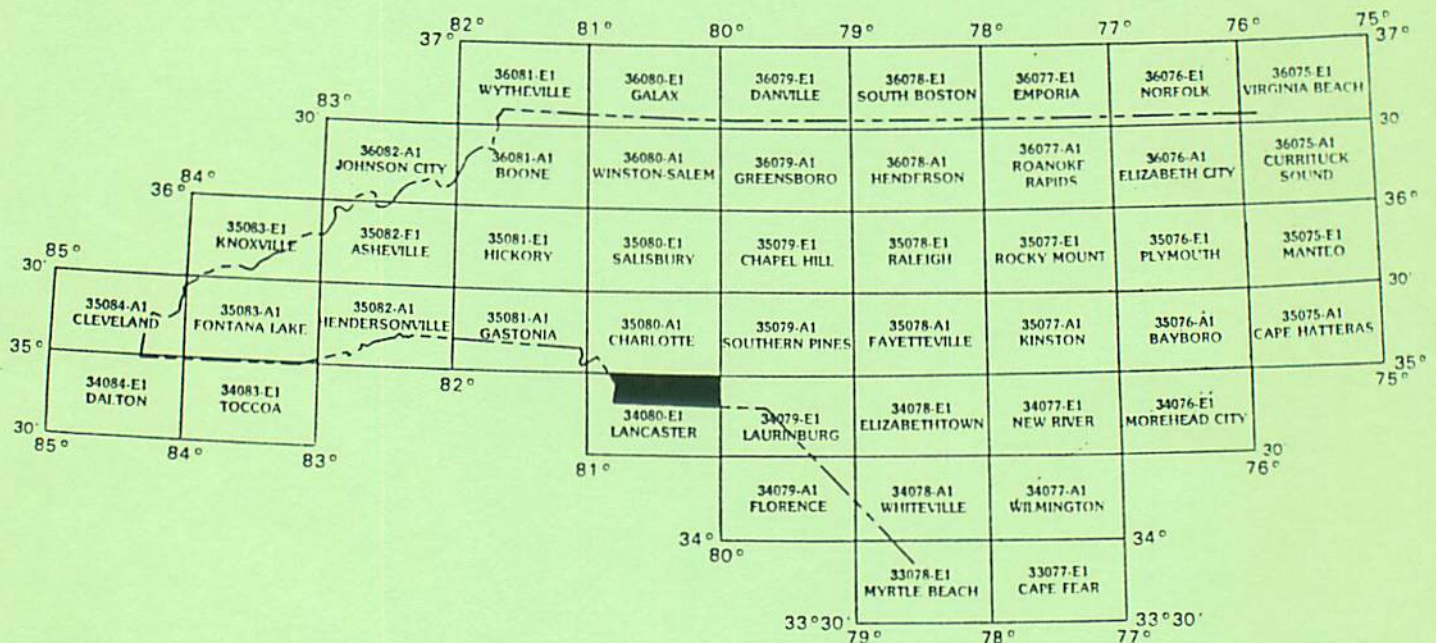


**Listing of Concentrations of Variables
of
Stream Sediment, Stream Water, and Groundwater
for the
Lancaster 30 x 60 - Minute Quadrangle
-NURE Database**

by
Robert H. Carpenter and Jeffrey C. Reid



**NORTH CAROLINA GEOLOGICAL SURVEY
OPEN-FILE REPORT 93-15**

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

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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 Lancaster 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., 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>
AN	Anson
UN	Union

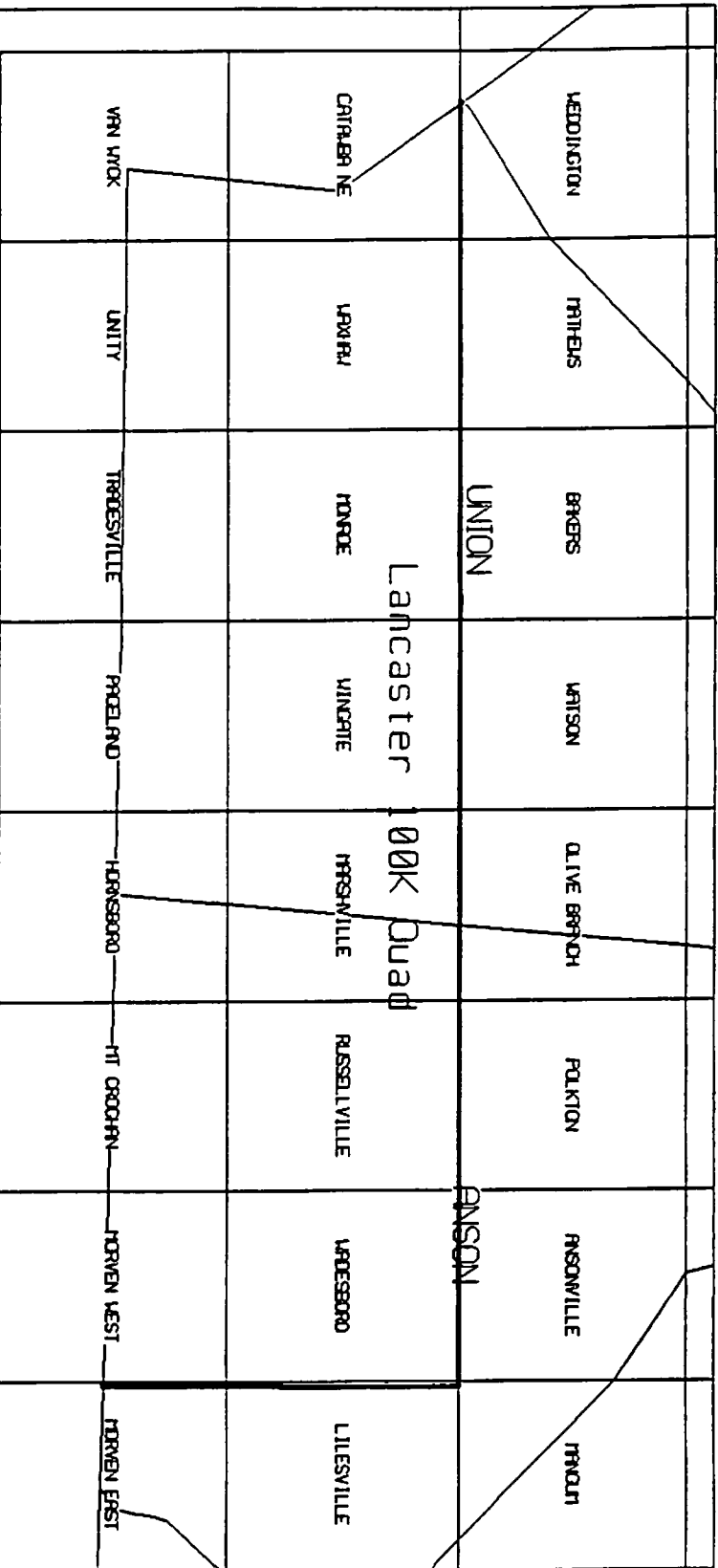


Figure 1. Map Showing Outlines of Lancaster 30 x 60 Minute - Quadrangle and Contained 7 - 1/2 Minute Quadrangles.

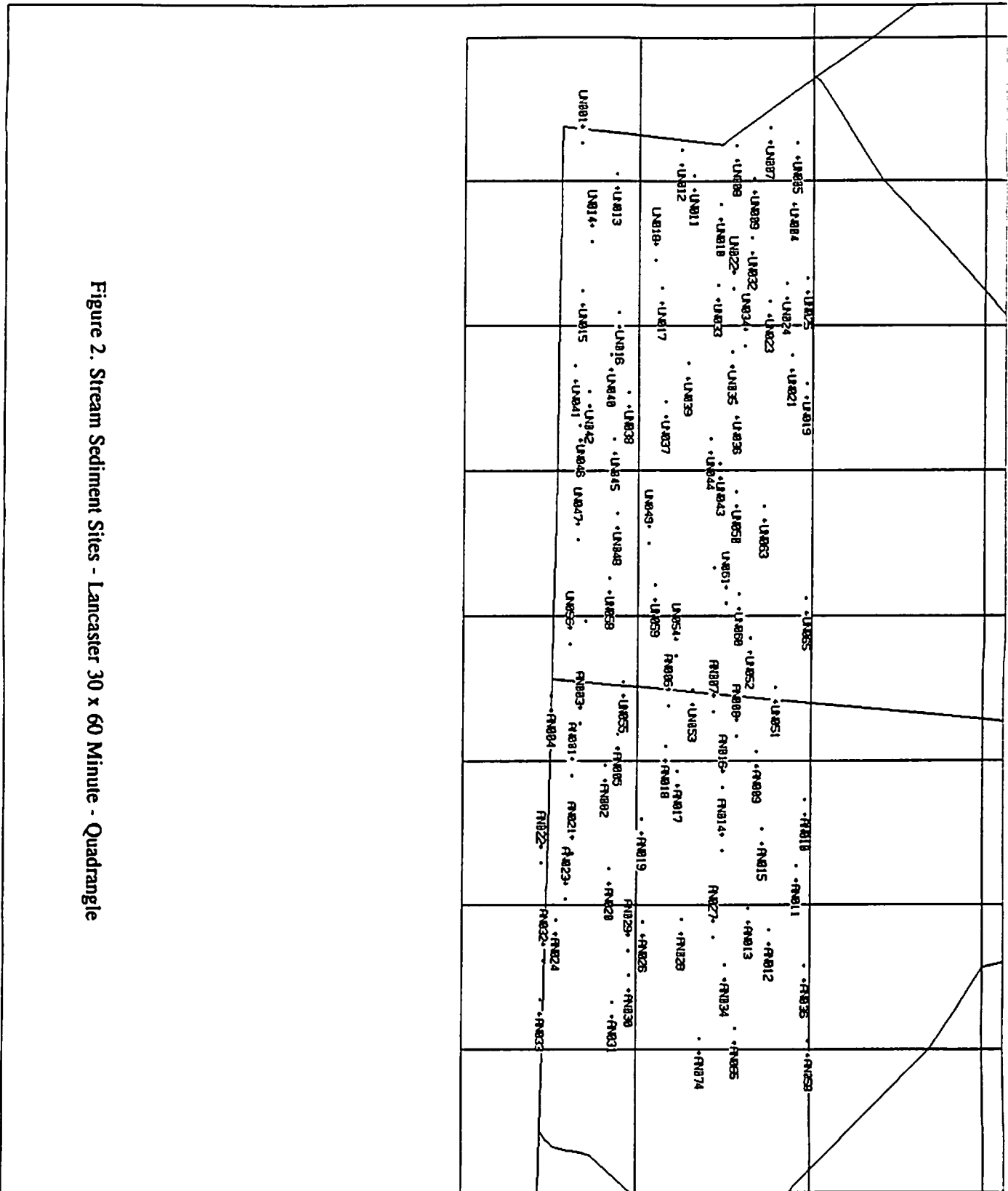


Figure 2. Stream Sediment Sites - Lancaster 30 x 60 Minute - Quadrangle

LANCASTER 100K QUADRANGLE - 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	
176	AM001	34.8285	80.2377	7.6	70	3.7	17	18	43800	60	35200	690	9700	15.7	6000	70	6.3	2.4	M	M	M	M	M	M
177	AM002	34.8523	80.2461	M	M	4.5	11	113	57800	37	39400	1180	17700	14.2	8200	150	7.6	1.5	M	M	M	M	M	M
178	AM003	34.8341	80.2819	7.6	110	1.8	4	25	29900	56	12300	720	10400	7.8	6300	60	3.6	-1.0	M	M	M	M	M	M
179	AM004	34.8135	80.3062	M	M	2.3	10	9	50600	53	25400	1220	9800	10.6	6400	80	2.5	0.9	M	M	M	M	M	M
180	AM005	34.8612	80.2734	7.6	25	1.8	-3	26	39300	-20	19600	460	18100	8.9	3700	50	1.4	-1.0	M	M	M	M	M	M
181	AM006	34.8976	80.2974	7.0	110	2.3	11	8	60300	49	27600	790	14200	8.7	6500	90	4.7	-1.0	M	M	M	M	M	M
182	AM007	34.9302	80.2921	7.4	70	3.4	13	18	70500	53	52600	970	14300	14.9	10700	110	5.4	2.0	M	M	M	M	M	M
183	AM008	34.9469	80.2708	7.3	90	3.2	16	11	70400	81	44000	1440	5700	14.5	32200	130	13.0	5.0	M	M	M	M	M	M
184	AM009	34.9615	80.2581	7.2	50	2.4	11	29	27700	-20	29800	210	6000	8.9	10400	50	5.4	2.8	M	M	M	M	M	M
185	AM010	34.9961	80.2160	7.1	80	1.9	4	14	30400	38	13100	620	9100	7.9	9600	50	3.6	2.0	M	M	M	M	M	M
186	AM011	34.9900	80.1589	7.1	75	2.6	11	26	45700	35	31700	780	14500	11.8	6900	70	1.3	-1.0	M	M	M	M	M	M
187	AM012	34.9709	80.1035	7.5	100	2.7	11	20	39700	48	37800	620	8700	6.9	6900	90	3.0	0.9	M	M	M	M	M	M
188	AM013	34.9561	80.1225	7.6	80	14.0	87	94	60400	380	63100	1030	12300	12.8	11600	160	10.3	1.5	M	M	M	M	M	M
189	AM014	34.9367	80.1717	7.5	115	2.7	11	21	8800	25	14400	160	2400	5.4	1100	20	2.3	-1.0	M	M	M	M	M	M
190	AM015	34.9655	80.1906	7.6	80	2.3	7	25	23200	-20	18800	280	8700	5.2	7500	50	3.4	4.2	M	M	M	M	M	M
191	AM016	34.9370	80.2271	7.4	95	3.3	12	31	74100	88	52000	1450	21700	12.0	6900	140	3.4	-1.0	M	M	M	M	M	M
192	AM017	34.9046	80.2414	7.4	50	1.5	-3	22	36100	-20	14400	320	19100	6.4	4300	50	3.7	2.2	M	M	M	M	M	M
193	AM018	34.8958	80.2625	7.4	40	2.0	11	29	47800	63	34200	750	21400	6.9	5500	100	2.2	1.7	M	M	M	M	M	M
194	AM019	34.8787	80.1999	7.6	170	18.4	145	112	56900	655	64600	910	16500	12.6	8600	180	13.6	5.7	M	M	M	M	M	M
195	AM020	34.8555	80.1562	7.6	70	7.9	44	30	36500	200	27500	810	3600	8.9	5500	60	11.3	0.9	M	M	M	M	M	M
196	AM021	34.8287	80.1696	M	M	4.7	22	16	33600	63	34000	580	5700	9.6	6000	70	5.7	-1.0	M	M	M	M	M	M
197	AM022	34.8068	80.1615	7.6	50	10.0	57	22	64700	251	31500	1980	5300	10.2	6100	80	6.2	1.1	M	M	M	M	M	M
198	AM023	34.8244	80.1300	7.7	48	39.2	339	107	18300	1404	20100	300	1600	10.7	6900	40	33.4	1.7	M	M	M	M	M	M
199	AM024	34.8174	80.1123	7.7	50	36.3	290	122	21500	1295	30000	290	5300	11.0	9600	50	29.1	3.5	M	M	M	M	M	M
200	AM025	34.8678	80.1173	7.7	45	15.8	119	67	14200	476	17900	210	900	6.0	7900	40	24.1	1.7	M	M	M	M	M	M
201	AM026	34.8800	80.1109	7.5	25	47.3	330	154	32200	1518	22100	310	2600	13.5	7800	60	39.2	4.4	M	M	M	M	M	M
202	AM027	34.9308	80.0970	7.0	45	17.8	138	107	26200	531	23900	770	6300	6.9	9100	40	31.7	-1.0	M	M	M	M	M	M
203	AM028	34.9079	80.1127	7.2	45	7.5	55	41	28000	260	26900	280	2300	9.0	5000	70	5.2	-1.0	M	M	M	M	M	M
204	AM029	34.8694	80.0850	6.8	35	26.7	198	91	28700	792	21100	310	1100	10.1	8200	60	17.2	2.8	M	M	M	M	M	M
205	AM030	34.8702	80.0637	6.6	45	25.0	188	79	69900	881	46700	1070	4700	20.8	8900	110	15.9	1.7	M	M	M	M	M	M
206	AM031	34.8583	80.0408	6.4	40	123.0	984	404	8900	4081	12100	300	700	15.8	17300	50	111.9	9.9	M	M	M	M	M	M
207	AM032	34.8087	80.0765	5.7	30	10.9	63	42	19300	283	5900	100	3500	4.2	5800	30	16.4	-1.0	M	M	M	M	M	M
208	AM033	34.8065	80.0430	5.4	40	19.6	122	71	5000	493	8000	100	500	5.9	9600	30	27.9	3.1	M	M	M	M	M	M
209	AM034	34.9392	80.0727	6.2	52	9.1	61	53	32300	258	22300	390	4600	6.3	5800	40	19.1	-1.7	M	M	M	M	M	M
211	AM036	34.9962	80.0720	7.1	40	2.2	-2	19	37600	-20	38200	290	5800	11.5	4300	50	3.3	-1.0	M	M	M	M	M	M
233	AM058	34.9993	80.0071	7.3	50	3.6	16	37	29200	84	47800	630	7200	10.2	8600	90	5.3	1.1	M	M	M	M	M	M
240	AM065	34.9468	80.0180	7.6	50	16.4	264	154	80400	1291	64200	2570	15100	9.3	14600	110	18.6	2.4	M	M	M	M	M	M
249	AM074	34.9213	80.0092	7.1	50	22.9	238	241	42000	964	39700	1420	7600	13.7	17800	110	49.7	2.4	M	M	M	M	M	M

LANCASTER 100K QUADRANGLE - 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	ppm
5914	UN001	34.8339	80.7836	6.5	95	5.2	6	217	38900	37	160100	5060	6600	20.8	38200	370	3.1	0.9	M	M	M	M	M
5917	UN004	34.9861	80.7419	6.8	70	1.7	3	8	26000	41	19000	680	4300	7.3	3000	40	2.0	-1.0	M	M	M	M	M
5918	UN005	34.9884	80.7834	6.5	65	1.5	4	32	15300	-20	16100	970	3500	5.5	8000	30	2.4	-1.0	M	M	M	M	M
5920	UN007	34.9690	80.7969	6.7	60	1.4	-2	17	30300	28	38700	1300	6400	14.5	11100	110	0.6	2.2	M	M	M	M	M
5921	UN008	34.9454	80.7815	6.7	50	1.5	6	3	37100	49	15800	200	3100	8.4	1600	30	1.9	-1.0	M	M	M	M	M
5922	UN009	34.9580	80.7527	6.8	65	2.3	12	13	24900	80	28100	1690	5100	11.8	9400	50	4.4	-1.0	M	M	M	M	M
5923	UN010	34.9336	80.7295	6.8	90	1.1	2	5	39900	52	60700	3260	7200	16.8	20000	110	1.7	2.2	M	M	M	M	M
5924	UN011	34.9146	80.7551	6.7	115	1.1	-2	6	19400	-20	19500	630	3700	7.6	4000	40	2.8	-1.0	M	M	M	M	M
5925	UN012	34.9055	80.7778	6.9	45	2.7	4	27	22400	18	5400	440	4300	4.3	1600	10	0.8	0.7	M	M	M	M	M
5926	UN013	34.8588	80.7567	6.8	70	1.7	4	25	31900	-20	40200	1140	M	11.4	7100	90	2.5	1.1	M	M	M	M	M
5927	UN014	34.8410	80.6974	6.7	120	2.0	5	8	36600	47	62600	2420	M	12.3	16900	80	1.6	4.6	M	M	M	M	M
5928	UN015	34.8345	80.6557	6.9	80	1.4	11	3	42600	40	39600	1050	8500	16.0	4500	90	M	4.8	M	M	M	M	M
5929	UN016	34.8608	80.6364	6.8	100	1.9	11	4	40700	-20	50200	2130	6600	10.6	16200	70	2.2	1.1	M	M	M	M	M
5930	UN017	34.8916	80.6573	6.6	145	2.7	6	8	32400	26	60800	3190	4500	11.3	42700	80	M	1.1	M	M	M	M	M
5931	UN018	34.8873	80.6814	6.9	90	2.4	9	6	30800	-20	59800	5180	4200	15.1	52200	90	3.6	-1.0	M	M	M	M	M
5932	UN019	34.9959	80.5754	6.6	110	2.3	10	8	42000	40	32700	470	1700	9.3	5400	80	1.5	1.5	M	M	M	M	M
5934	UN021	34.9850	80.5989	6.4	120	2.4	5	7	39500	50	51800	560	2800	10.6	7000	80	3.0	1.8	M	M	M	M	M
5935	UN022	34.9434	80.6568	6.5	110	3.1	6	5	45900	52	71500	4470	3400	19.8	35000	120	M	2.4	M	M	M	M	M
5936	UN023	34.9688	80.6460	6.6	100	2.4	8	8	36900	92	70400	3150	1600	11.8	31300	80	2.6	-1.0	M	M	M	M	M
5937	UN024	34.9810	80.6612	6.5	90	2.1	10	7	43300	-20	41400	1720	1200	11.8	10600	80	2.1	0.9	M	M	M	M	M
5938	UN025	34.9962	80.6458	6.6	120	2.6	11	7	40500	103	85200	4700	3100	19.0	43100	140	2.7	-1.0	M	M	M	M	M
5945	UN032	34.9566	80.7003	6.4	100	2.2	-3	5	38700	76	63500	5980	5400	10.0	39900	90	3.6	1.1	M	M	M	M	M
5946	UN033	34.9317	80.6599	6.4	145	3.0	17	8	47600	47	71900	3020	3200	16.5	28300	120	2.1	-1.0	M	M	M	M	M
5947	UN034	34.9520	80.6074	6.6	110	2.2	4	9	30500	-20	21300	210	2500	7.6	6900	60	1.8	-1.0	M	M	M	M	M
5948	UN035	34.9426	80.6021	M	M	3.0	12	8	55100	-20	60500	470	1200	14.5	17200	90	M	3.1	M	M	M	M	M
5949	UN036	34.9459	80.5589	6.5	110	3.1	15	5	46600	30	42700	1350	6200	16.4	26100	110	3.0	-1.0	M	M	M	M	M
5950	UN037	34.8948	80.5596	6.5	98	1.6	-1	7	26400	54	41300	1320	4000	10.5	11300	70	1.8	-1.0	M	M	M	M	M
5951	UN038	34.8679	80.5681	6.5	115	1.3	11	5	39200	41	25100	850	10300	17.9	2800	100	1.5	3.7	M	M	M	M	M
5952	UN039	34.9107	80.5924	6.5	118	2.6	-2	8	31000	43	68600	3390	4100	15.6	41200	100	M	3.3	M	M	M	M	M
5953	UN040	34.8552	80.5998	6.3	110	1.1	-6	5	32300	-20	11800	600	12800	11.4	4900	60	M	2.0	M	M	M	M	M
5954	UN041	34.8297	80.5992	6.4	92	1.6	18	5	44600	-20	40200	860	16800	13.1	5300	60	2.0	0.9	M	M	M	M	M
5955	UN042	34.8397	80.5866	6.5	95	1.4	-4	4	40500	25	27000	580	13800	15.2	3800	90	1.6	-1.0	M	M	M	M	M
5956	UN043	34.9340	80.5060	6.7	48	1.9	14	11	12300	-29	25600	100	2300	12.9	700	20	1.8	-1.0	M	M	M	M	M
5957	UN044	34.9271	80.5280	M	M	2.9	-10	4	52800	-20	59800	2400	4500	20.9	4000	90	M	-1.0	M	M	M	M	M
5958	UN045	34.8579	80.5276	6.6	75	1.4	21	5	31900	38	36600	700	5400	10.4	3000	60	1.5	3.7	M	M	M	M	M
5959	UN046	34.8333	80.5391	6.7	70	2.0	6	5	43300	60	32900	720	6600	14.6	4100	80	2.1	2.9	M	M	M	M	M
5960	UN047	34.8317	80.4406	6.5	55	6.3	29	16	52700	140	73500	1260	3100	21.7	5200	100	2.8	2.0	M	M	M	M	M
5961	UN048	34.8599	80.4637	6.4	125	1.8	-6	10	33900	34	19100	700	6600	10.7	2300	60	2.5	-1.0	M	M	M	M	M

LANCASTER 100K QUADRANGLE - 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
5962	UN049	34.8828	80.4382	6.5	75	1.9	-7	8	38000	44	29300	520	5200	11.7	4200	70	1.9	-1.0	M	M	M	M	M
5963	UN050	34.9457	80.4821	6.2	110	2.3	13	5	53800	35	65800	1040	7100	13.6	3600	100	2.8	-1.0	M	M	M	M	M
5964	UN051	34.9747	80.3135	6.4	230	2.8	18	8	44600	-29	41100	2230	4600	15.4	9700	60	1.9	2.0	M	M	M	M	M
5965	UN052	34.9563	80.3567	6.3	100	2.3	-2	8	35300	48	28600	850	7900	12.4	12600	60	2.1	2.0	M	M	M	M	M
5966	UN053	34.9151	80.3110	6.3	85	2.6	-6	11	49900	39	43200	270	1400	16.0	7000	70	2.8	-1.0	M	M	M	M	M
5967	UN054	34.9029	80.3413	6.2	80	3.6	21	16	43900	112	46800	700	5400	12.8	11300	60	5.4	1.5	M	M	M	M	-2.0
5968	UN055	34.8649	80.3186	6.4	240	2.4	11	8	49600	88	45400	1160	5500	13.0	4300	80	3.5	2.0	M	M	M	M	M
5969	UN056	34.8264	80.3512	6.5	70	4.6	11	21	30400	77	22000	420	5400	10.0	8800	50	7.4	0.9	M	M	M	M	M
5970	UN057	34.8378	80.3708	6.5	80	2.4	26	8	46400	50	72300	450	2100	15.5	5200	70	4.1	-1.0	M	M	M	M	M
5971	UN058	34.8547	80.4085	6.5	55	2.8	-5	13	21300	63	11600	310	3000	9.0	16000	50	4.2	1.8	M	M	M	M	-2.0
5972	UN059	34.8877	80.4020	6.3	90	2.5	18	5	48500	-29	46900	1230	6400	14.2	6900	90	1.6	2.0	M	M	M	M	M
5973	UN060	34.9481	80.3942	6.3	90	2.2	6	6	41400	44	34500	460	5800	12.6	3900	50	M	1.7	M	M	M	M	M
5974	UN061	34.9385	80.3860	6.3	85	3.0	-5	8	63200	-29	39600	630	12900	15.7	6500	90	2.3	-1.0	M	M	M	M	M
5975	UN062	34.9300	80.4168	6.3	70	2.2	-4	8	43900	-31	18100	550	M	14.9	6000	50	1.3	-1.0	M	M	M	M	M
5976	UN063	34.9656	80.4697	6.2	80	2.4	15	7	47100	50	56800	660	M	15.8	7500	90	1.5	1.7	M	M	M	M	M
5978	UN065	34.9962	80.3903	7.2	350	3.0	17	6	46600	170	51300	610	5900	18.7	26800	130	2.5	1.5	M	M	M	M	M

LANCASTER 100K QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County	Lat	Long	Ux	Ag	As	Ba	Be	Ca	Co	Cr	Cu	K	Li	Mg	Mo	Nb	Ni	P	Pb	Se	Sn	Sr	U	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
176	AN001	34.8285	80.2377	-0.5	.	1.0	.	8	-5	3	8300	6	3200	-5	15	6	1500	12	-5	-50	-2	20	26			
177	AN002	34.8523	80.2461	-0.5	.	-0.5	.	16	-5	10	9300	-5	2800	-5	25	12	1700	20	15	-50	-2	10	33			
178	AN003	34.8341	80.2819	-0.5	.	-0.5	.	15	-5	8	6300	-5	2100	-5	5	9	2200	12	-5	-50	-2	-5	26			
179	AN004	34.8135	80.3062	-0.5	.	-0.5	.	19	15	11	8300	6	1850	-5	5	11	1500	17	10	-50	-2	-5	29			
180	AN005	34.8612	80.2734	-0.5	.	-0.5	.	-5	-5	4	7300	-5	1550	-5	5	-5	2200	10	15	-50	-2	-5	10			
181	AN006	34.8976	80.2974	-0.5	.	-0.5	.	14	-5	8	9300	-5	1700	-5	5	14	800	12	15	-50	-2	-5	29			
182	AN007	34.9302	80.2921	-0.5	.	-0.5	.	12	-5	11	11300	7	2000	-5	5	17	1000	20	20	-50	-2	3	10			
183	AN008	34.9469	80.2708	-0.5	.	-0.5	.	18	-5	15	11300	18	2500	-5	5	14	1700	27	20	-50	-2	8	5			
184	AN009	34.9615	80.2581	-0.5	.	-0.5	.	-5	-5	4	6300	-5	1550	-5	10	6	1300	10	20	-50	-2	13	-5			
185	AN010	34.9961	80.2160	-0.5	.	-0.5	.	8	9	3	6300	-5	1650	-5	5	-5	1300	10	5	-50	-2	15	10			
186	AN011	34.9900	80.1589	-0.5	.	-0.5	.	12	5	7	7300	-5	1900	-5	5	7	1300	17	25	-50	-2	-5	19			
187	AN012	34.9709	80.1035	-0.5	.	-0.5	.	10	31	7	7300	-5	3650	-5	5	12	1500	10	-5	-50	-2	10	21			
188	AN013	34.9561	80.1225	-0.5	.	1.5	.	16	15	12	8300	-5	3150	-5	15	19	1800	17	-5	-50	-2	10	31			
189	AN014	34.9367	80.1717	-0.5	.	1.0	.	8	10	5	4300	-5	1950	-5	5	6	1200	-10	5	-50	-2	-5	14			
190	AN015	34.9655	80.1906	-0.5	.	1.5	.	5	5	3	3300	-5	1600	-5	5	-5	3000	-10	5	-50	-2	-5	11			
191	AN016	34.9370	80.2271	-0.5	.	-0.5	.	20	8	11	8300	-5	1700	-5	15	16	1400	17	25	-50	-2	-5	34			
192	AN017	34.9046	80.2414	-0.5	.	-0.5	.	6	-5	2	4300	-5	1800	-5	15	-5	2400	20	20	60	-2	-5	12			
193	AN018	34.8958	80.2625	-0.5	.	-0.5	.	9	-5	7	7300	-5	1900	-5	5	6	1800	-10	15	-50	-2	-5	19			
194	AN019	34.8787	80.1999	-0.5	.	-0.5	.	13	-5	8	8300	-5	2200	-5	10	14	1600	10	15	-50	-2	-5	28			
195	AN020	34.8555	80.1562	-0.5	.	-0.5	.	18	18	13	6300	-5	2600	-5	15	13	1300	12	10	-50	-2	-5	36			
196	AN021	34.8287	80.1696	-0.5	.	-0.5	.	11	8	5	4300	-5	2700	-5	10	8	1000	-10	25	80	-2	5	18			
197	AN022	34.8068	80.1615	-0.5	.	1.0	.	20	6	14	11300	8	2550	-5	5	11	2500	25	-5	-50	-2	10	46			
198	AN023	34.8244	80.1300	-0.5	.	-0.5	.	7	5	5	4300	-5	1400	-5	30	-5	400	10	5	-50	-2	-5	11			
199	AN024	34.8174	80.1123	-0.5	.	0.5	.	10	5	8	4300	-5	1200	-5	20	8	1000	12	5	-50	-2	40	25			
200	AN025	34.8678	80.1173	-0.5	.	0.5	.	5	6	5	2300	-5	600	-5	14	-5	600	10	-5	-50	-2	-5	13			
201	AN026	34.8800	80.1109	-0.5	.	1.0	.	10	-5	7	3300	-5	1300	-5	60	9	1200	12	-5	-50	-2	20	32			
202	AN027	34.9308	80.0970	-0.5	.	1.0	.	8	6	4	8300	-5	1050	-5	45	-5	600	-10	-5	-50	-2	45	13			
203	AN028	34.9079	80.1127	-0.5	.	-0.5	.	11	8	6	4300	-5	1250	-5	5	8	400	10	-5	-50	-2	30	24			
204	AN029	34.8694	80.0850	-0.5	.	-0.5	.	7	12	7	4300	-5	1400	-5	25	6	800	-10	-5	-50	-2	25	30			
205	AN030	34.8702	80.0637	0.7	.	-0.5	.	21	10	16	10300	-5	1700	-5	35	23	1200	12	-5	-50	-2	45	49			
206	AN031	34.8583	80.0408	-0.5	.	-0.5	.	-5	5	3	1300	-5	1100	-5	40	-5	2800	10	-5	-50	-2	-5	7			
207	AN032	34.8087	80.0765	-0.5	.	-0.5	.	-5	-5	3	2300	-5	1100	-5	5	5	500	-10	-5	-50	-2	45	5			
208	AN033	34.8065	80.0430	-0.5	.	-0.5	.	-5	-5	-2	1300	-5	400	-5	10	-5	500	-10	-5	-50	-2	45	-5			
209	AN034	34.9392	80.0727	-0.5	.	-0.5	.	6	13	5	11300	-5	1100	-5	10	5	400	12	-5	-50	-2	25	20			
211	AN036	34.9962	80.0720	-0.5	.	-0.5	.	7	6	13	6300	-5	1400	-5	10	11	300	12	-5	-50	-2	45	23			
233	AN058	34.9993	80.0071	-0.5	.	0.5	.	10	10	6	5300	-5	1450	-5	5	5	800	12	-5	-50	-2	15	16			
240	AN065	34.9468	80.0180	-0.5	.	0.5	.	12	-5	4	18300	-5	1450	-5	35	5	800	12	-5	-50	-2	3	55			
249	AN074	34.9213	80.0092	-0.5	.	0.5	.	5	5	4	14300	-5	1350	-5	5	-5	800	12	-5	-50	-2	95	13			

LANCASTER 100K QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County	Lat	Long	Ux	Uy	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	ppm
3864	UN001	34.8339	80.7836	-0.5	0.5	6	5300	-5	3300	-5	5	5	6	5300	-5	3300	-5	5	7	600	10	-5	-50	-2	30	16	
3867	UN004	34.9861	80.7419	-0.5	1.0	5	7300	-5	450	-5	7	7	5	7300	-5	450	-5	5	11	200	10	-5	-50	-2	5	18	
3868	UN005	34.9884	80.7834	-0.5	1.0	-5	3300	-5	900	-5	-5	-5	3	3300	-5	900	-5	-5	10	200	-10	-5	-50	-2	25	13	
3870	UN007	34.9690	80.7969	-0.5	1.5	12	3300	-5	1500	-5	12	-5	10	3300	-5	1500	-5	-5	9	500	12	-5	-50	-2	25	17	
3871	UN008	34.9454	80.7815	-0.5	1.0	-5	5300	-5	450	-5	-5	-5	11	5300	-5	450	-5	-5	-5	200	17	-5	-50	-2	20	15	
3872	UN009	34.9580	80.7527	-0.5	1.0	13	5300	-5	1200	-5	13	7	7	5300	-5	1200	-5	-5	7	300	12	-5	-50	-2	25	20	
3873	UN010	34.9336	80.7295	-0.5	1.0	23	3300	-5	1950	-5	23	30	10	3300	-5	1950	-5	-5	9	400	15	-5	-50	-2	35	33	
3874	UN011	34.9146	80.7551	-0.5	0.5	7	4300	-5	1350	-5	7	18	5	4300	-5	1350	-5	-5	-5	300	-10	-5	-50	-2	5	16	
3875	UN012	34.9055	80.7778	-0.5	-0.5	-5	14300	-5	750	-5	-5	-5	-2	14300	-5	750	-5	-5	-5	100	-10	-5	-50	2	15	5	
3876	UN013	34.8588	80.7567	-0.5	1.0	7	6300	-5	450	-5	7	12	5	6300	-5	450	-5	-5	6	400	-10	-5	-50	-2	25	14	
3877	UN014	34.8410	80.6974	-0.5	-0.5	18	4300	-5	2050	-5	18	43	10	4300	-5	2050	-5	-5	13	500	20	-5	-50	2	30	28	
3878	UN015	34.8345	80.6557	-0.5	-0.5	19	4300	-5	1350	-5	19	-5	11	4300	-5	1350	-5	-5	5	400	15	-5	-50	-2	20	23	
3879	UN016	34.8608	80.6364	-0.5	-0.5	11	6300	-5	1700	-5	11	5	9	6300	-5	1700	-5	-5	8	600	17	-5	-50	-2	15	35	
3880	UN017	34.8916	80.6573	-0.5	-0.5	10	4300	-5	2400	-5	10	10	16	4300	-5	2400	-5	5	10	500	27	-5	-50	-2	20	35	
3881	UN018	34.8873	80.6814	-0.5	-0.5	15	4300	-5	2450	-5	15	35	10	4300	-5	2450	-5	10	9	400	25	-5	-50	-2	20	25	
3882	UN019	34.9959	80.5754	0.5	-0.5	13	5300	5	1450	5	13	-5	18	5300	5	1450	5	-5	10	600	30	-5	-50	-2	20	39	
3884	UN021	34.9850	80.5989	0.5	0.5	7	7300	-5	1500	-5	7	14	14	7300	-5	1500	-5	-5	12	500	25	-5	-50	-2	20	42	
3885	UN022	34.9434	80.6568	0.7	-0.5	27	8300	-5	2400	-5	27	59	22	8300	-5	2400	-5	25	44	500	32	5	-50	-2	20	70	
3886	UN023	34.9688	80.6460	0.5	-0.5	15	5300	-5	2500	-5	15	22	13	5300	-5	2500	-5	-5	8	500	20	-5	-50	-2	25	27	
3887	UN024	34.9810	80.6612	0.5	-0.5	15	5300	-5	1350	-5	15	5	13	5300	-5	1350	-5	-5	8	400	15	-5	-50	-2	20	25	
3888	UN025	34.9962	80.6658	0.5	-0.5	23	6300	-5	2400	-5	23	60	12	6300	-5	2400	-5	-5	44	400	35	-5	-50	5	15	32	
3894	UN032	34.9566	80.7003	-0.5	-0.5	20	7300	-5	2200	-5	20	14	11	7300	-5	2200	-5	-5	11	500	20	-5	-50	2	10	29	
3895	UN033	34.9317	80.6599	0.5	1.0	19	8300	-5	2100	-5	19	9	19	8300	-5	2100	-5	10	12	800	42	-5	-50	3	20	39	
3896	UN034	34.9520	80.6074	-0.5	0.5	7	4300	-5	1700	-5	7	-5	8	4300	-5	1700	-5	-5	6	500	12	-5	-50	-2	40	17	
3897	UN035	34.9426	80.6021	-0.5	0.5	11	6300	10	1600	-5	11	6	17	6300	10	1600	-5	20	5	300	22	5	-50	3	25	18	
3898	UN036	34.9459	80.5589	0.5	-0.5	15	20700	7	1350	-5	15	15	11	20700	7	1350	-5	10	10	600	35	-5	-50	10	35	47	
3899	UN037	34.8948	80.5596	-0.5	-0.5	7	2200	-5	1050	-5	7	-5	5	2200	-5	1050	-5	10	-5	300	13	-5	-50	-2	40	16	
3900	UN038	34.8679	80.5681	-0.5	-0.5	8	1500	-5	750	-5	8	189	6	1500	-5	750	-5	-5	-5	200	10	-5	-50	-2	15	7	
3901	UN039	34.9107	80.5924	-0.5	-0.5	14	2800	-5	2150	-5	14	107	5	2800	-5	2150	-5	20	6	600	21	5	-50	-2	20	23	
3902	UN040	34.8552	80.5998	-0.5	-0.5	-5	2500	-5	950	-5	-5	11	2	2500	-5	950	-5	-5	-5	300	-10	-5	-50	-2	10	-5	
3903	UN041	34.8297	80.5902	-0.5	-0.5	8	4600	-5	1100	-5	8	19	6	4600	-5	1100	-5	-5	-5	300	10	-5	-50	-2	20	23	
3904	UN042	34.8397	80.5686	-0.5	-0.5	10	2900	-5	950	-5	10	-5	10	2900	-5	950	-5	-5	-5	500	12	-5	-50	-2	30	20	
3905	UN043	34.9340	80.5060	-0.5	0.5	9	2300	-5	1000	-5	9	-5	3	2300	-5	1000	-5	-5	-5	200	12	-5	-50	-2	10	13	
3906	UN044	34.9271	80.5280	0.7	0.5	37	6800	10	1250	-5	37	-5	18	6800	10	1250	-5	-5	18	600	37	5	-50	-2	15	49	
3907	UN045	34.8579	80.5276	0.5	1.0	12	3300	-5	1200	-5	12	-5	7	3300	-5	1200	-5	-5	6	500	22	-5	-50	-2	5	31	
3908	UN046	34.8333	80.5391	0.5	1.5	14	4000	-5	850	-5	14	-5	11	4000	-5	850	-5	-5	8	400	21	-5	-50	-2	10	30	
3909	UN047	34.8317	80.4406	0.7	1.0	28	7700	17	1800	-5	28	-5	18	7700	17	1800	-5	45	17	600	24	-5	-50	-2	75	10	54
3910	UN048	34.8599	80.4637	-0.5	1.0	9	1900	-5	800	-5	9	-5	3	1900	-5	800	-5	-5	-5	300	13	5	-50	-2	20	14	

LANCASTER 100X QUADRANGLE - SUPPLEMENTAL STREAM SEDIMENT

Lab #	County	Lat	Long	Uk	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
3911	UN049	34.8828	80.4382	.0.5	.0.7	.0.5	.0.5	1.0	.13	-5	9	4000	8	1050	-5	5	7	500	34	-5	-5	-50	-2	20	34	
3912	UN050	34.9457	80.4821	.0.7	.0.5	.0.5	.0.5	1.0	32	-5	18	5200	5	1100	-5	-5	19	700	38	-5	-5	-50	-2	30	63	
3913	UN051	34.9747	80.3135	.0.5	.0.5	.0.5	.0.5	1.0	20	-5	13	6900	18	2100	-5	15	7	700	40	-5	-5	-50	-2	10	51	
3914	UN052	34.9563	80.3567	-0.5	.0.5	.0.5	.0.5	-0.5	10	12	7	5300	8	1550	-5	20	7	500	18	-5	-5	-50	-2	15	27	
3915	UN053	34.9151	80.3110	.0.5	.0.5	.0.5	.0.5	-0.5	9	-5	16	9800	25	1500	-5	15	5	500	18	5	-5	-50	-2	25	23	
3916	UN054	34.9029	80.3413	.0.5	.0.5	.0.5	.0.5	-0.5	18	7	20	8700	13	1700	5	30	12	800	28	-5	-5	-50	3	25	49	
3917	UN055	34.8649	80.3186	.0.5	.0.5	.0.5	.0.5	-0.5	26	-5	16	8800	17	1200	-5	5	16	500	23	-5	-5	-50	3	20	36	
3918	UN056	34.8264	80.3512	-0.5	.0.5	.0.5	.0.5	-0.5	8	-5	6	5800	9	1600	-5	-5	10	500	15	-5	-5	-50	10	40	21	
3919	UN057	34.8378	80.3708	.0.7	.0.5	.0.5	.0.5	-0.5	19	-5	24	9900	18	1400	-5	-5	15	900	25	-5	-5	-50	5	5	48	
3920	UN058	34.8547	80.4085	-0.5	.0.5	.0.5	.0.5	-0.5	7	-5	6	2600	10	1700	-5	-5	-5	400	10	5	-5	-50	3	15	20	
3921	UN059	34.8877	80.4020	.0.5	.0.5	.0.5	.0.5	-0.5	19	-5	13	7000	10	1300	-5	-5	16	600	25	-5	-5	-50	2	25	51	
3922	UN060	34.9481	80.3942	.0.5	.0.5	.0.5	.0.5	0.5	10	5	13	4300	12	1200	-5	-5	8	500	25	-5	-5	-50	2	50	39	
3923	UN061	34.9385	80.3860	.0.5	.0.5	.0.5	.0.5	0.5	12	-5	12	9300	13	1650	-5	-5	9	600	28	-5	-5	-50	2	25	51	
3924	UN062	34.9300	80.4168	-0.5	.0.5	.0.5	.0.5	-0.5	11	-5	10	6700	11	2900	-5	-5	8	900	12	-5	-5	-50	-2	35	26	
3925	UN063	34.9656	80.4697	.0.5	.0.5	.0.5	.0.5	1.5	16	-5	15	4900	8	1700	-5	-5	11	600	27	-5	-5	-50	2	30	41	
3927	UN065	34.9962	80.3903	.0.5	.0.5	.0.5	.0.5	-0.5	14	-5	12	5200	5	1700	-5	-5	11	1400	21	-5	-5	-50	5	15	53	

LANCASTER 100K QUADRANGLE - GROUNDWATER

Lab #	County	Lat	Long	pH	Cond um/cm	U ppb	Br ppb	Cl ppb	F ppb	Mg ppb	Mn ppb	Nb ppb	V U/cond ppb x 1000	Al ppb	Dy ppb
98	AN501	34.9412	80.3059	7.4	332	0.040	.	M	.	M	108	M	-0.1	0.1	68
99	AN502	34.8849	80.3057	7.7	361	0.310	108	22900	843	9750	.	60200	-0.1	0.8	32
100	AN503	34.8407	80.3128	7.3	700	4.740	361	79000	.	24120	.	64700	1.3	6.7	47
101	AN504	34.8536	80.2532	7.9	407	5.248	181	42700	.	1870	16	M	-0.1	12.8	8
102	AN505	34.8441	80.1805	7.0	121	0.134	.	16200	.	4980	43	11220	-0.1	1.1	430
103	AN506	34.8419	80.1402	7.3	110	0.033	.	6600	36	6830	102	5240	-0.1	0.3	28
104	AN507	34.8323	80.0760	6.8	151	0.125	.	17200	.	2940	92	5130	-0.1	0.8	332
105	AN508	34.8825	80.0836	6.8	37	0.046	30	5000	.	.	8	M	-0.1	1.2	24
106	AN509	34.8857	80.1476	7.3	139	0.038	15	5800	108	5140	228	11270	-0.1	0.2	31
107	AN510	34.8912	80.2014	7.6	650	5.982	146	100500	.	46120	326	79460	1.3	9.2	31
108	AN511	34.8922	80.2633	7.2	220	0.533	47	16400	.	7460	.	11990	1.2	2.4	132
109	AN512	34.9435	80.2491	6.9	103	0.041	.	17200	.	3270	121	14310	-0.1	0.4	163
110	AN513	34.9293	80.1992	7.2	1116	9.889	.	M	.	.	211	580	-0.1	8.8	.
111	AN514	34.9509	80.1400	7.9	145	4.013	140	21600	.	1270	.	7660	-0.1	27.6	.
112	AN515	34.9831	80.1964	7.3	180	0.074	38	8800	.	6020	404	10780	-0.1	0.4	30
113	AN516	34.9775	80.2553	6.6	90	0.037	.	11000	.	4450	92	7480	-0.1	0.4	221
119	AN522	34.9736	80.0712	7.7	490	7.382	.	52400	.	12150	.	30990	3.4	15.0	30
128	AN531	34.9859	80.0295	7.3	275	1.499	31	21800	.	9090	.	14080	0.4	5.4	37
141	AN544	34.9650	80.1478	7.2	1080	5.506	453	M	.	M	205	M	-0.1	5.1	8
142	AN545	34.9503	80.0824	8.1	270	64.950	19	12600	.	.	22	64790	19.7	240.5	21
143	AN546	34.9371	80.0369	8.1	121	0.386	.	11700	185	.	.	8000	0.3	3.1	93
144	AN547	34.8861	80.0141	8.1	171	0.095	.	3900	135	.	58	M	-0.1	0.5	26
145	AN548	34.8465	80.0327	7.1	72	0.078	.	6700	58	600	5	3950	0.5	1.0	227
5200	UN514	34.9859	80.3131	7.1	335	1.009	109	32000	.	670	29	15770	-0.1	3.0	19
5204	UN518	34.9830	80.3690	7.5	223	0.033	.	M	.	3570	513	11220	-0.1	0.1	.
5209	UN523	34.9728	80.5311	6.9	86	0.046	62	9100	.	3940	7	7630	-0.1	0.5	15
5210	UN524	34.9785	80.5742	6.9	137	0.050	.	15400	.	4680	77	12070	-0.1	0.3	83
5213	UN527	34.9783	80.4084	6.1	100	0.085	90	22500	.	3420	59	10880	0.5	0.8	569
5214	UN528	34.9775	80.4751	7.6	305	0.511	183	43200	.	9480	.	19120	-0.1	1.6	112
5223	UN537	34.9935	80.8148	6.0	75	0.034	43	8700	.	2420	44	8610	-0.1	0.4	16
5224	UN538	34.9851	80.7519	6.6	48	0.027	47	7300	.	.	12	5840	0.3	0.5	13
5225	UN539	34.9818	80.6905	6.6	88	0.019	42	5100	35	.	32	M	0.3	0.2	16
5226	UN540	34.9843	80.6350	6.8	78	0.046	47	4800	53	3960	.	7070	0.6	0.5	22
5227	UN541	34.9313	80.4190	5.6	163	0.214	111	27400	.	7390	205	18390	-0.1	1.3	141
5228	UN542	34.8940	80.4211	7.1	620	0.734	.	M	.	M	114	M	-0.1	1.1	41
5229	UN543	34.8880	80.4718	6.5	1070	0.271	.	297600	.	46710	414	90250	-0.1	0.2	51
5230	UN544	34.9289	80.4755	7.3	488	2.968	324	M	.	M	684	M	-0.1	6.0	.
5231	UN545	34.9345	80.5274	6.8	110	0.176	49	8100	41	5880	39	8860	0.7	1.6	17

LANCASTER 100K QUADRANGLE - GROUNDWATER

Lab #	County	Lat	Long	pH	Cond	U	Br	Cl	F	Mg	Mn	Na	V U/cond	Al	Dy	
ID					um/cm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb x 1000	ppb	ppb	
5232	UM546	34.8807	80.5269	5.9	22	0.104	36	4900	10	1200	27	2780	-0.1	4.7	19	-0.001
5233	UM547	34.8873	80.5825	6.7	710	0.390	.	M	.	.	189	41760	-0.1	0.5	15	15.160
5234	UM548	34.9320	80.5795	5.3	168	0.055	.	26900	.	6060	109	M	0.4	0.3	173	0.220
5235	UM549	34.9339	80.6440	7.8	400	0.117	130	22500	.	12510	5	25730	-0.1	0.2	13	-0.001
5236	UM550	34.9291	80.6905	7.2	88	0.019	41	6700	15	4110	29	10050	13.0	0.2	18	-0.001
5237	UM551	34.9374	80.7495	7.3	82	0.028	43	4800	124	3820	8	5840	0.6	0.3	22	-0.001
5238	UM552	34.8806	80.7705	6.0	160	0.039	56	19900	.	1250	65	19720	-0.1	0.2	16	0.210
5239	UM553	34.8306	80.7440	7.0	102	0.039	17	5500	.	5540	39	9350	5.0	0.3	18	-0.001
5240	UM554	34.8450	80.6982	7.2	111	0.063	.	11000	.	5610	.	8580	0.7	0.5	48	0.120
5241	UM555	34.8907	80.6986	7.2	122	0.025	58	12100	.	7560	75	10690	4.3	0.2	46	-0.001
5242	UM556	34.8918	80.6338	7.3	240	0.069	.	26500	.	8770	.	19180	1.1	0.2	1469	0.090
5243	UM557	34.9228	80.3628	6.8	300	0.031	.	33200	.	6370	457	23980	-0.1	0.1	21	0.100
5244	UM558	34.8932	80.3624	7.5	262	0.027	113	22900	.	7080	355	15510	-0.1	0.1	17	-0.001
5245	UM559	34.8317	80.3732	6.6	55	0.126	.	8000	.	1440	24	5980	1.1	2.2	189	-0.001
5246	UM560	34.8406	80.4119	6.4	113	0.042	.	21500	.	8200	58	M	-0.1	0.3	106	-0.001
5247	UM561	34.8408	80.4771	7.0	92	0.035	71	10900	.	2540	68	5660	-0.1	0.3	96	-0.001
5248	UM562	34.8390	80.5283	7.2	1020	1.330	.	M	.	M	.	M	-0.1	1.3	.	-0.001
5249	UM563	34.8394	80.5839	6.6	560	0.118	360	116300	.	9080	375	37380	-0.1	0.2	1406	0.530
5250	UM564	34.8396	80.6454	6.3	1400	0.235	.	400200	.	47680	432	95700	-0.1	0.1	115	-0.001