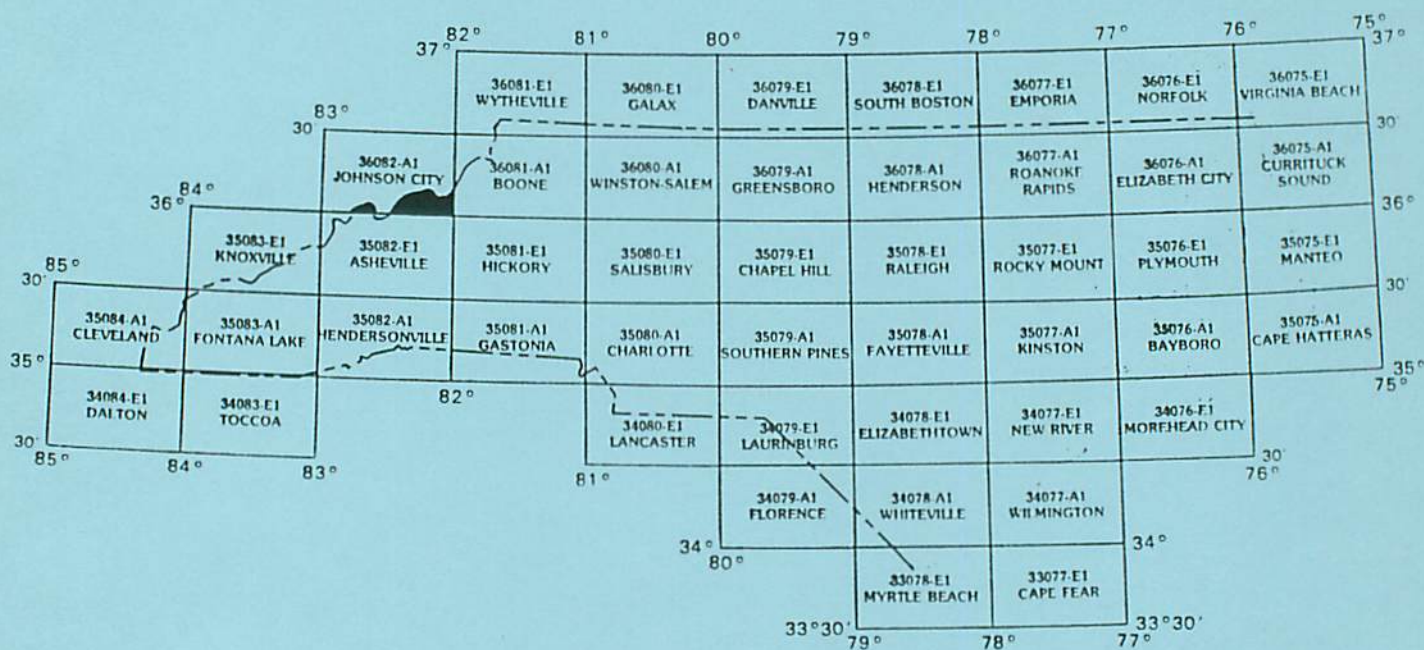


**Listing of Concentrations of Variables
of
Stream Sediment, Stream Water, and Groundwater
for the
Johnson City 30 x 60 - Minute Quadrangle
-NURE Database**

by
Robert H. Carpenter and Jeffrey C. Reid



**NORTH CAROLINA GEOLOGICAL SURVEY
OPEN-FILE REPORT 93-6**

State of North Carolina
James B. Hunt, Jr., Governor

**Department of Environment,
Health and Natural Resources**
Jonathan B. Howes, Secretary
Division of Land Resources
Charles H. Gardner,
Director and State Geologist

July, 1993

GEOLOGICAL SURVEY SECTION

The Geological Survey Section examines, surveys and maps the geology, mineral resources, and topography of the State to encourage the wise conservation and use of these resources by industry, commerce, agriculture and government agencies for the general welfare of the citizens of North Carolina.

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Jeffrey C. Reid
Chief Geologist

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INTRODUCTION

This report is a compilation of geochemical data for stream sediment and groundwater for the Johnson City 30 x 60 - minute quadrangle (Figure 1). Maps and tables were prepared from statewide data obtained by the Savannah River Laboratory under sponsorship of the U.S. Dept. of Energy in its National Uranium Resources Evaluation (NURE) program (Sargent and others, 1982). Sampling and analysis were performed during the period 1976 - 1980.

Because of the large size of the database, the North Carolina Geological Survey is presenting the database in both statewide and 30 x 60 - minute quadrangle formats. Statewide formats currently available include atlases of stream sediment and hydrogeochemical data which contain maps showing quartile distribution of concentrations of variables (Reid, 1991; Reid, 1993). Reid and Carpenter (1993a, 1993b) present listings of concentrations of variables which equal or exceed the 90th percentile (and pH and conductivity below the 10th percentile) for stream sediment and groundwater-stream water.

This open-file report is part of a series of reports that present sample-location maps and listings of analyses of all variables in all of the 30 x 60 - minute quadrangles that comprise the state of North Carolina. Subsequent reports will review the NURE data for individual 30 x 60 - minute quadrangles. These reviews will contain the following: 1) maps showing concentrations of all the variables in up to eight class intervals; 2) geologic review of the quadrangle and discussion of relationship of geochemical variables to rock units and structural features; 3) review of mineral resources and discussion of relationship of geochemical variables to mineral occurrences; and 4) discussion of outliers that may relate to anthropogenic contamination.

In this report, site-location maps use state boundaries, county boundaries and 7-1/2 - minute quadrangle boundaries as references to site-locations. The North Carolina Index to Topographic and Other Map Coverage, prepared by the U.S. Geological Survey, is a useful reference document. The List of Publications of the North Carolina Geological Survey indicates areas within the state for which some geologic and geophysical maps, and reports, are available.

Listings in this report are in the same basic format as those presented in microfiche by Sargent

and others (1982). Column 1 lists the laboratory numbers applied to each analyzed sample. Column 2 lists site identification codes. The first two characters are the codes for the county name. The next three digits are sample numbers. They are listed sequentially for each county in the order they were collected. The next two columns list the latitude and longitude of the sampling sites in decimal degree format. The remaining columns are data columns and analyses are given in parts per million (stream sediment) and parts per billion (groundwater). In these columns, a minus (-) sign indicates that a value is below the detection limit. If background is high, and an accurate estimate of minimum detection limit could not be made, a period (.) indicates that the element was not detected and that the detection limit is unusually high. Missing data are denoted by the letter "M". For gold, analyses are listed only for those samples in which gold was detected. For arsenic, a value of 0 is assigned for samples in which arsenic was analyzed, but not detected.

For stream sediment, two listings are presented. The first listing is for elements analyzed by neutron activation as well as field measurements for pH and conductivity of stream water. Variables included in this listing are pH, conductivity, uranium (U), thorium (Th), hafnium (Hf), cerium (Ce), iron (Fe), manganese (Mn), sodium (Na), scandium (Sc), titanium (Ti), vanadium (V), aluminum (Al), dysprosium (Dy), europium (Eu), lanthanum (La), samarium (Sm), ytterbium (Yb), and lutetium (Lu). The second listing is for supplemental elements analyzed by a variety of techniques. These include extractable uranium (Ux), silver (Ag), arsenic (As), barium (Ba), beryllium (Be), calcium (Ca), cobalt (Co), chromium (Cr), copper (Cu), potassium (K), lithium (Li), magnesium (Mg), molybdenum (Mo), niobium (Nb), nickel (Ni), phosphorous (P), lead (Pb), selenium (Se), tin (Sn), strontium (Sr), tungsten (W), yttrium (Y), and zinc (Zn). Stream sediment analyses are for the minus 100 mesh fraction (< 149 microns) unless otherwise noted.

Groundwater, normally samples of water from wells, was also analyzed by neutron activation. Field measurements were made of pH and conductivity. Variables included in listings of groundwater analyses include pH, conductivity, uranium (U), bromine (Br), chlorine (Cl), fluorine (F), magnesium (Mg), manganese (Mn), sodium (Na), vanadium (V), uranium/conductivity, aluminum (Al), and dysprosium (Dy). Stream water was also analyzed for these variables at 295 sites in North Carolina. Listings for stream water are included for areas in which these sites are located.

Although the data was acquired with considerable attention to quality control, some errors exist. These include uncertainties of sample locations due to the use of county road maps as base maps for field use and digitizing sampling sites. Malfunction of field equipment used in measurement of pH and conductivity has also been recognized in some areas. Some of the analyses are also in error. Some of these errors are apparent when concentrations show systematic "breaks" at county boundaries. This suggests that conditions of analysis for different batches of samples were not uniform. In general, analyses of stream sediment by neutron activation are more reliable than analyses of sediment by other supplemental methods.

For a number of counties, supplemental analyses were not made. Thus elements of interest for mineral exploration and environmental geochemistry are lacking for large areas.

REFERENCES

Reid, Jeffrey C., 1991 (revised 1993), A geochemical atlas of North Carolina: North Carolina Geological Survey, Bulletin 93, text plus 45 plates.

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- Reid, Jeffrey C., and Carpenter, Robert H., 1993a, Listings of concentrations (stream sediments) of variables which equal or exceed the 90th percentile, and pH and conductivity below the 10th percentile in the North Carolina portion of the NURE database: North Carolina Geological Survey, Open-File Report 93-1, introductory text plus 178 pages of data.
- Reid, Jeffrey C., and Carpenter, Robert H., 1993b, Listing of concentrations (groundwater and stream water) of variables which equal or exceed the 90th percentile, and pH and conductivity below the 10th percentile in the North Carolina portion of the NURE data base: North Carolina Geological Survey, Open-File Report 93-2, introductory text plus 162 pages of data.
- Sargent, K.A., Cook, J.R., and Fay, W.M., 1982, Data report: North and South Carolina, National Uranium Resource Evaluation Program, Hydrochemical and stream sediment reconnaissance: E.I. du Pont de Nemours & Co., Savannah River Laboratory, Aiken, S.C., under contract to the U.S. Dept of Energy, contract DE-AC09-76SR000001 (DPST-81-146-22; GBJX-102), 45 p. plus microfiche.

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COUNTY CODES

<u>Code</u>	<u>County</u>
AV	Avery
MD	Madison
MT	Mitchell
YN	Yancey

Figure 1. Map Showing Outlines of Johnson City 30 x 60 Minute Quadrangle and Contained 7 - 1/2 Minute Quadrangles.

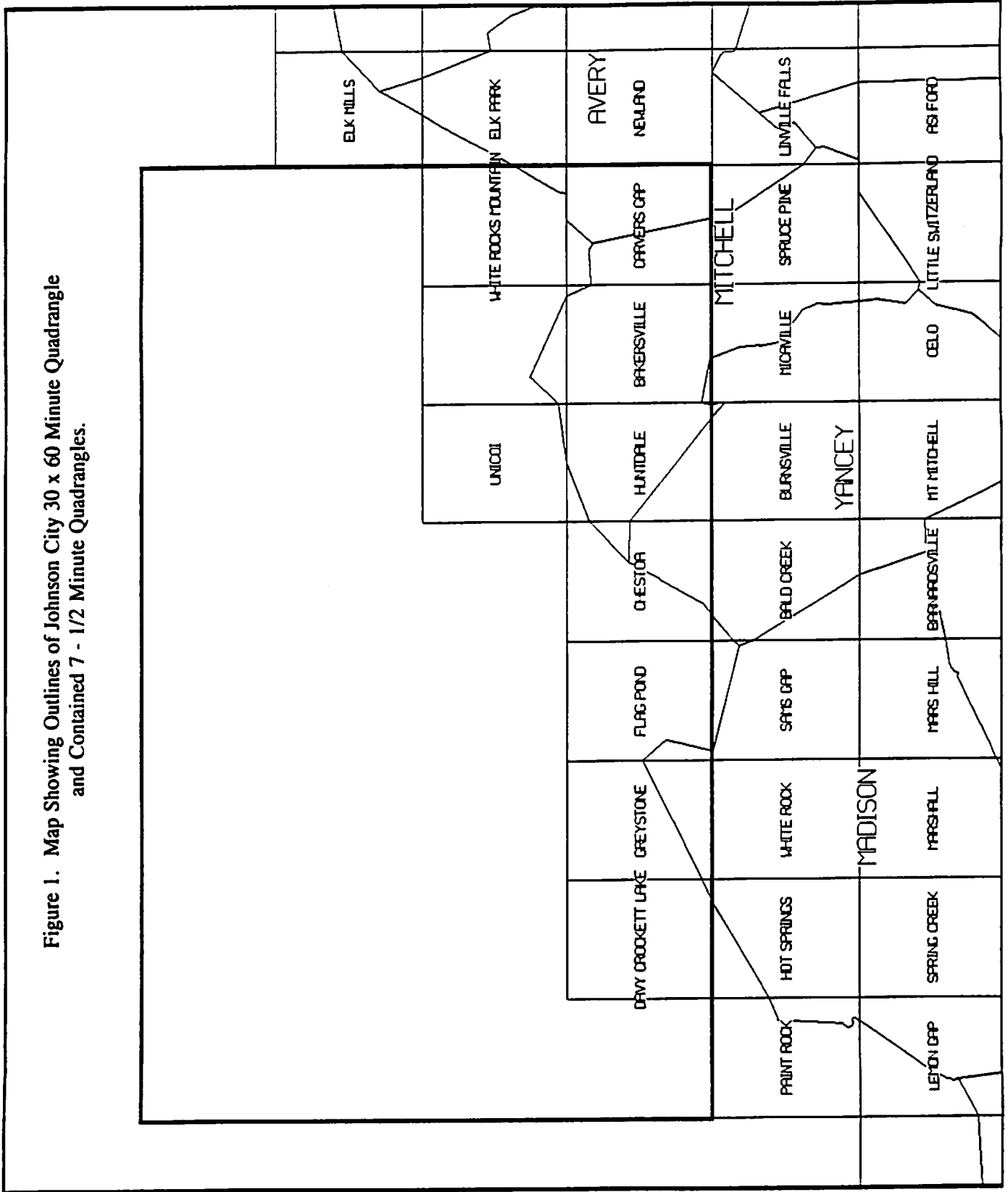


Figure 2. Stream Sediment Sites - Johnson City 30 x 60 Minute Quadrangle

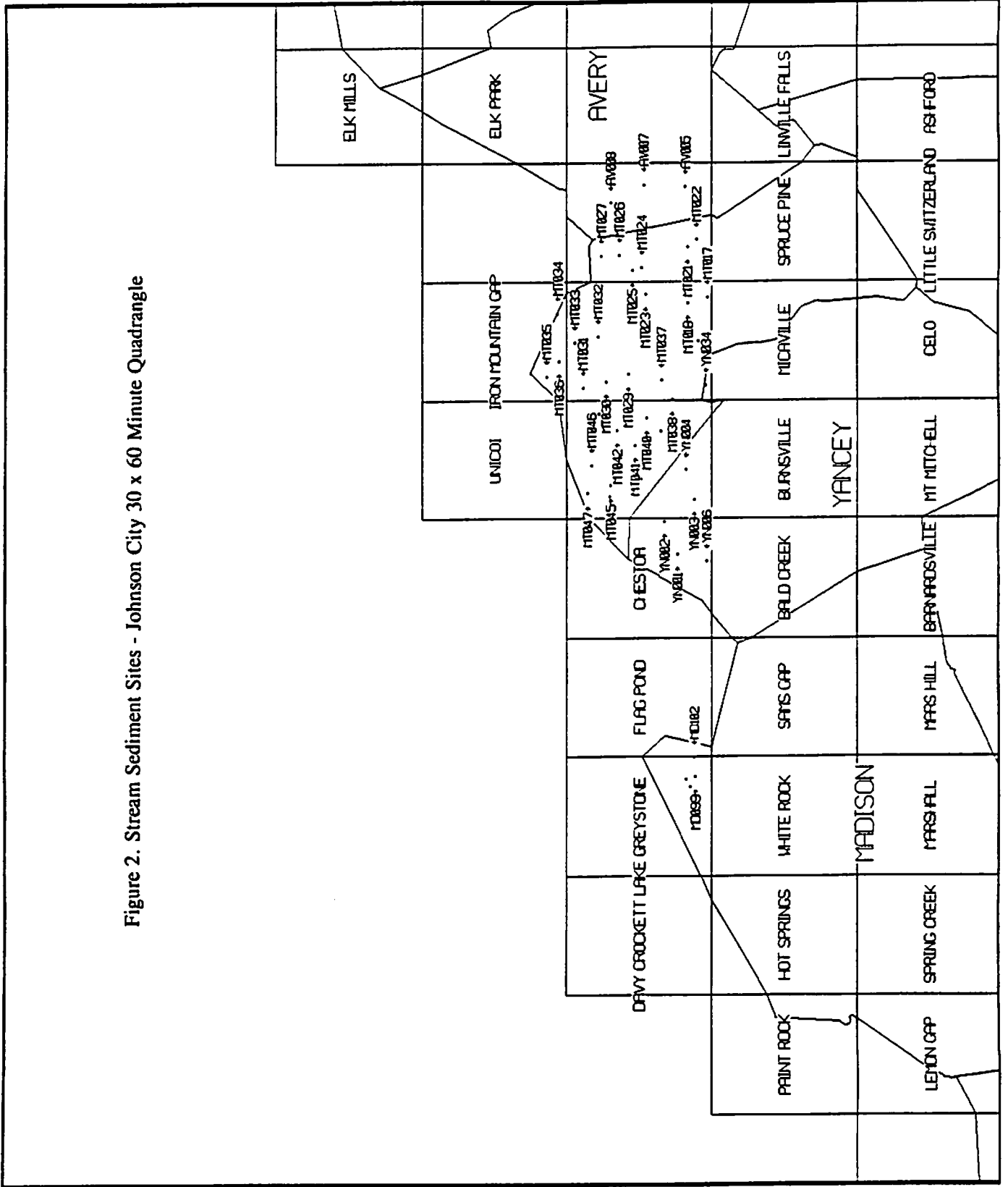
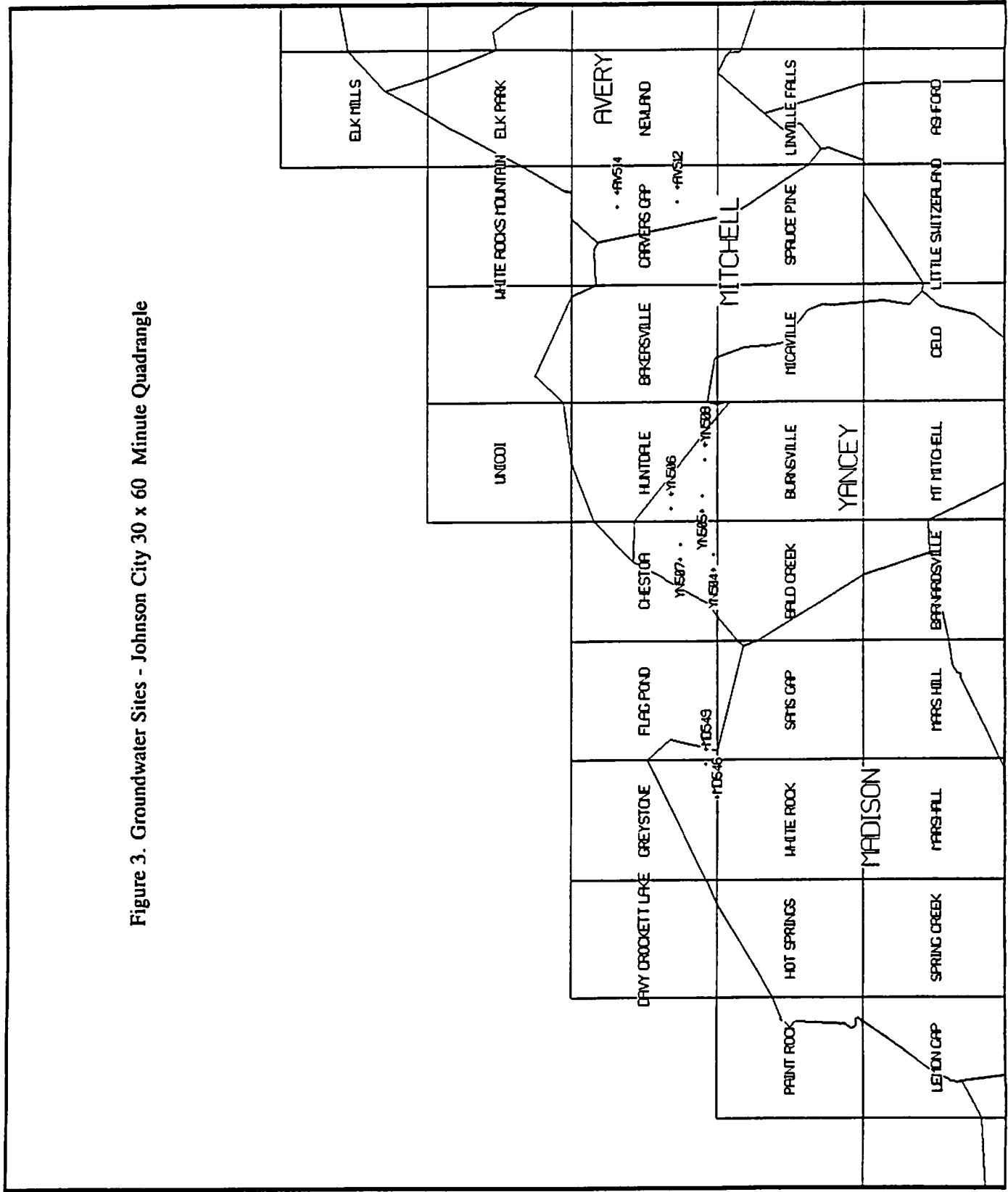


Figure 3. Groundwater Sites - Johnson City 30 x 60 Minute Quadrangle



JOHNSON CITY 100K SHEET - STREAM SEDIMENT

Lab #	County	Lat	Long	pH	Cond	U	Th	Hf	Al	Ce	Fe	Mn	Na	Sc	Ti	V	Dy	Eu	La	Sm	Yb	Lu	Au
ID					um/cm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
330	AV005	36.0224	82.0247	7.5	20	4.3	16	12	47000	164	61600	740	M	12.3	M	370	4.1	2.0	M	M	M	M	M
332	AV007	36.0586	82.0224	7.6	23	1.8	-4	13	45200	57	72400	780	M	18.8	M	360	2.5	1.6	M	M	M	M	M
333	AV008	36.0871	82.0418	7.8	20	1.9	10	M	46700	68	118600	950	M	12.0	33500	420	3.6	2.6	M	M	M	M	M
3862	MD097	36.0186	82.6562	6.6	12	6.1	22	42	54000	126	30700	2210	23100	6.0	4600	40	4.2	2.4	58	44	6.2	1.3	
3863	MD098	36.0218	82.6484	6.4	28	4.8	15	29	47800	119	33800	5010	18100	5.8	13500	30	2.6	1.7	29	36	M	1.3	
3864	MD099	36.0138	82.6457	6.5	23	4.6	16	23	56500	115	34500	2440	11100	11.8	M	50	2.9	2.1	35	23	7.3	0.4	
3867	MD102	36.0147	82.6256	6.7	21	7.1	21	45	38200	105	30300	240	5400	4.7	6600	50	11.6	3.8	44	86	7.7	0.7	
4178	MT016	36.0112	82.1884	8.1	41	3.0	10	45	56600	125	77700	1420	12300	20.6	32100	220	5.7	2.4	47	18	6.5	0.6	
4179	MT017	36.0035	82.1418	7.8	49	5.5	12	54	58900	118	67700	1470	11100	29.2	20300	230	9.6	3.5	39	9	7.6	1.0	
4180	MT018	36.0202	82.1479	7.8	58	3.1	8	63	68600	159	121300	1880	12800	23.1	58500	350	4.2	3.3	50	13	M	0.6	
4181	MT019	36.0249	82.1266	8.0	50	2.5	8	46	65200	193	72200	1550	15600	26.2	26700	210	22.9	3.8	66	13	5.8	0.8	
4182	MT020	36.0070	82.1135	7.7	39	3.2	7	22	57400	72	48500	1390	13100	24.0	17200	230	M	1.9	27	5	5.2	0.3	
4183	MT021	36.0207	82.0884	7.8	29	2.6	12	37	78800	198	150000	1700	17200	63.1	14000	260	6.0	6.1	75	13	9.6	2.0	
4184	MT022	36.0128	82.0807	7.8	25	2.1	10	13	71100	68	58900	1340	19700	24.8	11900	190	7.3	2.6	30	3	9.8	0.6	
4185	MT023	36.0571	82.1389	7.8	28	2.7	17	61	59100	194	125800	1940	12600	24.9	52000	360	15.3	2.0	78	10	M	0.7	
4186	MT024	36.0602	82.1099	7.7	30	2.1	9	36	72000	214	79800	1750	21200	30.1	24800	290	M	5.6	107	15	4.8	0.7	
4187	MT025	36.0685	82.1133	7.8	20	1.4	17	34	66200	157	115900	2040	14500	28.0	31400	310	M	1.6	48	9	3.3	0.7	
4188	MT026	36.0795	82.0968	7.8	20	1.3	10	23	78300	113	109600	1990	15000	26.5	34400	320	12.4	2.5	43	8	3.7	0.5	
4189	MT027	36.0951	82.0979	7.7	15	1.0	4	13	77000	79	110000	2380	15600	24.9	37000	340	7.1	1.9	26	9	3.2	0.6	
4190	MT028	36.0552	82.1728	7.7	35	2.2	19	118	58800	161	265600	1730	11700	40.5	50800	390	M	M	50	10	5.7	1.3	
4191	MT029	36.0721	82.2225	7.8	25	6.5	58	68	73000	243	62700	1320	20600	18.7	12400	130	15.6	1.7	120	7	5.2	1.0	
4192	MT030	36.0912	82.2302	7.8	31	3.5	24	25	85100	109	41100	1250	24900	12.7	9500	120	8.6	2.4	62	9	3.9	0.2	
4193	MT031	36.1113	82.2368	7.8	21	8.9	82	57	69900	268	51400	1220	16800	13.4	12400	100	13.7	4.2	141	14	M	0.6	
4194	MT032	36.0983	82.1834	7.7	25	1.8	37	31	77600	223	101000	1940	20500	19.8	35000	270	M	2.0	83	15	M	0.5	
4195	MT033	36.1181	82.1895	7.6	25	2.6	18	35	65900	121	64900	1280	19200	22.0	14300	160	M	3.9	59	9	6.9	0.5	
4196	MT034	36.1329	82.1587	7.7	21	3.2	16	43	60100	153	54500	1280	16700	18.6	14700	160	M	-1.0	53	10	5.0	0.7	
4197	MT035	36.1425	82.2255	7.7	20	11.0	75	45	90100	344	51100	1380	15500	14.0	12000	120	14.8	M	146	24	5.3	1.1	
4198	MT036	36.1318	82.2089	7.6	25	7.2	59	71	67700	231	56900	1570	15200	16.4	15000	140	11.0	2.8	110	12	M	0.7	
4199	MT037	36.0434	82.2291	7.8	59	3.1	10	42	64800	90	56500	1040	19700	13.0	14400	120	6.5	1.2	39	6	2.6	0.7	
4200	MT038	36.0342	82.2487	7.9	70	2.6	13	109	73900	211	153400	1740	21400	38.4	27400	170	16.8	4.4	104	15	12.6	1.9	
4201	MT039	36.0440	82.2829	7.9	70	2.8	12	44	67500	101	64300	1310	25600	16.3	16800	110	13.7	1.7	43	5	5.9	0.8	
4202	MT040	36.0561	82.2688	8.1	30	4.9	20	58	60900	93	37600	1040	22900	11.8	11200	90	12.7	-1.0	48	8	3.8	0.8	
4203	MT041	36.0660	82.2973	7.8	25	6.6	73	61	84300	256	66600	1520	24900	17.1	16700	140	M	5.0	129	17	3.2	0.9	
4204	MT042	36.0816	82.2818	7.7	20	10.8	94	54	63900	414	41300	1600	15700	10.9	19500	110	14.9	M	188	23	5.7	0.7	

JOHNSON CITY 100K SHEET - STREAM SEDIMENT

Lab #	County	Lat	Long	pH	Cond um/cm	U	Th	Hf	Al	Ce	Fe	Mn	Na	Sc	Ti	V	Dy	Eu	La	Sm	Yb	Lu	Au
4205	MT043	36.0973	82.2643	7.7	25	5.5	52	43	67400	167	48200	1380	17700	10.0	17300	120	9.9	2.0	89	7	4.9	0.5	
4206	MT044	36.0609	82.3333	7.7	40	5.4	36	33	81300	199	55200	1120	13300	18.0	11800	140	12.9	2.1	85	11	3.7	0.6	
4207	MT045	36.0874	82.3405	7.8	21	4.3	16	25	67800	90	40600	1190	11800	11.0	13100	130	M	1.3	37	5	3.0	0.3	
4208	MT046	36.1040	82.3186	7.7	19	5.1	21	30	59100	104	35700	1120	11000	9.0	15300	100	9.1	2.1	45	5	5.8	0.9	
4209	MT047	36.1075	82.3485	7.2	12	6.9	12	93	63200	93	17500	630	11000	2.9	6700	30	5.0	1.1	41	8	8.8	1.8	
4210	MT048	36.0880	82.3518	7.9	11	5.4	33	70	25500	176	12000	190	900	4.8	12000	40	10.3	1.2	73	19	4.6	1.4	
6691	YN001	36.0296	82.4122	9.0	21	5.0	36	107	38600	177	39000	610	7700	14.0	9900	50	M	3.6	90	9	8.2	1.6	
6692	YN002	36.0409	82.3777	8.7	13	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M	M
6693	YN003	36.0151	82.3547	8.4	21	6.9	25	92	67200	177	46300	1260	15100	19.1	12500	130	12.5	1.9	76	15	7.0	1.1	8.020
6694	YN004	36.0218	82.3236	8.1	61	2.4	8	34	62600	130	56900	1080	18600	17.4	14900	90	11.4	3.9	65	12	5.3	0.6	0.052
6695	YN005	36.0129	82.3841	8.3	35	4.0	11	54	65500	145	37400	910	14400	17.0	7700	100	14.2	1.8	56	12	2.5	0.7	
6696	YN006	36.0041	82.4200	8.1	29	2.5	6	26	80200	130	38600	940	12200	14.3	7600	110	M	2.5	58	9	M	0.5	
6724	YN034	36.0046	82.2345	7.8	45	6.1	12	55	58600	182	92300	2270	12600	28.5	37200	240	10.3	4.9	71	16	2.9	0.9	

JOHNSON CITY 100K SHEET - SUPPLEMENTAL SEDIMENTS

Lab #	County	Lat	Long	Ux	Ag	As	Ba	Be	Ca	Co	Cr	Cu	K	Li	Mg	Mo	Mb	Ni	P	Pb	Se	Sn	Sr	W	Y	Zn	
ID				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	
332	AV005	36.0224	82.0247	-	-0.5					9		17		5		-5	45	10	500	-10		10			-2	25	38
334	AV007	36.0586	82.0224		-0.5	103				17	-5	21	7000	-5	3650	-5	30	13	700	-10		5			-2	20	43
335	AV008	36.0871	82.0418		-0.5	148	1.5			13	-5	10	10000	-5	4800	-5	40	10	1000	-10		20			-2	20	45
2729	MD097	36.0186	82.6562																								
2730	MD098	36.0218	82.6484																								
2731	MD099	36.0138	82.6457																								
2732	MD102	36.0147	82.6256																								
2733	MT016	36.0112	82.1884	1.4	0.8	1	182	1	800	10	10	11	8000	-5	2550	-2	50	5	700	-10	-1	10		2	-5	48	
2734	MT017	36.0035	82.1418	1.4	0.4	3	147	1	600	8	12	10	4000	-5	1400	-2	45	-5	500	-10	1	5		2	10	35	
2735	MT018	36.0202	82.1479	1.4	0.6		122	1	1300	10	12	10	7000	-5	1950	3	50	-5	600	-10	-1	-5		2	10	35	
2736	MT019	36.0249	82.1266	1.1	0.3	1	210	1	1400	5	8	8	7000	-5	1900	-2	30	5	600	-10	-1	-5		2	10	28	
2737	MT020	36.0070	82.1135	1.1	0.4	0	187	0.5	1300	5	13	10	2000	-5	1750	-2	50	5	400	-10	1	-5		2	5	28	
2738	MT021	36.0207	82.0884	1.2	0.7	0	235	1	1000	8	13	14	2000	-5	1400	-2	30	7	500	-10	-1	10		-2	15	35	
2739	MT022	36.0128	82.0807	1.6	0.2		90	1.5	900	5	12	13	3000	5	7150	3	45	5	400	-10	-1	5		-2	5	38	
2740	MT023	36.0571	82.1389	1.6	0.4	2	112	1	900	8	7	11	10000	-5	5050	-2	50	5	500	-10	1	-5		-2	5	35	
2741	MT024	36.0602	82.1099	1.6	0.4	0	292	1	1600	8	9	9	13000	-5	1100	-2	30	-5	1000	-10	-1	5		-2	-5	43	
2742	MT025	36.0685	82.1133	1.5	0.5		185	1	1000	8	9	10	6000	-5	1500	-2	35	7	500	-10	-1	10		-2	10	35	
2743	MT026	36.0795	82.0968	1.5	0.5	0	62	1	1000	13	-5	15	7000	-5	5700	-2	50	7	700	-10	-1	-5		-2	-5	58	
2744	MT027	36.0951	82.0979	1.6	0.6		105	1.5	1200	10	8	16	7000	-5	5250	2	55	12	700	-10	-1	-5		-2	-5	60	
2745	MT028	36.0552	82.1728	1.2	0.4	0	257	1.5	300	15	5	11	17000	-5	3350	-2	50	5	500	-10	-1	10		-2	-5	50	
2746	MT029	36.0721	82.2225	2.3	0.6		297	2	1000	13	9	9	11000	-5	1550	-2	25	7	600	-10	-1	5		2	-5	63	
2747	MT030	36.0912	82.2302	1.0	0.4		195	1.5	1000	10	8	12	9000	-5	1700	-2	50	12	600	-10	-1	-5		-2	5	75	
2748	MT031	36.1113	82.2368	2.2	0.6		407	1.5	800	10	5	7	20000	-5	2200	-2	35	7	700	-10	1	5		-2	-5	70	
2749	MT032	36.0983	82.1834	1.4	0.3		245	1	800	8	10	8	10000	-5	1000	-2	45	7	300	-10	1	15		-2	-5	33	
2750	MT033	36.1181	82.1895	2.0	0.3	2	287	1.5	800	8	6	10	10000	-5	2200	-2	45	5	400	-10	1	5		-2	-5	58	
2751	MT034	36.1329	82.1587	1.4	0.1	2	300	1.5	600	5	7	12	14000	-5	2400	-2	45	10	500	-10	-1	15		-2	-5	55	
2752	MT035	36.1425	82.2255	1.6	0.6	0	310	2	500	13	-5	215	14000	8	2400	-2	35	10	800	-10	1	5		-2	5	93	
2753	MT036	36.1318	82.2089	1.2	0.6	6	305	2	700	13	-5	14	11000	-5	800	-2	50	10	900	10	1	-5		-2	-5	70	
2754	MT037	36.0434	82.2291	1.4	0.3	2	220	1.5	800	8	-5	8	13000	-5	2100	-2	50	7	400	-10	1	-5		-2	5	50	
2755	MT038	36.0342	82.2487	1.2	0.2	1	305	1.5	900	10	-5	8	12000	-5	2650	-2	50	-5	600	-10	1	5		2	15	50	
2756	MT039	36.0440	82.2829	1.4	0.2	10	322	1.5	1000	10	-5	7	14000	-5	2300	-2	35	5	600	-10	-1	-5		-2	5	55	
2757	MT040	36.0561	82.2688	1.2	0.2	2	170	2	700	8	-5	5	13000	-5	1800	-2	40	-5	500	-10	-1	5		-2	-5	38	
2758	MT041	36.0660	82.2973	1.2	0.7		277	1.5	1200	10	-5	8	14000	-5	650	-2	30	-5	600	-10	-1	5		-2	10	55	
2759	MT042	36.0816	82.2818	1.5	0.4	2	350	2	500	5	-5	5	18000	5	1050	-2	25	-5	700	-10	-1	10		-2	10	40	

JOHNSON CITY 100K SHEET - SUPPLEMENTAL SEDIMENTS

Lab #	County	Lat	Long	Ux	Ag	As	Ba	Be	Ca	Co	Cr	Cu	K	Li	Mg	Mo	Nb	Ni	P	Pb	Se	Sn	Sr	W	Y	Zn
ID				ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
2760	MT043	36.0973	82.2643	3.3	0.9	0	360	2	400	8	-5	6	16000	-5	800	-2	25	-5	400	-10	-1	10	.	-2	-5	45
2761	MT044	36.0609	82.3333	2.2	0.5	1	150	2	500	10	6	7	11000	6	1250	-2	25	5	400	-10	-1	-5	.	-2	-5	55
4624	MT045	36.0874	82.3405	1.4	0.8	1	442	2	400	8	-5	5	16000	-5	900	-2	25	-5	400	10	1	5	.	-2	5	45
4625	MT046	36.1040	82.3186	1.2	0.6	0	420	2	300	8	-5	7	15000	-5	900	-2	40	-5	500	10	-1	-5	.	-2	15	48
4626	MT047	36.1075	82.3485	1.2	0.4		195	4	100	-5	-5	2	21000	7	400	2	75	-5	200	-10	-1	10	.	2	5	35
4627	MT048	36.0880	82.3518	1.1	0.2	1	40	1	-100	-5	-5	2	15000	5	900	-2	40	-5	300	-10	-1	5	.	-2	-5	8
4628	YN001	36.0296	82.4122	0.4	-0.1		177	1	200	-5	-5	3	11000	6	500	-2	10	7	900	-10	1	-5	.	-2	-5	37
4629	YN002	36.0409	82.3777	2.5	-0.1	0	97	1.5	400	5	-5	3	21000	7	1500	-2	5	5	1000	-10	1	-5	.	-2	-5	30
4657	YN003	36.0151	82.3547	0.7	0.3	2	345	1	800	10	-5	8	7000	-5	450	2	5	10	1100	15	-1	10	.	-2	-5	52
	YN004	36.0218	82.3236	-0.1	0.3		397	1.5	900	7	-5	7	12000	-5	600	-2	20	7	900	-10	-1	10	.	-2	-5	45
	YN005	36.0129	82.3841	0.4	0.3		330	1	500	5	-5	7	12000	-5	800	-2	5	10	1000	-10	-1	5	.	-2	-5	42
	YN006	36.0041	82.4200	0.4	-0.1	3	415	2	600	12	-5	13	11000	-5	750	-2	5	20	1100	-10	-1	-5	.	-2	-5	80
	YN034	36.0046	82.2345	0.8	-0.1	0	135	1	2000	10	15	9	4000	-5	2600	-2	5	10	1100	-10	-1	10	.	-2	40	35

JOHNSON CITY 100K SHEET - GROUNDWATER

Lab #	County	Lat	Long	pH	Cond um/cm	U ppb	Br ppb	Cl ppb	F ppb	Mg ppb	Mn ppb	Na ppb	V ppb	U/cond x 1000	Al ppb	Dy ppb
204	AV512	36.0346	82.0380	6.8	18	0.125	46	5300	36	850	.	2150	0.1	6.9	35	-0.001
206	AV514	36.0862	82.0436	7.5	60	0.019	37	6500	33	3790	.	2020	1.4	0.3	55	-0.001
3239	MD546	36.0001	82.6793	6.9	50	-0.002	.	M	.	M	.	M	-0.1	0.0	.	-0.001
3242	MD549	36.0096	82.6288	6.9	20	-0.002	.	M	.	M	.	M	-0.1	0.0	.	-0.001
5745	YN504	36.0033	82.4101	6.3	40	0.023	44	9400	44	.	57	3980	-0.1	0.5	56	0.070
5746	YN505	36.0129	82.3483	6.5	60	0.019	.	15100	120	.	55	5100	0.9	0.3	111	-0.001
5747	YN506	36.0397	82.3617	6.4	30	-0.002	.	9200	53	.	11	3080	0.5	0.0	73	-0.001
5748	YN507	36.0322	82.3991	6.5	30	0.018	.	9400	28	.	17	2590	-0.1	0.6	82	-0.001
5749	YN508	36.0103	82.3101	6.5	50	-0.002	57	9100	182	4020	.	4200	1.6	0.0	93	-0.001