

# A PATHFINDER

July 27, 2006

Mr. Gary Janosko, Branch Chief  
Fuel Cycle Facilities Branch  
Division of Fuel Cycle Safety and Safeguards  
Office of Nuclear Material Safety and Safeguards  
U. S. Nuclear Regulatory Commission  
11545 Rockville Pike  
Rockville, Maryland 20852

Ref: Docket No. 40-2259, Source Material License No. SUA-672

Dear Mr. Janosko:

Enclosed please find two copies of the semi-annual ground water monitoring report (covering the first and second quarters of 2006) as required by condition 60B of the referenced license. Please let us know if there are any questions regarding the report.

Sincerely,



T. W. Hardgrove  
Manager, Reclamation Operations

Enclosure

Cc: Blair Spitzberg, USNRC Region IV  
Mark Plessinger, Stoller  
Donna Wickers  
Hydro-Engineering, LLC, w/o encl.

**SEMI-ANNUAL  
GROUND-WATER MONITORING  
FOR LUCKY Mc MINE**

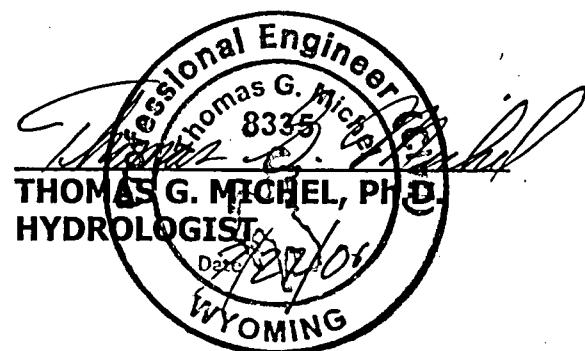
**PREPARED FOR:**

**PATHFINDER MINES CORPORATION  
LUCKY Mc MINE**

**BY:**

**HYDRO-ENGINEERING, L.L.C.**

**JULY, 2006**



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## **1.0 Introduction and Summary of Results**

This semi-annual report presents the results of ground-water monitoring for the first half of 2006 for the Lucky Mc tailings area. This report covers the requirement of NRC License SUA-672, License Condition 60B.

The following table lists the site standards that are in effect at Lucky Mc tailings POC well T1-12. The tabulation also lists the measured June 2006 concentrations for POC well T1-12. All of the present concentrations in POC well T1-12 are significantly below the site standards.

**GROUND-WATER PROTECTION STANDARDS FOR POINT-OF COMPLIANCE WELL T1-12  
AND DECEMBER 2005 POC CONCENTRATION**

POC STANDARD & CONCENTRATION	CONSTITUENT								
	Arsenic	Beryllium	Cadmium	Chromium	Nickel	RA-226 + RA-228	Selenium	Thorium-230	Uranium
SITE STANDARD	0.05	0.07	0.02	0.05	0.85	7.5	1.10	13.2	1.70
T1-12, June 2006	<0.004	<0.01	<0.01	<0.05	0.31	<3.1	0.48	<0.2	0.38

NOTE: All concentrations in mg/l except for radium and thorium in pCi/l.

## **2.0 Piezometric Data**

The water-level data collected during the first half of 2006 are presented in Table 1 along with the 2004/2005 water-level data. Figure 1 presents the piezometric surface of the Lucky Mc aquifer from the POC well through the Fraser Draw alluvium, while Figure 2 presents plots of the water-level elevations versus time for wells AL-6, T1-6, T1-12, AL-1, AL-7, AL-8 and AL-9. The corresponding water-level elevation or constituent concentration is posted adjacent to the well location on the plan view figures of the area (such as Figure 1). Water-level elevations in early 2006 have been steady in these wells.

## **3.0 Water-Quality Data**

License Condition 60B requires monitoring of water from the POC and POE wells and other selected wells for the constituents presented in Table 1. An analysis of the selenium, uranium, combined radium-226 plus radium-228, sulfate, chloride and TDS concentrations is required.

Figure 3 presents the June 2006 chloride concentrations for the Lucky Mc aquifer. The chloride concentrations are highest in the Wind River Channel at POC well T1-12 and decrease significantly beyond POE well AL-6 to levels similar to background levels. Figure 4 presents the plots of chloride concentrations versus time for the seven monitored wells. Overall, chloride concentrations are gradually declining in POC well T1-12.

Figure 5 presents the TDS concentrations for June 2006 water samples from the Lucky Mc aquifer. The TDS concentrations are greater than 5000 mg/l at POC well T1-12 and are

generally slightly less than 4000 mg/l in the western portion of the Fraser Draw alluvium. Figure 6 presents the plots of TDS concentrations versus time and illustrates that the early 2006 TDS concentrations are less than the average value for the previous few years for wells AL-1, AL-6, AL-7 and AL-8. The large increase in TDS in well AL-9 during December of 2005 is considered anomalous because the TDS in subsequent samples is consistent with the historical TDS concentration.

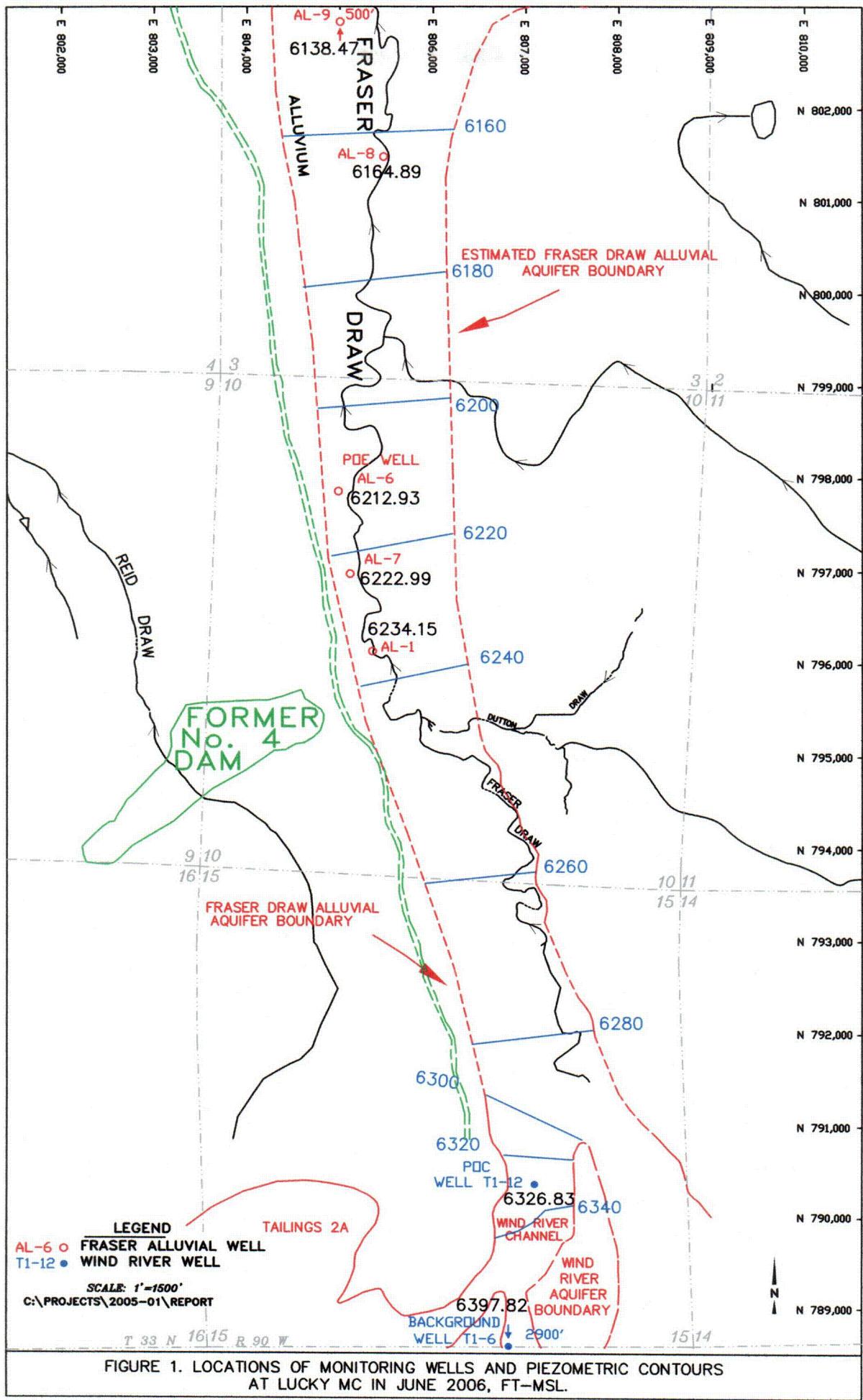
The measured sulfate concentrations for the Lucky Mc aquifer during June of 2006 are presented in Figure 7 and show that the sulfate concentrations in the western portion of the Fraser Draw alluvium are greater than 2000 mg/l while concentrations are less than 2000 mg/l in the eastern half. The sulfate concentration versus time plots in Figure 8 show that sulfate concentrations in POC well T1-12 have been fairly steady since 2003.

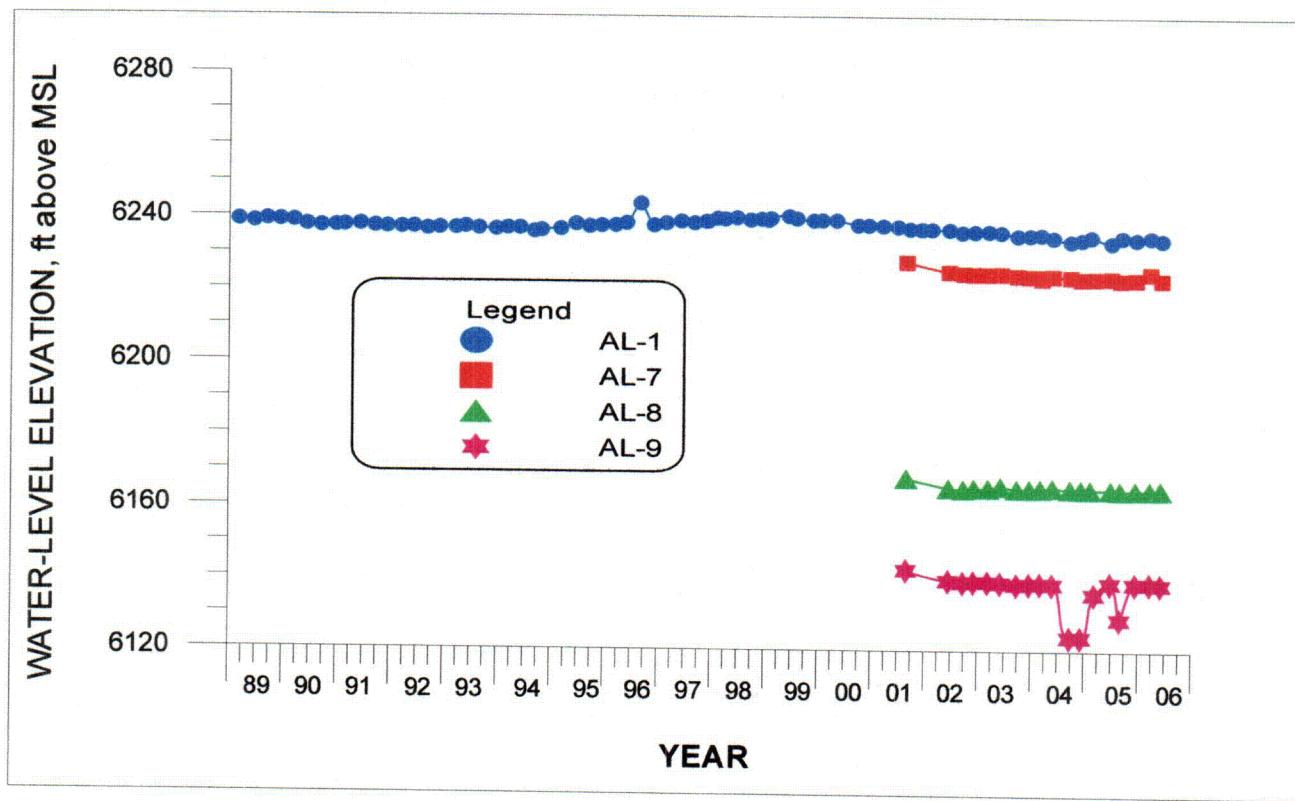
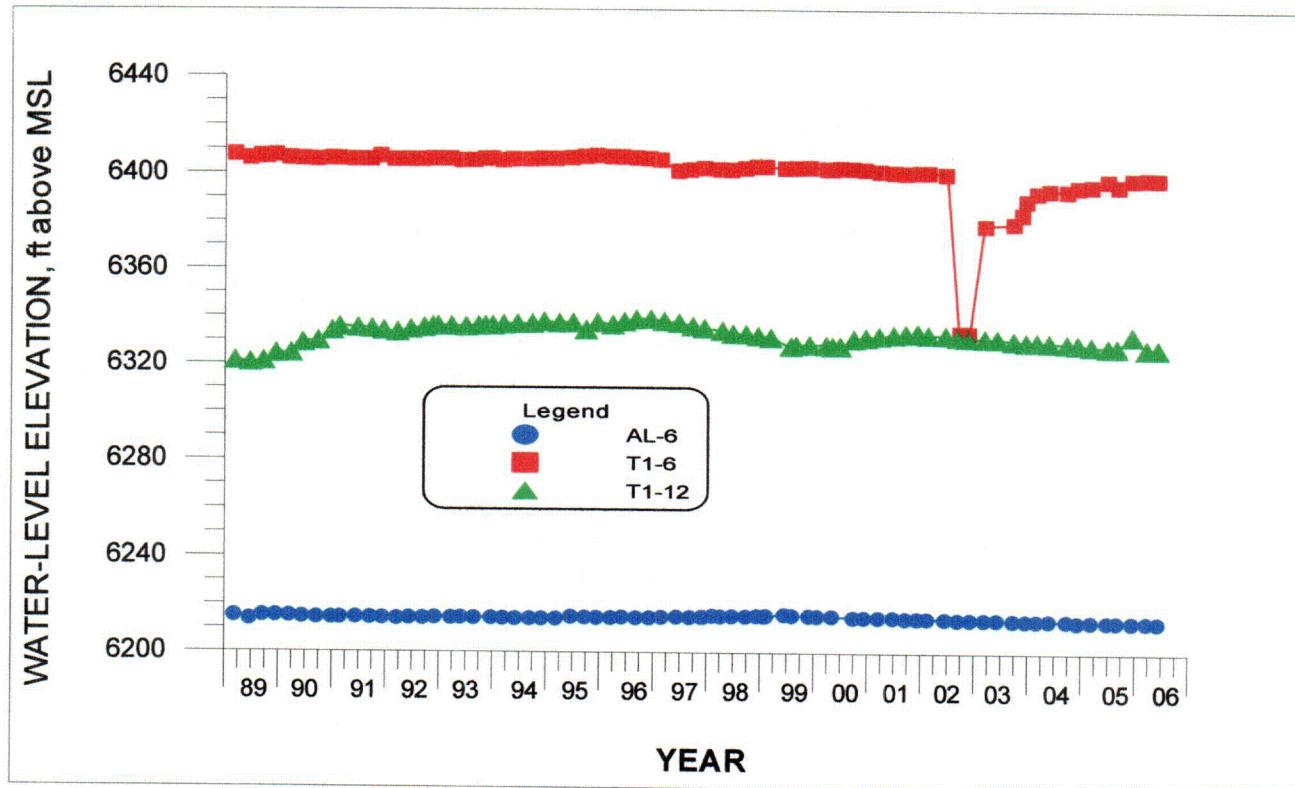
Uranium concentrations for the Lucky Mc aquifer during June of 2006 are presented in Figure 9 and this figure shows the highest observed uranium concentrations at POE well AL-6. Figure 10 shows that the uranium concentration in the POE well has gradually declined over the last few years. The uranium concentrations have been relatively steady in POC well T1-12.

Figure 11 presents the selenium concentrations for June 2006 for the Lucky Mc aquifer. Selenium concentrations are greatest at POC well T1-12. Selenium concentrations in POC well T1-12 have been relatively steady for the last year (see Figure 12).

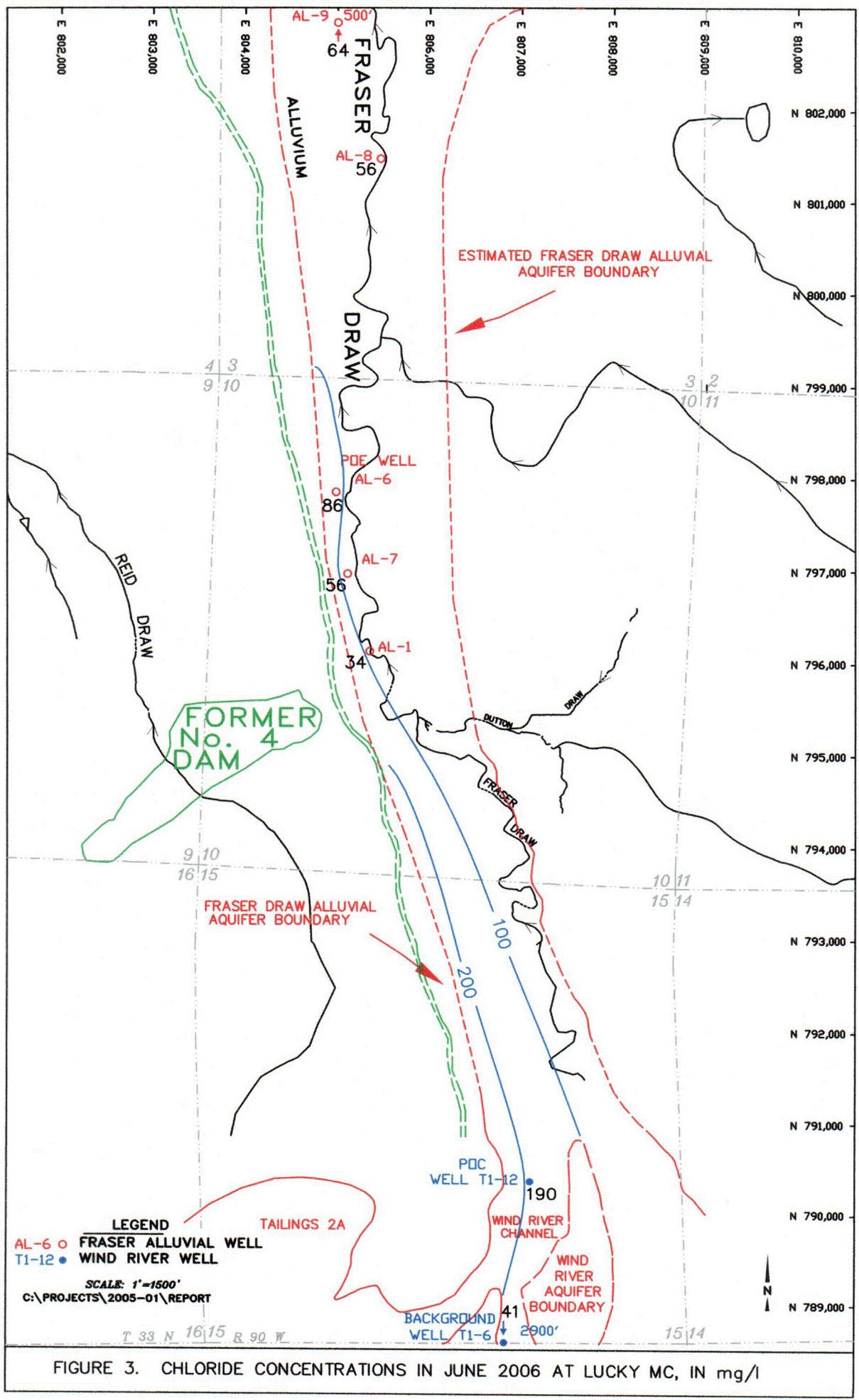
Figure 13 presents the radium-226 plus radium-228 activity for June 2006 in the Lucky Mc aquifer in pCi/l. The activity at POC well T1-12 is well below the radium-226 plus radium-228 site standard of 7.5 pCi/l. Measured radium activities generally exhibit more variability than other constituents, and little significance is given to occasional outliers. Figure 14 shows plots of the radium-226 plus radium-228 activity versus time for the monitored wells. These plots show significant variability in measured activity, which is thought to be due to variability in the laboratory analysis. None of the values in early 2006 are above typical values for the sum of these two constituents.

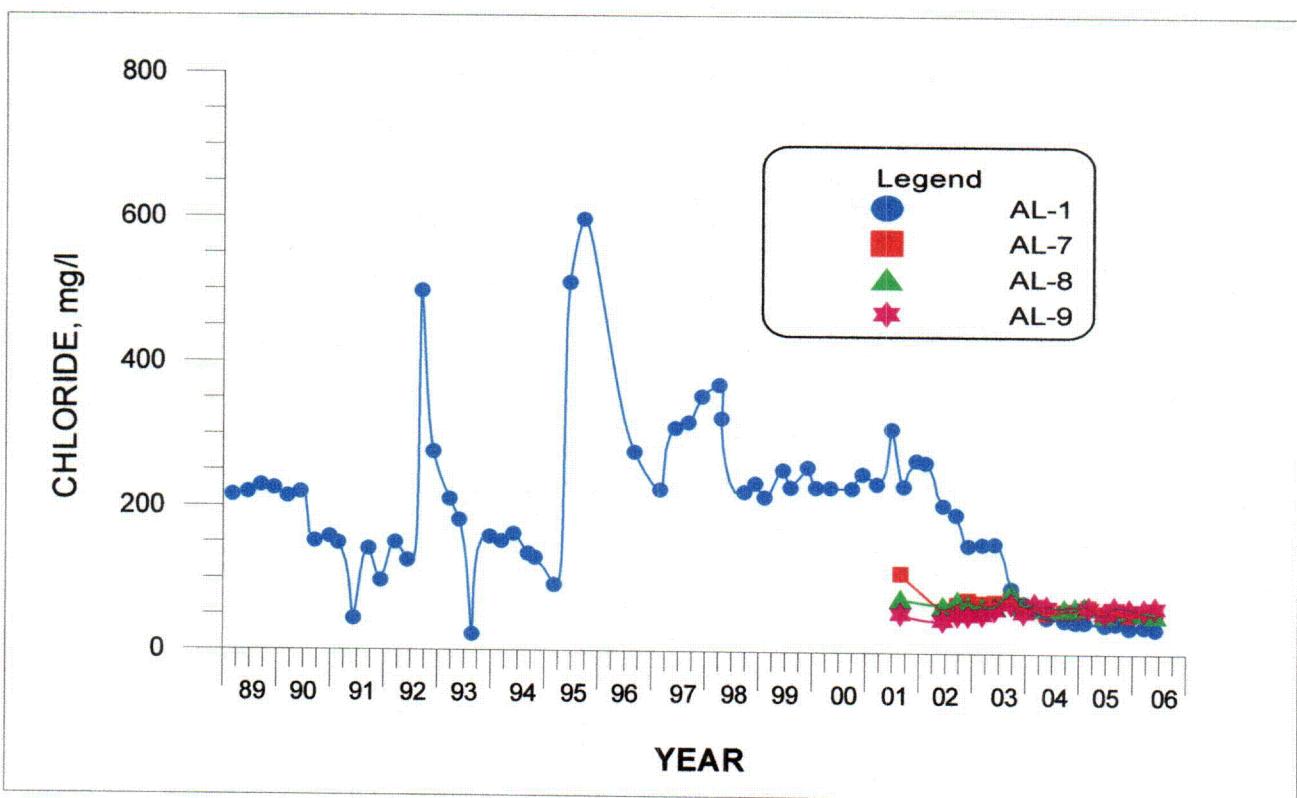
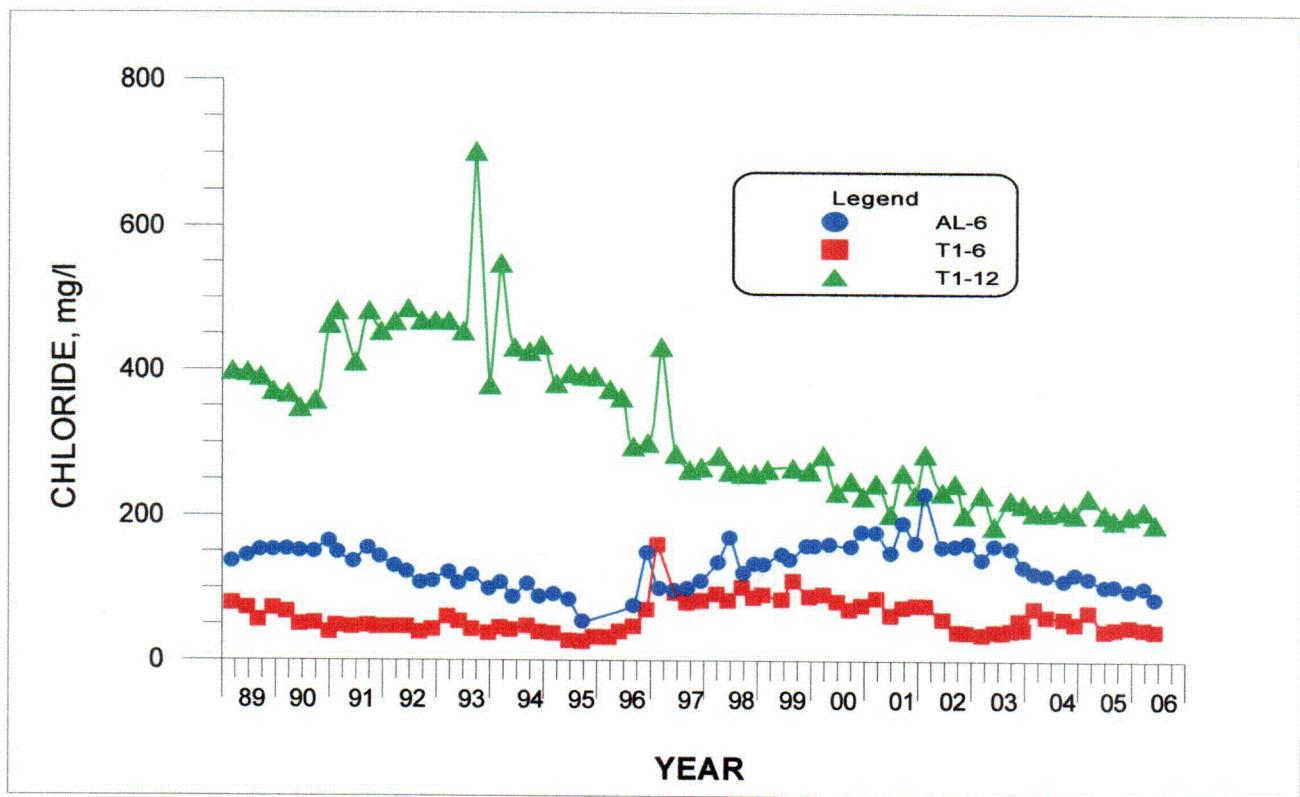
Concentrations of the remainder of the constituents at the site are gradually decreasing or are not significant at POC well T1-12.



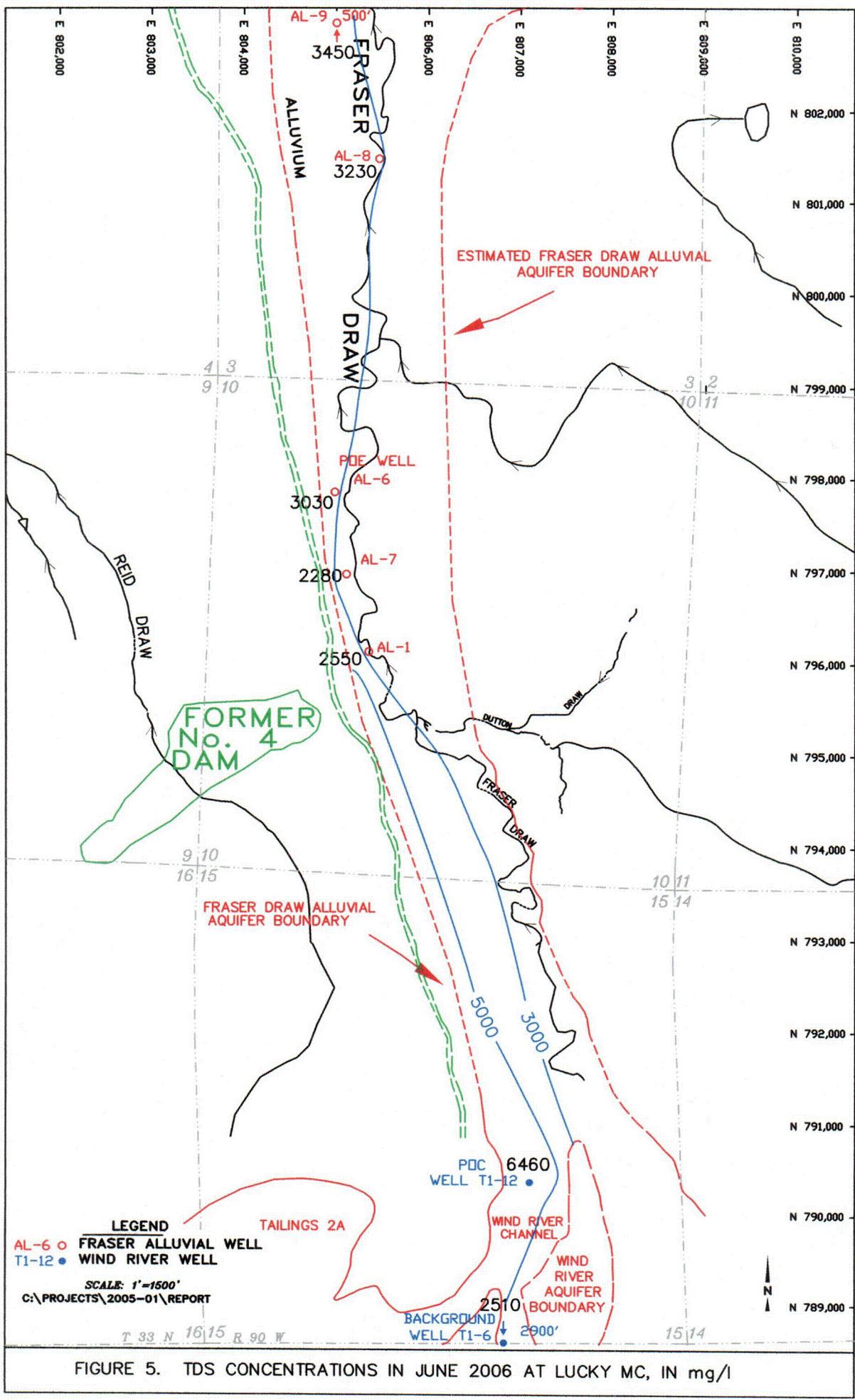


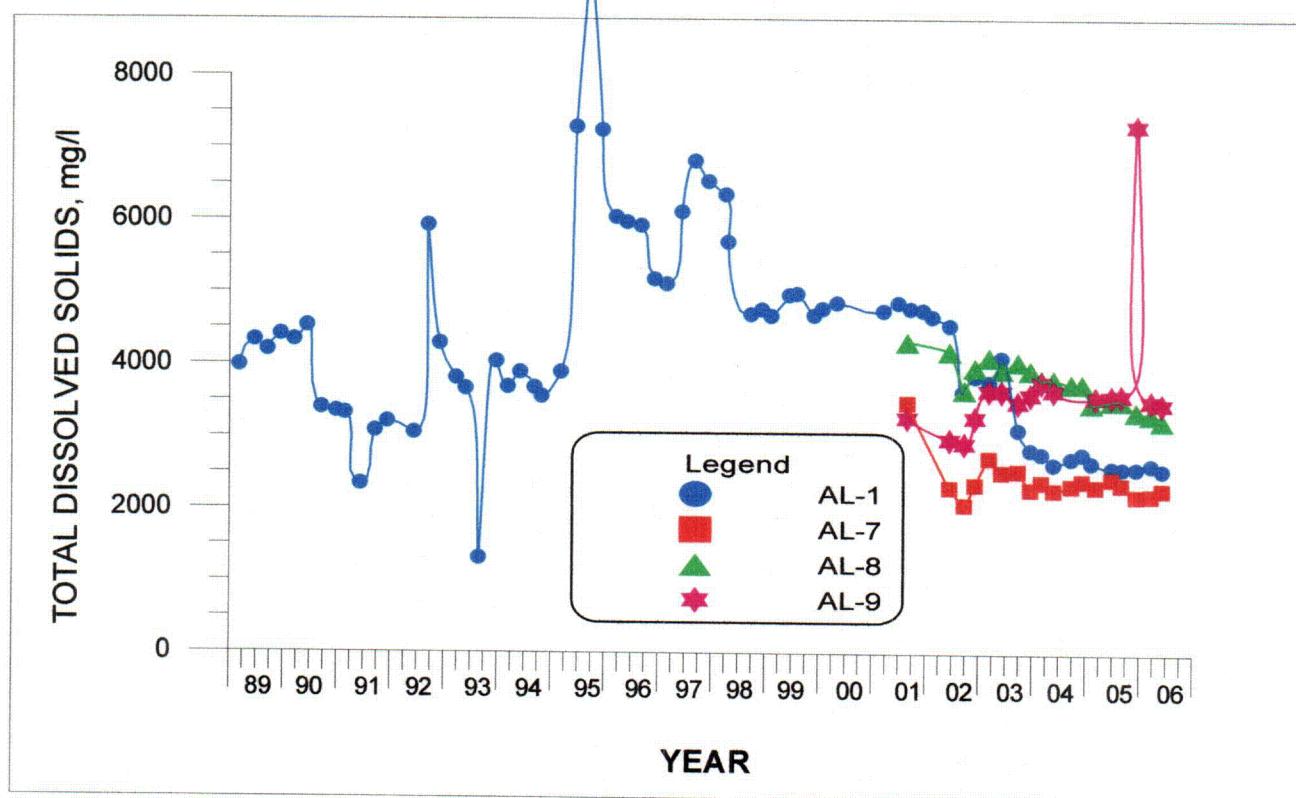
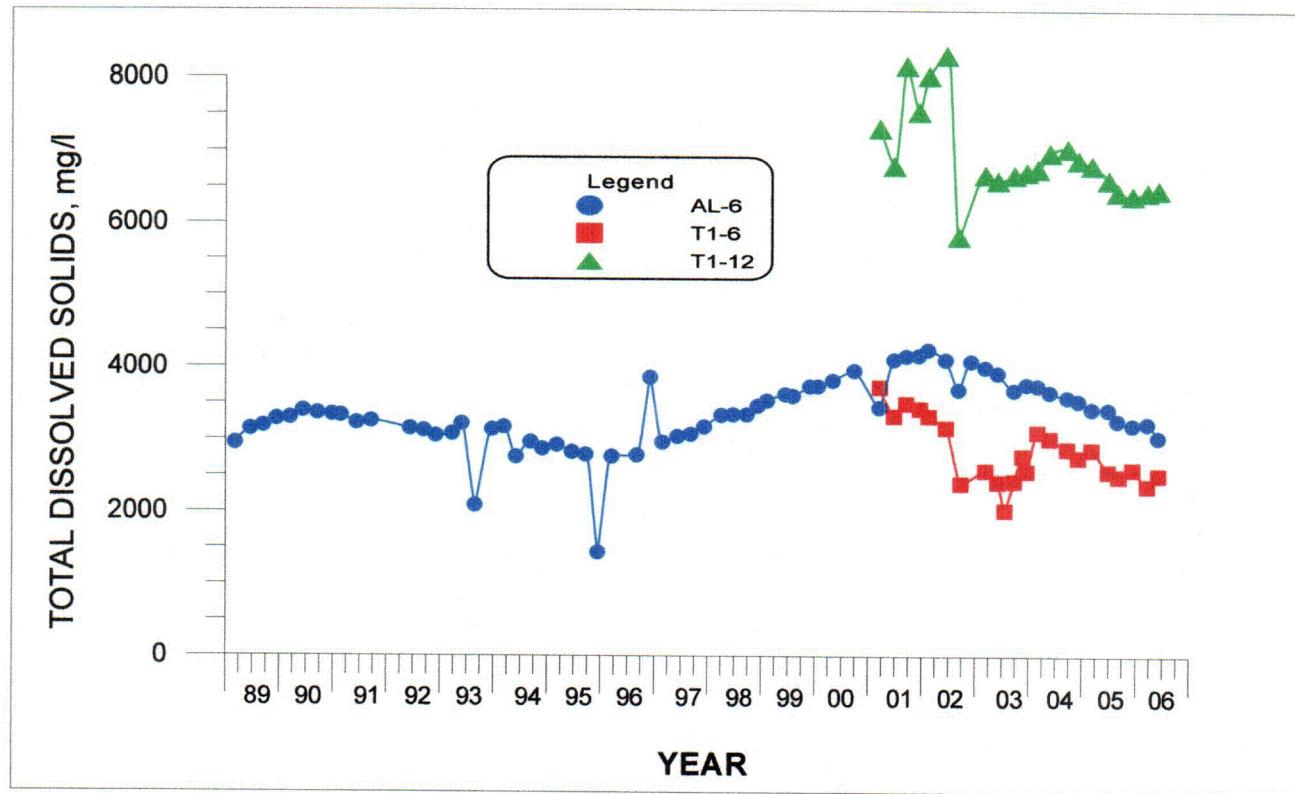
**FIGURE 2. WATER-LEVEL ELEVATION VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**



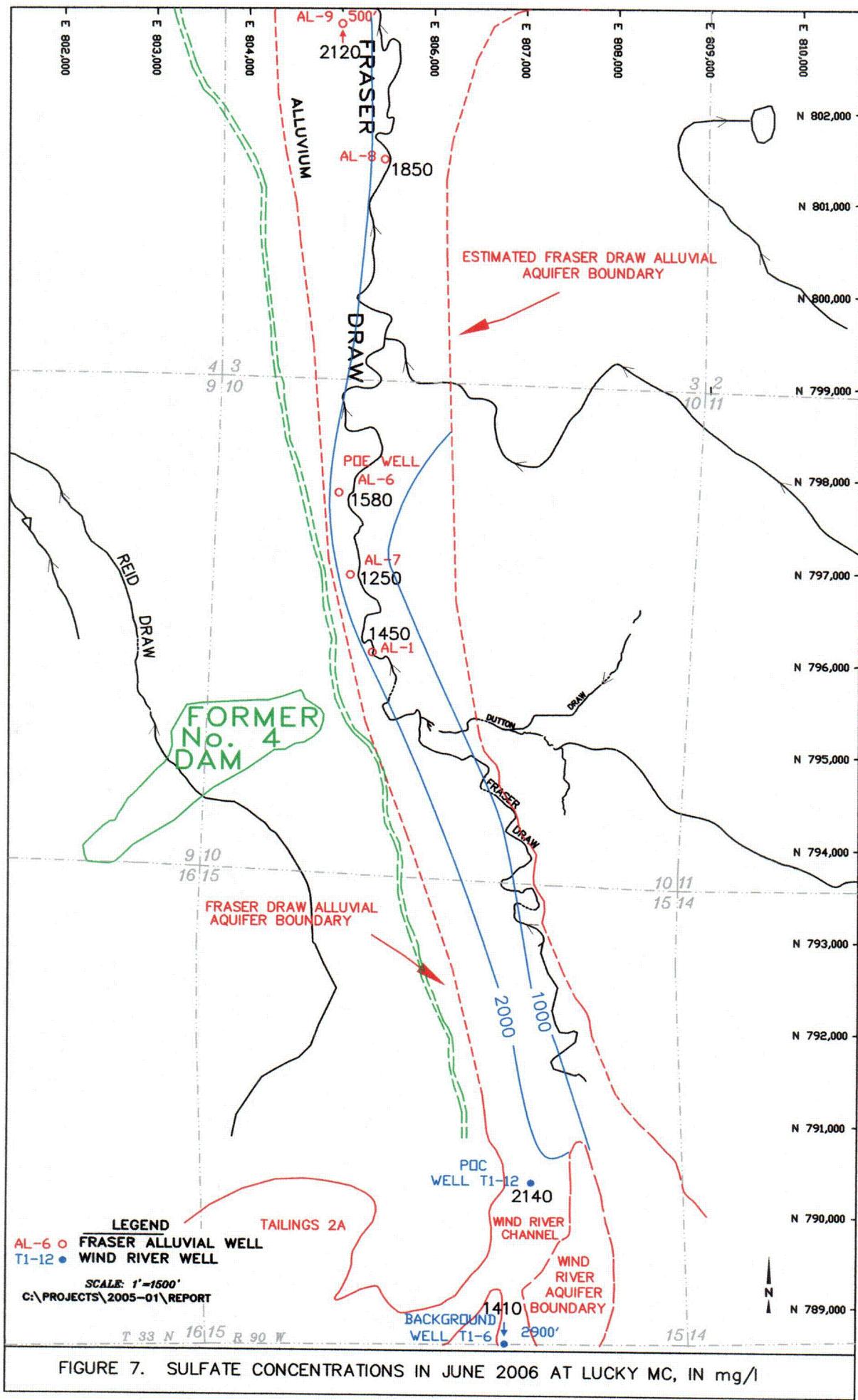


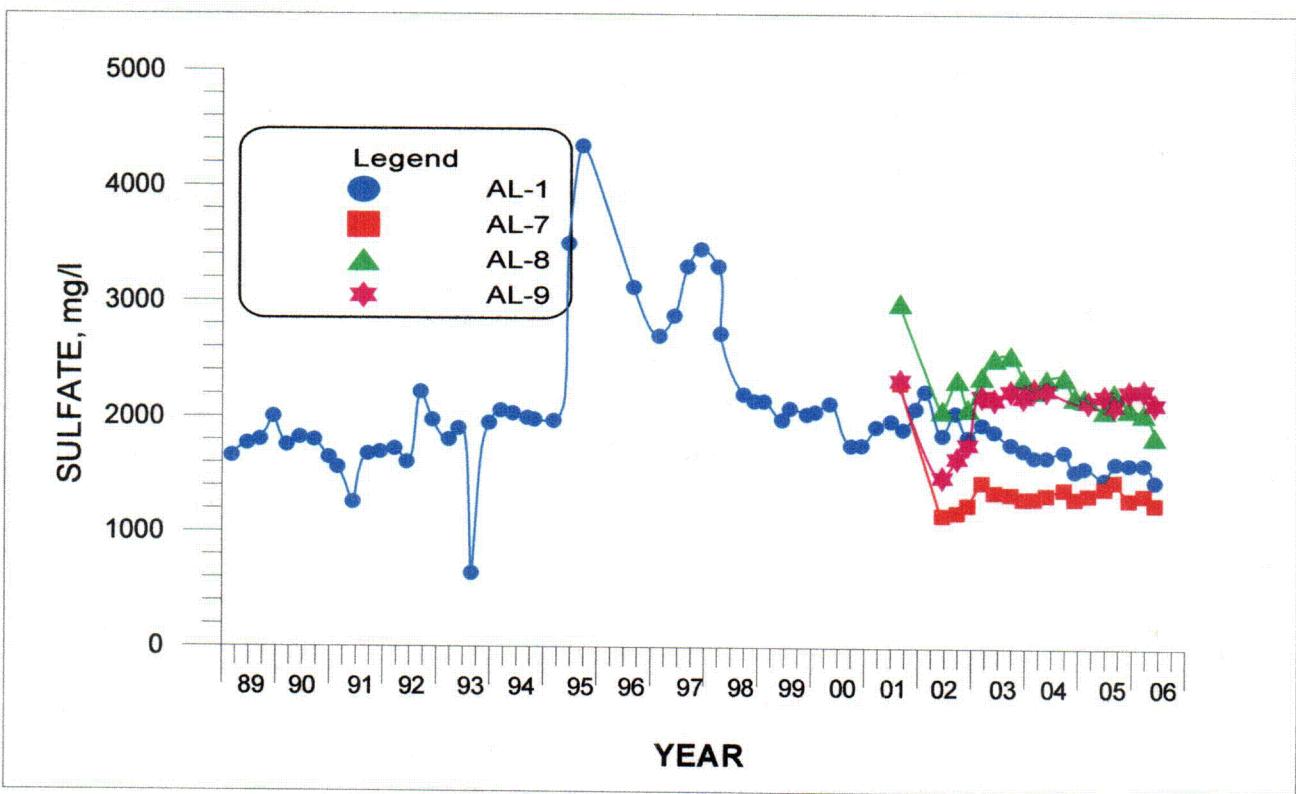
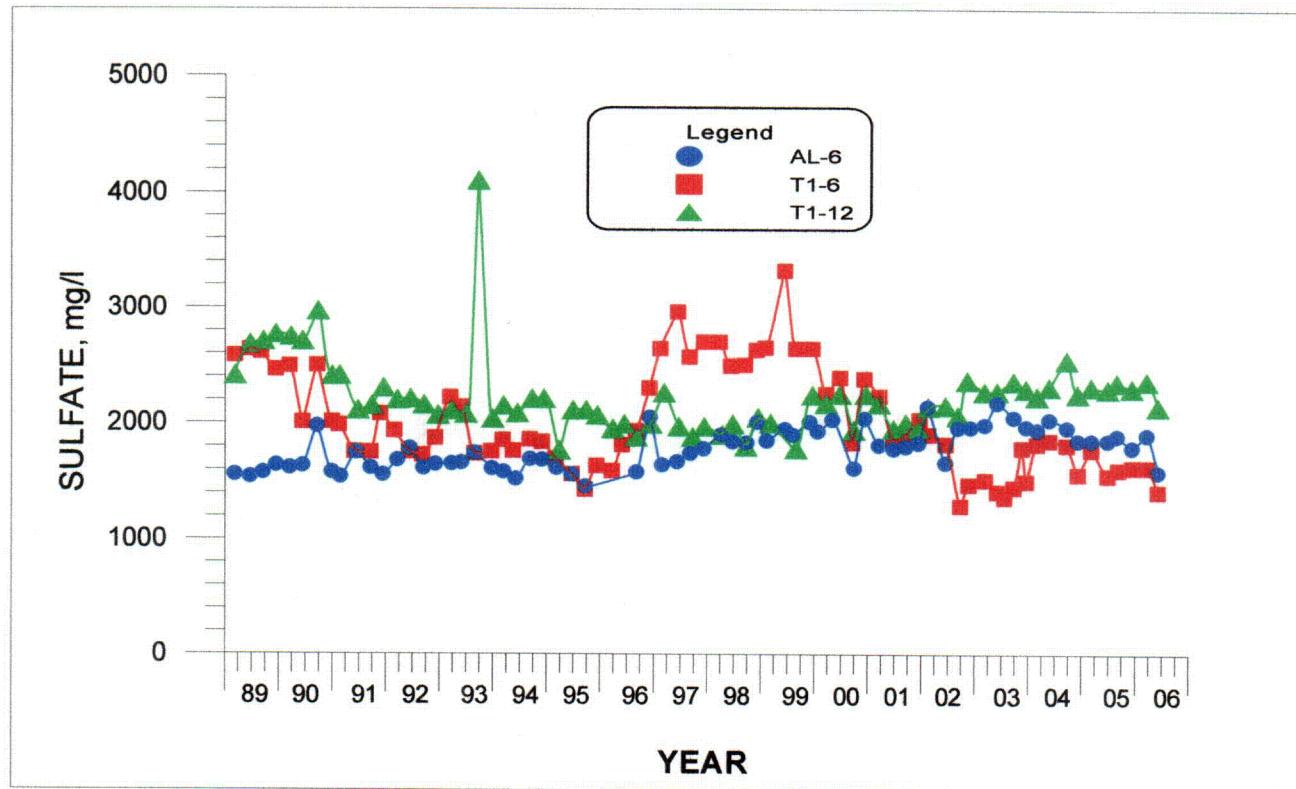
**FIGURE 4. CHLORIDE CONCENTRATIONS VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**





**FIGURE 6. TDS CONCENTRATIONS VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**





**FIGURE 8. SULFATE CONCENTRATIONS VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**

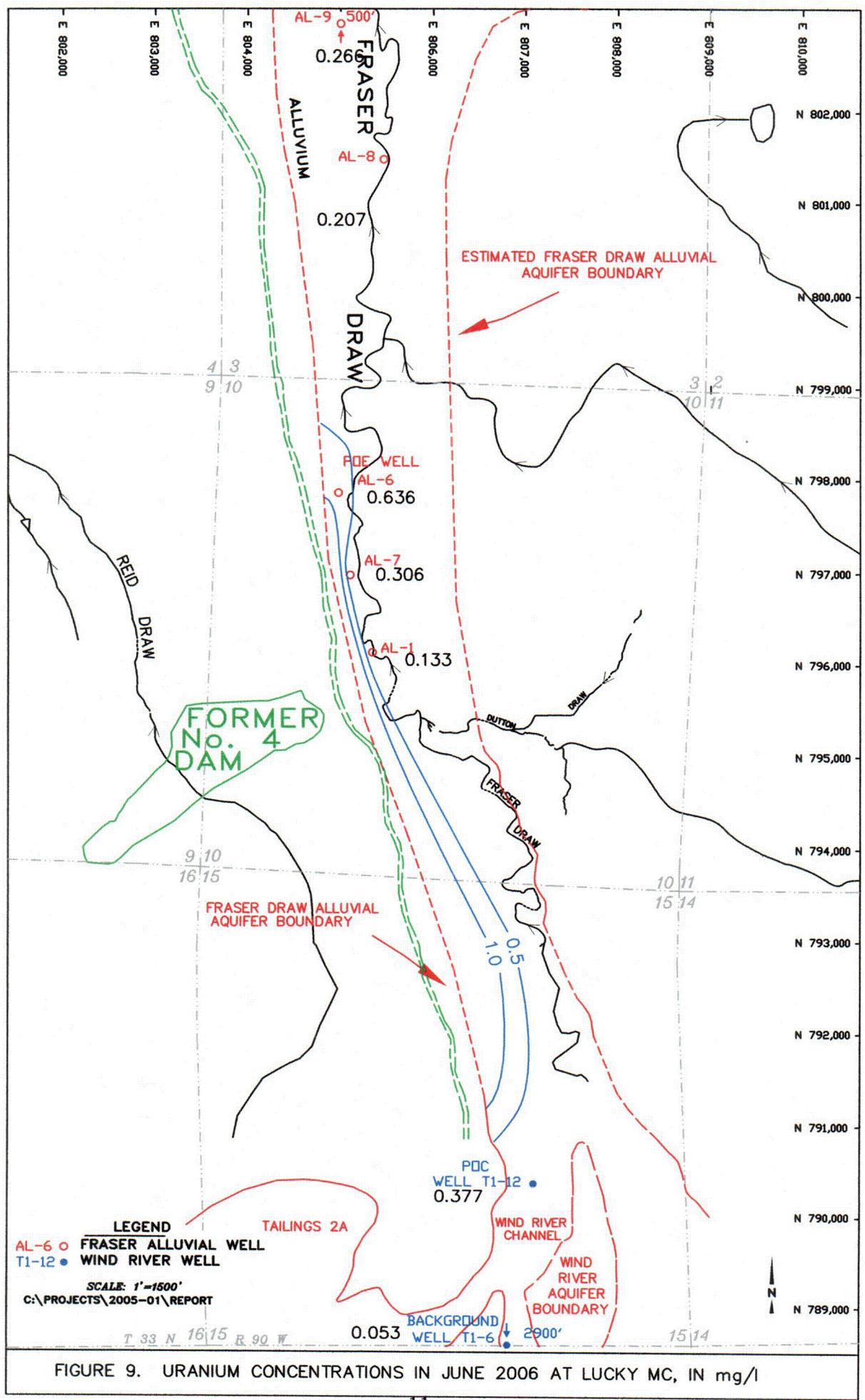
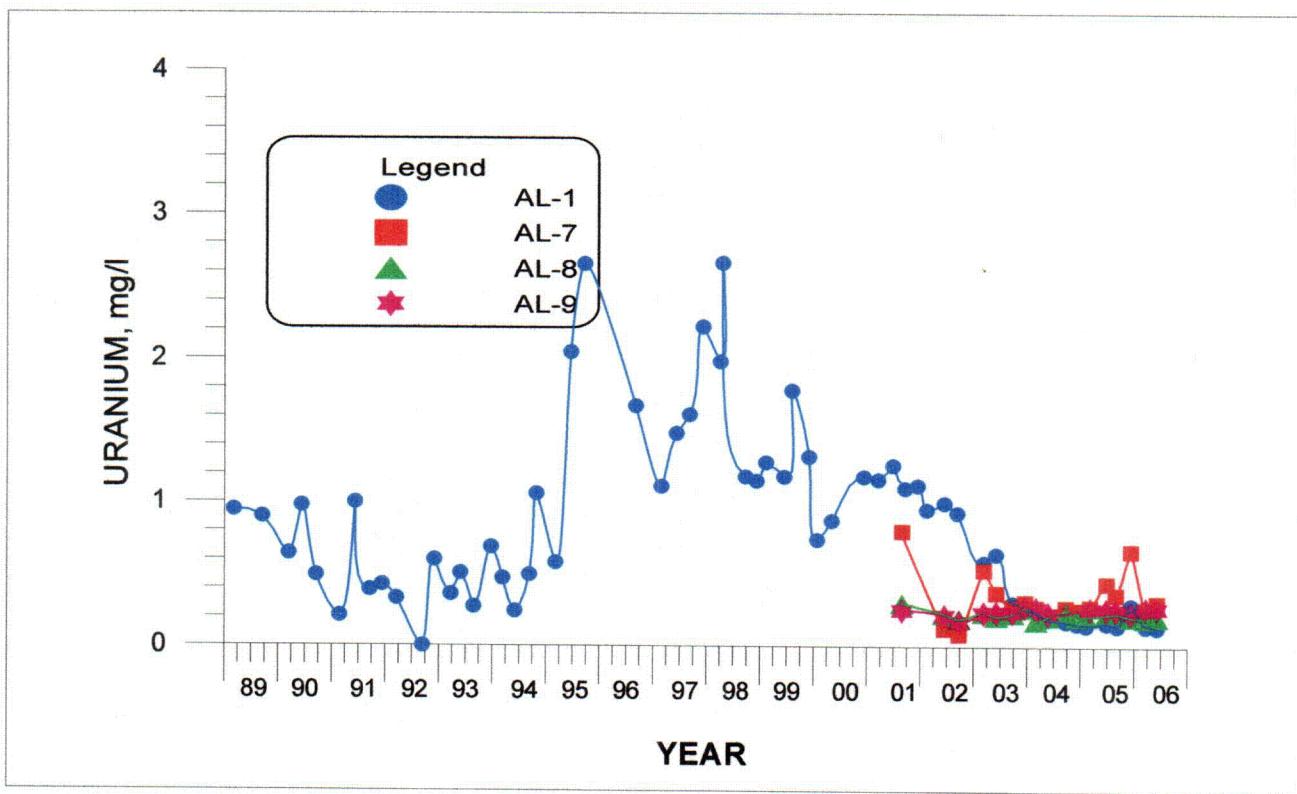
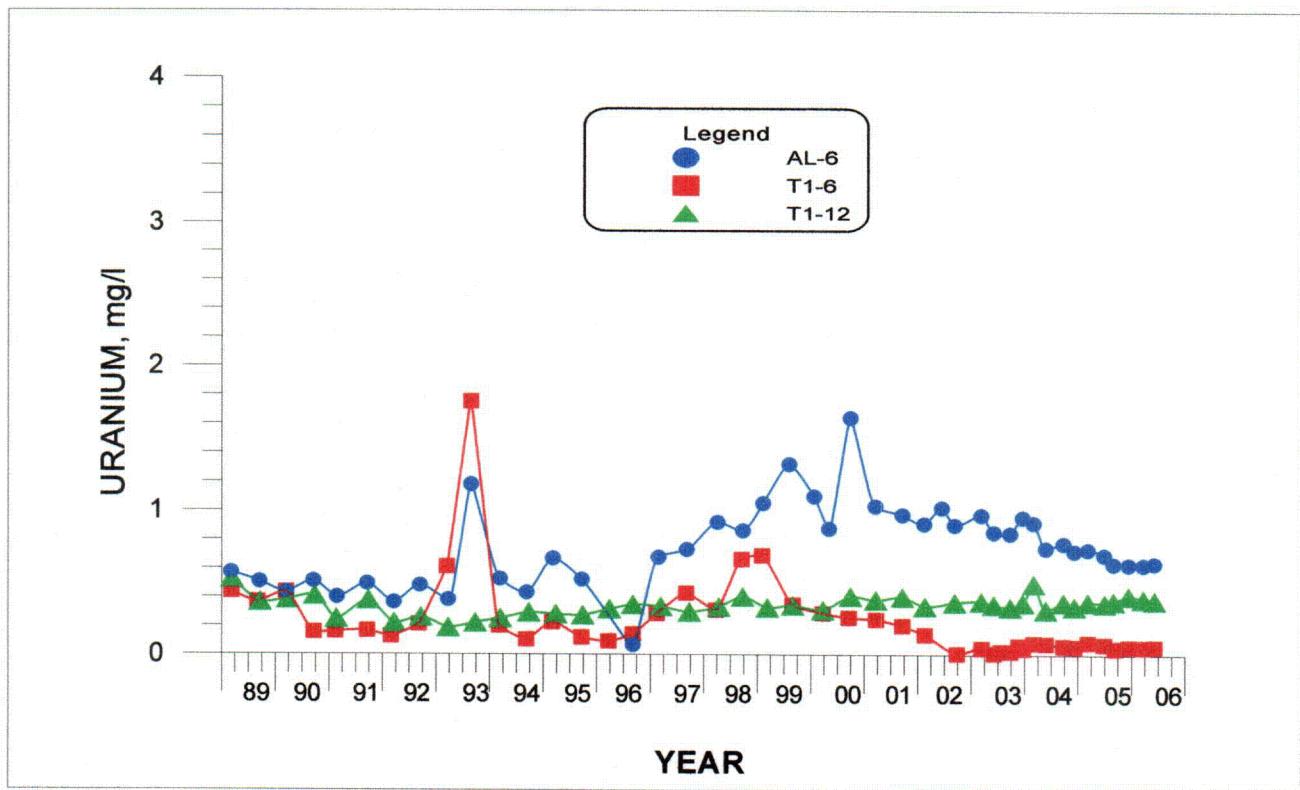
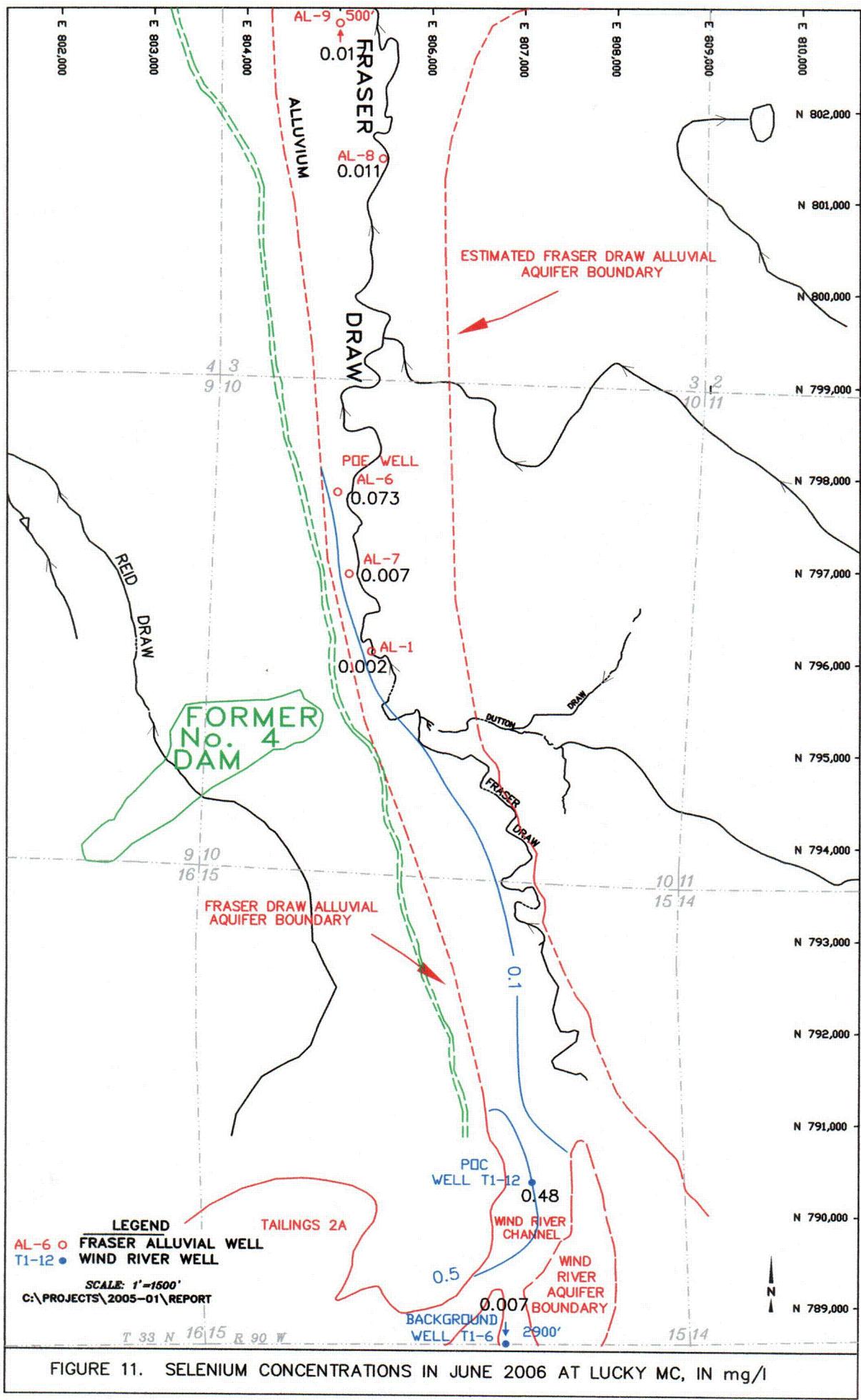
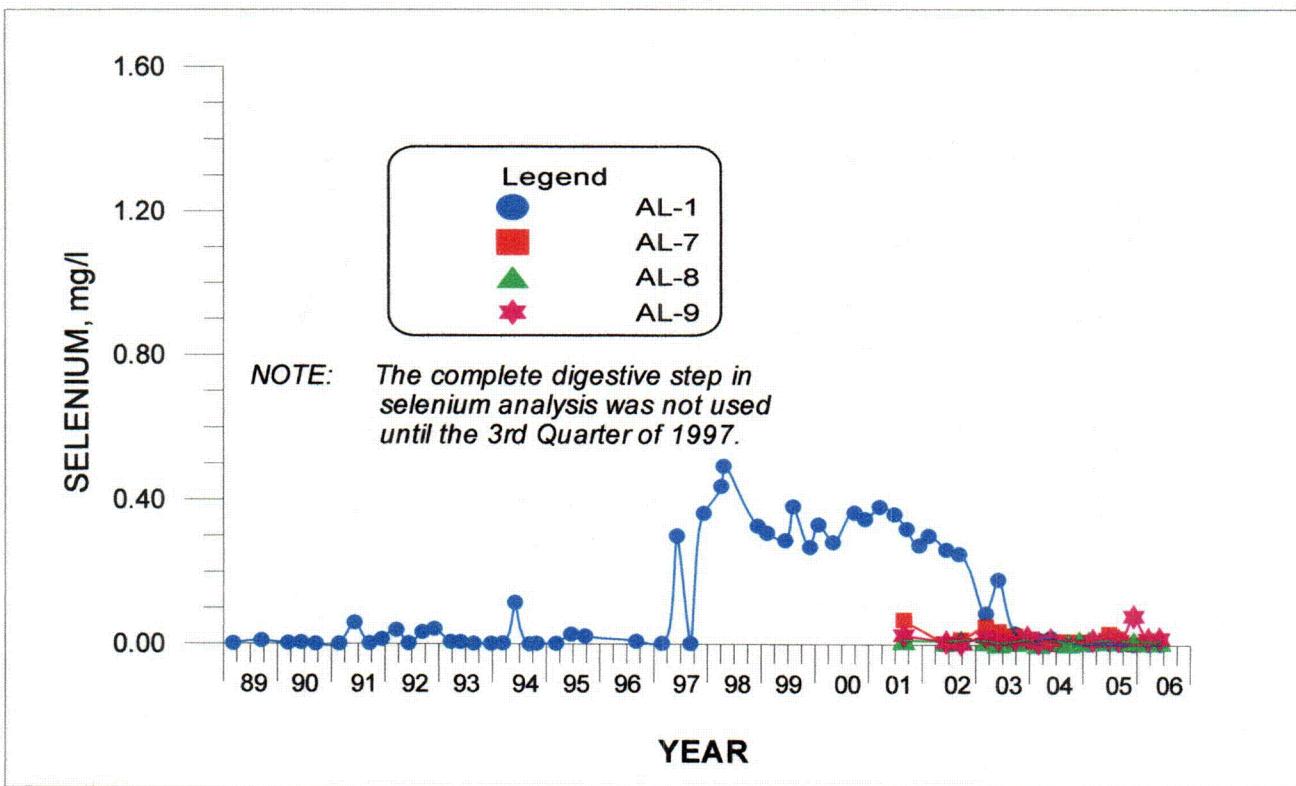
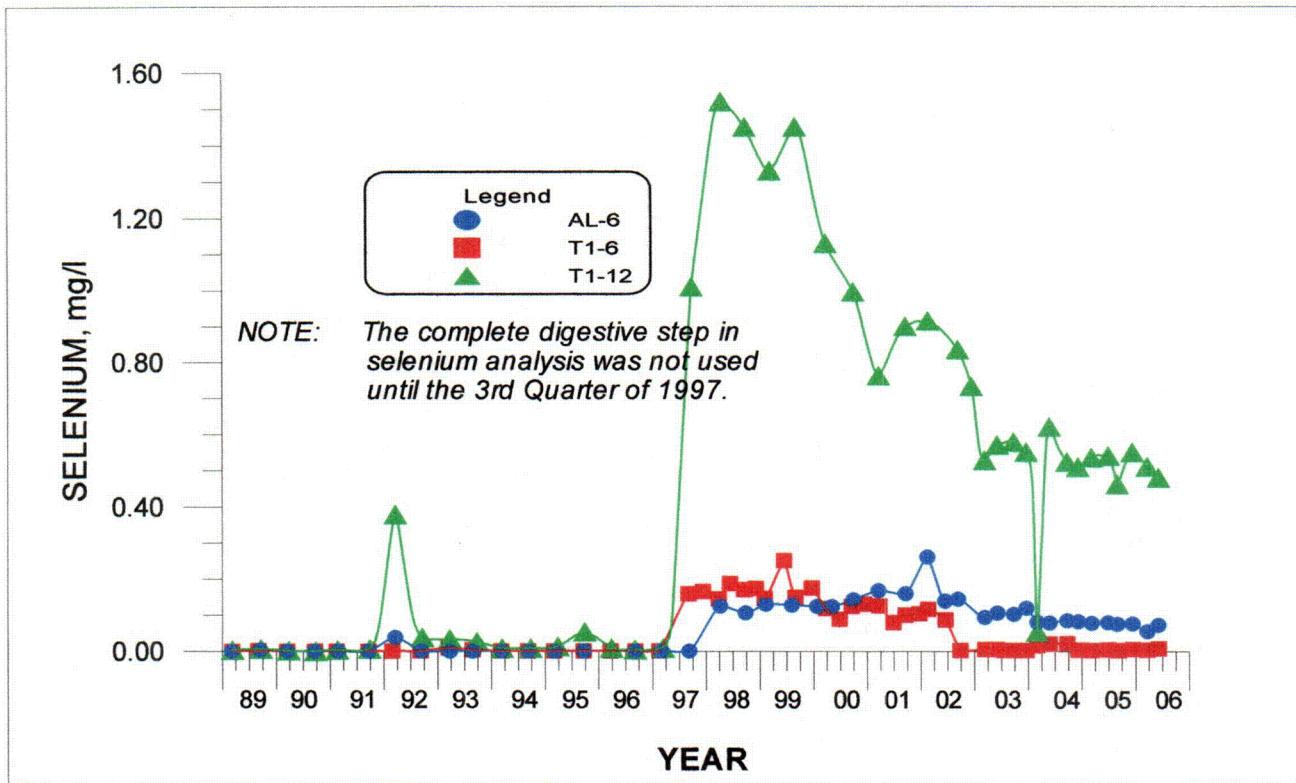


FIGURE 9. URANIUM CONCENTRATIONS IN JUNE 2006 AT LUCKY MC, IN mg/l

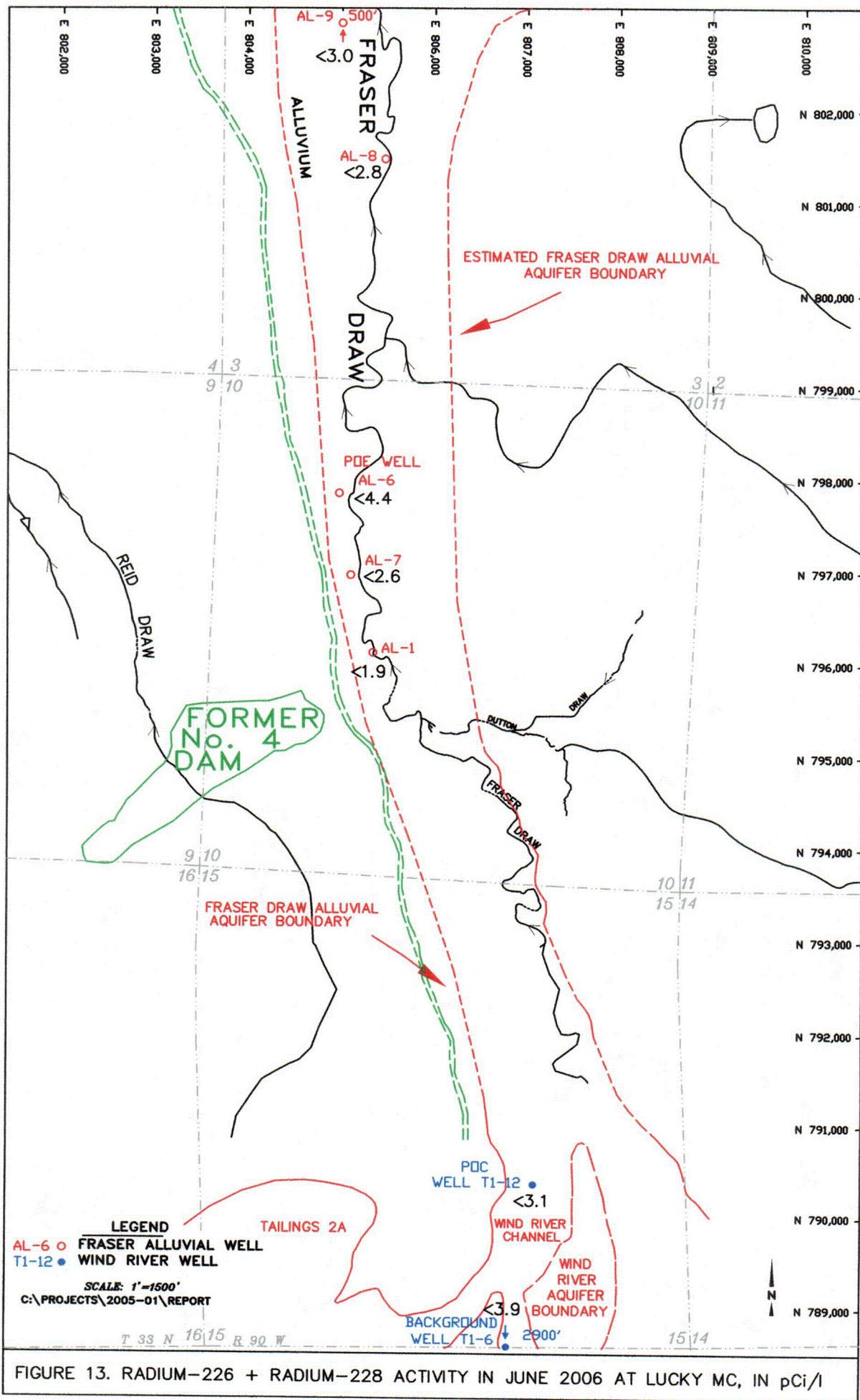


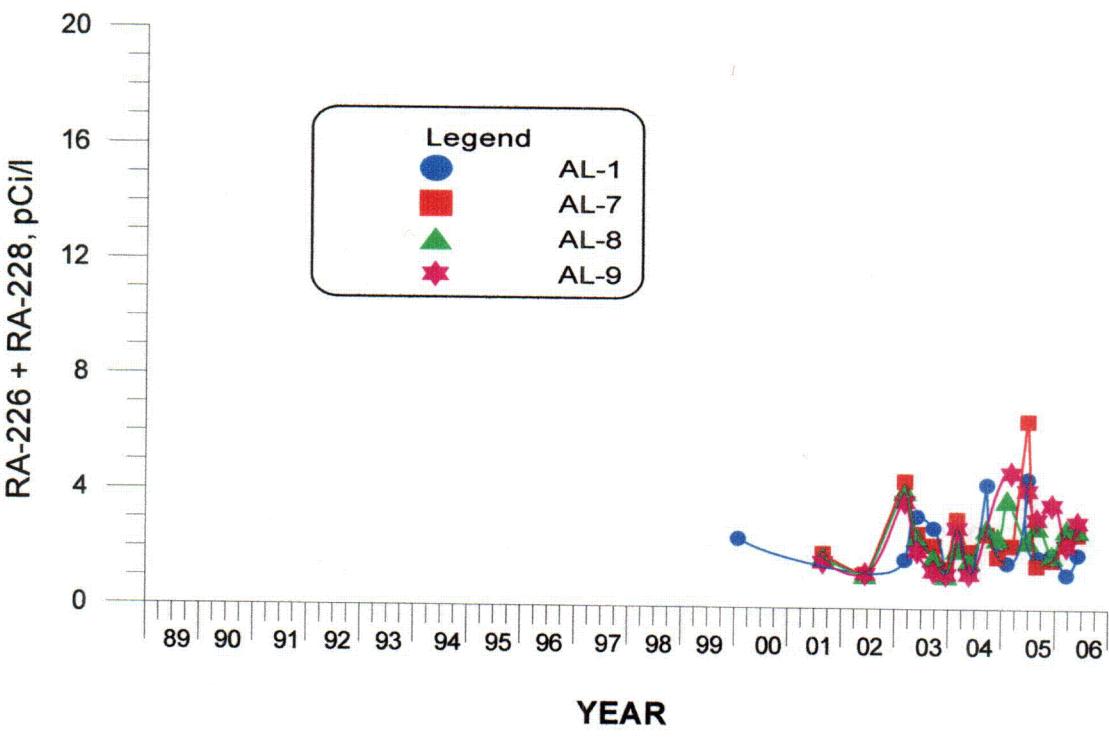
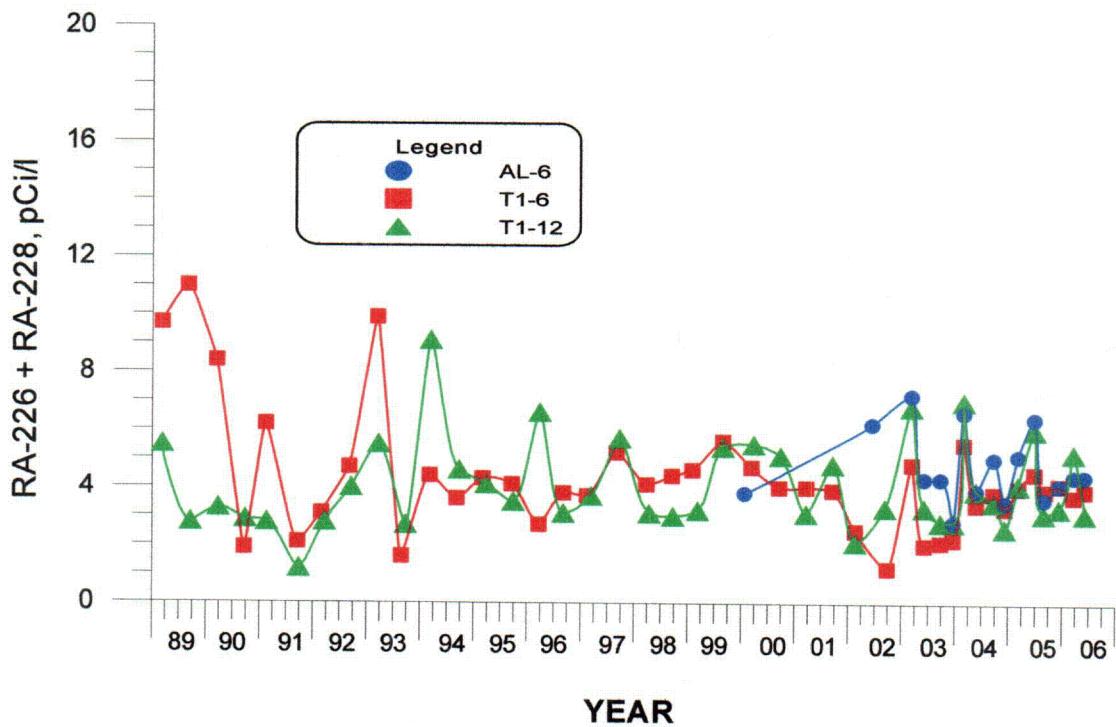
**FIGURE 10. URANIUM CONCENTRATIONS VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**





**FIGURE 12. SELENIUM CONCENTRATIONS VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**





**FIGURE 14. RADIUM-226 + RADIUM-228 ACTIVITY VERSUS TIME FOR WELLS T1-6, T1-12, AL-1, AL-6, AL-7, AL-8 AND AL-9.**

**TABLE 1. WATER-LEVEL AND WATER-QUALITY DATA.**

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	WL (feet)	WL_ELEV (ft-msl)	pH(f) (std. units)	Cond(f) ( $\mu\text{mhos}$ )	TDS (mg/l)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-1	3/2/2004	29.15	6235.45	—	3380	2770	1660	61.2	2.9	0.245
	5/26/2004	29.93	6234.67	7.2	3080	2630	1660	50.1	1.6	0.190
	9/22/2004	30.96	6233.64	7.5	2830	2710	1710	46.0	0.3	0.175
	12/6/2004	30.54	6234.06	7.0	2910	2770	1540	44.0	0.1	0.159
	2/9/2005	29.73	6234.87	7.2	1885	2650	1570	44.0	< 0.1	0.147
	6/27/2005	31.31	6233.29	6.9	3140	2580	1470	40.0	< 0.1	0.162
	9/8/2005	29.76	6234.84	6.8	3100	2570	1610	42.0	< 0.1	0.144
	12/12/2005	30.31	6234.29	6.2	3110	2570	1600	36.0	0.1	0.289
	3/22/2006	29.75	6234.85	7.4	3240	2620	1600	37.0	< 0.1	0.142
	6/5/2006	30.45	6234.15	7.4	3280	2550	1450	34.0	< 0.1	0.133
AL-6	3/2/2004	23.18	6213.62	7.0	3970	3740	1940	121.0	41.5	0.916
	5/26/2004	23.14	6213.66	7.0	3820	3650	2030	118.0	40.3	0.740
	9/22/2004	23.31	6213.49	7.3	3500	3580	1960	111.0	69.1	0.772
	12/6/2004	23.77	6213.03	6.9	3490	3530	1850	120.0	41.7	0.718
	3/8/2005	23.45	6213.35	6.9	3730	3420	1850	114.0	37.2	0.731
	6/27/2005	23.65	6213.15	7.2	3740	3410	1850	103.0	29.5	0.693
	8/31/2005	23.66	6213.14	6.6	3720	3260	1890	104.0	36.7	0.631
	12/12/2005	23.72	6213.08	6.6	3630	3200	1790	97.0	41.1	0.626
	3/22/2006	23.77	6213.03	12.9	4160	3220	1900	101.0	24.0	0.624
	6/5/2006	23.87	6212.93	7.5	3670	3030	1580	86.0	34.0	0.636
AL-7	3/2/2004	28.12	6223.88	6.9	2710	2380	1300	62.5	3.6	0.274
	3/8/2004	28.71	6223.29	7.1	2550	—	—	—	—	—
	5/26/2004	28.04	6223.96	7.2	2580	2270	1330	56.3	0.4	0.210
	9/22/2004	28.33	6223.67	7.4	2360	2330	1380	59.0	1.9	0.272
	12/6/2004	28.79	6223.21	7.4	2400	2400	1300	60.0	2.3	0.255
	3/8/2005	28.71	6223.29	7.1	2550	2320	1330	65.0	0.6	0.276
	6/28/2005	28.61	6223.39	6.9	2750	2430	1390	57.0	8.9	0.439
	8/31/2005	29.05	6222.95	6.7	2730	2350	1450	60.0	5.6	0.361
	12/12/2005	28.91	6223.09	6.2	2670	2190	1290	54.0	0.3	0.663
	3/22/2006	27.20	6224.80	7.5	2840	2200	1330	58.0	0.3	0.261
AL-8	6/5/2006	29.01	6222.99	7.4	2900	2280	1250	56.0	0.8	0.306
	3/2/2004	29.85	6165.15	7.2	4910	3800	2250	69.5	< 0.1	0.180
	5/26/2004	29.53	6165.47	7.1	4310	3800	2340	65.1	< 0.1	0.210
	9/22/2004	29.89	6165.11	7.5	3950	3740	2360	64.0	0.2	0.242
	12/6/2004	29.91	6165.09	7.1	3960	3740	2190	65.0	< 0.1	0.206
	2/9/2005	30.02	6164.98	7.3	3160	3470	2180	66.0	0.3	0.210
	6/27/2005	30.06	6164.94	7.3	4240	3510	2080	55.0	< 0.1	0.223
	8/31/2005	30.19	6164.81	6.9	4340	3510	2230	65.0	0.2	0.230
	12/12/2005	30.14	6164.86	6.4	4070	3360	2090	62.0	0.2	0.206
	3/22/2006	30.14	6164.86	7.5	4160	3320	2050	59.0	0.4	0.198
AL-9	6/5/2006	30.11	6164.89	7.7	4230	3230	1850	56.0	0.1	0.207
	3/2/2004	35.38	6138.62	7.3	4290	3760	2250	68.8	0.6	0.266
	5/26/2004	35.53	6138.47	6.9	4020	3640	2240	64.5	< 0.1	0.230
	9/22/2004	50.30	6123.70	—	—	—	—	—	—	—

**TABLE 1. WATER-LEVEL AND WATER-QUALITY DATA. (cont.)**

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	WL (feet)	WL_ELEV (ft-msl)	pH(f) (std. units)	Cond(f) ( $\mu\text{mhos}$ )	TDS (mg/l)	SO4 (mg/l)	Cl (mg/l)	NO3+NO2 (mg/l)	Unat (mg/l)
AL-9	12/6/2004	> 50.30	6123.70	—	—	—	—	—	—	—
	3/8/2005	38.34	6135.66	6.7	3850	3540	2140	64.0	< 0.1	0.261
	6/27/2005	35.25	6138.75	7.3	4000	3560	2190	56.0	< 0.1	0.256
	8/31/2005	45.21	6128.79	6.8	4320	3570	2110	64.0	0.6	0.253
	12/12/2005	35.31	6138.69	6.6	4240	7300	2230	61.0	< 0.1	0.234
	3/22/2006	35.30	6138.70	7.6	4790	3490	2240	61.0	< 0.1	0.264
	6/5/2006	35.53	6138.47	7.4	4390	3450	2120	64.0	0.2	0.266
T1-6	3/2/2004	36.18	6392.04	7.6	4090	3100	1820	72.3	0.5	0.080
	5/26/2004	35.00	6393.22	6.8	3400	3010	1850	60.7	0.2	0.075
	9/22/2004	35.25	6392.97	7.8	3230	2870	1810	58.0	0.3	0.059
	12/7/2004	33.72	6394.50	7.5	2900	2750	1560	51.0	0.3	0.056
	3/8/2005	33.28	6394.94	7.5	3270	2860	1770	67.0	< 0.1	0.083
	6/28/2005	30.90	6397.32	7.8	3470	2560	1550	41.0	< 0.1	0.071
	9/8/2005	33.15	6395.07	7.2	3310	2490	1600	44.0	< 0.1	0.043
	12/12/2005	30.43	6397.79	6.4	2960	2590	1620	47.0	< 0.1	0.052
	3/22/2006	30.25	6397.97	7.6	3350	2360	1620	44.0	< 0.1	0.050
	6/5/2006	30.40	6397.82	7.8	3250	2510	1410	41.0	0.1	0.053
T1-12	3/2/2004	11.26	6329.54	6.7	7060	6750	2230	205.0	310.0	0.493
	5/26/2004	11.40	6329.40	6.3	7240	6970	2310	205.0	340.0	0.310
	9/22/2004	11.95	6328.85	6.6	6550	7030	2540	208.0	550.0	0.361
	12/6/2004	12.17	6328.63	6.7	6450	6870	2250	203.0	321.0	0.333
	3/8/2005	12.87	6327.93	6.7	6840	6800	2310	226.0	298.0	0.364
	6/29/2005	13.42	6327.38	6.5	7110	6600	2290	203.0	259.0	0.356
	8/31/2005	13.49	6327.31	6.0	6770	6430	2350	195.0	271.0	0.370
	12/12/2005	8.52	6332.28	5.3	6960	6380	2300	201.0	289.0	0.409
	3/22/2006	13.97	6326.83	6.9	7230	6430	2360	208.0	343.0	0.387
	6/5/2006	13.97	6326.83	6.8	7310	6460	2140	190.0	327.0	0.377

**TABLE 1. WATER-LEVEL AND WATER-QUALITY DATA. (cont.)**

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
AL-1	3/2/2004	< 0.2	—	1.8	± 0.4	< 1.0	—	< 2.8
	5/26/2004	< 0.2	—	< 0.2	—	< 1.0	—	< 1.2
	9/22/2004	< 0.2	—	1.3	—	3.0	—	4.3
	12/6/2004	< 0.2	—	0.9	—	< 1.0	—	< 1.9
	2/9/2005	< 0.2	—	0.6	± 0.4	< 1.0	—	< 1.6
	6/27/2005	2.0	0.6	3.5	± 1.0	< 1.0	—	< 4.5
	9/8/2005	< 0.2	—	0.8	± 0.4	< 1.0	—	< 1.8
	12/12/2005	< 0.2	—	0.9	± 0.4	< 1.0	—	< 1.9
	3/22/2006	< 0.2	—	< 0.2	± 0.2	< 1.0	—	< 1.2
	6/5/2006	< 0.2	—	0.9	± 0.3	< 1.0	—	< 1.9
AL-6	3/2/2004	< 0.2	—	3.4	± 0.5	3.2	1.2	6.6
	5/26/2004	< 0.2	—	2.9	± 0.7	< 1.0	—	< 3.9
	9/22/2004	< 0.2	—	4.0	—	< 1.0	—	< 5.0
	12/6/2004	< 0.2	—	2.5	—	< 1.0	—	< 3.5
	3/8/2005	< 0.2	—	4.1	± 0.7	< 1.0	—	< 5.1
	6/27/2005	< 0.2	—	5.4	± 1.5	< 1.0	—	< 6.4
	8/31/2005	< 0.2	—	2.6	± 0.6	< 1.0	—	< 3.6
	12/12/2005	< 0.2	—	3.1	± 0.7	< 1.0	—	< 4.1
	3/22/2006	< 0.2	—	3.4	± 0.7	< 1.0	—	< 4.4
	6/5/2006	< 0.2	—	3.4	± 0.6	< 1.0	—	< 4.4
AL-7	3/2/2004	< 0.2	—	2.1	± 0.5	< 1.0	—	< 3.1
	5/26/2004	< 0.2	—	1.0	± 0.5	< 1.0	—	< 2.0
	9/22/2004	< 0.2	—	1.6	—	< 1.0	—	< 2.6
	12/6/2004	< 0.2	—	0.8	—	< 1.0	—	< 1.8
	3/8/2005	< 0.2	—	1.2	± 0.5	< 1.0	—	< 2.2
	6/28/2005	< 0.2	—	5.5	± 1.4	< 1.0	—	< 6.5
	8/31/2005	< 0.2	—	0.5	± 0.3	< 1.0	—	< 1.5
	12/12/2005	< 0.2	—	0.7	± 0.4	< 1.0	—	< 1.7
	3/22/2006	< 0.2	—	1.4	± 0.5	< 1.0	—	< 2.4
	6/5/2006	< 0.2	—	1.6	± 0.4	< 1.0	—	< 2.6
AL-8	3/2/2004	< 0.2	—	1.1	± 0.4	< 1.0	—	< 2.1
	5/26/2004	< 0.2	—	0.7	± 0.5	< 1.0	—	< 1.7
	9/22/2004	< 0.2	—	1.8	—	< 1.0	—	< 2.8
	12/6/2004	< 0.2	—	1.5	—	< 1.0	—	< 2.5
	2/9/2005	< 0.2	—	2.8	± 0.5	< 1.0	—	< 3.8
	6/27/2005	< 0.2	—	1.4	± 0.5	< 1.0	—	< 2.4
	8/31/2005	< 0.2	—	1.9	± 0.5	< 1.0	—	< 2.9
	12/12/2005	< 0.2	—	0.9	± 0.4	< 1.0	—	< 1.9
	3/22/2006	< 0.2	—	1.1	± 0.4	< 1.0	—	< 2.8
	6/5/2006	< 0.2	—	1.8	± 0.5	< 1.0	—	< 2.8
AL-9	3/2/2004	0.7	0.4	1.8	± 0.4	< 1.0	—	< 2.8
	5/26/2004	< 0.2	—	< 0.2	—	< 1.0	—	< 1.2
	3/8/2005	< 0.2	—	3.7	± 0.7	< 1.0	—	< 4.7
	6/27/2005	< 0.2	—	3.1	± 0.8	< 1.0	—	< 4.1
	8/31/2005	< 0.2	—	2.1	± 0.5	< 1.0	—	< 3.1

**TABLE 1. WATER-LEVEL AND WATER-QUALITY DATA. (cont.)**

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	Th230 (pCi/l)	Th230(e) (pCi/l)	Ra226 (pCi/l)	Ra226(e) (pCi/l)	Ra228 (pCi/l)	Ra228(e) (pCi/l)	Ra226+Ra228 (pCi/l)
AL-9	12/12/2005	< 0.2	—	2.6	± 0.5	< 1.0	—	< 3.6
	3/22/2006	< 0.2	—	1.2	± 0.5	< 1.0	—	< 2.2
	6/5/2006	< 0.2	—	2.0	± 0.5	< 1.0	—	< 3.0
T1-6	3/2/2004	< 0.2	—	4.5	± 0.6	< 1.0	—	< 5.5
	5/26/2004	< 0.2	—	2.4	± 0.7	< 1.0	—	< 3.4
	9/22/2004	< 0.2	—	2.8	± 0.5	< 1.0	—	< 3.8
	12/7/2004	< 0.2	—	2.3	± 0.5	< 1.0	—	< 3.3
	3/8/2005	< 0.2	—	3.0	± 0.6	< 1.0	—	< 4.0
	6/28/2005	4.5	1.0	3.5	± 0.8	< 1.0	—	< 4.5
	9/8/2005	< 0.2	—	2.9	± 0.6	< 1.0	—	< 3.9
	12/12/2005	< 0.2	—	3.1	± 0.6	< 1.0	—	< 4.1
	3/22/2006	< 0.2	—	2.7	± 0.6	< 1.0	—	< 3.7
	6/5/2006	< 0.2	—	2.9	± 0.6	< 1.0	—	< 3.9
T1-12	3/2/2004	< 0.2	—	6.0	± 0.7	< 1.0	—	< 7.0
	5/26/2004	< 0.2	—	2.9	± 0.7	< 1.0	—	< 3.9
	9/22/2004	< 0.2	—	2.5	—	< 1.0	—	< 3.5
	12/6/2004	< 0.2	—	1.6	—	< 1.0	—	< 2.6
	3/8/2005	< 0.2	—	3.1	± 0.6	< 1.0	—	< 4.1
	6/29/2005	< 0.2	—	4.9	± 1.1	1.1	2.1	6.0
	8/31/2005	< 0.2	—	2.1	± 0.5	< 1.0	—	< 3.1
	12/12/2005	< 0.2	—	2.3	± 0.5	< 1.0	—	< 3.3
	3/22/2006	< 0.2	—	3.0	± 0.7	2.2	0.9	5.2
	6/5/2006	< 0.2	—	2.1	± 0.5	< 1.0	—	< 3.1

**TABLE 1. WATER-LEVEL AND WATER-QUALITY DATA. (cont.)**

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
AL-1	3/2/2004	0.003	< 0.010	< 0.005	< 0.050	0.039	0.015
	5/26/2004	< 0.004	< 0.010	< 0.010	< 0.050	< 0.050	0.020
	9/22/2004	< 0.001	--	< 0.010	< 0.050	< 0.050	0.007
	12/6/2004	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.003
	2/9/2005	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.002
	6/27/2005	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.004
	9/8/2005	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.002
	12/12/2005	0.001	< 0.010	< 0.010	< 0.050	< 0.050	< 0.001
	3/22/2006	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.001
	6/5/2006	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.002
AL-6	3/2/2004	0.007	< 0.001	< 0.005	< 0.050	0.012	0.081
	5/26/2004	0.006	< 0.010	< 0.010	< 0.050	< 0.050	0.079
	9/22/2004	0.006	--	< 0.010	< 0.050	< 0.050	0.085
	12/6/2004	0.007	< 0.010	< 0.010	< 0.050	< 0.050	0.082
	3/8/2005	< 0.006	< 0.010	< 0.010	< 0.050	< 0.050	0.078
	6/27/2005	0.006	< 0.010	< 0.010	< 0.050	< 0.050	0.080
	8/31/2005	0.006	< 0.010	< 0.010	< 0.050	< 0.050	0.075
	12/12/2005	0.007	< 0.010	< 0.010	< 0.050	< 0.050	0.076
	3/22/2006	0.005	< 0.010	< 0.010	< 0.050	< 0.050	0.055
	6/5/2006	0.006	< 0.010	< 0.010	< 0.050	< 0.050	0.073
AL-7	3/2/2004	0.001	< 0.001	< 0.005	< 0.050	0.011	0.006
	5/26/2004	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.003
	9/22/2004	0.001	--	< 0.010	< 0.050	< 0.050	0.009
	12/6/2004	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.007
	3/8/2005	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.007
	6/28/2005	0.003	< 0.010	< 0.010	< 0.050	< 0.050	0.031
	8/31/2005	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.018
	12/12/2005	< 0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.003
	3/22/2006	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.005
	6/5/2006	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.007
AL-8	3/2/2004	0.002	< 0.001	< 0.005	< 0.050	0.007	0.004
	5/26/2004	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.012
	9/22/2004	0.004	--	< 0.010	< 0.050	< 0.050	0.006
	12/6/2004	0.005	< 0.010	< 0.010	< 0.050	< 0.050	0.013
	2/9/2005	0.005	< 0.010	< 0.010	< 0.050	< 0.050	0.011
	6/27/2005	0.004	< 0.010	< 0.010	< 0.050	< 0.050	0.013
	8/31/2005	0.004	< 0.010	< 0.010	< 0.050	< 0.050	0.012
	12/12/2005	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.011
	3/22/2006	0.004	< 0.010	< 0.010	< 0.050	< 0.050	0.010
	6/5/2006	0.003	< 0.010	< 0.010	< 0.050	< 0.050	0.011
AL-9	3/2/2004	0.002	< 0.001	< 0.005	< 0.050	0.010	0.006
	5/26/2004	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.014
	3/8/2005	0.004	< 0.010	< 0.010	< 0.050	< 0.050	0.013
	6/27/2005	0.002	< 0.010	< 0.010	< 0.050	< 0.050	0.018
	8/31/2005	0.005	< 0.010	< 0.010	< 0.050	< 0.050	0.013

**TABLE 1. WATER-LEVEL AND WATER-QUALITY DATA. (cont.)**

Lucky MC Mine - Pathfinder Mines Corp.

Sample Point Name	Date	As (mg/l)	Be (mg/l)	Cd (mg/l)	Cr (mg/l)	Ni (mg/l)	Se (mg/l)
AL-9	12/12/2005	< 0.030	< 0.010	< 0.030	< 0.050	< 0.050	< 0.080
	3/22/2006	0.003	< 0.010	< 0.010	< 0.050	< 0.050	0.016
	6/5/2006	0.003	< 0.010	< 0.010	< 0.050	< 0.050	0.017
T1-6	3/2/2004	0.003	< 0.001	< 0.005	< 0.050	0.056	0.016
	5/26/2004	< 0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.020
	9/22/2004	< 0.001	--	< 0.010	< 0.050	< 0.050	0.021
	12/7/2004	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.003
	3/8/2005	0.001	< 0.010	< 0.010	< 0.050	< 0.050	< 0.002
	6/28/2005	0.001	< 0.010	< 0.010	< 0.050	0.060	0.004
	9/8/2005	0.003	< 0.010	< 0.010	< 0.050	< 0.050	0.002
	12/12/2005	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.005
	3/22/2006	0.001	< 0.010	< 0.010	< 0.050	< 0.050	0.003
T1-12	6/5/2006	< 0.001	< 0.010	< 0.005	< 0.050	< 0.050	0.007
	3/2/2004	< 0.001	< 0.001	< 0.005	< 0.050	0.032	0.054
	5/26/2004	< 0.004	< 0.001	< 0.001	< 0.050	0.280	0.620
	9/22/2004	< 0.002	--	< 0.010	< 0.050	0.290	0.523
	12/6/2004	< 0.002	< 0.010	< 0.010	< 0.050	0.280	0.509
	3/8/2005	0.003	< 0.010	< 0.010	< 0.050	0.300	0.536
	6/29/2005	0.010	< 0.010	< 0.010	< 0.050	0.310	0.540
	8/31/2005	< 0.002	< 0.010	< 0.010	< 0.050	0.290	0.462
	12/12/2005	0.006	< 0.010	< 0.010	< 0.050	0.330	0.550
T1-12	3/22/2006	< 0.004	< 0.010	< 0.010	< 0.050	0.300	0.510
	6/5/2006	< 0.004	< 0.010	< 0.010	< 0.050	0.310	0.480