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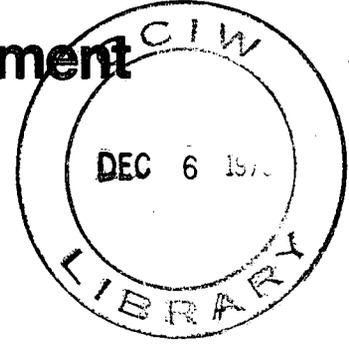


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Intérieures**



TRACE METALS DETERMINED  
FROM  
WATER SAMPLES COLLECTED FROM  
NORTHWESTERN ONTARIO  

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L. D. DELORME  
November 1, 1976

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FROM  
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PROJECT 76-PRD-21  
Autecology of shelled invertebrates  
June, July, 1976

L. D. Delorme  
Paleoenvironmental Research Section  
Process Research Division  
Canada Centre for Inland Waters  
Burlington, Ontario.

## TRACE METALS DETERMINED FROM WATER SAMPLES

COLLECTED FROM NORTHWESTERN ONTARIO.

### Method of Collection

Samples of water were collected at the mud-water interface using a 1 litre van Dorn water bottle held on its side just above the interface.

A 250 ml polyethylene bottle was filled from the van Dorn water bottle and then 1 ml of 1:1 Nitric Acid was added. The bottles were then stored at room temperature for later shipment to the Water Quality Laboratory, CCIW, Burlington.

Sample numbers 6279 to 6471 inclusive had Mercury analyzed from a 100 ml sample kept in a glass bottle with 1 ml of 30 per cent sulfuric acid. Sample numbers 6472 to 6720 had Mercury analyzed from a 100 ml sample kept in a polyethylene bottle with 1 ml of potassium dichromate added.

Silver from samples 6279 to 6471 was analyzed from the samples preserved in Nitric Acid. Sample 6472 to 6720 had silver analyzed from 100 ml samples which had had 1 gram of EDTA added.

Trace metal analyses were determined using an Atomic Absorption Spectrophotometer\* in the Water Quality Laboratory, Burlington except soluble iron.

Soluble iron was determined in the field immediately after the sample was collected using the Phenanthroline method. Per cent transmittence was read using a portable pre-calibrated Bausch & Lomb "Mini Spec 20" spectrophotometer. It should be fairly obvious from the results given, that a great deal remains to be desired for the results of soluble iron. Problems were encountered with turbid and coloured water samples.

\* Using unfiltered water samples

The minimum detectable limit for some of the parameters are listed below.

Manganese	10	ppb
Nickel	1	ppb
Arsenic	0.1	ppb
Cadmium	0.2	ppb
Cobalt	0.5	ppb
Mercury	0.05	ppb

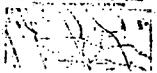
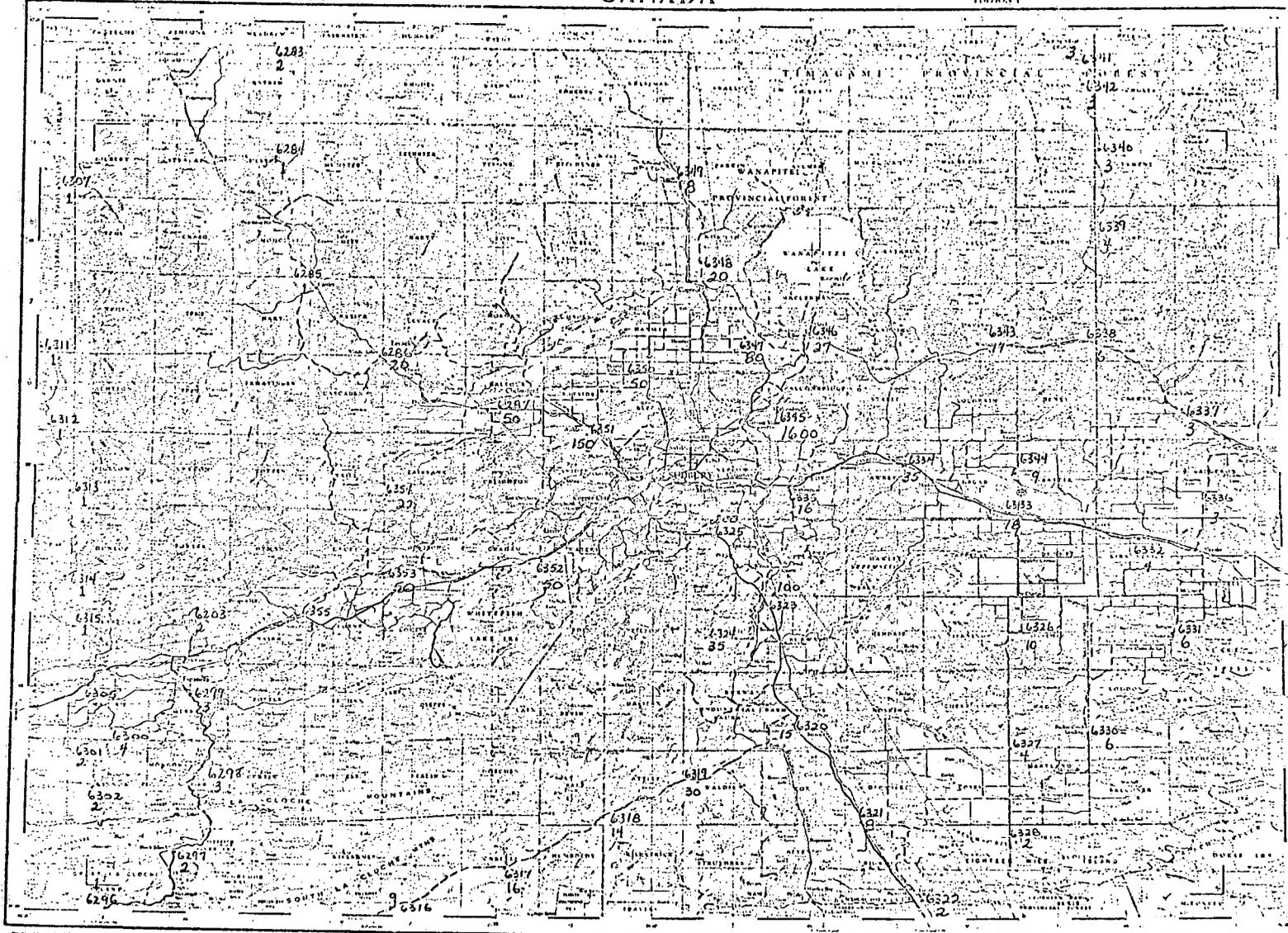
For further details on methodology, preparation of samples, and accuracy of results, interested people should contact Mr. F. Philbert or Mr. O. El Kei, Water Quality Laboratory, Canada Centre for Inland Waters, Burlington.

Without going into any interpretation of the values obtained, a few highlights can be pointed out.

Total iron	66% exceeded	100 ppb
Manganese	13% exceeded	100 ppb
Nickel	15% exceeded	3 ppb
Copper	8% exceeded	10 ppb
Arsenic	3% exceeded	1 ppb

Figure 1 illustrates the distribution of Nickel in the area surrounding Sudbury.

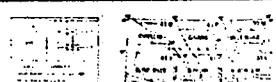
Geographic coordinates are given in appendix A.



Scale 1:50,000  
 Geological Survey of Canada  
 Ottawa, Ontario

Fig. 1 SUDBURY 6318 Sample No 14 ppb Ni.

Scale 1:50,000  
 Geological Survey of Canada  
 Ottawa, Ontario



1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5279	100.	300.	90.	1.	10.	0.1	0.4	0.5	0.05
5280	180.	250.	40.	1.	6.	0.1	0.2	0.5	0.05
5281	140.	120.	35.	1.	7.	80000.0*	0.2	0.5	0.05
5282	130.	150.	75.	1.	6.	0.1	0.2	0.5	0.05
5283	0.	100.	75.	2.	8.	80000.0	0.2	0.5	0.05
5284	170.	180.	25.	1.	8.	0.1	0.2	0.5	0.05
5285	230.	710.	30.	1.	5.	0.6	0.2	0.5	0.05
5286	100.	280.	75.	20.	7.	0.6	0.2	1.0	0.05
5287	160.	450.	50.	50.	14.	2.1	0.2	0.5	0.05
5288	0.	150.	25.	1.	6.	80000.0	0.2	0.5	0.05
5289	210.	650.	70.	1.	8.	0.1	0.2	0.5	0.05
5290	100.	50.	30.	1.	8.	80000.0	0.2	0.5	0.05
5291	120.	50.	15.	1.	8.	80000.0	0.2	0.5	0.05
5292	0.	50.	380.	7.	9.	80000.0	0.4	0.6	0.05
5293	310.	500.	50.	1.	7.	0.1	0.2	0.5	0.05
5294	110.	80.	20.	1.	6.	80000.0	0.2	0.5	0.05
5295	150.	80.	45.	1.	10.	80000.0	0.2	0.5	0.06
5296	100.	50.	20.	1.	4.	0.1	0.2	0.5	0.05
5297	0.	30.	10.	2.	6.	80000.0	0.2	0.5	0.05
5298	140.	110.	20.	1 3.	7.	0.1	0.2	0.5	0.05
5299	100.	1050.	85.	3.	6.	0.2	0.2	0.5	0.05
5300	150.	620.	85.	4.	8.	0.9	0.2	0.5	0.05
5301	130.	90.	15.	2.	7.	0.1	0.2	0.5	0.05
5302	140.	70.	25.	2.	6.	0.3	0.2	0.5	0.05

\* " 8 " in the high order column indicates less than the detectable limit.

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6303	150.	100.	15.	2.	4.	80000.0	0.2	0.5	0.05
6304	140.	150.	25.	1.	10.	80000.0	0.2	0.5	0.05
6305	110.	350.	20.	2.	6.	80000.0	0.2	0.5	0.05
6306	100.	30.	20.	1.	6.	80000.0	0.2	0.5	0.05
6307	120.	30.	15.	1.	6.	80000.0	0.2	0.5	0.05
6308	220.	200.	40.	1.	4.	80000.0	0.2	0.5	0.05
6309	140.	200.	40.	1.	6.	80000.0	0.2	0.5	0.05
6310	240.	300.	40.	1.	5.	80000.0	0.2	0.5	0.05
6311	170.	100.	75.	1.	10.	80000.0	0.2	0.5	0.05
6312	170.	100.	25.	1.	5.	80000.0	0.2	0.5	0.05
6313	200.	100.	25.	1.	5.	80000.0	0.2	0.5	0.05
6314	220.	1150.	170.	1.	6.	0.5	0.2	1.0	0.05
6315	150.	50.	15.	1.	6.	0.1	0.2	0.5	0.05
6316	180.	100.	170.	9.	6.	0.1	0.2	1.5	0.05
6317	270.	130.	170.	16.	9.	0.3	0.2	0.2	0.05
6318	190.	300.	150.	14.	9.	0.5	0.2	1.5	0.05
6319	160.	200.	20.	30.	12.	0.5	0.2	0.5	0.05
6320	130.	170.	25.	15.	9.	0.5	0.2	0.5	0.05
6321	270.	920.	170.	8.	8.	0.8	0.2	1.0	0.05
6322	180.	750.	20.	2.	6.	0.2	0.2	0.5	0.05
6323	200.	180.	15.	100.	20.	0.8	0.2	0.5	0.05
6324	170.	200.	30.	35.	13.	2.0	0.2	1.0	0.05
6325	130.	30.	70.	200.	9.	0.5	0.2	0.2	0.05
6326	170.	800.	75.	10.	10.	0.9	0.2	0.5	0.05

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

AGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5327	130.	360.	60.	4.	8.	0.4	0.2	0.5	0.05
5328	170.	90.	40.	2.	6.	0.1	0.2	0.5	0.05
5329	250.	150.	30.	5.	7.	0.2	0.2	0.5	0.05
5330	210.	190.	35.	6.	7.	0.3	0.2	0.5	0.05
5331	190.	230.	25.	6.	8.	0.4	0.2	0.5	0.05
5332	250.	230.	70.	4.	7.	0.4	0.2	0.5	0.05
5333	150.	700.	100.	18.	9.	0.7	0.2	1.0	0.05
5334	210.	630.	85.	35.	10.	0.8	0.2	0.5	0.05
5335	170.	70.	20.	16.	10.	0.2	0.2	0.5	0.05
5336	110.	60.	25.	3.	5.	0.4	0.2	0.5	0.05
5337	190.	400.	200.	3.	7.	0.5	0.2	0.5	0.05
5338	130.	180.	65.	6.	6.	0.3	0.2	0.5	0.05
5339	210.	50.	25.	4.	5.	0.3	0.2	0.5	0.05
5340	150.	40.	10.	3.	8.	0.3	0.2	0.5	0.05
5341	180.	100.	30.	3.	8.	0.2	0.2	0.5	0.05
5342	170.	30.	15.	3.	7.	0.2	0.2	0.5	0.05
5343 90000100. **		70.	120.	17.	8.	0.3	0.2	1.0	0.05
5344	130.	150.	35.	9.	9.	0.8	0.2	0.5	0.05
5345	120.	70.	35.	1600.	16.	6.0	2.0	3.0	0.05
5346	140.	50.	15.	27.	10.	0.7	0.2	1.0	0.05
5347	230.	700.	30.	80.	60.	4.5	0.2	1.0	0.05
53-8	180.	90.	45.	20.	12.	0.7	0.2	1.0	0.05
53-9	140.	370.	150.	8.	10.	0.3	0.2	1.0	0.05
5350	240.	600.	150.	50.	16.	2.1	0.2	1.0	0.05

\*\* " 9 " in the high order column indicates an undetermined value.

## 1975 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

AGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6351	170.	100.	55.	150.	11.	1.4	0.2	1.0	0.05
6352	100.	700.	290.	50.	38.	2.2	0.6	18.0	0.05
6353	120.	760.	65.	50.	21.	12.2	0.6	3.0	0.05
6354	110.	100.	50.	22.	6.	0.5	0.2	1.0	0.05
6355	100.	130.	25.	3.	6.	0.2	0.2	1.0	0.05
6356	230.	170.	30.	1.	7.	80000.0	0.2	1.0	0.05
6357	100.	100.	20.	1.	6.	0.1	0.2	1.0	0.05
6358	150.	100.	40.	1.	5.	80000.0	0.2	1.0	0.05
6359	100.	250.	35.	1.	6.	80000.0	0.2	1.0	0.05
6360	210.	50.	20.	1.	6.	80000.0	0.2	1.0	0.05
6361	140.	20.	10.	1.	3.	80000.0	0.2	1.0	0.05
6362	0.	60.	10.	1.	12.	80000.0	0.2	1.0	0.05
6363	90.	40.	10.	1.	6.	0.1	0.2	1.0	0.05
6364	40.	250.	20.	2.	10.	0.2	0.2	1.0	0.05
6365	360.	650.	170.	2.	8.	0.2	0.2	1.0	0.05
6366	60.	220.	20.	2.	6.	80000.0	0.2	1.0	0.05
6367	90.	40.	10.	1.	5.	80000.0	0.2	1.0	0.05
6368	90.	100.	10.	1.	7.	0.5	0.2	1.0	0.05
6369	120.	150.	15.	1.	5.	0.6	0.2	1.0	0.05
6370	80.	170.	30.	1.	7.	0.6	0.2	1.0	0.05
6371	210.	1450.	160.	4.	11.	1.0	0.2	1.0	0.05
6372	150.	100.	30.	2.	5.	0.1	0.2	1.0	0.05
6373	70.	60.	20.	1.	6.	0.2	0.2	1.0	0.05
6374	30.	610.	40.	1.	7.	0.4	0.2	1.0	0.05

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6375	100.	50.	20.	22.	7.	0.3	0.2	1.0	0.05
6376	150.	150.	50.	29.	6.	0.3	0.2	1.0	0.05
6377	200.	420.	30.	34.	10.	0.3	0.2	1.0	0.05
6378	90.	230.	210.	8.	8.	0.2	0.2	2.0	0.06
6379	120.	140.	140.	5.	7.	0.3	0.2	1.0	0.05
6380	90.	140.	180.	5.	7.	0.2	0.2	1.0	0.05
6381	110.	650.	470.	7.	7.	0.3	0.2	2.0	0.05
6382	90.	20.	40.	1.	6.	80000.0	0.2	1.0	0.05
6383	160.	70.	10.	3.	5.	0.1	0.2	1.0	0.05
6384	230.	3800.	340.	3.	11.	0.8	0.2	2.0	0.05
6385	140.	300.	20.	2.	8.	0.2	0.2	1.0	0.05
6386	90.	40.	30.	15.	6.	80000.0	0.2	1.0	0.05
6387	150.	200.	20.	1.	7.	0.1	0.2	1.0	0.05
6388	250.	400.	50.	2.	6.	0.1	0.2	1.0	0.05
6389	120.	90.	10.	5.	8.	0.3	0.2	1.0	0.05
6390	120.	70.	10.	2.	6.	0.3	0.2	1.0	0.05
6391	120.	50.	10.	2.	7.	0.3	0.2	1.0	0.10
6392	180.	120.	10.	3.	9.	0.1	0.4	1.0	0.13
6393	190.	150.	10.	8.	6.	80000.0	0.2	1.0	0.05
6394	160.	100.	10.	2.	5.	80000.0	0.4	1.0	0.05
6395	100.	80.	10.	2.	5.	0.1	0.2	1.0	0.05
6396	40.	20.	10.	4.	7.	0.2	0.4	1.0	0.05
6397	140.	60.	20.	2.	7.	0.2	0.2	1.0	0.05
6398	210.	60.	20.	3.	5.	0.2	0.2	1.0	0.05

1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6399	120.	30.	10.	2.	5.	0.2	0.2	1.0	0.05
6400	180.	40.	10.	3.	5.	0.9	0.5	1.0	0.05
6401	290.	300.	40.	4.	9.	10.3	0.2	1.0	0.05
6402	560.	650.	230.	2.	5.	0.2	0.2	1.0	0.05
6403	850.	1300.	170.	1.	5.	0.2	0.2	1.0	0.05
6404	220.	70.	10.	2.	6.	80000.0	0.2	1.0	0.05
6405	190.	220.	20.	1.	5.	0.2	0.2	1.0	0.05
6406	170.	50.	15.	3.	5.	0.1	0.2	1.0	0.05
6407	90.	220.	50.	2.	6.	0.5	0.2	1.0	0.05
6408	140.	120.	15.	2.	6.	0.2	0.2	1.0	0.05
6409	230.	60.	40.	3.	7.	80000.0	0.2	1.0	0.05
6410	210.	110.	20.	3.	7.	0.3	0.2	1.0	0.05
6411	220.	100.	10.	1.	6.	0.1	0.2	1.0	0.05
6412	180.	700.	70.	3.	21.	0.1	0.4	1.0	0.05
6413	210.	100.	70.	2.	3.	0.1	0.2	1.0	0.05
6414	300.	120.	30.	3.	6.	0.1	0.2	1.0	0.05
6415	490.	240.	60.	2.	5.	0.7	0.2	1.0	0.05
6416	190.	200.	20.	2.	4.	0.1	0.2	1.0	0.05
6417	220.	60.	10.	3.	6.	80000.0	0.2	1.0	0.05
6418	190.	30.	10.	2.	7.	0.2	0.2	1.0	0.05
6419	50.	60.	20.	3.	2.	0.1	0.2	1.0	0.05
6420	50.	50.	20.	3.	7.	0.2	0.2	1.0	0.05
6421	80.	50.	30.	4.	10.	0.6	0.2	1.0	0.05
6422	270.	100.	30.	4.	10.	0.7	0.2	1.0	0.05

## 1975 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6423	80.	50.	40.	3.	14.	0.4	0.2	1.0	0.05
6424	220.	50.	20.	1.	7.	0.3	0.2	1.0	0.05
6425	120.	70.	30.	2.	8.	0.3	0.2	1.0	0.05
6426	120.	20.	10.	1.	5.	0.3	0.2	1.0	0.05
6427	90.	20.	20.	1.	4.	1.2	0.2	1.0	0.05
6428	50.	120.	15.	1.	10.	0.4	0.4	1.0	0.05
6429	170.	50.	10.	1.	7.	0.3	0.4	1.0	0.14
6430	170.	150.	30.	1.	6.	0.4	0.4	1.0	0.05
6431	90.	50.	20.	3.	11.	0.2	0.2	1.0	0.05
6432	170.	200.	30.	2.	8.	0.3	0.2	1.0	0.05
6433	190.	120.	20.	2.	8.	0.2	0.2	1.0	0.05
6434	50.	50.	30.	3.	11.	0.3	0.2	1.0	0.05
6435	100.	30.	20.	1.	8.	0.2	0.2	1.0	0.05
6436	50.	20.	10.	2.	7.	0.2	0.5	1.0	0.05
6437	90.	100.	60.	1.	7.	0.5	0.2	1.0	0.05
6438	140.	50.	10.	2.	45.	0.3	0.2	1.0	0.05
6439	50.	30.	10.	1.	6.	0.3	0.2	1.0	0.06
6440	50.	90.	10.	1.	6.	0.3	0.2	1.0	0.05
6441	220.	90.	20.	1.	7.	0.3	0.2	1.0	0.05
6442	140.	20.	40.	1.	8.	0.2	0.4	1.0	0.05
6443	150.	20.	15.	1.	6.	0.4	0.2	1.0	0.05
6444	190.	50.	20.	2.	6.	0.2	0.2	1.0	0.05
6445	120.	40.	15.	1.	6.	0.2	0.2	1.0	0.05
6446	120.	40.	20.	1.	6.	0.2	0.2	1.0	0.05

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6447	180.	50.	25.	1.	7.	0.2	0.2	1.0	0.05
6448	140.	80.	20.	1.	3.	0.2	0.2	1.0	0.05
6449	80.	80.	15.	1.	6.	0.3	0.4	1.0	0.05
6450	120.	80.	20.	2.	7.	0.3	0.2	1.0	0.05
6451	190.	140.	55.	1.	4.	0.2	0.2	1.0	0.10
6452	180.	260.	35.	2.	5.	0.3	0.2	2.0	0.05
6453	250.	210.	40.	1.	6.	0.3	0.2	1.0	0.05
6454	220.	120.	40.	1.	7.	0.2	0.2	1.0	0.06
6455	150.	80.	20.	1.	6.	0.2	0.2	1.0	0.05
6456	170.	60.	10.	1.	3.	0.5	0.2	1.0	0.05
6457	150.	100.	35.	1.	5.	0.4	0.4	1.0	0.05
6458	250.	110.	40.	1.	5.	1.1	0.2	1.0	0.05
6459	130.	900.	40.	1.	4.	0.4	0.2	1.0	0.05
6460	120.	1300.	50.	2.	4.	0.4	0.2	1.0	0.05
6461	120.	1800.	60.	10.	4.	0.8	0.2	1.0	0.05
6462	120.	3500.	90.	10.	10.	0.8	0.2	2.0	0.05
6463	150.	120.	35.	3.	6.	6.0	0.2	1.0	0.05
6464	190.	700.	15.	4.	10.	0.8	0.2	1.0	0.05
6465	140.	50.	10.	1.	6.	0.2	0.2	1.0	0.05
6466	360.	210.	100.	15.	15.	3.7	80000.0	2.0	9000.00
6467	330.	110.	10.	3.	9.	0.3	80000.0	8000.0	9000.00
6468	140.	900.	70.	2.	8.	0.6	80000.0	8000.0	9000.00
6469	80.	290.	20.	2.	6.	0.2	80000.0	8000.0	9000.00
6470	50.	1200.	60.	3.	50.	0.6	80000.0	8000.0	9000.00

## 1975 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6471	90.	100.	35.	2.	8.	0.2	80000.0	8000.0	9000.00
6472	280.	1200.	110.	3.	7.	0.6	80000.0	8000.0	0.57
6473	200.	1300.	140.	3.	8.	0.6	80000.0	0.5	0.65
6474	150.	70.	30.	1.	4.	0.8	80000.0	8000.0	0.97
6475	200.	100.	25.	1.	5.	0.5	80000.0	8000.0	0.42
6476	170.	50.	15.	1.	4.	0.4	80000.0	8000.0	0.20
6477	260.	40.	10.	2.	4.	0.4	80000.0	8000.0	0.17
6478	310.	450.	130.	2.	6.	0.7	80000.0	8000.0	0.27
6479	830.	2170.	155.	2.	3.	0.7	80000.0	8000.0	0.16
6480	260.	210.	15.	1.	7.	0.4	80000.0	8000.0	1.10
6481	260.	170.	10.	2.	4.	0.4	80000.0	8000.0	1.00
6482	260.	270.	30.	2.	8.	0.8	80000.0	8000.0	0.68
6483	260.	500.	70.	2.	7.	0.7	80000.0	8000.0	0.15
6484	180.	500.	30.	2.	5.	0.3	80000.0	8000.0	0.41
6485	280.	50.	5.	1.	4.	0.2	80000.0	8000.0	0.23
6486	240.	90.	25.	1.	5.	0.2	80000.0	1.0	1.60
6487	190.	110.	80.	2.	6.	0.4	80000.0	8000.0	1.40
6488	230.	110.	40.	1.	7.	0.4	80000.0	8000.0	0.25
6489	180.	90.	20.	1.	4.	0.3	80000.0	8000.0	0.83
6490	150.	120.	20.	1.	5.	80000.0	80000.0	8000.0	0.57
6491	280.	90.	30.	2.	5.	0.2	80000.0	8000.0	0.49
6492	340.	1100.	90.	2.	5.	0.4	80000.0	8000.0	0.29
6493	260.	150.	25.	2.	6.	0.7	80000.0	8000.0	1.90
6494	130.	1400.	190.	2.	7.	0.4	80000.0	8000.0	1.60

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6495	400.	650.	130.	2.	4.	0.5	80000.0	8000.0	1.20
6496	230.	120.	20.	1.	6.	0.3	80000.0	8000.0	0.88
6497	150.	110.	10.	2.	6.	0.3	80000.0	8000.0	0.82
6498	130.	25.	80000000.	2.	11.	0.2	80000.0	8000.0	0.52
6499	500.	150.	160.	2.	4.	0.5	80000.0	8000.0	0.06
6500	180.	8000000.	800000000.	1.	2.	0.4	80000.0	8000.0	0.18
6501	110.	20.	20.	1.	3.	1.4	80000.0	8000.0	0.15
6502	140.	450.	45.	2.	8.	0.4	80000.0	8000.0	1.10
6503	150.	130.	30.	1.	5.	0.5	80000.0	8000.0	1.00
6504	110.	40.	25.	2.	5.	0.3	80000.0	8000.0	0.53
6505	0.	35.	15.	2.	6.	0.3	80000.0	8000.0	0.45
6506	40.	110.	20.	2.	6.	0.3	80000.0	8000.0	0.28
6507	130.	100.	20.	2.	5.	0.5	80000.0	8000.0	1.20
6508	80.	90.	45.	1.	6.	0.4	80000.0	8000.0	1.10
6509	110.	550.	40.	2.	5.	0.5	80000.0	8000.0	0.90
6510	150.	30.	20.	3.	7.	0.6	80000.0	8000.0	0.68
6511	130.	130.	25.	1.	8.	0.5	80000.0	8000.0	1.10
6512	80.	150.	270.	3.	9.	0.2	80000.0	0.5	0.45
6513	530.	1400.	50.	2.	5.	0.3	80000.0	8000.0	0.33
6514	310.	1300.	60.	3.	6.	0.3	80000.0	8000.0	0.72
6515	150.	140.	25.	1.	3.	0.2	80000.0	8000.0	0.90
6516	40.	110.	20.	1.	5.	0.3	80000.0	8000.0	0.77
6517	60.	100.	25.	2.	8.	0.7	80000.0	8000.0	0.60
6518	190.	50.	10.	1.	3.	0.5	80000.0	8000.0	0.14

## 1975 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

AGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5519	180.	660.	40.	2.	6.	0.7	80000.0	8000.0	0.31
5520	60.	760.	40.	3.	7.	0.3	80000.0	0.5	0.20
5521	130.	570.	40.	2.	8.	0.4	80000.0	8000.0	0.22
5522	200.	500.	40.	3.	7.	0.4	80000.0	8000.0	0.23
5523	110.	470.	35.	6.	12.	0.3	80000.0	6000.0	0.25
5524	110.	300.	30.	2.	17.	0.2	80000.0	8000.0	0.05
5525	181.	70.	10.	2.	6.	0.2	80000.0	8000.0	0.12
5526	130.	40.	20.	2.	8.	0.2	80000.0	8000.0	0.10
5527	130.	10.	80000000.	1.	6.	1.0	80000.0	8000.0	0.30
5528	260.	100.	80000000.	1.	7.	0.3	80000.0	8000.0	0.24
5529	140.	9.	80000000.	8000000.	15.	2.4	80000.0	8000.0	0.21
5530	150.	40.	15.	1.	7.	0.5	80000.0	8000.0	0.23
5531	70.	650.	540.	2.	6.	0.4	80000.0	8000.0	0.25
5532	30.	500.	170.	2.	4.	1.0	80000.0	8000.0	0.23
5533	70.	300.	30.	1.	6.	0.5	80000.0	8000.0	0.13
5534	0.	150.	80000000.	1.	3.	0.3	80000.0	8000.0	0.87
5535	310.	560.	75.	2.	9.	0.4	80000.0	8000.0	0.42
5536	480.	1200.	160.	3.	7.	0.4	80000.0	8000.0	0.60
5537	0.	550.	70.	2.	6.	0.3	80000.0	8000.0	0.30
5538	610.	750.	270.	2.	6.	0.5	80000.0	8000.0	0.40
5539	430.	300.	80.	1.	8.	0.4	80000.0	8000.0	0.21
5540	360.	290.	80.	1.	4.	0.5	80000.0	8000.0	0.21
5541	360.	350.	240.	2.	6.	1.0	80000.0	8000.0	0.60
5542	290.	120.	15.	1.	8.	0.4	80000.0	8000.0	0.52

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

GE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5543	440.	400.	55.	1.	6.	0.3	80000.0	8000.0	0.37
6544	650.	950.	430.	1.	6.	1.3	80000.0	8000.0	0.35
5545	460.	120.	160.	1.	15.	0.4	80000.0	1.5	0.28
5546	480.	300.	100.	8000000.	6.	0.5	80000.0	8000.0	0.33
5547	260.	440.	40.	1.	6.	0.4	80000.0	8000.0	0.05
55-8	390.	1300.	70.	3.	9.	0.5	80000.0	8000.0	0.60
5549	390.	180.	40.	1.	2.	0.4	80000.0	8000.0	0.48
5550	530.	550.	55.	2.	6.	0.5	80000.0	8000.0	0.44
5551	330.	150.	30.	1.	7.	0.4	80000.0	1.0	0.29
5552	650.	8.	10.	8000000.	4.	0.3	80000.0	8000.0	0.37
5553	710.	50.	50.	3.	5.	0.3	80000.0	8000.0	0.28
5554	0.	40.	20.	2.	7.	0.2	80000.0	8000.0	0.22
5555	160.	100.	45.	1.	7.	0.2	80000.0	8000.0	0.40
5556	130.	25.	80000000.	8000000.	3.	0.2	80000.0	8000.0	0.28
5557	170.	100.	30.	8000000.	5.	0.3	80000.0	8000.0	0.34
5558	70.	120.	45.	1.	7.	0.3	80000.0	1.0	0.29
5559	100.	40.	10.	8000000.	5.	0.3	80000.0	8000.0	0.28
5560	130.	300.	120.	1.	5.	0.3	80000.0	8000.0	0.35
5561	100.	260.	60.	8000000.	6.	0.6	80000.0	8000.0	0.27
5562	130.	100.	15.	1	1.	0.3	80000.0	8000.0	0.27
5563	220.	150.	30.	2.	5.	0.3	80000.0	8000.0	0.25
5564	170.	110.	10.	1.	3.	0.2	80000.0	8000.0	0.29
5565	710.	30.	10.	1.	4.	0.4	80000.0	8000.0	0.28
5566	220.	370.	110.	2.	5.	0.4	80000.0	8000.0	0.22

1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6567	230.	160.	20.	1.	4.	0.4	80000.0	8000.0	0.23
6568	300.	60.	15.	8000000.	4.	0.3	80000.0	8000.0	0.22
6569	160.	40.	10.	8000000.	4.	0.3	80000.0	8000.0	2.20
6570	330.	80.	10.	1.	6.	0.3	80000.0	8000.0	0.11
6571	270.	10.	80000000.	8000000.	4.	0.5	80000.0	8000.0	0.11
6572	230.	80.	80000000.	1.	5.	0.5	80000.0	8000.0	0.14
6573	220.	90.	10.	1.	5.	0.4	80000.0	1.0	0.25
6574	130.	80.	10.	1.	4.	0.4	80000.0	8000.0	0.29
6575	70.	70.	10.	1.	5.	0.3	80000.0	8000.0	0.14
6576	130.	50.	10.	3.	5.	0.6	80000.0	8000.0	0.14
6577	320.	200.	35.	1.	4.	0.3	80000.0	8000.0	0.35
6578	0.	550.	210.	3.	5.	0.3	80000.0	8000.0	0.18
6579	250.	80.	80000000.	2.	55.	0.3	80000.0	8000.0	0.16
6580	90.	130.	80000000.	2.	6.	1.5	80000.0	8000.0	0.11
6581	0.	70.	10.	5.	6.	0.2	80000.0	8000.0	0.17
6582	130.	30.	80000000.	2.	4.	0.2	80000.0	8000.0	0.17
6583	460.	210.	25.	2.	14.	0.2	80000.0	8000.0	0.14
6584	230.	220.	20.	1.	7.	0.2	80000.0	8000.0	0.17
6585	250.	100.	80000000.	1.	5.	0.3	80000.0	8000.0	0.15
6586	230.	250.	20.	1. 1.	9.	1.0	80000.0	8000.0	0.35
6587	310.	700.	80.	1.	6.	1.5	80000.0	8000.0	0.18
6588	230.	120.	80000000.	8000000.	6.	4.3	80000.0	8000.0	0.42
6589	430.	220.	60.	5.	8.	1.3	80000.0	8000.0	0.09
6590	220.	80.	80000000.	1.	8.	3.9	80000.0	8000.0	2.70

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY	
6591	230.	100.	10.	1.	8.	11.0	80000.0	8000.0	0.18	
6592	230.	220.	50.	1.	10.	12.0	80000.0	8000.0	0.23	
6593	260.	100.	30.	1.	7.	2.0	80000.0	8000.0	0.18	
6594	260.	130.	10.	8000000.	9.	4.2	80000.0	8000.0	0.62	
6595	300.	110.	80000000.	8000000.	7.	0.6	80000.0	8000.0	0.78	
6596	230.	50.	30.	8000000.	7.	0.5	80000.0	8000.0	0.17	
6597	310.	120.	10.	8000000.	8.	1.0	80000.0	8000.0	0.12	
6598	290.	130.	80000000.	1.	5.	0.5	80000.0	8000.0	0.17	
6599	150.	100.	20.	2.	8.	1.0	80000.0	8000.0	0.16	
6600	210.	50.	15.	2.	9.	4.0	80000.0	8000.0	0.21	
6601	70.	50.	230.	2.	12.	0.1	80000.0	8000.0	0.22	
6602	160.	100.	80000000.	2.	8.	3.8	2.0	8000.0	0.41	
6603	260.	120.	30.	1.	5.	0.4	80000.0	8000.0	0.14	
6604	180.	90.	10.	1.	6.	1.3	80000.0	8000.0	0.30	
6605	210.	35.	80000000.	1.	8.	0.4	80000.0	8000.0	0.12	
6606	210.	70.	80000000.	1.	5.	2.4	80000.0	8000.0	0.12	
6607	180.	13.	80000000.	1.	5.	1.1	80000.0	8000.0	0.18	
6608	180.	160.	20.	2.	8.	0.4	80000.0	8000.0	0.20	
6609	120.	400.	100.	1.	4.	80000.0	80000.0	8000.0	0.23	
6610	220.	190.	20.	1	2.	8.	0.3	80000.0	8000.0	0.12
6611	110.	30.	80000000.	1.	6.	0.3	80000.0	8000.0	0.05	
6612	160.	120.	20.	1.	9.	0.2	80000.0	8000.0	2.00	
6613	180.	110.	20.	1.	10.	0.2	80000.0	8000.0	0.16	
6614	180.	220.	20.	1.	9.	0.2	80000.0	8000.0	0.12	

## 1975 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5615	70.	65.	80000000.	2.	6.	0.2	80000.0	8000.0	0.10
5616	200.	190.	30.	1.	6.	0.2	80000.0	8000.0	0.11
5617	210.	160.	80000000.	1.	7.	0.3	80000.0	8000.0	0.15
5618	230.	130.	10.	3.	10.	0.3	80000.0	8000.0	2.40
5619	230.	100.	80000000.	1.	14.	0.2	80000.0	8000.0	0.63
5620	210.	70.	80000000.	1.	7.	0.1	80000.0	8000.0	1.10
5621	230.	15.	80000000.	1.	4.	0.2	80000.0	8000.0	0.23
5622	290.	100.	80000000.	1.	7.	0.2	80000.0	8000.0	2.70
5623	290.	260.	150.	4.	5.	80000.0	80000.0	6000.0	0.35
5624	230.	400.	25.	1.	8.	0.1	80000.0	8000.0	0.35
5625	160.	70.	80000000.	1.	7.	0.1	80000.0	8000.0	0.27
5626	130.	90.	80000000.	1.	6.	80000.0	80000.0	8000.0	0.42
5627	480.	1800.	70.	2.	9.	2.3	80000.0	8000.0	0.23
5628	260.	40.	25.	1.	4.	0.2	80000.0	8000.0	0.20
5629	190.	160.	20.	1.	7.	0.1	80000.0	8000.0	0.06
5630	240.	320.	20.	1.	4.	0.1	80000.0	8000.0	0.05
5631	900.	2600.	250.	3.	5.	0.3	80000.0	1.0	0.09
5632	180.	200.	200.	1.	4.	0.2	80000.0	8000.0	0.05
5633	280.	170.	10.	1.	6.	0.2	80000.0	8000.0	0.12
5634	530.	550.	50.	1.	5.	0.3	80000.0	8000.0	0.05
5635	380.	310.	25.	1.	7.	0.3	80000.0	8000.0	0.05
5636	230.	120.	70.	80000000.	5.	0.3	80000.0	8000.0	0.05
5637	150.	390.	10.	2.	6.	0.3	80000.0	8000.0	0.50
5638	310.	300.	20.	4.	7.	0.2	80000.0	8000.0	0.08

## 1976 TRACE METALS (PP3) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5639	240.	500.	50.	2.	5.	0.5	80000.0	8000.0	0.07
5640	290.	50.	80000000.	1.	7.	0.8	80000.0	8000.0	0.11
5641	140.	100.	80000000.	1.	9.	0.7	80000.0	8000.0	0.05
5642	120.	40.	80000000.	80000000.	7.	0.6	80000.0	8000.0	0.05
5643	340.	330.	25.	3.	7.	1.0	80000.0	8000.0	0.21
5644	330.	100.	15.	1.	6.	1.0	80000.0	8000.0	0.06
5645	310.	50.	80000000.	1.	5.	1.0	80000.0	8000.0	0.05
5646	150.	130.	20.	1.	3.	0.3	80000.0	8000.0	0.16
5647	170.	100.	25.	1.	4.	0.2	80000.0	8000.0	0.05
5648	450.	120.	80000000.	2.	4.	0.2	80000.0	8000.0	0.05
5649	530.	520.	30.	2.	3.	0.3	80000.0	8000.0	0.05
5650	340.	180.	10.	2.	3.	0.2	80000.0	8000.0	0.05
5651	410.	220.	30.	5.	10.	80000.0	80000.0	8000.0	0.05
5652	230.	100.	80000000.	3.	6.	80000.0	80000.0	8000.0	0.07
5653	890.	1600.	120.	3.	3.	1.2	0.2	8000.0	0.05
5654	340.	420.	25.	5.	8.	1.0	0.2	8000.0	0.05
5655	490.	860.	40.	3.	5.	0.9	80000.0	5000.0	0.05
5656	970.	900.	200.	3.	3.	0.9	80000.0	8000.0	0.05
5657	450.	260.	30.	2.	5.	0.1	80000.0	8000.0	0.08
5658	940.	2300.	3500.	4.	4.	0.8	80000.0	1.5	0.08
5659	310.	200.	25.	2.	5.	0.2	80000.0	8000.0	0.08
5660	1850.	1900.	390.	35.	11.	0.2	80000.0	2.0	0.05
5661	240.	110.	40.	9.	6.	0.2	80000.0	1.0	0.05
5662	1060.	990.	60.	1.	5.	0.4	80000.0	8000.0	0.05

## 1976 TRACE METALS (PPB) FROM NORTHWESTERN ONTARIO

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
6663	239.	45.	80000000.	8000000.	6.	0.2	80000.0	8000.0	0.05
6664	1740.	2210.	530.	2.	6.	1.0	80000.0	1.0	0.05
6665	231.	170.	20.	1.	5.	0.2	80000.0	8000.0	0.05
6665	193.	200.	40.	1.	4.	1.0	80000.0	8000.0	0.05
6667	163.	70.	80000000.	8000000.	4.	0.5	80000.0	8000.0	2.40
6668	237.	180.	10.	2.	4.	0.4	80000.0	8000.0	0.05
6669	160.	12.	80000000.	8000000.	5.	0.2	80000.0	8000.0	0.05
6670	559.	1000.	50.	4.	5.	1.0	80000.0	0.5	0.18
6671	130.	110.	30.	1.	5.	0.2	80000.0	8000.0	0.49
6672	240.	20.	80000000.	8000000.	4.	0.2	80000.0	8000.0	0.05
6673	210.	50.	80000000.	1.	6.	0.2	80000.0	8000.0	0.05
6674	30.	50.	80000000.	8000000.	4.	0.2	80000.0	8000.0	0.05
6675	140.	40.	10.	8000000.	2.	80000.0	80000.0	8000.0	0.06
6676	190.	110.	45.	8000000.	11.	80000.0	80000.0	8000.0	0.30
6677	160.	30.	80000000.	2.	6.	80000.0	80000.0	8000.0	0.18
6678	160.	100.	80000000.	1.	2.	0.1	80000.0	8000.0	0.07
6679	510.	900.	30.	3.	9.	0.1	80000.0	8000.0	0.14
6680	240.	450.	30.	1.	10.	0.3	80000.0	8000.0	0.05
6681	120.	300.	10.	2.	4.	0.1	80000.0	8000.0	0.05
6682	270.	1000.	270.	3.	4.	1.0	80000.0	0.5	0.05
6683	130.	110.	10.	1.	3.	0.2	80000.0	8000.0	1.00
6684	190.	70.	30.	1.	11.	0.2	80000.0	8000.0	0.05
6685	150.	800.	40.	2.	3.	0.2	80000.0	8000.0	0.05
6686	120.	520.	30.	1.	2.	0.2	80000.0	8000.0	0.18

## 1976 TRACE METALS (PPM) FROM NORTHWESTERN ONTARIO

PAGE

SAMPLE NO.	SOLUBLE IRON	TOTAL IRON	MANGANESE	NICKEL	COPPER	ARSENIC	CADMIUM	COBALT	MERCURY
5687	100.	210.	15.	1.	11.	80000.0	80000.0	8000.0	0.05
5688	130.	60.	10.	8000000.	2.	80000.0	80000.0	8000.0	0.05
5689	130.	180.	15.	1.	5.	80000.0	80000.0	8000.0	0.15
5690	160.	200.	10.	2.	6.	0.1	80000.0	8000.0	0.24
5691	160.	390.	15.	1.	6.	0.2	80000.0	8000.0	0.05
5692	190.	290.	40.	1.	8.	0.2	80000.0	8000.0	0.05
5693	120.	220.	40.	8000000.	1.	0.1	80000.0	8000.0	0.05
5694	710.	1400.	50.	2.	6.	3.1	80000.0	8000.0	0.05
5695	920.	5400.	560.	1.	1.	0.1	80000.0	0.5	0.06
5696	670.	1200.	75.	2.	4.	0.2	80000.0	8000.0	0.10
5697	2590.	7300.	270.	3.	2.	0.8	80000.0	5000.0	0.06
5698	900.	1600.	160.	3.	3.	0.4	80000.0	8000.0	0.05
5699	370.	450.	25.	2.	5.	0.2	80000.0	8000.0	0.05
5700	850.	3600.	50.	8000000.	1.	0.5	80000.0	0.5	0.05
5701	950.	1100.	35.	2.	3.	0.5	80000.0	0.5	0.08
5702	270.	160.	50.	8000000.	1.	0.1	80000.0	8000.0	0.05
5703	200.	800.	20.	8000000.	10.	0.3	80000.0	8000.0	0.07
5704	170.	20.	15.	2.	5.	80000.0	80000.0	8000.0	0.05
5705	200.	70.	15.	1.	3.	0.1	80000.0	8000.0	0.11
5706	240.	30.	80000000.	80000000.	4.	0.1	80000.0	8000.0	0.05
5707	240.	60.	10.	1.	2.	0.2	80000.0	8000.0	0.05
5708	450.	1000.	120.	1.	3.	1.3	80000.0	8000.0	0.10
5709	530.	500.	350.	1.	3.	0.7	80000.0	8000.0	0.22
5710	270.	200.	25.	8000000.	5.	0.3	80000.0	8000.0	0.06



## APPENDIX A

## Geographic Location of Sample Stations

SAMP	UTM	LAT	LONG	NTS
5450	17 654500 4779500	43.154	-79.100 *	301303
5451	17 656500 4791200	43.259	-79.072	301306
5452	17 646500 4774000	43.107	-79.200	301303
5453	17 647700 4767250	43.226	-79.181	301303
5454	17 636000 4761900	43.180	-79.327	301303
5455	17 616500 4782600	43.191	-79.566	301304
5456	17 616750 4774250	43.114	-79.565	301304
5457	17 623400 4762300	43.005	-79.486	301303
5458	17 641750 4759000	42.972	-79.262	301214
5459	17 659000 4769500	43.063	-79.047	301303
5460	17 661600 4760000	42.977	-79.018	301214
5461	17 667500 4750000	42.886	-78.949	301215
5462	17 655750 4746000	42.853	-79.094	301214
5463	17 644000 4750500	42.895	-79.236	301214
5464	17 635600 4750500	42.897	-79.339	301214
5465	17 617000 4746100	42.860	-79.568	301213
5466	17 576000 4758500	42.797	-80.071	400916
5467	17 559000 4754500	42.763	-80.279	400916
5468	17 556300 4753300	42.932	-80.310	400916
5469	17 553550 4768750	43.072	-80.342	401601
5470	17 562750 4775900	43.135	-80.228	401601
5471	17 574800 4772000	43.099	-80.081	401601
5472	17 574000 4758000	42.973	-80.093	400916
5473	17 574250 4748750	42.890	-80.091	400916
5474	17 605250 4868300	43.962	-79.688	301313
5475	17 590500 4869000	43.971	-79.872	301313
5476	17 601750 4851800	43.814	-79.735	301313
5477	17 589500 4853250	43.829	-79.887	301313
5478	17 600500 4858000	43.690	-79.753	301312
5479	17 640250 4782700	43.186	-79.274	301303
5480	17 640000 4780000	43.162	-79.278	301303
5481	17 640600 4782500	43.184	-79.270	301303
5482	17 632250 4781600	43.178	-79.373	301303
5483	17 632500 4781700	43.178	-79.370	301303
5484	17 632000 4781500	43.177	-79.376	301303
5485	17 497250 4748500	42.891	-81.034	400914
5486	17 496750 4752400	42.746	-81.040	400911
5487	17 513500 4750500	42.729	-80.835	400910
5488	17 530750 4752800	42.749	-80.624	400910
5489	17 540750 4755250	42.771	-80.502	400915
5490	17 540500 4744750	42.856	-80.504	400915
5491	17 475250 4763000	43.021	-81.304	401603
5492	17 467500 4769500	43.079	-81.399	401603
5493	17 458550 4761200	43.004	-81.509	401604
5494	17 444650 4761300	43.004	-81.679	401604
5495	17 423750 4761500	43.004	-81.936	401604
5496	17 434200 4777400	43.148	-81.809	401604
5497	17 516250 4746000	42.868	-80.801	400915
5498	17 527500 4748000	42.886	-80.663	400915
5499	17 556500 4714000	42.578	-80.312	400909

\* Disregard negative sign

5500	17	523500	4718450	42.620	-80.713	400910
5501	17	514250	4723200	42.663	-80.826	400910
5502	17	493800	4724500	42.675	-81.076	400911
5503	17	483000	4734750	42.767	-81.203	400914
5504	17	472500	4730800	42.731	-81.336	400911
5505	17	461500	4716300	42.600	-81.469	400911
5506	17	452750	4711700	42.558	-81.576	400912
5507	17	430950	4693750	42.395	-81.839	400905
5508	17	446750	4767250	42.518	-81.624	400912
5509	17	441250	4766700	42.512	-81.715	400912
5510	17	430600	4686500	42.330	-81.842	400905
5511	17	415500	4661750	42.285	-82.025	401008
5512	17	402750	4673750	42.212	-82.178	401001
5513	17	397000	4693300	42.387	-82.251	401008
5514	17	379300	4682600	42.288	-82.464	401008
5515	17	361250	4683800	42.296	-82.683	401007
5516	17	346000	4686500	42.318	-82.844	401007
5517	17	337000	4685000	42.122	-82.972	401002
5518	17	325250	4661600	42.089	-83.113	401003
5519	17	341000	4654500	42.028	-82.921	401002
5520	17	559000	4806900	43.415	-80.271	401608
5521	17	559950	4806800	43.414	-80.260	401608
5522	17	560100	4807300	43.418	-80.258	401608
5523	17	527450	4816100	43.499	-80.660	401607
5524	17	527700	4815950	43.498	-80.657	401607
5525	17	486000	4746250	42.871	-81.171	400914
5526	17	465500	4750600	42.909	-81.423	400914
5527	17	453250	4738600	42.800	-81.572	400913
5528	17	438000	4722800	42.657	-81.756	400912
5529	17	424000	4712750	42.565	-81.926	400912
5530	17	423750	4694000	42.396	-81.926	400905
5531	17	421250	4696750	42.421	-81.957	400905
5532	17	431900	4747300	42.877	-81.834	400913
5533	17	376300	4689300	42.348	-82.502	401007
5534	17	383000	4693500	42.387	-82.421	401008
5535	17	379900	4693000	42.382	-82.459	401008
5536	17	372000	4687200	42.328	-82.554	401007
5537	17	632250	4957750	44.763	-79.329	310414
5538	17	628750	4974000	44.910	-79.369	310414
5539	17	619100	4983700	44.999	-79.489	310414
5540	17	618250	4975750	44.927	-79.502	310413
5541	17	601000	4982500	44.991	-79.719	310413
5542	17	593700	4970000	44.879	-79.814	310413
5543	17	593000	4969000	44.870	-79.823	310413
5544	17	603200	4966200	44.844	-79.694	310413
5545	17	620250	4940500	44.610	-79.485	310411
5546	17	617900	4955000	44.741	-79.511	310412
5547	17	599250	4954300	44.557	-79.750	310412
5548	17	596000	4940500	44.613	-79.790	310412
5549	17	584100	4959000	44.781	-79.937	310413
5550	17	589100	4944500	44.650	-79.876	310412
5551	17	663750	4954600	44.728	-78.932	310410
5552	17	672900	4963200	44.803	-78.814	310415
5553	17	678750	4972500	44.885	-78.737	310415

5554	17	681000	4964500	44.993	-78.704	310415
5555	17	691250	4968000	45.022	-78.573	310502
5556	17	705400	4969000	45.027	-78.393	310501
5557	17	703250	4975500	44.906	-78.425	310416
5558	17	695000	4971700	44.874	-78.531	310415
5559	17	690000	4957100	44.744	-78.600	310410
5560	17	719200	4966000	44.996	-78.219	310416
5561	17	734250	4963400	44.967	-78.030	310416
5562	17	728000	4971750	44.865	-78.114	310416
5563	17	728000	4953500	44.701	-78.122	310409
5564	17	722450	4952500	44.513	-78.201	310409
5565	17	711300	4957300	44.560	-78.339	310409
5566	17	711250	4958000	44.746	-78.332	310409
5567	17	649750	4944100	44.637	-79.112	310411
5568	17	644500	4962800	44.806	-79.173	310414
5569	17	644500	4972750	44.895	-79.170	310414
5570	17	646250	4963550	44.992	-79.145	310414
5571	17	656700	4988500	45.035	-79.011	310503
5572	17	646500	4928300	44.495	-79.157	310406
5573	17	669250	4954500	44.546	-78.869	310410
5574	17	679400	4940600	44.598	-78.740	310410
5575	17	693750	4939000	44.580	-78.560	310410
5576	17	697200	4950500	44.503	-78.519	310410
5577	17	683300	4925000	44.457	-78.696	310407
5578	17	681000	4910750	44.329	-78.730	310407
5579	17	675200	4897000	44.207	-78.807	310402
5580	17	663750	4896000	44.201	-78.951	310402
5581	17	665500	4884900	44.101	-78.932	310402
5582	17	672600	4886550	44.114	-78.843	310402
5583	17	647450	4882200	44.080	-79.158	310403
5584	17	647000	4895600	44.201	-79.160	310403
5585	17	631800	4909000	44.324	-79.347	310406
5586	17	663750	4925700	44.468	-78.941	310407
5587	17	661800	4913050	44.355	-78.970	310407
5588	17	652000	4911050	44.339	-79.093	310406
5589	17	635000	4893000	44.180	-79.311	310403
5590	17	628750	4885500	44.113	-79.391	310403
5591	17	617750	4887750	44.135	-79.528	310404
5592	17	621050	4928000	44.497	-79.477	310406
5593	17	605000	4914200	44.375	-79.682	310405
5594	17	617000	4912450	44.358	-79.532	310405
5595	17	617550	4894750	44.198	-79.529	310404
5596	17	602000	4896300	44.215	-79.723	310404
5597	17	605800	4883300	44.097	-79.678	310404
5598	17	590000	4878250	44.054	-79.876	310404
5599	17	588750	4907500	44.317	-79.887	310405
5600	17	686750	4893400	44.172	-78.664	310402
5601	17	697000	4877750	44.028	-78.542	310402
5602	17	707700	4881350	44.058	-78.407	310401
5603	17	721750	4889000	44.123	-78.229	310401
5604	17	732900	4889000	44.119	-78.089	310401
5605	17	733500	4902250	44.238	-78.076	310401
5606	17	717500	4898200	44.207	-78.278	310401
5607	17	694750	4907500	44.297	-78.559	310407

5608	17	703600	4912000	44.335	-78.446	310408
5609	17	708000	4910000	44.225	-78.396	310401
5610	17	724500	4910700	44.317	-78.185	310408
5611	17	733050	4914250	44.346	-78.076	310408
5612	17	737750	4927300	44.462	-78.011	310408
5613	17	732800	4938400	44.563	-78.069	310409
5614	17	719700	4929500	44.487	-78.237	310408
5615	17	713500	4931500	44.507	-78.314	310409
5616	17	668420	4937425	44.572	-78.879	310410
5617	17	667310	4934820	44.549	-78.894	310410
5618	17	668050	4936350	44.563	-78.884	310410
5619	17	668830	4938445	44.582	-78.873	310410
5620	17	698700	4921600	44.422	-78.504	310407
5621	17	699200	4921420	44.421	-78.498	310408
5622	17	699775	4921450	44.421	-78.491	310408
5623	17	699775	4927075	44.471	-78.488	310408
5624	17	698925	4927350	44.474	-78.499	310408
5625	17	698400	4927560	44.476	-78.505	310407
5626	17	665050	4956260	44.743	-78.915	310410
5627	17	664350	4957025	44.750	-78.924	310410
5628	17	664225	4957700	44.756	-78.925	310415
5629	17	664150	4954800	44.730	-78.927	310410
5630	17	715750	4887450	44.110	-78.304	310401
5631	17	716200	4889100	44.125	-78.298	310401
5632	17	719075	4888075	44.115	-78.262	310401
5633	17	720500	4890450	44.136	-78.244	310401
5634	17	721275	4889450	44.127	-78.234	310401
5635	17	722500	4890225	44.133	-78.219	310401
5636	17	632500	5023350	45.353	-79.308	310506
5637	17	621700	5034700	45.457	-79.444	310506
5638	17	640700	5035350	45.459	-79.200	310506
5639	17	638540	5045940	45.555	-79.225	310511
5640	17	649875	5065400	45.728	-79.074	310511
5641	17	647720	5061060	45.689	-79.103	310511
5642	17	644170	5044040	45.537	-79.154	310511
5643	17	623860	5053175	45.623	-79.411	310511
5644	17	625750	5070000	45.774	-79.383	310514
5645	17	633800	5067400	45.749	-79.280	310511
5646	17	616400	5076500	45.834	-79.501	310513
5647	17	608800	5075250	45.824	-79.599	310513
5648	17	610770	5056150	45.652	-79.578	310512
5649	17	631900	5082750	45.888	-79.300	310514
5650	17	640750	5086750	45.922	-79.185	310514
5651	17	646000	5080600	45.865	-79.119	310514
5652	17	617775	5050075	45.596	-79.490	310511
5653	17	624400	5092600	45.978	-79.394	310514
5654	17	616250	5090000	45.956	-79.500	310514
5655	17	607700	5090250	45.959	-79.610	310513
5656	17	587750	5084600	45.911	-79.869	310513
5657	17	579000	5084500	45.911	-79.981	310513
5658	17	601200	5093300	45.988	-79.693	310513
5659	17	593000	5088000	45.947	-79.800	310513
5660	17	606660	5064500	45.727	-79.604	310512
5661	17	601750	5069450	45.773	-79.691	310513

5662	17	595300	5056850	45.661	-79.777	310512
5663	17	587400	5061850	45.707	-79.877	310512
5664	17	579800	5059200	45.684	-79.975	310512
5665	17	607975	5051700	45.612	-79.615	310512
5666	17	604410	5044050	45.544	-79.663	310512
5667	17	610540	5034250	45.455	-79.586	310505
5668	17	597000	5029025	45.410	-79.760	310505
5669	17	589325	5034420	45.460	-79.858	310505
5670	17	586710	5052100	45.619	-79.888	310512
5671	17	655500	5014750	45.271	-79.018	310506
5672	17	655650	5014800	45.271	-79.016	310506
5673	17	655500	5013250	45.258	-79.018	310506
5674	17	655200	5013750	45.262	-79.022	310506
5675	17	648250	5024750	45.363	-79.107	310506
5676	17	642750	5013250	45.260	-79.181	310506
5677	17	648800	5001100	45.150	-79.107	310503
5678	17	639450	4996425	45.109	-79.227	310503
5679	17	595500	4990500	45.063	-79.787	310504
5680	17	611425	5013100	45.265	-79.580	310505
5681	17	629400	5006150	45.199	-79.353	310503
5682	17	656725	5126275	46.274	-78.966	311207
5683	17	672600	5129840	46.302	-78.759	311207
5684	17	687000	5130430	46.304	-78.572	311207
5685	17	693175	5128000	46.280	-78.493	311208
5686	17	704575	5126400	46.262	-78.345	311208
5687	17	717450	5125000	46.246	-78.179	311201
5688	17	730250	5121410	46.209	-78.015	311201
5689	17	624200	5128500	46.301	-79.387	311206
5690	17	627900	5133250	46.343	-79.338	311206
5691	17	639000	5143000	46.428	-79.191	311206
5692	17	650750	5150000	46.489	-79.036	311206
5993	17	641000	5156600	46.550	-79.161	311211
5994	17	647200	5169500	46.665	-79.076	311211
5695	17	646800	5162750	46.784	-79.077	311214
5696	17	640750	5160900	46.769	-79.157	311214
5697	17	626250	5119500	46.219	-79.363	311203
5698	17	621650	5116550	46.194	-79.423	311203
5699	17	613300	5107800	46.116	-79.534	311204
5700	17	610750	5100000	46.047	-79.569	311204
5701	17	597500	5097000	46.022	-79.740	311204
5702	17	595500	5102500	46.071	-79.765	311204
5703	17	622750	5099750	46.042	-79.414	311203
5704	17	626950	5111000	46.143	-79.356	311203
5705	17	533500	5093600	45.997	-80.567	410815
5706	17	532500	5086000	45.929	-80.581	410815
5707	17	533700	5080500	45.879	-80.566	410815
5708	17	534500	5088000	45.767	-80.556	410815
5709	17	540000	5081300	45.706	-80.486	410809
5710	17	536500	5052000	45.622	-80.506	410810
5711	17	548750	5049500	45.599	-80.375	410809
5712	17	553000	5038250	45.497	-80.253	410808
5713	17	564750	5031500	45.436	-80.172	410808
5714	17	555000	5024300	45.372	-80.298	410808
5715	17	578750	5149250	46.494	-79.974	311205

5716	17	582300	5131500	46.334	-79.931	311205
5717	17	590450	5135500	46.368	-79.746	311205
5718	17	604200	5133750	46.351	-79.646	311205
5719	17	629660	5310100	47.933	-79.264	311314
5720	17	623750	5298200	47.827	-79.280	311314
5721	17	632230	5276000	47.633	-79.240	311311
5722	17	632875	5267850	47.552	-79.234	311311
5723	17	647700	5254300	47.427	-79.042	311306
5724	17	661775	5278625	47.643	-78.846	311310
5725	17	617575	5242700	47.329	-79.444	311306
5726	17	617650	5262850	47.510	-79.438	311311
5727	17	613950	5270400	47.579	-79.485	311311
5728	17	602300	5278475	47.654	-79.638	311312
5729	17	600200	5262050	47.506	-79.669	311312
5730	18	334750	5052525	45.609	-77.119	310611
5731	18	333945	5052125	45.605	-77.129	310611
5732	18	333450	5051850	45.602	-77.136	310611
5733	18	333200	5051625	45.600	-77.139	310611
5734	18	323250	5049690	45.580	-77.266	310611
5735	18	297300	5116000	46.169	-77.626	311104
5736	18	276750	5122000	46.217	-77.894	311104
5737	18	282825	5116500	46.169	-77.813	311104
5738	18	313430	5100060	46.031	-77.411	311103
5739	18	337950	5066800	45.918	-77.090	310614
5740	18	350375	5064975	45.904	-76.929	310615
5741	18	341200	5074425	45.807	-77.044	310614
5742	18	330275	5079800	45.853	-77.186	310614
5743	18	317640	5066775	45.732	-77.344	310611
5744	18	348800	5040835	45.507	-76.935	310610
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5746	18	369780	5049800	45.592	-76.669	310610
5747	18	373570	5059850	45.683	-76.623	310610
5748	18	371390	5074275	45.812	-76.655	310615
5749	18	363600	5080860	45.870	-76.757	310615
5750	18	362500	5075150	45.818	-76.770	310615
5751	18	355150	5066140	45.736	-76.862	310610
5752	18	353650	5054200	45.628	-76.877	310610
5753	18	393050	5069875	45.776	-76.376	310616
5754	18	386900	5076675	45.836	-76.456	310616
5755	18	407575	5075220	45.826	-76.190	310616
5756	18	384000	5050300	45.599	-76.487	310609
5757	18	403250	5041300	45.520	-76.239	310609
5758	18	415400	5042050	45.529	-76.083	310609
5759	18	347175	5027625	45.389	-76.952	310607
5760	18	363925	5033625	45.445	-76.740	310607
5761	18	394430	5031820	45.434	-76.350	310608
5762	18	399210	5020430	45.332	-76.286	310608
5763	18	418400	5021250	45.342	-76.042	310608
5764	18	405600	5008325	45.224	-76.200	310601
5765	18	408920	4997250	45.125	-76.158	310601
5766	18	398600	4969350	45.052	-76.288	310601
5767	18	382650	5023650	45.358	-76.498	310608
5768	18	363900	5016975	45.295	-76.736	310607
5769	18	373200	5010050	45.234	-76.615	310602

5770	18	348200	5008300	45.218	-76.933	310602
5771	18	348250	4956750	44.750	-76.942	310310
5772	18	366000	4961500	44.796	-76.694	310315
5773	18	362000	4969000	44.863	-76.747	310315
5774	18	366750	4977600	44.941	-76.689	310315
5775	18	378500	4980600	44.972	-76.541	310315
5776	18	390000	4979000	44.958	-76.395	310316
5777	18	381700	4966550	44.843	-76.497	310316
5778	18	367000	4947700	44.672	-76.678	310310
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5780	18	365300	4926250	44.479	-76.694	310307
5781	18	365150	4914900	44.377	-76.693	310307
5782	18	354000	4910750	44.337	-76.831	310307
5783	18	350650	4939500	44.595	-76.882	310310
5784	18	402250	4972300	44.899	-76.238	310316
5785	18	411250	4971250	44.891	-76.124	310316
5786	18	418550	4972000	44.899	-76.032	310316
5787	18	411400	4958375	44.775	-76.120	310316
5788	18	405750	4950400	44.703	-76.190	310309
5789	18	395500	4944500	44.648	-76.318	310309
5790	18	389375	4948200	44.681	-76.396	310309
5791	18	393750	4960250	44.790	-76.343	310316
5792	18	378750	4921250	44.436	-76.523	310307
5793	18	385500	4933000	44.543	-76.441	310309
5794	18	410250	4939750	44.607	-76.131	310309
5795	18	410700	4929300	44.518	-76.124	310309
5796	18	397000	4921300	44.440	-76.294	310308
5797	18	384750	4905300	44.294	-76.445	310308
5798	18	357950	4893300	44.181	-76.777	310302
5799	18	343000	4902500	44.261	-76.967	310307
5800	17	632200	4764500	43.024	-79.378	301303
5801	17	607500	4760750	42.994	-79.681	301213
5802	17	587300	4761000	42.999	-79.929	301213
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5804	17	601750	4749550	42.894	-79.754	301213
5805	17	555000	4793000	43.290	-80.322	401608
5806	17	567250	4789200	43.255	-80.172	401608
5807	17	559100	4807250	43.418	-80.270	401608
5808	17	555050	4816500	43.501	-80.319	401609
5809	17	556800	4833900	43.658	-80.296	401609
5810	17	575680	4825750	43.583	-80.063	401609
5811	17	569500	4811750	43.457	-80.141	401608
5812	17	604000	4776450	43.136	-79.721	301304
5813	17	586250	4777750	43.150	-79.939	301304
5814	17	528750	4775000	43.129	-80.647	401602
5815	17	541300	4778000	43.156	-80.492	401601
5816	17	542500	4765750	43.045	-80.478	401601
5817	17	526200	4763200	43.023	-80.678	401602
5818	17	514000	4762000	43.012	-80.828	401602
5819	17	503250	4761000	43.004	-80.960	401602
5820	17	549000	4717000	42.606	-80.403	400909
5821	17	556200	4719000	42.623	-80.290	400909
5822	17	513800	4778300	43.159	-80.830	401602
5823	17	525500	4790500	43.269	-80.686	401607

5824	17	541000	4795500	43.313	-80.494	401608
5825	17	541000	4804750	43.396	-80.494	401608
5826	17	542900	4823800	43.568	-80.469	401609
5827	17	543000	4838750	43.702	-80.466	401609
5828	17	547000	4853750	43.837	-80.415	401616
5829	17	552500	4855250	43.850	-80.347	401616
5830	17	575600	4863300	43.921	-80.053	401616
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5833	17	512500	4794500	43.305	-80.846	401607
5834	17	529500	4806000	43.408	-80.636	401607
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5836	17	530500	4830750	43.631	-80.622	401610
5837	17	530500	4851250	43.816	-80.621	401615
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5839	17	515000	4864250	43.933	-80.813	401615
5840	17	512300	4855250	43.852	-80.847	401615
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5842	17	513500	4823750	43.569	-80.833	401610
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5844	17	464500	4775000	43.129	-81.436	401603
5845	17	452600	4778000	43.155	-81.533	401604
5846	17	452100	4768750	43.252	-81.590	401605
5847	17	454000	4803700	43.387	-81.568	401605
5848	17	452150	4821900	43.550	-81.592	401612
5849	17	451650	4834100	43.660	-81.600	401612
5850	17	451200	4854250	43.842	-81.607	401613
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5853	17	470500	4855350	43.853	-81.367	401614
5854	17	469250	4841000	43.723	-81.382	401611
5855	17	503250	4750750	42.911	-80.960	400915
5856	17	503000	4751000	42.914	-80.963	400915
5857	17	502750	4751250	42.916	-80.966	400915
5858	17	494300	4790000	43.265	-81.070	401606
5859	17	494500	4806250	43.411	-81.068	401606
5860	17	492250	4822250	43.555	-81.096	401611
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5868	17	484250	4777250	43.150	-81.194	401603
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5870	17	482300	4805200	43.401	-81.219	401606
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5875	17	448450	4747000	42.876	-81.631	400913
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5877	17	423500	4744500	42.851	-81.936	400913

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5880	17	408300	4750000	42.899	-82.123	401016
5881	17	404000	4759200	42.981	-82.170	401016
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5883	17	395750	4751500	42.911	-82.277	401016
5884	17	395000	4733900	42.752	-82.283	401016
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5887	17	383750	4704000	42.489	-82.415	401008
5888	17	395750	4714750	42.580	-82.270	401009
5889	17	406750	4713200	42.568	-82.136	401009
5890	17	404400	4692750	42.383	-82.161	401008
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5893	17	379950	4672050	42.193	-82.454	401001
5894	17	378200	4660900	42.093	-82.473	401001
5895	17	361950	4662400	42.103	-82.670	401002
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5897	17	351500	4675000	42.215	-82.799	401002
5898	17	572000	4920550	44.437	-80.095	410103
5899	17	574000	4906000	44.305	-80.072	410108
5900	17	576000	4894200	44.199	-80.049	410101
5901	17	571000	4884600	44.113	-80.113	410101
5902	17	560750	4882800	44.098	-80.241	410101
5903	17	559000	4898250	44.237	-80.261	410101
5904	17	556700	4910000	44.343	-80.289	410108
5905	17	562900	4923100	44.460	-80.209	410108
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5907	17	542750	4880550	44.079	-80.466	410101
5908	17	528450	4879000	44.066	-80.645	410102
5909	17	515500	4881000	44.084	-80.806	410102
5910	17	498750	4882500	44.098	-81.016	410103
5911	17	483500	4883500	44.106	-81.206	410103
5912	17	466000	4861200	44.085	-81.425	410103
5913	17	454200	4884750	44.116	-81.572	410104
5914	17	455700	4891500	44.177	-81.554	410104
5915	17	467200	4895200	44.211	-81.411	410103
5916	17	473750	4895250	44.212	-81.329	410103
5917	17	496250	4894600	44.207	-81.047	410103
5918	17	517300	4892000	44.183	-80.784	410102
5919	17	531500	4894900	44.209	-80.606	410102
5920	17	530650	4910000	44.345	-80.615	410107
5921	17	513500	4916500	44.404	-80.830	410107
5922	17	528100	4903250	44.284	-80.648	410107
5923	17	540250	4906200	44.310	-80.495	410108
5924	17	528700	4928250	44.509	-80.639	410110
5925	17	516700	4931600	44.539	-80.790	410110
5926	17	496250	4929000	44.516	-81.047	410111
5927	17	517000	4947050	44.679	-80.786	410110
5928	17	531000	4941000	44.624	-80.609	410110
5929	17	534000	4937650	44.593	-80.572	410110
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5931	17	626150	4941050	44.613	-79.385	310411

5932	17	020425	4940000	44.611	-79.382	310411
5933	17	027720	4940450	44.608	-79.390	310411
5934	17	027800	4941150	44.614	-79.389	310411
5935	17	026050	4940500	44.609	-79.404	310411
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5937	17	490000	4915300	44.393	-81.043	410106
5938	17	481150	4913550	44.377	-81.237	410106
5939	17	400000	4910500	44.349	-81.427	410106
5940	17	458500	4914750	44.387	-81.521	410105
5941	17	470000	4920750	44.495	-81.377	410106
5942	17	480000	4933500	44.557	-81.214	410111
5943	17	480500	4939400	44.610	-81.208	410111
5944	17	497400	4946000	44.669	-81.033	410111
5945	17	498500	4956200	44.761	-81.019	410114
5946	17	477750	4952750	44.730	-81.281	410111
5947	17	498750	4966000	44.849	-81.016	410114
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SAMP	---	-----UTM-----	LAT	LONG	NTS	
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5954	17	027620	4941250	44.615	-79.392	310411
5955	17	027075	4940975	44.613	-79.398	310411
5956	17	026190	4941475	44.618	-79.410	310411
5957	17	026225	4942100	44.623	-79.409	310411
5958	17	026280	4942650	44.628	-79.408	310411
5959	17	027850	4942850	44.630	-79.388	310411
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5962	17	029000	4949175	44.686	-79.372	310411
5963	17	030450	4951125	44.704	-79.353	310411
5964	17	028630	4951000	44.703	-79.376	310411
5965	17	027880	4947600	44.672	-79.387	310411
5966	17	020790	4945700	44.655	-79.401	310411
5967	17	031150	4953630	44.546	-79.349	310411
5968	17	040900	4954200	44.549	-79.226	310411
5969	17	041050	4952445	44.533	-79.225	310411
5970	17	039820	4926525	44.480	-79.242	310406
5971	17	035800	4923175	44.451	-79.293	310406
5972	17	033000	4922000	44.446	-79.329	310406
5973	17	017375	4918100	44.409	-79.526	310405
5974	17	012790	4916475	44.395	-79.584	310405
5975	17	008775	4914250	44.375	-79.635	310405
5976	17	004640	4915000	44.383	-79.686	310405
5977	17	018450	4905300	44.293	-79.515	310405
5978	17	017050	4900550	44.251	-79.526	310405
5979	17	017900	4897500	44.223	-79.524	310404
5980	17	065330	5012100	45.245	-78.893	310502
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5903	17	663405	5005470	45.185	-78.856	310502
5904	17	669450	5002475	45.157	-78.844	310502
5985	17	669850	5000050	45.135	-78.840	310502
5986	17	672150	4997975	45.116	-78.811	310502
5987	17	672850	4999000	45.126	-78.802	310502
5988	17	658525	5020000	45.323	-78.977	310507
5989	17	662040	5026225	45.373	-78.923	310507
5990	17	670225	5042650	45.517	-78.713	310510
5991	17	679400	5044450	45.532	-78.702	310510
5992	17	679830	5051850	45.599	-78.694	310510
5993	17	684325	5046000	45.551	-78.639	310510
5994	17	684750	5048120	45.564	-78.633	310510
5995	17	688150	5048500	45.567	-78.589	310510
5996	17	687000	5046655	45.550	-78.597	310510
5997	17	693250	5049700	45.576	-78.523	310510
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6000	17	699900	5048400	45.562	-78.439	310509
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6018	17	688950	5007560	45.198	-78.594	310502
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6021	17	690175	5011175	45.230	-78.577	310502
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6023	17	694900	5013800	45.253	-78.516	310507
6024	17	692175	5003660	45.162	-78.555	310502
6025	17	689200	4997825	45.111	-78.595	310502
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6027	17	697020	5001100	45.138	-78.494	310501
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6095	17	712925	5375750	48.501	-78.118	320409
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0185	18	271350	4886300	44.096	-77.856	310304
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6201	18	456300	5016250	45.300	-75.532	310705
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6215	18	432200	4938250	44.596	-75.854	310212
6216	18	441700	4956500	44.761	-75.737	310213
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6228	18	491750	5002150	45.175	-75.105	310703
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6232	18	451125	5042300	45.534	-75.626	310712
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0269	10	566250	4983650	45.005	-74.159	310701
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0277	10	543500	5047500	45.582	-74.442	310709
0278	10	343050	5040735	45.504	-77.009	310611

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