

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Geochemical analyses of samples from the Bread Loaf Roadless Area,
Addison and Washington Counties, Vermont

by

M. S. Erickson, B. F. Arbogast, S. J. Sutley, B. F. Adrian 1/
and P. J. Atelsek 2/

Open-File Report 84-100

This report is preliminary and has not been reviewed for conformity with
U.S. Geological Survey editorial standards and stratigraphic nomenclature.

1/ U.S. Geological Survey, Denver, CO 2/ U.S. Geological Survey, Reston, VA

Abstract

Semiquantitative spectrographic analyses for 31 elements and atomic absorption analyses for gold and zinc are reported for 176 rocks, 208 soils, 72 stream sediments, and 18 panned concentrate samples from the Bread Loaf Roadless Area, Vermont. Sample locations are given in Universal Transverse Mercator (UTM) coordinates. Rock types analyzed include quartz-mica schist, quartzite-granofels, greenstone, and vein quartz.

Introduction

The analyses reported in this study are on 474 samples from the Bread Loaf Roadless Area in Washington and Addison counties, Vermont. The initial sample collection was conducted in the Fall of 1980 by J. F. Slack, R. A. Ayuso, A. E. Grosz, A. R. Pyke, R. L. Graves, P. J. Loferski, and M. P. Foose, all from the U.S. Geological Survey. These included 161 rocks, 208 soils, 64 stream sediments, and 18 panned concentrates taken in a uniform sample density over the 31 square mile area.

After some of the analyses suggested anomalous concentrations of base metals in one of the northern drainages, a resampling of this drainage was conducted in the Fall of 1981. J. F. Slack and R. A. Ayuso collected an additional 15 rock and 8 stream sediment samples. These samples are indicated by the 700 series sample numbers.

The spectrographic analyses were done by S. J. Sutley, M. S. Erickson, B. M. Adrian, and B. Bailey and the atomic absorption analyses were done by B. F. Arbogast, W. C. Martin, and R. J. Fairfield, all from the U.S. Geological Survey in Denver. Data compilation and report were done by P. J. Atelsek of the U.S. Geological Survey in Reston, Va..

Sampling Procedures

The rock samples are mainly representative chips taken over a 1-meter interval across the bedding. Some of the rock is partly weathered, but the freshest material available from a bedrock source was generally sampled.

Soil samples were obtained by digging below the surficial organic material and taking a grab sample from the lower A horizon or upper B horizon.

Stream sediment samples were taken in most of the first order drainages in the area, including some intermittent streams. Sampling was done by collecting several handfuls of the finest sediment available at the site.

Panned concentrate samples from the major drainages were obtained by collecting material from the slow-moving areas of the stream, sieving to minus 4-mesh and concentrating the heavy mineral fraction by standard panning techniques.

Analytical Techniques

Rock samples were crushed to 0.25 inch (6mm) and pulverized to minus 140-mesh (0.105mm) in a vertical grinder with ceramic plates. Soils and stream sediment samples were dried and sieved to minus 80-mesh (0.177mm), then pulverized to minus 140-mesh (0.105mm).

The panned concentrates were first air dried, then the magnetite in them was removed with a hand magnet. The remainder was separated at specific gravity 2.86 with bromoform. The heavy mineral fraction was then separated electromagnetically by a Frantz 1/ isodynamic separator set at forward and side angles of 20 degrees and an ampere setting of 0.6 A. The non-magnetic fraction had a 2 added to the sample number and the magnetic fraction had a 1 added. These two fractions were then ground with a mortar and pestle, and analyzed.

Each sample was analyzed semiquantitatively for 31 elements by a six-step, D. C. arc, optical emission spectrographic method (Grimes and Marranzino, 1968). Gold and zinc were also determined by an quantitative atomic absorption technique (Ward and others, 1969). Gold in the panned concentrate was not analyzed for by AA.

The semiquantitative spectrographic values are reported as six steps per order of magnitude (1, 0.7, 0.5, 0.3, 0.2, 0.15 or multiples of 10 of these numbers) and are approximate geometric midpoints of the concentration ranges. The precision is shown to be within one adjoining step on each side of the reported value 83 percent of the time and within two adjoining steps 96 percent of the time (Motooka and Grimes, 1976).

Explanation of Table

The table is divided according to sample type into 8 sections. Rock samples were subdivided lithologically into schist, quartzite-granofels, greenstone, and quartz vein. Panned concentrates are divided into magnetic and non-magnetic sections.

The letter suffix at the end of the sample number indicates the sample type: R - rock, S - soil, SS - stream sediment. Panned concentrates have no letter suffix but the final number indicates whether the sample is magnetic (1) or non-magnetic (2) at .6 amperes.

The X and Y coordinates are in Universal Transverse Merator (UTM) grid Zone 18, on the Lincoln, Bread Loaf, and Warren U.S. Geological Survey 7.5-minute Topographic Quadrangle Maps. The X coordinate is the easting value in meters; the Y coordinate is the northing value. Usually only the last five significant digits are shown.

Iron, magnesium, calcium, and titanium values are reported in percent (%); all others are in parts per million (ppm). Letters beneath chemical symbols indicate the methods of analysis: s, six-step semiquantitative spectrographic methods; aa, atomic absorption. Other symbols represented on the table are: N, not detected; --, not determined; <, amount detected is below the lowest limit of determination, which is the figure shown; >, amount detected is above the highest limit of determination.

1/ The use of brand names in this report is for descriptive purposes only and does not constitute endorsement by the U.S. Geological Survey.

The lower limits of determination for the 31 elements that were determined spectrographically are listed below. These limits are doubled for panned concentrates.

In percent:	Calcium	0.05	Magnesium	0.02
	Iron	0.05	Titanium	0.002
In ppm:	Antimony	100	Molybdenum	5
	Arsenic	200	Nickel	5
	Barium	20	Niobium	20
	Beryllium	1	Scandium	5
	Bismuth	10	Silver	0.5
	Boron	10	Strontium	100
	Cadmium	20	Thorium	100
	Chromium	10	Tin	10
	Cobalt	5	Tungsten	50
	Copper	5	Vanadium	10
	Gold	10	Yttrium	10
	Lanthanum	20	Zinc	200
	Lead	10	Zirconium	10
	Manganese	10		

The limits for gold and zinc determined by atomic absorption are variable and dependent on sample weight and element. Within each sample group elements for which nothing was detected have been omitted from the table, and are listed below:

Soils -- As, Au, Cd, Sb, Th, W

Stream Sediments -- As, Au, Bi, Cd, Sb, Th, W

Panned Concentrates (magnetic) -- As, Bi, Cd, Mo, Sb, W, Au (aa)

Panned Concentrates (non-magnetic) -- As, Bi, Cd, Mo, Sb, W, Au (aa)

Schists -- Au, Bi, Cd, Sb, Sn, Th, W

Quartzite - granofels -- As, Au, Sb, Sn, Th, W

Greenstone -- As, Au, Bi, Cd, Mo, Sb, Sn, Th, W, Zn, Au (aa)

Vein quartz -- Ag, As, Au, Bi, Cd, Mo, Nb, Sb, Sn, Th, W, Zn, Au (aa)

References

- Grimes, D. J., and Marranzino, A. P., 1968, Direct-current arc and alternating-current spark emission spectrographic field methods for the semiquantitative analysis of geologic materials: U.S. Geological Survey Circular 591, 6 p.
- Motooka, J. M., and Grimes, D. J., 1976, Analytical precision of one-sixth order semiquantitative spectrographic analyses: U.S. Geological Survey Circular 738, 25 p.
- Slack, J. F., and Atelsek, P. J., in press, Geochemical survey of the Bread Loaf Roadless Area, Addison and Washington Counties, Vermont: U.S. Geological Survey Miscellaneous Field Studies Map MF 1625-C.
- Ward, F. N., Nakagawa, H. M., Harms, T. F., and Van Sickle, G. H., 1969, Atomic absorption methods of analysis useful in geochemical exploration: U.S. Geological Survey Bulletin 1289, 45 p.

BREADLOAF SCHISTS

Sample	X coordinate	Y coordinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Co-ppm s
101R	68,640	65,910	1.5	.30	.07	.50	500	N	N	100	700	1.5	15
103R	67,920	80,800	3.0	.30	.05	.70	700	N	N	50	500	1.0	15
105R	67,990	80,090	2.0	1.50	.15	.50	500	N	N	70	700	1.0	15
106R	67,990	79,890	1.5	1.50	<.05	.30	500	N	N	100	1,000	1.0	15
107R	67,990	79,810	2.0	.70	.05	.50	1,000	N	N	200	500	1.5	20
108R	67,850	79,560	2.0	.70	.05	.50	1,000	N	N	100	500	1.5	20
115R	69,340	78,510	2.0	1.00	.07	.50	700	N	N	100	500	1.0	20
119R	68,790	77,830	2.0	1.00	.10	.50	500	N	N	100	700	1.0	15
121R	68,510	77,720	2.0	.50	.05	.50	500	N	N	100	700	2.0	10
125R	68,300	78,740	2.0	1.00	.05	.30	300	N	N	70	1,000	1.5	10
129R	69,960	74,930	2.0	.70	.05	.50	300	N	N	70	700	1.0	15
133R	70,000	75,950	3.0	1.00	.05	.70	2,000	N	N	100	700	1.5	20
204R	67,490	79,840	1.0	1.00	.07	.30	300	N	N	50	1,000	1.0	10
211R	69,590	79,260	1.5	1.00	.05	.70	500	N	N	50	700	1.0	10
213R	69,270	79,350	3.0	.70	.20	.70	700	N	N	100	700	2.0	15
215R	68,730	79,100	2.0	.70	.05	.50	500	N	N	70	500	1.5	20
223R	69,560	77,100	1.0	.30	<.05	.30	100	N	N	30	1,000	1.0	5
224R	69,520	77,460	1.5	1.00	<.05	.50	300	<.5	N	70	500	1.0	10
225R	69,740	77,690	3.0	1.00	.05	.50	1,000	N	N	50	300	1.5	20
227R	70,150	78,200	2.0	.70	.05	.50	300	N	N	70	500	1.0	10
235R	64,590	71,270	1.0	.30	.05	.30	150	N	N	50	500	1.0	15
236R	64,910	71,240	1.5	.50	.05	.70	200	N	N	30	1,000	1.0	15
237R	65,170	71,660	2.0	.30	.05	.50	300	N	N	50	300	1.5	15
243R	66,790	77,210	3.0	.50	.05	.50	700	N	N	30	1,500	1.5	20
246R	67,070	76,820	3.0	.30	.05	.50	500	N	N	70	500	1.5	20
249R	66,410	76,630	5.0	.30	.05	.70	1,000	N	N	70	500	1.0	20
253R	66,390	82,610	3.0	1.00	.05	.50	1,000	N	N	70	700	1.0	20
257R	66,190	81,170	2.0	.50	.05	.50	1,500	N	N	150	700	1.0	15
260R	65,450	80,150	2.0	1.50	<.05	.30	100	N	N	100	700	1.0	7
263R	66,570	74,470	1.5	1.00	.05	.50	1,000	N	N	50	500	1.0	20
267R	66,150	73,950	1.0	.70	<.05	.20	500	N	N	20	500	<1.0	15
268R	65,740	73,890	3.0	.70	.10	.50	1,500	N	N	50	500	1.0	20
269R	64,890	69,470	2.0	1.00	.05	.50	300	N	N	50	700	1.0	15
282R	65,440	68,350	3.0	.50	.07	.50	2,000	N	N	50	700	1.5	10
286R	67,070	76,820	5.0	.50	<.05	.30	1,500	N	N	100	500	1.5	20
303R	68,370	80,680	7.0	2.00	.07	.70	500	<.5	N	200	700	<1.0	15
306R	68,920	80,080	5.0	1.50	1.00	1.00	500	N	N	15	N	N	30
309R	69,460	80,720	1.5	.50	.05	.50	1,000	N	N	20	700	1.0	15
311R	69,480	81,230	2.0	.50	.05	.70	300	N	N	20	300	1.0	15
317R	66,610	80,420	2.0	.70	.70	.30	700	.5	N	50	2,000	1.0	15
319R	66,160	79,850	5.0	.50	<.05	.70	2,000	N	N	30	200	1.0	30
322R	70,000	79,270	.5	.10	.07	.20	70	<.5	N	50	500	<1.0	N
325R	69,300	79,480	2.0	.70	.05	.50	2,000	N	N	100	700	1.0	20
329R	68,930	79,700	2.0	.70	.20	.50	1,000	N	N	70	700	1.0	15
332R	69,480	80,320	2.0	.50	.05	.70	300	N	N	50	700	1.0	10

BREADLOAF SCHISTS

Sample	Cr-ppm S	Cu-ppm S	La-ppm S	Mo-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S	Zr-ppm S
101R	70	15	50	N	<20	20	50	15	100	70	30	N	100
103R	100	10	30	N	<20	30	30	15	<100	70	20	<200	70
105R	100	30	20	N	<20	20	50	10	<100	70	20	<200	70
106R	70	50	<20	<5	N	20	30	10	<100	100	15	200	70
107R	70	<5	30	N	<20	30	70	15	100	50	20	200	50
108R	70	<5	30	N	<20	30	70	15	100	70	20	200	70
115R	150	30	20	N	<20	50	50	15	150	70	20	<200	100
119R	100	100	<20	5	<20	50	30	10	<100	70	15	<200	100
121R	100	30	<20	N	<20	30	70	15	150	70	30	<200	70
125R	70	10	<20	N	<20	20	30	10	100	100	15	200	70
129R	100	50	20	5	<20	30	20	15	100	70	30	200	100
133R	100	50	20	N	<20	30	50	15	100	70	20	200	100
204R	70	30	<20	N	<20	20	15	10	<100	100	20	<200	100
211R	100	15	30	N	<20	30	20	10	<100	70	20	<200	150
213R	100	20	50	N	<20	30	30	15	100	70	30	<200	100
215R	100	30	30	N	<20	50	50	10	<100	50	20	200	70
223R	70	30	50	10	<20	20	15	15	100	150	15	<200	100
224R	70	20	50	N	<20	30	30	15	100	100	20	<200	100
225R	100	30	<20	N	<20	50	50	20	150	100	30	200	100
227R	100	30	<20	N	<20	30	10	10	100	100	20	<200	100
235R	50	15	N	N	<20	20	30	10	<100	70	15	<200	100
236R	70	10	<20	N	<20	15	30	15	100	100	20	<200	100
237R	70	10	<20	N	<20	30	30	15	100	70	20	<200	70
243R	100	10	30	N	<20	30	50	15	200	70	30	200	70
246R	70	7	<20	N	<20	30	50	15	150	70	20	<200	70
249R	100	7	<20	N	<20	30	50	20	100	70	30	200	70
253R	70	15	N	N	<20	50	30	15	100	70	15	200	70
257R	50	10	N	N	<20	30	30	15	<100	50	20	<200	150
260R	100	15	<20	7	<20	15	30	10	<100	150	15	<200	100
263R	70	10	<20	N	<20	20	50	15	100	100	20	<200	100
267R	50	5	N	N	N	20	20	15	100	70	10	N	50
268R	100	5	N	N	N	50	50	20	150	100	10	<200	100
269R	70	7	<20	N	<20	30	50	15	100	100	15	200	70
282R	70	20	<20	N	<20	15	70	20	200	70	20	<200	50
286R	50	5	N	N	N	30	70	15	150	70	50	200	50
303R	150	50	30	5	N	20	30	10	100	150	20	200	150
306R	70	70	20	N	<20	20	10	20	100	150	30	<200	100
309R	70	15	<20	N	<20	20	30	15	100	50	20	N	150
311R	50	10	30	N	<20	20	50	10	<100	50	30	N	200
317R	70	50	30	<5	N	30	100	10	150	70	20	N	70
319R	100	<5	50	N	<20	30	50	15	N	70	50	200	70
322R	50	5	50	15	N	7	10	7	N	200	10	N	70
325R	100	20	30	N	<20	30	20	15	150	70	20	<200	100
329R	100	15	30	5	N	20	20	15	100	100	20	<200	150
332R	100	20	20	7	<20	10	30	15	150	100	15	N	150

BREADLOAF SCHISTS

Sample	Au-ppm aa	Zn-ppm aa
101R	N	100
103R	N	85
105R	N	120
106R	N	130
107R	N	150
108R	N	130
115R	N	110
119R	N	100
121R	N	100
125R	N	110
129R	N	95
133R	N	120
204R	N	75
211R	N	70
213R	N	75
215R	N	110
223R	N	65
224R	N	75
225R	N	140
227R	N	70
235R	N	75
236R	N	70
237R	N	70
243R	N	100
246R	N	80
249R	N	45
253R	N	120
257R	N	90
260R	N	90
263R	N	80
267R	N	65
268R	N	110
269R	N	170
282R	N	190
286R	N	130
303R	N	150
306R	N	120
309R	N	80
311R	N	90
317R	N	75
319R	N	45
322R	N	20
325R	N	95
329R	N	90
332R	N	65

BREADLOAF SCHISTS

Sample	X coordinate	Y coordinate	Fe-pct. S	Mg-pct. S	Ca-pct. S	Ti-pct. S	Mn-ppm S	Ag-ppm S	As-ppm S	B-ppm S	Ba-ppm S	Be-ppm S	Co-ppm S
338R	70,070	80,040	3.0	1.00	.07	.50	300	N	N	50	500	<1.0	20
340R	70,690	80,360	2.0	.50	.70	.70	500	N	N	30	300	<1.0	15
343R	71,360	80,610	1.5	.30	.10	.50	500	N	N	70	500	1.0	15
349R	70,130	79,000	2.0	1.00	.05	.50	700	N	N	70	300	<1.0	15
359R	71,460	78,600	5.0	.70	.05	.70	2,000	N	N	50	700	1.0	30
369R	71,710	80,330	5.0	.50	.07	.70	1,500	N	N	100	700	1.0	20
376R	64,760	73,680	5.0	.50	.07	.50	1,000	N	N	100	500	1.0	20
378R	64,910	74,000	7.0	2.00	.07	.70	1,000	N	N	100	700	1.0	15
379R	65,510	73,120	10.0	1.50	.07	.70	700	.5	N	70	500	1.0	20
383R	67,170	77,690	10.0	1.00	.20	.70	1,500	N	N	150	700	1.0	50
386R	67,310	77,800	10.0	1.50	.07	.70	700	N	N	150	1,000	1.0	20
387R	67,390	77,810	7.0	.50	.10	.50	1,500	N	N	150	500	1.5	20
389R	67,520	77,050	10.0	1.00	.10	.70	1,500	N	N	200	500	1.0	30
392R	67,810	78,170	10.0	1.00	.05	.70	700	N	N	200	1,000	1.0	20
394R	67,960	77,590	10.0	1.00	.05	.70	1,000	N	N	200	1,500	1.0	15
396R	67,970	76,970	10.0	1.50	.07	.70	1,000	N	N	150	500	1.0	30
397RA	66,620	82,670	10.0	2.00	.20	1.00	1,500	N	N	500	500	<1.0	20
397RB	66,620	82,670	7.0	2.00	.10	.70	500	N	N	300	1,500	1.0	7
401RA	66,720	82,140	3.0	.50	.07	.50	700	N	N	50	700	1.5	50
401RB	66,720	82,140	2.0	.15	.07	.50	500	N	N	100	500	1.0	15
401RC	66,720	82,140	2.0	.30	.07	.70	1,000	N	N	50	700	1.0	20
404R	67,530	82,410	2.0	1.00	.05	.70	500	N	N	70	1,000	1.0	15
407R	67,540	82,910	2.0	.30	.05	.50	1,000	N	N	100	1,000	1.5	20
418RA	66,580	78,430	3.0	.20	.05	.50	1,000	N	N	100	700	1.5	20
418RB	66,580	78,430	3.0	1.50	2.00	.30	2,000	N	N	20	700	1.0	30
418RC	66,580	78,430	3.0	.70	.07	.50	1,500	N	N	20	1,000	1.0	15
419R	66,700	78,600	2.0	1.00	<.05	.50	300	N	N	70	1,000	2.0	20
423R	67,090	79,230	1.5	1.00	<.05	.50	100	N	N	30	1,000	1.0	7
430R	65,520	75,790	2.0	.70	.05	.30	200	N	N	50	700	1.0	10
433R	65,950	75,730	7.0	.70	.05	.70	1,000	N	N	30	1,500	1.5	20
435R	66,250	75,630	2.0	1.00	<.05	.50	200	N	N	50	700	1.0	10
437R	66,680	75,550	1.5	.15	.05	.20	500	N	N	50	300	1.0	15
446R	66,030	67,840	1.5	.70	.05	.70	200	N	N	100	500	1.0	15
463R	63,740	67,640	5.0	2.00	1.00	1.00	1,000	N	N	<10	150	N	30
467R	64,190	67,780	3.0	.70	1.00	.50	300	N	N	10	200	<1.0	10
470R	64,340	67,890	3.0	2.00	2.00	.70	500	N	N	10	<20	N	30
473R	64,870	68,110	5.0	2.00	1.50	.50	700	N	N	10	200	<1.0	20
482R	68,730	75,400	2.0	.70	.05	.70	500	N	N	15	700	1.5	15
485R	68,590	75,840	3.0	.50	.05	.70	1,500	<.5	N	100	500	1.0	20
486R	68,470	76,040	5.0	.15	.07	.70	1,000	N	N	200	500	2.0	20
492R	68,640	76,880	3.0	.50	<.05	.50	500	N	N	100	300	<1.0	15
494R	69,040	76,490	5.0	1.50	.05	.50	200	N	N	100	1,000	1.0	10
498R	67,060	72,440	5.0	1.00	<.05	.50	500	N	N	150	500	1.0	20
502R	66,690	67,520	5.0	.50	.05	.50	700	N	N	100	700	1.5	15
508R	66,750	66,400	5.0	.50	.05	.70	700	N	N	100	500	1.5	20

BREADLOAF SCHISTS/

Sample	Cr-ppm S	Cu-ppm S	La-ppm S	Mo-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S	Zr-ppm S
338R	150	100	30	5	<20	20	20	15	150	70	20	<200	100
340R	50	30	50	N	<20	15	15	10	150	50	30	N	150
343R	70	20	30	N	<20	20	30	15	100	70	20	<200	100
349R	70	20	20	N	<20	20	20	10	100	70	20	<200	100
359R	70	30	30	N	N	20	20	10	<100	70	20	N	500
369R	70	15	20	N	<20	20	50	15	100	50	15	N	200
376R	50	20	<20	N	N	20	20	10	<100	70	10	<200	100
378R	100	10	N	N	<20	20	70	15	100	100	15	200	100
379R	70	15	20	N	<20	20	50	15	150	70	15	200	70
383R	150	50	50	N	<20	50	50	20	150	70	30	200	100
386R	100	100	50	<5	<20	30	100	20	100	100	50	200	100
387R	70	5	50	N	<20	30	70	15	100	100	50	200	100
389R	100	20	70	N	20	50	70	15	100	70	50	200	100
392R	100	10	20	N	N	50	50	20	100	50	50	200	100
394R	100	10	20	N	<20	50	70	20	150	50	30	200	100
396R	100	30	20	N	<20	30	100	15	100	70	50	300	150
397RA	150	<5	30	<5	<20	30	70	15	100	200	30	200	500
397RB	100	70	20	N	N	7	100	10	100	100	10	200	70
401RA	100	<5	100	N	N	30	70	15	100	70	30	300	50
401RB	50	<5	50	N	N	15	50	15	<100	50	20	N	150
401RC	100	30	70	N	N	30	50	15	100	70	30	200	70
404R	150	30	N	7	N	20	30	15	100	100	30	200	100
407R	100	50	30	N	N	20	70	15	150	70	30	<200	70
418RA	100	<5	50	N	N	30	100	15	100	70	20	<200	70
418RB	70	50	50	N	N	50	100	10	100	70	20	N	70
418RC	100	<5	70	N	<20	30	100	20	100	70	50	200	50
419R	100	20	50	N	N	20	100	15	150	70	20	<200	100
423R	100	10	<20	7	<20	15	20	10	100	100	20	<200	100
430R	70	15	20	5	N	30	30	10	<100	100	20	<200	100
433R	200	50	70	N	<20	30	70	20	200	70	30	200	70
435R	70	20	30	N	N	30	70	10	<100	100	15	<200	70
437R	50	7	N	N	N	30	20	10	<100	50	20	<200	70
446R	100	10	N	N	<20	20	30	15	<100	100	15	<200	100
463R	150	200	<20	N	<20	50	15	15	150	70	15	500	70
467R	50	<5	20	N	N	5	30	10	200	50	30	<200	100
470R	100	50	N	N	N	50	N	20	300	100	20	<200	70
473R	70	<5	<20	N	N	30	50	15	200	100	15	N	30
482R	70	5	30	<5	<20	50	50	10	100	100	20	<200	100
485R	70	20	30	N	N	30	70	20	100	70	50	200	70
486R	100	30	70	N	<20	50	100	20	150	100	30	200	70
492R	70	30	<20	N	N	20	30	15	100	50	15	200	50
494R	100	70	20	7	<20	10	30	15	<100	100	15	<200	70
498R	70	<5	50	N	N	50	50	15	100	70	20	200	50
502R	100	50	100	N	N	15	100	20	200	70	30	<200	100
508R	100	<5	50	N	<20	30	70	15	150	70	20	200	100

BREADLOAF SCHISTS/

Sample	Au-ppm aa	Zn-ppm aa
338R	N	95
340R	N	100
343R	N	80
349R	N	100
359R	N	75
369R	N	170
376R	N	100
378R	N	110
379R	N	140
383R	N	110
386R	N	120
387R	N	100
389R	N	130
392R	N	120
394R	N	90
396R	N	120
397RA	N	150
397RB	N	90
401RA	N	250
401RB	N	85
401RC	N	115
404R	N	130
407R	N	100
418RA	N	85
418RB	N	45
418RC	N	75
419R	N	140
423R	N	85
430R	N	80
433R	N	140
435R	N	70
437R	N	55
446R	N	100
463R	N	310
467R	N	120
470R	N	70
473R	.05	130
482R	N	130
485R	N	120
486R	N	180
492R	N	150
494R	N	130
498R	N	85
502R	N	120
508R	N	110

BREADLOAF SCHISTS

Sample	X coordinate	Y coordinate	Fe-pct. S	Mg-pct. S	Ca-pct. S	Ti-pct. S	Mn-ppm S	Ag-ppm S	As-ppm S	B-ppm S	Ba-ppm S	Be-ppm S	Co-ppm S
510R	66,990	66,280	5.0	.20	.05	.70	1,000	N	N	100	500	1.0	20
513R	69,050	74,200	3.0	1.00	.05	.50	300	N	N	100	700	1.0	15
514R	66,920	72,110	15.0	.20	<.05	.70	300	N	N	10	50	N	15
518R	67,530	75,140	5.0	.70	.05	.70	1,000	N	N	100	500	1.5	20
519R	67,340	75,560	7.0	.70	.05	.50	2,000	N	N	200	500	1.0	30
520R	67,910	75,740	5.0	.50	.07	.50	1,000	N	N	100	500	1.5	20
525R	68,840	75,090	3.0	.70	.10	.50	500	N	N	70	700	1.0	10
529R	66,850	72,040	5.0	.50	.05	.50	3,000	N	N	70	300	1.0	30
532R	66,220	71,350	5.0	.50	.10	.50	2,000	N	N	100	700	1.0	20
541R	64,630	75,180	7.0	.50	.05	.50	500	N	N	100	700	1.5	20
543R	64,190	75,200	7.0	.70	.05	.50	500	N	N	100	700	1.0	20
544R	64,120	75,650	5.0	.50	<.05	.70	500	N	N	100	700	1.0	15
545R	64,200	75,830	7.0	.70	.10	1.00	1,000	N	N	70	1,000	1.5	20
547R	63,870	75,730	7.0	1.00	.15	1.00	300	N	N	50	500	1.0	15
549R	63,570	76,080	5.0	1.00	.07	1.00	500	N	N	30	500	<1.0	15
552R	70,580	75,070	5.0	1.00	.07	.70	500	N	N	50	500	1.0	15
555R	70,550	75,510	7.0	.50	.15	.70	700	N	N	50	700	1.5	20
561R	71,550	79,660	5.0	.70	.07	1.00	1,500	N	N	200	700	1.0	20
564R	71,290	80,230	7.0	1.50	.20	.70	2,000	N	N	20	500	<1.0	20
572R	67,560	81,300	5.0	1.00	.05	.50	3,000	N	N	100	500	1.0	50
580R	71,260	79,320	5.0	.70	.05	.50	2,000	N	N	50	200	1.0	30
581RA	67,630	81,680	7.0	.10	<.05	.50	500	N	N	100	500	1.0	20
581RB	67,630	81,680	7.0	.15	<.05	.70	700	N	N	100	500	1.5	30
582R	67,560	81,710	5.0	.20	.07	.70	500	N	N	150	500	1.0	20
600R	66,660	72,380	7.0	1.00	.15	.50	1,000	N	N	100	300	1.0	30
603R	66,100	72,450	7.0	.70	.05	.50	500	N	N	50	700	1.0	20
606R	66,440	72,700	10.0	2.00	.10	.70	700	N	N	100	500	1.5	20
611R	63,330	74,720	5.0	1.50	.15	.70	1,000	N	N	30	200	1.0	20
615R	64,120	74,810	5.0	1.00	.10	.70	500	N	N	150	700	1.0	15
622R	71,380	77,190	5.0	1.00	.30	.70	700	N	N	30	500	1.5	15
624R	71,330	77,790	5.0	1.00	.05	.70	1,000	N	N	100	1,000	1.0	10
628R	71,280	78,220	5.0	.50	.15	.70	700	N	N	50	700	1.0	15
631R	70,920	78,490	10.0	3.00	.70	1.00	2,000	N	N	50	N	N	50
632R	70,800	78,440	.3	.05	.05	.03	300	N	N	N	50	N	<5
654R	66,380	73,460	10.0	.70	.10	.50	2,000	N	N	100	500	<1.0	15
656R	72,030	79,850	.3	.10	<.05	.05	100	N	N	N	100	N	N
658R	72,140	80,090	3.0	.50	.07	.70	700	N	N	100	500	1.5	20
659R	72,570	79,950	5.0	1.00	.05	.70	700	N	N	30	500	1.0	20
745RA	666,470	882,460	15.0	3.00	.15	.70	700	N	N	1,000	5,000	1.5	30
748R	666,360	882,270	15.0	2.00	.15	1.00	1,000	N	N	.70	1,500	1.5	15
749R	666,330	882,290	10.0	1.00	.07	.50	1,000	N	N	50	1,500	2.0	7
750R	666,330	882,250	15.0	1.50	.15	1.00	>5,000	N	N	30	1,000	1.5	70
751R	665,310	882,230	10.0	2.00	.10	.70	2,000	N	N	200	1,000	2.0	70
752R	666,290	882,190	10.0	2.00	.15	1.00	1,000	N	N	50	2,000	3.0	50
753R	666,480	882,350	15.0	2.00	.30	1.00	5,000	N	N	20	700	2.0	70

BREADLOAF SCHISTS

Sample	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s
510R	100	10	30	N	<20	30	70	20	150	50	30	<200	100
513R	70	20	50	5	<20	20	20	10	100	70	20	<200	100
514R	20	10	<20	N	N	20	N	7	N	100	30	<200	15
518R	100	7	100	N	<20	30	50	20	100	70	30	<200	100
519R	100	<5	<20	N	<20	50	70	20	100	70	30	200	100
520R	150	10	20	N	<20	50	70	15	150	50	70	200	100
525R	100	20	100	10	<20	20	100	15	150	100	30	<200	70
529R	70	<5	100	N	<20	50	50	15	<100	50	50	200	100
532R	100	20	70	N	<20	30	50	20	100	70	20	200	70
541R	70	15	20	N	<20	20	50	10	100	70	20	<200	100
543R	70	7	N	N	<20	30	20	15	<100	70	20	<200	100
544R	50	<5	20	N	<20	20	20	10	<100	70	30	N	500
545R	200	<5	<20	N	<20	30	70	15	150	70	20	<200	200
547R	70	15	<20	N	<20	20	50	15	100	100	20	200	150
549R	70	30	<20	N	<20	20	15	15	100	70	20	N	700
552R	50	15	<20	N	<20	15	20	10	<100	70	20	<200	700
555R	50	20	50	N	<20	20	20	15	100	70	20	<200	200
561R	70	50	<20	N	<20	30	50	10	100	70	15	<200	200
564R	100	30	<20	N	N	50	30	15	100	100	20	<200	150
572R	100	<5	50	N	<20	70	50	15	100	50	30	300	70
580R	70	20	<20	N	<20	50	20	10	<100	50	15	200	100
581RA	100	30	50	N	<20	50	50	15	100	70	30	200	100
581RB	100	5	70	N	<20	70	100	15	100	70	70	200	50
582R	100	50	50	N	<20	50	150	15	150	70	50	<200	70
600R	70	50	70	N	N	70	30	15	<100	70	30	200	100
603R	70	200	<20	N	N	100	50	10	100	70	15	200	70
606R	150	70	100	N	<20	50	100	15	200	100	50	500	100
611R	70	10	50	N	N	30	30	15	100	100	30	<200	300
615R	100	15	<20	N	<20	30	70	15	<100	70	20	200	150
622R	50	7	50	N	<20	30	30	15	<100	70	30	<200	200
624R	100	20	20	5	<20	20	20	10	<100	100	20	N	200
628R	50	10	50	N	<20	20	30	10	150	70	20	<200	300
631R	500	50	N	N	N	500	15	20	<100	200	15	200	30
632R	N	7	N	N	N	10	N	5	N	20	<10	N	50
654R	100	70	50	N	<20	50	50	15	<100	150	20	200	70
656R	N	10	N	N	N	5	N	5	N	20	<10	N	70
658R	70	50	30	N	N	30	20	15	150	50	20	<200	100
659R	200	10	<20	N	<20	70	<10	10	<100	70	15	<200	200
745RA	300	300	70	20	<20	150	100	30	N	500	100	N	500
748R	500	100	N	70	20	30	100	50	200	300	30	200	200
749R	150	50	N	N	<20	10	70	20	150	150	20	N	100
750R	300	10	100	N	20	150	100	30	<100	200	100	200	200
751R	150	5	N	N	<20	150	70	20	<100	150	70	200	100
752R	300	20	N	N	<20	100	100	30	200	200	50	300	200
753R	300	5	100	N	20	150	70	30	<100	200	70	300	150

BREADLOAF SCHISTS/

Sample	Au-ppm aa	Zn-ppm aa
510R	N	65
513R	N	90
514R	N	35
518R	N	45
519R	N	65
520R	N	110
525R	N	80
529R	N	50
532R	N	130
541R	N	95
543R	N	90
544R	N	75
545R	N	100
547R	N	100
549R	N	85
552R	N	70
555R	N	60
561R	N	95
564R	N	80
572R	N	240
580R	N	140
581RA	N	130
581RB	N	110
582R	N	130
600R	N	140
603R	N	100
606R	N	260
611R	N	95
615R	N	110
622R	N	75
624R	N	50
628R	N	85
631R	N	100
632R	N	10
654R	N	80
656R	N	10
658R	N	75
659R	N	120
745RA	N	10
748R	N	75
749R	N	50
750R	N	75
751R	N	150
752R	N	150
753R	N	70

BREADLOAF SCHISTS/

Sample	X coordinate	Y coordinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Co-ppm s
758R	666,800	882,610	5.0	1.00	.07	.70	500	N	200	100	2,000	2.0	10
759R	666,840	882,680	7.0	1.50	.05	1.00	150	.7	N	100	5,000	2.0	N

BREADLOAF SCHISTS

Sample	Cr-ppm S	Cu-ppm S	La-ppm S	Mo-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S	Zr-ppm S
758R	200	70	50	<5	20	20	30	20	<100	200	50	N	150
759R	200	70	50	N	20	<5	50	20	150	150	20	N	200

BREADLOAF SCHISTS/

Sample	Au-ppm aa	Zn-ppm aa
758R	N	40
759R	N	25

BREADLOAF QUARTZITE-GRANOFELS SAMPLES

Sample	X coord- dinate	Y coord- dinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s
363R	72,000	79,580	5.0	.70	.07	.70	700	N	30	300	<1.0	N	N
365R	72,040	79,850	.2	.05	<.05	.03	200	N	20	N	N	N	N
399R	66,640	82,300	1.0	.03	.05	.50	1,500	.5	150	200	<1.0	<10	<20
439R	64,930	66,910	.7	.10	.05	.10	100	N	N	500	<1.0	N	N
441R	65,230	67,310	1.0	.10	<.05	.30	150	N	<10	300	<1.0	N	N
443R	65,050	67,610	1.0	.30	.07	.50	300	N	200	200	<1.0	N	N
455R	64,330	69,250	2.0	.50	.15	.50	150	N	20	200	<1.0	N	N
457R	64,830	69,470	2.0	.50	.05	.50	150	N	15	700	<1.0	N	N
573R	67,450	81,360	7.0	1.00	.05	.70	2,000	N	150	500	1.0	N	N
656R	72,030	79,850	.3	.10	<.05	.05	100	N	N	100	N	N	N
663R	73,040	77,790	2.0	.07	<.05	.70	200	N	50	500	1.0	N	N
664RB	73,170	79,900	5.0	1.00	.70	.70	700	N	10	20	1.0	N	N
742RA	666,590	882,550	20.0	5.00	.15	1.00	5,000	N	20	1,000	1.0	N	N
742RB	666,590	882,550	10.0	3.00	.10	.70	3,000	N	50	700	1.0	N	N
742RC	666,590	882,550	7.0	2.00	.07	.70	2,000	N	150	2,000	1.5	N	N
745RB	666,470	882,460	1.0	.20	.15	.50	500	N	500	500	1.0	N	N
746R	666,450	882,420	2.0	.50	.10	1.00	3,000	N	200	1,000	1.5	N	N
747R	666,420	882,380	.7	.20	.05	.30	500	N	1,000	500	1.0	N	N

BREADLOAF QUARTZITE-GRANOFELS SAMPLES

Sample	Co-ppm S	Cr-ppm S	Cu-ppm S	La-ppm S	Mo-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S
363R	20	70	20	30	N	N	20	30	10	100	100	20	N
365R	N	<10	5	N	N	N	7	<10	N	N	15	N	N
399R	15	<10	7	30	7	<20	N	200	5	N	30	20	1,000
439R	5	N	<5	100	N	N	<5	15	5	N	20	30	<200
441R	10	20	5	<20	N	<20	<5	10	7	N	30	15	N
443R	15	50	<5	20	N	N	20	20	10	150	70	20	N
455R	20	50	50	20	N	N	20	20	10	100	70	20	<200
457R	15	50	<5	N	N	N	15	20	10	100	50	20	<200
573R	30	150	30	70	N	<20	30	70	15	150	70	30	200
656R	N	N	10	N	N	N	5	N	5	N	20	<10	N
663R	15	50	7	N	N	<20	10	20	10	<100	50	15	N
664RB	20	70	15	50	N	<20	30	70	15	500	70	50	N
742RA	100	500	700	50	N	<20	150	70	50	N	300	100	N
742RB	70	200	700	50	N	<20	150	70	20	N	150	70	200
742RC	30	200	7	70	N	<20	100	30	20	N	100	30	<200
745RB	5	20	7	N	N	<20	5	10	<5	N	20	20	<200
746R	5	70	5	50	N	20	10	200	7	N	70	50	N
747R	5	30	<5	N	N	<20	5	10	<5	N	30	15	N

BREADLOAF QUARTZITE-GRANOFELS SAMPLES

Sample	Zr-ppm s	Au-ppm aa	Zn-ppm aa
363R	300	<.05	60
365R	150	N	5
399R	500	N	1,300
439R	100	N	10
441R	500	N	20
443R	100	N	85
455R	150	N	140
457R	100	N	80
573R	100	N	120
656R	70	N	10
663R	500	N	50
664RB	200	N	90
742RA	300	N	30
742RB	150	N	100
742RC	100	N	75
745RB	1,000	N	10
746R	>1,000	N	80
747R	500	N	50

BREADLOAF GREENSTONES

Sample	X coordinate	Y coordinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Co-ppm s	Cr-ppm s
220R	70,390	76,830	3	2.0	.50	.7	1,500	N	<10	100	<1	20	70
294R	64,440	70,130	5	1.0	1.00	.7	500	N	<10	N	<1	20	30
344R	71,260	80,560	3	1.5	3.00	.5	700	N	<10	N	N	30	300
351R	70,420	78,920	5	2.0	2.00	1.0	1,000	N	10	N	N	50	200
578R	67,810	81,630	7	.7	.05	.5	700	N	50	300	1	20	70
633R	70,700	78,420	10	2.0	5.00	.5	2,000	N	20	N	N	50	500
635R	70,400	78,220	10	3.0	5.00	.5	1,500	N	20	N	N	30	300
637R	70,870	79,200	5	1.5	.70	.7	1,000	N	20	300	<1	20	100
640R	70,740	79,430	7	3.0	2.00	.7	1,500	N	20	N	N	50	200
664RA	73,170	79,900	5	2.0	2.00	.7	1,000	.5	10	30	N	50	200

BREADLOAF GREENSTONES

Sample	Cu-ppm s	La-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s	Zn-ppm aa
220R	70	20	N	50	10	15	<100	70	20	70	110
294R	20	30	<20	7	10	20	100	100	50	100	55
344R	70	20	N	50	15	20	150	150	20	20	35
351R	150	30	N	70	20	20	200	100	20	50	65
578R	15	50	N	50	50	10	100	50	20	70	130
633R	100	<20	N	100	N	20	100	500	20	30	20
635R	30	<20	N	150	<10	30	<100	300	20	30	40
637R	50	100	N	30	20	20	100	150	30	150	65
640R	100	N	N	100	10	30	150	300	15	20	85
664RA	200	50	N	70	150	30	500	150	30	70	75

BREADLOAF QUARTZ VEIN SAMPLES

Sample	X coordinate	Y coordinate	Fe-pct. S	Mg-pct. S	Ca-pct. S	Ti-pct. S	Mn-ppm S	B-ppm S	Ba-ppm S	Be-ppm S	Co-ppm S	Cr-ppm S	Cu-ppm S
217Q	68,800	78,580	.05	.02	<.05	.005	20	N	20	N	N	N	<5
227Q	70,150	78,200	1.00	.15	<.05	.200	200	15	200	<1	10	50	10
246Q	66,880	75,970	.05	<.02	<.05	.005	30	N	N	N	N	N	<5
336Q	70,000	80,000	.05	.02	<.05	.020	200	N	N	N	N	N	<5
352Q	70,470	78,920	.10	.05	.05	.020	150	N	N	N	N	N	N
391Q	67,700	78,160	.30	.05	<.05	.030	100	<10	<20	N	N	N	5
421Q	66,850	78,860	.30	.05	<.05	.020	200	15	50	<1	N	N	5
448Q	66,360	67,880	.05	.02	<.05	.005	70	N	N	N	N	N	<5
483Q	68,720	75,430	.05	.02	<.05	.005	100	N	<20	N	N	N	<5
489Q	68,260	76,220	.10	.02	<.05	.010	100	N	N	N	N	N	<5
509Q	66,880	66,320	.05	<.02	<.05	.010	100	N	N	N	N	N	N

BREADLOAF QUARTZ VEIN SAMPLES

Sample	La-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zr-ppm s	Zn-ppm aa
217Q	N	<5	N	N	N	10	N	10	<5
227Q	N	15	30	7	<100	70	10	70	40
246Q	N	N	N	N	N	10	N	N	<5
336Q	<20	N	N	N	N	10	N	20	<5
352Q	N	5	N	N	N	10	N	20	<5
391Q	20	5	N	N	N	10	N	20	10
421Q	N	10	N	N	N	15	<10	30	15
448Q	N	N	N	<5	N	10	N	10	<5
483Q	N	N	N	N	N	15	N	10	<5
489Q	N	<5	N	N	N	10	N	<10	5
509Q	N	<5	N	N	N	<10	N	100	25

BREADLOAF STREAM SEDIMENTS

Sample	X coord- dinate	Y coord- dinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Co-ppm s	Cr-ppm s
102SS	67,920	80,920	5	1.0	.20	1.0	2,000	N	200	500	2.0	30	50
113SS	69,640	78,910	5	1.0	.50	1.0	2,000	N	150	300	2.0	30	50
116SS	69,120	78,420	5	1.0	.20	1.0	2,000	N	200	500	2.0	30	50
117SS	69,140	78,380	5	1.0	.20	>1.0	3,000	<.5	150	500	2.0	30	50
126SS	70,430	74,550	5	1.0	.30	1.0	1,500	N	150	300	2.0	20	50
127SS	70,370	74,630	5	1.0	.20	1.0	2,000	N	150	300	1.5	30	70
131SS	69,770	75,540	5	1.0	.30	1.0	2,000	N	150	500	2.0	30	70
140SS	71,270	76,460	3	1.0	.30	1.0	2,000	.7	100	300	2.0	30	50
200SS	67,690	80,810	7	1.0	.20	1.0	3,000	N	150	700	2.0	50	70
210SS	69,640	79,190	5	1.0	.70	.7	2,000	N	150	500	2.0	50	50
218SS	70,920	77,040	5	1.0	.50	>1.0	2,000	N	100	300	1.5	20	50
231SS	70,880	77,220	5	1.0	1.00	1.0	2,000	<.5	100	300	2.0	30	30
232SS	63,290	71,450	5	.7	.50	>1.0	3,000	<.5	100	300	2.0	50	50
242SS	63,480	72,460	5	.7	.20	1.0	2,000	N	150	500	2.0	30	20
244SS	66,830	77,190	5	.7	.15	1.0	>5,000	N	150	500	2.0	70	50
265SS	63,510	80,010	7	1.0	.20	1.0	5,000	N	100	500	2.0	50	70
266SS	63,310	80,050	5	1.0	.30	1.0	5,000	.5	150	500	3.0	70	50
273SS	65,310	75,610	7	1.0	.15	>1.0	>5,000	.5	200	500	2.0	200	70
274SS	65,210	75,670	5	.7	.20	>1.0	1,000	<.5	150	500	1.5	20	30
277SS	65,830	69,860	7	1.0	.20	>1.0	5,000	N	150	500	2.0	50	50
278SS	65,790	69,760	5	1.0	.20	1.0	3,000	<.5	150	500	2.0	30	50
288SS	66,270	68,460	5	1.0	.20	1.0	5,000	N	150	500	2.0	50	20
289SS	63,340	70,870	3	.7	.70	>1.0	1,000	.7	70	300	1.5	20	20
300SS	68,840	81,460	7	1.0	.50	>1.0	5,000	N	150	500	2.0	30	70
313SS	67,650	80,880	7	1.0	.20	1.0	2,000	N	150	500	2.0	50	70
321SS	70,000	79,260	7	1.0	.70	>1.0	3,000	<.5	100	300	1.5	20	70
337SS	70,050	79,990	7	1.5	.50	.7	3,000	<.5	100	500	2.0	50	100
346SS	70,490	80,490	5	1.5	.30	1.0	1,000	<.5	100	500	2.0	20	70
370SS	71,830	80,560	5	1.0	.70	.7	1,500	<.5	100	300	1.5	20	30
371SS	63,270	72,730	5	.7	.20	>1.0	3,000	<.5	100	300	2.0	30	30
381SS	66,890	77,510	7	1.0	.15	1.0	1,500	<.5	150	500	2.0	30	50
409SS	67,150	83,760	7	1.0	.20	1.0	1,000	N	200	500	2.0	20	50
410SS	67,010	83,380	7	1.0	.30	>1.0	1,000	N	200	700	2.0	30	70
411SS	66,870	83,430	5	1.0	.15	>1.0	1,000	N	150	500	2.0	20	50
415SS	66,130	78,220	7	1.0	.20	.7	1,000	N	150	700	2.0	20	70
416SS	66,240	78,170	7	1.5	.10	1.0	3,000	<.5	150	700	3.0	50	70
424SS	65,100	77,250	5	1.0	.20	1.0	1,500	<.5	100	500	2.0	30	50
425SS	65,220	77,390	3	1.0	.70	.7	700	<.5	100	300	2.0	20	30
427SS	65,040	76,400	5	.7	.20	1.0	700	N	150	500	2.0	20	30
429SS	65,200	75,680	5	.7	.10	>1.0	1,000	<.5	150	500	2.0	15	50
450SS	66,640	67,970	5	.7	.15	>1.0	1,000	N	100	500	2.0	50	50
452SS	63,050	68,980	5	.7	.50	>1.0	1,000	N	100	300	1.5	30	30
460SS	63,270	67,450	5	.7	.50	1.0	1,000	.7	100	200	1.5	15	20
474SS	62,880	68,010	5	.5	.30	1.0	700	.7	70	300	1.5	15	30
476SS	63,290	80,780	10	1.5	.30	1.0	1,000	.5	150	500	3.0	30	50

BREADLOAF STREAM SEDIMENTS

Sample	Cu -ppm s	La -ppm s	Mo -ppm s	Nb -ppm s	Ni -ppm s	Pb -ppm s	Sc -ppm s	Sn -ppm s	Sr -ppm s	V -ppm s	Y -ppm s	Zn -ppm s	Zr -ppm s
102SS	150	50	5	20	50	50	20	N	100	150	20	500	150
113SS	50	100	N	20	50	20	20	N	100	200	100	200	200
116SS	50	50	<5	20	70	50	20	N	100	200	30	300	200
117SS	50	50	N	30	70	30	20	N	100	150	30	300	150
126SS	30	50	N	20	50	50	20	N	150	150	50	<200	200
127SS	30	100	N	20	50	30	20	N	100	150	70	200	200
131SS	50	100	N	<20	50	50	30	N	150	150	50	200	200
140SS	50	50	<5	<20	50	50	30	N	200	150	50	200	200
200SS	50	100	5	20	100	50	30	N	200	150	50	500	150
210SS	50	100	N	<20	70	50	30	N	200	100	50	300	150
218SS	30	30	N	20	30	20	20	N	200	150	30	<200	150
231SS	50	100	N	20	50	30	20	N	200	150	50	<200	150
232SS	20	30	N	20	20	30	15	N	200	100	50	<200	700
242SS	20	100	N	<20	30	50	20	N	150	100	50	<200	200
244SS	50	100	5	<20	50	150	20	N	150	150	50	N	200
265SS	70	150	<5	20	70	100	20	N	200	150	50	500	150
266SS	50	70	5	20	50	50	20	N	200	100	30	500	200
273SS	70	70	5	30	50	100	20	N	150	100	70	N	200
274SS	30	70	N	30	30	30	15	N	100	100	50	N	200
277SS	30	100	5	30	50	50	20	N	150	100	100	300	300
278SS	20	100	7	30	50	50	20	N	150	100	50	300	200
288SS	20	100	N	30	50	50	20	N	150	100	30	200	200
289SS	15	50	<5	20	20	30	15	N	200	100	30	N	700
300SS	50	50	5	30	70	50	20	N	200	100	50	300	500
313SS	70	100	N	20	100	50	20	N	200	100	50	300	200
321SS	50	50	N	20	100	50	20	N	200	100	30	<200	300
337SS	50	100	N	N	100	70	30	N	200	150	100	<200	200
346SS	30	70	N	<20	100	50	20	N	200	100	30	N	500
370SS	20	70	N	<20	50	30	15	N	200	100	30	N	500
371SS	20	150	N	30	50	70	20	N	150	100	100	N	200
381SS	20	70	<5	20	50	50	20	N	200	150	50	<200	200
409SS	50	50	5	<20	50	50	20	N	150	100	30	200	150
410SS	50	100	<5	20	50	70	20	N	150	100	50	300	200
411SS	50	70	<5	20	30	30	20	N	<100	100	30	300	500
415SS	50	50	N	<20	50	30	20	N	100	150	50	500	150
416SS	70	100	<5	<20	50	50	30	N	100	100	20	500	200
424SS	30	50	N	20	30	50	30	N	200	100	50	300	700
425SS	20	30	N	N	20	20	20	N	200	100	30	<200	500
427SS	20	30	<5	20	30	30	20	N	150	100	30	<200	300
429SS	30	50	N	<20	30	30	20	N	150	100	30	N	700
450SS	30	100	N	N	30	50	20	N	100	150	70	N	700
452SS	20	70	N	20	20	30	20	N	200	100	50	N	>1,000
460SS	15	N	N	<20	20	15	15	N	200	100	50	<200	500
474SS	15	N	N	N	20	20	20	N	150	100	50	N	700
476SS	30	50	N	N	50	50	30	N	200	150	50	300	300

BREADLOAF STREAM SEDIMENTS

Sample	Au-ppm aa	Zn-ppm aa
102SS	N	130
113SS	N	100
116SS	N	95
117SS	N	70
126SS	N	65
127SS	N	80
131SS	N	90
140SS	N	75
200SS	N	140
210SS	N	70
218SS	N	45
231SS	N	110
232SS	N	160
242SS	N	105
244SS	N	75
265SS	N	160
266SS	N	140
273SS	N	50
274SS	N	75
277SS	.05	130
278SS	N	110
288SS	N	120
289SS	N	75
300SS	N	110
313SS	N	110
321SS	N	65
337SS	N	90
346SS	N	70
370SS	N	70
371SS	N	110
381SS	N	65
409SS	N	55
410SS	N	100
411SS	N	85
415SS	.05	70
416SS	N	100
424SS	N	75
425SS	N	40
427SS	N	50
429SS	N	50
450SS	N	70
452SS	N	70
460SS	N	40
474SS	N	60
476SS	N	90

BREADLOAF STREAM SEDIMENTS

Sample	X coordinate	Y coordinate	Fe-pct. %	Mg-pct. %	Ca-pct. %	Ti-pct. %	Mn-ppm S	Ag-ppm S	B-ppm S	Ba-ppm S	Be-ppm S	Co-ppm S	Cr-ppm S
477SS	64,510	82,040	7	1.5	.15	1.0	1,000	<.5	150	700	3.0	30	70
496SS	69,270	76,160	10	1.0	.20	1.0	2,000	1.0	200	500	2.0	30	50
497SS	67,150	72,420	10	1.0	.15	>1.0	>5,000	N	200	500	2.0	50	70
500SS	63,170	69,570	7	1.0	1.00	>1.0	1,000	N	150	300	1.5	20	30
512SSA	66,700	65,650	10	1.0	.20	>1.0	>5,000	N	150	300	2.0	70	50
512SSB	69,070	74,180	5	1.0	.30	1.0	2,000	N	300	700	3.0	30	50
514SS	69,050	74,280	10	1.0	.20	>1.0	3,000	N	200	500	2.0	50	50
523SS	68,800	75,100	7	1.0	.10	1.0	>5,000	<.5	100	300	3.0	70	50
524SS	68,840	75,160	10	1.0	.15	>1.0	>5,000	N	150	500	3.0	70	70
537SS	68,020	69,470	7	1.0	.20	>1.0	5,000	N	150	500	2.0	50	50
538SS	68,130	69,500	5	.7	.15	.7	>5,000	7.0	200	500	2.0	50	50
553SS	70,560	75,140	7	1.5	.20	1.0	5,000	5.0	150	500	2.0	50	50
557SS	71,090	76,110	5	1.0	.30	1.0	700	<.5	100	300	2.0	10	50
570SS	67,940	81,110	10	1.0	.20	1.0	5,000	N	200	500	3.0	70	70
577SS	67,920	81,600	10	1.5	.20	>1.0	5,000	<.5	200	500	2.0	50	70
609SS	67,320	72,570	10	1.0	.15	>1.0	>5,000	N	150	300	2.0	70	50
610SS	63,330	74,720	7	1.5	1.50	>1.0	5,000	N	70	300	2.0	30	30
618SS	63,270	74,090	7	1.0	.50	>1.0	5,000	N	100	500	2.0	30	50
620SS	72,380	75,930	7	1.0	.50	>1.0	3,000	N	100	300	1.5	20	50
743SS	666,520	882,560	3	1.5	.30	.3	2,000	<.5	200	1,500	2.0	20	100
744SS	666,530	882,530	3	1.5	.50	.5	2,000	.5	300	1,500	2.0	30	100
754SS	666,620	882,460	7	1.0	.15	1.0	700	.5	150	1,500	2.0	20	150
755SS	666,580	882,450	2	1.0	.30	1.0	3,000	N	150	700	1.5	30	100
756SS	666,610	882,510	2	.7	.50	.7	2,000	N	150	1,000	2.0	20	100
757SS	666,730	882,500	3	.7	.50	.7	2,000	.5	150	1,000	2.0	20	100
760SS	666,940	882,740	2	.7	.70	1.0	1,500	.7	150	700	2.0	15	100
761SS	666,610	882,720	3	1.5	.30	.5	2,000	N	150	2,000	2.0	30	150

BREADLOAF STREAM SEDIMENTS

Sample	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s
477SS	50	100	7	N	50	70	30	N	200	150	50	300	200
496SS	30	50	N	20	70	20	20	N	100	150	30	300	150
497SS	50	100	N	30	100	70	30	N	100	150	50	300	200
500SS	20	30	<5	<20	20	10	20	N	<100	100	20	<200	200
512SSA	100	100	N	20	70	50	20	N	<100	100	30	300	300
512SSB	50	100	5	20	100	100	20	N	100	150	50	300	200
514SS	70	150	N	20	100	50	30	N	100	150	50	300	200
523SS	100	150	N	<20	100	100	20	N	150	100	50	500	150
524SS	70	150	7	20	100	100	30	N	150	100	30	300	200
537SS	50	200	10	20	100	100	30	N	200	100	100	200	500
538SS	30	70	10	<20	50	70	20	N	200	100	20	200	150
553SS	150	500	7	<20	70	150	20	20	200	100	150	<200	150
557SS	30	50	5	20	50	50	15	N	150	100	20	N	200
570SS	100	200	7	20	150	70	30	N	150	150	70	500	150
577SS	100	150	<5	30	100	50	30	N	150	100	50	200	150
609SS	100	200	N	20	70	50	30	N	150	100	100	N	200
610SS	50	50	N	20	50	50	30	N	200	150	30	500	200
618SS	30	100	N	20	100	50	30	N	200	100	50	500	500
620SS	30	50	N	<20	100	30	20	N	150	100	30	N	200
743SS	70	150	<5	<20	70	100	15	N	<100	150	50	<200	100
744SS	70	200	N	<20	70	150	20	N	<100	150	70	<200	150
754SS	150	100	7	20	50	100	20	N	<100	200	50	N	200
755SS	150	300	<5	20	70	100	15	N	<100	150	70	N	200
756SS	70	200	N	20	30	100	15	N	<100	100	50	<200	150
757SS	70	300	<5	<20	50	100	15	N	<100	100	70	<200	70
760SS	70	300	N	<20	50	100	15	N	<100	150	100	N	100
761SS	100	100	N	<20	100	100	20	N	<100	150	50	N	150

BREADLOAF STREAM SEDIMENTS

Sample	Au-ppm aa	Zn-ppm aa
477SS	N	110
496SS	N	60
497SS	N	75
500SS	N	40
512SSA	N	105
512SSB	N	110
514SS	N	55
523SS	N	140
524SS	N	80
537SS	N	120
538SS	--	95
553SS	N	80
557SS	N	55
570SS	N	180
577SS	N	140
609SS	N	60
610SS	N	80
618SS	N	120
620SS	N	55
743SS	<.05	160
744SS	N	110
754SS	N	130
755SS	N	140
756SS	N	140
757SS	N	110
760SS	N	110
761SS	N	110

BREADLOAF PANNED CONCENTRATES/

Sample	X coord- dinate	Y coord- dinate	Fe-pct. S	Mg-pct. S	Ca-pct. S	Ti-pct. S	Mn-ppm S	Ag-ppm S	Au-ppm S	B-ppm S	Ba-ppm S	Be-ppm S	Co-ppm S
1411	671,790	880,720	50	.2	.10	1	1,500	N	N	N	<50	N	50
1421	671,320	876,680	>50	.2	.10	1	1,500	N	N	N	<50	N	70
1431	663,230	871,460	>50	.2	<.10	2	2,000	N	N	<20	<50	N	50
1441	663,110	872,460	50	.3	.10	>2	3,000	N	N	20	50	N	50
1451	662,680	868,770	50	.3	.15	>2	2,000	N	N	<20	50	N	50
1461	667,750	867,390	50	.3	.10	2	2,000	N	N	20	50	N	50
1471	670,550	874,290	50	.5	.10	>2	5,000	N	N	20	70	N	70
1481	670,080	873,420	50	1.0	.10	2	5,000	N	N	20	100	N	70
1491	667,510	872,560	50	1.0	.10	>2	5,000	N	N	<20	70	N	50
1501	668,280	869,250	50	.5	.15	>2	3,000	N	N	20	50	N	50
1511	671,670	880,730	30	1.0	.10	>2	5,000	N	N	30	70	N	50
1521	669,360	881,730	50	.7	<.10	2	5,000	N	N	20	50	N	50
1531	667,170	883,940	50	.7	.10	>2	7,000	N	N	20	50	N	70
1541	664,460	882,060	50	1.0	.15	>2	7,000	N	N	20	50	N	70
1551	665,190	877,360	30	1.0	.20	>2	5,000	N	N	50	50	N	70
1561	665,100	877,270	50	.7	.15	>2	7,000	N	N	30	50	N	70
1571	663,280	880,060	>50	.2	<.10	2	2,000	N	N	N	<50	N	70
1581	663,110	867,410	30	1.0	.50	>2	5,000	N	N	<20	50	N	70

BREADLOAF PANNED CONCENTRATES

Sample	Cr-ppm s	Cu-ppm s	La-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s
1411	200	20	N	N	50	<20	10	N	N	500	30	500	50
1421	100	15	N	N	70	N	15	N	N	700	30	500	50
1431	100	10	N	<50	50	<20	15	N	N	300	30	<500	70
1441	100	20	N	50	50	N	15	N	N	200	100	500	70
1451	150	10	N	50	50	<20	15	N	N	200	150	500	50
1461	100	10	N	50	50	<20	15	N	N	200	100	500	70
1471	100	20	N	50	70	<20	20	N	N	200	100	500	50
1481	100	30	N	50	70	<20	20	N	N	200	150	500	70
1491	150	20	N	50	70	<20	20	N	N	200	150	500	70
1501	100	20	N	50	50	20	15	N	N	200	70	500	70
1511	150	30	N	50	50	20	15	N	N	150	100	500	100
1521	150	20	N	<50	70	20	15	N	N	150	70	500	70
1531	100	20	N	50	70	20	15	N	N	200	100	500	100
1541	150	50	N	50	70	<20	15	N	N	150	200	500	70
1551	150	30	N	50	70	<20	15	N	N	150	100	500	70
1561	150	20	N	50	50	<20	15	N	N	200	100	500	70
1571	100	10	N	<50	70	20	10	N	N	500	50	500	50
1581	150	20	N	50	50	<20	20	N	<200	200	150	500	100

Sample	Th-ppm S	Zn-ppm aa
1411	N	20
1421	N	35
1431	N	45
1441	N	55
1451	N	50
1461	N	65
1471	N	90
1481	N	95
1491	N	85
1501	N	110
1511	N	100
1521	N	115
1531	N	85
1541	N	85
1551	N	95
1561	N	85
1571	N	40
1581	N	70

BREADLOAF PANNED CONCENTRATES

Sample	X' coor- dinate	Y coor- dinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	Au-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Co-ppm s
1412	671,790	887,200	2	.7	2.0	2	1,000	N	N	1,000	500	<2	20
1422	671,320	876,680	3	1.0	2.0	2	1,000	2	N	700	300	<2	20
1432	663,230	871,460	3	.5	2.0	>2	1,000	N	<20	2,000	300	N	20
1442	663,110	872,460	2	.5	1.0	>2	700	N	N	2,000	500	<2	10
1452	662,680	868,770	3	.7	2.0	>2	1,000	N	N	2,000	200	N	20
1462	667,750	867,390	3	.5	2.0	>2	700	N	N	1,500	500	<2	30
1472	670,550	874,290	5	.7	2.0	>2	1,000	<1	N	1,000	500	<2	30
1482	670,080	873,420	3	.5	1.5	>2	1,000	N	N	1,000	700	2	30
1492	667,510	872,560	3	.5	2.0	>2	1,000	N	N	1,500	500	<2	30
1502	668,280	869,250	2	.5	3.0	>2	1,000	N	N	1,500	500	<2	20
1512	671,670	880,730	3	.5	1.0	>2	1,000	<1	N	1,000	700	2	30
1522	669,360	881,730	2	.3	2.0	>2	500	N	N	1,500	500	<2	15
1532	667,170	883,940	3	.5	1.0	>2	700	N	<20	1,500	500	<2	20
1542	664,460	882,060	3	.5	1.5	>2	700	N	N	1,500	500	<2	20
1552	665,190	877,360	3	.5	2.0	>2	700	N	N	2,000	500	<2	20
1562	665,100	877,270	3	.5	2.0	>2	1,000	N	N	2,000	500	<2	20
1572	663,280	880,060	2	.2	.5	>2	700	N	N	1,000	500	<2	15
1582	663,110	867,410	3	.7	3.0	>2	1,000	N	N	1,500	200	N	15

BREADLOAF PANNED CONCENTRATES

Sample	Cr-ppm S	Cu-ppm S	La-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sn-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S	Zr-ppm S
1412	100	20	50	50	30	30	30	N	200	150	100	N	>2,000
1422	150	20	70	50	50	50	50	N	200	200	100	N	>2,000
1432	150	15	300	50	20	70	30	N	200	100	200	N	>2,000
1442	100	10	200	50	20	70	30	N	200	150	150	N	>2,000
1452	150	10	500	50	20	100	30	N	500	150	200	N	>2,000
1462	100	50	500	50	15	100	30	N	200	150	200	N	>2,000
1472	150	150	500	70	20	100	20	<20	300	150	200	N	>2,000
1482	100	100	500	50	50	150	20	N	<200	100	150	N	>2,000
1492	100	50	500	70	20	150	30	<20	200	150	200	N	>2,000
1502	150	150	500	50	30	100	20	20	200	150	200	N	>2,000
1512	150	200	500	50	50	100	20	<20	<200	150	150	<500	500
1522	100	150	500	50	15	70	15	N	<200	150	150	N	>2,000
1532	150	100	500	50	15	100	15	<20	N	150	150	N	>2,000
1542	100	70	500	50	15	100	20	<20	200	150	200	N	>2,000
1552	100	50	500	50	15	100	20	<20	200	150	200	N	>2,000
1562	100	50	500	50	30	100	20	N	200	150	150	N	>2,000
1572	100	20	700	50	30	70	10	N	N	100	150	N	>2,000
1582	100	50	500	50	30	70	50	N	500	150	200	N	>2,000

BREADLOAF PANNED CONCENTRATES/

Sample	Th-ppm s	Zn-ppm aa
1412	N	40
1422	N	50
1432	N	65
1442	N	65
1452	<200	65
1462	N	70
1472	<200	85
1482	<200	-
1492	<200	115
1502	N	95
1512	N	65
1522	N	100
1532	<200	60
1542	N	35
1552	<200	60
1562	N	75
1572	200	55
1582	<200	35

BREADLOAF SOILS

Sample	X coord- dinate	Y coord- dinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Co-ppm s
104S	67,970	80,430	7.0	1.0	.05	.50	500	1.0	150	500	2.0	10	10
109S	67,660	79,450	5.0	1.0	.05	.70	200	N	70	700	2.0	N	<5
110S	67,700	79,750	5.0	.7	.05	.30	300	<.5	100	300	1.5	N	5
111S	67,590	80,080	3.0	.7	.50	.20	>5,000	2.0	50	500	2.0	N	20
112S	67,640	80,420	5.0	1.0	.15	.50	2,000	N	100	500	2.0	N	20
114S	69,390	78,540	7.0	1.0	.10	.50	500	N	100	300	2.0	N	10
118S	69,000	78,030	5.0	1.0	.10	.50	500	N	100	500	2.0	N	20
120S	68,650	77,790	5.0	.7	.10	.30	2,000	N	100	500	2.0	N	50
122S	68,280	77,830	7.0	.7	.10	.50	500	N	50	500	2.0	N	10
123S	67,900	78,080	2.0	.2	.05	.50	200	<.5	100	300	1.5	N	<5
124S	67,730	78,580	2.0	.5	.10	.70	200	N	100	500	3.0	N	5
128S	70,040	74,800	5.0	1.0	.20	1.00	1,000	N	100	300	2.0	N	20
130S	69,810	75,550	5.0	1.0	.30	.70	1,000	N	100	500	2.0	N	50
132S	69,850	75,750	7.0	1.0	.30	1.00	500	N	100	300	2.0	N	15
134S	70,100	76,100	5.0	.7	.15	1.00	700	N	100	300	2.0	N	15
135S	70,200	76,200	5.0	.7	.15	1.00	500	N	100	300	2.0	N	10
136S	70,380	76,270	5.0	1.0	.10	1.00	700	N	100	500	2.0	N	30
137S	70,760	76,340	5.0	1.0	.20	1.00	700	N	100	300	2.0	N	20
138S	70,980	76,350	.3	.1	.20	.10	100	N	30	150	<1.0	N	N
139S	71,210	76,400	5.0	1.0	.70	1.00	500	N	70	300	2.0	N	10
201S	67,530	80,490	7.0	1.5	.10	.70	700	N	150	500	2.0	N	20
202S	67,420	80,030	7.0	1.5	.15	.70	1,500	N	150	500	2.0	N	30
212S	69,550	79,300	5.0	1.5	.15	.70	700	N	150	500	2.0	N	20
214S	68,730	79,100	7.0	1.5	.07	.70	1,000	N	100	500	2.0	N	50
216S	67,850	79,000	5.0	1.0	.05	.15	500	N	100	700	3.0	N	10
219S	70,540	76,860	--	.3	.20	.15	300	N	50	300	1.5	N	N
221S	70,200	76,690	5.0	1.0	.30	.10	1,000	N	150	500	2.0	N	20
222S	69,720	76,920	5.0	.5	.10	1.00	500	<.5	200	300	2.0	N	10
225S	69,740	77,690	--	.2	.07	.20	700	N	50	300	2.0	N	N
226S	69,940	77,900	7.0	.7	<.05	.20	500	N	70	500	1.5	N	10
229S	70,360	77,670	3.0	.7	.30	.20	500	<.5	50	200	1.5	N	10
230S	70,880	77,460	10.0	1.0	.20	1.00	500	N	150	500	2.0	N	20
233S	63,960	71,290	7.0	.7	.20	.70	300	N	100	300	1.5	N	7
234S	64,310	71,340	7.0	.7	.20	.70	500	N	100	500	2.0	N	20
238S	65,320	72,140	10.0	.7	.05	1.00	500	N	150	500	3.0	N	10
239S	64,950	72,350	5.0	.7	.07	.50	200	N	150	500	3.0	N	10
240S	64,570	72,330	10.0	1.5	.07	.70	700	N	200	700	3.0	N	20
241S	64,210	72,330	10.0	.7	.10	1.00	300	N	150	500	3.0	N	10
245S	66,920	77,010	10.0	1.0	.10	.50	500	N	200	500	2.0	N	15
247S	67,250	76,630	5.0	.7	.10	.70	700	N	150	500	2.0	N	10
248S	67,450	76,290	1.5	.2	.07	.50	300	N	50	200	2.0	N	N
250S	66,790	76,130	10.0	.7	.10	>1.00	700	N	150	500	2.0	N	15
251S	66,560	76,320	3.0	.3	.10	.50	500	N	70	300	1.5	N	N
252S	66,430	76,550	5.0	.7	.10	.50	700	N	100	700	2.0	N	15
254S	66,140	76,980	3.0	.5	.10	.50	500	N	100	300	2.0	N	10

BREADLOAF SOILS. /

Sample	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s
104S	70	30	N	5	<20	20	50	20	N	200	100	20	N
109S	70	15	N	N	<20	20	50	20	N	200	150	20	N
110S	70	20	N	N	N	20	20	20	N	150	100	15	N
111S	50	50	700	7	N	50	70	20	N	200	100	200	N
112S	50	50	70	N	20	30	100	20	N	200	100	30	N
114S	70	30	N	N	<20	15	50	20	N	200	100	20	N
118S	70	30	30	<5	<20	20	70	20	N	200	100	20	N
120S	70	50	100	N	N	30	100	20	N	200	100	50	N
122S	70	30	N	N	N	30	50	15	N	200	100	20	N
123S	30	<5	N	N	<20	10	20	10	N	200	100	10	N
124S	100	20	N	N	<20	10	100	30	N	200	100	15	N
128S	100	30	N	N	<20	30	50	20	N	100	100	30	N
130S	70	30	30	<5	N	30	50	20	N	100	100	50	N
132S	70	30	70	N	N	30	50	20	N	200	150	20	N
134S	100	30	50	<5	N	30	50	20	N	150	100	30	N
135S	50	30	N	N	N	20	50	20	N	200	100	20	N
136S	100	50	30	N	20	30	50	20	N	200	100	20	N
137S	70	50	N	<5	<20	50	50	20	N	150	100	20	N
138S	N	10	N	<5	N	5	20	<5	N	N	50	N	N
139S	100	20	N	<5	N	20	50	20	N	200	100	15	N
201S	70	50	N	N	<20	50	100	20	N	200	100	20	200
202S	50	50	100	5	<20	50	150	20	N	200	100	50	N
212S	50	30	N	N	<20	50	70	20	N	200	100	20	N
214S	50	70	N	<5	N	50	100	20	N	200	100	20	N
216S	100	20	N	N	N	30	50	30	N	200	150	20	N
219S	10	10	N	<5	N	15	50	15	N	<100	100	10	N
221S	70	20	30	N	<20	30	100	20	N	200	100	20	N
222S	50	15	N	N	20	20	50	20	N	150	100	20	N
225S	<10	30	N	<5	N	15	100	15	N	<100	100	30	200
226S	50	50	N	5	N	20	100	15	N	150	100	10	N
229S	30	30	50	N	N	30	100	15	N	150	100	20	N
230S	100	30	30	N	20	50	70	20	N	200	150	20	N
233S	<10	20	N	N	N	20	100	15	N	150	100	20	N
234S	70	20	50	N	N	20	100	20	N	150	100	30	N
238S	100	30	N	N	N	20	100	30	N	200	100	15	N
239S	50	30	50	N	N	20	100	20	N	200	100	20	N
240S	100	30	500	N	N	50	100	30	N	<100	100	200	N
241S	50	20	N	N	<20	20	100	20	N	200	100	20	N
245S	50	30	N	N	N	30	100	20	N	150	100	20	N
247S	50	20	30	5	<20	20	30	20	N	200	100	20	N
248S	N	7	N	N	N	5	10	10	N	N	70	10	N
250S	70	20	20	N	<20	20	50	20	N	150	150	50	N
251S	50	10	N	N	N	15	10	15	N	<100	100	<10	N
252S	30	20	50	5	N	20	20	15	N	<100	100	30	200
254S	30	30	50	N	N	10	<10	10	N	<100	100	20	N

BREADLOAF SOILS.

Sample	Zn-ppm s	Au-ppm aa	Zn-ppm aa
104S	150	<.05	45
109S	200	N	25
110S	150	N	50
111S	150	N	140
112S	200	N	80
114S	150	N	30
118S	200	N	70
120S	100	N	75
122S	100	N	40
123S	200	N	10
124S	100	N	20
128S	100	N	70
130S	100	<.10	45
132S	150	N	45
134S	150	N	50
135S	200	N	35
136S	200	N	60
137S	150	N	70
138S	100	--	80
139S	200	<.05	30
201S	150	N	60
202S	150	N	90
212S	200	N	60
214S	100	N	80
216S	100	N	40
219S	100	N	40
221S	150	N	60
222S	200	N	15
225S	100	N	75
226S	200	N	30
229S	150	N	45
230S	500	N	50
233S	200	N	30
234S	700	N	50
238S	150	N	30
239S	100	N	55
240S	150	N	80
241S	500	N	30
245S	200	N	60
247S	200	N	25
248S	150	N	75
250S	300	N	20
251S	150	N	30
252S	150	N	110
254S	200	<.05	25

BREADLOAF SOILS. /

Sample	X coordinate	Y coordinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Co-ppm s
255S	65,990	77,330	5.0	.7	.20	>1.00	700	N	100	300	1.5	N	15
256S	66,080	82,730	3.0	.2	.05	.20	200	N	50	500	2.0	N	N
258S	66,430	82,130	5.0	1.5	.10	.70	700	N	150	1,000	2.0	N	20
259S	66,260	81,610	7.0	1.0	.10	.70	500	N	150	700	2.0	N	15
261S	66,050	80,400	2.0	.5	.10	.50	300	N	100	700	2.0	N	<5
262S	65,670	80,240	1.5	.5	1.00	.50	1,000	<.5	20	300	1.5	N	<5
264S	64,980	80,070	7.0	1.0	.15	.70	700	.7	150	500	2.0	N	15
270S	65,640	74,330	1.0	.2	.10	.50	200	N	20	200	1.5	N	N
271S	65,660	74,670	2.0	.3	.10	.50	300	N	50	300	1.5	N	N
272S	65,670	74,900	2.0	.3	.10	.50	300	N	70	500	1.5	N	<5
275S	66,290	69,110	3.0	.7	.20	>1.00	700	N	150	500	2.0	N	5
276S	65,940	69,730	3.0	1.0	.20	.70	700	N	100	300	2.0	N	15
279S	65,700	69,770	3.0	.5	.10	.50	500	N	100	300	2.0	N	N
280S	65,330	69,770	3.0	.7	.15	.70	500	N	50	500	2.0	N	10
281S	65,040	69,800	5.0	1.5	.10	.50	700	N	100	500	2.0	N	20
283S	65,000	68,790	5.0	.5	.07	.50	500	N	100	300	2.0	N	<5
284S	65,370	68,820	5.0	.7	.10	.50	700	N	100	500	2.0	N	10
285S	65,320	68,340	7.0	1.0	.07	.70	1,000	N	150	500	3.0	N	20
287S	65,920	68,380	3.0	.5	.10	.50	700	N	50	300	2.0	N	10
290S	63,540	70,610	5.0	.7	.50	.70	500	N	70	500	1.5	N	5
291S	63,860	70,490	3.0	.2	.15	.50	300	N	70	300	1.5	N	<5
295S	64,020	70,020	10.0	3.0	1.00	.70	700	N	20	150	1.0	N	50
296S	63,940	69,820	10.0	2.0	1.50	.70	700	N	100	300	2.0	N	20
297S	63,560	69,720	7.0	1.5	.50	.50	700	N	100	500	2.0	N	15
298S	63,390	69,620	5.0	1.0	.30	1.00	500	N	150	300	1.5	N	10
299S	63,140	69,580	2.0	.2	.20	1.00	200	N	50	300	1.5	N	N
301S	68,160	81,170	10.0	1.5	.05	.70	1,000	N	150	700	3.0	N	50
302S	68,310	80,690	3.0	.7	.20	.50	700	N	100	500	3.0	N	15
305S	68,800	80,010	7.0	1.5	.20	.70	700	N	70	500	3.0	N	30
308S	69,300	80,670	10.0	.7	.10	.50	500	N	50	300	1.5	N	N
310S	69,480	81,080	15.0	3.0	1.50	1.00	1,000	N	50	500	1.5	N	50
312S	69,350	81,380	15.0	2.0	2.00	1.00	700	N	30	200	<1.0	N	50
314S	67,550	80,870	10.0	1.5	.07	.70	1,000	N	200	150	2.0	N	30
315S	67,000	80,640	10.0	3.0	.20	1.00	2,000	N	200	500	2.0	N	50
318S	66,480	80,470	10.0	1.0	.07	1.00	200	N	200	700	2.0	N	10
323S	69,940	79,390	15.0	5.0	1.00	1.00	>5,000	N	70	500	2.0	N	100
327S	69,200	79,560	10.0	3.0	.20	1.00	3,000	N	100	500	3.0	N	30
331S	69,320	80,100	7.0	1.5	.15	1.00	1,500	N	150	500	3.0	N	20
335S	69,850	80,210	5.0	.7	.20	1.00	700	N	100	300	3.0	N	N
339S	70,400	80,220	10.0	2.0	.30	1.00	1,000	N	150	500	3.0	N	20
341S	71,060	80,400	7.0	1.5	.15	1.00	700	N	100	500	3.0	N	15
342S	71,480	80,670	10.0	.7	.20	1.00	700	N	100	300	2.0	N	10
347S	70,490	80,530	10.0	1.5	.20	1.00	700	N	100	500	2.0	N	20
348S	70,140	79,010	10.0	1.0	.20	1.00	700	N	100	300	2.0	N	20
350S	70,380	78,910	10.0	1.5	1.50	1.00	1,000	N	100	300	2.0	N	50

BREADLOAF SOILS.

Sample	Cr-ppm S	Cu-ppm S	La-ppm S	Mo-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sn-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S
255S	100	15	N	N	<20	15	20	20	N	150	100	20	N
256S	20	30	50	<5	N	<5	50	10	N	N	100	20	N
258S	70	30	N	N	N	30	30	20	N	<100	150	20	N
259S	70	50	30	5	N	30	50	30	N	150	150	20	N
261S	30	15	N	5	N	10	20	20	N	N	100	20	N
262S	N	20	100	N	N	15	70	10	N	<100	50	30	N
264S	70	20	30	N	N	20	70	30	N	150	150	50	N
270S	<10	20	N	5	N	7	20	7	N	N	70	30	N
271S	20	7	N	N	N	10	15	10	N	<100	70	15	N
272S	30	20	300	<5	N	15	30	15	N	<100	100	70	N
275S	30	<5	N	N	20	15	30	20	N	150	150	30	N
276S	20	30	N	N	N	30	20	15	N	100	100	30	N
279S	<10	15	N	N	N	15	15	10	N	100	100	20	N
280S	20	20	50	N	N	15	20	15	N	100	100	30	N
281S	50	70	50	<5	N	30	30	20	N	150	100	30	N
283S	30	20	N	N	N	20	50	20	N	<100	100	20	N
284S	50	20	N	N	N	20	50	20	N	100	100	20	N
285S	70	50	N	<5	N	30	100	30	N	200	150	20	N
287S	20	20	N	N	N	20	<10	15	N	N	70	20	N
290S	20	15	N	N	N	20	10	15	N	150	100	30	N
291S	<10	5	N	N	N	10	<10	10	N	<100	100	20	N
295S	100	50	N	N	N	30	20	50	N	200	1,000	20	<200
296S	70	30	N	N	N	30	50	30	N	200	500	30	N
297S	50	30	N	N	N	30	50	20	N	200	150	20	N
298S	30	15	N	N	N	5	30	15	N	200	100	20	N
299S	N	7	N	N	N	<5	N	15	N	<100	100	20	N
301S	50	50	N	N	<20	70	50	30	N	200	150	50	200
302S	50	20	70	N	N	30	50	20	N	200	100	30	<200
305S	70	50	30	N	N	50	50	20	N	200	150	20	<200
308S	70	20	N	N	N	20	30	15	N	<100	100	10	N
310S	100	30	N	N	N	50	50	30	N	200	200	100	200
312S	100	50	N	N	N	50	N	50	N	300	500	20	200
314S	70	50	50	N	<20	70	50	30	N	150	150	20	200
315S	100	100	50	<5	<20	100	50	30	N	100	150	30	200
318S	70	30	N	5	<20	30	30	20	N	100	200	15	N
323S	70	100	200	N	N	150	30	20	N	N	150	100	200
327S	50	70	50	N	N	50	100	15	N	N	200	100	<200
331S	50	30	30	N	N	30	50	20	N	<100	150	10	N
335S	70	30	20	N	N	20	20	10	N	200	200	20	N
339S	70	100	N	N	N	30	70	15	N	100	200	30	<200
341S	70	30	N	N	N	30	30	15	N	<100	150	30	N
342S	50	30	N	N	N	20	30	10	N	N	150	50	N
347S	70	50	N	N	N	30	50	15	N	N	150	50	N
348S	70	50	N	N	N	30	50	15	N	N	150	50	<200
350S	100	70	N	N	N	50	70	15	N	100	200	50	N

BREADLOAF SOILS.

Sample	Zr-ppm s	Au-ppm aa	Zn-ppm aa
255S	700	N	20
256S	100	N	25
258S	150	N	85
259S	150	N	65
261S	100	N	25
262S	150	--	180
264S	200	N	45
270S	150	N	25
271S	150	N	40
272S	300	N	30
275S	700	N	20
276S	500	N	95
279S	100	N	45
280S	300	N	55
281S	150	N	90
283S	150	N	50
284S	150	N	75
285S	200	<.05	65
287S	200	N	65
290S	300	N	40
291S	700	N	20
295S	100	N	70
296S	500	N	45
297S	300	N	55
298S	>1,000	N	25
299S	700	N	15
301S	200	N	90
302S	150	N	85
305S	100	N	80
308S	700	N	40
310S	200	N	90
312S	100	N	55
314S	150	N	75
315S	200	N	90
318S	200	N	55
323S	150	N	85
327S	200	N	110
331S	200	N	45
335S	200	N	45
339S	200	N	60
341S	200	N	75
342S	1,000	N	30
347S	300	N	55
348S	200	N	55
350S	200	N	65

BREADLOAF SOILS.

Sample	X coord- dinate	Y coord- dinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Co-ppm s
356S	70,700	78,960	5.0	1.0	.30	1.00	500		100	300	2.0	N	N
358S	70,300	78,850	7.0	1.0	.30	1.00	700		150	300	2.0	N	20
361S	71,760	78,780	10.0	1.5	1.50	1.00	2,000		150	300	1.5	N	50
362S	72,140	79,240	10.0	1.5	.30	1.00	1,000		100	500	2.0	N	30
364S	71,990	79,820	7.0	1.0	.15	1.00	700		100	300	2.0	N	<5
368S	71,830	80,310	7.0	1.0	.50	1.00	700		100	300	2.0	N	5
372S	63,600	72,950	10.0	1.0	.20	1.00	700		150	300	1.5	N	15
373S	64,140	73,330	7.0	.7	.10	1.00	500		200	500	2.0	N	N
375S	64,640	73,660	3.0	.5	.07	1.00	500		150	500	1.5	N	N
380S	65,490	73,090	3.0	.3	.05	.70	300		100	300	2.0	N	N
382S	67,000	77,630	7.0	.5	.07	1.00	500		100	300	2.0	N	N
385S	67,270	77,840	5.0	.7	.05	.70	500	1.5	150	500	3.0	N	N
390S	67,590	78,130	5.0	.3	.10	1.00	300		100	300	2.0	N	N
393S	67,980	77,890	7.0	1.0	.20	1.00	1,000		100	500	3.0	N	15
395S	67,990	77,290	10.0	1.5	.10	1.00	700		150	500	2.0	N	30
398S	66,630	82,460	10.0	3.0	.10	1.00	1,000	<.5	200	1,000	2.0	N	30
400S	66,720	82,200	3.0	.3	.07	1.00	700		150	500	2.0	N	15
403S	66,880	82,010	5.0	.5	<.05	1.00	200	.5	150	700	3.0	N	<5
405S	67,630	82,510	3.0	.2	.05	.20	500		100	300	2.0	N	N
406S	67,510	82,830	7.0	1.0	.30	.50	700		150	500	2.0	N	50
408S	67,570	83,070	5.0	.7	.20	.70	500		150	500	2.0	N	N
412S	66,580	82,890	5.0	.7	.07	.70	500		150	500	2.0	N	10
413S	66,350	77,540	7.0	1.0	.10	1.00	1,000		150	500	2.0	N	50
414S	66,240	78,040	5.0	.7	.07	.70	700		100	500	2.0	N	20
417S	66,510	78,410	7.0	1.0	<.05	1.00	700		150	700	3.0	N	15
420S	66,800	78,750	1.5	.2	.10	.30	200	.7	50	300	3.0	N	N
422S	66,950	79,030	5.0	.7	.07	.50	300		100	500	2.0	N	N
426S	65,160	77,120	7.0	.7	.50	>1.00	700		100	300	3.0	N	15
428S	65,020	76,460	5.0	1.0	<.05	1.00	200		100	500	1.5	N	5
431S	65,670	75,830	7.0	1.5	.15	1.00	700		150	700	2.0	N	20
434S	66,070	75,740	5.0	.7	.07	1.00	500		200	500	2.0	N	10
436S	66,510	75,570	3.0	.5	.07	.70	700		100	300	2.0	N	20
438S	64,620	66,740	3.0	.5	.15	.70	300		100	500	2.0	N	N
440S	64,980	67,160	5.0	.7	.10	.70	500		100	300	2.0	N	10
442S	65,470	67,120	1.0	.2	<.05	1.00	150		50	300	1.5	N	N
444S	65,050	67,710	2.0	.3	.07	>1.00	300		150	500	3.0	N	5
445S	65,580	67,760	2.0	.2	.07	.50	300		70	300	3.0	N	N
447S	66,100	67,830	2.0	.3	.07	.20	300		100	300	3.0	N	N
449S	66,430	67,950	2.0	.3	.07	.20	300		100	300	2.0	N	N
451S	63,090	69,010	1.5	.1	.10	1.00	300		100	300	1.5	N	N
453S	63,590	69,060	2.0	.3	.15	.70	300	<.5	100	300	1.5	N	10
454S	63,780	69,170	3.0	.7	.70	.70	500		70	300	2.0	N	20
456S	64,590	69,230	3.0	.5	.15	.50	700		100	300	2.0	N	20
458S	64,610	69,750	3.0	1.0	.15	.50	700		100	500	3.0	N	20
459S	64,250	69,320	5.0	1.0	.20	.50	700		100	500	3.0	N	30

BREADLOAF SOILS

Sample	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s
356S	50	15	70	N	N	<5	30	10	N	<100	200	30	N
358S	50	30	50	N	N	50	70	10	N	<100	150	50	N
361S	70	50	50	N	<20	50	30	15	N	<100	150	100	<200
362S	70	50	N	N	<20	70	50	10	N	N	100	50	<200
364S	50	30	N	N	N	30	20	10	N	N	150	20	<200
368S	50	30	N	N	N	20	30	10	N	<100	150	20	<200
372S	50	30	30	N	N	20	30	20	N	100	150	20	N
373S	50	20	N	N	N	10	50	15	N	100	150	15	N
375S	50	15	N	<5	N	N	50	15	N	N	150	15	N
380S	30	20	N	N	N	N	15	15	N	<100	100	10	N
382S	50	20	N	N	N	10	50	10	N	N	150	30	<200
385S	30	30	N	N	N	10	50	10	N	N	150	20	<200
390S	20	15	N	N	N	<5	30	7	N	N	150	30	<200
393S	50	150	70	5	N	50	30	10	N	100	150	50	200
395S	70	50	50	N	N	50	50	10	N	N	150	20	N
398S	100	50	30	N	N	50	50	20	N	N	150	20	<200
400S	50	50	70	N	N	20	30	20	N	100	100	30	N
403S	50	30	30	5	N	20	20	15	N	N	150	20	N
405S	30	20	30	N	N	N	30	15	N	N	100	<10	N
406S	50	50	50	N	N	70	50	20	N	<100	150	20	N
408S	50	30	50	N	N	<5	30	20	N	N	100	20	N
412S	50	30	50	<5	N	20	30	20	N	N	100	20	N
413S	70	50	70	N	20	50	70	30	N	100	100	30	<200
414S	50	30	70	N	N	30	30	20	N	<100	100	20	N
417S	50	30	30	N	N	30	50	20	N	N	150	20	N
420S	20	20	30	N	N	20	50	10	N	N	70	15	N
422S	70	30	30	<5	N	30	50	20	N	<100	150	20	N
426S	100	30	30	5	<20	30	20	15	N	100	100	20	N
428S	50	20	N	N	N	20	20	30	N	<100	150	30	N
431S	100	50	50	N	N	50	50	20	N	100	100	30	N
434S	50	15	N	N	<20	20	50	20	N	150	100	20	N
436S	20	20	70	N	N	N	30	15	N	100	70	20	N
438S	30	10	N	N	N	N	20	20	N	150	100	20	N
440S	30	20	N	N	N	<5	50	20	N	100	100	15	N
442S	15	<5	N	N	N	N	<10	10	N	N	70	20	N
444S	50	<5	N	N	<20	N	20	20	N	150	100	30	N
445S	30	10	N	N	<20	N	15	15	N	N	70	10	N
447S	20	20	50	<5	<20	15	20	15	N	<100	70	20	N
449S	20	20	50	N	N	20	20	20	N	100	70	20	N
451S	<10	7	N	<5	<20	<5	<10	10	N	150	100	20	N
453S	10	10	N	N	N	<5	20	15	N	150	100	20	<200
454S	30	30	N	N	<20	20	30	20	N	150	100	20	<200
456S	30	20	N	N	N	30	50	20	N	150	100	30	<200
458S	50	30	N	N	N	50	50	20	N	200	100	50	<200
459S	50	30	N	N	N	30	50	30	N	200	150	20	N

BREADLOAF SOILS

Sample	Zn-ppm s	Au-ppm aa	Zn-ppm aa
356S	300	N	10
358S	300	N	65
361S	300	N	45
362S	700	N	60
364S	200	N	60
368S	150	N	25
372S	300	N	35
373S	300	N	35
375S	150	<.05	30
380S	70	N	25
382S	200	N	25
385S	100	N	50
390S	150	N	20
393S	100	N	190
395S	200	N	60
398S	500	N	70
400S	150	N	55
403S	300	<.05	50
405S	100	N	35
406S	100	N	85
408S	200	N	45
412S	150	N	70
413S	200	N	80
414S	150	<.05	75
417S	150	<.05	40
420S	100	N	60
422S	150	N	75
426S	1,000	N	40
428S	300	N	10
431S	150	N	65
434S	300	N	25
436S	200	N	45
438S	200	N	25
440S	150	N	35
442S	500	N	5
444S	200	N	5
445S	200	N	30
447S	200	N	55
449S	150	N	45
451S	1,000	N	<5
453S	700	N	15
454S	300	N	25
456S	150	N	45
458S	150	N	70
459S	100	N	60

BREADLOAF SOILS/

Sample	X coordinate	Y coordinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Co-ppm s
461S	63,320	67,520	2.0	.2	.10	1.00	500	N	100	300	1.5	N	N
465S	63,890	67,630	2.0	.5	.50	.70	300	N	50	200	1.0	N	N
469S	64,260	67,770	3.0	1.0	1.50	1.00	300	N	50	300	1.0	N	10
472S	64,610	68,070	7.0	2.0	2.00	.50	700	N	20	100	1.0	N	30
481S	68,790	75,350	3.0	.5	.05	.50	700	N	100	300	2.0	N	15
484S	68,630	75,790	3.0	.5	.07	.50	700	N	100	300	2.0	N	15
487S	68,410	76,070	2.0	.3	.10	.70	500	N	70	300	1.5	N	5
490S	68,250	76,460	10.0	1.0	.07	.70	700	N	150	500	2.0	N	20
491S	68,600	76,860	7.0	.5	.07	.50	500	N	150	500	2.0	N	7
493S	68,940	76,550	10.0	1.0	.15	.70	1,000	N	150	500	2.0	N	30
499S	66,940	72,460	2.0	.2	.05	.50	500	N	100	300	2.0	N	5
501S	66,760	67,630	7.0	1.0	.15	1.00	3,000	N	150	500	2.0	N	50
503S	66,450	67,320	3.0	.2	.05	.70	700	N	100	300	2.0	N	<5
504S	66,400	67,090	5.0	.5	.07	1.00	1,500	N	100	300	3.0	N	20
505S	66,390	66,820	3.0	.3	.05	.20	700	N	100	300	2.0	N	15
506S	66,520	66,530	5.0	.3	.07	.30	2,000	N	100	300	2.0	N	10
507S	66,650	66,460	2.0	.2	.05	.20	300	N	50	300	1.5	N	N
511S	67,410	65,980	10.0	1.5	.20	1.00	700	N	200	500	2.0	N	20
515S	68,720	74,540	7.0	.7	.07	.50	700	N	70	300	2.0	N	10
516S	68,260	74,800	10.0	1.0	.10	>1.00	700	N	150	500	2.0	N	20
517S	67,880	75,140	10.0	.7	<.05	>1.00	700	N	150	500	3.0	N	15
521S	68,000	75,660	7.0	.5	.07	>1.00	500	N	100	300	2.0	N	10
522S	68,210	75,290	10.0	.7	.05	>1.00	700	N	150	500	2.0	N	15
526S	68,990	74,690	7.0	1.5	.15	>1.00	1,000	N	100	500	2.0	N	30
527S	67,130	72,340	7.0	1.0	.10	>1.00	1,000	N	100	300	2.0	N	20
530S	66,590	71,740	15.0	1.0	.15	.50	1,000	N	200	500	3.0	N	50
531S	66,240	71,530	20.0	1.5	.15	.70	1,000	N	200	500	1.5	N	10
533S	66,210	70,870	5.0	.7	.10	.50	700	N	100	500	2.0	N	15
534S	66,260	70,550	5.0	.7	.05	1.00	700	N	150	700	1.5	N	N
535S	66,720	70,520	7.0	.7	.07	1.00	700	N	150	500	2.0	N	20
536S	67,150	70,460	7.0	.7	.07	.70	500	N	150	500	2.0	N	15
539S	65,190	75,630	7.0	.5	.10	.70	500	N	150	500	2.0	N	10
540S	64,750	75,380	7.0	.7	.15	.70	700	N	200	500	2.0	N	10
542S	64,630	75,180	5.0	.7	.07	.70	500	N	200	500	2.0	N	15
546S	64,050	75,730	10.0	.7	.10	.70	700	N	100	300	2.0	N	10
548S	63,670	75,870	10.0	1.0	.70	.70	700	N	70	300	2.0	N	20
550S	63,330	76,170	7.0	.7	.15	1.00	700	N	100	500	2.0	N	10
551S	70,580	75,030	10.0	2.0	.20	.70	1,000	N	100	500	2.0	N	30
554S	70,550	75,510	10.0	1.0	.20	1.00	700	N	150	500	1.5	N	N
556S	70,660	76,040	10.0	1.5	.20	1.00	>5,000	N	150	500	2.0	N	50
558S	71,090	76,110	7.0	1.0	.30	1.00	700	N	150	500	2.0	N	10
559S	71,290	79,290	7.0	1.0	.50	1.00	700	N	100	500	2.0	N	20
562S	71,550	79,680	7.0	1.0	.20	1.00	700	N	100	500	2.0	N	30
565S	71,290	80,230	5.0	1.0	.70	1.00	500	<.5	100	500	2.0	N	20
571S	67,750	81,170	10.0	1.5	.10	.70	1,500	N	150	500	3.0	N	50

BREADLOAF SOILS/

Sample	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s	Pb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	Y-ppm s	Zn-ppm s
461S	30	<5	N	N	<20	<5	20	10	N	150	100	15	N
465S	<10	15	N	N	N	<5	15	15	N	150	100	15	N
469S	20	10	N	N	N	15	30	20	N	300	150	20	N
472S	70	70	N	N	N	50	30	30	N	200	200	15	N
481S	30	30	70	N	N	50	50	20	N	100	100	30	N
484S	50	30	100	N	N	20	20	20	N	100	100	30	N
487S	30	20	N	N	N	15	10	15	N	<100	100	30	N
490S	70	20	50	N	N	30	30	30	N	150	200	50	N
491S	50	20	50	N	N	20	20	20	N	150	100	30	N
493S	50	70	100	N	N	50	50	20	N	150	150	30	N
499S	30	10	30	N	N	15	10	15	N	<100	100	10	N
501S	70	70	150	N	N	30	50	20	N	100	100	50	N
503S	30	10	N	N	N	10	10	15	N	150	70	<10	N
504S	50	30	N	N	N	20	20	15	N	150	100	15	N
505S	50	30	N	7	N	30	10	15	N	<100	100	20	N
506S	30	30	N	5	N	15	20	15	N	<100	100	20	N
507S	20	7	N	N	N	10	10	15	N	N	100	15	N
511S	50	70	30	N	<20	50	50	20	N	150	100	50	<200
515S	30	50	N	5	N	30	30	20	N	150	100	50	200
516S	70	50	N	5	<20	50	100	30	N	150	150	30	N
517S	50	30	N	N	N	20	30	30	N	150	150	50	N
521S	50	15	N	N	N	15	30	20	N	150	150	30	N
522S	50	20	N	N	N	20	30	30	N	150	150	20	N
526S	50	70	50	N	N	50	50	20	N	150	150	30	N
527S	50	30	50	N	N	30	50	20	N	150	100	50	N
530S	100	100	100	N	N	50	100	30	N	300	150	50	N
531S	20	70	N	N	N	20	150	20	15	100	150	20	N
533S	50	50	100	5	N	15	50	20	N	150	100	20	N
534S	50	15	N	N	20	10	50	20	N	100	100	30	N
535S	50	30	N	N	<20	20	50	30	N	200	100	50	N
536S	50	30	N	N	<20	20	50	30	N	200	100	20	N
539S	50	20	N	7	20	15	30	20	N	200	150	20	N
540S	100	30	N	N	20	20	150	20	N	200	150	20	N
542S	50	30	N	<5	20	20	100	20	N	150	150	20	N
546S	50	30	100	5	<20	15	100	20	N	150	100	30	N
548S	30	20	N	N	20	30	70	20	N	200	150	20	N
550S	50	10	N	N	20	20	30	20	N	200	100	20	N
551S	100	50	N	N	<20	50	150	30	N	100	100	30	N
554S	30	20	N	N	N	10	20	20	N	<100	150	15	N
556S	70	50	N	5	<20	30	100	20	N	200	100	20	N
558S	100	30	N	N	<20	30	50	20	N	<100	100	30	N
559S	70	20	N	N	<20	30	50	20	N	200	150	20	N
562S	50	20	N	7	20	50	30	20	N	150	150	30	N
565S	70	20	N	N	<20	50	50	20	N	200	150	20	N
571S	100	100	100	N	<20	50	150	30	N	200	100	30	300

BREADLOAF SOILS

Sample	Zr-ppm s	Au-ppm aa	Zn-ppm aa
461S	700	N	5
465S	150	N	15
469S	150	N	15
472S	100	N	65
481S	100	N	95
484S	200	N	50
487S	150	N	30
490S	200	N	40
491S	100	N	55
493S	150	N	90
499S	100	N	20
501S	200	N	110
503S	150	N	50
504S	150	N	50
505S	100	N	90
506S	150	N	35
507S	100	N	30
511S	150	N	100
515S	100	N	70
516S	150	N	90
517S	100	N	40
521S	200	<.05	25
522S	100	N	40
526S	100	N	95
527S	150	N	75
530S	300	<.05	70
531S	150	N	35
533S	200	N	55
534S	700	N	20
535S	150	N	50
536S	300	N	55
539S	200	N	35
540S	300	N	40
542S	300	N	50
546S	200	N	35
548S	300	N	75
550S	700	N	40
551S	500	N	90
554S	700	N	20
556S	300	N	80
558S	700	N	55
559S	200	N	50
562S	200	N	85
565S	200	N	60
571S	150	N	140

BREADLOAF SOILS/

Sample	X coordinate	Y coordinate	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Co-ppm s
575S	67,160	81,420	10.0	1.0	.07	1.00	500	N	150	500	3.0	N	10
583S	67,460	81,820	2.0	.2	.10	.20	500	N	70	200	2.0	N	N
584S	67,880	81,640	10.0	.5	.07	.20	700	N	100	300	2.0	N	10
601S	66,580	72,390	5.0	1.0	.05	.70	700	<.5	150	500	2.0	N	20
602S	66,160	72,430	10.0	1.5	.05	1.00	1,000	N	150	500	3.0	N	50
604S	65,930	72,560	7.0	.5	.05	1.00	700	N	100	500	2.0	N	10
605SA	66,390	72,790	5.0	.5	.05	1.00	700	N	150	500	2.0	N	10
605SB	66,390	72,790	10.0	.5	.05	.70	700	N	100	500	2.0	N	20
612S	63,520	74,740	7.0	.7	.20	1.00	500	N	100	500	2.0	N	20
614S	64,010	74,810	7.0	1.0	.07	1.00	500	N	100	500	3.0	N	10
616S	64,340	74,640	7.0	.7	.05	.70	500	N	100	500	3.0	N	7
617S	63,380	74,130	5.0	.5	.30	1.00	500	N	100	500	2.0	N	20
621S	71,370	76,890	5.0	1.0	.20	.70	500	.7	100	300	2.0	N	20
623S	71,440	77,280	5.0	1.0	.20	1.00	300	N	50	300	3.0	N	10
625S	71,300	77,840	2.0	.7	<.05	1.00	200	N	300	500	2.0	N	<5
627S	71,350	78,020	3.0	.7	.05	1.00	500	N	150	500	2.0	N	<5
634S	70,560	78,310	7.0	.7	.30	1.00	700	N	50	300	3.0	N	15
639S	70,800	79,370	5.0	1.0	.30	.70	500	<.5	100	500	2.0	N	15
641S	71,670	79,750	7.0	1.0	1.00	1.00	700	<.5	100	300	2.0	N	20
650S	67,220	72,900	7.0	.5	.05	1.00	700	N	200	500	2.0	N	20
651S	67,020	73,100	7.0	.7	.05	1.00	700	<.5	150	500	2.0	N	20
652S	66,760	73,260	7.0	.7	.15	1.00	700	N	200	300	2.0	N	10
653S	66,400	73,400	7.0	1.0	.10	1.00	1,000	N	200	500	2.0	N	20
655S	67,230	72,720	10.0	1.0	.10	1.00	1,000	N	200	500	3.0	N	20
657S	72,120	80,060	5.0	1.0	.15	1.00	700	N	100	500	2.0	N	30
660S	72,830	79,870	7.0	1.0	.15	1.00	700	N	150	300	2.0	N	15
661S	72,960	79,650	5.0	1.0	.20	.70	700	N	150	200	2.0	N	20
665S	73,240	79,950	7.0	1.0	.70	.70	3,000	N	150	300	2.0	N	50

BREADLOAF SOILS/

Sample	Cr-ppm S	Cu-ppm S	La-ppm S	Mo-ppm S	Nb-ppm S	Ni-ppm S	Pb-ppm S	Sc-ppm S	Sn-ppm S	Sr-ppm S	V-ppm S	Y-ppm S	Zn-ppm S
575S	100	30	N	N	<20	20	100	30	N	150	150	20	N
583S	30	20	N	N	N	5	20	15	N	<100	100	20	N
584S	50	20	N	N	N	15	30	20	N	100	100	15	N
601S	50	20	30	N	<20	30	50	20	N	200	100	20	N
603S	70	50	30	N	20	50	70	20	N	200	150	20	200
604S	50	15	N	N	20	20	50	15	N	200	100	30	N
605SA	70	15	N	N	20	20	50	20	N	200	150	50	N
605SB	30	50	N	N	<20	30	50	20	N	100	100	20	N
612S	50	30	100	N	20	30	50	30	N	150	150	30	N
614S	50	50	50	N	20	30	30	30	N	100	150	30	N
616S	30	20	30	N	N	20	50	20	N	100	150	15	N
617S	30	50	30	N	<20	30	30	20	N	200	150	20	N
621S	70	50	100	N	<20	30	50	20	N	200	100	70	N
623S	30	<5	N	N	20	10	20	15	N	200	100	20	N
625S	100	20	N	5	20	20	<10	20	N	200	200	<10	N
627S	70	10	N	N	30	10	10	20	N	200	100	15	N
634S	100	20	N	N	30	20	30	20	N	200	100	20	N
639S	100	30	N	<5	<20	30	50	20	N	200	100	20	N
641S	100	30	N	N	N	50	50	30	N	200	200	20	N
650S	50	20	N	N	30	30	30	20	N	100	100	50	N
651S	70	20	N	N	20	50	50	30	N	150	100	30	N
652S	50	30	N	<5	N	20	50	20	N	150	150	20	<200
653S	50	50	70	N	N	30	50	20	N	<100	100	20	N
655S	70	20	N	N	N	50	70	30	N	<100	150	50	300
657S	70	50	N	N	N	100	70	30	N	<100	150	20	N
660S	70	30	N	N	<20	30	30	30	N	<100	200	30	N
661S	70	30	N	N	<20	50	50	20	N	200	200	20	N
665S	100	50	100	N	N	50	70	30	N	200	200	50	N

BREADLOAF SOILS

Sample	Zr-ppm s	Au-ppm aa	Zn-ppm aa
575S	200	N	45
583S	100	N	50
584S	100	N	50
601S	200	N	55
602S	150	N	85
604S	200	N	25
605SA	200	<.05	15
605SB	150	N	55
612S	200	N	70
614S	200	N	45
616S	200	N	30
617S	150	N	95
621S	150	N	60
623S	1,000	N	20
625S	200	<.05	20
627S	500	N	5
634S	500	<.05	40
639S	200	N	55
641S	300	N	60
650S	150	N	40
651S	150	N	50
652S	700	N	25
653S	200	N	50
655S	200	N	50
657S	500	N	70
660S	700	N	60
661S	500	N	40
665S	500	N	70