	28.3							14.2						0								117	242	666.71							
128	TDM XXIX	TDM 29	10/10/02	OBSS				0.001				319			0.01	73.9	22.22	0.05			0.03	0.05		11.22				0.02		7.5			0.4	1	0.001		103.5	198.7	569.08		0.2	0.004427				5071.15
128	TDM XXIX	TDM 29	12/5/02	OBSS				0.001							0.0005		22	0.001				0.001						0.0124	7.9						0.00127		107	218		666						5070.7	
128	TDM XXIX	TDM 29	5/6/03	OBSS													16												7.4	7.5	7.4							103	151		700						5070.5	
128	TDM XXIX	TDM 29	7/15/03	OBSS				0.001							0.0005		20	0.00142				0.001						0.0017		7.28	7.51		0.3	1	0.001		114	203		635			2.537396				
128	TDM XXIX	TDM 29	10/21/03	OBSS													19													7.31	7.45							98.4	156		623							
129	TDM XXX	TDM 30	10/15/81	OBSS																																											5064.96	
129	TDM XXX	TDM 30	11/13/81	OBSS																																											5065.47	
129	TDM XXX	TDM 30	12/8/81	OBSS																																											5066.36	
129	TDM XXX	TDM 30	3/16/82	OBSS																																											5065.64	
129	TDM XXX	TDM 30	4/13/82	OBSS																																											5065.82	
129	TDM XXX	TDM 30	8/27/82	OBSS																																											5066.23	
129	TDM XXX	TDM 30	10/28/82	OBSS																																											5066.41	
129	TDM XXX	TDM 30	1/15/86	OBSS																																											5069.06	
129	TDM XXX	TDM 30	1/16/86	OBSS				0.001								257	114						1.2	15					11.98			1.1		0.8		0.001			675		1467	1.2		1			5069.51	
129	TDM XXX	TDM 30	4/28/86	OBSS				0.001								297	118						1.2	88					8.37			1		1.4		0.001			1050		2003	0.5		2			5064.46	
129	TDM XXX	TDM 30	7/22/86	OBSS				0.001								297	118						1.4	98					7.63			1		0.9		0.001			875		2026	0.2		1.7			5074.36	
129	TDM XXX	TDM 30	10/29/86	OBSS				0.001								281	120						1	83					7.65			1.7		0.9		0.001			1040		1924	0.5		1.1			5069.56	
129	TDM XXX	TDM 30	1/15/87	OBSS				0.001								361	126						1.5	112					7.86			1.5		1		0.001			945		2258	2.8		0.3				
129	TDM XXX	TDM 30	4/16/87	OBSS				0.001								313	132						1	122					8			1.2		1.3		0.001			955		2410	1.6		2			4992.76	
129	TDM XXX	TDM 30	8/3/87	OBSS				0.001								232	125						0.9	44					7.74			0.7		1.8		0.007			540		1127	0.4		1			5068.57	
129	TDM XXX	TDM 30	10/25/87	OBSS				0.003								393	127						0.9	98					7.7			0.9		0.4		0.001			1060		2143	0.6		0.6			5067.79	
129	TDM XXX	TDM 30	2/25/88	OBSS				0.001								480	142						1.1	93					7.22			1.2		0.9		0.001			1500		2394	0.2					5080.79	
129	TDM XXX	TDM 30	5/20/88	OBSS				0.001								369	130						1.4	68					7.19			1.4		2.6		0.004			1350		2064	0.5		1.2			5080.12	
129	TDM XXX	TDM 30	8/30/88	OBSS				0.001								1295	145						0.9	93					7.18			0.7		2.4		0.001			850		2347	0.9		1.1			5079.46	
129	TDM XXX	TDM 30	11/16/88	OBSS				0.001								573	172						1.6	24					7.39			0.8		1		0.003			1900		2055	0.5		1.2			5078.89	
129	TDM XXX	TDM 30	2/13/89	OBSS				0.001		0.005		402.6	378		0.002	385	255	0.01		0.2	0.97	0.05	0.9	117		0.0002	0.1	0.02	7.38			0.7	10	1.8	2.8	0.006	0.01	181	1150		2321	0.4		0.2	0.1		5079.14	
129	TDM XXX	TDM 30	5/10/89	OBSS				0.001							0.005	333	155	0.01			0.14	0.05		72				0.02	11.75				8	0.8	1.7	0.001		177	1200		1919	0.5		0.2			5080.36	
129	TDM XXX	TDM 30	7/13/89	OBSS				0.001				461.16			0.002	221	140	0.01			0.03	0.05		74				0.02	7.39					0.8	0.6	0.003		130	840		1563	0.5		0.2			5076.56	
129	TDM XXX	TDM 30	10/18/89	OBSS								444.08				358	165							101					7.55									137	1240		2191						5075.49	
129	TDM XXX	TDM 30	1/15/90	OBSS				0.001				368.44			0.007	345	150	0.01			0.39	0.05		110				0.02	7.3					0.7	1.7	0.001		131	1070		1304	1.5		0.1			5074.92	
129	TDM XXX	TDM 30	4/23/90	OBSS								385.52				441	195							117					7.69									157	840		1944						5074.46	
129	TDM XXX	TDM 30	8/22/90	OBSS				0.001				70.76			0.002	226	124	0.01			0.02	0.05		61				0.02	8.76					1	2.1	0.006		137	560		1627	0.2		0.2			5073.27	
129	TDM XXX	TDM 30	10/18/90	OBSS								7.32				108	210							25					9.4									143	1350		1084						5072.01	
129	TDM XXX	TDM 30	1/11/91	OBSS				0.001				293			0.01		161	0.05			1	0.05		116				0.05		8.4			0.2	1	0.001		163	1443	2480.51		0.2		0.2031				
129	TDM XXX	TDM 30	7/4/91	OBSS				0.001				584			0.01		97.6	0.05			0.05	0.05		58.7				0.05		10.4			0.4	1.2	0.074		154	863	1382.31		0.2		1.8				
129	TDM XXX	TDM 30	10/10/91	OBSS								378.2					153							114						7.5								148		2323.8277							
129	TDM XXX	TDM 30	1/8/92	OBSS				0.001				296.46			0.01		109	0.05			0.17	0.05		66.6				0.02		7.1			0.2	1	0.001		153	824	1541.253		0.2		0.68			5068.56	
129	TDM XXX	TDM 30	4/9/92	OBSS																																											5067.83	
129	TDM XXX	TDM 30	4/22/92	OBSS								490					138							88.7						7.4					10.8				154		1981.064			3.921				
129	TDM XXX	TDM 30	7/22/92	OBSS																																											5066.82	
129	TDM XXX	TDM 30	7/23/92	OBSS				0.001				133			0.01		105	0.05			0.079	0.05		58.74		0.001		0.02		8.9			0.2	1.5	0.001		166.63	743	1348.24		0.2		2.71				
129	TDM XXX	TDM 30	10/12/92	OBSS																																											5067.61	
129	TDM XXX	TDM 30	10/26/92	OBSS								396					145							80.7						7.5								158.1	940	1840.328							
129	TDM XXX	TDM 30	1/4/93	OBSS																																											5066.61	
129	TDM XXX	TDM 30	1/11/93	OBSS				0.001				547			0.01		179	0.05			0.15	0.05		129				0.02		7.1			0.4	1	0.001		154	1570	2874.093		0.2		0.2				
129	TDM XXX	TDM 30	4/10/93	OBSS																																											5066.61	
129	TDM XXX	TDM 30	4/26/93	OBSS								454					169							117						7.2								144	1349	2524.443							
129	TDM XXX	TDM 30	7/10/93	OBSS				0.001				175			0.01		125	0.05			0.05	0.05		57.7				0.02		7.8			0.8	8.9	0.049		168	819	1481.8944		0.2		2.708

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
129	TDM XXX	TDM 30	4/16/94	OBSS																																											5065.36	
129	TDM XXX	TDM 30	7/1/94	OBSS																																												5066.06	
129	TDM XXX	TDM 30	7/5/94	OBSS				0.001				570				0.01	550	177	0.05					3.57	0.05		114				0.02	7.5					0.8	3.3	0.007		202	1580	2912.013		0.2		27.08				
129	TDM XXX	TDM 30	10/12/94	OBSS																																											5065.76	
129	TDM XXX	TDM 30	1/26/95	OBSS				0.001				562				0.01	680	192	0.05					4.57	0.05		160				0.02		6.9				0.5	1.5	0.001		170	1777	3265.013		0.2		0.9			5065.46	
129	TDM XXX	TDM 30	4/3/95	OBSS																																											5065.24	
129	TDM XXX	TDM 30	4/24/95	OBSS								488					446	166									105					7.3									153	1268	2382.443							
129	TDM XXX	TDM 30	7/21/95	OBSS				0.001								0.01	129	30.6	0.05					0.05	0.05		1				0.02		11.2				0.7	1	0.458		161	210	752.97		0.2		0.2			5065.22	
129	TDM XXX	TDM 30	11/20/95	OBSS													106	50.6									1					11.5									161	277	725.4755							5064.61	
129	TDM XXX	TDM 30	1/15/96	OBSS																																											5064.56	
129	TDM XXX	TDM 30	1/24/96	OBSS				0.001				345				0.01	284	113	0.05					0.05	0.05		67.2				0.02		8.3				0.2	1	0.074		156	864	1718.922		0.2		0.3				
129	TDM XXX	TDM 30	4/15/96	OBSS																																											5065.32	
129	TDM XXX	TDM 30	7/9/96	OBSS				0.001								0.01	135	61	0.05					0.05	0.05		4				0.02		11.3				0.3	1	0.37		161	500	914.093		0.6		0.2			5064.36	
129	TDM XXX	TDM 30	11/12/96	OBSS								655					244	118									61.1					7.9			10.5						154	805	1731.4851							5064.26	
129	TDM XXX	TDM 30	1/3/97	OBSS																																											5064.36	
129	TDM XXX	TDM 30	2/4/97	OBSS				0.001				432				0.01	370	149	0.05					0.12	0.05		86.9				0.02		7.6				0.2	1	0.012		150	1033	2009.9945		0.2		0.2				
129	TDM XXX	TDM 30	4/21/97	OBSS																																											5064.06	
129	TDM XXX	TDM 30	7/8/97	OBSS				0.001				386				0.01	299	144	0.05					0.78	0.05		71						7.7				0.2	1	0.007		158	905	1777.7082		0.2		0.2			5064.06	
129	TDM XXX	TDM 30	10/9/97	OBSS								436					391	157									86.1					7									154	980	1989							5064.36	
129	TDM XXX	TDM 30	1/6/98	OBSS				0.001				466				0.005	486	191	0.05					0.83	0.05		106				0.02		7.1				0.2	1	0.004		154	1400	2571		0.2		0.6			5063.43	
129	TDM XXX	TDM 30	4/4/98	OBSS								425					343	146									74.4					7.2			8.8						153	967	1897							
129	TDM XXX	TDM 30	4/10/98	OBSS																																											5063.96	
129	TDM XXX	TDM 30	7/7/98	OBSS				0.001				399				0.005	295	117	0.05					0.84	0.05		63				0.02		7				0.2	1	0.002		150	824	1650		0.2		1.2			5063.22	
129	TDM XXX	TDM 30	10/22/98	OBSS								635					482	190									118					6.8									157	1300	2567							5064.06	
129	TDM XXX	TDM 30	1/5/99	OBSS																																											5077.4	
129	TDM XXX	TDM 30	1/11/99	OBSS				0.002				443				0.005	219	87.7	0.05					2.91	0.05		44.2				0.02		7.1				0.6	1	0.079		135	547	1281.4157		0.2		3.2				
129	TDM XXX	TDM 30	4/19/99	OBSS								544					365	148									81.6					7.1									140	868	1882.6691							5077.03	
129	TDM XXX	TDM 30	7/9/99	OBSS				0.007				248				0.005	173	64	0.05					0.05	0.05		24				0.04		7.5				0.2	1	0.221		158	576	1129.9986		0.2		1.2863			5077.53	
129	TDM XXX	TDM 30	10/11/99	OBSS								423					292	115									62					7.1									140	893								5077.03	
129	TDM XXX	TDM 30	1/11/00	OBSS				0.001				313				0.005	240	107	0.05					1.47	0.05		48.5				0.02		7.1				0.2	1	0.111		144	815	1526		0.2		0.3			5077.9	
129	TDM XXX	TDM 30	4/11/00	OBSS								332					210	103									43.1					7.1									136	596	1261							5077.1	
129	TDM XXX	TDM 30	7/11/00	OBSS				0.001				296				0.01	129	58.8	0.05					0.05	0.05		13.2				0.02		7.4				0.2	1	0.026		151	338	842	934	0.2		1			5077.2	
129	TDM XXX	TDM 30	10/27/00	OBSS								358					183	84.3									34.5					7.1									143	538		1210						5063.26	
129	TDM XXX	TDM 30	1/5/01	OBSS				0.001				403				0.01	209	89.6	0.05					0.16	0.05		43				0.02		7.1				0.2	1.8	0.007		126	584	1257		0.2		0.6			5063.11	
129	TDM XXX	TDM 30	4/11/01	OBSS								411					222	77.4									51					7.1									137	630	1325							
129	TDM XXX	TDM 30	4/12/01	OBSS																																											5077.1	
129	TDM XXX	TDM 30	7/17/01	OBSS																																											5063.11	
129	TDM XXX	TDM 30	7/31/01	OBSS				0.001				400				0.01	200	80	0.0009					0.02	9E-05		40				0.009		7.1				0.3	1	0.0015		120	450	1100		0.2		0.67				
129	TDM XXX	TDM 30	10/17/01	OBSS																																											5060.54	
129	TDM XXX	TDM 30	10/29/01	OBSS								430					160	51									12					7.1									152	322	912							
129	TDM XXX	TDM 30	2/27/02	OBSS				0.001				386				0.01	130	42.2	0.05					0.12	0.05		3.84				0.02		7.1				0.2	1	0.00198		154	309	832.99		0.2		1.29				
129	TDM XXX	TDM 30	5/6/02	OBSS								375					127	50									2.83					0									154	284	804.88							
129	TDM XXX	TDM 30	10/10/02	OBSS				0.0012				213				0.01	62.9	39.37	0.05					0.07	0.05		2.4				0.02		7.2				0.2	1	0.001878		141.9	269.3	622.46		0.2	0.001086				5059.34	
129	TDM XXX	TDM 30	12/5/02	OBSS				0.001								0.0005		41	0.001						0.001						0.0018	7.8							0.0014		152	265		717						5061.55	
129	TDM XXX	TDM 30	1/24/03	OBSS				0.001								0.0005		40	0.001						0.001						0.0019	7.78	8.24				2.5	1	0.001			235		676			0.28			5061.43	
129	TDM XXX	TDM 30	4/30/03	OBSS				0.001								0.0005		42	0.001						0.001						0.0112	7.7	7.75						0.439		163	1070		1890						5061.51	
129	TDM XXX	TDM 30	7/11/03	OBSS																																		0.2	1								3.799324			
129	TDM XXX	TDM 30	7/11/03	OBSS				0.001								0.0005		47	0.00125						0.001						0.0092			7.83					0.251		149	820		1560							
129	TDM XXX	TDM 30	10/20/03	SSS														46							0.05							7.82	7.87								139	488		999							
130	TDM XXXI	TDM 31	7/3/91					0.001								0.01		185	0.05					0.4	0.05		105				0.05						0.7	3.2	0.001		203	1709	2646.01		0.2		1.8				
130	TDM XXXI	TDM 31	4/21/97									596					434	160									126					7.1									150	1166	2334.7974							
131	RM-1		1/13/86	TDSS	Background well			0.001																						12.25								0.001										5109.2	
131	RM-1		2/19/86	TDSS	Background well			0.001																						12.2								0.004										5109.6	
131	RM-1		3/17/86	TDSS	Background well	0.1		0.003	0.1			46	160	0.49	0.002	204	86	0.01	0.01	0.01			0.05	0.6	7		0.0002	0.1		12.15			0.6		1.4			0.001	0.01		67		818	0.1			0.6	0.1		5114.6	0.005
131	RM-1		4/24/86	TDSS	Background well			0.001																						11.8								0.003										5109.1	
131	RM-1		5/23/86	TDSS	Background well			0.001																						12.32								0.001										5114.8	
131	RM-1		6/19/86	TDSS	Background well	0.1		0.001	0.1					0.29	0.002	184	78	0.01	0.01	0.02			0.05	1	7		0.0002	0.1		12.16			0.8		1.2			0.001	0.01		80		739	1.7			0.9	0.1		5114.9	0.017
131	RM-1		7/22/86	TDSS	Background well			0.001																						12.33								0.003											
131	RM-1		8/13/86	TDSS	Background well			0.001																						11.96								0.003											
131	RM-1		9/23/86	TDSS	Background well	0.1		0.001	0.1		280		228	0.23	0.002	269	38	0.01	0.01	0.02	0.24	0.01	0.05	1	5	0.01	0.0002	0.1	0.02	12.16			0.5	9	1.4			0.001		85	71		950	2			71	0.1			0.016
131	RM-1		10/20/86	TDSS	Background well			0.001																						12.3								0.001										5106.4	
131	RM-1		11/12/86	TDSS	Background well			0.001																						12.3								0.001										5109.8	
131	RM-1		12/5/86	TDSS	Background well	0.1		0.001	0.1					0.21	0.002	80	70	0.01	0.01	0.01			0.05	2.2	15		0.0002	0.1		12.1			1.7		1.3			0.001	0.01		78		537	2.2			3.6	0.1		5110.1	0.017
131	RM-1		1/5/87	TDSS	Background well			0.001																						11.94								0.001										5110.2	
131	RM-1		2/12/87	TDSS	Background well			0.001																						11.75								0.005										5110.4	
131	RM-1		3/16/87	TDSS	Background well	0.1		0.001	0.1			84		0.09	0.002	77	40	0.01	0.01	0.01			0.05	1.3	4		0.0002	0.1		11.73			1		1.1			0.001	0.01		84		461	1.9			0.6	0.1		5110.7	0.005
131	RM-1		4/16/87	TDSS	Background well			0.001																						11.7								0.001										5343.48	
131	RM-1		5/28/87	TDSS	Background well			0.001																						10.9								0.001										5111.23	
131	RM-1		6/29/87	TDSS	Background well	0.1		0.001	0.1					0.17	0.002	20	10	0.01	0.01	0.01			0.05	2.3	7		0.0002	0.1		8.29			0.9		0.8			0.002	0.01		135		324	0.4			1.1	0.1		5110.56	0.008
131	RM-1		7/29/87	TDSS	Background well			0.001																						11.44								0.001										5111.2	
131	RM-1		8/30/87	TDSS	Background well			0.001																						8.08								0.001										5111.62	
131	RM-1		10/4/87	TDSS	Background well	0.1		0.001	0.1			75.01		0.09	0.002	19	10	0.01	0.01	0.01	0.27	0.01	0.05	1.5	10	0.01	0.0002	0.1	0.02	9.21			0.9	5.4	0.9			0.001	0.01	85	117		347	1.3			0.1	0.1		5111.59	0.005
131	RM-1		10/25/87	TDSS	Background well			0.001																						8.52								0.001										5111.2	
131	RM-1		11/30/87	TDSS	Background well			0.001																						9.43								0.001										5112.14	
131	RM-1		2/11/88	TDSS	Background well	0.1		0.001	0.1					0.43	0.002	20	25	0.01	0.01	0.01			0.05	1.3	1		0.0002	0.1		11.4			1.1		0.4			0.003			109		327	0.6			0.1	0.1		5112.34	0.005
131	RM-1		3/31/88	TDSS	Background well	0.1		0.001	0.1			137.86		0.16	0.002	34	11	0.01	0.01	0.01			0.05	1.4	7		0.0002	0.1		7.8			1.1		1.5			0.004	0.01		70		347	0.5			1.8	0.1		5112.78	0.005
131	RM-1		6/9/88	TDSS	Background well	0.1		0.001	0.1					0.02	0.002	32	29	0.01	0.01	0.01			0.05	0.4	3		0.0002	0.1		8			0.4		0.7			0.007	0.01		80		245	0.4			0.2	0.1		5112.84	0.013
131	RM-1		9/19/88	TDSS	Background well	0.1		0.001	0.1			37.21		0.67	0.002	10	20	0.01	0.01	0.02	0.3	0.02	0.05	1.3	7	0.03	0.0002	0.1	0.02	11.28			1.4	4	0.6			0.001	0.01	73	118		263	0.5			1.1	0.1		5113.06	0.005
131	RM-1		12/5/88	TDSS	Background well	0.1		0.001						0.38	0.01	26	15		0.01	0.01			0.05	1.3	11		0.0002	0.1		8.09			1.3		0.6			0.003			112		311	0.2			0.3			5113.17	0.024
131	RM-1		3/21/89	TDSS	Background well			0.001								194	43						1							12.56			1.7		1.8			0.001			70		843	0.4						5113.33	
131	RM-1		9/19/89	TDSS	Background well	0.1		0.001	0.1					0.09	0.002	384	600	0.01		0.01	0.43	0.03	0.005		62	0.02	0.0002	0.1	0.02	12.27				9	1.5			0.001		89	32		1116				0.4	0.1		5113.18	0.005
131	RM-1		4/23/90	TDSS	Background well			0.001								165	145													12.24					2.5			0.001			80		684				0.6			5113.47	
131	RM-1		9/7/90	TDSS	Background well	0.1		0.001	0.1					0.08	0.008	104	55	0.01		0.01	0.36	0.06	0.05		15	0.02	0.0002	0.1	0.02	12.3				9	0.5			0.001		95	31		1082				0.2	0.1		5113.95	0.019
131	RM-1		3/28/92	TDSS	Background well			0.001									127														12					0.7			0.001			28.8						0.68			5115.2	
131	RM-1		9/21/92	TDSS	Background well	0.1		0.001						0.1	0.01		54.5	0.05			0.23	0.05	0.05		0.09	0.01	0.001	0.1	0.02	12.2				9.25	1.1			0.001		109.33	31.2	1663.03				2.03	0.1		5117.92	0.01
131	RM-1		3/3/93	TDSS	Background well			0.001									46.1														12.9					0.8			0.001			31.6						0.2031				
131	RM-1		9/16/93	TDSS	Background well																																												5116.9	
131	RM-1		3/28/94	TDSS	Background well																																											5117.6	
131	RM-1		9/29/94	TDSS	Background well	0.1		0.001	0.28					0.1	0.01	504	20.4	0.05		0.01	0.29	0.05	0.05		0.1	0.01	0.001	0.1	0.02	12.7				7.5	5			0.007		87.6	29.4	872.3977	1165			0.677	0.1		5118.14	0.05
131	RM-1		3/21/95	TDSS	Background well			0.001								411	23														12.5					1			0.001										0.2			5118.6	
131	RM-1		9/7/95	TDSS	Background well	0.13		0.001	0.21					0.1	0.01	383	21.9	0.05		0.01	0.39	0.05	0.05		1	0.01	0.001	0.1	0.05		12			7.6	1.2			0.002		84	44	768.6404				6.77	0.1		5120.5	0.05
131	RM-1		3/12/96	TDSS	Background well			0.001								397	21.5														11.9					1			0.001			42.6						0.2			5121.9	
131	RM-1		9/30/96	TDSS	Background well	0.1		0.001	0.23					0.1	0.01	402	22.5	0.05		0.01	0.31	0.05	0.05		1	0.01	0.001	0.1	0.05		12.4			6.9	1.3	1		0.001		85.9	36	936.0148		0.2		0.2	0.1		5126.4	0.07
131	RM-1		3/21/97	TDSS	Background well			0.001								423	23.2	0.05				0.21	0.05		1				0.05		12.5				1.1	1		0.001		85	29	994.243		1.6		0.2			5126.3	
131	RM-1		9/29/97	TDSS	Background well	0.1		0.001	0.2			0.1		0.1	0.01	360	21.5	0.05		0.01	0.34	0.05	0.05		1	0.01	0.001	0.1	0.02		12.2			7.2	0.6	1		0.001		89	27.8	873		0.2		0.2	0.1		5126.4	0.02
131	RM-1		3/4/98	TDSS	Background well			0.001				0.1			0.005	284	18.2	0.05				0.05	0.05		1				0.02		12.1				1	1		0.004		85	47	730		0.2		0.2			5129.8	
131	RM-1		9/7/98	TDSS	Background well	0.21		0.001	0.18			0.1		0.1	0.005	293	15.6	0.05		0.01	0.33	0.05	0.05		1	0.01	0.001	0.1	0.02		12.3			6.4	0.2	1		0.002		80	42	762		0.2		4.2	0.1		5126.4	0.02
131	RM-1		3/1/99	TDSS	Background well			0.001				1			0.005	357	20	0.05				0.05	0.05		1				0.02		12.4				0.9	1.4		0.001		86.9	47	842.893		0.2		0.2			5126.3	
131	RM-1		9/15/99	TDSS	Background well	0.3		0.001	0.16			1		0.1	0.005	294	14.2	0.05		0.01	0.31	0.03	0.05		1	0.01	0.001	0.1	0.02		12.3			6.4	0.7	1		0.003		87	40.2	724.373		2		2.6	0.1		5126.4	0.11
131	RM-1		4/1/00	TDSS	Background well			0.001				1			0.01	313	18.4	0.05				1.8	0.06		1				0.02		12.5				0.6	1		0.002		81.9	39	776		0.2		0.2			5126.4	
131	RM-1		9/6/00	TDSS	Background well	0.25		0.001	0.11			1		0.1	0.01	232	21.1	0.05		0.01	0.31	0.03	0.05		1	0.01	0.001	0.1	0.02		12.2			5.4	1	1		0.006		72.1	48.2	647	838	0.2		36.93035	0.1		5126.4	0.01
131	RM-1		3/2/01	TDSS	Background well			0.001				1			0.01	282	18.6	0.05				0.05	0.05		1				0.02		12.3				0.4	1		0.002		87.3	42.4	707		0.2		0.2			5126.4	
131	RM-1		9/14/01	TDSS	Background well	0.25		0.0003	0.15					0.08	0.01	252	17.8	0.001		0.009	0.3	0.01	0.04		0.1	0.0002	0.0001	0.004	0.007		12.2			5.2	1	1		0.0033		74.5	35	411.23		0.2		3.59	0.001		5126.3	0.03
131	RM-1		2/28/02	TDSS	Background well			0.001							0.01	309	18.3	0.05				0.03	0.05		1				0.02		12.2				0.7	1		0.0022		81.6	33.4	483.46		0.2		0.2				
131	RM-1		10/10/02	TDSS	Background well	0.31		0.001	0.13					0.1	0.01	260.6	14.99	0.05		0.01	0.32	0.03	0.05		1	0.01	0.001	0.1	0.02		12.2			4.91	0.8	1		0.001		73.2	29.87	700		0.2	0.0003		0.1		5123.9	0.02
131	RM-1		2/5/03	TDSS	Background well			0.001							0.0005			0.001				0.0329							0.0036		13				0.6	1		0.00149		72.8	42.4		690			0.2031			5124.4	
131	RM-1		7/21/03	TDSS	Background well			0.001							0.0005		17	0.001				0.0688							0.0026		12.8	12.1			0.6	1		0.00148		76.7	34.2		1040			0.2031				
132	RM-2		1/13/86	TDSS	Background well			0.007																						9.1		

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
132	RM-2		6/29/87	TDSS	Background well	0.1		0.001	0.1					0.21	0.002	20	17	0.01	0.01	0.01			0.05	1	6		0.0002	0.1		8.2			0.7		0.7		0.007	0.01		138		322	1.6	0			0.1		5080.55	0.005
132	RM-2		7/29/87	TDSS	Background well			0.001																						8.15							0.001												5080.47	
132	RM-2		8/30/87	TDSS	Background well			0.001																						7.99							0.001												5080.82	
132	RM-2		10/4/87	TDSS	Background well	0.1		0.001	0.1			105.53		0.11	0.002	22	16	0.01	0.01	0.01	0.85	0.01	0.05	0.9	9	0.02	0.0002	0.1	0.02	7.87			0.9	2.4	0.9		0.001	0.01	87	117		322	1		0.12	0.1			5080.73	0.005
132	RM-2		10/25/87	TDSS	Background well			0.001																						8.27							0.001												5080.47	
132	RM-2		11/30/87	TDSS	Background well			0.001																						8.47							0.002												5081.34	
132	RM-2		2/8/88	TDSS	Background well	0.1		0.004	0.1					0.37	0.002	11	19	0.01	0.01	0.02			0.05	0.9	2		0.0002	0.1		9.22			1.9		1.3		0.005	0.01		110		390	0.7		8.8	0.1			5081.02	0.005
132	RM-2		3/31/88	TDSS	Background well	0.1		0.003	0.1			97.6		0.16	0.002	26	15	0.01	0.01	0.01			0.05	0.8	6		0.0002	0.1		6.95			1.3		1.8		0.004	0.01		90		389	1		2.5	10			5081.41	0.005
132	RM-2		6/9/88	TDSS	Background well	0.1		0.01	0.1					0.07	0.002	17	17	0.01	0.01	0.01			0.05	1.4	4		0.0002	0.1		7.58			2.4		1.6		0.006	0.01		97		299	0.8		1.2	0.1			5081.28	0.06
132	RM-2		9/19/88	TDSS	Background well	0.1		0.001	0.1			100.04		0.25	0.002	20	18	1	0.01	0.02	0.36	0.01	0.05	1.3	3	0.01	0.0002	0.1	0.02	8.16			1.3	3	1.3		0.002	0.01	77	116		331	1		4	0.1			5081.47	0.005
132	RM-2		12/5/88	TDSS	Background well	0.1		0.001	0.1					0.16	0.01	26	22	0.01	0.01	0.01			0.05	0.9	14		0.0002	0.1		7.94			0.7		1.5		0.001	0.01		123		345	0.7		0.7	0.1			5081.48	0.012
132	RM-2		3/21/89	TDSS	Background well			0.001				135.42				27	35					1	4		4					8.69			0.9		0.4		0.001			129		319	0.4		0.3				5081.67	
132	RM-2		9/19/89	TDSS	Background well	0.1		0.001	0.1			131.76		0.18	0.002	23	24	0.01		0.01	0.45	0.01	0.05		9	0.02	0.0002	0.1	0.02	7.93				5	0.9		0.001		80	140		302			1	0.1			5080.62	0.005
132	RM-2		4/23/90	TDSS	Background well			0.001				127.86				45	52													8.72					1		0.001			99		368			1.6				5081.82	
132	RM-2		9/7/90	TDSS	Background well	0.1		0.001	0.1			158.6		0.01	0.002	28	18	0.01		0.01	0.52	0.01	0.05		6	0.02	0.0002	0.1	0.02	8.3				5	0.6		0.001		92	124		366			1.2	0.1			5080.79	0.005
132	RM-2		3/28/92	TDSS	Background well			0.001									27.3														7.6				0.2		0.001			126					21.66				5080.39	
132	RM-2		9/21/92	TDSS	Background well	0.1		0.001				158.6		0.1	0.01		27.4	0.05			0.24	0.05	0.05		10.21	0.035	0.001	0.1	0.02		7.9			4.64	0.4		0.001		79	115	345.21				4.06	0.1			5079.73	0.01
132	RM-2		3/3/93	TDSS	Background well			0.001				157					26.7														7.8				0.4		0.001			116					0.2031				5079.8	
132	RM-2		9/16/93	TDSS	Background well																																												5079.3	
132	RM-2		3/28/94	TDSS	Background well																																												5079.65	
132	RM-2		9/29/94	TDSS	Background well	0.1		0.001	0.1		177			0.1	0.01	36.8	8.4	0.05		0.01	0.35	0.05	0.05		5.4	0.02	0.001	0.1	0.02	7				3.9	4.7		0.003		84.7	128	367.1962	368			3.385	0.1			5079.54	0.03
132	RM-2		3/21/95	TDSS	Background well			0.001				163				24.5	9.9														8				0.2		0.001			118					0.12				5079.95	
132	RM-2		9/7/95	TDSS	Background well	0.1		0.001	0.1			151		0.1	0.01	26.7	7.8	0.05		0.01	0.35	0.05	0.05		4.7	0.01	0.001	0.1	0.05		7.9			3.3	0.4		0.001		79.3	125	333.003				2.2341	0.1			5079.45	0.05
132	RM-2		3/12/96	TDSS	Background well			0.001								26.5	10.2														9.5				0.5		0.001			130					0.4062				5080	
132	RM-2		9/30/96	TDSS	Background well	0.1		0.001	0.1			163		0.1	0.01	25.2	8.8	0.05		0.01	0.35	0.05	0.05		4.7	0.01	0.001	0.1	0.05		8.3			3.4	0.2	1	0.001		82.2	125	342.1684		0.2		0.5416	0.1			5079.85	0.01
132	RM-2		3/21/97	TDSS	Background well			0.001				148.6			0.01	32.2	9.8	0.05				1.16	0.05		5.6				0.05		8.4				0.6	1	0.001		83.1	131	339.083		0.2		1.35				5080.13	
132	RM-2		9/29/97	TDSS	Background well	0.1		0.001	0.1			151		0.1	0.01	26.5	9.7	0.05		0.01	0.37	0.05	0.05		5.1	0.02	0.001	0.1	0.02		7.9			3.5	0.2	1	0.001		83.7	129	334		0.2		1.3	0.1			5079.85	0.01
132	RM-2		3/4/98	TDSS	Background well			0.001				169			0.005	32.7	15.1	0.05				0.05	0.05		5.5				0.02		7.8				0.2	1	0.002		82.8	128	349		0.2		4.1				5080.5	
132	RM-2		9/7/98	TDSS	Background well	0.1		0.001	0.1			149		0.1	0.005	34.3	9.2	0.05		0.01	0.38	0.05	0.05		4.4	0.02	0.001	0.1	0.02		8.3			3.3	0.2	1	0.001		77.3	124	328		0.2		17.3	0.1			5080.45	0.01
132	RM-2		3/1/99	TDSS	Background well			0.001				160			0.005	30.8	18.8	0.05				0.05	0.05		5.1				0.02		7.9				0.2	1	0.001		80.5	134	351.693		0.2		0.5				5082.7	
132	RM-2		9/15/99	TDSS	Background well	0.1		0.001	0.1			162		0.1	0.005	47.7	15.1	0.05		0.01	0.34	0.03	0.05		5.4	0.03	0.001	0.1	0.02		7.9			3.7	0.2	1	0.001		87.7	137	376.373		2.6		5.6	0.1				0.04
132	RM-2		9/16/99	TDSS	Background well																																												5082	
132	RM-2		4/1/00	TDSS	Background well			0.001				161			0.01	38.5	18.1	0.05				0.08	0.05		4.9				0.02		7.9				0.4	1	0.001		81.1	120	346		0.2		0.4				5082.8	
132	RM-2		9/6/00	TDSS	Background well	0.1		0.001	0.1			160		0.1	0.03	33.3	21.5	0.05		0.01	0.35	0.03	0.05		5	0.03	0.001	0.1	0.02		7.8			3.5	0.3	1	0.002		73	113	328	331	0.2		10	0.1			5082.6	0.01
132	RM-2		3/2/01	TDSS	Background well			0.001				147			0.01	32.9	16.4	0.05				0.05	0.05		7.3				0.02		7.8				0.2	1	0.001		84	125	342		0.2		0.7				5081.1	
132	RM-2		9/14/01	TDSS	Background well	0.008		0.001	0.03			167		0.04	0.01	30.9	13.4	0.05		0.0005	0.3	0.03	0.0002		4.7	0.027	0.001	0.001	0.001		7.8			2.7	0.2	1	0.001		75.4	108	318.54		0.2		9.48	0.0002			5081.1	0.011
132	RM-2		2/28/02	TDSS	Background well			0.001				168			0.01	36.4	11.4	0.05				0.03	0.05		5.01				0.02		7.8				0.2	1	0.001		81.3	127	344.87		0.2		1.44					
132	RM-2		10/10/02	TDSS	Background well	0.1		0.001	0.1			155		0.1	0.01	29.15	8.05	0.05		0.01	0.37	0.03	0.05		5.27	0.02	0.001	0.1	0.02		7.8			2.99	0.2	2.4	0.001		72.5	114.8	310.81		0.2	0.000741		0.1			5080.38	0.02
133	RM-3		11/23/81	TDSS	Background well																																													5079.75	
133	RM-3		12/11/81	TDSS	Background well																																													5079.8	
133	RM-3		1/13/86	TDSS	Background well			0.001																						8.64							0.001												5076.8	
133	RM-3		2/19/86	TDSS	Background well			0.001																						8.8							0.001												5083.2	
133	RM-3		3/17/86	TDSS	Background well	0.1		0.001	0.1			117	122	0.06	0.002	17	17	0.01	0.01	0.01			0.05	1	6		0.0002	0.1		8.64			0.7		0.9		0.001	0.01		136		362	1.5		2	0.1			5082.8	0.005
133	RM-3		4/24/86	TDSS	Background well			0.001																						8.8																			5076.9	
133	RM-3		5/23/86	TDSS	Background well			0.001																						8.91							0.001												5082.3	
133	RM-3		6/19/86	TDSS	Background well	0.1		0.001	0.1					0.16	0.002	20	19	0.01	0.01	0.01			0.05	0.8	6		0.0002	0.1		8.76			0.7		0.9		0.001	0.01		135		343	0.5		1	0.1			5082.4	0.011
133	RM-3		7/22/86	TDSS	Background well			0.001																						9.32							0.001												5083.1	
133	RM-3		8/13/86	TDSS	Background well			0.001																						8.89							0.001												5082.6	
133	RM-3		9/23/86	TDSS	Background well	0.1		0.001	0.1			4	117	0.31	0.002	22	19	0.01	0.01	0.01	0.3	0.02	0.05	1	6	0.01	0.0002	0.1	0.02	9.42			0.7	4	1.5		0.001	0.01	88	160		370	3.4		8	0.1			5258.71	0.005
133	RM-3		10/21/86	TDSS	Background well			0.001																						8.31							0.001												5077.1	
133	RM-3		11/12/86	TDSS	Background well			0.001																						9.36							0.001												5077.5	
133	RM-3		12/5/86	TDSS	Background well	0.1		0.001	0.1					0.15	0.002	21	17	0.01	0.01	0.01			0.05	1.2	6		0.0002	0.1		8.47			0.8		0.8		0.001	0.01		145		385	0.6		1.7	0.1			5077.45	0.022
133	RM-3		1/5/87	TDSS	Background well			0.001																						8.49							0.001												5077.6	
133	RM-3		2/12/87	TDSS	Background well			0.001																						8.91							0.001												5077.5	
133	RM-3		3/16/87	TDSS	Background well	0.1		0.001	0.1			90		0.07	0.002	17	14	0.01	0.01	0.01			0.05	0.8	5		0.0002	0.1		8.75			0.5		0.9		0.005	0.01		91		214	0.9		0.1	0.1			5077.6	0.005
133	RM-3		4/16/87	TDSS	Background well			0.001																						9.1							0.001												5077.4	
133	RM-3		5/28/87	TDSS	Background well			0.001																						7.69							0.001												5077.34	
133	RM-3		6/29/87	TDSS	Background well	0.1		0.001	0.1					0.12	0.002	26	15	0.01	0.01	0.01			0.05	1.3	5		0.0002	0.1		8.19			1		0.9		0.008	0.01		140		339	1			0.1			5077.55	0.023
133	RM-3		7/29/87	TDSS	Background well			0.001																						8.13							0.001												5077.55	
133	RM-3		8/30/87	TDSS	Background well			0.001																						8.3							0.002												5223.6	
133	RM-3		10/4/87	TDSS	Background well	0.1		0.001	0.1			109.19		0.1	0.002	26	15	0.01	0.01	0.01	4	0.01	0.05	1	5	0.01	0.0002	0.1	0.02	7.87			1	3	0.8		0.001	0.01	91	73		386	1		0.1	0.1			5077.71	0.005
133	RM-3		10/25/87	TDSS	Background well			0.001																						8.29							0.008												5077.55	
133	RM-3		11/30/87	TDSS	Background well			0.001																						8.29							0.001												5078.26	
133	RM-3		1/7/88	TDSS	Background well	0.1		0.001	0.1					0.32	0.002	24	18	0.01	0.01			0.01	0.05	1.1	4		0.0005	0.1		8.22			1.1		0.5		0.014	0.01		134		356	0.6		0.1	0.1			5077.88	0.005
133	RM-3		3/31/88	TDSS	Background well	0.1		0.001	0.1			112.85		0.11	0.002	24	16	0.01	0.01	0.01			0.05	1.1	5		0.0002	0.1		7			1.1		0.4		0.012	0.01		150		382	0.1		2.4	0.1			5078.23	0.005
133	RM-3		6/25/88	TDSS	Background well	0.1		0.001	0.1					0.03	0.002	22	13	0.01	0.01	0.01			0.05	2	7		0.0002	0.1					1.2		0.7		0.011	0.01		100		331	1.4		0.2	0.1			5078.03	0.023
133	RM-3		9/19/88	TDSS	Background well	0.1		0.001	0.1			101.87		0.13	0.002	28	19	0.01	0.01	0.03	0.4	0.01	0.05	3.1	4		0.0002	0.1	0.02	7.77			1.4	3	1.2		0.002	0.01	83	111		373	0.8		0.8	0.1			5078.49	0.005
133	RM-3		12/5/88	TDSS	Background well	0.1		0.001	0.1					0.16	0.01	24	26	0.01	0.01	0.01			0.05	0.9	11		0.0002	0.1		7.92			0.7		0.9		0.001	0.01		164		390	0.8		0.1	0.1			5078.18	0.022
133	RM-3		3/21/89	TDSS	Background well			0.001				136.64				19	27								1					7.95			0.8		0.9		0.01			176		338	0.6		1				5078.28	
133	RM-3		9/19/89	TDSS	Background well	0.1		0.001	0.1			117.12			0.002	25	22	0.01		0.01		0.02	0.05		8	0.03	0.0002	0.1	0.023	8.03				3	0.9		0.005		89	140		343			0.3	0.1			5078.83	0.02
133	RM-3		4/23/90	TDSS	Background well			0.001				134.2				42	24													8.2					0.6		0.01			129		394			0.2				5078.67	
133	RM-3		9/7/90	TDSS	Background well	0.1		0.001	0.1			134.2		0.01	0.002	26	15	0.01		0.01	0.38	0.01	0.05		8	0.02	0.0002	0.1	0.02	8.6				5	0.5		0.001		94	130		374			0.5	0.1			5078.15	0.005
133	RM-3		3/28/92	TDSS	Background well			0.002				137					9.1														7.9				0.2		0.001			166					25.05				5078.5	
133	RM-3		9/21/92	TDSS	Background well	0.1		0.001				133.7		0.1	0.01		9.2	0.05			0.25	0.05	0.05		6.83	0.021	0.001	0.1	0.02		8.2			4.1	0.2		0.001		90	166	369.18				1.35	0.1			5078.46	0.01
133	RM-3		3/3/93	TDSS	Background well			0.001				129					11.8														8.2				0.6		0.001			152					1.35				5078.35	
133	RM-3		9/16/93	TDSS	Background well																																												5078.4	
133	RM-3		3/28/94	TDSS	Background well																																												5078.6	
133	RM-3		9/29/94	TDSS	Background well	0.1		0.001	0.1		183			0.1	0.01	31.1	6.3	0.05		0.01	0.3	0.05	0.05		5.6	0.02	0.001	0.1	0.02	7.2				3.3	1.6		0.001		96.2	159	404.5175	402			0.2	0.1			5078.79	0.04
133	RM-3		3/21/95	TDSS	Background well			0.001				149				27.7	8.1														7.3				0.4		0.001			149					0.2				5079	
133	RM-3		9/7/95	TDSS	Background well	0.1		0.001	0.1			120		0.1	0.01	26.5	9	0.05		0.01	0.28	0.05	0.05		5	0.03	0.001	0.1	0.05		8.5			3.6	0.3		0.001		85	153	370.4773				8.801	0.1			5078.55	0.03
133	RM-3		3/12/96	TDSS	Background well			0.001								29.9	6.7														7.9				0.5		0.001			160					0.2708				5078.9	
133	RM-3		9/30/96	TDSS	Background well	0.1		0.001	0.1			139		0.1	0.01	41.3	8	0.05		0.01	0.29	0.05	0.05		5.3	0.01	0.001	0.1	0.05		8.9			3.5	0.2	1	0.001		91	153	397.9119		1.1		7.8532	0.1			5079.4	0.02
133	RM-3		3/21/97	TDSS	Background well			0.001				159.3			0.01	38.2	9.4	0.05					0.05		6.1				0.05		8.3				0.2	1	0.001		83.6	155	372.393		0.2		0.2				5079.45	
133	RM-3		9/29/97	TDSS	Background well	0.1		0.001	0.1			153		0.1	0.01	28.9	8.2	0.05		0.01	0.33	0.05	0.05		5.5	0.02	0.001	0.1	0.02		8.3			3.5	0.2	1	0.001		94.3	160	378		0.2		0.2	0.1			5079.3	0.05
133	RM-3		3/4/98	TDSS	Background well			0.001				147			0.005	31.7	8	0.05				0.05	0.05		6				0.02		8.24				0.8	1	0.002		92.9	169	382		0.2		0.2				5079.35	
133	RM-3		9/7/98	TDSS	Background well	0.1		0.001	0.1			154		0.1	0.005	29.2	6.6	0.05		0.01	0.32	0.05	0.05		5.7	0.02	0.001	0.1	0.02		8.2			3.4	0.2	1	0.001		90	163	376		0.2		1.3	0.1			5079.8	0.07
133	RM-3		3/1/99	TDSS	Background well			0.001				154			0.005	33	9.5	0.05				0.05	0.05		6.5				0.02		8.2				0.5	1.2	0.001		91.4	185	404.893		0.2		0.2				5078.8	
133	RM-3		9/15/99	TDSS	Background well	0.1		0.001	0.1			152		0.1	0.005	33.2	4.8	0.05		0.01	0.29	0.03	0.05		6.9	0.02	0.001	0.1	0.02		8.1			3.5	0.2	2.4	0.001		97.7	168	389.073		0.2		0.9	0.1				0.1
133	RM-3		9/17/99	TDSS	Background well																																													5078.8	
133	RM-3		4/1/00	TDSS	Background well			0.001				153			0.01	29.9	7.2	0.05				0.08	0.05		5.7				0.02		8.2				0.2	1	0.001		89.9	163	375		0.2		0.2				5078.7	
133	RM-3		9/6/00	TDSS	Background well	0.1		0.001	0.1			152		0.1	0.01	28.1	13	0.05		0.01	0.29	0.03	0.05		7	0.02	0.001	0.1	0.02		8.1			3.5	0.2	1	0.001		84.1	158	369	374	0.2		0.7	0.1			5078.7	0.08
133	RM-3		3/2/01	TDSS	Background well			0.001				153			0.01	32.8	5.9	0.05				0.05	0.05		6.5				0.02		8				0.2	1	0.001		97.7	166	388		0.2		0.2				5078.6	
133	RM-3		9/14/01	TDSS	Background well	0.004		0.001	0.02			161		0.04	0.01	27.9	5.5	0.0003		0.002	0.3	0.006	0.001		6.4	0.014	0.001	0.001	0.001		8			2.8	0.3	1	0.001		85.3	145	360.25		0.2		1.9	0.1			5078.55	0.073
133	RM-3		2/28/02	TDSS	Background well			0.001				164			0.01	32.2	8.32	0.05				0.03	0.05		6.32				0.02		8				0.2	1	0.001		92.2	170	391.28		0.2		0.2					
133	RM-3		10/10/02	TDSS	Background well	0.1		0.001	0.1			168		0.1	0.01	29.93	5.29	0.05		0.01	0.32	0.03	0.05		5.77	0.01	0.001	0.1	0.02		8			2.89	0.3	1	0.001		84.1	149	362.73		0.2	0.0003		0

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)		Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
134	RM-4		1/7/88	TDSS	Background well	0.1			0.001	0.1					0.42	0.002	94	12	0.01		0.01	0.05	0.8	20		0.0005			8.05				0.9		0.6		0.053	0.01		446		975	0.4		1.7			5123.39	0.006
134	RM-4		3/31/88	TDSS	Background well	0.1			0.001	0.1			142.74		0.16	0.002	112	15	0.01	0.01	0.01	0.05	1.1	6		0.0002	0.1		7.8				1		0.8		0.013	0.01		400		975	1		3.4	0.1		5123.59	0.005
134	RM-4		6/25/88	TDSS	Background well	0.1			0.001	0.1					0.11	0.002	97	19	0.01	0.01	0.01	0.05	1.3	18		0.0002	0.1		7.62				1.3		0.8		0.005	0.01		410		943	0.6		0.1	0.1		5123.53	0.014
134	RM-4		9/19/88	TDSS	Background well	0.1			0.001	0.1			157.38		0.13	0.002	115	13	0.01	0.01	0.02	0.27	0.01	0.05	0.9	5	0.06	0.0002	0.1	0.02	8.1			1.2	4	1.2	2.9	0.001	0.01	177	460		1014	1.3		10	0.1		5123.08	0.005
134	RM-4		10/25/88	TDSS	Background well				0.001		0.005			183		0.005	119	12	0.01			0.24	0.04	0.05	1.4	10		0.0002	0.1	0.02	8.03			1.2	4	1.2	2.9	0.002	0.01	178	532		975	0.7		9.6	0.1		5122.94	
134	RM-4		11/9/88	TDSS	Background well				0.001		0.005		147.62			0.0002	117	13	0.01			0.42	0.04	0.05		13		0.0002	0.1	0.02	7.92				5	0.6	2.8	0.013	0.01	184	540		985	1.3		4.6	0.1		5122.89	
134	RM-4		11/23/88	TDSS	Background well				0.001		0.005		150.06			0.002	106	17	0.01			0.51	0.09	0.05		19		0.0002	0.1	0.02	7.72				5	0.9	2.7	0.001	0.01	184	555		1025	1.4		2.4	0.1		5123.04	
134	RM-4		12/8/88	TDSS	Background well	0.1			0.001	0.1					0.24	0.01	98	27	0.01	0.01	0.01			0.05	1	26		0.0002	0.1		7.78			1.4		1.2		0.001	0.01		600		1043	0.8		2	0.1		5122.96	
134	RM-4		3/27/89	TDSS	Background well				0.001		0.005		202.52	190		0.002	88	33	0.01			0.31	0.02	0.05	0.6	5		0.0002	0.1	0.02	7.98			0.9	4	0.9	1.5	0.001	0.01	195	510		956	0.2		2.1	0.1		5122.88	
134	RM-4		6/12/89	TDSS	Background well				0.001				193.98			0.002	88	30	0.01					0.01	0.05		17				0.02	7.87			4	1.1	0.8	0.004			229	540		927	2		3.4			5123.03	
134	RM-4		9/19/89	TDSS	Background well	0.1			0.001		0.005		174.46		0.18	0.002	93	42	0.01		0.01			0.01	0.05		18	0.12	0.0002	0.1	0.02	7.9				5	0.5	0.8	0.001			181	560		968	2.1		2.6	0.1		5122.54	0.008
134	RM-4		12/20/89	TDSS	Background well								217.16				85	96							18						7.63									199	500		1000						5123.45	
134	RM-4		3/26/90	TDSS	Background well				0.001				212.28			0.002	84	20	0.01					0.02	0.05		27				0.02	7.68					1.6	1.5	0.001			205	600		928	1.1		0.2			5123.59	
134	RM-4		6/26/90	TDSS	Background well								200.08				127	17							11						7.99									191	488		1027						5123.81	
134	RM-4		9/7/90	TDSS	Background well	0.1			0.001	0.1			244		0.01	0.002	112	14	0.01		0.01	0.34	0.05	0.05		15	0.11	0.0002	0.1	0.02	8.3				5	0.8	2	0.004			196	420		1019	0.5		0.3	0.1		5123.7	0.005
134	RM-4		12/1/90	TDSS	Background well								202				91	11							17						7.5									200	434		987						5123.46	
134	RM-4		12/12/91	TDSS	Background well								208.62					11							18.7							8.1									171	565									
134	RM-4		3/28/92	TDSS	Background well				0.002				193			0.01		9.43	0.05					0.05	0.05		23.4				0.02		7.5			0.2	1	0.001			204	589	1045.939				18.956			5123.56	
134	RM-4		6/10/92	TDSS	Background well								214					8							24.5						7.8									211	554	1007.943							5123.54	
134	RM-4		9/21/92	TDSS	Background well	0.1			0.001				193.7		0.1	0.01		7.5	0.05		0.01	0.16	0.05	0.05		24.62	0.01	0.001	0.1	0.02		7.8			6.56	0.7	1.5	0.001			203	515	940.4865		0.2	0.002	1.354	0.1		5122.95	0.01
134	RM-4		12/3/92	TDSS	Background well								202					6.5							19.5						7.8									184	567								5123	
134	RM-4		3/3/93	TDSS	Background well																																													5123.07	
134	RM-4		6/5/93	TDSS	Background well								205					7.3							20.1						7.7									224	583	1037.343							5124.05	
134	RM-4		9/16/93	TDSS	Background well																																													5123.95	
134	RM-4		12/2/93	TDSS	Background well																																													5124	
134	RM-4		3/28/94	TDSS	Background well																																													5124.14	
134	RM-4		6/28/94	TDSS	Background well																																													5123.7	
134	RM-4		6/29/94	TDSS	Background well													8.76							16.8						7.9									153	563									
134	RM-4		9/29/94	TDSS	Background well	0.1			0.001	0.1		113			0.1	0.01	93	8.4	0.05		0.01	0.16	0.05	0.05		14.9	0.01	0.001	0.1	0.02	8.1				5.4	1.1	1	0.001			192	569	955.8091	960	0.2		0.677	0.1		5123.2	0.03
134	RM-4		12/14/94	TDSS	Background well																																													5123.2	
134	RM-4		3/21/95	TDSS	Background well				0.001			220				0.01	95	8.2	0.05					0.05	0.05		20.7				0.02	7.4			4.6	1	2.9	0.001			162	517	918.0373		0.2		0.7			5123.7	
134	RM-4		6/26/95	TDSS	Background well								216					9.1							19						7.6									197	574	1016.543							5124.5	
134	RM-4		9/7/95	TDSS	Background well	0.1			0.001	0.1			202		0.1	0.01	100	7.9	0.05		0.01	0.16	0.05	0.05		21	0.01	0.001	0.1	0.05		7.6			5	0.2	2.9	0.001			188	537	961.0574		0.7		0.7	0.1		5124.2	0.14
134	RM-4		12/1/95	TDSS	Background well								192				108	10.2							21						7.5									179	563	978.1746							5124.7	
134	RM-4		3/12/96	TDSS	Background well				0.001				205			0.01	100	7.6	0.05					0.05	0.05		21.3				0.02		7.8			0.8	1	0.001			180	550	974.1474		0.2		0.2			5124.45	
134	RM-4		6/29/96	TDSS	Background well								223				99.7	9.1							22.8						8.2		5.8							194	593	1050.7505							5125.4	
134	RM-4		9/30/96	TDSS	Background well	0.1			0.001	0.1			289		0.1	0.01	100	8.9	0.05		0.01	0.16	0.05	0.05		20.6	0.03	0.001	0.1	0.05	8.2			5.3	0.2	1	0.001			185	527	1007.3193		0.2		0.6093	0.1		5124.2	0.02
134	RM-4		12/26/96	TDSS	Background well												102	9.3							21.3															185	535								5124.9	
134	RM-4		3/21/97	TDSS	Background well				0.001				214.7			0.01	104	8.4	0.05					0.14	0.05		21.2				0.05		8			0.6	1	0.001			189	550	980.5259		0.2		1.35			5126.25	
134	RM-4		6/12/97	TDSS	Background well																																													5124.5	
134	RM-4		6/13/97	TDSS	Background well								219				104	9							20.9						8									190	535	969								
134	RM-4		9/29/97	TDSS	Background well	0.1			0.001	0.1			215		0.1	0.01	102	10	0.05		0.01	0.18	0.05	0.05		21.2	0.01	0.001	0.1	0.02		7.9			5.4	0.2	1	0.001			192	544	983		0.2		0.7	0.1		5124.2	0.02
134	RM-4		12/29/97	TDSS	Background well								253				126	11.4							25.2						7.8									190	609	1089							5125.25	
134	RM-4		3/5/98	TDSS	Background well				0.001				264			0.005	117	10.5	0.05					0.05	0.05		24				0.02		7.7			0.8	1	0.002			194	550	1028		0.2		0.6			5125.4	
134	RM-4		6/26/98	TDSS	Background well								269				112	9.7							23.2						7.6		5.6							191	567	1044							5125.2	
134	RM-4		9/7/98	TDSS	Background well	0.1			0.001	0.1			276		0.1	0.005	105	9.7	0.05		0.01	0.17	0.05	0.05		22.7	0.14	0.001	0.1	0.02		7.7			5.5	0.2	1	0.001			186	531	999		0.2		1.8	0.1		5124.58	0.02
134	RM-4		12/7/98	TDSS	Background well								272				103	9.4							22.2						7.7									188	534	993							5124.2	
134	RM-4		3/1/99	TDSS	Background well				0.001				271			0.005	115	11.6	0.05					0.05	0.05		23				0.02		7.7			0.7	1	0.001			185	597	1069.593		0.2		0.7			5125.05	
134	RM-4		6/3/99	TDSS	Background well								271				118	16.8							24.3						7.6									196	596	1089.043							5125.5	
134	RM-4		9/15/99	TDSS	Background well	0.1			0.001	0.1			266		0.1	0.005	117	6.1	0.05		0.01	0.14	0.03	0.05		25.6	0.14	0.001	0.1	0.02		7.7			5.8	0.5	3.9	0.001			204	560	1048.173		0.2		1.1	0.1			0.04
134	RM-4		9/18/99	TDSS	Background well																																													5124.2	
134	RM-4		12/15/99	TDSS	Background well								264				104	19.3							22.3						7.7									210	620	1110.043							5123.7	
134	RM-4		4/1/00	TDSS	Background well				0.001				271			0.01	108	10.9	0.05				0.09	0.05		22.8				0.02		7.7			0.6	1	0.001			187	550	1017		0.2		0.5			5125.2	
134	RM-4		6/5/00	TDSS	Background well								273				101.1	16.05							22.42						7.6									173.7	511		1100						5125.2	
134	RM-4		9/6/00	TDSS	Background well	0.1			0.001	0.1			272		0.1	0.01	104	17.2	0.05		0.01	0.15	0.03	0.05		22.5	0.12	0.001	0.1	0.02		7.7			5.6	0.6	1.7	0.002			175	488	945	1080	0.2		1.2	0.1		5124.6	0.02
134	RM-4		12/8/00	TDSS	Background well								269				107	15.1							23.6						7.7									188	510		1090						5125.2	
134	RM-4		3/2/01	TDSS	Background well				0.001				267			0.01	121	15.8	0.05					0.05	0.05		26.1				0.02		7.7			1	1	0.001			205	560	1064		0.2		0.6			5124.7	
134	RM-4		6/5/01	TDSS	Background well								273				113	18.1							24.4						7.6									186	519	999							5125	
134	RM-4		9/14/01	TDSS	Background well	0.001			0.001	0.02			281		0.05	0.01	106	20.3	0.05		0.0008	0.2	0.03	0.05		23	0.12	0.001	0.0002	0.002		7.7			5	0.5	1	0.001			182	507	984.45		0.2		1.76	7E-05		5124.36	0.014
134	RM-4		12/27/01	TDSS	Background well								276				127	17.7					0.03			26.8						7.7									193	618	1120.88							5124.2	
134	RM-4		2/28/02	TDSS	Background well				0.001				292			0.01	125	16.7	0.05				0.03	0.05		26				0.02		7.7			0.5	2	0.001			199	597	1109.32		0.2		0.71				
134	RM-4		5/17/02	TDSS	Background well								287				135	22.4							27.9						0									200	606	1134.84								
134	RM-4		10/10/02	TDSS	Background well	0.1			0.001	0.1			285		0.1	0.01	110.2	19.02	0.05		0.01	0.14	0.03	0.05		23.66	0.12	0.001	0.1	0.02		7.7			4.98	0.5	1	0.001			180.2	531	1012.04		0.2	0.0005		0.1		5123.98	0.01
134	RM-4		12/5/02	TDSS	Background well				0.001							0.0005		19	0.001							0.001						7.7									196	585		1160						5123.88	
134	RM-4		2/5/03	TDSS	Background well				0.001							0.0005		20	0.001							0.001					0.0013	7.9	7.84			0.6	1	0.001			209	535		1110			0.663			5124.06	
134	RM-4		4/30/03	TDSS	Background well				0.001							0.0005		18	0.001							0.001					0.001	7.7	7.76					0.00133			180	580		1180						5124.43	
134	RM-4		7/21/03	TDSS	Background well				0.001							0.0005		20	0.001							0.001					0.0011		7.82					0.001			196	575		1280							
134	RM-4		7/21/03	TDSS	Background well				0.001							0.0005		20	0.001							0.001					0.0011		7.83			0.7	1	0.00101			188	590		1260			0.685124				
134	RM-4		10/21/03	TDSS	Background well													20															7.88								180	576		1150							
135	RM-5		12/12/91															11.2							18.2															164	548									
135	RM-5		3/28/92						0.002							0.01		24.7	0.05					0.05	0.05		20.9				0.02					3.5	1.8	0.001			111	464			0.2	0.033	22.341				
136	DW-41		2/26/86	OBSS	Background well				0.001																						7.7					1.2		0.001						330			1			5028.1	
136	DW-41		3/27/86	OBSS	Background well				0.001			210					18	9													7.6					1.8		0.001				79		311			4.6			5073.2	
136	DW-41		5/26/86	OBSS	Background well				0.001																						7.75					4.4		0.002						353			3.7			5073.8	
136	DW-41		8/14/86	OBSS	Background well	0.1			0.001	0.1			115.9	215	0.17	0.002	18	9	0.01		0.01	0.22	0.01	0.05		4	0.01	0.0002	0.1	0.02	7.71				3	2.6		0.001			82	56		300			2.4	0.1		5074.3	0.005
136	DW-41		11/13/86	OBSS	Background well				0.001																						7.71					0.5		0.001						386						5068.9	
136	DW-41		2/5/87	OBSS	Background well																																													5031	
136	DW-41		6/11/87	OBSS	Background well				0.001				147.62				16	9								8									1.3		0.001				118		361			0.5			5032.32	
136	DW-41		8/29/87	OBSS	Background well																																													5032.88	
136	DW-41		12/7/87	OBSS	Background well	0.1			0.001	0.1			128.1		0.01	0.002	18	6	0.01		0.01	0.74	0.01	0.05		3	0.04	0.0005	0.1	0.02	8.22				3	1		0.002			98	100		321			0.9	0.1		5033.23	0.005
136	DW-41		2/28/88	OBSS	Background well																																													5033.7	
136	DW-41		5/23/88	OBSS	Background well				0.001				139.69				19	10													8.16					1.3		0.005				120		339			0.8			5033.78	
136	DW-41		8/31/88	OBSS	Background well																																													5033.99	
136	DW-41		11/7/88	OBSS	Background well	0.1			0.001	0.1			151.28		0.31	0.002	29	13	0.01		0.01	0.36	0.08	0.05		9	0.03	0.0002	0.1	0.02	8.07				3	2		0.001			98	120		310			1.1	0.1		5033.97	0.018
136	DW-41		5/10/89	OBSS	Background well				0.001				213.5				17	14													8.19					0.8		0.001				104		323			5.2			5035.43	
136	DW-41		11/20/89	OBSS	Background well	0.1			0.001	0.1			170.8		0.21	0.002	13	14	0.01		0.01	0.36	0.06	0.05		4	0.04	0.0002	0.1	0.02	8.02				4	1.1		0.001			98	110		388			0.7	0.1		5069.81	0.005
136	DW-41		5/1/90	OBSS	Background well				0.001				183				37	22													8.04					0.8		0.001				112		376			0.2			5038.08	
136	DW-41		11/27/90	OBSS	Background well	0.1			0.001				195.2		0.01	0.002	17	6	0.01		0.01	0.29	0.1	0.05		2	0.02	0.0002		0.02	7.4				3	0.5		0.001			108	110		373			0.62	0.1		5037.76	0.009
136	DW-41		11/19/91	OBSS	Background well	0.1			0.001						0.1	0.01		6.4	0.05		0.01	0.18	0.05	0.05		4.65	0.02	0.001	0.05	0.05		8			4.3	0.3		0.001			121	127					2	0.1			0.02
136	DW-41		5/9/92	OBSS	Background well				0.001				318					3.9													8.5					0.2		0.001				131					0.7			5040.69	
136	DW-41		11/7/92	OBSS	Background well	0.1			0.001				178		0.1	0.01		3.9	0.05		0.01	0.25	0.04	0.05		4.1	0.02	0.001	0.1	0.02		7.9			2.9	0.3		0.002			113	141	392.1814				0.2	0.1		5041.2	0.03
136	DW-41		5/4/93	OBSS	Background well																																													5042.75	
136	DW-41		11/29/93	OBSS	Background well																																													5043.2	
136	DW-41		5/24/94	OBSS	Background well				0.001				191.3					1								7.4									0.2		0.001				121					1.354			5044.15	
136	DW-41		11/29/94	OBSS	Background well																																													5044.45	
136	DW-41		5/16/95	OBSS	Background well				0.001								19	1								8									0.6		0.001				133					0.2			5045.2	
136	DW-41		11/21/95	OBSS	Background well																																													5045.62	
136	DW-41		11/22/95	OBSS	Background well	0.1			0.001	0.1			177		0.1	0.01	20.3	3.5	0.05		0.01	0.14	0.11	0.05		4.1	0.02	0.001	0.1	0.02		8.2			2.7	0.3		0.001			105	130	364.9				0.2	0.1			0.03
136	DW-41		5/16/96	OBSS	Background well																																													5046.9	
136	DW-41		11/15/96	OBSS	Background well				0.001				207			0.01	18.6	3.9	0.05				0.05	0.05		3.91				0.05		8.6			2.8	0.2	1	0.001			103	117	363.503		0.2		0.2			5047.4	
136	DW-41		6/6/97	OBSS	Background well																																													5047.1	
136	DW-41		6/7/97	OBSS	Background well				0.001				155			0.01	21.7	3	0.05				0.05	0.05		4.2				0.05		8.4					0.2	1	0.001			100	125	334.723		0.2		0.4062				
136	DW-41		11/21/97	OBSS	Background well	0.1			0.001	0.1			210		0.1	0.005	23	2	0.05		0.01	0.17	0.05	0.05		4	0.02	0.001	0.1	0.02		8			3	0.2	1	0.001			107	119	364		0.2		0.5	0.1		5047.5	0.01
136	DW-41		5/14/98	OBSS	Background well				0.001				205			0.005	18.8	2.8	0.05				0.05	0.05		3.9				0.02		8				0.2	1	0.001			105	139	373		0.2		1.4			5054.15	
136	DW-41		11/11/98	OBSS	Background well	0.1			0.001	0.1			155		0.1	0.005	24	3	0.05		0.01	0.22	0.05	0.05		5	0.02	0.001	0.1	0.02		8.3			3	0.2	1	0.001			116	207	436		0.2		0.2	0.1		5047.1	0.01
136	DW-41		5/19/99	OBSS	Background well				0

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
141	DW-46		2/26/88	OBSS	Background well			0.001																																							5026.7	
141	DW-46		5/20/88	OBSS	Background well			0.001				116.51				37	10												7.78					1.2		0.004			240		456			0.5				5027.13	
141	DW-46		8/31/88	OBSS	Background well																																											5027.78	
141	DW-46		11/7/88	OBSS	Background well	0.1		0.001	0.1			115.9		0.11	0.002	29	17	0.01		0.01	0.36	0.03	0.05		4	0.03	0.0002	0.1	0.02	8.03				2	0.6		0.001		117	220		384			0.7	0.1		5027.99	
141	DW-46		5/10/89	OBSS	Background well			0.001				154.94				22	14												8.24					0.7		0.001			104		416			0.3				5030.34	
141	DW-46		11/20/89	OBSS	Background well	0.1		0.001	0.1			139.08		0.16	0.002	18	11	0.01		0.01	0.4	0.05	0.05		5	0.01	0.0002		0.02	8.05				4	0.7		0.001		116	210		461			0.2	0.1		5031.23	0.0005
141	DW-46		5/1/90	OBSS	Background well			0.001				143.96				50	16												7.76					1.4		0.001			198		432			0.2				5034.11	
141	DW-46		11/27/90	OBSS	Background well	0.1		0.001				156.16		0.03	0.002	19	5	0.01		0.01	0.33	0.03	0.05		4	0.01	0.0002	0.1	0.02	7.5				4	0.4		0.001		110	166		425			0.3	0.1		5037.49	0.007
141	DW-46		11/19/91	OBSS	Background well	0.1		0.001						0.1	0.01		6.6	0.05		0.01	0.21	0.07	0.05		5.86	0.01	0.001	0.05	0.05		7.7			3.5	0.2		0.001		133	206					0.2	0.1			0.03
141	DW-46		5/10/92	OBSS	Background well																																											5043.71	
141	DW-46		5/12/92	OBSS	Background well			0.001				189					2.5													8.6				0.2		0.02			210					0.7					
141	DW-46		11/6/92	OBSS	Background well																																											5044.43	
141	DW-46		11/7/92	OBSS	Background well	0.1		0.001				154		0.1	0.01		3.3	0.05		0.01	0.25	0.05	0.05		5.5	0.01	0.001	0.1	0.02		8			2.8	0.2		0.002		131	222	498.5779				0.2	0.1			0.02
141	DW-46		5/4/93	OBSS	Background well																																											5046.3	
141	DW-46		5/25/94	OBSS	Background well			0.001				151.3					1								7.5								0.2		0.001			190					1.354				5048.8	
141	DW-46		11/25/94	OBSS	Background well																																											5049.3	
141	DW-46		5/16/95	OBSS	Background well			0.001								23	1													8.1			0.3		0.001		210					0.2				5050.57	
141	DW-46		11/21/95	OBSS	Background well	0.1		0.001	0.1			162		0.1	0.01	23	3.3	0.05		0.01	0.18	0.07	0.05		4.9	0.02	0.001	0.1	0.02		8.2			2.7	0.2		0.001		119	215	458.59				0.2	0.1			0.02
141	DW-46		11/22/95	OBSS	Background well																																											5051.15	
141	DW-46		5/16/96	OBSS	Background well																																											5052.3	
141	DW-46		11/15/96	OBSS	Background well			0.001				144			0.01	21	3.6	0.05				0.05	0.05		4.7				0.05		8.8			2.9	0.2	1	0.001		117	197	428.293		0.2		0.2				
141	DW-46		11/26/96	OBSS	Background well																																											5046.9	
141	DW-46		6/7/97	OBSS	Background well			0.001				149			0.01	26	2	0.05				0.05	0.05		5.6				0.05		8.4			0.2	1	0.001			113	211	432.543		0.2		0.2			5052.3	
141	DW-46		11/17/97	OBSS	Background well	0.1		0.001	0.1			154		0.1	0.005	26	1	0.05		0.01	0.22	0.05	0.05		5	0.02	0.001	0.1	0.02		8.2			4	0.2	1	0.001		118	185	417		0.2		0.2	0.1		5052.83	0.01
141	DW-46		5/14/98	OBSS	Background well			0.001				156			0.005	22.9	3.5	0.05				0.05	0.05		5				0.02		8.2				0.2	2.4	0.001		126	216	452		0.2		1			5056.35	
141	DW-46		11/11/98	OBSS	Background well	0.1		0.001	0.1			203		0.1	0.005	21	4	0.05		0.01	0.17	0.05	0.05		4	0.02	0.001	0.1	0.02		8.2			3	0.2	1	0.001		103	129	366		0.2		0.3	0.1		5052.4	0.01
141	DW-46		5/19/99	OBSS	Background well			0.001				156			0.005	23	5	0.05				0.05	0.05		5				0.02		8.3				0.2	1	0.001		122	201	436.493		0.2		0.2			5057.3	
141	DW-46		11/6/99	OBSS	Background well	0.1		0.001	0.1			152		0.1	0.005	21.7	1.1	0.05		0.01	0.22	0.05	0.05		4.9	0.02	0.001	0.1	0.02		8.3			2.8	0.4	1	0.001		117	202	426.443		0.2		0.2	0.1		5052.3	0.01
141	DW-46		6/1/00	OBSS	Background well			0.001				156			0.01	20.8	3.232	0.05				0.4812	0.05		5.1				0.02		8.2				0.4	1.9	0.001		123	203.5	436.5562	445	0.2		0.278247			5056.3	
141	DW-46		11/21/00	OBSS	Background well																																											5052.8	
141	DW-46		5/11/01	OBSS	Background well			0.001				154			0.01	21.4	3.6	0.05				0.05	0.05		4.8				0.02		8.2				0.2	1	0.001		108	195	412		0.2		0.2			5056.8	
141	DW-46		10/31/01	OBSS	Background well	0.1		0.001	0.1			151		0.1	0.01	24	1	0.05		0.03	0.2	0.03	0.05		5	0.01	0.001	0.1	0.02		8.2			2.8	0.2	1.3	0.002		110	200	417		0.2		0.2	0.1		5058.4	0.01
141	DW-46		5/7/02	OBSS	Background well			0.001				158			0.01	25.6	5.61	0.05				0.03	0.05		5.17				0.02		0				0.2	6.7	0.001		118	211	443.86		0.2		0.2				
141	DW-46		1/22/03	OBSS	Background well			0.001							0.0005			0.001					0.001						0.001		8.54				0.6	1	0.001		115	172		399			0.11			5059.68	
141	DW-46		7/14/03	OBSS	Background well			0.001			114				0.0005		2.1	0.00113					0.001						0.001		8.47				0.4	4.2	0.001		99.9	183		439			0.2031				
142	DW-47		2/25/86	OBSS	Background well			0.001																	7.4									0.7		0.002			3		679			3				5034.6	
142	DW-47		3/25/86	OBSS	Background well			0.001			117					69	17								7.3									1.1		0.002			350		733			2				5045.65	
142	DW-47		5/26/86	OBSS	Background well			0.001																	7.84									5.3		0.001					791			1.9				5044	
142	DW-47		8/15/86	OBSS	Background well	0.1		0.001	0.1			75.6	127	0.06	0.002	80	18	0.01		0.01	0.3	0.01	0.05		20	0.08	0.0002	0.1	0.02	7.47				4	1.3		0.002		117	328		783			15.8	0.1		5046.6	0.005
142	DW-47		11/13/86	OBSS	Background well			0.001																	7.77									1.3		0.001					774			2.4				5043.5	
142	DW-47		2/5/87	OBSS	Background well																																											5044.7	
142	DW-47		6/12/87	OBSS	Background well			0.001				98.21				80	18												7.8					1.6		0.019			406		751			1.1				5048.65	
142	DW-47		8/29/87	OBSS	Background well																																											5051.4	
142	DW-47		2/6/88	OBSS	Background well	0.1		0.001	0.1			108.58		15	0.002	81	16	0.01		0.01	0.36	0.01	0.05		14	0.05	0.0002	0.1	0.02	7.3				3	1		0.01		119	387		736			0.1	0.1		5053.2	0.486
142	DW-47		2/28/88	OBSS	Background well																																											5057.14	
142	DW-47		5/23/88	OBSS	Background well							91.5																																						
142	DW-47		7/5/88	OBSS	Background well			0.001				91.5				80	17												7.85					0.5		0.01			330		724			0.1					
142	DW-47		8/31/88	OBSS	Background well																																											5049.42	
142	DW-47		11/16/88	OBSS	Background well	0.1		0.001	0.1			84.18		0.19	0.002	83	33	0.01		0.01	0.48	0.02	0.05		21	0.04	0.0002	0.1	0.02	8.14				3	1.3		0.009		118	490		710			1.3	0.1	1.7	5058.39	0.243
142	DW-47		5/3/89	OBSS	Background well			0.001				103.7				74	11												8.42					0.8		0.005			188		691			1.7				5061.14	
142	DW-47		11/20/89	OBSS	Background well	0.1		0.001	0.1			95.16		0.21	0.002	72	20	0.01		0.01	0.51	0.01	0.05		17	0.03	0.0002	0.1	0.02	8.17				5	1.1		0.013		125	430		750			0.4	0.1		5068.52	0.368
142	DW-47		5/1/90	OBSS	Background well			0.001				119.56				152	22												7.84					1		0.001			434		824			1.1				5073.78	
142	DW-47		11/8/90	OBSS	Background well	0.1		0.001				122		0.08	0.002	84	16	0.01		0.01	0.4	0.01	0.05		23	0.05	0.0002	0.1	0.02	7.5				4	0.4		0.002		125	382		728			4.3	0.1		5071.08	0.255
142	DW-47		11/18/91	OBSS	Background well	0.1		0.001						0.1	0.01		13.4	0.05		0.01	0.28	0.05	0.05		23.4	0.06	0.001	0.05	0.05		8			6.1	0.5		0.001		143	458					6.8	0.1			0.2
142	DW-47		5/6/92	OBSS	Background well			0.001				155					13.5													9				0.2		0.012			450					4.3			5073.45	
142	DW-47		11/6/92	OBSS	Background well																																											5073.68	
142	DW-47		11/7/92	OBSS	Background well	0.1		0.001				113		0.1	0.01		11.6	0.05		0.01	0.3	0.05	0.05		17.6	0.07	0.001	0.1	0.02		7.5			4.3	0.2		0.002		137	411	724.2673				0.2	0.1			0.27
142	DW-47		5/3/93	OBSS	Background well																																											5073.55	
142	DW-47		11/25/93	OBSS	Background well																																											5073.68	
142	DW-47		5/26/94	OBSS	Background well			0.001				126.4					10.4													7.2				0.2		0.001			386					4.739				5071.74	
142	DW-47		11/25/94	OBSS	Background well																																											5073.49	
142	DW-47		5/11/95	OBSS	Background well			0.001								86	7.8								8					8				0.6		0.001			414					13.3				5075.56	
142	DW-47		11/21/95	OBSS	Background well	0.1		0.001	0.1			185		0.1	0.01	89.8	11.1	0.05		0.01	0.23	0.03	0.05		24	0.06	0.001	0.1	0.02		7.6			4.3	0.4		0.001		124	458	812.53				20.31	0.1		5076.1	0.21
142	DW-47		11/16/96	OBSS	Background well			0.001				158			0.01	80.5	8.1	0.05				0.05	0.05		16.2				0.05		8.2			4.2	0.2	1	0.001		124	379	677.693		0.2		2.6			5077.65	
142	DW-47		6/4/97	OBSS	Background well			0.001				193			0.01	80.5	8.7	0.05				0.05	0.05		18				0.05		8				0.2	1	0.001		120	404	728.143		0.2		12.186			5184.6	
142	DW-47		11/24/97	OBSS	Background well	0.1		0.001	0.1				176	0.1	0.005	84	8	0.05		0.01	0.25	0.05	0.05		23	0.06	0.001	0.1	0.02		7.9			5	0.2	1	0.001		119	362	691		0.2		21.3	0.1		5118.9	0.81
142	DW-47		5/8/98	OBSS	Background well			0.001				185			0.005	92.1	10.8	0.05				0.05	0.05		27.3				0.02		7.8				0.2	1	0.001		135	461	819		0.2		30.9			5112.45	
142	DW-47		11/9/98	OBSS	Background well	0.1		0.001	0.1			161		0.1	0.005	78	9	0.05		0.01	0.26	0.05	0.05		20	0.06	0.001	0.1	0.02		7.9			4.3	0.9	1	0.001		123	400	716		0.2		17	0.1		5119.1	0.41
142	DW-47		6/1/99	OBSS	Background well			0.001				152			0.005	73	10	0.05				0.05	0.05		18				0.02		7.8				1.3	1	0.001		124	369	672.493		0.2		15.0294			5116.25	
142	DW-47		11/5/99	OBSS	Background well	0.1		0.001	0.1			180		0.1	0.005	77.4	7	0.05		0.01	0.25	0.05	0.05		22.3	0.05	0.001	0.1	0.02		7.9			4.4	0.7	1	0.001		117	378	697.693		0.2		23.7627	0.1		5118.6	0.6
142	DW-47		6/2/00	OBSS	Background well			0.001				168			0.01	66.5	8.23	0.05				0.05	0.05		18.62				0.02		7.8				0.4	2.1	0.001		106.6	346.9	633.343	682	0.2		18.956			5121.35	
142	DW-47		11/21/00	OBSS	Background well																																											5119.1	
142	DW-47		5/9/01	OBSS	Background well			0.001				152			0.01	65.4	7.3	0.05				0.05	0.05		16.2				0.02		7.8				0.4	1	0.001		112	368	647		0.2		13.4			5121.45	
142	DW-47		10/31/01	OBSS	Background well	0.1		0.001	0.1			143		0.1	0.01	69	11	0.05		0.04	0.2	0.03	0.05		16	0.06	0.001	0.1	0.02		7.8			3.7	0.2	1	0.001		120	360			0.2		8.5	0.1		5114.85	0.05
142	DW-47		5/8/02	OBSS	Background well			0.001				149			0.01	75.3	8.98	0.05				0.03	0.05		16.8				0.02		0				0.2	1	0.001		127	386	689.13		0.2		10.2				
142	DW-47		1/20/03	OBSS	Background well			0.001							0.0005		6	0.001					0.001						0.001		7.85				0.4	1	0.001		120	302		3510			6.91			5121.6	
142	DW-47		7/17/03	OBSS	Background well			0.001			105				0.0005		5.9	0.00102					0.001						0.001		7.86			0.3	1	0.001		110	340		638			6.77				
144	DW-35		2/27/86	OBSS	Background well			0.001																	7.5									0.5		0.001			366					9			5012.9	
144	DW-35		3/25/86	OBSS	Background well			0.001			171					26	11								7.4									0.9		0.001			125		374			7.3				4996.9	
144	DW-35		5/26/86	OBSS	Background well			0.001																	7.68									2.4		0.001					460			2.6				5013.8	
144	DW-35		8/18/86	OBSS	Background well	0.1		0.001	0.1			146.4	212	0.06	0.002	38	12	0.01		0.01	0.22	0.01	0.05		7	0.03	0.0002	0.1	0.02	7.66				4	1.5		0.001		83	107		389			3.8	0.1		5016.1	0.005
144	DW-35		11/18/86	OBSS	Background well			0.001																	7.89									0.9		0.001					480			5.1				5012.7	
144	DW-35		2/5/87	OBSS	Background well																																											5012.8	
144	DW-35		6/3/87	OBSS	Background well			0.001				72.59				26	10												7.87					1.9		0.001			127		347			1.1				5017.71	
144	DW-35		8/25/87	OBSS	Background well																																											5022.12	
144	DW-35		12/9/87	OBSS	Background well	0.1		0.001	0.1			139.69		0.31	0.002	85	9	0.01		0.01	0.69	0.01	0.05		6	0.1	0.0005	0.1	0.02	8.15				3	0.7		0.001		85	109		350			0.6	0.1		5025.38	0.005
144	DW-35		2/26/88	OBSS	Background well																																											5026.03	
144	DW-35		5/23/88	OBSS	Background well			0.001				151.28				35	11												8.09					3		0.007			160		385			1.5				5026.62	
144	DW-35		8/31/88	OBSS	Background well																																											5029.62	
144	DW-35		11/7/88	OBSS	Background well	0.1		0.001	0.1			174.46		0.2	0.002	27	18	0.01		0.01	0.48		0.05		11	0.01	0.0002	0.1	0.02	7.89				3	0.7		0.001		84	137		378			1.2	0.1		5029.94	0.005
144	DW-35		5/3/89	OBSS	Background well			0.001				191.54				38	15												7.56					0.9		0.001			98		369			1.3				5030.94	
144	DW-35		11/21/89	OBSS	Background well																																											5033.06	
144	DW-35		1/18/90	OBSS	Background well	0.1		0.001	0.1			161.04		27	0.002	32	13	0.01		0.01	0.45	0.16	0.05		5	0.05	0.0002	0.1	0.02	7.36				4	0.7		0.001		84	114		329			0.1	0.1			0.018
144	DW-35		5/3/90	OBSS	Background well			0.001				187.88				75	16												7.34					1.6		0.001			138		366			0.2				5034.24	
144	DW-35		11/8/90	OBSS	Background well	0.1		0.002	0.1			175.68		0.04	0.002	22	8	0.01		0.01	0.36	0.01	0.05		5	0.01	0.0002	0.1	0.02	7.4				4	0.7		0.001		88	104		385			0.8	0.1		5037.29	0.021
144	DW-35		11/20/91	OBSS	Background well	0.1		0.001						0.1	0.01		10.9	0.05		0.01	0.25	0.05	0.05		8.21	0.05	0.001	0.05	0.05		8.1			5.1	0.2		0.001		97.5	139					0.7	0.1			0.02
144	DW-35		5/10/92	OBSS	Background well			0.001				190					4.9													8.4				0.2		0.007			133					0.2				5047.45	
144	DW-35		11/6/92	OBSS	Background well	0.1		0.001				197		0.1	0.01		6	0.05		0.01	0.33	0.06	0.05		6.8	0.06	0.001	0.1	0.02		7.4			4.2	0.5		0.002		92.9	163	420.6163				4.06	0.1		5046.86	0.02
144	DW-35		5/3/93	OBSS	Background well																																											5050.9	
144	DW-35		11/26/93	OBSS	Background well																																											5046.55	
144	DW-35		5/25/94	OBSS	Background well			0.001				185.7					4.4								7.3									0.3		0.001			133					1.354				
144	DW-35		6/11/94	OBSS	Background well																																											4925.9	
144	DW-35		11/29/94	OBSS	Background well																																											5054.7	
144	DW-35		5/18/95	OBSS	Background well			0.001								37	2.4												7.7					0.7		0.001			152					0.2				5056.3	
144	DW-35		11/21/95	OBSS	Background well	0.1		0.001	0.1			188		0.1	0.01	39.4	6.2	0.05		0.01	0.24	0.12	0.05		7.1	0.07	0.001	0.1	0.02		7.7			3.6	0.2		0.001		86.4	156	403.26				0.2	0.1		5056.48	0.03
144	DW-35		5/17/96	OBSS	Background well																																											5057.9	
144	DW-35		11/15/96	OBSS	Background well							167				41.2	6.2								7.5						7.6			3.8					83	153	378.643							5057	
144	DW-35		6/4/97	OBSS	Background well			0.001				203			0.01	43	5.6	0.05				0.05	0.05		7.6				0.05		8				0.2	1	0.001		83.6	158	401.183		0.2		0.2			5058.4	
144	DW-35		11/13/97	OBSS	Background well	0.1		0.001	0.1			188		0.1	0.006	40	5	0.05		0.01	0.28	0.05	0.05		7	0.04	0.001	0.1	0.02		7.8			4	0.2	1	0.001		89	139	379		0.2		0.2	0.1

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
148	TDM XXXII	TDM 32	10/20/86	OBSS				0.001								417	235						1	15					12.24			0.9		0.9		0.001				1879	19.6			1.1			5092.45	
148	TDM XXXII	TDM 32	1/2/87	OBSS				0.001								385	215						0.8	15					12.24			0.7		1		0.001			650		1867	1.5					5092.6	
148	TDM XXXII	TDM 32	4/10/87	OBSS				0.001								393	220						1	10					11.9			1.4		1.1		0.001			717		1860	2.1			1.1		5092.6	
148	TDM XXXII	TDM 32	8/13/87	OBSS				0.001								762	260						0.6	249					7.5			1.6		0.9		0.008			1460		2420	0.2			204		5091.78	
148	TDM XXXII	TDM 32	10/31/87	OBSS				0.001								501	245						2	159					7.12			1		1.1		0.001			1320		2848	2.2			52		5091.37	
148	TDM XXXII	TDM 32	1/13/88	OBSS				0.001								585	267						0.8	151					6.96			1		0.5		0.001			4570		3509	0.6			0.6		5067.96	
148	TDM XXXII	TDM 32	4/6/88	OBSS				0.0002								754	290						1	185					6.94			0.9		1.1		0.002			2110		3963	1.4			130		5091.18	
148	TDM XXXII	TDM 32	7/8/88	OBSS				0.002								729	315						1.1	224					6.91			2		0.3		0.011			1480		3883	1.2			123		5090.14	
148	TDM XXXII	TDM 32	10/15/88	OBSS																									6.98																	5089.42	
148	TDM XXXII	TDM 32	11/10/88	OBSS												681													6.98					0.9		0.003					4036				133			
148	TDM XXXII	TDM 32	2/13/89	OBSS				0.001		0.005		925.98	708		0.002	473	319	0.01			0.24	0.41	0.05	0.9	239		0.0002	0.1	0.02	7.54			1	4	1.6		0.12	0.01	289	1540		3668	0.6		64	0.1	2.4	5088.92	
148	TDM XXXII	TDM 32	5/10/89	OBSS				0.002				844.24			0.013	503	310	0.01				0.53	0.05		204				0.02	7.37				4	0.6	1.3	0.001		339	2080		3499	0.5		57			5088.49	
148	TDM XXXII	TDM 32	8/28/89	OBSS				0.001				761.28			0.01	271	280	0.01				0.53	0.05		230				0.02	7.24					0.8	1.4	0.001		271	1770		3422	0.9		103			5087.55	
148	TDM XXXII	TDM 32	11/20/89	OBSS								753.96				489	265							187					7.06					0.3	0.4			239	1710		3428			0.2			5087.09	
148	TDM XXXII	TDM 32	2/5/90	OBSS				0.001				834.48			0.008	569	290	0.01				1.8	0.05		215				0.02	7.02					0.8	0.9	0.001		292	1660		2655	0.7		71			5086.76	
148	TDM XXXII	TDM 32	5/3/90	OBSS								915				569	310							215					7.39									168	1720		3518						5086.4	
148	TDM XXXII	TDM 32	8/27/90	OBSS				0.002				900.6			0.01	730	268	0.01				1.01	0.05		215				0.02	7.2					0.9	1.6	0.007		255	1490		3604	0.2		63			5085.71	
148	TDM XXXII	TDM 32	11/8/90	OBSS								880.84				473	265							205					7.4									268	1350		3648						5085.19	
148	TDM XXXII	TDM 32	2/5/91	OBSS								908			0.01		274	0.05				1.04	0.05		218				0.05		7.5				0.2	1	0.001		250	1871	3803.23		0.2		118.8812				
148	TDM XXXII	TDM 32	8/4/91	OBSS				0.001				865			0.01		275	0.05				0.27	0.05		214				0.05		7.1				0.2	1	0.001		197	1957	3806.65		0.2		114			5088.49	
148	TDM XXXII	TDM 32	11/18/91	OBSS								810					320							213						7.1									220	2024	3923.16								
148	TDM XXXII	TDM 32	2/19/92	OBSS				0.001							0.01		272	0.05				0.38	0.05		201				0.02		7				0.2	3.8	0.001		271	1800			0.2		71.8			5082.4	
148	TDM XXXII	TDM 32	5/6/92	OBSS													244								183						6.9									249	1900	3188.7466							5081.95	
148	TDM XXXII	TDM 32	8/6/92	OBSS				0.003				741			0.01		249	0.05				0.111	0.05		239				0.02		7				0.8	1	0.006		276.73	2032	3860.43		0.2		94.78			5081.55	
148	TDM XXXII	TDM 32	11/6/92	OBSS								659					277							190						7.3			201						190	2192	4204.2212							5081	
148	TDM XXXII	TDM 32	2/5/93	OBSS				0.001				687			0.01		269	0.05				0.05	0.11		184				0.02	7.1				5.7	0.3	2.2	0.003		201	1861	3562.9278		0.2	93.4				5080.5	
148	TDM XXXII	TDM 32	5/3/93	OBSS								561					261							182						6.8									187									5080.2	
148	TDM XXXII	TDM 32	8/7/93	OBSS																																													5079.75	
148	TDM XXXII	TDM 32	11/25/93	OBSS																																													5079.25	
148	TDM XXXII	TDM 32	2/22/94	OBSS				0.001				760.5			0.01		274	0.05				4.61	0.05		200				0.02		6.9				8.6	1	0.002		163		3858.303		0.2		59.5			5078.75	
148	TDM XXXII	TDM 32	5/26/94	OBSS								680.8					291							200						7.1									193	1743	3480.843							5078.45	
148	TDM XXXII	TDM 32	8/24/94	OBSS																																													5078.05	
148	TDM XXXII	TDM 32	9/25/94	OBSS							714					667	297							204					6.7									187	1908	3620.443	3993							
148	TDM XXXII	TDM 32	11/25/94	OBSS																																													5077.63	
148	TDM XXXII	TDM 32	2/27/95	OBSS																																													5077.33	
148	TDM XXXII	TDM 32	5/16/95	OBSS																																														
148	TDM XXXII	TDM 32	8/21/95	OBSS																																													
148	TDM XXXII	TDM 32	11/21/95	OBSS																																													
148	TDM XXXII	TDM 32	2/28/96	OBSS																																													
148	TDM XXXII	TDM 32	5/17/96	OBSS																																													
148	TDM XXXII	TDM 32	8/20/96	OBSS																																													
148	TDM XXXII	TDM 32	11/16/96	OBSS																																													
148	TDM XXXII	TDM 32	2/22/97	OBSS																																													
148	TDM XXXII	TDM 32	6/4/97	OBSS																																													
148	TDM XXXII	TDM 32	11/24/97	OBSS																																													
148	TDM XXXII	TDM 32	2/4/98	OBSS																																													
148	TDM XXXII	TDM 32	5/7/98	OBSS																																													5077
148	TDM XXXII	TDM 32	8/6/98	OBSS																																													
148	TDM XXXII	TDM 32	11/9/98	OBSS																																													
148	TDM XXXII	TDM 32	2/1/99	OBSS																																													
148	TDM XXXII	TDM 32	4/16/99	OBSS																																													5112.9
148	TDM XXXII	TDM 32	5/19/99	OBSS																																													
148	TDM XXXII	TDM 32	9/13/99	OBSS																																													
148	TDM XXXII	TDM 32	11/5/99	OBSS																																													
148	TDM XXXII	TDM 32	2/9/00	OBSS																																													
148	TDM XXXII	TDM 32	6/2/00	OBSS																																													5112.9
148	TDM XXXII	TDM 32	3/2/01	OBSS																																													
148	TDM XXXII	TDM 32	11/1/01	OBSS																																													
149	TDM XXXIII	TDM 33	11/18/91														306								213						0									223	1998									
150	TDM XXXIV	TDM 34	1/17/86	OBSS																																														
150	TDM XXXIV	TDM 34	4/30/86	OBSS																																														
150	TDM XXXIV	TDM 34	7/24/86	OBSS		0.1		0.002	0.1			90.3	137	0.22	0.002	38	11	0.01		0.01	0.3	0.04	0.05	0.4	10	0.01	0.0002	0.1	0.02	7.24			0.8	4	2.9		0.001		122	264		509	0.6		10.3	0.1		5124.9	0.005
150	TDM XXXIV	TDM 34	10/29/86	OBSS				0.001								45	11						0.9	10					7.6			0.9		0.5		0.001			308		594	1.4			1.4			5116.7	
150	TDM XXXIV	TDM 34	1/7/87	OBSS				0.001				117	171			45	11						1	9					7.66			0.8		0.9		0.001			258		605	0.8			2.2			5117	
150	TDM XXXIV	TDM 34	4/14/87	OBSS				0.001								34	10						0.9	11					7.7			1		0.7		0.001			302		588	1.6			9.2			5114.9	
150	TDM XXXIV	TDM 34	8/17/87	OBSS		0.1		0.001	0.1			122		0.01	0.002	38	14	0.01	0.01	0.01			0.05	0.6	8		0.0002	0.1		8.4			1.3		1		0.001	0.01		273		482	1			2	0.01		5113.91	0.007
150	TDM XXXIV	TDM 34	10/28/87	OBSS				0.001								39	8						1.1	8					7.7			1		1.4		0.006			290		557	0.7			0.9			5113.1	
150	TDM XXXIV	TDM 34	1/19/88	OBSS								95.16				38	9					1	7		1.5				7.9			1.5		0.9		0.001			587		587	1			0.1			5114.43	
150	TDM XXXIV	TDM 34	4/6/88	OBSS				0.001								35	13						0.9	14					7.66			0.6		0.3		0.001			280		543	0.5						5115.72	
150	TDM XXXIV	TDM 34	7/8/88	OBSS				0.001				113.46				48	16						0.5	6					7.71			0.2		0.3		0.005			186		543	1.2			0.5			5113.29	
150	TDM XXXIV	TDM 34	10/15/88	OBSS				0.001								50	16						1.6	7					7.52			1		1.2		0.001			156		438	0.66			0.05			5114.46	
150	TDM XXXIV	TDM 34	2/21/89	OBSS				0.001				168.36				34	31						1	7					7.37			0.9		0.4		0.001			208		540	0.9			0.2			5111.21	
150	TDM XXXIV	TDM 34	8/28/89	OBSS		0.1		0.001	0.1			159.82		0.01	0.004	38	11	0.01		0.01	0.17	0.01	0.05		9	0.01	0.0002	0.1	0.02	7.35				3	0.2		0.001		138	250		495		0.5	0.1			5110.49	0.029
150	TDM XXXIV	TDM 34	2/5/90	OBSS				0.001				148.84				37	13													7.75					0.7		0.001			270		419				0.2			5108.39	
150	TDM XXXIV	TDM 34	8/27/90	OBSS		0.1		0.001	0.1			192.76		0.11	0.002	51	28	0.01		0.01	0.42	0.01	0.01		8	0.02	0.0002	0.1	0.02	7.6					0.3		0.002		132	240		541		0.2	0.1			5107.69	0.006
150	TDM XXXIV	TDM 34	2/5/91	OBSS				0.001				178					8.35														7.1				0.6		0.001			271						0.2031			
150	TDM XXXIV	TDM 34	8/4/91	OBSS		0.1		0.001				157		0.1	0.01		6.6	0.05		0.03	0.32	0.08	0.05		8.4	0.01	0.001	0.1	0.05		7			3.3	0.2		0.001		136	305	580.51			0.7	0.1			0.01
150	TDM XXXIV	TDM 34	2/19/92	OBSS				0.001									17.5													7.3					0.2		0.023			390				2			5109.54	
150	TDM XXXIV	TDM 34	8/6/92	OBSS		0.1		0.001				182.5		0.1	0.01		15.4	0.05		0.1	0.51	0.05	0.05		17.19	0.056	0.001	0.1	0.02		7.1			4.27	0.4		0.01		164.6	378	741.51			2.03	0.1		5105.82	0.01
150	TDM XXXIV	TDM 34	2/5/93	OBSS				0.001				144					8.9													7.7					0.2		0.001			293				0.2					
150	TDM XXXIV	TDM 34	2/8/93	OBSS																																													5099.9	
150	TDM XXXIV	TDM 34	8/7/93	OBSS																																													5099.5	
150	TDM XXXIV	TDM 34	2/22/94	OBSS				0.001				166.2					10.3														7.1					0.9		0.001			345				4.4			5099.55	
150	TDM XXXIV	TDM 34	8/24/94	OBSS		0.1		0.001	0.1		125			0.1	0.01	66.9	9.1	0.05		0.01	0.35	0.05	0.05		8.2	0.09	0.001	0.1	0.02	6.8				2.6			0.002		118	327		605		1	0.1		5098.4	0.03
150	TDM XXXIV	TDM 34	2/27/95	OBSS				0.001				205.9				56	7													7.2					0.8		0.001			303				0.677			5097.65	
150	TDM XXXIV	TDM 34	8/21/95	OBSS		0.1		0.001	0.1			175		0.1	0.01	57	12.2	0.05		0.01	0.37	0.05	0.05		8.6	0.06	0.001	0.1	0.05		6.7			3.4	0.6		0.001		146	311	627.001			0.2	0.1		5096.2	0.05
150	TDM XXXIV	TDM 34	2/28/96	OBSS				0.001				178					57.2	12.1													6.7					0.6		0.001			325				0.2			5097.08	
150	TDM XXXIV	TDM 34	8/20/96	OBSS		0.1		0.001	0.1			157		0.1	0.01	54	13.1	0.05		0.01	0.3	0.06	0.05		8.9	0.11	0.001	0.1	0.05		7.2			3.4	0.2		0.001		149	326	647.2256			0.2	0.1		5095.5	0.08
150	TDM XXXIV	TDM 34	2/22/97	OBSS				0.001				438				57.6	12													8.1					1.8		0.001			344				1.4			5093.84	
150	TDM XXXIV	TDM 34	8/26/97	OBSS		0.21		0.001	0.1			175		0.1	0.01	65.9	15.4	0.05		0.22	0.33	2.77	0.05		10.3	0.03	0.001	0.1	0.02		6.9			3.9	0.8		0.001		150	384	748			12.2	0.1			0.07
150	TDM XXXIV	TDM 34	2/4/98	OBSS				0.001				170				67.7	15													6.6					3.1		0.001			385				0.2			5093.76	
150	TDM XXXIV	TDM 34	8/6/98	OBSS		0.1		0.001	0.1			171		0.1	0.005	67.4	15	0.05		0.08	0.32	0.07	0.05		10.6	0.04	0.001	0.1	0.02		6.8			4	1		0.001		162	380	726			0.7	0.1		5095.6	0.15
150	TDM XXXIV	TDM 34	2/3/99	OBSS				0.001				164				73.4	17.2													6.8					1.2		0.001			431				0.2			5095.06	
150	TDM XXXIV	TDM 34	8/13/99	OBSS		0.1		0.001	0.1			154		0.1	0.01	62.1	20.2	0.05		0.04	0.29	0.03	0.05		10.1	0.01	0.001	0.1	0.02		6.7			3.8	1.1		0.001		151	381	706.1821			0.46	0.1			0.05
150	TDM XXXIV	TDM 34	9/13/99	OBSS																																													5095.5	
150	TDM XXXIV	TDM 34	1/1/00	OBSS																																													5305.2	
150	TDM XXXIV	TDM 34	2/9/00	OBSS				0.001				159				71.4	18.7													6.7					0.5		0.001			427				0.2			5094.2	
150	TDM XXXIV	TDM 34	9/6/00	OBSS		0.1		0.001	0.1			173		0.1	0.01	69.7	19.1	0.05		0.01	0.27	0.03	0.05		12.6	0.01	0.001	0.1	0.02		6.7			4.3	0.5		0.001		149	378	720	773		0.2	0.1		5094.3	0.05
150	TDM XXXIV	TDM 34	3/2/01	OBSS				0.001				144				73.3	20.1													6.7					0.5		0.001			437				0.2			5094	
150	TDM XXXIV	TDM 34	8/1/01	OBSS		0.001			0.03					0.04	0.0001	78	22			0.008	0.3				13	0.018		0.0005	0.004					3.9	0.4				150	410				0.0474			5094.14	0.1
150	TDM XXXIV	TDM 34	5/17/02	OBSS				0.001				181				130	29.5													0					0.5		0.00112			512				1.35					
150	TDM XXXIV	TDM 34	10/11/02	OBSS		0.1		0.001	0.1			172		0.1	0.01	73.5	16.48	0.05		0.01	0.28	0.09	0.05		12.22	0.31	0.001	0.1	0.02		6.7			3.72	0.4		0.001		157.5	413.2	763.55					0.1	5096	0.01
151	TDM XXXV	TDM 35	1/17/86	TDSS	TDSS Keywell - Cl Mixing model																																														
151	TDM XXXV	TDM 35	4/30/86	TDSS	TDSS Keywell - Cl Mixing model																																														
151	TDM XXXV	TDM 35	7/24/86	TDSS	TDSS Keywell - Cl Mixing model	0.1		0.001	0.1			97.6	178	0.03	0.002	37	11	0.01		0.01	0.27	0.01	0.05	0.9	8	0.01	0.0002	0.1	0.02	7.54			0.5	4	0.9		0.001		111	214		446	0.6		4	0.1		5135.65	0.005
151	TDM XXXV	TDM 35	10/29/86	TDSS	TDSS Keywell - Cl Mixing model			0.001								55	9						0.9	11					7.63			0.8		0.7		0.001			278		597	0.9			1.4			5124.5	
151	TDM XXXV	TDM 35	1/7/87	TDSS	TDSS Keywell - Cl Mixing model			0.001				134	190			40	10						0.9	12					7.64			0.8		1.3		0.001			226		567	1.1			0.7			5121.8	
151	TDM XXXV	TDM 35	4/14/87	TDSS	TDSS Keywell - Cl Mixing model			0.001								38	12						0.6	13					7.8			1.9		0.6		0.001			294		579	0.7			3.9			5112.3	
151	TDM XXXV	TDM 35	8/31/87	TDSS	TDSS Keywell - Cl Mixing	0.1		0.001	0.1			180.56		0.25	0.002	38	11	0.01		0.01	0.33	0.06	0.05	2.5	10	0.06	0.0002	0.1	0.02	8			1.1	4	2.9		0.001		124	270		591	0.9		1	0.1		5101.8	0.007
151	TDM XXXV	TDM 35	10/31/87	TDSS	TDSS Keywell - Cl Mixing model			0.001								40	9						1.1	13					7.76			1		1		0.001			254		582	1.2			0.1			5101.12	
151	TDM XXXV	TDM 35	1/19/88	TDSS	TDSS Keywell - Cl Mixing model			0.001				189.1				51	9						1.1	11					7.9			1.1		0.9		0.001			250		606	0.4			0.1			5102.37	
151	TDM XXXV	TDM 35	4/6/88	TDSS	TDSS Keywell - Cl Mixing model			0.001								55	10						1	10					7.63			0.8		1.1		0.002			294		558	0.6						5096.82	
151	TDM XXXV	TDM 35	7/8/88	TDSS	TDSS Keywell - Cl Mixing	0.1		0.001	0.1			153.11		0.15	0.004	56	10	0.01		0.01	0.99	0.05	0.05	1.3	8	0.05	0.0002	0.1	0.02	7.82			0.9	3	1.2		0.016		132	290		520	0.3		0.5	0.1		5095.89	0.006
151	TDM XXXV	TDM 35	10/6/88	TDSS	TDSS Keywell - Cl Mixing model			0.001								64	14						1.7	8					8.01			1.3		0.5		0.002			242		425	0.28			0.05			5096.93	
151	TDM XXXV	TDM 35	2/21/89	TDSS	TDSS Keywell - Cl Mixing model			0.001				226.92				40	27						1.2	11					7.86			0.9		0.9		0

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
151	TDM XXXV	TDM 35	2/22/94	TDSS	TDSS Keywell - Cl Mixing model			0.001				256.7					36.6													7.2					0.9		0.001											5084.29	
151	TDM XXXV	TDM 35	8/24/94	TDSS	TDSS Keywell - Cl Mix	0.1		0.001	0.1		374			0.1	0.01	346	90.2	0.05		0.01	0.2	1.47	0.05		93.6	0.25	0.001	0.1	0.02	6.9				6.9			0.006		184	1055		1952			0.1		5079.9	0.03
151	TDM XXXV	TDM 35	2/27/95	TDSS	TDSS Keywell - Cl Mixing model			0.005																																						5075.7	
151	TDM XXXV	TDM 35	8/21/95	TDSS	TDSS Keywell - Cl Mix	0.1		0.001	0.1			204		0.1	0.01	57	8.8	0.05		0.01	0.3	0.05	0.05		10	0.01	0.001	0.1	0.05		7.6			4	0.2		0.001		130	266	578.951			0.2	0.1	5076	0.02
151	TDM XXXV	TDM 35	2/28/96	TDSS	TDSS Keywell - Cl Mixing model			0.001				540				440	126													6.9					1.7		0.001			1262						0.2708		5074.45	
151	TDM XXXV	TDM 35	8/20/96	TDSS	TDSS Keywell - Cl Mix	0.1		0.001	0.1			391		0.1	0.01	271	78.7	0.05		0.01	0.21	0.05	0.05		60.1	0.17	0.001	0.1	0.05		7.5			8.3	0.8		0.001		162	867	1657.1105					0.8124	0.1	5075.05	0.03
151	TDM XXXV	TDM 35	2/22/97	TDSS	TDSS Keywell - Cl Mixing model			0.001				341				339	115													7.4				2			0.002			949						4.1		5073.83	
151	TDM XXXV	TDM 35	8/26/97	TDSS	TDSS Keywell - Cl Mix	0.13		0.001	0.1			246		0.1	0.01	149	53.2	0.05		0.16	0.28	2.81	0.05		29.9	0.06	0.001	0.1	0.02		7.8			9.5	0.5		0.048		136	483	1055				0.1	2			0.06
151	TDM XXXV	TDM 35	2/4/98	TDSS	TDSS Keywell - Cl Mixing model			0.001				463				404	149													7					5.4		0.002			1100						1		5073.67	
151	TDM XXXV	TDM 35	8/6/98	TDSS	TDSS Keywell - Cl Mix	0.1		0.001	0.1			502		0.1	0.005	476	186	0.05		0.03	0.18	1.37	0.05		92.5	0.26	0.001	0.1	0.02		7.3			12.2	2.6		0.002		194	1240	2456				0.1	1.1	0.1	5074.5	0.07
151	TDM XXXV	TDM 35	2/1/99	TDSS	TDSS Keywell - Cl Mixing model			0.001				630				657	218													7.1					2.1		0.002			1760						0.7		5074.3	
151	TDM XXXV	TDM 35	8/13/99	TDSS	TDSS Keywell - Cl Mix	0.1		0.001	0.1			655		0.1	0.01	605	202	0.05		0.01	0.1	0.05	0.05		151	0.35	0.001	0.1	0.02		7.3			14.1	1.5		0.001		198	1650	3148.8106					0.6003	0.1		0.04
151	TDM XXXV	TDM 35	9/13/99	TDSS	TDSS Keywell - Cl Mixing model																																											5074.4	
151	TDM XXXV	TDM 35	2/9/00	TDSS	TDSS Keywell - Cl Mixing model			0.001				659				653	207													7.1					1.5		0.001			1690						1.23		5072.9	
151	TDM XXXV	TDM 35	9/6/00	TDSS	TDSS Keywell - Cl Mixing model																																												
151	TDM XXXV	TDM 35	10/27/00	TDSS	TDSS Keywell - Cl Mixing model																																											5073	
151	TDM XXXV	TDM 35	3/2/01	TDSS	TDSS Keywell - Cl Mixing model			0.001				720				758	221													7.1					0.3		0.005			1910						0.339		5073	
151	TDM XXXV	TDM 35	8/1/01	TDSS	TDSS Keywell - Cl Mix	0.002		0.0005	0.02					0.06	0.0002	650	190	0.001		0.008	0.1	0.008			150	0.36		0.00007	0.02					14	0.6		0.0018		190	1700					0.433	0.0003		5073.1	0.019
151	TDM XXXV	TDM 35	2/27/02	TDSS	TDSS Keywell - Cl Mixing model			0.001				725				681	233					0.13								7.1					0.4		0.001			1870						0.39			
151	TDM XXXV	TDM 35	10/11/02	TDSS	TDSS Keywell - Cl Mix	0.1		0.001	0.1			725		0.1	0.01	708	190.2	0.05		0.01	0.1	0.69	0.05		163.3	0.39	0.001	0.1	0.03		7.1			12.84	0.4		0.00449		197	1878	3514.31			0.0003		5072.7	0.1		0.02
152	TDM XXXVI	TDM 36	1/14/86	OBSS				0.001								124	30						1.2	56					7.31		0.9			1.4		0.001			336		850	1.2			14		5097	
152	TDM XXXVI	TDM 36	4/24/86	OBSS				0.001								200	41						1.1	66					7.19		0.9			1.3		0.001			565		1234	0.9			32		5099	
152	TDM XXXVI	TDM 36	7/21/86	OBSS		0.1		0.001	0.1			141.5	210	0.04	0.002	116	27	0.01		0.01	0.27	0.01	0.05	1.3	49	0.01	0.0002	0.1	0.02	7.25		0.4	4	0.6		0.001		32	290		701	0.7		6.3	0.1	5103.95	0.005
152	TDM XXXVI	TDM 36	10/22/86	OBSS				0.001								156	34							1	63					7.15		0.7		0.7		0.001			422		948	0.9			14		5097.7	
152	TDM XXXVI	TDM 36	1/14/87	OBSS				0.001				220	288			204	42							1	61					7.3				1.7		0.001			442		1149	0.9			13		5097.8	
152	TDM XXXVI	TDM 36	4/15/87	OBSS				0.001								108	24							2.1	54					7.3		0.7		0.6		0.001			328		697	0.8			8		5096.8	
152	TDM XXXVI	TDM 36	8/17/87	OBSS		0.1		0.001	0.1			180.56		0.01	0.002	111	17	0.01	0.01	0.01			0.05	0.9	36		0.0002	0.1		8.17		0.9		0.7		0.008	0.01		205		502	0.4		11	0.01	5096.4	0.03
152	TDM XXXVI	TDM 36	10/28/87	OBSS				0.001								152	33							1.3	56					7.39		0.7		1.6		0.01			428		917	1.7			11		5095.88	
152	TDM XXXVI	TDM 36	1/13/88	OBSS				0.001				214.72				200	41							1.1	54					7.6		1.1		1		0.005			500		1102	0.5			0.1		5095.4	
152	TDM XXXVI	TDM 36	4/6/88	OBSS				0.001								257	60							1.1	63					7.25		0.6		1.7		0.008			650		1245	1.4			16		5094.76	
152	TDM XXXVI	TDM 36	7/8/88	OBSS		0.1		0.001	0.1			193.37		0.08	0.004	164	44	0.01		0.01	1.07	0.07	0.05	1.5	46	0.02	0.0002	0.1	0.02	7.58		0.2	3	2		0.011		34	300		819	1		21	0.1	5093.98	0.026
152	TDM XXXVI	TDM 36	10/18/88	OBSS				0.001								216	242							1.7	43					7.44		1.6		1.8		0.015			382		920	0.3			14		5093.21	
152	TDM XXXVI	TDM 36	2/13/89	OBSS				0.001				219.6				152	35							0.8	51					7.34		1.1		1.1		0.009			330		927	0.6			9.2		5092.53	
152	TDM XXXVI	TDM 36	8/28/89	OBSS		0.1		0.001	0.1			268.4		0.01	0.0003	214	12	0.01		0.01	0.19	0.02	0.05		70	0.04	0.0002	0.1	0.02	7.27			5	0.4		0.004		55	530		1244				13	0.1	5090.82	0.033
152	TDM XXXVI	TDM 36	2/5/90	OBSS				0.001				263.52				2289	65													7.34				1.1		0.006			600		1130				5.5		5089.49	
152	TDM XXXVI	TDM 36	8/27/90	OBSS		0.1		0.001	0.1			373.32		0.08	0.005	304	89	0.01		0.01	0.19	0.04	0.01		107	0.08	0.0002	0.1	0.02	7.2			7	0.5		0.008		100	1000		1842			7	0.1	5087.47	0.026
152	TDM XXXVI	TDM 36	2/5/91	OBSS				0.001				539				168														7.3				1.7		0.002			1622						29.1787			
152	TDM XXXVI	TDM 36	8/4/91	OBSS		0.15		0.001				590		0.1	0.01	173	0.05		0.02	0.12	0.06	0.05		167	0.28	0.001	0.1	0.05		7.3			12.5	2.5		0.001		157	2054	3474.62					38.8	0.1		0.05
152	TDM XXXVI	TDM 36	2/19/92	OBSS				0.001								192									155					7				0.3		0.001			1841						22.3		5105.64	
152	TDM XXXVI	TDM 36	8/19/92	OBSS		0.1		0.001						0.1	0.01	155	0.05		0.01	0.1	0.124	0.06		177.44	0.316	0.001	0.1	0.02					17.46	3.3		0.001		195.88	956						46.04	0.1	5083.28	0.082
152	TDM XXXVI	TDM 36	2/5/93	OBSS				0.001				324					69.9													7.2				0.7		0.005			923						16.93		5083.05	
152	TDM XXXVI	TDM 36	8/7/93	OBSS																																											5081.3	
152	TDM XXXVI	TDM 36	2/22/94	OBSS				0.002				506.5				139														6.9				0.2		0.001			1846						9.9		5082.45	
152	TDM XXXVI	TDM 36	8/24/94	OBSS		0.1		0.001	0.1		354			0.1	0.01	475	103	0.05		0.01	0.11	0.05	0.05		123	0.2	0.001	0.1	0.02	6.9				10		0.003		114	1400		2488			0.1		5082.25	0.03
152	TDM XXXVI	TDM 36	2/27/95	OBSS																																											5080.89	
152	TDM XXXVI	TDM 36	8/21/95	OBSS		0.1		0.001	0.1			527		0.1	0.01	724	162	0.05		0.01	0.1	0.75	0.05		137	0.04	0.001	0.1	0.05		6.9			14.8	1.4		0.001		180	1872	3355.001					31.819	0.1	5082.1	0.04
152	TDM XXXVI	TDM 36	2/28/96	OBSS				0.001				331				412	101													6.9				1.1		0.003			1170						31.142		5079.39	
152	TDM XXXVI	TDM 36	8/20/96	OBSS		0.1		0.001	0.1			295		0.1	0.01	280	63.8	0.05		0.01	0.13	0.05	0.05		82	0.05	0.001	0.1	0.05		7.5			8.1	0.3		0.012		80.5	845	1570.705					20.987	0.1	5079.25	0.03
152	TDM XXXVI	TDM 36	2/22/97	OBSS				0.002				165				464	7.9													7.5				1.8		0.014			135						21.7		5079.35	
152	TDM XXXVI	TDM 36	8/26/97	OBSS		0.1		0.001	0.1			490		0.1	0.01	552	149	0.05		0.01	0.12	2.4	0.05		112	0.34	0.001	0.1	0.02		7.4			13.7	0.6		0.001		169	1670	2941					13.5	0.1		0.02
152	TDM XXXVI	TDM 36	2/4/98	OBSS				0.001				295				392	79.1													7.1				1.5		0.01			1200						26.7		5079.22	
152	TDM XXXVI	TDM 36	8/6/98	OBSS		0.1		0.001	0.1			194		0.1	0.005	284	53	0.05		0.01	0.16	0.39	0.05		89.1	0.04	0.001	0.1	0.02		7.3			6.2	1.2		0.017		58.2	846	1500					25.5	0.1		0.03
152	TDM XXXVI	TDM 36	8/7/98	OBSS																																											5079.2	
152	TDM XXXVI	TDM 36	2/1/99	OBSS				0.001				139				174	16.3													7.3					1.3		0.019			602						20.4		5079.2	
152	TDM XXXVI	TDM 36	8/13/99	OBSS		0.1		0.001	0.1			224		0.1	0.01	246	58.8	0.05		0.01	0.14	0.03	0.05		77.2	0.05	0.001	0.1	0.02		7.3			6	0.7		0.016		59.1	794	1389.1546			0.0345			0.1		0.02
152	TDM XXXVI	TDM 36	9/13/99	OBSS																																											5079.1	
152	TDM XXXVI	TDM 36	2/9/00	OBSS				0.001				226				278	60													7.3					0.2		0.007			869						33.9		5079.2	
152	TDM XXXVI	TDM 36	9/6/00	OBSS		0.1		0.001	0.1			319		0.1	0.01	367	110	0.05		0.01	0.1	0.03	0.05		94.7	0.02	0.001	0.1	0.02		7.3			11.1	0.4		0.003		135	1180	2062	2530				17.6	0.1	5079.1	0.01
152	TDM XXXVI	TDM 36	3/2/01	OBSS				0.001				281				362	88.1													7.3					0.4		0.008			1090						15		5079.2	
152	TDM XXXVI	TDM 36	8/1/01	OBSS		0.03		0.0004	0.02					0.04	0.0003	190	39			0.002	0.2	0.009			65	0.077		0.0004	0.003					5	0.2		0.0019		100	630						16.2	0.0001		0.007
152	TDM XXXVI	TDM 36	8/2/01	OBSS																																											5079.2	
152	TDM XXXVI	TDM 36	10/11/02	OBSS		0.1		0.001	0.1			461		0.1	0.01	504	120.8	0.05		0.01	0.13	0.27	0.05		126.6	0.36	0.001	0.1	0.02		7.3			11.04	0.9		0.001855		130.6		2483.44			0.02			0.1	5077.25	0.01
166	Spring		8/26/97			0.1		0.001	0.1			355		0.1	0.01	142	27.6	0.05		0.01	0.29	0.48	0.05		40	0.31	0.001	0.1	0.02		7.8			4.3	0.2	1	0.001		55.2	295	768		0.2		68.4	0.1		0.05
167	Highland		1/8/86	Reservoir				0.005																7.77						7.4				7.4		0.016					619				2153		5217.6	
167	Highland		2/18/86	Reservoir				0.001								64	19							7.6						6.6				6.6		0.014			228		620				1866		4952.6	
167	Highland		3/26/86	Reservoir																				7.3						10.5											605				1880			
167	Highland		4/22/86	Reservoir																				7.9						7											674				1917			
167	Highland		5/22/86	Reservoir				0.001																8.2						10.8						0.013					741				2526			
167	Highland		6/27/86	Reservoir																				8.01						6.1											888				1986			
167	Highland		7/17/86	Reservoir																				7.42						4.2											697				2081			
167	Highland		8/14/86	Reservoir		0.1		0.002	0.1			73.2	115	0.16	0.002	77	22	0.01		0.01	0.27	0.07	0.05		16	0.03	0.0002	0.1	0.02	7.25			9	3.2		0.011		99	360		672				1392	0.1		0.005
167	Highland		9/24/86	Reservoir																				7.18						1.5											669				2440			
167	Highland		11/19/86	Reservoir				0.001																7.95						4.9						0.016					720				2239			
167	Highland		2/11/87	Reservoir				0.002				69	69			63	17							7.55						9						0.014			294		479				1550			
167	Highland		6/25/87	Reservoir																				8.27						6.1						0.215					641				1837			
167	Highland		6/30/87	Reservoir																																											4968.5	
167	Highland		8/31/87	Reservoir		0.1		0.001	0.1			93.3		0.15	0.002	76	24	0.01		0.01	0.33	0.03	0.05		20	0.02	0.0002	0.1	0.02	8.19			9	5.8		0.196		89	350		707				3477	0.1	4968.5	0.005
167	Highland		9/30/87	Reservoir																																											4969.5	
167	Highland		10/28/87	Reservoir		0.1		0.001	0.1			104.92		0.15	0.002	74	30	0.01	0.01	0.08	0.36	0.13	0.05	1.6	22	0.01	0.0002	0.1	0.07	7.83		0.7	8	6.8		0.16	0.1	90	360		670	4.2			2411	0.1		0.005
167	Highland		11/30/87	Reservoir																																											4970.7	
167	Highland		12/17/87	Reservoir				0.001																7.79						3						0.29					665				1947			
167	Highland		1/28/88	Reservoir																																											4972.5	
167	Highland		2/28/88	Reservoir				0.002				85				74	22							7.75						7.7						0.017			300		611				1780		5094.19	
167	Highland		3/30/88	Reservoir																																											4974.1	
167	Highland		4/28/88	Reservoir																																											4974.7	
167	Highland		5/27/88	Reservoir				0.001																8						9						0.268					621				1952		4975.3	
167	Highland		6/30/88	Reservoir																																											4975.8	
167	Highland		7/31/88	Reservoir																																											4976	
167	Highland		8/31/88	Reservoir		0.1		0.001	0.1			87		0.22	0.002	90	24	0.01		0.01	0.21	0.02	0.05		16	0.03	0.0002	0.1	0.02	8.02			9	12.1		0.132		103	364		726				2526	0.1		0.007
167	Highland		9/27/88	Reservoir																																											4976.4	
167	Highland		10/27/88	Reservoir																																											4967.9	
167	Highland		11/29/88	Reservoir				0.001																8.12						6.8						0.194					665				2138		4977.43	
167	Highland		12/3/88	Reservoir																																											4978.3	
167	Highland		1/13/89	Reservoir				0.001								38	31							7.76						5						0.155			450		677				2084		4978.72	
167	Highland		3/29/89	Reservoir																																											4980.26	
167	Highland		5/2/89	Reservoir																																											4980.9	
167	Highland		5/23/89	Reservoir				0.001																8.11						3.6						0.195					677				1906		5115.97	
167	Highland		8/28/89	Reservoir		0.1		0.001	0.1			132.98		0.01	0.003	78	34	0.01		0.01	0.2	0.02	0.05		23	0.01	0.0002		0.02	8.1			11	5.7		0.063		107	360		683				1665			0.018
167	Highland		1/18/90	Reservoir				0.001				119.56				88	28							7.82						2.2						0.141			340		770				1917			
167	Highland		8/28/90	Reservoir		0.1		0.001	0.01			122		0.07	0.002	101	32	0.01		0.01	0.34	0.03	0.01		22	0.01	0.0002	0.1	0.02	8.7			9	4.8		0.163		105	312		731				461	0.1		0.005
167	Highland		1/14/91	Reservoir								171					22.6						0.05		26.5						7.6				5.1		0.155		101	452	788.6					1627.3726			
167	Highland		8/4/91	Reservoir		0.1		0.001				146		0.1	0.01		24.9	0.05		0.02	0.21	0.05	0.05		24	0.01	0.001	0.1	0.05		8.4			9	3.5		0.157		90.2	392	695.51					1738	0.1		0.01
167	Highland		4/27/92	Reservoir				0.001				154					22.4													8.4				3.6		0.247			401	2136.3					1534			
167	Highland		8/6/92	Reservoir		0.1		0.003				154		0.1	0.01		24.3	0.05		0.01	0.34	0.05	0.05		30.78	0.021	0.001	0.1	0.024		8.2			12.39	1.9		0.171		130.4	430	794.18					2281.49	0.1		0.01
167	Highland		2/5/93	Reservoir				0.001				130					23.1													8.2				3.8		0.138			435						1853.7			
167	Highland		2/28/94	Reservoir				0.001				144.7					23.2													7.6				4.6		0.081			485						1646			
167	Highland		3/31/94	Reservoir																																											5005.655	
167	Highland		8/24/94	Reservoir		0.1		0.001	0.1		118			0.1	0.01	118	24.9	0.05		0.01	0.26	0.05	0.05		25.6	0.01	0.001	0.1	0.02	7.1			9.9			0.057		94.3	451		814					0.1		0.01
167	Highland		9/29/94	Reservoir																																											5006.545	
167	Highland		12/21/94	Reservoir															

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
167	Highland		7/9/97	Reservoir																																										5017.15	
167	Highland		8/26/97	Reservoir		0.11		0.001	0.1			140		0.1	0.01	112	30.2	0.05		0.01	0.28	0.22	0.05		28.7	0.01	0.001	0.1	0.02		8.3			11.2	3.1	1	0.132		113	489	880		0.2		1770	0.1			0.01
167	Highland		9/24/97	Reservoir																																									5017.45	
167	Highland		12/24/97	Reservoir																																									5017.9	
167	Highland		4/3/98	Reservoir				0.002				154			0.005	106	28.2	0.05					0.05	0.05		27.6				0.02		8.1				3.9	1	0.133		114	453	806		0.2		2090				
167	Highland		4/4/98	Reservoir																																									5019.27	
167	Highland		6/24/98	Reservoir																																									5020	
167	Highland		8/7/98	Reservoir		0.1		0.005	0.1			146		0.1	0.005	118	31.7	0.05		0.01	0.28	0.05	0.05		30.6	0.01	0.001	0.1	0.02		8.3			11.1	3.7	1	0.116		117	484	866		0.2		1880	0.1			0.01
167	Highland		9/17/98	Reservoir																																									5019.92	
167	Highland		12/31/98	Reservoir																																									5020.65	
167	Highland		3/31/99	Reservoir																																									5022.97	
167	Highland		6/4/99	Reservoir				0.002				152			0.005	109	30.3	0.05					0.05	0.05		28.7				0.02		8.2				4	1	0.129		117	455	818.493		0.2		2050				
167	Highland		7/17/99	Reservoir																																									5023.32	
167	Highland		8/16/99	Reservoir		0.1		0.004	0.1			142		0.1	0.01	101	32.6	0.05		0.01	0.25	0.03	0.05		29.1	0.01	0.001	0.1	0.02		8.3			9.8	3.7	1.5	0.131		103	445	792.3575		0.2	3.05		0.1			0.01
167	Highland		9/26/99	Reservoir																																									5023.21	
167	Highland		12/12/99	Reservoir																																									5023.43	
167	Highland		4/1/00	Reservoir																																									5024.4	
167	Highland		6/1/00	Reservoir				0.00581				148			0.005	94.7	32.91	0.05					0.05	0.05		26.19				0.02		8.2				3.9	3.4	0.117		99.9	422	752.193	854	0.2		1900				
167	Highland		6/19/00	Reservoir																																									5025.12	
167	Highland		9/5/00	Reservoir		0.1		0.004	0.1			135		0.1	0.01	102	34	0.05		0.01	0.27	0.03	0.05		28.8	0.01	0.001	0.1	0.02		8.2			10.3	3.9	1	0.11		105	468	808	860	0.2		0.2	0.1			0.01
167	Highland		10/2/00	Reservoir																																									5024.63	
167	Highland		12/19/00	Reservoir																																									5024.96	
167	Highland		4/2/01	Reservoir																																									5026.04	
167	Highland		5/29/01	Reservoir				0.003				147			0.01	102	30.1	0.05					0.05	0.05		28.1				0.02		8.2				4.2	1	0.125		109	426	771.19		0.2		2060				
167	Highland		6/12/01	Reservoir																																									5026.48	
167	Highland		8/2/01	Reservoir		0.004		0.0028	0.04			140		0.04		110	28.3	0.0002		0.002	0.3	0.03	0.05		30.8	0.003	0.001	0.02	0.003		8.2			10.7	3.6	1	0.125		110	454	810		0.2		2336	0.0007			0.004
167	Highland		4/12/02	Reservoir				0.001					148		0.01	117	34.3	0.05					0.03	0.05		31.3				0.02		8.06				3.7	1	0.12		118	510	888.27		0.2		2160				
167	Highland		10/15/02	Reservoir		0.1		0.001	0.1			144		0.1	0.01	101.1	33.56	0.05		0.01	0.27	0.03	0.05		28.81	0.01	0.001	0.1	0.02		8.2			10.19	4.3	1	0.1		111.8	474.6	835.33		0.2	2.88		0.1			0.01
167	Highland		4/23/03	Reservoir				0.001							0.0005			0.001					0.001		0.0017				0.0017		8.45						0.0984		120	580		919							5027.97	
167	Highland		7/29/03	Reservoir				0.001			102				0.0005		36	0.001					0.001		0.0023				0.0023		8.47				3.4	1	0.12		111	519		1100			2085.16				
168	Highland @ 1/3		3/26/86	Reservoir	1/3 depth											63														7.3				12								610						
168	Highland @ 1/3		6/27/86	Reservoir	1/3 depth											75														7.63				12.3								623						
168	Highland @ 1/3		8/14/86	Reservoir	1/3 depth											71														7.3				8.7								669						
168	Highland @ 1/3		1/12/87	Reservoir	1/3 depth											74														7.94				11.1								665						
168	Highland @ 1/3		7/17/87	Reservoir	1/3 depth											76														8.15												651						
168	Highland @ 1/3		2/2/88	Reservoir	1/3 depth											90														8				4.4								778						
168	Highland @ 1/3		7/28/88	Reservoir	1/3 depth											80														7.52				11.4								685						
168	Highland @ 1/3		1/13/89	Reservoir	1/3 depth											99														7.36				5.1								705						
168	Highland @ 1/3		1/18/90	Reservoir	1/3 depth											98														7.06				4.4								887						
168	Highland @ 1/3		1/14/91	Reservoir	1/3 depth							176											0.05											1.8														
168	Highland @ 1/3		4/27/92	Reservoir	1/3 depth							169																			8.8			4							192.9									
168	Highland @ 1/3		2/5/93	Reservoir	1/3 depth							138																			8.2			3.5															
168	Highland @ 1/3		2/28/94	Reservoir	1/3 depth							168.4																			7.8			5.6															
168	Highland @ 1/3		4/3/95	Reservoir	1/3 depth							150				106															7.3			5															
168	Highland @ 1/3		5/21/96	Reservoir	1/3 depth			0.001				143			0.01	103	25.7	0.05					0.05	0.06		26.2				0.02		8.6				5.1	1	0.113		105	448	790.4588		1.1		2179				
168	Highland @ 1/3		8/20/96	Reservoir	1/3 depth	0.1		0.001	0.1			136		0.1	0.01	95	25.2	0.05		0.01	0.25	0.05	0.05		26.2	0.01	0.001	0.1	0.05		8.6			10.7	4.5	1	0.136		111	415	764.963		0.2		1816.0525	0.1			0.01
168	Highland @ 1/3		8/26/97	Reservoir	1/3 depth			0.001				152			0.01	112	29.4	0.05					0.05	0.05		27.8				0.02		8.2				3.3	1	0.121		109	476	855		0.2		1740				
168	Highland @ 1/3		4/3/98	Reservoir	1/3 depth			0.004				151			0.005	106	27.3	0.05					0.05	0.05		27.7				0.02		8.2				4	1	0.128		115	456	808		0.2		1800				
168	Highland @ 1/3		7/7/98	Reservoir	1/3 depth	0.1		0.004	0.1			141		0.1	0.005	118	29.3	0.05		0.01	0.28	0.36	0.05		30.3	0.01	0.001	0.1	0.02		8.3			11.4	4.3	1	0.115		119	486	866		0.2		1900	0.1			0.01
168	Highland @ 1/3		6/4/99	Reservoir	1/3 depth			0.002				150			0.005	110	30.8	0.05					0.05	0.05		29				0.02		8.3				4.3	1	0.128		116	455	818.293		0.2		2140				
168	Highland @ 1/3		8/16/99	Reservoir	1/3 depth	0.1		0.002	0.1			150		0.1	0.01	96.2	32.7	0.05		0.01	0.25	0.03	0.05		26.7	0.01	0.001	0.1	0.02		8.3			9.6	4.6	2.3	0.13		101	420	762.1091		0.2	3		0.1			0.01
168	Highland @ 1/3		6/1/00	Reservoir	1/3 depth			0.00596				150			0.005	96.9	31.12	0.05					0.05	0.05		26.78				0.02		8.3				4.2	3.8	0.1183		101	423.3	756.593	859	0.2		1930				
168	Highland @ 1/3		9/5/00	Reservoir	1/3 depth	0.1		0.005	0.1			132		0.1	0.01	93.5	32.5	0.05		0.01	0.28	0.03	0.05		26.5	0.01	0.001	0.1	0.02		8.2			10.1	4.8	1	0.12		103	451	774	855	0.2		2660	0.1			0.01
168	Highland @ 1/3		5/29/01	Reservoir	1/3 depth			0.004				142			0.01	101	29.5	0.05					0.05	0.05		27.9				0.02		8.2				3.6	1	0.123		108	433	773		0.2		2020				
168	Highland @ 1/3		8/2/01	Reservoir	1/3 depth	0.003		0.0028	0.03			146		0.04	0.00009	103	28.9	0.0002		0.003	0.3	0.03	0.05		28.9	0.0009	0.001	0.01	0.003		8.2			10.2	3.2	1	0.125		110	430	781		0.2		2302	0.0007			0.003
168	Highland @ 1/3		4/12/02	Reservoir	1/3 depth			0.001					146		0.01	116	33.4	0.05					0.03	0.05		31				0.02		8.03				3.3	1	0.11		117	505	878.37		0.2		1960				
168	Highland @ 1/3		10/15/02	Reservoir	1/3 depth	0.1		0.001	0.1			144		0.1	0.01	96.4	29.23	0.05		0.01	0.27	0.03	0.05		27.66	0.01	0.001	0.1	0.02		8.2			9.82	4.7	1	0.09		106.9	474.8	820.02		0.2	2.85		0.1			0.01
168	Highland @ 1/3		4/23/03	Reservoir	1/3 depth			0.001							0.0005			0.001					0.001		0.0018				0.0018		8.29						0.0994		59.2	525		919							
168	Highland @ 1/3		7/29/03	Reservoir	1/3 depth			0.001			112				0.0005		35	0.001					0.001		0.0025				0.0025		8.36				2.7	1	0.1		112	522		1050			2112.24				
169	Highland @ 2/3		3/26/86	Reservoir	2/3 depth											63														7.3				18.4								605						
169	Highland @ 2/3		6/27/86	Reservoir	2/3 depth											74														7.6				8								623						
169	Highland @ 2/3		8/14/86	Reservoir	2/3 depth											71														7.36				8								778						
169	Highland @ 2/3		1/12/87	Reservoir	2/3 depth											75														7.86				16.1								666						
169	Highland @ 2/3		7/17/87	Reservoir	2/3 depth											80														8.18												631						
169	Highland @ 2/3		2/2/88	Reservoir	2/3 depth											91														7.77				5.2								804						
169	Highland @ 2/3		7/28/88	Reservoir	2/3 depth											82														7.59				8.5								685						
169	Highland @ 2/3		1/13/89	Reservoir	2/3 depth											98														7.34				9								687						
169	Highland @ 2/3		1/18/90	Reservoir	2/3 depth											106														7.12				107								747						
169	Highland @ 2/3		1/14/91	Reservoir	2/3 depth							166											0.05											3.1														
169	Highland @ 2/3		4/27/92	Reservoir	2/3 depth							151																			8.4			4.4															
169	Highland @ 2/3		2/5/93	Reservoir	2/3 depth							141																			8.1			3.5															
169	Highland @ 2/3		2/28/94	Reservoir	2/3 depth							159.1																			7.9			2.3															
169	Highland @ 2/3		4/3/95	Reservoir	2/3 depth							155				107															7.4			4.2															
169	Highland @ 2/3		5/21/96	Reservoir	2/3 depth			0.001				142			0.01	103	26.4	0.05				0.05	0.05		26.5				0.02		8.7				4.9	1	0.132		104	449	790.3689		0.3		2166				
169	Highland @ 2/3		8/20/96	Reservoir	2/3 depth	0.1		0.002	0.1			147		0.1	0.01	94.7	25.1	0.05		0.01	0.25	0.05	0.05		25.7	0.01	0.001	0.1	0.05		8.5			10.5	4.1	1	0.15		109	406	756.6933		0.2		1981.3082	0.1			0.01
169	Highland @ 2/3		6/12/97	Reservoir	2/3 depth			0.001				151			0.01	108	25.6	0.05				0.05	0.05		26.3				0.05		8.3				3.9	1	0.127		111	435	782		0.2		1820				
169	Highland @ 2/3		8/26/97	Reservoir	2/3 depth	0.1		0.001	0.1			152		0.1	0.01	113	30	0.05		0.01	0.28	0.06	0.05		27.6	0.01	0.001	0.1	0.02		8.3			10.8	3.3	1	0.121		108	470	861		0.2		1810	0.1			0.01
169	Highland @ 2/3		4/3/98	Reservoir	2/3 depth			0.002				149			0.005	106	25.5	0.05				0.05	0.05		27.6				0.02		8.1				4.2	1	0.136		115	449	798		0.2		2010				
169	Highland @ 2/3		8/7/98	Reservoir	2/3 depth	0.1		0.003	0.1			148		0.1	0.005	116	29.1	0.05		0.01	0.28	0.06	0.05		29	0.01	0.001	0.1	0.02		8.2			10.9	4.4	1	0.11		115	467	842		0.2		1830	0.1			0.01
169	Highland @ 2/3		6/4/99	Reservoir	2/3 depth			0.002				151			0.005	109	30.7	0.05				0.05	0.05		28.6				0.02		8.1				4.2	1	0.126		114	450	810.293		0.2		2130				
169	Highland @ 2/3		8/16/99	Reservoir	2/3 depth	0.1		0.004	0.1			148		0.1	0.01	98.1	31.1	0.05		0.01	0.25	0.03	0.05		27.3	0.01	0.001	0.1	0.02		8.2			9.6	3.7	1	0.131		103	428	772.022		0.2	3.02		0.1			0.01
169	Highland @ 2/3		6/1/00	Reservoir	2/3 depth			0.00476				147			0.005	94.8	32.54	0.05				0.05	0.05		26.44				0.02		8.1				4.5	2.7	0.1187		99.5	430.8	760.073	866	0.2		1950				
169	Highland @ 2/3		9/5/00	Reservoir	2/3 depth	0.1		0.003	0.1			145		0.1	0.01	97.7	30.4	0.05		0.01	0.26	0.03	0.05		26.4	0.01	0.001	0.1	0.02		8.2			10.1	4.4	1	0.105		102	416	747	825	0.2		2540	0.1			0.01
169	Highland @ 2/3		5/29/01	Reservoir	2/3 depth			0.004				147			0.01	103	29.2	0.05				0.05	0.05		28.2				0.02		8.1				3.9	1	0.12		109	454	799		0.2		2020				
169	Highland @ 2/3		8/2/01	Reservoir	2/3 depth	0.002		0.0034	0.04			149		0.04	0.0001	102	26	0.05		0.001	0.3				28.3	0.0004	0.001	0.01	0.003		8.1			10	3.4	1	0.121		108	416	769		0.2		2322	0.0007			0.002
169	Highland @ 2/3		4/12/02	Reservoir	2/3 depth			0.001					147		0.01	116	34.2	0.05					0.03	0.05		31.1				0.02		8.06				4.2	1	0.11		117	503	878.12		0.2		1990				
169	Highland @ 2/3		10/15/02	Reservoir	2/3 depth	0.1		0.001	0.1			154		0.1	0.01	98.8	29.53	0.05		0.01	0.27	0.03	0.05		27.17	0.01	0.001	0.1	0.02		8.1			9.85	4.2	1	0.09		104.7	450	800.24		0.2	2.82		0.1			0.01
169	Highland @ 2/3		4/23/03	Reservoir	2/3 depth			0.001							0.0005			0.001					0.001		0.0018				0.0018		8.6						0.099		127	505		910							
169	Highland @ 2/3		7/29/03	Reservoir	2/3 depth			0.001			125				0.0005		34	0.0011					0.001		0.0024				0.0024		8.25				3.8	1	0.1		109	516		1050			2112.24				
170	TDM XXXVI	TDM 37	2/28/86	Backfill	Runoff/Backfill Proxy			0.001																						7.3				7.7		0.004						663		1206			4989.6	
170	TDM XXXVI	TDM 37	3/26/86	Backfill	Runoff/Backfill Proxy			0.001			73					91	16													7.3				7		0.012			350		677			1622			4984.7	
170	TDM XXXVI	TDM 37	5/23/86	Backfill	Runoff/Backfill Proxy			0.001																						8.46				8.4		0.001						682		620			4991.5	
170	TDM XXXVI	TDM 37	8/14/86	Backfill	Runoff/Backfill Proxy	0.1		0.002	0.1			61	70	0.16	0.002	95	16	0.01		0.01		0.04	0.05		18	0.08	0.0002	0.1	0.02		7.38			9	1.4		0.001		105	430		781			4.8	0.1	4976.1	0.005	
170	TDM XXXVI	TDM 37	11/13/86	Backfill	Runoff/Backfill Proxy			0.001																						7.4				10.1		0.001						736		632			4988.8	
170	TDM XXXVI	TDM 37	2/5/87	Backfill	Runoff/Backfill Proxy																																									4989.3	
170	TDM XXXVI	TDM 37	6/19/87	Backfill	Runoff/Backfill Proxy							63.44				101														7.6				3.8		0.005						722		603			4991.72	
170	TDM XXXVI	TDM 37	8/25/87	Backfill	Runoff/Backfill Proxy																																									4992.67	
170	TDM XXXVI	TDM 37	12/7/87	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			53.68		0.4	0.002	118	16	0.01		0.01	0.48	0.02	0.05		15	0.12	0.0005	0.1	0.02		7.75			9	11.6		0.002		75	390		709			426	0.1	4993.48	0.005	
170	TDM XXXVI	TDM 37	2/28/88	Backfill	Runoff/Backfill Proxy																																										4994.33	
170	TDM XXXVI	TDM 37	5/23/88	Backfill	Runoff/Backfill Proxy			0.001				50.02				115	17													7.26				9.2		0.018			474		797			450		4995.56	
170	TDM XXXVI	TDM 37	8/31/88	Backfill	Runoff/Backfill Proxy																																									4996.57	
170	TDM XXXVI	TDM 37	11/7/88	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			48.8		0.25	0.002	117	39	0.01		0.01	0.34	0.03	0.05	1.3	17	0.02	0.0002	0.1	0.02	1.2	7.37		1.2	8	10.2	1.8	0.001		72	410		711	0.9		826	0.1	4996.85	0.005	
170	TDM XXXVI	TDM 37	6/12/89	Backfill	Runoff/Backfill Proxy			0.001		0.005		61	83		0.002	100	56	0.01			0.51	0.01	0.05	1.9	23		0.0002		0.02	0.7	7.67		0.7	8	7.3	0.7	0.005	0.01	85	400		725	2.3		23	0.1	4999.13		
170	TDM XXXVI	TDM 37	12/20/89	Backfill	Runoff/Backfill Proxy							68.32				103	26													7.16				0.7		0.005			360		722			408		5000.25	
170	TDM XXXVI	TDM 37	6/26/90	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			56.12		0.16	0.002	109	20	0.01		0.01	0.45	0.02			17	0.01	0.0002	0.1	0.02		7.55			9	2.6		0.001		75	350		695			0.3	0.1	5002.55	0.052	
170	TDM XXXVI	TDM 37	12/1/90	Backfill	Runoff/Backfill Proxy			0.001				73				99	17													8.1						0.002			310		705					5002.55	
170	TDM XXXVI	TDM 37	12/12/91	Backfill	Runoff/Backfill Proxy			0.001				77.59					17.6														7.9				12.2		0.001			391					346				
170	TDM XXXVI	TDM 37	6/10/92	Backfill	Runoff/Backfill Proxy	0.1		0.001				155		0.1	0.01		15	0.05	0.01		0.68	0.05	0.05		18	0.02	0.001	0.1	0.02		8.5			9.9	11.4		0.001		94.1	378	676				290	0.1	5006.89	0.01	
170	TDM XXXVI	TDM 37	12/3/92	Backfill	Runoff/Backfill Proxy			0.001				77.4					13.8														7.2				10.4		0.008			388					284

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
170	TDM XXXVI	TDM 37	6/3/99	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			85		0.1	0.005	113	33.8	0.05		0.01	0.29	0.05	0.05		19.9	0.03	0.001	0.1	0.02		7.8			10.4	6.9	1	0.001		96.4	449	767.823		0.2		255	0.1		5017.9	0.01
170	TDM XXXVI	TDM 37	12/15/99	Backfill	Runoff/Backfill Proxy			0.001				81			0.01	106	34.9	0.05				0.05	0.05		17.6				0.02		8				7.5	1	0.001		89.8	450	741.293		0.2		307			5015.8	
170	TDM XXXVI	TDM 37	6/1/00	Backfill	Runoff/Backfill Proxy																																									5117.6	
170	TDM XXXVI	TDM 37	6/6/00	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			86		0.1	0.01	92.7	33.21	0.05		0.01	0.24	0.05	0.05		17.88	0.02	0.001	0.1	0.02		7.8			8.1	8.7	1	0.001		82.7	404.6	676.583	749	0.2		360.164	0.1			0.01
170	TDM XXXVI	TDM 37	12/8/00	Backfill	Runoff/Backfill Proxy			0.002				83			0.005	97.8	27.1	0.05				0.03	0.05		18.6				0.02		7.8				9.4	2.4	0.002		96.1	407		747	1.2		312			5017.5	
170	TDM XXXVI	TDM 37	6/5/01	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			83		0.1	0.01	99.8	29.1	0.05		0.01	0.22	0.03	0.05		18.9	0.02	0.001	0.1	0.02		7.8			9	8.5	1	0.001		91	394	677		0.2		345	0.1		5017.9	0.01
170	TDM XXXVI	TDM 37	12/27/01	Backfill	Runoff/Backfill Proxy			0.00104				84			0.01	110	32.2	0.05				0.03	0.05		20.1				0.02		7.8				8.6	1	0.001		95	457	757.14		0.2		323			5027.2	
170	TDM XXXVI	TDM 37	5/8/02	Backfill	Runoff/Backfill Proxy	0.1		0.001	0.1			88		0.1	0.01	117	37.2	0.05		0.01	0.24	0.03	0.05		20.8	0.02	0.001	0.1	0.02		0			9.53	7.8	5.9	0.001		98.8	460	787.95		0.2		339	0.1			0.01
170	TDM XXXVI	TDM 37	1/24/03	Backfill	Runoff/Backfill Proxy			0.00165							0.0005			0.001					0.001						0.0014		8.01				13.3	1	0.001		95.5	382		1060			387.58			5031.54	
170	TDM XXXVI	TDM 37	7/21/03	Backfill	Runoff/Backfill Proxy			0.001							0.0005		34	0.00165					0.001						0.0013	7.77	7.91			14.5	1	0.001		92.2	420		897			514.52				
171	TDM XXXVI	TDM 38	2/28/86	Backfill				0.001																					7.8				1.2		0.002					996			38			5052.8	
171	TDM XXXVI	TDM 38	3/26/86	Backfill				0.001			73					82	33												7.4				2.8		0.001			440		840			28			5037.3	
171	TDM XXXVI	TDM 38	5/23/86	Backfill				0.002																					7.69				2.6		0.001					894			51.7			5051.6	
171	TDM XXXVI	TDM 38	8/14/86	Backfill		0.1		0.002	0.1			48.8	63	0.01	0.002	95	15	0.01		0.01	0.3	0.04	0.05		15		0.0002	0.1	0.02	7.48			10	7.6		0.001		66	367		652			402	0.1		5068.4	0.005
171	TDM XXXVI	TDM 38	11/13/86	Backfill				0.001																					7.5				1.4		0.001					791			21			5046.5	
171	TDM XXXVI	TDM 38	2/5/87	Backfill																																										5031.8	
171	TDM XXXVI	TDM 38	6/19/87	Backfill								57.34				99													7.5				1.7		0.002					740			32			5046.93	
171	TDM XXXVI	TDM 38	8/25/87	Backfill																																										5047.08	
171	TDM XXXVI	TDM 38	12/7/87	Backfill		0.1		0.001	0.1			67.1		0.27	0.002	112	36	0.01		0.01	0.74	0.02	0.05		16	0.12	0.0005	0.1	0.02	7.55			7	3		0.001		90			740			19	0.1		5047.32	0.005
171	TDM XXXVI	TDM 38	2/28/88	Backfill																																										5046.7	
171	TDM XXXVI	TDM 38	5/23/88	Backfill				0.001				50.63				104	46								428					7.5				2.2		0.011					750			14.2			5046.77	
171	TDM XXXVI	TDM 38	8/31/88	Backfill																																										5046.92	
171	TDM XXXVI	TDM 38	11/7/88	Backfill		0.1		0.001	0.1			57.34		0.1	0.002	104	55	0.01		0.01	0.4	0.07	0.05		19	0.03	0.0002		0.02	7.54			6	0.9		0.011		82	400		749			15			5046.87	0.011
171	TDM XXXVI	TDM 38	3/15/89	Backfill				0.001		0.005		70.76	98		0.002	105	44	0.01			0.36	0.1	0.05	0.6	7		0.0002	0.1	0.02	7.3			0.9	6	0.6	0.001	0.01	97	400		727	0.2		2.8	0.1	1.8	5046.53	
171	TDM XXXVI	TDM 38	6/12/89	Backfill				0.001				74.42			0.002	103	52	0.01				0.26	0.05		17				0.02	7.47			7	1	0.5	0.003		118	400		736	0.7		1.6			5046.07	
171	TDM XXXVI	TDM 38	9/26/89	Backfill		0.1		0.001		0.005		113		0.17	0.002	98	40	0.01		0.01	0.34	0.06	0.05		19	0.05	0.002	0.1	0.02	8.47			9	0.9	0.6	0.001		78	400		689	0.8		1.1	0.1		5045.74	0.005
171	TDM XXXVI	TDM 38	12/20/89	Backfill								65.88				107	38								16					7.09									90	340		805						5045.83	
171	TDM XXXVI	TDM 38	4/24/90	Backfill				0.001				70.76			0.002	143	30	0.01				0.01	0.05		4				0.02	7.43				0.9	4.8	0.001		90	340		806	0.6		0.4			5045.78	
171	TDM XXXVI	TDM 38	6/26/90	Backfill								63.44				120	60								19					7.41									98	396		848						5045.25	
171	TDM XXXVI	TDM 38	9/7/90	Backfill		0.1		0.003	0.1			165.92		0.01	0.002	114	23	0.01		0.01	0.34	0.01	0.05		13	0.06	0.0002	0.1	0.02	8.2			8	1	2.2	0.003		95	324		746	0.4		4.3	0.1		5043.59	0.005
171	TDM XXXVI	TDM 38	12/1/90	Backfill								92				114	30								15					7.7									94	350		810						5043.38	
171	TDM XXXVI	TDM 38	12/12/91	Backfill								73.2					27.4								16.3						7.1								83.6	472									
171	TDM XXXVI	TDM 38	3/28/92	Backfill				0.002				75.9			0.01		24.7	0.05					0.05	0.05		21				0.02		7.3				1.5	1	0.001		111	461	778.52		0.2		14			5042.74	
171	TDM XXXVI	TDM 38	6/10/92	Backfill								91					28.5								20.4						8								95.5	418	717.343							5042.59	
171	TDM XXXVI	TDM 38	9/21/92	Backfill		0.1		0.001				162		0.1	0.01		25.6	0.05		0.01	0.16	0.182	0.05		21.5	0.077	0.001	0.1	0.02		8			11.07	1.2	1	0.001		111.24	432	825.2687		0.2		4.739	0.1		5042.78	0.01
171	TDM XXXVI	TDM 38	12/3/92	Backfill								83.9					21.8								16.2						7								90	457								5042.57	
171	TDM XXXVI	TDM 38	3/3/93	Backfill																																										5042.45	
171	TDM XXXVI	TDM 38	6/5/93	Backfill								76.6					34								17.5						7								86.8	461	766.043							5042.57	
171	TDM XXXVI	TDM 38	9/16/93	Backfill																																										5042.3	
171	TDM XXXVI	TDM 38	12/2/93	Backfill																																										5042.15	
171	TDM XXXVI	TDM 38	3/28/94	Backfill																																										5042.05	
171	TDM XXXVI	TDM 38	6/28/94	Backfill																																										5042.05	
171	TDM XXXVI	TDM 38	6/29/94	Backfill													28.3								15.1						7.45								80.1									
171	TDM XXXVI	TDM 38	9/29/94	Backfill		0.1		0.001	0.1		112.5			0.1	0.01	117	21.1	0.05		0.01	0.23	0.05	0.05		19.1	0.04	0.001	0.19	0.02	7.3			8.5	2.5	1	0.001		101	479	806.4365	805	0.2		2.708	0.1		5042.25	0.03
171	TDM XXXVI	TDM 38	12/14/94	Backfill																																										5042.3	
171	TDM XXXVI	TDM 38	3/21/95	Backfill				0.001			75.6				0.01	114	37	0.05				0.06	0.05		21				0.02	6.7			8.2	0.4	1.8	0.001		79	439	736.9017		0.2		6.9			5042.4	
171	TDM XXXVI	TDM 38	6/26/95	Backfill								77.1					30.6								18.8						7.5								94.2	483	776.593							5042.05	
171	TDM XXXVI	TDM 38	9/7/95	Backfill		0.1		0.001	0.1			73.9		0.1	0.01	115	27.9	0.05		0.01	0.21	0.12	0.05		19.3	0.06	0.001	0.12	0.05		7.5			8.6	1.1	1	0.001		97	463	769.3861		0.2		2.6	0.1		5041.95	0.05
171	TDM XXXVI	TDM 38	12/1/95	Backfill								68.3				132	39								21						7.5								90	495	812.036							5041.7	
171	TDM XXXVI	TDM 38	1/25/96	Backfill																																											5127.83	
171	TDM XXXVI	TDM 38	3/12/96	Backfill				0.001				73.2			0.01	122	34.2	0.05				0.05	0.05		20.8				0.02		7.2				1	2.5	0.001		92.1	486	795.493		0.2		2.3018				
171	TDM XXXVI	TDM 38	6/29/96	Backfill								85.4				121	38								22.6						7.9			9.3					101	528	867.0531							5042.3	
171	TDM XXXVI	TDM 38	9/30/96	Backfill		0.1		0.001	0.1			148		0.1	0.01	124	36	0.05		0.01	0.22	0.15	0.05		20.7	0.06	0.001	0.1	0.05		7.7			9.8	0.6	1	0.001		99	487	861.368		0.2		3.9943	0.1		5042.8	0.02
171	TDM XXXVI	TDM 38	12/26/96	Backfill												122	35								21														97	436								5042.55	
171	TDM XXXVI	TDM 38	3/21/97	Backfill				0.001				93.2			0.01	136	41.2	0.05				0.9	0.05		22.7				0.05		7.4				1.2	1	0.001		102	513	861.943		0.2		3.39				
171	TDM XXXVI	TDM 38	6/12/97	Backfill																																											5042.05	
171	TDM XXXVI	TDM 38	6/13/97	Backfill								82				134	39.9								21.9						7.5								103	496	837								
171	TDM XXXVI	TDM 38	9/29/97	Backfill		0.1		0.001	0.1			66		0.1	0.01	151	51.6	0.05		0.01	0.26	0.05	0.05		25.4	0.06	0.001	0.12	0.02		7.6			10.4	0.2	1	0.001		105	546	924		0.2		4.7	0.1		5042.8	0.01
171	TDM XXXVI	TDM 38	12/30/97	Backfill								56				152	55.5								25.5						7.4								101	588	951							5042.55	
171	TDM XXXVI	TDM 38	3/3/98	Backfill				0.001				70			0.005	144	45.5	0.05				0.05	0.05		24.4				0.02		7.52				4.7	1	0.003		102	541	893		0.2		3.8			5042.8	
171	TDM XXXVI	TDM 38	6/26/98	Backfill								71				132	46								22.1						7.3			8.7					96.1	553	894							5042.8	
171	TDM XXXVI	TDM 38	9/7/98	Backfill		0.1		0.001	0.1			79		0.1	0.005	126	39.4	0.05		0.01	0.24	0.05	0.05		22.4	0.06	0.001	0.1	0.02		7.2			8.9	0.8	1	0.001		101	513	851		0.2		2.8	0.1		5043.3	0.02
171	TDM XXXVI	TDM 38	12/7/98	Backfill								79				129	43.1								21						7.4								103	515	851							5041.3	
171	TDM XXXVI	TDM 38	3/1/99	Backfill				0.001				69			0.005	147	50.9	0.05				0.26	0.05		24.7				0.02		7.3				0.8	1	0.001		105	569	933.803		0.2		2.8			5043.5	
171	TDM XXXVI	TDM 38	6/3/99	Backfill								62				144	51.3								25.5						7.3								108	538	900.5974							5043.75	
171	TDM XXXVI	TDM 38	9/15/99	Backfill		0.1		0.001	0.1			66		0.1	0.005	146	49.3	0.05		0.01	0.22	0.25	0.05		26.4	0.06	0.001	0.1	0.02		7.5			10.6	0.5	5.6	0.001		114	563	934.393		0.2		2.4	0.1			0.02
171	TDM XXXVI	TDM 38	9/19/99	Backfill																																											5043.3	
171	TDM XXXVI	TDM 38	12/15/99	Backfill								61				151	59.2								22.3						7.5								93.4	580	938.843							5040	
171	TDM XXXVI	TDM 38	4/1/00	Backfill				0.001				64			0.01	134	54.8	0.05				0.08	0.05		23.2				0.02		7.5				0.4	1.9	0.001		103	547	897		0.2		2.2			5043.4	
171	TDM XXXVI	TDM 38	6/6/00	Backfill								58				127.2	52.2								23.31						7.3								93	521	849.0833	976						5042.8	
171	TDM XXXVI	TDM 38	9/6/00	Backfill		0.1		0.001	0.1			52		0.1	0.01	129	51.3	0.05		0.01	0.23	0.03	0.05		23.2	0.12	0.001	0.1	0.02		7.2			9.2	3.1	1	0.002		98.1	518	848	957	0.2		2.2	0.1		5043.3	0.31
171	TDM XXXVI	TDM 38	10/27/00	Backfill																																											5125.47	
171	TDM XXXVI	TDM 38	12/8/00	Backfill								65				130	47.2								23.5						7.2								102	506		941						5042.7	
171	TDM XXXVI	TDM 38	3/2/01	Backfill				0.001				81			0.01	146	49.5	0.05							26.3				0.02		7.3				0.4	1	0.001		113	544	922		0.2		1.1			5043	
171	TDM XXXVI	TDM 38	6/11/01	Backfill								81				128	40.8								22.9						7.2								99.1	483	817							5043.3	
171	TDM XXXVI	TDM 38	9/14/01	Backfill		0.003		0.0008	0.02			86		0.02	0.01	120	39.1	0.004		0.002	0.2	0.03	0.0002		21.1	0.15	0.0001	0.08	0.002		7.4			8.6	0.4	1	0.0011		98.8	468	799.25		0.2		2.1	0.1		5043.1	0.028
171	TDM XXXVI	TDM 38	12/27/01	Backfill								76				143	44.4								24.4						7.2								100	555	904.7							5042.6	
171	TDM XXXVI	TDM 38	2/28/02	Backfill				0.001				79			0.01	137	45.8	0.05				0.03	0.05		23.3				0.02		7.2				0.7	1	0.00148		99.3	547	891.99		0.2		1.06				
171	TDM XXXVI	TDM 38	5/8/02	Backfill								74				148	45.5								25.6						0								107	562	925.01								
171	TDM XXXVI	TDM 38	10/12/02	Backfill		0.1		0.001	0.1			80		0.1	0.01	120.5	39.82	0.05		0.01	0.22	0.16	0.05		21.44	0.03	0.001	0.1	0.02		7.2			8.35	0.2	1	0.001		95	487.5	814.9		0.2	0.00333		0.1		5047	0.03
171	TDM XXXVI	TDM 38	12/6/02	Backfill				0.001							0.0005		38	0.001					0.001						0.0027	7.3					0.00122			102	520		927						5039.26	
171	TDM XXXVI	TDM 38	1/30/03	Backfill				0.001							0.0005		36	0.001					0.001						0.0027	7.4	7.18			0.2	1	0.00118		94	486		869			1.11			5047.35	
171	TDM XXXVI	TDM 38	4/30/03	Backfill				0.001							0.0005		35	0.001					0.001						0.0023	7.4	7.26				0.00199			89.5	535		931						5047.4	
171	TDM XXXVI	TDM 38	7/17/03	Backfill				0.001							0.0005		35	0.00104					0.001						0.0022		7.39			0.5	1	0.001		94.4	505		868			1.436594				
171	TDM XXXVI	TDM 38	8/11/03	Backfill																										7.2																		
171	TDM XXXVI	TDM 38	10/23/03	Backfill													34														7.38								101	490		879							
172	EM-5		2/1/86	TDSS	Background well			0.001																					7.5				3.9		0.001					655			2			5096.79	
172	EM-5		3/20/86	TDSS	Background well			0.002			134					49	18												7.5				0.5		0.001			300		627			0.6			5098.79	
172	EM-5		5/24/86	TDSS	Background well			0.003																					7.72				6.3		0.001					649			4.4			5098.89	
172	EM-5		8/13/86	TDSS	Background well	0.1		0.002	0.1			73.2	144	0.11	0.002	56	17	0.01		0.01	0.2	0.02	0.05		34	0.04	0.0002	0.1	0.02	7.42			6					116	258		458					0.1	5101.19	0.005
172	EM-5		11/18/86	TDSS	Background well			0.001																					7.67				4.7		0.001					698						5098.59	
172	EM-5		6/10/87	TDSS	Background well			0.001				126.27				59	18												7.56				4.5		0.001			310		610			0.1			5092.97	
172	EM-5		8/25/87	TDSS	Background well																																										5074.58	
172	EM-5		11/23/87	TDSS	Background well																																										5094.28	
172	EM-5		12/9/87	TDSS	Background well	0.1		0.001	0.1			143.96		0.22	0.002	105	19	0.01		0.01	0.4	0.01	0.05		13	0.05	0.0005	0.1	0.02	8.22			4	3.1		0.001		105	272		523			0.9	0.1			0.005
172	EM-5		2/28/88	TDSS	Background well																																										5094.28	
172	EM-5		5/23/88	TDSS	Background well							117.12																																					
172	EM-5		7/29/88	TDSS	Background well			0.001				117.12				45	16								14					7.79				5.2		0.001			186		719			21					
172	EM-5		8/31/88	TDSS	Background well																																										5094.47	
172	EM-5		11/16/88	TDSS	Background well	0.1		0.001	0.1			106.14		0.21	0.002	48	19	0.01		0.01	0.38	0.05	0.05		12		0.0002	0.1	0.02	7.83			4	3.1		0.001		106	270		456			0.7	0.1		5094.05	0.005
172	EM-5		4/6/89	TDSS	Background well			0.001		0.005		151.28	146		0.003	36	30	0.01			0.2	0.57	0.05	2.1	22		0.0002	0.1	0.02	7.75		1.2	3	1.9	0.002	0.01	103	248		418	0.3		1.7	0.1		5092.77	
172	EM-5		6/12/89	TDSS	Background well			0.001				132.98			0.002	41	34	0.01				0.01	0.05		10				0.02	7.75			3	1.7	0.4	0.004		132	220		485	1.6		0.2			5092.44	
172	EM-5		9/26/89	TDSS	Background well	0.1		0.001		0.005		123.22		0.16	0.002	39	40	0.01		0.01	0.31	0.01	0.05		10	0.02	0.0002	0.1	0.02	7.72			4	1.5	0.5	0.002		97	228		450	1.4		0.3	0.1		5092.06	0.005
172	EM-5		12/20/89	TDSS	Background well							119.56				38	15								9					7.54									123	205		627						5091.64	
172	EM-5		4/23/90	TDSS	Background well			0.001				131.76			0.002	50	14	0.01				0.03	0.05		4				0.02	7.44				2.2	3.1	0.001		112	302		530	0.5		0.2			5091.76	
172	EM-5		6/26/90	TDSS	Background well							124.44				53	13								12					7.82									115	340		595						5091.14	
172	EM-5

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
172	EM-5		9/7/95	TDSS	Background well	0.1		0.001	0.1			157		0.1	0.01	59.5	10.1	0.05		0.01	0.14	0.05	0.05		11.3	0.03	0.001	0.1	0.05		7.7			4.8	2.1	3.2	0.001		124	306	594.883		0.5		0.7	0.1		5086.39	0.02
172	EM-5		12/1/95	TDSS	Background well							159				65	11.9								11.7						7.8								116	324	608.7202							5086.14	
172	EM-5		3/12/96	TDSS	Background well			0.001				159			0.01	61	10.5	0.05				0.05	0.05		11.8				0.02		7.7				2	1	0.001		116	316	606.693		0.2		0.2			5086.39	
172	EM-5		6/29/96	TDSS	Background well							169				58.4	10.2								12.4						8.2			4.96					126	338	647.7359							5086.39	
172	EM-5		9/30/96	TDSS	Background well	0.1		0.001	0.1			182		0.1	0.01	59.9	10.7	0.05		0.01	0.14	0.07	0.05		11.3	0.03	0.001	0.1	0.05		8.2			4.9	1.5	1	0.001		123	319	634.1756		0.2		0.8124	0.1		5086.59	0.01
172	EM-5		12/26/96	TDSS	Background well											61	10.9								11.7														119	306								5085.99	
172	EM-5		3/21/97	TDSS	Background well			0.001				165.7			0.01	66.5	11.5	0.05				0.05	0.05		12.5				0.05		8				2	1	0.001		125	329	627.793		0.2		0.2			5086.34	
172	EM-5		6/12/97	TDSS	Background well																																										5086.9	
172	EM-5		6/13/97	TDSS	Background well							162				64.3	11.8								11.8						8.1								123	314	606								
172	EM-5		9/29/97	TDSS	Background well	0.1		0.001	0.1			167		0.1	0.01	67.3	12.7	0.05		0.01	0.14	0.05	0.05		12.8	0.03	0.001	0.1	0.02		8			5.1	1.9	1	0.001		128	342	652		0.2		1.3	0.1		5086.59	0.01
172	EM-5		12/30/97	TDSS	Background well							174				77.7	14								14.6						7.9								128	372	694							5085.21	
172	EM-5		3/5/98	TDSS	Background well			0.001				174			0.005	76.7	14.3	0.05				0.05	0.05		14.5				0.02		7.91				2.4	1	0.001		130	362	685		0.2		0.5			5085.29	
172	EM-5		6/26/98	TDSS	Background well							168				71	12.1								13.5						7.8			4.8					125	376	687							5085.29	
172	EM-5		9/7/98	TDSS	Background well	0.1		0.001	0.1			168		0.1	0.005	66	11.1	0.05		0.01	0.17	0.05	0.05		13.1	0.03	0.001	0.1	0.02		7.8			5	1.5	1	0.001		120	337	637		0.2		0.9	0.1		5085.09	0.01
172	EM-5		12/7/98	TDSS	Background well							173				68	11								13.5						7.9								124	358	662							5085.49	
172	EM-5		3/1/99	TDSS	Background well			0.001				172			0.005	76.4	14.8	0.05				0.05	0.05		14.1				0.02		8				2.6	1	0.001		123	350	666.793		0.2		0.7			5085.09	
172	EM-5		6/3/99	TDSS	Background well							170				78.2	14.9								15.4						7.8								135	367	697.943							5084.94	
172	EM-5		9/15/99	TDSS	Background well	0.1		0.001	0.1			171		0.1	0.005	85.6	16.2	0.05		0.01	0.14	0.03	0.05		17.3	0.03	0.001	0.1	0.02		7.9			5.5	2.7	3.7	0.001		137	398	742.073		0.2		0.7	0.1			0.01
172	EM-5		9/20/99	TDSS	Background well																																										5084.54	
172	EM-5		12/15/99	TDSS	Background well							167				97.3	20								12.3						7.9								110	403	728.543							5084.99	
172	EM-5		4/1/00	TDSS	Background well			0.001				167			0.01	64.2	9.2	0.05				0.05	0.05		12.4				0.02		7.9				1.6	1.4	0.001		118	335	625		0.2		0.3			5084.99	
172	EM-5		6/6/00	TDSS	Background well							166				58.7	12.17								11.96						7.8								109.8	312.2	590.273	648						5109.59	
172	EM-5		9/6/00	TDSS	Background well	0.1		0.001	0.1			164		0.1	0.01	59.9	11.7	0.05		0.01	0.39	0.03	0.05		12	0.03	0.001	0.1	0.02		7.8			4.8	1.6	1	0.002		116	328	612	656	0.2		0.5	0.1		5084.99	0.01
172	EM-5		12/8/00	TDSS	Background well							143				66	12.8								13.4						7.8								123	326		675						5085.29	
172	EM-5		3/2/01	TDSS	Background well			0.001				154			0.01	65.3	14.1	0.05				0.05	0.05		13.2				0.02		7.8				1	1.8	0.001		126	323	621		0.2		0.3			5085.9	
172	EM-5		6/5/01	TDSS	Background well							166				65.5	13.3								13.1						7.8								117	317	611							5085.59	
172	EM-5		6/13/01	TDSS	Background well							166				65.5	13.3								13.1						7.8								117	317	611								
172	EM-5		9/14/01	TDSS	Background well	0.003		0.001	0.02			161		0.04	0.01	56.5	12.8	0.006		0.0003	0.2	0.03	8E-05		11.2	0.029	0.001	0.003	0.002		7.8			4	1.1	1	0.001		111	286	562.43		0.2		0.63	0.1		5084.84	0.007
172	EM-5		12/27/01	TDSS	Background well							161				64.8	10.3								12.6						7.8								116	332	616.39							5082.09	
172	EM-5		2/28/02	TDSS	Background well			0.001				166				62.4	10.5	0.05				0.03	0.05		12						7.8				0.7	1	0.001		116	326	610.52		0.2		0.2				
172	EM-5		5/8/02	TDSS	Background well							168				72.4	14.7								13.9						0								123	363	670.62								
172	EM-5		10/11/02	TDSS	Background well	0.1		0.001	0.1			166		0.1	0.01	59.2	9.77	0.05		0.01	0.15	0.03	0.05		11.72	0.02	0.001	0.1	0.02		7.8			4.33	1	1	0.001		111.5	298.1	578.16		0.2	0.000615		0.1		5082.85	0.01
172	EM-5		12/3/02	TDSS	Background well			0.001							0.0005		8.3	0.001					0.001							0.001	7.9						0.00106		121	335		662						5082.49	
172	EM-5		1/30/03	TDSS	Background well			0.001							0.0005		8.6	0.001					0.001							0.001	7.9	8.11			2.1	1	0.001		107	278		608			0.319			5082.65	
172	EM-5		4/30/03	TDSS	Background well			0.001							0.0005		8.4	0.001					0.001							0.001	7.9	7.88					0.001		110	318		650						5082.45	
172	EM-5		7/16/03	TDSS	Background well																										8.1			1	5									2.917193			
172	EM-5		7/21/03	TDSS	Background well			0.001							0.0005		8.3	0.0011					0.001							0.001		8.04			1.4	1	0.001		114	315		669			0.24372				
172	EM-5		10/23/03	TDSS	Background well												8.5														7.88								114	306		608							
173	TDM XXXIX	TDM 39	8/24/88	Backfill				0.001		0.005					0.002		70	0.01			0.38		0.05			0.0002	0.1	0.02	7					0.8	2.4	0.003	0.01		264		637	0.7		6	0.1		5080.69	
173	TDM XXXIX	TDM 39	9/9/88	Backfill				0.001		0.005					0.002		69	0.01			0.33		0.05			0.0002	0.1	0.02	7.39					0.5	1.5	0.001	0.01		200		739	0.6		5.1	0.1		5073.89	
173	TDM XXXIX	TDM 39	9/23/88	Backfill				0.001		0.005					0.002		60	0.01			0.33		0.05			0.0002	0.1	0.02	7.97					0.6	3.2	0.001	0.01		474		702	0.6		6.4	0.1		5073.8	
173	TDM XXXIX	TDM 39	10/13/88	Backfill				0.001		0.005			128		0.003	88	63	0.01			0.33	0.01	0.05		24		0.0002	0.1	0.02	7.62			5	1.2	3.4	0.001	0.01	71	290		510	0.5		6.3	0.1		5073.71	
173	TDM XXXIX	TDM 39	1/12/89	Backfill				0.001		0.005		108.58	110		0.002	92	98	0.01			0.3	0.01	0.05	2.3	15		0.0002	0.1	0.02	7.82		0.7	5	0.9	3	0.003	0.01	74	275		604	0.2		4.4	0.1		5072.91	
173	TDM XXXIX	TDM 39	4/24/89	Backfill				0.0002				95.16			0.002	93	125	0.01				0.01	0.05		45				0.02	7.8			5	1	1.8	0.001		71	400		626	0.6		0.7			5072.66	
173	TDM XXXIX	TDM 39	7/13/89	Backfill				0.001				113.46			0.002	87	85	0.01				0.01	0.05		22				0.13	7.37				1	0.8	0.004		69	290		602	0.8		0.2			5072.15	
173	TDM XXXIX	TDM 39	10/23/89	Backfill								97.6				88	74								19						7.84								79	300		635						5071.66	
173	TDM XXXIX	TDM 39	1/15/90	Backfill				0.001				85.4			0.002	95	76	0.01				0.07	0.05		22				0.02	7.45				0.4	1.9	0.001		74	262		563	0.2		0.1			5071.42	
173	TDM XXXIX	TDM 39	4/23/90	Backfill								104.92				106	90								6						7.47								79	232		604						5071.13	
173	TDM XXXIX	TDM 39	8/23/90	Backfill				0.003				119.56			0.002	99	78	0.01				0.02	0.05		25				0.02	8.1				1	2.1	0.001		77	220		652	0.2		2			5070.33	
173	TDM XXXIX	TDM 39	10/19/90	Backfill								112.24				103	72								20						7.8								76	238		653						5070.14	
173	TDM XXXIX	TDM 39	1/13/91	Backfill				0.001				110			0.01		66.4	0.05				0.05	0.05		23.4				0.05		6.9				0.9	1	0.001		86.2	359	680.91		0.2		3.1142				
173	TDM XXXIX	TDM 39	7/19/91	Backfill				0.001				115.41			0.01		64.7	0.05				0.05	0.05		22.5				0.05		7.8				0.5	1	0.001		78.2	332	642.245		0.2		7.8				
173	TDM XXXIX	TDM 39	10/14/91	Backfill								110.53					77.3								23						8.3								84	335	671.595								
173	TDM XXXIX	TDM 39	1/14/92	Backfill				0.002				116.87			0.01		62.9	0.05				0.05	0.05		21.3				0.02		8.3				0.6	1.2	0.001		77.2	299	610.048		0.2		3.39			5067.83	
173	TDM XXXIX	TDM 39	4/22/92	Backfill								147					68.8								24.5						7.8				0.3				78	323	665.986			0.043					
173	TDM XXXIX	TDM 39	4/23/92	Backfill																																											5067.09	
173	TDM XXXIX	TDM 39	7/10/92	Backfill				0.001				174			0.01		68.9	0.05				0.05	0.05		23.38		0.001		0.02		8.4				0.2	1.7	0.001		97.51	289	654.96		0.2		1.35			5066.96	
173	TDM XXXIX	TDM 39	10/27/92	Backfill								99					75.2								20.4						7.5								74	287	596.428							5066.84	
173	TDM XXXIX	TDM 39	1/20/93	Backfill				0.001				96			0.01		70.2	0.05				0.05	0.05		20.3				0.02		7.3				1.9	1	0.001		72	315	627.993		0.2		0.2			5066.59	
173	TDM XXXIX	TDM 39	4/28/93	Backfill								107					78.4								29.8						7.4								71.8	332	664.543							5066.09	
173	TDM XXXIX	TDM 39	7/13/93	Backfill				0.001				134			0.01		75.8	0.05				0.05	0.05		21.6				0.02		7.2				0.8	2.7	0.001		70.6	337	685.5497		0.2		6.093			5065.94	
173	TDM XXXIX	TDM 39	10/28/93	Backfill																																											5065.49	
173	TDM XXXIX	TDM 39	1/22/94	Backfill																																												5065.34	
173	TDM XXXIX	TDM 39	4/24/94	Backfill																																												5065.59	
173	TDM XXXIX	TDM 39	7/10/94	Backfill				0.001			134				0.01	120	78	0.05				0.07	0.05		21.2				0.02	6.6				0.4	11.4	0.001		69.7	318	674.413		0.2		8.124			5065.34	
173	TDM XXXIX	TDM 39	10/27/94	Backfill																																												5065.31	
173	TDM XXXIX	TDM 39	1/30/95	Backfill				0.001				133			0.01	110	81.7	0.05				0.05	0.05		26				0.02		7.5				0.9	1	0.001		77	335	696.693		0.2		4.1			5064.84	
173	TDM XXXIX	TDM 39	5/4/95	Backfill								126				109	87								26.4						7.2								77.1	324	686.943							5064.69	
173	TDM XXXIX	TDM 39	7/25/95	Backfill				0.001				131			0.01	110	86	0.05				0.05	0.05		25				0.02		7.6				1	1	0.001		79	320	685.993		0.2		3.9			5064.66	
173	TDM XXXIX	TDM 39	11/21/95	Backfill								123				110	81.5								25.2						7.7								80.1	310	668.8316							5064.09	
173	TDM XXXIX	TDM 39	1/26/96	Backfill				0.001				138			0.01	106	80	0.05				0.05	0.05		25.1				0.02		7.6				0.6	1.7	0.001		77	300	661.993		0.2		3.3			5064.44	
173	TDM XXXIX	TDM 39	5/1/96	Backfill																																												5064.09	
173	TDM XXXIX	TDM 39	7/9/96	Backfill				0.005				134			0.01	117	90	0.05				0.05	0.05		26.4				0.02		8				0.5	1	0.002		81	332	713.893		0.2		3				
173	TDM XXXIX	TDM 39	7/11/96	Backfill																																												5064.29	
173	TDM XXXIX	TDM 39	11/13/96	Backfill									209			121	98.5								27.9						7.5		6.98						76.9	337	773.223							5064.19	
173	TDM XXXIX	TDM 39	2/4/97	Backfill				0.001				123			0.01	113	93	0.05				0.05	0.05		25.7				0.02		8				0.2	1	0.001		74	315	682.643		0.2		2.7			5064.09	
173	TDM XXXIX	TDM 39	4/26/97	Backfill								124				111	100								25.4						8.1								77	325	700.843							5063.79	
173	TDM XXXIX	TDM 39	7/8/97	Backfill				0.001				125			0.01	117	99.1	0.05				0.16	0.05		27.8						8				0.2	2.7	0.001		85.1	361	752.943		0.2		2.71			5064.09	
173	TDM XXXIX	TDM 39	10/9/97	Backfill								113				134	100								30.4						7.6								81.6	368	771							5064.29	
173	TDM XXXIX	TDM 39	1/5/98	Backfill				0.001				119			0.005	123	106	0.05				0.05	0.05		27.8				0.02		7.6				0.6	1.4	0.002		80.3	384	781		0.2		6			5064.09	
173	TDM XXXIX	TDM 39	4/4/98	Backfill								125				118	102								28.3						7.7		7.1						81.7	354	747							5064.2	
173	TDM XXXIX	TDM 39	7/7/98	Backfill				0.001				115			0.005	119	83	0.05				0.05	0.05		27.9				0.02		7.6				0.2	1	0.001		84.3	393	765		0.2		3.2			5063.74	
173	TDM XXXIX	TDM 39	10/22/98	Backfill								115				116	90.8								28.3						7.5								80.6	381	757							5063.89	
173	TDM XXXIX	TDM 39	1/5/99	Backfill																																												5064.09	
173	TDM XXXIX	TDM 39	1/7/99	Backfill				0.001				120			0.005	121	98.8	0.05				0.08	0.05		28.9				0.02		7.7				0.9	1	0.002		77.7	373	762.0559		0.2		5.3				
173	TDM XXXIX	TDM 39	4/19/99	Backfill									116			128	92.5								30.3						7.8								83	370	764.4645							5063.99	
173	TDM XXXIX	TDM 39	7/9/99	Backfill				0.001				119			0.005	115	92	0.05				0.05	0.05		27				0.02		7.7				0.5	1	0.001		80	339	714.993		0.2		6.5669			5063.99	
173	TDM XXXIX	TDM 39	10/11/99	Backfill								122				125	99								30						7.7								82	415								5063.99	
173	TDM XXXIX	TDM 39	1/11/00	Backfill				0.001				122			0.005	123	98.2	0.05				0.06	0.05		29.6				0.02		7.7				0.6	1	0.001		82.7	394	791		0.2		5.8			5063.89	
173	TDM XXXIX	TDM 39	4/11/00	Backfill								122				118	103								28.7						7.7								79.8	342	735							5064.09	
173	TDM XXXIX	TDM 39	7/11/00	Backfill				0.001				121			0.01	119	102	0.05				0.05	0.05		28.4				0.02		7.7				0.5	1	0.001		82.6	322	717	763	0.2		4.5			5063.89	
173	TDM XXXIX	TDM 39	10/27/00	Backfill								1				133	0.1								33.5														85.8	112								5064.09	
173	TDM XXXIX	TDM 39	1/5/01	Backfill				0.001				118			0.01	120	98.6	0.05				0.05	0.05		28				0.04		7.7				0.2	1	0.003		78	382	768		0.2		4.9			5063.99	
173	TDM XXXIX	TDM 39	4/10/01	Backfill								122				124	91.5								31						7.7								85	381	776								
173	TDM XXXIX	TDM 39	4/12/01	Backfill																																												5063.99	
173	TDM XXXIX	TDM 39	7/17/01	Backfill																																												5064.09	
173	TDM XXXIX	TDM 39	7/31/01	Backfill				0.0006				120			0.01	120	96	0.0004				0.007	0.0001		29				0.023		7.7				0.6	2.3	0.001		77	330	719		0.2		4.33				
173	TDM XXXIX	TDM 39	10/17/01	Backfill																																												5060.89	
173	TDM XXXIX	TDM 39	10/29/01	Backfill								120				129	97								30						7.7								83	370	770								
173	TDM XXXIX	TDM 39	2/27/02	Backfill				0.001				121			0.01	121	95.1	0.05				0.03	0.05		27.7				0.02		7.7				0.6	1	0.001		78.9	362	745.65		0.2		4.1				
173	TDM XXXIX	TDM 39	5/9/02	Backfill								129				133	100								29.8						0								82.7	371	780.66								
173	TDM XXXIX	TDM 39	10/11/02	Backfill				0.001				131			0.01	108.5	84.8	0.05				0.03	0.05		25.09				0.02		7.7				0.8	1	0.001		74.6	318.7	677.19		0.2	0.00265				5064.43	
173	TDM XXXIX	TDM 39	12/6/02	Backfill				0.00107							0.0005		74	0.001					0.001							0.0014	7.8						0.001		82	355		798						5064.66	
173	TDM XXXIX	TDM 39	2/4/03	Backfill				0.00109							0.0005		84	0.001					0.001							0.0015	7.9	7.9			0.5	1	0.00142		73.2	310		769			2.51			5107.43	
173	TDM XXXIX	TDM 39	5/5/03	Backfill													80						0.001								7.86								74.7									5065.19	
173	TDM XXXIX	TDM 39	7/16/03	Backfill				0.00212							0.0005		94	0.001					0.001							0.0014		7.87	7.59		1	5	0.001		87.5	368		822			2.917193				
173	TDM XXXIX	TDM 39	10/20/03	Backfill													92															7.78								74.2	368		808							
174	TDM XL	TDM 40	8/17/88	TDSS	Background well			0.001		0.005					0.002		5	0.01			0.38		0.05			0.002	0.1	0.02	10.78					0.8	1.9	0.001	0.01		46		292	0.9		1.6	0.1		5082.97	
174	TDM XL	TDM 40	9/1/88	TDSS	Background well			0

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
174	TDM XL	TDM 40	4/23/92	TDSS	Background well							183					4.3								6.28						8.1									76.1	105	314.123							5084.26	
174	TDM XL	TDM 40	7/10/92	TDSS	Background well			0.001				179			0.01		15.2	0.05				0.05	0.05		5.9		0.001		0.02		8.2				0.2	1	0.001			89.77	114	340.58		0.2		5.42			5084.04	
174	TDM XL	TDM 40	10/27/92	TDSS	Background well			0.001			149						7.5								5.1						7.5									79.4	128	321.143		0.2		1.8			5084.18	
174	TDM XL	TDM 40	1/21/93	TDSS	Background well			0.001				165			0.01		6	0.05				0.05	0.05		5				0.024		7.8				0.8	2.2	0.001			70	103	297.793	0.2			0.2			5083.94	
174	TDM XL	TDM 40	4/28/93	TDSS	Background well							161					6.1								5						7.6									74.6	101	292.643							5083.89	
174	TDM XL	TDM 40	7/13/93	TDSS	Background well			0.001				176			0.01		7.3	0.05				0.05	0.05		5.2				0.02		7.4				0.6	1	0.001			74.4	103	310.793		0.2		0.2031			5083.99	
174	TDM XL	TDM 40	10/26/93	TDSS	Background well																																												5083.76	
174	TDM XL	TDM 40	1/14/94	TDSS	Background well																																													5083.89	
174	TDM XL	TDM 40	4/24/94	TDSS	Background well																																													5085.49	
174	TDM XL	TDM 40	7/10/94	TDSS	Background well			0.001			180				0.01	30.1	11.8	0.05				0.05	0.05		6.2				0.02	7.1					0.3	1	0.001			66.4	99.5	304.493		0.2		0.677			5084.04	
174	TDM XL	TDM 40	10/27/94	TDSS	Background well																																												5083.99	
174	TDM XL	TDM 40	1/30/95	TDSS	Background well			0.001				182			0.01	31	1	0.05				0.05	0.05		6.32				0.02		7.5				0.4	1	0.001			67.2	102	299.013		0.2		0.2			5083.73	
174	TDM XL	TDM 40	5/4/95	TDSS	Background well							178				30.7	8.1								6.1						7.4									70	103	307.343							5083.54	
174	TDM XL	TDM 40	7/25/95	TDSS	Background well			0.001				184			0.01	30.6	6.4	0.05				0.05	0.05		5.8				0.02		8				0.6	2.4	0.001			72.5	103	310.793		0.2		10.2			5084.04	
174	TDM XL	TDM 40	11/21/95	TDSS	Background well							178				29.6	5.3								5.7						7.9									69	99.6	298.643							5083.84	
174	TDM XL	TDM 40	1/26/96	TDSS	Background well			0.001				196			0.01	29.2	4.8	0.05				0.05	0.05		5.9				0.02		7.9				0.2	1.1	0.001			68	94	313.0145		0.2		0.2			5084.34	
174	TDM XL	TDM 40	5/1/96	TDSS	Background well																																												5083.99	
174	TDM XL	TDM 40	7/11/96	TDSS	Background well			0.001				198			0.01	33.2	6.4	0.05				0.05	0.05		6.3				0.02		8.3				0.3	1	0.001			70.9	104	320.293		0.2		0.2			5084.34	
174	TDM XL	TDM 40	11/13/96	TDSS	Background well							167				32.9	7.1								6.3						7.8			3.8						67.3	103	304.343							5084	
174	TDM XL	TDM 40	2/4/97	TDSS	Background well			0.005				182			0.01	33.2	6.5	0.05				0.05	0.05		6.4				0.02		8.1				0.2	1	0.005			64.9	104	306.443		0.2		0.2			5084.29	
174	TDM XL	TDM 40	4/26/97	TDSS	Background well							174				29.2	6.7								5.5						8.4									65.2	98	295.883							5084.04	
174	TDM XL	TDM 40	7/9/97	TDSS	Background well			0.001				189			0.01	29.8	6.5	0.05				0.08	0.05		6						8.2				0.2	1	0.001			71	100	308.243		0.2		0.34			5084.59	
174	TDM XL	TDM 40	10/9/97	TDSS	Background well							180				37.3	15.7								7.3						7.9									69.6	98	319							5084.34	
174	TDM XL	TDM 40	1/5/98	TDSS	Background well			0.001				184			0.005	32.4	5.2	0.05				0.05	0.05		6.1				0.02		7.9				0.2	1	0.001			70.3	108	315		0.7		0.2			5084.62	
174	TDM XL	TDM 40	4/6/98	TDSS	Background well							181				32.7	8.1								6.5						8			3.8						70.3	108	317							5084.1	
174	TDM XL	TDM 40	4/7/98	TDSS	Background well																																												5084.09	
174	TDM XL	TDM 40	7/7/98	TDSS	Background well			0.001				177			0.005	30	4.8	0.05				0.05	0.05		5.9				0.02		8				0.2	1	0.001			70	99	299		0.2		0.2				
174	TDM XL	TDM 40	10/22/98	TDSS	Background well							180				36.4	7.9								9.3						8									71.5	128	346								
174	TDM XL	TDM 40	10/26/98	TDSS	Background well																																												5084.44	
174	TDM XL	TDM 40	1/7/99	TDSS	Background well			0.001				179			0.005	31.1	8.5	0.05				0.05	0.05		6				0.02		8				0.2	1	0.001			66.4	95.4	299.393		0.2		0.2			5084.74	
174	TDM XL	TDM 40	4/17/99	TDSS	Background well							176				34.4	10.9								7.5						8									68.5	111	322.743							5084.59	
174	TDM XL	TDM 40	7/9/99	TDSS	Background well			0.001				174			0.005	54	20	0.05				0.05	0.05		12				0.02		8				0.2	1	0.001			74	161	410.493		0.2		0.2			5084.39	
174	TDM XL	TDM 40	10/6/99	TDSS	Background well							176				32	8								7						8									66	118									
174	TDM XL	TDM 40	10/11/99	TDSS	Background well																																												5084.59	
174	TDM XL	TDM 40	1/6/00	TDSS	Background well			0.001				172			0.01	32.7	12.3	0.05				0.05	0.05		7.2				0.02		8				0.2	1	0.001			67	108	316		0.2		0.609			5084.19	
174	TDM XL	TDM 40	4/10/00	TDSS	Background well							177				31.8	6.1								6.6						8									64.9	102	302							5085.39	
174	TDM XL	TDM 40	7/5/00	TDSS	Background well			0.001				180			0.01	47.7	14.7	0.05				0.12	0.05		10.9				0.02		8				0.2	1	0.001			69.5	133	368	314	0.2		0.9			5084.39	
174	TDM XL	TDM 40	10/26/00	TDSS	Background well							172				33.1	11.01								7.17						8									70.4	107		313						5085.39	
174	TDM XL	TDM 40	1/3/01	TDSS	Background well			0.001				168			0.01	31	5.8	0.05				0.05	0.05		6.1				0.02		8				0.2	1	0.001			65.5	106	301		0.2		0.2			5085.14	
174	TDM XL	TDM 40	4/12/01	TDSS	Background well							179				36	6.3								7						8									74	101	316							5084.59	
174	TDM XL	TDM 40	8/1/01	TDSS	Background well			0.001				180			0.01	31	9.7	0.0003				0.03	0.05		6.2				0.001		8				0.3	1	0.001			64	89	288		0.2		0.135			5085.39	
174	TDM XL	TDM 40	10/30/01	TDSS	Background well							180				37.3	10								7.5						8									70	112	325							5083.04	
174	TDM XL	TDM 40	2/26/02	TDSS	Background well			0.001				183			0.01	32.8	4.27	0.05				0.03	0.05		6.32				0.02		8				0.2	5.9	0.001			68.2	101	304.24		0.2		0.201				
174	TDM XL	TDM 40	5/7/02	TDSS	Background well							185				34.4	10.5								6.54						0									68.3	102	314.15							5084.34	
174	TDM XL	TDM 40	10/10/02	TDSS	Background well			0.001				184			0.01	29.67	8.43	0.05				0.03	0.05		5.93				0.02		8				0.2	1	0.001			62	92.4	290.43		0.2	0.0003				5083.79	
174	TDM XL	TDM 40	12/3/02	TDSS	Background well			0.001							0.0005		4.4	0.001					0.001						0.001	7.9						0.001			69.3	131		327						5083.34	
174	TDM XL	TDM 40	1/28/03	TDSS	Background well			0.001							0.0005		5	0.001					0.001						0.001	8.1	8.21				0.3	1	0.001			64.9	22.5		317			0.2031			5083.39	
174	TDM XL	TDM 40	5/5/03	TDSS	Background well												4.8													7.9	8.03	7.9								60.8	86.7		323						5084.29	
174	TDM XL	TDM 40	7/17/03	TDSS	Background well			0.001							0.0005		5.2	0.001					0.001						0.001		4.44	7.86				0.8	1	0.001			70.7	87		299			0.2031				
174	TDM XL	TDM 40	10/23/03	TDSS	Background well												5.5															8.02									65.5	84.4		313							
175	TDM XLI	TDM 41	8/17/88	TDSS	Tailings Impact Endmember			0.001		0.005					0.009			0.12		0.16					0.0002	0.1	0.72	6.16						2.1	2.6	0.001	0.01			2920		5685	1		0.2	0.1			5128.16	
175	TDM XLI	TDM 41	9/1/88	TDSS	Tailings Impact Endmember			0.001		0.005					0.01		449	0.58		0.14		0.05			0.0002	0.1	0.73	6.23						1.1	10	0.001	0.01			2940		5420	0.3		2.1	0.1			5126.98	
175	TDM XLI	TDM 41	9/30/88	TDSS	Tailings Impact Endmember			0.001		0.005			12		0.012	465	376	0.55		0.17	198	0.08		544	0.0002	0.1	0.83	6.37				8	1	9.4	0.001	0.01	291	3270		4929	0.6		0.7	0.1		5126.49	
175	TDM XLI	TDM 41	1/12/89	TDSS	Tailings Impact Endmember			0.001		0.005		452.62	37		0.012	473	410				251	0.05	2.8	527	0.0002	0.1	0.9	6.49			1.3	8	2.1	6.2	0.007	0.01	279	3950		5810	1		0.8	0.1		5124.11	
175	TDM XLI	TDM 41	4/6/89	TDSS	Tailings Impact Endmember			0.001				507.52			0.014	440	480	0.77			218	0.05		504			0.72	6.44				7	0.6	1.5	0.001		299	3600		5766	0.9		0.2			5123.03	
175	TDM XLI	TDM 41	7/14/89	TDSS	Tailings Impact Endmember			0.001				497.76			0.011	333	410	0.4			244	0.05		518			0.73	6.4					1.3	0.8	0.001		284	3000		5393	0.9		0.3			5121.25	
175	TDM XLI	TDM 41	10/20/89	TDSS	Tailings Impact Endmember							441.64				391	420							514				6.39									360	3980		5542						5121.03	
175	TDM XLI	TDM 41	12/12/89	TDSS	Tailings Impact Endmember			0.001				400.16			0.014	489	420	2.03			320	0.05		547			1.13	6.36					1.6	3.3	0.001		314	2200		5526	1		0.4			5119.87	
175	TDM XLI	TDM 41	1/16/90	TDSS	Tailings Impact Endmember			0.001				373.32			0.014	441	430	1.97			315	0.05		605			1.19	6.08					1.3		0.001		324	2400		3924	0.2		0.9		1.6	5119.63	
175	TDM XLI	TDM 41	5/1/90	TDSS	Tailings Impact Endmember							390.4				481	400							708				6.23									308	3360		6080						5121.03	
175	TDM XLI	TDM 41	8/22/90	TDSS	Tailings Impact Endmember			0.001				427			0.013	738	395	0.49			337	0.05		270			0.99	6.153					1.1	1.9	0.001		316	2140		5864	0.1		0.2			5115.98	
175	TDM XLI	TDM 41	10/19/90	TDSS	Tailings Impact Endmember							331.84				362	384							653				6.2									274	3850		7056						5119.6	
175	TDM XLI	TDM 41	1/13/91	TDSS	Tailings Impact Endmember			0.001				371			0.01		356	0.05			311.6	0.05		560			1.09	6.4					2	5.4	0.001		374	4092	6124.51		0.2		0.2031				
175	TDM XLI	TDM 41	7/3/91	TDSS	Tailings Impact Endmember			0.001				399.91			0.01		346	0.05			374	0.05		582			1.3	6.1					0.9	4.6	0.001		394	4091	6183.965		0.2		1.8			5084.18	
175	TDM XLI	TDM 41	10/14/91	TDSS	Tailings Impact Endmember							373.32					364							411				6.1									315	2240	3820.67								
175	TDM XLI	TDM 41	1/8/92	TDSS	Tailings Impact Endmember			0.001				334.03			0.01		303	0.05			396	0.05		544			1.39	6.4					1.3	6.1	0.001		310	4463	6658.158		0.2		0.2			5115.08	
175	TDM XLI	TDM 41	4/23/92	TDSS	Tailings Impact Endmember							397					368							608				6.1									309	4208								5110.38	
175	TDM XLI	TDM 41	7/10/92	TDSS	Tailings Impact Endmember			0.001				353			0.01		339	0.05			421.62	0.05		542.65	0.001		1.404	6					1.8	6.5	0.001		353.94	4531	6403.08		0.2		2.71			5110.13	
175	TDM XLI	TDM 41	10/27/92	TDSS	Tailings Impact Endmember						337						322							535				6.2									286	4505	6290.943							5108.27	
175	TDM XLI	TDM 41	1/20/93	TDSS	Tailings Impact Endmember			0.001				345			0.01		340	0.05			441	0.05		505			1.22	6.1					3.2	7.7	0.001		313	4640	6879.943		0.2		0.2			5108.3	
175	TDM XLI	TDM 41	4/27/93	TDSS	Tailings Impact Endmember							349					373							517				5.9									321	4198								5110.94	
175	TDM XLI	TDM 41	7/13/93	TDSS	Tailings Impact Endmember			0.001				399			0.01		363	0.05			464	0.05		526			1.32	5.9					1.7	4.3	0.001		355	4507	6952.943		0.2		1.354			5107.69	
175	TDM XLI	TDM 41	10/27/93	TDSS	Tailings Impact Endmember																																												5094.94	
175	TDM XLI	TDM 41	1/12/94	TDSS	Tailings Impact Endmember																																													5099.19	
175	TDM XLI	TDM 41	4/24/94	TDSS	Tailings Impact Endmember																																													5101.19	
175	TDM XLI	TDM 41	7/8/94	TDSS	Tailings Impact Endmember			0.001			346				0.01	483	335	0.05			542	0.05		466			1.34	6.2					2.2	29	0.001		324	4739	7062.443		0.2		0.677			5100.74	
175	TDM XLI	TDM 41	10/25/94	TDSS	Tailings Impact Endmember																																												5100.53	
175	TDM XLI	TDM 41	1/23/95	TDSS	Tailings Impact Endmember																																												5109.07	
175	TDM XLI	TDM 41	1/30/95	TDSS	Tailings Impact Endmember			0.001				370			0.01	500	304	0.05			389	0.05		560			1.53	6.4					3.2	10.2	0.001		330	4875	7143.443		0.2		0.4				
175	TDM XLI	TDM 41	5/4/95	TDSS	Tailings Impact Endmember			0.001				397			0.01	518	340	0.05			397	0.05		544			1.51	6.5					3	10	0.001		326	4394	6717.943		0.2		0.2			5102.51	
175	TDM XLI	TDM 41	7/21/95	TDSS	Tailings Impact Endmember			0.001				401			0.01	496	323	0.05			484	0.05		574			1.57	6.1					2.2	8.8	0.001		350	4720	7147.943		0.2		0.2				
175	TDM XLI	TDM 41	7/24/95	TDSS	Tailings Impact Endmember																																												5100.94	
175	TDM XLI	TDM 41	11/21/95	TDSS	Tailings Impact Endmember							457				455	294							498				6.1									320	3698	5494.0316							5104.34	
175	TDM XLI	TDM 41	1/15/96	TDSS	Tailings Impact Endmember																																												5107.89	
175	TDM XLI	TDM 41	1/26/96	TDSS	Tailings Impact Endmember			0.001				439			0.01	495	271	0.05			455	0.05		555			1.44	6.8					1.8	6.7	0.001		329	4335	6681.843		0.2		0.2				
175	TDM XLI	TDM 41	5/1/96	TDSS	Tailings Impact Endmember																																												5103.89	
175	TDM XLI	TDM 41	7/11/96	TDSS	Tailings Impact Endmember			0.001				456			0.01	460	308	0.05			460	0.05		560			1.7	6.5					1.6	1	0.001		335	4610	6961.443		1.5		0.2			5103.99	
175	TDM XLI	TDM 41	11/12/96	TDSS	Tailings Impact Endmember							396				526	338							587				6				13.2						295	4204	6161.643							5104.1	
175	TDM XLI	TDM 41	1/31/97	TDSS	Tailings Impact Endmember			0.001				689			0.01	525	325	0.05			390	0.05		520			1.19	6.4					0.9	1	0.001		289	4200	6203.943		0.2		0.2			5111.29	
175	TDM XLI	TDM 41	4/26/97	TDSS	Tailings Impact Endmember							496				540	303							475				6.6									295	4100	5961.443							5103.79	
175	TDM XLI	TDM 41	7/1/97	TDSS	Tailings Impact Endmember			0.001				396			0.01	520	304	0.05			364	0.05		510				6.6					1.2	11.5	0.001		303	4350	6185		0.2		0.41			5103.59	
175	TDM XLI	TDM 41	10/7/97	TDSS	Tailings Impact Endmember							427				466	283							470				6									290	4370	6093							5103.99	
175	TDM XLI	TDM 41	1/1/98	TDSS	Tailings Impact Endmember			0.001				441			0.005	484	281	0.05			422	0.05		500			1.57	6.1					2.5	10.5	0.004		283	4000	6191		0.2		0.7			5103.79	
175	TDM XLI	TDM 41	4/6/98	TDSS	Tailings Impact Endmember							548				465	296							435				6.2				12.9						295	3500	5266							5103.91	
175	TDM XLI	TDM 41	7/7/98	TDSS	Tailings Impact Endmember			0.001				355			0.005	518	270	0.05			318	0.05		439			1.25	5.9					1.5	11.5	0.004		299	3967	5990		0.2		0.3			5111.04	
175	TDM XLI	TDM 41	10/22/98	TDSS	Tailings Impact Endmember							424				458	283							473				6									305	3680	5413							5102.19	
175	TDM XLI	TDM 41	1/6/99	TDSS	Tailings Impact Endmember			0.001				529			0.005	441	312	0.05			334	0.05		469			1.24	6.2					1.7	7.1	0.001		270	3800	5892.943		0.2		0.2			5109.5	
175	TDM XLI	TDM 41	4/17/99	TDSS	Tailings Impact Endmember							504				504	297							464				6.2									273	3700	5492.443							5108.98	
175	TDM XLI	TDM 41	7/5/99	TDSS	Tailings Impact Endmember			0.001				443			0.005	416	298	0.05			290	0.05		470			1.4	6.2					1.1	9.4	0.002		275	3220	5192.943		0.2		7.447			5106.5	
175	TDM XLI	TDM 41	10/6/99	TDSS	Tailings Impact Endmember							541				467	302							459				6.5									270	3390								5110	
175	TDM XLI	TDM 41	1/6/00	TDSS	Tailings Impact Endmember			0.001				472			0.01	529	277	0.05			164	0.05		458	48.4		1.3	6.1				13.1	1.4	8.2	0.005		288	3830	5784		0.2		0.2			5108.4	
175	TDM XLI	TDM 41	4/4/00	TDSS	Tailings Impact Endmember							485				513	311							470				6.1									277	3610	5426							5108.98	
175	TDM XLI	TDM 41	7/6/00	TDSS	Tailings Impact Endmember			0.001				499			0.01	461	282	0.05			305	0.05		438			1.3	6.1					1.5	1	0.001		270	3340	5348	6140	0.2		0.4			5108.5	
175	TDM XLI	TDM 41	10/26/00	TDSS	Tailings Impact Endmember							458				475	294							464				6.1									266	3600		6140						5102.59	
175	TDM XLI	TDM 41	1/2/01	TDSS	Tailings Impact Endmember			0.001				478			0.01	472	297	0.05			278	0.05		445			1.1	6.1					0.7	8.8	0.005		250	3470	5453		0.2		0.2			5102.69	
175	TDM XLI	TDM 41	4/10/01	TDSS	Tailings Impact Endmember							514				426	277							405				6.1									197	2860	4424								
175	TDM XLI	TDM 41	4/12/01	TDSS	Tailings Impact Endmember																																												5109

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
176	TDM XLII	TDM 42	4/26/89	TDSS				0.001				346.48			0.007	459	215	0.01				0.1	0.05		102				0.02	8.2				12	0.9	2	0.001		195	1880		2491	0.2					5136.19	
176	TDM XLII	TDM 42	7/17/89	TDSS				0.001				297.68			0.006	442	250	0.01				0.09	0.05		120				0.02	8.11					1.1	0.9	0.001		198	1540		2546	0.6					5135.1	
176	TDM XLII	TDM 42	10/23/89	TDSS								307.44				453	205							103					8.27									204	1570		2645						5133.96	
176	TDM XLII	TDM 42	1/17/90	TDSS				0.001				300.12			0.012	493	190	0.01				0.08	0.05		108				0.03	7.98					1.3	2	0.001		205	1650		2066	0.2		0.3			5133.09	
176	TDM XLII	TDM 42	4/24/90	TDSS								346.48				481	375							88					7.59									238	1100		2706						5132.65	
176	TDM XLII	TDM 42	8/24/90	TDSS				0.001				322.08			0.008	553	172	0.03				0.19	0.05		54					8.1					0.6	2.3	0.001		206	1500		2576	0.2		0.2			5131.4	
176	TDM XLII	TDM 42	10/18/90	TDSS								348.92				445	198							62					8									201	1350		2796						5130.94	
176	TDM XLII	TDM 42	1/11/91	TDSS				0.001				329			0.01	467	178	0.05				0.55	0.05		108				0.05		7.8				0.2	1	0.001		210	1631	2758.51		1.4		0.2031				
176	TDM XLII	TDM 42	7/3/91	TDSS				0.001				336.23			0.01	473	187	0.05				0.4	0.05		106				0.05		7				0.3	1	0.001		207	1483	2624.125		0.2		2.4				
176	TDM XLII	TDM 42	10/10/91	TDSS								306.7				484	181							104						7.5									194	1538	2654.3943								
176	TDM XLII	TDM 42	1/9/92	TDSS				0.001				301.9			0.01	444	181	0.05				2.4	0.05		112				0.02		6.9				0.8	3.3	0.001		194	1509	2594.123		0.2		0.2			5127.9	
176	TDM XLII	TDM 42	4/22/92	TDSS								318				484	175							111						7.6									207	1551	2687.443							5127.7	
176	TDM XLII	TDM 42	7/9/92	TDSS				0.001				383			0.01	409	164	0.05				0.05	0.05		91.39		0.001		0.02		7.4				0.6	3.5	0.001		260.9	1445	2561.89		0.2		0.68			5126.93	
176	TDM XLII	TDM 42	10/26/92	TDSS							271					438	170							93.8					7.6									221	1479	2537.743							5126.69	
176	TDM XLII	TDM 42	1/20/93	TDSS				0.001				222			0.01	427	176	0.05				0.88	0.05		100				0.02		7.6				1.3	1	0.001		176	1466	2457.323		0.2		0.2			5126.2	
176	TDM XLII	TDM 42	4/28/93	TDSS								237				393	173							79.7						7.3									180	1335	2279.643								
176	TDM XLII	TDM 42	5/12/93	TDSS																																												5125.36	
176	TDM XLII	TDM 42	7/12/93	TDSS				0.001				330			0.01	496	251	0.05				0.97	0.05		103				0.02		7				3.6	1	0.001		228	1450	2740.485		0.2		1.354			5125.64	
176	TDM XLII	TDM 42	10/26/93	TDSS																																												5124.91	
176	TDM XLII	TDM 42	1/13/94	TDSS																																												5124.69	
176	TDM XLII	TDM 42	4/24/94	TDSS																																												5124.49	
176	TDM XLII	TDM 42	7/5/94	TDSS																																												5124.01	
176	TDM XLII	TDM 42	7/17/94	TDSS				0.001				398.7			0.01	589	204	0.05				1.15	0.05		120				0.02		7.5				1.2	7.6	0.001		208	1747	3068.943		0.2		0.2				
176	TDM XLII	TDM 42	10/25/94	TDSS																																												5123.67	
176	TDM XLII	TDM 42	1/26/95	TDSS				0.001				382			0.01	612	208	0.05				1.06	0.05		127				0.02		7				1.5	4.3	0.001		221	1728	3088.503		0.2		0.2			5123.59	
176	TDM XLII	TDM 42	4/24/95	TDSS				0.001				405			0.01	560	235	0.05				1.24	0.05		120				0.02		7.1				0.7	4.3	0.001		223	1742	3084.183		0.2		0.677			5123.19	
176	TDM XLII	TDM 42	7/21/95	TDSS				0.001				437			0.01	609	231	0.05				1.35	0.05		115				0.02		7.1				1.7	3.2	0.001		220	1737	3132.293		0.2		0.2			5123.05	
176	TDM XLII	TDM 42	11/20/95	TDSS								446				607	217							122						7.2									235	1724	3128.443							5122.19	
176	TDM XLII	TDM 42	1/24/96	TDSS				0.001				498			0.01	718	232	0.05				1.27	0.05		132				0.02		7.6				1.5	1	0.001		230	1892	3474.1117		0.2		0.2			5122.7	
176	TDM XLII	TDM 42	4/24/96	TDSS																																												5121.89	
176	TDM XLII	TDM 42	7/10/96	TDSS																																												5122.29	
176	TDM XLII	TDM 42	7/11/96	TDSS				0.001				476			0.01	600	225	0.05				0.21	0.05		145				0.02		7.5				1.3	1	0.001		241	1970	3419.653		0.2		2				
176	TDM XLII	TDM 42	11/11/96	TDSS								407				683	247							151						7.2			12.1						213	1952	3462.043							5121.62	
176	TDM XLII	TDM 42	1/27/97	TDSS				0.001				467			0.01	705	264	0.05				0.05	0.05		150				0.02		7.3				0.9	1	0.001		212	2055	3619.943		0.2		0.2			5121.54	
176	TDM XLII	TDM 42	4/26/97	TDSS								466				660	248							140						7.3									214	1903	3398.443								
176	TDM XLII	TDM 42	5/10/97	TDSS																																												5121.39	
176	TDM XLII	TDM 42	7/7/97	TDSS				0.001				462			0.01	685	231	0.05				0.98	0.05		145						7.5				1	4.4	0.001		221	1807	3320.443		0.2		0.2			5121.04	
176	TDM XLII	TDM 42	10/9/97	TDSS								456				634	222							124						7.1									209	1870	3288							5122.29	
176	TDM XLII	TDM 42	1/5/98	TDSS				0.001				466			0.005	624	242	0.05				0.78	0.05		138				0.02		7				1.6	3.6	0.005		221	1850	3309		0.2		0.2			5120.64	
176	TDM XLII	TDM 42	4/10/98	TDSS								456				589	234							125						7.3			12.3						226	1900	3303							5119.96	
176	TDM XLII	TDM 42	7/2/98	TDSS				0.001				458			0.005	626	213	0.05				1.05	0.05		142				0.02		7.2				0.9	3.7	0.004		222	1830	3264		0.2		0.3			5119.89	
176	TDM XLII	TDM 42	10/13/98	TDSS								466				655	224							125						7.2									219	1850	3308							5119.74	
176	TDM XLII	TDM 42	1/6/99	TDSS				0.001				475			0.005	627	248	0.05				1.65	0.05		117				0.02		7.1				0.8	1	0.001		188	1800	3221.593		0.2		0.2			5119.64	
176	TDM XLII	TDM 42	4/17/99	TDSS								462				665	253							156						7.2									199	1830	3336.443							5119.34	
176	TDM XLII	TDM 42	7/5/99	TDSS				0.001				468			0.005	656	239	0.05				6.2	0.05		163				0.04		7.2				0.7	3.4	0.002		195	1880	3375.643		0.2		0.2708			5119.09	
176	TDM XLII	TDM 42	10/6/99	TDSS								469				635	235							159						7.2									196	1920								5119.44	
176	TDM XLII	TDM 42	1/5/00	TDSS				0.001				470			0.01	675	204	0.05				7.4	0.05		164				0.04		7.2				0.6	3.7	0.006		173	1930	3391		0.2		0.2			5119.14	
176	TDM XLII	TDM 42	4/4/00	TDSS								487				654	233							159						7.2									205	1940	3437							5119.19	
176	TDM XLII	TDM 42	7/6/00	TDSS																																												5119.84	
176	TDM XLII	TDM 42	7/13/00	TDSS				0.001				486			0.01	621	245	0.05				6.36	0.05		153				0.03		7.2				0.7	4.1	0.001		196	1720	3186	3800	0.2		0.2				
176	TDM XLII	TDM 42	10/25/00	TDSS								475				667	266.7							137						7.2									195	1910		3780						5119.19	
176	TDM XLII	TDM 42	1/2/01	TDSS				0.001				470			0.01	678	230	0.05				5.1	0.05		163				0.04		7.2				0.6	5.4	0.006		173	1770	3257		0.2		0.2			5119.09	
176	TDM XLII	TDM 42	4/10/01	TDSS								498				680	225							158						7.2									235	2160	3709								
176	TDM XLII	TDM 42	4/12/01	TDSS																																												5119.34	
176	TDM XLII	TDM 42	7/31/01	TDSS				0.001				490			0.0001	640	220	0.0007				1.5	6E-05		160				0.026		7.2				1.2	4.3	0.001		200	1800	3280		0.2		0.135				
176	TDM XLII	TDM 42	8/1/01	TDSS																																												5119.09	
176	TDM XLII	TDM 42	10/17/01	TDSS								500				758	279							172						7.2									202	2140	3804							5116.79	
176	TDM XLII	TDM 42	2/21/02	TDSS				0.001				505			0.01	656	229	0.05				2.06	0.05		155				1.02		7.2				1.1	1	0.001		211	2020	3522.28		0.2		0.67				
176	TDM XLII	TDM 42	4/30/02	TDSS								515				698	231							170						0									216	2070	3645.4								
176	TDM XLII	TDM 42	9/30/02	TDSS				0.00303				521			0.01	711	203.2	0.05				1.81	0.05		170.3				0.05		7.2				0.9	2.3	0.007905		194.9	2080	3621.77		0.2	0.0003				5117.84	
176	TDM XLII	TDM 42	12/4/02	TDSS				0.001							0.0005		210	0.001					0.001							0.0047	7.1						0.00265		222	2090		3980						5117.29	
176	TDM XLII	TDM 42	2/4/03	TDSS				0.001							0.0005		220	0.001					0.001							0.0035	7.1	7.15				1.3	2.9	0.00294		244	1940		3820			0.2031			5313.55	
176	TDM XLII	TDM 42	5/8/03	TDSS													200												7	7.16	7							207	2060		4060						5313.5	
176	TDM XLII	TDM 42	7/18/03	TDSS				0.001							0.0005		230	0.001					0.001							0.0044		7.3	7.31			2.6	3	0.00381		231	2000		4260			0.2031				
176	TDM XLII	TDM 42	10/23/03	TDSS													230														7.05							217	2310		4010							
177	TDM XLIII	TDM 43	8/22/88	TDSS				0.001		0.005					0.01		325	0.01			0.15		0.05				0.0002	0.1	0.11	6.1					1.6	2	0.001	0.01		2080		4974	1.2		43	0.1		5141.09	
177	TDM XLIII	TDM 43	9/7/88	TDSS				0.001		0.005					0.016		308	0.01			0.15		0.05				0.0002	0.1	0.12	6.06					0.8	4.3	0.001	0.03		2250		4450	0.5		69	0.1		5140.84	
177	TDM XLIII	TDM 43	9/21/88	TDSS				0.001		0.005					0.013		290	0.01			0.21		0.05				0.0002	0.1	0.15	6.28					1	6.5	0.001	0.01		2510		4526	0.5		62	0.1		5140.27	
177	TDM XLIII	TDM 43	10/5/88	TDSS				0.001		0.005	384				0.011	537	338	0.01			0.22	0.04	0.05		422		0.0002	0.1	0.14	6.25				14	1.2	6.9	0.001	0.01	283	2470		5349	1		41	0.1		5140.06	
177	TDM XLIII	TDM 43	1/11/89	TDSS				0.001		0.005		193.98	537		0.011	537	282	0.01			0.14	0.07	0.05	1.4	351		0.0002	0.1	0.02	7.99		1.3	17	1.8	5.7	0.002	0.01	283	3800		4167	0.7		64	0.1		5138.29	
177	TDM XLIII	TDM 43	4/6/89	TDSS				0.001				569.74			0.011	515	460	0.01				0.09	0.05		400				0.02	6.43			16	1.6	2.4	0.001		277	3050		4037	1.8		20			5137.03	
177	TDM XLIII	TDM 43	7/12/89	TDSS				0.001				559.98			0.008	514	320	0.01				0.04	0.05		370				0.02	6.41				1.8	1.2	0.003		273	2690		4636	1.4		64			5135.76	
177	TDM XLIII	TDM 43	10/20/89	TDSS								539.24				500	310							480					6.43									350	2650		4432						5135.33	
177	TDM XLIII	TDM 43	12/18/89	TDSS				0.001				580.72			0.015	537	310	0.04				0.82	0.05		355				0.09	6.35				1.4	1.6	0.001		280	2290		4355	1.1		47			5129.57	
177	TDM XLIII	TDM 43	1/18/90	TDSS				0.001				580.72			0.015	537	290	0.01				1.55	0.05		360				0.06	6.25				1.4	1.6	0.001		274	2400		3105	0.6		36			5127.39	
177	TDM XLIII	TDM 43	5/1/90	TDSS								527.04				778	320							327					5.92									317	2880		5022						5133.39	
177	TDM XLIII	TDM 43	8/24/90	TDSS				0.001				722.24			0.009	705	275	0.04				1.1	0.05		298				0.07	6.6				1.6	2.1	0.001		293	2170		3783	0.2		25			5123.56	
177	TDM XLIII	TDM 43	10/19/90	TDSS								653.92				529	265							342					6.5									277	2500		4624						5131.38	
177	TDM XLIII	TDM 43	1/13/91	TDSS				0.001				537			0.01	593	264	0.06				48.2	0.05		368				0.2		6.2				0.7	1	0.001		322	2903	4718.54		0.2		22.5441				
177	TDM XLIII	TDM 43	7/3/91	TDSS				0.001				731.02			0.01	567	257	0.05				2.09	0.05		317				0.05		6.4				1.2	1.8	0.001		269	2476	4251.52		0.2		34.1			5124.69	
177	TDM XLIII	TDM 43	10/14/91	TDSS								703.69				672	292							257						6.4									271	2413	4257.235							5124.49	
177	TDM XLIII	TDM 43	1/14/92	TDSS				0.001				597.31			0.01	657	261	0.05				1.81	0.05		307				0.02		6.4				2.1	1.7	0.001		254	2552	4372.997		0.2		35.2			5127.04	
177	TDM XLIII	TDM 43	4/23/92	TDSS								692				649	282							304						6									260	2311	4155.987							5122.07	
177	TDM XLIII	TDM 43	7/10/92	TDSS				0.001				594			0.01	542	248	0.05				0.05	0.05		312.87		0.001		0.02		6.4				0.8	6.2	0.001		338.36	2495	4233.43		0.2		31.82			5125.43	
177	TDM XLIII	TDM 43	10/27/92	TDSS							583					526	241							290.3					6.5									269	2273	3895.6287							5125.54	
177	TDM XLIII	TDM 43	1/20/93	TDSS				0.001				557			0.01	606	247	0.05				0.84	0.05		290				0.03		6.4				4.1	5.1	0.001		252	2481	4163.2697		0.2		39.9			5125.65	
177	TDM XLIII	TDM 43	4/27/93	TDSS								578				615	237							266						6.3									247	2354	4025.277							5124.86	
177	TDM XLIII	TDM 43	7/15/93	TDSS				0.001				568			0.01	618	204	0.05				0.53	0.05		310				0.02		6.2				1.4	4.3	0.001		255	2529	4203.4981		0.2		41.297			5124.64	
177	TDM XLIII	TDM 43	10/27/93	TDSS																																												5123.94	
177	TDM XLIII	TDM 43	1/12/94	TDSS																																												5123.83	
177	TDM XLIII	TDM 43	4/24/94	TDSS																																												5123.07	
177	TDM XLIII	TDM 43	7/7/94	TDSS																																												5123.65	
177	TDM XLIII	TDM 43	7/24/94	TDSS				0.001				603.9			0.01	655	237	0.05				0.18	0.05		276				0.02		7.2				91.4	10.6	0.005		232	2648	4367.85		0.2		38.589				
177	TDM XLIII	TDM 43	10/24/94	TDSS																																												5123.74	
177	TDM XLIII	TDM 43	1/23/95	TDSS																																												5122.69	
177	TDM XLIII	TDM 43	1/30/95	TDSS				0.001				488			0.01	550	253	0.05				2.22	0.05		307				0.02		6.9				1.5	4.9	0.002		223	2421	4118.058		0.2		44.4				
177	TDM XLIII	TDM 43	5/4/95	TDSS				0.001				504			0.01	619	298	0.05				2.6	0.05		299				0.02		7.2				1.3	7.2	0.001		241	2500	4347.158		0.2		57.545			5122.49	
177	TDM XLIII	TDM 43	7/24/95	TDSS				0.001				487			0.01	592	235	0.05				0.05	0.05		276				0.02		6.8				1	3.1	0.001		200	2054	3666.557		0.2		55.9			5122.69	
177	TDM XLIII	TDM 43	11/21/95	TDSS																																												5121.89	
177	TDM XLIII	TDM 43	11/22/95	TDSS								499				585	212							255						6.9									234	2165	3744.7114								
177	TDM XLIII	TDM 43	1/15/96	TDSS																																												5121.96	
177	TDM XLIII	TDM 43	1/26/96	TDSS				0.002				507			0.01	684	272	0.05				0.8	0.05		286				0.03		7				0.9	1	0.001		250	2348	4142.7741		0.2		51				
177	TDM XLIII	TDM 43	5/1/96	TDSS																																												5121.04	
177	TDM XLIII	TDM 43	7/10/96	TDSS				0.001				460			0.01	630	240	0.05				0.05	0.05		295				0.02		7.4				0.9	1	0.001		262	2470	4140.4729		0.2		56.8				
177	TDM XLIII	TDM 43	7/11/96	TDSS																																												5120.34	
177	TDM XLIII	TDM 43	11/12/96	TDSS																																													
177	TDM XLIII	TDM 43	1/27/97	TDSS																																												
177	TDM XLIII	TDM 43	4/14/97	TDSS																																												5119.19	
177	TDM XLIII	TDM 43	7/7/97	TDSS																																												
177	TDM XLIII	TDM 43	10/9/97	TDSS																																												
177	TDM XLIII	TDM 43	1/6/98	TDSS																																												
177	TDM XLIII	TDM 43	4/6/98	TDSS																																												
177	TDM XLIII	TDM 43	7/7/98	TDSS																																												
177	TDM XLIII	TDM 43	10/13/98	TDSS																																												
177	TDM XLIII	TDM 43	1/7/99	TDSS																																												
177	TDM XLIII	TDM 43	4/16/99	TDSS																																												
177	TDM XLIII	TDM 43	7/5/99	TDSS																																												
177	TDM XLIII	TDM 43	10/3/99	TDSS																																												
177	TDM XLIII	TDM 43	1/11/00	TDSS												

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
178	TDM XLIV	TDM 44	8/17/88	TDSS				0.001		0.005					0.006		315	0.01				0.11		0.05			0.0002	0.1	0.02	6.6					1.9	2.1	0.001	0.01		1460		4028	1.2		57	0.1		5133.78	
178	TDM XLIV	TDM 44	9/1/88	TDSS				0.002		0.005					0.006		334	0.05				0.12		0.12			0.0002	0.1	0.02	6.56					1.1	6.7	0.001	0.01		2050		4160	0.2		36	0.1		5133.15	
178	TDM XLIV	TDM 44	9/14/88	TDSS				0.001		0.005			476		0.009	493	312	0.05				0.12	5.28	0.06		320		0.0002	0.1	0.11	6.67				12	1.5	4.1	0.001	0.01	284	2250		3999	0.4		35			5133.1	
178	TDM XLIV	TDM 44	9/28/88	TDSS				0.001		0.005	384				0.012	537	326	0.04				0.15		0.1			0.0002	0.1	0.08	6.73					1.3	4.4	0.001	0.01		1470		3968	0.4		37	0.1		5132.78	
178	TDM XLIV	TDM 44	1/11/89	TDSS				0.001		0.005		722.24	525		0.0009	583	2900	0.01				0.12	6.39	0.05	1.4	288		0.0002		0.02	6.9		1.1	15	1.9	3.7	0.001	0.01	271	300		3980	0.9		31	0.1		5131.5	
178	TDM XLIV	TDM 44	4/24/89	TDSS				0.002				766.16			0.007	567	420	0.01					4.32	0.05		309				0.02	6.89			14	1.7	1.7	0.001		267	2500		3227	1.7		26			5130.47	
178	TDM XLIV	TDM 44	7/13/89	TDSS				0.001				762.5			0.009	500	330	0.03					5.38	0.05		331				0.03	6.96				1.1	0.6	0.001		273	2800		4392	1.3		75			5129.7	
178	TDM XLIV	TDM 44	10/20/89	TDSS								851.56				550	310									288				6.83									340	2370		3923						5128.94	
178	TDM XLIV	TDM 44	12/18/89	TDSS				0.001				897.92			0.016	625	320	0.06					4.9	0.05		274				0.07	6.89				1.3	1.9	0.001		286	1940		4029	0.7		2.3			5122.74	
178	TDM XLIV	TDM 44	1/18/90	TDSS				0.001				888.16			0.015	585	320	0.01					5.09	0.05		298				0.03	6.46				1.4	1.5	0.001		324	1990		2324	0.4		2.6			5117.15	
178	TDM XLIV	TDM 44	5/1/90	TDSS								878.4				521	320									293				6.92									273	2070		4078						5126.32	
178	TDM XLIV	TDM 44	8/24/90	TDSS				0.001				961.36			0.014	770	290	0.05					4.08	0.05		288				0.05	6.8				1.3	1.6	0.001		305	2100		3690	0.2		2.6			5126.19	
178	TDM XLIV	TDM 44	10/19/90	TDSS								954.04				517	255									334				6.5									291	2200		4340						5125.19	
178	TDM XLIV	TDM 44	1/13/91	TDSS				0.001				915			0.01	817	281	0.05					6.65	0.05		303				0.05		7			2.7	1.4	0.001		299	2427	4584.51		0.2		0.6093				
178	TDM XLIV	TDM 44	10/14/91	TDSS								863.52				703	295									284					6.6									276	2299	4288.82								
178	TDM XLIV	TDM 44	1/14/92	TDSS				0.001				883.74			0.01	619	235	0.05					5.24	0.05		314				0.02		6.7			24.7	5	0.001		271	2258	4148.073		0.2		3.39			5122.28	
178	TDM XLIV	TDM 44	4/23/92	TDSS								894				653	213									283					6.6									306	2160	4062.443							5116.98	
178	TDM XLIV	TDM 44	7/10/92	TDSS				0.001				859.6			0.01	617.5	249	0.05					3.133	0.05		303.9		0.001		0.02		6.6			0.9	4.8	0.001		363.74	2396	4360.04		0.2		1.35			5121.32	
178	TDM XLIV	TDM 44	10/27/92	TDSS							768					611	239									247.8				6.8									277	2093	3852.243							5120.9	
178	TDM XLIV	TDM 44	1/20/93	TDSS				0.001				790			0.01	704	239	0.05					3.61	0.05		251				0.02		6.6			20.4	6.3	0.003		264	2383	4240.053		0.2		6.8			5120.95	
178	TDM XLIV	TDM 44	4/27/93	TDSS								742				602	234									242				6.5									253	2299	4001.443							5119.44	
178	TDM XLIV	TDM 44	7/15/93	TDSS																																													5120.44	
178	TDM XLIV	TDM 44	10/27/93	TDSS																																													5116.8	
178	TDM XLIV	TDM 44	1/12/94	TDSS																																													5119.51	
178	TDM XLIV	TDM 44	4/24/94	TDSS																																													5111.84	
178	TDM XLIV	TDM 44	7/8/94	TDSS				0.001			856				0.01	679	244	0.05					2.71	0.05		300				0.02	7				1.5	3	0.001		306	2463	4423.153		0.2		1.354			5116.39	
178	TDM XLIV	TDM 44	10/27/94	TDSS																																													5111.04	
178	TDM XLIV	TDM 44	1/23/95	TDSS																																													5118.59	
178	TDM XLIV	TDM 44	1/30/95	TDSS				0.001				907			0.01	698	242	0.05					0.05	0.05		302				0.02		7.4			2	9.8	0.001		266	2572	4536.0751		0.2		2.5				
178	TDM XLIV	TDM 44	4/24/95	TDSS																																													5112.97	
178	TDM XLIV	TDM 44	5/4/95	TDSS								815				688	272									273					7.1									262	2531	4433.943							5117.49	
178	TDM XLIV	TDM 44	7/24/95	TDSS				0.003				806			0.01	715	278	0.05					4.75	0.05		315				0.02		6.5			1.2	1.4	0.001		260	2409	4385.193		0.2		0.7			5116.34	
178	TDM XLIV	TDM 44	11/21/95	TDSS								816				680	249									301					6.6									277	2410	4325.886							5118.29	
178	TDM XLIV	TDM 44	1/15/96	TDSS																																													5118.14	
178	TDM XLIV	TDM 44	1/26/96	TDSS				0.002				823			0.01	850	279	0.05					0.05	0.05		370				0.02		6.9			0.8	2.9	0.001		272	2910	5114.6132		0.2		1.7				
178	TDM XLIV	TDM 44	5/1/96	TDSS																																													5115.54	
178	TDM XLIV	TDM 44	7/11/96	TDSS				0.001				802			0.01	755	240	0.05					2.41	0.05		325				0.02		7.1			0.7	1	0.001		280	2615	4618.853		0.5		0.8			5117.64	
178	TDM XLIV	TDM 44	11/12/96	TDSS								696				752	286									340					6.6		16.4							238	2569	4549.843							5116.4	
178	TDM XLIV	TDM 44	1/27/97	TDSS																																													5120.49	
178	TDM XLIV	TDM 44	1/31/97	TDSS				0.001				751			0.01	715	240	0.05					1.75	0.05		320				0.02		6.8			0.8	1	0.001		250	2570	4471.1202		0.2		0.2				
178	TDM XLIV	TDM 44	4/26/97	TDSS								759				705	265									310					7									245	2276	4182.2277							5117.14	
178	TDM XLIV	TDM 44	7/1/97	TDSS				0.001				581			0.01	730	271	0.05					6.33	0.05		310						6.6			0.9	8.4	0.001		246	2470	4318		0.2		1.35				
178	TDM XLIV	TDM 44	7/7/97	TDSS																																													5117.64	
178	TDM XLIV	TDM 44	10/6/97	TDSS								280				145	19.7									31.4					6.7									13.3	140	490							5117.64	
178	TDM XLIV	TDM 44	1/1/98	TDSS				0.001				723			0.005	675	233	0.05					2.09	0.05		296				0.02		6.6			0.9	4.9	0.005		237	2300	4105		0.2		1.1			5117.49	
178	TDM XLIV	TDM 44	4/6/98	TDSS								723				625	277									295					6.6		16.5							254	2450	4263							5117.45	
178	TDM XLIV	TDM 44	7/1/98	TDSS				0.001				702			0.005	657	234	0.05					0.05	0.05		292				0.18		6.7			1.2	3	0.004		265	2430	4231		0.2		1.2			5115.14	
178	TDM XLIV	TDM 44	10/22/98	TDSS								703				648	241									297					6.5									260	2330	4131							5115.94	
178	TDM XLIV	TDM 44	1/7/99	TDSS				0.001				763			0.005	658	274	0.05					0.05	0.05		294				0.02		6.7			0.9	3.3	0.001		202	2150	3963.0119		0.2		1.0155			5115.9	
178	TDM XLIV	TDM 44	4/17/99	TDSS								714				692	276									308					6.7									210	2140	3985.443							5115.26	
178	TDM XLIV	TDM 44	7/5/99	TDSS				0.001				676			0.005	680	254	0.05					0.05	0.05		305				0.03		6.7			1.1	2.8	0.001		211	2360	4154.0813		0.2		1.2186			5115.26	
178	TDM XLIV	TDM 44	10/11/99	TDSS								671				632	284									289					6.7									219	2310								5115.26	
178	TDM XLIV	TDM 44	1/11/00	TDSS				0.001				781			0.005	599	271	0.05					0.03	0.05		278				0.3		6.8			0.7	3.4	0.001		212	2030	3783		0.2		1.5			5115.7	
178	TDM XLIV	TDM 44	4/11/00	TDSS								735				596	267									284					6.8									233	2020	3773							5115.4	
178	TDM XLIV	TDM 44	7/11/00	TDSS				0.001				997			0.01	644	247	0.05					0.05	0.05		273				0.48		6.8			0.9	2.3	0.001		208	1710	3589	4260	0.2		1.9			5115.8	
178	TDM XLIV	TDM 44	10/27/00	TDSS								907				681	250.7									285					6.9									194	1820		4350						5115.74	
178	TDM XLIV	TDM 44	1/5/01	TDSS				0.001				911			0.01	682	233	0.05					0.05	0.05		276				0.09		6.9			0.7	3.3	0.005		173	1800	3632		0.2		1.8			5115.59	
178	TDM XLIV	TDM 44	4/10/01	TDSS								869				648	233									268					6.9									236	2240	4068								
178	TDM XLIV	TDM 44	4/12/01	TDSS																																													5115.3	
178	TDM XLIV	TDM 44	9/20/01	TDSS				0.0012				767			0.0003	580	201	0.0009					0.03	0.001		270				0.01		6.8			0.6	4.5	0.0034		201	1790	3436.02		0.2		3.18				
178	TDM XLIV	TDM 44	10/17/01	TDSS																																														
178	TDM XLIV	TDM 44	10/29/01	TDSS								840				687	302									300					6.8									210	2180	4100							5113.24	
178	TDM XLIV	TDM 44	2/27/02	TDSS				0.00114				817			0.01	616	284	0.05					0.07	0.05		275				0.02		6.8			0.2	2.4	0.00515		224	2120	3930.11		0.2		2.19				
178	TDM XLIV	TDM 44	5/6/02	TDSS								779				596	259									273					6.8									234	2120	3868.3								
178	TDM XLIV	TDM 44	10/10/02	TDSS				0.001				714			0.01	627	231.9	0.05					0.03	0.05		289.4				0.05		6.8			0.2	3.1	0.00268		217.1	2231	3961.07		0.2	0.00225				5113.84	
178	TDM XLIV	TDM 44	12/5/02	TDSS				0.001							0.0005		230	0.001						0.001						0.0141	6.8						0.00275		246	2170		4460						5114.41	
178	TDM XLIV	TDM 44	2/4/03	TDSS				0.001							0.0005		260	0.001						0.001						0.039	6.9	6.8			0.8	1	0.00298		258	2070		4300			1.52			5114.51	
178	TDM XLIV	TDM 44	5/6/03	TDSS													220															7.1	7.02	7.1							237	2240		4750						5114.24	
178	TDM XLIV	TDM 44	7/16/03	TDSS																												7.08				0.4	1									1.650526			
178	TDM XLIV	TDM 44	7/16/03	TDSS				0.001							0.000504		260	0.001						0.0015						0.0324		7.14					0.00175		256	2230		4390							
178	TDM XLIV	TDM 44	10/23/03	TDSS													260															7.14							247	2360		4350							
179	TDM XLV	TDM 45	8/22/88	TDSS				0.001		0.005					0.002		81	0.01			0.14			0.05			0.0002	0.1	0.02	7.54					0.8	2.2	0.001	0.01		336		1022	1.4		0.6	0.1		5138.15	
179	TDM XLV	TDM 45	9/6/88	TDSS				0.001		0.005					0.003		110	0.01			0.27			0.05			0.0002	0.1	0.02	9.01					0.8	3.4	0.001	0.01		490		1148	0.2		0.05	0.1		5137.22	
179	TDM XLV	TDM 45	9/20/88	TDSS				0.001		0.005					0.005		82	0.01			0.17			0.05			0.0002	0.1	0.02	8.78					1	2.7	0.001	0.01		494		1169	0.2		0.5	0.1		5137	
179	TDM XLV	TDM 45	10/4/88	TDSS				0.001		0.005			573		0.002	108	85	0.01			0.17	0.01	0.05			39		0.0002	0.1	0.02	8.69			7	1.8	4.1	0.001	0.01	172	542		976	0.5		0.05			5136.45	
179	TDM XLV	TDM 45	1/17/89	TDSS				0.001		0.005		159.82	293		0.002	128	77	0.01			0.17	0.02	0.05	1.8	27		0.0002	0.1	0.02	8.05		1.2	6	1.2	2.9	0.001	0.01	160	510		1028	0.3		0.9	0.1		5135.94	
179	TDM XLV	TDM 45	4/27/89	TDSS				0.001				222.04			0.002	134	230	0.01					0.05	0.05		27				0.02	8.3			5	1.2	2.7	0.001		156	600		1012	0.8		0.2			5133.96	
179	TDM XLV	TDM 45	7/17/89	TDSS				0.001				223.26			0.002	116	80	0.01					0.01	0.05		36				0.02	8.24				0.9	0.5	0.003		149	430		1015	1.2		0.2			5132.94	
179	TDM XLV	TDM 45	10/23/89	TDSS								185.44				109	82									32					8.29									175	500		958						5131.93	
179	TDM XLV	TDM 45	1/17/90	TDSS				0.001				193			0.002	112	115	0.01					0.01	0.05		31				0.02	7.9				1	1.4	0.001		159	458		652	0.2		0.7			5131.17	
179	TDM XLV	TDM 45	5/1/90	TDSS								170.8				120	85									24					8.29									157	520		1036						5130.21	
179	TDM XLV	TDM 45	8/24/90	TDSS				0.001				595.36			0.006	141	80	0.01					0.02	0.05		16				0.02	7.8				0.6	1.6	0.001		167	490		1002	0.2		0.2			5129.63	
179	TDM XLV	TDM 45	10/18/90	TDSS								200				114	72									27					8.5									163	425		968						5129.53	
179	TDM XLV	TDM 45	1/11/91	TDSS				0.001				210			0.01	143	69.2	0.05					0.11	0.05		30.4				0.05		7.5			0.7	7.9	0.001		167	568	1082.61		0.2		0.2031				
179	TDM XLV	TDM 45	10/10/91	TDSS								185.03				129	78.8									30.2					8.5									167	552	1058.1993								
179	TDM XLV	TDM 45	1/9/92	TDSS				0.001				221.55			0.01	125	70.8	0.05					0.05	0.05		25.8				0.02		7.8			1.7	1	0.001		167	503	1009.088		0.2		6.09			5126.44	
179	TDM XLV	TDM 45	4/22/92	TDSS								231				134	70.2									31.1					7.9									203	557	1111.243							5126.2	
179	TDM XLV	TDM 45	7/24/92	TDSS				0.001				212.77			0.01	137	78.9	0.05					0.05	0.05		35.7		0.001		0.02		7.6			0.6	1	0.001		209.82	574	1141.905		0.2		1.35			5125.33	
179	TDM XLV	TDM 45	10/26/92	TDSS							187					122	77.6									27.2					7.9									161	561	1042.743							5125.16	
179	TDM XLV	TDM 45	1/20/93	TDSS				0.001				182			0.01	154	84.5	0.05					0.05	0.05		27				0.02		8.1			0.6	5.9	0.001		174	592	1123.9676		0.2		0.2			5124.79	
179	TDM XLV	TDM 45	4/28/93	TDSS								193				147	98.5									29.9					7.9									162	568	1102.343							5124.14	
179	TDM XLV	TDM 45	7/12/93	TDSS				0.001				214			0.01	182	89	0.05						0.05		33				0.02		7.5			1.4	1	0.001		176	650	1240.2339		0.2		2.708			5124.3	
179	TDM XLV	TDM 45	1/13/94	TDSS																																													5123.54	
179	TDM XLV	TDM 45	4/24/94	TDSS																																													5123.39	
179	TDM XLV	TDM 45	7/10/94	TDSS				0.001			208				0.01	189	103	0.05					0.27	0.05		31.6				0.02	7.2				0.8	1	0.001		196	768	1392.313		0.2		1.354			5122.88	
179	TDM XLV	TDM 45	10/25/94	TDSS																																													5122.34	
179	TDM XLV	TDM 45	1/26/95	TDSS				0.001				206			0.01	223	117	0.05					0.36	0.05		44				0.02		6.5			1	1.9	0.001		197	859	1543.803		0.2		0.5			5122.26	
179	TDM XLV	TDM 45	4/24/95	TDSS								221				237	127									50					7.2									208	883	1615.943							5121.84	
179	TDM XLV	TDM 45	7/21/95	TDSS				0.001				209			0.01	238	128	0.05					0.37	0.05		45				0.02		7.5			0.6	2.8	0.001		201	837	1554.313		0.2		0.2			5121.74	
179	TDM XLV	TDM 45	11/20/95	TDSS								220				236	124									46.9					7.5									210	877	1604.343							5120.94	
179	TDM XLV	TDM 45	1/24/96	TDSS				0.001				224			0.01	259	135	0.05					0.34	0.05		51.7				0.02		7.8			0.6	1	0.001		207	928	1709.483		0.2		0.2			5121.44	
179	TDM XLV	TDM 45	4/24/96	TDSS																																													5120.69	
179	TDM XLV	TDM 45	7/10/96	TDSS																																													5120.84	
179	TDM XLV	TDM 45	7/11/96	TDSS				0.001				229			0.01	271	133	0.05					0.25	0.05		54				0.02		7.8			0.4	1	0.001		227	984	1784.193		0.2		0.2				
179	TDM XLV	TDM 45	11/11/96	TDSS								205				275	147									54					7.4		7.6							202	1034	1822.543							5120.44	
179	TDM XLV	TDM 45	1/27/97	TDSS				0.001				222			0.01	257	130	0.05					0.16	0.05		51.6				0.02		7.6			0.2	1	0.001		216	935	1701.043		0.2		0.2				
179	TDM XLV	TDM 45	4/26/97	TDSS								220				253	156									49.2					7.7									209	936	1713.643								
179	TDM XLV	TDM 45	5/9/97	TDSS																																													5119.89	
179	TDM XLV	TDM 45	7/7/97	TDSS				0.001				216			0.01	258	146	0.05					0.4	0.05		53						7.8			0.2	1	0.001		221	1012	1798.443		0.2		0.2			5119.84	
179	TDM XLV	TDM 45	10/6/97	TDSS								217				312	144									60.1					7.5									222	1010	1857								
179	TDM XLV	TDM 45	10/9/97	TDSS																																													5120.84	
179	T

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
179	TDM XLV	TDM 45	4/10/01	TDSS								221				313	155								64						7.5																	
179	TDM XLV	TDM 45	4/12/01	TDSS																																											5118.4	
179	TDM XLV	TDM 45	8/1/01	TDSS				0.001				210			0.01	300	150	0.0004				0.02	0.05		61				0.01		7.5				0.6	1	0.001		210	1100	1900		0.2		0.135			5118.94	
179	TDM XLV	TDM 45	10/18/01	TDSS								220				341	176								66						7.5									227	1240	2155							5116.04	
179	TDM XLV	TDM 45	2/22/02	TDSS				0.001				219			0.01	313	164	0.05				0.03	0.05		63.6				0.02		7.5				0.2	1	0.00127		235	1210	2093.61		0.2		0.2				
179	TDM XLV	TDM 45	4/30/02	TDSS								218				307	159								67.3						0									242	1220	2105.4								
179	TDM XLV	TDM 45	9/30/02	TDSS				0.001				222			0.01	291.2	145.4	0.05				0.03	0.05		60.1				0.02		7.5				0.5	2.6	0.002665		224.8	1099	1931.52		0.2	0.0003				5116.54	
179	TDM XLV	TDM 45	12/4/02	TDSS				0.001							0.0005		120	0.001					0.001						0.0023	7.6							0.00101		229	1140		2230						5116.71	
179	TDM XLV	TDM 45	1/31/03	TDSS				0.001							0.0005		140	0.001					0.001						0.0037	7.5	7.56				0.7	1	0.00161		266	1070		2200			0.2031			5115.98	
179	TDM XLV	TDM 45	5/8/03	TDSS													130													7.5	7.65	7.5								237	1140		2330						5116	
179	TDM XLV	TDM 45	7/18/03	TDSS				0.001							0.0005		150	0.001					0.001						0.0023		7.6	7.64			0.6	1	0.00168		242	1180		2370			0.2031				
179	TDM XLV	TDM 45	10/22/03	TDSS													160														7.58									245	1270		2280							
180	TDM XLVI	TDM 46	8/23/88	Backfill				0.001		0.005					0.002		155	0.01			0.22		0.05		7.26		0.0002	0.1	0.02	7.26					3.9	2.4	0.001	0.01		930		2212	0.9		632	0.1		5109.14	
180	TDM XLVI	TDM 46	9/7/88	Backfill				0.001		0.005					0.007		180	0.01			0.22		0.05		7.11		0.0002	0.1	0.02	7.11					2	8.1	0.002	0.01		1250		2298	0.4		620	0.1		5107.94	
180	TDM XLVI	TDM 46	9/21/88	Backfill				0.002		0.005					0.003		242	0.01			0.2		0.05		6.91		0.0002	0.1	0.02	6.91					1.5	5.2	0.0003	0.01		1610		2717	0.4		528	0.1		5197.06	
180	TDM XLVI	TDM 46	10/5/88	Backfill				0.001					134		0.009	409	185	0.01			0.23	0.06	0.05		68		0.0002	0.1	0.02	7.44			11		3.6	7.6	0.001	0.01	171	238		1688	1		574	0.1		5106.6	
180	TDM XLVI	TDM 46	1/11/89	Backfill				0.001		0.005		202.52	195		0.002	433	173	0.01			0.22	0.36	0.05	1.1	54		0.0002	0.1	0.02	7.35		1.8	13		5.9	5	0.002	0.01	162	1100		2189	2.6		528	0.1		5104.99	
180	TDM XLVI	TDM 46	4/25/89	Backfill				0.001				168.36			0.002	343	175	0.01				0.04	0.05		68				0.02	7.4			12		3.2	2.9	0.001		150	1400		1797	4		166			5104.16	
180	TDM XLVI	TDM 46	8/29/89	Backfill				0.001				335.5			0.006	197	215	0.01				0.33	0.05		106				0.02	6.84					5.7	1.5	0.001		197	1320		2697	0.8		385			5102.3	
180	TDM XLVI	TDM 46	10/20/89	Backfill								97.6				434	215								94					6.89									190	1380		2299						5102.82	
180	TDM XLVI	TDM 46	1/16/90	Backfill				0.001				143.96			0.004	377	175	0.01				0.01	0.05		67				0.02	7.09					1.7	1.7	0.002		163	1100		1606	0.3		499			5101.4	
180	TDM XLVI	TDM 46	4/24/90	Backfill								448.96				529	255								127					6.86									269	1160		2400						5100.95	
180	TDM XLVI	TDM 46	8/23/90	Backfill				0.001				229.36			0.007	437	200	0.01				0.01	0.05		68				0.02	7					4.9	2.3	0.009		179	920		2327	0.4		459			5099.25	
180	TDM XLVI	TDM 46	10/19/90	Backfill								256.2				417	158								83					7.1									177	1110		2311						5098.91	
180	TDM XLVI	TDM 46	1/13/91	Backfill				0.001				466			0.01	573	274	0.05				0.05	0.05		162				0.05		7.3				11.2	1	0.008		233	1766	3241.09		0.2		319.2055				
180	TDM XLVI	TDM 46	10/14/91	Backfill								419.68				513	263								131						6.6									208	1484	2810.74								
180	TDM XLVI	TDM 46	1/14/92	Backfill																																												5094.03	
180	TDM XLVI	TDM 46	4/22/92	Backfill								506				529	272								162						6.9									262	1708	12391.443								
180	TDM XLVI	TDM 46	4/23/92	Backfill																																												5092.84	
180	TDM XLVI	TDM 46	7/10/92	Backfill				0.001				402.8			0.01	432.78	210	0.05				0.05	0.05		138.82		0.001		0.024		6.8				5.6	1	0.029		246.7	1472	2701.8		0.2		509.78			5092.07	
180	TDM XLVI	TDM 46	10/27/92	Backfill							398					459	232								124					6.8									243.5	1593	2850.943							5091.21	
180	TDM XLVI	TDM 46	1/20/93	Backfill																																												5090.36	
180	TDM XLVI	TDM 46	1/21/93	Backfill				0.001				299			0.01	479	203	0.05				0.05	0.05		99.8				0.024		7				4.9	3.8	0.027		178	1420	2529.793		0.2		846				
180	TDM XLVI	TDM 46	4/27/93	Backfill								322				402	203								103						6.5									188	1351	2410.658							5089.08	
180	TDM XLVI	TDM 46	7/13/93	Backfill				0.001				458			0.01	519	228	0.05				2.25	0.05		139				0.12		6.4				8.9	2.9	0.09		238	1635	2997.6481		0.2		363.549			5088.51	
180	TDM XLVI	TDM 46	10/28/93	Backfill																																												5086.96	
180	TDM XLVI	TDM 46	1/22/94	Backfill																																												5086.86	
180	TDM XLVI	TDM 46	4/24/94	Backfill																																													
180	TDM XLVI	TDM 46	7/7/94	Backfill																																												
180	TDM XLVI	TDM 46	10/12/94	Backfill																																												
180	TDM XLVI	TDM 46	4/3/95	Backfill																																												
180	TDM XLVI	TDM 46	7/21/95	Backfill																																												
180	TDM XLVI	TDM 46	11/20/95	Backfill																																												
180	TDM XLVI	TDM 46	1/15/96	Backfill																																												
180	TDM XLVI	TDM 46	4/15/96	Backfill																																												
180	TDM XLVI	TDM 46	7/10/96	Backfill																																												
180	TDM XLVI	TDM 46	11/11/96	Backfill																																												
180	TDM XLVI	TDM 46	1/27/97	Backfill																																												
180	TDM XLVI	TDM 46	4/11/97	Backfill																																												
180	TDM XLVI	TDM 46	10/7/97	Backfill																																												
180	TDM XLVI	TDM 46	1/6/98	Backfill																																												
180	TDM XLVI	TDM 46	4/6/98	Backfill																																												
180	TDM XLVI	TDM 46	7/7/98	Backfill																																												
180	TDM XLVI	TDM 46	10/13/98	Backfill																																												
180	TDM XLVI	TDM 46	1/6/99	Backfill																																												
180	TDM XLVI	TDM 46	4/16/99	Backfill																																												
180	TDM XLVI	TDM 46	7/5/99	Backfill																																												
180	TDM XLVI	TDM 46	10/3/99	Backfill																																												
180	TDM XLVI	TDM 46	1/1/00	Backfill																																												
180	TDM XLVI	TDM 46	4/10/00	Backfill																																												
180	TDM XLVI	TDM 46	10/25/00	Backfill																																												
180	TDM XLVI	TDM 46	1/5/01	Backfill																																												
180	TDM XLVI	TDM 46	4/12/01	Backfill																																												
180	TDM XLVI	TDM 46	8/1/01	Backfill																																												
180	TDM XLVI	TDM 46	10/17/01	Backfill																																												
181	TDM XLVII	TDM 47	8/22/88	TDSS				0.001		0.005					0.002		55	0.01			0.13		0.05				0.0002	0.1	0.02	7.6					1.3	2.3	0.001	0.01		274		769	1.1		5.5	0.1		5139.53	
181	TDM XLVII	TDM 47	9/6/88	TDSS				0.001		0.005					0.002		55	0.01			0.22		0.05				0.0002	0.1	0.02	8.69					1.2	1.9	0.001	0.01		280		692	0.2		5	0.1		5138.99	
181	TDM XLVII	TDM 47	9/20/88	TDSS				0.001		0.005					0.002		49	0.01			0.17		0.05				0.0002		0.02	8.6					1	1.6	0.001	0.01		282		738	0.3		0.05	0.1		5138.79	
181	TDM XLVII	TDM 47	10/4/88	TDSS				0.001		0.005			144		0.003	52	51	0.01			0.17	0.01	0.05		17		0.0002	0.1	0.02	8.46			4		2.4	3.1	0.001	0.01	145	302		719	0.4		0.05	0.1		5138.26	
181	TDM XLVII	TDM 47	1/11/89	TDSS				0.001		0.005		178.12	117		0.002	51	56	0.01			0.17	0.01	0.05	0.5	13		0.0002	0.1	0.02	8.07		1.1	3		1.1	2.9	0.001	0.01	146	350		683	0.6		2.6			5137.26	
181	TDM XLVII	TDM 47	4/27/89	TDSS				0.001				186.66			0.002	86	220	0.01				0.02	0.05		16				0.02	7.92			3		1.7	2.5	0.001		148	400		754	0.7		0.3			5136.22	
181	TDM XLVII	TDM 47	7/14/89	TDSS				0.001				179.95			0.002	78	70	0.01				0.01	0.05		14				0.02	7.75					1.3	1.2	0.003		151	460		842	1.1		0.2			5135.23	
181	TDM XLVII	TDM 47	10/23/89	TDSS								146.4				96	78								13					7.99									177	460		835						5134.37	
181	TDM XLVII	TDM 47	1/17/90	TDSS				0.001				156.16			0.003	108	115	0.01				0.01	0.05		29				0.02	7.63					0.9		0.001		172	460		809	0.2		23		1.6	5133.67	
181	TDM XLVII	TDM 47	4/24/90	TDSS								180.56				152	95								34					7.65									237	450		1072						5133.45	
181	TDM XLVII	TDM 47	8/22/90	TDSS				0.001				192.76			0.005	157	84	0.01				0.07	0.05		22				0.02	7.74					1	2.8	0.001		213	520		1269	0.2		0.7			5132.39	
181	TDM XLVII	TDM 47	10/18/90	TDSS								202.52				147	98								31					7.9									210	560		1303						5132.08	
181	TDM XLVII	TDM 47	1/11/91	TDSS				0.001				176			0.01	183	89	0.05				0.09	0.05		32.3				0.05		7.4				2	1	0.001		218	770	1380.32		0.2		0.2031				
181	TDM XLVII	TDM 47	10/14/91	TDSS								276.45				220	115								30.1						8.1									241	814	1558.375								
181	TDM XLVII	TDM 47	1/9/92	TDSS																																													5129.56	
181	TDM XLVII	TDM 47	4/22/92	TDSS												262	117								52															299	1078	5280.543							5129.37	
181	TDM XLVII	TDM 47	4/23/92	TDSS								252				262	117								52						7.5				0.3					299	1078	1934.486			0.043					
181	TDM XLVII	TDM 47	7/9/92	TDSS				0.001				273			0.01	275.9	105	0.05				0.05	0.05		56.04		0.001		0.02		7.8				1	1	0.001		330.36	1130	2033.9		0.2		0.68			5128.57	
181	TDM XLVII	TDM 47	10/26/92	TDSS							210					269	104								44.5					7.6									307	1127	1956.943							5128.3	
181	TDM XLVII	TDM 47	1/20/93	TDSS				0.001				251			0.01	327	114	0.05				0.22	0.05		45.4				0.02		7.3				0.2	5.2	0.001		252	1214	2078.563		0.2		0.2			5127.85	
181	TDM XLVII	TDM 47	4/26/93	TDSS								283				279	122								46.9						7.5									264	1118	1971.843							5127.32	
181	TDM XLVII	TDM 47	7/12/93	TDSS				0.001				269			0.01	320	132	0.05				0.18	0.05		51.9				0.02		7.1				1.2	2.6	0.001		319	1211	2172.8771		0.2		1.354			5127.58	
181	TDM XLVII	TDM 47	10/25/93	TDSS																																													5126.9	
181	TDM XLVII	TDM 47	1/13/94	TDSS																																													5126.8	
181	TDM XLVII	TDM 47	4/24/94	TDSS																																													5126.96	
181	TDM XLVII	TDM 47	7/6/94	TDSS				0.001			290				0.01	337	123	0.05				0.27	0.05		47.5				0.02	7.3					0.5	1	0.001		293	1269	2215.213		0.2		0.2031			5126.1	
181	TDM XLVII	TDM 47	10/25/94	TDSS																																													5125.77	
181	TDM XLVII	TDM 47	1/26/95	TDSS				0.001				281			0.01	355	124	0.05				0.24	0.05		57.3				0.02		7				0.8	1	0.001		278	1391	2346.483		0.2		0.2			5125.75	
181	TDM XLVII	TDM 47	4/24/95	TDSS								288				336	123								59						7.2									281	1261	2204.443							5125.35	
181	TDM XLVII	TDM 47	7/21/95	TDSS				0.003				282			0.01	338	123	0.05				0.25	0.05		55				0.02		7.4				1.2	2	0.001		286	1282	2225.693		0.6		0.2			5125.35	
181	TDM XLVII	TDM 47	11/20/95	TDSS								284				330	103								54.3						7.5									286	1187	2102.743							5124.51	
181	TDM XLVII	TDM 47	1/24/96	TDSS				0.001				308			0.01	342	112	0.05				0.21	0.05		57				0.02		7.8				0.5	1	0.001		276	1266	2222.896		0.2		0.2			5125.1	
181	TDM XLVII	TDM 47	4/24/96	TDSS																																													5124.2	
181	TDM XLVII	TDM 47	7/10/96	TDSS				0.001				292			0.01	336	104	0.05				0.18	0.05		55.3				0.02		8				0.6	1	0.001		292	1275	2208.923		0.2		0.2			5124.6	
181	TDM XLVII	TDM 47	11/11/96	TDSS								267				330	102								54						7.4			7.3						255	1204	2086.243							5124.1	
181	TDM XLVII	TDM 47	1/27/97	TDSS				0.001				226			0.01	280	85.3	0.05				0.05	0.05		47				0.02		7.7				1	1	0.001		258	1069	1852.743		0.2		0.7			5124.1	
181	TDM XLVII	TDM 47	4/26/97	TDSS								286				259	91								42.5						7.7									296	1099	1930.943								
181	TDM XLVII	TDM 47	5/9/97	TDSS																																													5120.28	
181	TDM XLVII	TDM 47	7/7/97	TDSS				0.001				276			0.01	277	74.8	0.05				0.18	0.05		44.7						7.7				0.7	3.1	0.001		257	994	1785.943		0.2		0.2			5123.6	
181	TDM XLVII	TDM 47	10/9/97	TDSS								291				288	80								47.4						7.5									256	1100	1918							5124.6	
181	TDM XLVII	TDM 47	11/1/97	TDSS																																													5123.15	
181	TDM XLVII	TDM 47	1/5/98	TDSS				0.001				295			0.005	276	78.2	0.05				0.05	0.05		45.4				0.02		7.4				0.2	1	0.002		251	1080	1879		0.2		0.2			5123.4	
181	TDM XLVII	TDM 47	4/10/98	TDSS								298				262	72.5								46.6						7.5			7.2						258	1050	1839							5122.8	
181	TDM XLVII	TDM 47	7/2/98	TDSS				0.001				301			0.005	233	55	0.05				0.06	0.05		40				0.02		7.4				0.5	1	0.001		252	964	1695		0.2		0.2			5122.8	
181	TDM XLVII	TDM 47	10/13/98	TDSS								300				235	58.5								41.7						7.7									249	971	1708							5123.2	
181	TDM XLVII	TDM 47	1/6/99	TDSS				0.001				306			0.005	238	57.4	0.05				0.06	0.05		36.9				0.02		7.5				0.5	1.7	0.001		244	932	1663.803		0.2		0.2			5122.15	
181	TDM XLVII	TDM 47	4/12/99	TDSS																																													5121.9	
181	TDM XLVII	TDM 47	4/17/99	TDSS								301				234	59								40.1						7.5									226	892	1604.043								
181	TDM XLVII	TDM 47	7/5/99	TDSS				0.001				305			0.005	215	55	0.05				0.05	0.05		37				0.02		7.5				0.2	3	0.001		232	867	1560.993		0.2		0.2			5122.2	
181	TDM XLVII	TDM 47	10/6/99	TDSS								308				219	53								38						7.6									228	924								5122.2	
181	TDM XLVII	TDM 47	1/5/00	TDSS				0.001				310			0.01	195	48.6	0.05				0.05	0.05		34.7				0.02		7.5				0.9	1.5	0.002		221	820	1477		0.2		0.2			5121.9	
181	TDM XLVII	TDM 47	4/4/00	TDSS								316				191	45.3								35						7.5									222	774	1428							5082.2	
181	TDM XLVII	TDM 47	7/6/00	TDSS				0.001				316			0.01	190	42.3	0.05				0.05	0.05		34.9				0.02		7.5				0.2	1	0.001		223	731	1381	1540	0.2		0.2			5122.7	
181	TDM XLVII	TDM 47	10/25/00	TDSS								320				198	47.02								37.4						7.5									225	786		1540						5122.6	
181	TDM XLVII	TDM 47	1/2/01	TDSS				0.001				322			0.01	177	43.3	0.05				0.05	0.05		31.1				0.02		7.5				0.2	1	0.001		199	727	1341		0.2		0.2			5122.45	
181	TDM XLVII	TDM 47	4/10/01	TDSS								332				191	36.5								34						7.5									249	815	1494								
181	TDM XLVII	TDM 47	4/12/01	TDSS																																													5121.9	
181	TDM XLVII	TDM 47	8/1/01	TDSS				0.001				330			0.0001	190	40	0.0004				0.03	5E-05		34	

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
181	TDM XLVII	TDM 47	2/21/02	TDSS				0.001				347			0.01	189	41	0.05				0.03	0.05		33.1				0.02		7.5				0.4	1	0.001		218	769	1423.05		0.2		0.2				
181	TDM XLVII	TDM 47	4/30/02	TDSS								345				204	45								35.6						0								220	778	1454.72								
181	TDM XLVII	TDM 47	9/30/02	TDSS				0.001				343			0.01	168.6	39.52	0.05				0.03	0.05		30.38				0.02		7.5				0.5	3	0.001		198.3	674	1282.3		0.2	0.0003				5120.81	
181	TDM XLVII	TDM 47	12/2/02	TDSS				0.001							0.0005		34	0.001					0.001						0.0012	7.6							0.001		224	705		1410						5120.53	
181	TDM XLVII	TDM 47	2/4/03	TDSS				0.001							0.0005		40	0.001					0.001						0.0022		7.6				0.7	1	0.001		225	620					0.2031			5120.1	
181	TDM XLVII	TDM 47	5/6/03	TDSS													31													7.5	7.48	7.5								198	660		1440						5119.93	
181	TDM XLVII	TDM 47	7/18/03	TDSS																											7.6				0.7	1									0.2031				
181	TDM XLVII	TDM 47	7/18/03	TDSS				0.001							0.0005		37	0.001					0.001						0.0014			7.8					0.00108		207	665		1490							
181	TDM XLVII	TDM 47	10/22/03	TDSS													38															7.65								215	682		1360							
182	TDM XLVIII	TDM 48	8/22/88	TDSS	Background well			0.001		0.005					0.002		9	0.01			0.28		0.05					0.0002	0.1	0.02	9.72				1.1	2.5	0.001	0.01		240		373	0.9		0.05	0.1		5136.32	
182	TDM XLVIII	TDM 48	9/6/88	TDSS	Background well			0.001		0.005					0.002		10	0.01			0.24		0.05					0.0002	0.1	0.02	9.9				0.9	1.5	0.003	0.01		182		385	0.2		1.1	0.1		5135.12	
182	TDM XLVIII	TDM 48	9/20/88	TDSS	Background well			0.001		0.005					0.002		11	0.01			0.32		0.05					0.0002	0.1	0.02	9.6				1.1	1.8	0.001	0.01		204		403	0.4		0.5	0.1		5135.02	
182	TDM XLVIII	TDM 48	10/4/88	TDSS	Background well			0.001		0.005			134		0.002	14	13	0.01			0.27	0.01	0.05		2			0.0002	0.1	0.02	9.6			4	1.8	2.1	0.001	0.01	104	110		379	0.7		0.05	0.1		5134.52	
182	TDM XLVIII	TDM 48	1/11/89	TDSS	Background well			0.01		0.005		90.28	142		0.002	14	14	0.01			0.3	0.05	0.05	1.5	2			0.0002	0.1	0.02	9.27		1	4	0.7	1.3	0.002	0.01	106	162		341	0.6		0.6			5133.68	
182	TDM XLVIII	TDM 48	4/27/89	TDSS	Background well			0.001				102.48			0.002	18	14	0.01				0.02	0.05		2					0.02	9.24			4	0.3	2.1	0.001		108	195		337	1.1		0.2			5133.26	
182	TDM XLVIII	TDM 48	7/14/89	TDSS	Background well			0.001				109.19			0.002	17	18	0.01				0.01	0.05		3					0.02	8.86				1.2	0.9	0.002		100	165		350	0.3		0.7			5131.7	
182	TDM XLVIII	TDM 48	10/23/89	TDSS	Background well							73.2				12	12								4						9.53								117	182		351						5130.82	
182	TDM XLVIII	TDM 48	1/15/90	TDSS	Background well			0.001				109.8			0.002	14	12	0.01				0.01	0.05		5					0.02	8.94				0.4		0.001		107	149		351	0.2		0.9		1.6	5130.47	
182	TDM XLVIII	TDM 48	4/24/90	TDSS	Background well							97.84				14	43								20						8.6								119	100		324						5130.01	
182	TDM XLVIII	TDM 48	8/23/90	TDSS	Background well			0.001				130.5			0.002	20	25	0.01				0.02	0.05		5					0.02	8.57				0.6	1.7	0.001		110	134		389	0.2		0.3			5128.93	
182	TDM XLVIII	TDM 48	10/18/90	TDSS	Background well							120				18	11								6						8.6								107	157		361						5128.58	
182	TDM XLVIII	TDM 48	1/11/91	TDSS	Background well			0.001				122			0.01	22	4.9	0.05				0.05	0.05		4					0.05		7.7			0.2	1	0.001		126	209	426.91		0.2		0.2031				
182	TDM XLVIII	TDM 48	10/10/91	TDSS	Background well							116.38				23.7	4.1								3						8.1								109	197	395.0343								
182	TDM XLVIII	TDM 48	1/9/92	TDSS	Background well																																											5126.23	
182	TDM XLVIII	TDM 48	4/23/92	TDSS	Background well							149				21.3	5.3								4.3						7.3								114	182	401.843							5125.73	
182	TDM XLVIII	TDM 48	7/23/92	TDSS	Background well			0.001				136			0.01	20.63	4.1	0.05				0.05	0.05		4.46		0.001			0.02		8.2			0.2	1	0.001		137.7	221	456.09		0.2		0.2			5125.17	
182	TDM XLVIII	TDM 48	10/26/92	TDSS	Background well						117					20.4	6.6								3.3						8								113	203	405.243							5124.68	
182	TDM XLVIII	TDM 48	1/21/93	TDSS	Background well			0.001				98			0.01	23.8	6.5	0.05				0.05	0.05		3.6					0.02		8.2			0.2	1	0.001		104	197	384.393		0.2		0.2			5124.53	
182	TDM XLVIII	TDM 48	4/28/93	TDSS	Background well							117				20.1	5								3.2						8.1								104	189	380.243							5124.03	
182	TDM XLVIII	TDM 48	7/12/93	TDSS	Background well			0.001				144			0.01	22.7	5.3	0.05				0.05	0.05		3.8					0.02		7.9			1	1	0.001		111	191	406.293		0.2		1.354			5124.23	
182	TDM XLVIII	TDM 48	10/25/93	TDSS	Background well																																											5123.53	
182	TDM XLVIII	TDM 48	1/13/94	TDSS	Background well																																											5123.48	
182	TDM XLVIII	TDM 48	4/24/94	TDSS	Background well																																											5123.28	
182	TDM XLVIII	TDM 48	7/6/94	TDSS	Background well			0.001			148				0.01	30.9	5.1	0.05				0.05	0.05		3.5					0.02	8.3				0.2	1	0.001		110	198	421.993		0.2		0.677			5122.78	
182	TDM XLVIII	TDM 48	10/25/94	TDSS	Background well																																											5122.53	
182	TDM XLVIII	TDM 48	1/26/95	TDSS	Background well			0.001				138			0.01	23.7	4	0.05				0.05	0.05		4.26					0.02		7.2			0.3	1	0.001		102	199	402.453		0.2		1.6			5122.53	
182	TDM XLVIII	TDM 48	4/24/95	TDSS	Background well							148				24	6.9								4.3						7.6								110	198	417.643							5122.11	
182	TDM XLVIII	TDM 48	7/21/95	TDSS	Background well			0.001				143			0.01	23.5	6.4	0.05				0.05	0.05		4					0.02		8.2			0.7	1	0.001		111	193	409.893		0.5		0.2			5121.83	
182	TDM XLVIII	TDM 48	11/20/95	TDSS	Background well							102				23.5	4.3								4						8.5								112	206	401.243							5121.08	
182	TDM XLVIII	TDM 48	1/24/96	TDSS	Background well			0.001				104			0.01	24.9	4.7	0.05				0.05	0.05		4.2					0.02		8.7			0.2	1	0.001		104	198	420.293		0.2		0.2			5121.88	
182	TDM XLVIII	TDM 48	4/24/96	TDSS	Background well																																											5120.98	
182	TDM XLVIII	TDM 48	7/10/96	TDSS	Background well			0.001				130			0.01	23.6	4.7	0.05				0.05	0.05		4.4					0.02		8.6			0.2	1	0.001		112	209	429.793		0.2		0.2				
182	TDM XLVIII	TDM 48	7/11/96	TDSS	Background well																																											5121.18	
182	TDM XLVIII	TDM 48	11/11/96	TDSS	Background well							144				24.9	6.4								4.3						8.3			2.2					103	196	409.243							5120.58	
182	TDM XLVIII	TDM 48	1/27/97	TDSS	Background well			0.001				140			0.01	24.6	5.5	0.05				0.05	0.05		4.21					0.02		8.5			0.2	1	0.001		103	189	396.753		0.2		0.7			5120.68	
182	TDM XLVIII	TDM 48	4/26/97	TDSS	Background well							168				23	5.9								3.8						8.5								103	150	377.343								
182	TDM XLVIII	TDM 48	7/7/97	TDSS	Background well			0.001				147			0.01	30.3	5.7	0.05				0.05	0.05		5							8.3			0.2	1	0.001		113	196	423.943		0.2		0.2				
182	TDM XLVIII	TDM 48	10/6/97	TDSS	Background well							142				24.2	5.2								4						8.1								107	185	397							5121.18	
182	TDM XLVIII	TDM 48	11/1/97	TDSS	Background well																																											5119.8	
182	TDM XLVIII	TDM 48	1/5/98	TDSS	Background well			0.001				143			0.005	24.3	4.9	0.05				0.05	0.05		4.1					0.02		8.2			0.9	1	0.001		108	211	424		0.2		0.2			5119.98	
182	TDM XLVIII	TDM 48	4/6/98	TDSS	Background well							146				28.3	5.5								6.9						8.3		2.3						112	207	433							5119.68	
182	TDM XLVIII	TDM 48	7/2/98	TDSS	Background well			0.001				140			0.005	23.3	3.4	0.05				0.05	0.05		4					0.02		8.2			0.2	1	0.001		112	191	404		0.2		0.2			5119.33	
182	TDM XLVIII	TDM 48	10/13/98	TDSS	Background well							143				24.9	5.9								4.3						8.3								112	185	406							5119.98	
182	TDM XLVIII	TDM 48	1/6/99	TDSS	Background well			0.001				143			0.005	23.2	7.1	0.05				0.05	0.05		3.9					0.02		8.3			0.2	1	0.001		103	184	395.193		0.2		0.2			5119.1	
182	TDM XLVIII	TDM 48	4/17/99	TDSS	Background well							143				26.7	9.3								4.7						8.2								109	193	416.643							5118.75	
182	TDM XLVIII	TDM 48	7/5/99	TDSS	Background well			0.001				140			0.005	28	11	0.05				0.05	0.05		5					0.02		8.1			0.2	1	0.001		109	193	418.493		0.2		0.2			5117.55	
182	TDM XLVIII	TDM 48	10/5/99	TDSS	Background well							141				30	8								6						8.3								111	221								5118	
182	TDM XLVIII	TDM 48	1/5/00	TDSS	Background well			0.001				139			0.01	26.5	5	0.05				0.05	0.05		4.6					0.02		8.2			0.2	1	0.001		111	184	403		0.2		0.2			5117.7	
182	TDM XLVIII	TDM 48	4/4/00	TDSS	Background well							146				22.1	5.1								4						8.2								105	176	388							5118.65	
182	TDM XLVIII	TDM 48	7/6/00	TDSS	Background well			0.001				141			0.01	26.6	10.4	0.05				0.05	0.05		4.8					0.02		8.2			0.2	1	0.003		109	188	412	406	0.2		0.6			5118.8	
182	TDM XLVIII	TDM 48	10/25/00	TDSS	Background well							136				25.5	9.42								4.6						8.2								110	186		397						5119.73	
182	TDM XLVIII	TDM 48	1/2/01	TDSS	Background well			0.001				137			0.01	24	7	0.05				0.05	0.05		4					0.02		8.2			0.2	2.7	0.001		102	186	394		0.2		0.2			5119.63	
182	TDM XLVIII	TDM 48	4/10/01	TDSS	Background well							140				26	6								5						8.2								113	188	410								
182	TDM XLVIII	TDM 48	4/12/01	TDSS	Background well																																											5118.8	
182	TDM XLVIII	TDM 48	8/1/01	TDSS	Background well			0.001				140			0.0002	24	7.6	0.05				0.03	4E-05		4.2				0.001			8.2			0.3	1	0.001		100	170	379		0.2		0.318			5119.68	
182	TDM XLVIII	TDM 48	10/17/01	TDSS	Background well							140				24	9.08								4.08						8.2								102	187	399								
182	TDM XLVIII	TDM 48	2/21/02	TDSS	Background well							147			0.01	24.7	7.72	0.05				0.03	0.05		4.19					0.02		8.2			0.3	1	0.001		107	190	406.89		0.2		0.2				
182	TDM XLVIII	TDM 48	4/30/02	TDSS	Background well							147				30.1	15.4								5.11						8.2								113	207	444.25								
182	TDM XLVIII	TDM 48	9/30/02	TDSS	Background well			0.001				148			0.01	24.01	8.35	0.05				0.03	0.05		4.17					0.02		8.2			0.2	1	0.001		99.9	176.6	387.04		0.2	0.0003				5117.39	
182	TDM XLVIII	TDM 48	12/2/02	TDSS	Background well			0.001							0.0005		6.9	0.001					0.001						0.001	8.2							0.00105		108	178		406						5116.98	
182	TDM XLVIII	TDM 48	1/21/03	TDSS	Background well			0.001							0.0005		7.9	0.001					0.001	8.16	8.57				0.001					0.3	1	0.001				151		406			0.21				5116	
182	TDM XLVIII	TDM 48	5/6/03	TDSS	Background well												7.9							8.2	8.12	8.2													97.9	160		412						5115.83	
182	TDM XLVIII	TDM 48	7/17/03	TDSS	Background well			0.001							0.0005		8.6	0.001					0.001						0.001		8.43	8.08			0.2	1	0.001		112	181		386			0.2031				
182	TDM XLVIII	TDM 48	10/22/03	TDSS	Background well												8.9															8.19								111	189		399							
183	TDM XLIX	TDM 49	8/22/88	TDSS				0.001		0.005					0.002		72	0.01			0.17		0.05					0.0002	0.1	0.02	8.2				1.2	2	0.001	0.01		310		880	0.4		4.6	0.1		5127.31	
183	TDM XLIX	TDM 49	9/6/88	TDSS				0.001		0.005					0.002		70	0.01			0.24		0.05					0.0002	0.1	0.02	8.59				0.7	2	0.002	0.01		390		890	0.3		5.5	0.1		5126.37	
183	TDM XLIX	TDM 49	9/20/88	TDSS				0.001		0.005					0.002		71	0.01			0.19		0.05					0.0002	0.1	0.02	8.51				1	2.4	0.001	0.01		400		965	0.3		4.1	0.1		5126.25	
183	TDM XLIX	TDM 49	10/4/88	TDSS				0.001		0.005			142		0.002	90	75				0.2	0.01	0.05		24			0.0002	0.1	0.02	8.14			7	2.1	4	0.001	0.01	159	380		843	0.7		0.87	0.1		5125.63	
183	TDM XLIX	TDM 49	1/17/89	TDSS				0.001		0.005		193.98	232		0.002	132	103	0.01			0.17	0.05	0.05	1.8	27			0.0002	0.1	0.02	7.99		1.1	6	1	2.8	0.003	0.01	156	460		1018	0.6		0.7	0.1		5124.73	
183	TDM XLIX	TDM 49	4/27/89	TDSS				0.001				223.87			0.002	123	120	0.01				0.01	0.05		36					0.02	8.32			5	1	1.9	0.001		171	670		1060	0.9		0.2			5123.49	
183	TDM XLIX	TDM 49	7/17/89	TDSS				0.001				225.7			0.002	319	80	0.01				0.01	0.05		26					0.02	7.93				1.1	0.9	0.001		169	510		5345	0.3		0.2			5122.65	
183	TDM XLIX	TDM 49	10/23/89	TDSS								189.34				127	86								26						8.43								184	642		1064						5121.64	
183	TDM XLIX	TDM 49	1/17/90	TDSS				0.001				175.4			0.002	128	90	0.01							34					0.02	8.36				0.7	1.6	0.001		183	500		997	1.9		0.7			5121.38	
183	TDM XLIX	TDM 49	5/1/90	TDSS								207.4				104	75								29						8.16								173	620		1202						5120.18	
183	TDM XLIX	TDM 49	8/24/90	TDSS				0.001				231.8			0.004	181	96	0.01				0.16	0.05		41					0.02	7.9				0.7	1.5	0.001		195	476		1376	0.1		0.2			5119.73	
183	TDM XLIX	TDM 49	10/18/90	TDSS								231.8				200	90								15						7.6								195	625		1410						5119.37	
183	TDM XLIX	TDM 49	1/11/91	TDSS				0.001				207			0.01	204	88.7	0.05				0.18	0.05		48.3					0.05		7.3			1.8	1.3	0.001		195	847	1486.51		0.2		0.2031				
183	TDM XLIX	TDM 49	10/10/91	TDSS								210.51				186	89.4								41.5						7.6								190	746	1358.1993								
183	TDM XLIX	TDM 49	1/9/92	TDSS																																												5116.87	
183	TDM XLIX	TDM 49	4/22/92	TDSS								240				165	64.2								39						7.6								183	650	1221.643							5116.77	
183	TDM XLIX	TDM 49	7/22/92	TDSS																																												5115.99	
183	TDM XLIX	TDM 49	7/23/92	TDSS				0.001				221			0.01	142	64.9	0.05				0.05	0.05		36.96		0.001			0.02		7.59			0.6	1	0.001		220.88	625	1200.74		0.2		0.68				
183	TDM XLIX	TDM 49	10/26/92	TDSS							221					133	65.7								25.4						7.7								179	566	1080.043							5115.87	
183	TDM XLIX	TDM 49	1/20/93	TDSS				0.001				191			0.01	137	61.5	0.05				0.05	0.05		24.2					0.02		7.8			0.7	1	0.001		166	542	1070.3728		0.2		0.2			5115.65	
183	TDM XLIX	TDM 49	4/28/93	TDSS								21				109	63								22.9						7.6								146	520	871.843							5115.02	
183	TDM XLIX	TDM 49	7/12/93	TDSS				0.001				237			0.01	138	69.2	0.05				0.05	0.05		27					0.02		7.3			1.1	1	0.001		160	528	1041.193		0.2		1.354			5115.27	
183	TDM XLIX	TDM 49	10/26/93	TDSS																																												5114.52	
183	TDM XLIX	TDM 49	1/13/94	TDSS																																												5114.4	
183	TDM XLIX	TDM 49	4/24/94	TDSS																																												5114.33	
183	TDM XLIX	TDM 49	7/10/94	TDSS				0.001			229				0.01	143	61.5	0.05				0.05	0.05		21.1					0.02	7.5				0.6	1	0.001		148	492	980.593		0.2		1.354			5113.77	
183	TDM XLIX	TDM 49	10/25/94	TDSS																																												5113.37	
183	TDM XLIX	TDM 49	1/26/95	TDSS				0.001				191			0.01	133	68	0.05				0.21	0.05		27					0.02		7			0.9	3.6	0.001		153	526	1003.153		0.2		0.7			5113.37	
183	TDM XLIX	TDM 49	4/24/95	TDSS								219				133	70								30						7.5								166	529	1037.943								
183	TDM XLIX	TDM 49	7/21/95	TDSS				0.001				217			0.01	139	75	0.05				0.25	0.05		29					0.02		7.5			0.9	1	0.001		169	544	1065.193		0.2		0.2			5112.77	
183	TDM XLIX	TDM 49	11/20/95	TDSS								210				144	71.9								30.2						7.7								176	537	1064.5873							5112.02	
183	TDM XLIX	TDM 49	1/24/96	TDSS				0.001				231			0.01	180	88	0.05				0.14	0.05		38					0.02		8			0.4	1	0.001		169	645	1252.3931		0.2		0.2			5112.62	
183	TDM XLIX	TDM 49	4/24/96	TDSS																																												5111.87	
183	TDM XLIX	TDM 49	7/10/96	TDSS				0.001				226			0.01	150	80	0.05				0.07	0.05		35					0.02		8.1			0.3	1	0.001		183	639	1200.513		0.2		0.2			5112.12	
183	TDM XL

APPENDIX C
MEASURED WATER QUALITY: HIGHLAND PIT LAKE AND GROUNDWATER MONITORING WELLS

FINAL LONG TERM GEOCHEMICAL EVOLUTION OF THE HIGHLAND PIT LAKE
EXXONMOBIL CORPORATION- CONVERSE COUNTY, WYOMING

Well Number	Well Name		Date	Monitor	Comment	Aluminum (mg/L)	Antimony(mg/L)	Arsenic (mg/L)	Barium (mg/L)	Beryllium (mg/L)	Bicarbonate (mg/l)	Bicarbonate-Field (mg/l)	Bicarbonate-Lab (mg/L)	Boron (mg/L)	Cadmium (mg/L)	Calcium (mg/L)	Chloride (mg/L)	Chromium (mg/L)	Cobalt (mg/L)	Copper (mg/L)	Fluoride (mg/L)	Iron (mg/L)	Lead (mg/L)	Lead 210 (pCi/L)	Magnesium (mg/L)	Manganese (mg/L)	Mercury (mg/L)	Molybdenum (mg/L)	Nickel (mg/L)	pH-Unspec-ified (s.u.)	pH-Field (s.u.)	pH-Lab (s.u.)	Polonium 210 (pCi/L)	Potassium (mg/L)	Radium 226 (pCi/L)	Radium 228 (pCi/L)	Selenium (mg/L)	Silver (mg/L)	Sodium (mg/L)	Sulfate (mg/L)	TDS (calc) (mg/l)	TDS (mg/L)	Thorium 230 (pCi/L)	Uranium (mg/L)	Uranium (pCi/L)	Vanadium (mg/L)	Vanadium (pCi/L)	Water Level Elevation (ft)	Zinc (mg/L)
183	TDM XLIX	TDM 49	4/4/00	TDSS								242				188	110								41.9						7.6																5109.4		
183	TDM XLIX	TDM 49	7/6/00	TDSS				0.001				242			0.01	196	99.5	0.05				0.05	0.05		43.4				0.02		7.6				0.2	1	0.001			191	702	1355	1560	0.2		0.2			5110.3	
183	TDM XLIX	TDM 49	10/25/00	TDSS								242				220	109								50.5						7.6										210	811		1580						5110.27	
183	TDM XLIX	TDM 49	1/2/01	TDSS				0.001				241			0.01	203	111	0.05				0.05	0.05		43				0.02		7.6				0.2	1	0.002			182	759	1421		0.2		0.2			5110.17	
183	TDM XLIX	TDM 49	4/10/01	TDSS								258				217	103								47						7.6										212	874	1584								
183	TDM XLIX	TDM 49	4/12/01	TDSS																																												5109.4		
183	TDM XLIX	TDM 49	8/1/01	TDSS				0.001				250			0.01	220	110	0.05				0.03	0.05		47				0.02		7.6				0.7	2.5	0.001			180	760	1440		0.2		0.203			5110.12	
183	TDM XLIX	TDM 49	10/29/01	TDSS								260				262	112								61.9						7.6										202	935	1701							5107.29	
183	TDM XLIX	TDM 49	2/22/02	TDSS				0.001				266			0.01	232	112	0.05				0.03	0.05		48.6				0.02		7.6				0.3	1	0.00159			200	874	1600.65		0.2		0.2				
183	TDM XLIX	TDM 49	4/30/02	TDSS								264				256	123								52.8						0										206	897	1667.1								
183	TDM XLIX	TDM 49	9/30/02	TDSS				0.001				265			0.01	214	99.2	0.05				0.03	0.05		45.83				0.02		7.6				0.2	1	0.001			197.5	791	1470.13		0.2	0.0003				5107.97	
183	TDM XLIX	TDM 49	12/4/02	TDSS				0.001							0.0005		89	0.001					0.001							0.0016	7.5						0.001			205	869		1730						5107.89	
183	TDM XLIX	TDM 49	1/31/03	TDSS				0.001							0.0005		100	0.001					0.001							0.0031	7.7	7.64				0.8	1	0.00118			215	834		1670			0.2031			5107.25	
183	TDM XLIX	TDM 49	5/8/03	TDSS												96	96														7.5	7.57	7.5								197	850		1780						5107.25	
183	TDM XLIX	TDM 49	7/18/03	TDSS				0.001							0.0005		120	0.001					0.001							0.0017		7.6	7.65			0.8	2.2	0.00144			200	865		1860			0.2031				
184	TDM XLX	TDM 49	4/23/02	TDSS												503	371								585																330	4656	19134.543								
47	DW-18		2/25/86	OBSS				0.001																						7.3				1.1		0.002						415			23			5069.3	
47	DW-18		3/20/86	OBSS				0.001			161					51	11													7.33				1.2		0.001				153		426			15.8			5010.35	
47	DW-18		5/24/86	OBSS				0.001																						7.47				1.5		0.001						400			7.8			5078.7	
47	DW-18		8/18/86	OBSS		0.1		0.001	0.1			117.1	159	0.07	0.002	44	10	0.01		0.01	0.24	0.01	0.05		7	0.02	0.0002	0.1	0.02	7.53				1.4		0.001			67	135		372			25	0.1		5011.3	0.005
47	DW-18		11/17/86	OBSS				0.001																						8.28				0.2		0.001						432			4.9			5010.2	
47	DW-18		2/5/87	OBSS																																												5005.6	
47	DW-18		6/29/87	OBSS								127.49				11														8.39				2.5		0.004						923			1			5007.32	
47	DW-18		8/25/87	OBSS																																												5007.67	
47	DW-18		12/7/87	OBSS		0.1		0.001	0.1			84.18		0.01	0.002	18	7	0.01		0.01	0.69	0.02	0.05		3	0.07	0.0005	0.1	0.02	7.99				4	1.4	0.05			88	119		283			3.4	0.1		5007.98	0.005
47	DW-18		2/26/88	OBSS																																												5007.95	
47	DW-18		5/23/88	OBSS				0.001				145.18				19	14													8				3.6		0.029				140		388			6.4			5008.3	
47	DW-18		8/31/88	OBSS																																												5084.12	
47	DW-18		11/28/88	OBSS		0.1		0.001	0.1			158.6		0.23	0.002	67	20	0.01		0.01	0.33	0.79	0.05		11	0.03	0.0002	0.1	0.02	7.68				5	3.2		0.05		60	188		478			1.9	0.1		5008.77	0.009
47	DW-18		5/3/89	OBSS				0.001				154.94				21	14													8.17				0.7		0.001				175		290			69			5009.65	
47	DW-18		11/21/89	OBSS		0.1		0.001	0.1			131.76		0.18	0.002	12	11	0.01		0.02	0.42	0.09	0.05		5	0.07	0.0002	0.1	0.02	8.14				5	1.1		0.001		95	130		387			1.1			5010.45	0.005
47	DW-18		5/2/90	OBSS				0.001				163.48				46	18													7.99				1.2		0.001				178		402			0.2			5011.73	
47	DW-18		11/27/90	OBSS		0.1		0.001	0.1			183		0.04	0.002	44	12	0.01		0.01	0.36	0.55	0.05		10	0.12	0.0002	0.1	0.02	7.6				6	1.5		0.001		83	180		468			3.9	0.1		5011.1	0.013
47	DW-18		11/18/91	OBSS		0.1		0.001						0.1	0.01	32.3	6.7	0.05		0.01	0.27	0.05	0.05		12.1	0.07	0.001	0.05	0.06		8.1			5.9	0.5		0.001		108	180					2.6	0.1			0.03
47	DW-18		5/6/92	OBSS				0.001				184				37.4	5														8.6				0.4		0.001				193					6.7			5014.05	
47	DW-18		11/7/92	OBSS		0.1		0.001				167		0.1	0.01	35.9	7.2	0.05		0.01	0.25	0.23	0.05		7.5	0.06	0.001	0.1	0.02		8			4.5	0.8		0.002		97	193	437.9376				0.2	0.1		5015.34	0.02
47	DW-18		5/5/93	OBSS																																												5018.05	
47	DW-18		11/30/93	OBSS																																												5017.64	
47	DW-18		5/24/94	OBSS				0.001				164.2				30.1	1														7.7				0.2		0.001									0.677			5020.6	
47	DW-18		11/30/94	OBSS																																													5023.85	
47	DW-18		5/17/95	OBSS				0.001								22	1														8.3				0.2		0.001				154					0.2			5022.2	
47	DW-18		11/27/95	OBSS		0.1		0.001	0.1			160		0.1	0.01	25.2	3.7	0.05		0.01	0.24	0.05	0.05		5	0.04	0.001	0.1	0.02		8			3.7	0.5		0.001		95.9	163	387.16				0.2	0.1		5023.07	0.03
47	DW-18		5/20/96	OBSS				0.001				94.7				22.1	2.7														8.5				0.2		0.001				157					0.2			5025	
47	DW-18		11/14/96	OBSS				0.002				132			0.01	17.4	2.6	0.05			0.27	0.05	0.05		3.5		0.001		0.05		8.9			3.5	0.2	1	0.001		94	142	350.4984		0.2		0.2			5024.8	
47	DW-18		6/6/97	OBSS				0.001				141			0.01	19.4	1.7	0.05				0.05	0.05		3.7				0.05		8.6				0.2	1	0.001		92.4	150	344.863		0.2		0.5416			5025	
47	DW-18		11/14/97	OBSS		0.1		0.001	0.1				168	0.1	0.005	26	3	0.05		0.01	0.29	0.05	0.05		5	0.04	0.001	0.1	0.02		8.1			4	0.2	1	0.001		100	146	369		0.2		0.3	0.1		5029	0.01
47	DW-18		5/8/98	OBSS				0.001				149			0.005	24.1	3.1	0.05				0.05	0.05		5				0.02		8.2				0.6	1	0.001		102	168	377		0.2		3.7			5032.45	
47	DW-18		11/11/98	OBSS		0.1		0.001	0.1			165		0.1	0.005	27	4	0.05		0.01	0.28	0.1	0.05		5.4	0.04	0.001	0.1	0.02		8.3			4	0.2	1	0.001		94	160	378		0.2		0.8	0.1		5028.2	0.01
47	DW-18		5/18/99	OBSS				0.001				156			0.005	24.4	5	0.05				0.05	0.05		5.1				0.02		8.3				0.6	1	0.001		99	156	369.993		0.2		0.3			5274.3	
47	DW-18		11/5/99	OBSS		0.1		0.001	0.1			162		0.1	0.005	25	4.7	0.05		0.01	0.27	0.04	0.05		5.5	0.04	0.001	0.1	0.02		8.3			4.1	0.4	1	0.001		95.4	163	379.703		0.2		0.5416	0.1		5026.3	0.01
47	DW-18		6/2/00	OBSS				0.001				157			0.01	24.92	8.2	0.05				0.05	0.05		6.1				0.02		8.3				0.2	1.7	0.001		97.4	169.5	387.113	398	0.2		0.645181			5032.45	
47	DW-18		11/22/00	OBSS																																													5029.05	
47	DW-18		5/11/01	OBSS				0.001				158			0.005	29	3.1	0.05				0.05	0.05		6				0.02		8.3				0.5	1	0.001		88.3	180	388		0.2		0.677			5032.75	
47	DW-18		10/31/01	OBSS		0.1		0.001	0.1			158		0.1	0.01	30	1	0.05		0.02	0.3	0.03	0.05		5.9	0.029	0.001	0.1	0.02		8.3			4	0.2	3.7	0.001		90	170			0.2		0.2	0.1		5033.8	0.01
47	DW-18		5/17/02	OBSS				0.001				170			0.01	39.3	11.5	0.05				0.03	0.05		8.05				0.02		0				0.2	1	0.001		101	195	439.84		0.2		1.08				
47	DW-18		1/22/03	OBSS				0.001							0.0005			0.001					0.001							0.001		8.7				1.5	1	0.001		89.4	184		478			1.69			5039.45	
47	DW-18		7/15/03	OBSS				0.001			143				0.0005		8.1	0.001					0.001							0.001		7.8				1	1	0.001		88.7	194		487			1.576733				
48	DW-11		7/24/92					0.001				156.89			0.01	17.79	1.5	0.05				0.05	0.05		4.17		0.001		0.02		8.2				0.2	1	0.001		124.48	179	406.185		0.2		2.03				

Notes:
ft - feet
mg/L - milligrams per Liter
OBSS - Ore Body Sandstone
pCi/L - picocuries per Liter
s.u. - standard unit
TDSS - Tailings Dam Sandstone