

UNITED STATES DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY

**Spectrographic analyses of insoluble-residue samples,  
Joplin 1° x 2° quadrangle, Missouri and Kansas:  
Drill hole nos. 106, 107, and 108**

By

John H. Bullock, Jr.\* and Helen W. Folger\*

Open-File Report 90-4

Prepared in cooperation with the Kansas Geological Survey and the Missouri Division of Geology and Land Survey.

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature. Any use of trade names is for descriptive purposes only and does not imply endorsement by the U.S. Geological Survey.

\*U.S. Geological Survey, DFC, Box 25046, MS 973, Denver, CO 80225

1990

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## INTRODUCTION

Geochemical studies of the Joplin 1° x 2° quadrangle, Missouri and Kansas, were begun in 1983 as part of a multidisciplinary study of the quadrangle by the U.S. Geological Survey, the Missouri Division of Geology and Land Survey, and the Kansas Geological Survey. The purpose of the study was to assess the mineral resource potential of the area by integrated geologic, geochemical, and geophysical studies.

The geochemical work has been directed at the characterization of the sedimentary rocks in the quadrangle through spectrographic analyses of dilute-hydrochloric-acid insoluble-residue samples of whole rock from widely-spaced drill holes. Drill holes have been selected for study from the sample libraries of the Missouri Division of Geology and Land Survey (MGLS) and the Kansas Geological Survey (KGS). None of the holes are company confidential and none intersect economically significant mineralized ground.

The analytical results for drill hole no. 106 (#23239 - MGLS), drill hole no. 107 (#23238, #21406 - MGLS), and drill hole no. 108 (#28309-MGLS) are given in this report. Drill hole no. 106 is located in sec. 12, T. 35 S., R. 23 E. in Cherokee County, Kansas; drill hole no. 107 is located in sec. 11, T. 35 S., R. 23 E. in Cherokee County, Kansas; drill hole no. 108 is located in sec. 13, T. 34 S., R. 23 E. in Cherokee County, Kansas (fig.1). Data for the insoluble-residue samples from drill holes 106, 107, and 108 are listed in tables 1, 2, and 3 respectively. Well name, well number, township, range, and county allow for identification and location of files at the Missouri Division of Geology and Land Survey.

## PREPARATION AND ANALYSIS OF SAMPLES

Insoluble residues were prepared by dissolving approximately 80 grams of crushed carbonate rock in repeated applications of 1:5 hydrochloric acid until the carbonate was removed. The samples were then filtered and dried overnight at 50°C.

The samples were pulverized to minus 140 mesh (0.105 mm) in a vertical grinder equipped with ceramic plates. Some insoluble-residue samples contained only a few milligrams of material, and these were hand ground with an agate mortar and pestle. A hand magnet was passed over the insoluble-residue samples before grinding to remove filings or chips of drill bit that might have been present.

Each sample was analyzed semiquantitatively for 31 elements using a six-step D.C.-arc optical-emission spectrographic method (Grimes and Marranzino, 1968).

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

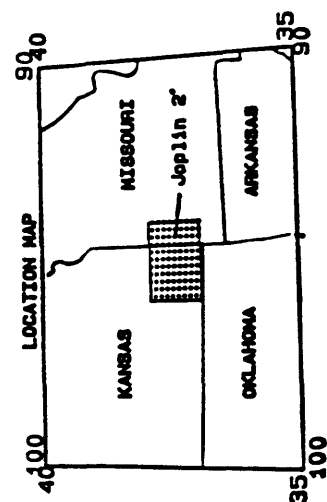
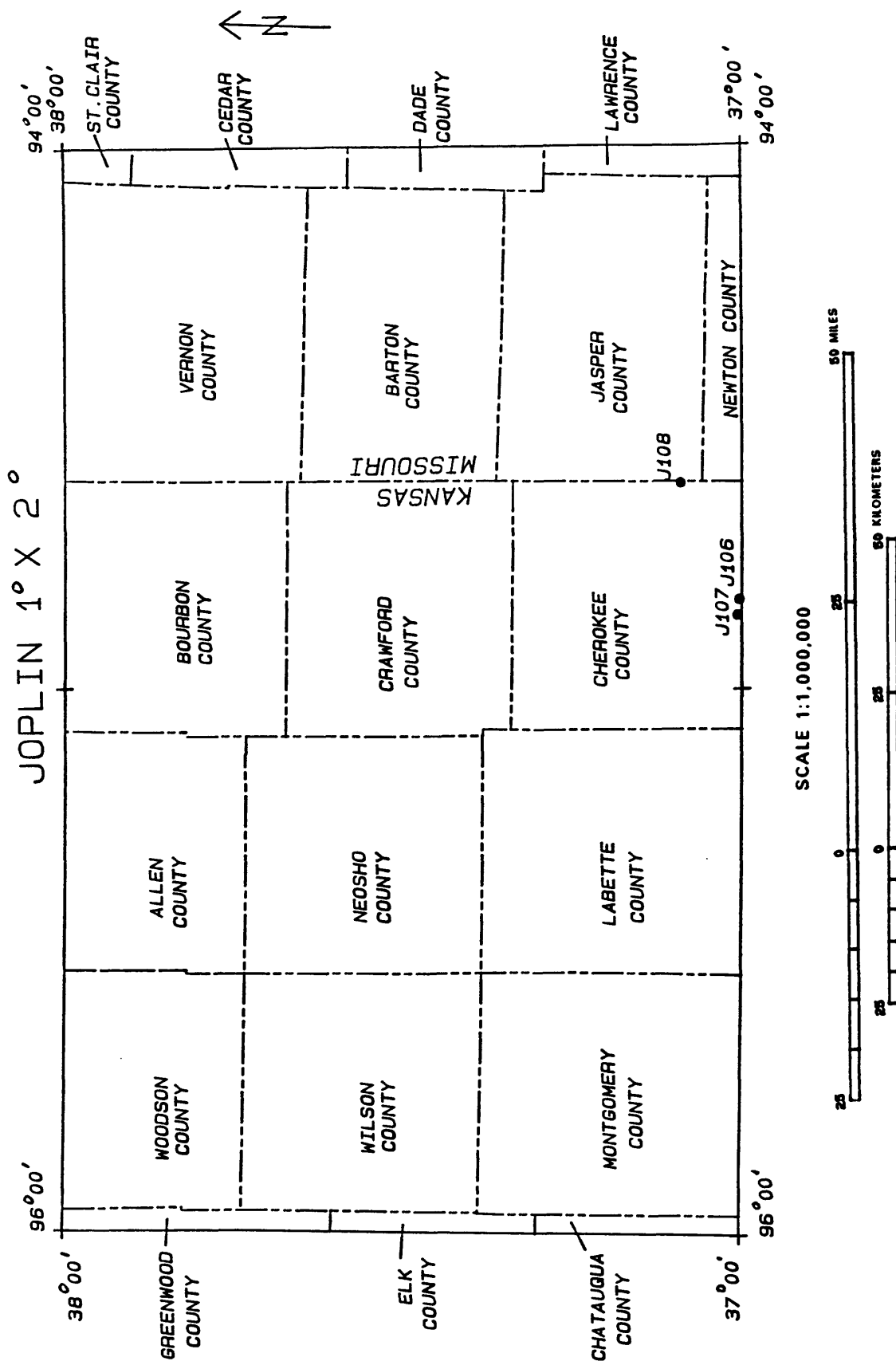


Figure 1. Locations of drill holes 106, 107, and 108, Joplin 1° x 2° quadrangle, Missouri and Kansas.

The visual lower limits of determination for the 31 elements that were determined spectrographically for this report are as follows:

**For those given in percent:**

Calcium	0.05
Iron	0.05
Magnesium	0.02
Titanium	0.002

**For those given 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		

**DESCRIPTION OF DATA TABLES**

Each sample is identified by an eight-character code beginning with the letter J, signifying Joplin. The next three digits signify the USGS drill-hole number. The last four digits identify the depth of the sample from the drill-hole collar. Most samples are composites of approximate 10-foot intervals, dependent upon the original sample intervals and upon the amount of sample material available for analysis.

The stratigraphic unit of the sample is identified by a coded number in the last column of tables 1 through 3. The code and formation names are as follows:

<u>Code</u>	<u>Formation</u>
40	Mississippian Undifferentiated
65	Cotter Dolomite
66	Jefferson City Dolomite
67	Roubidoux Formation
68	Gasconade Dolomite
69	Gunter Sandstone Member
71	Davis Shale
81	Eminence
83	Derby / Doerun
87	Post Bonnetterre Cambrian Undifferentiated
89	Bonnetterre Transition Zone

## EXPLANATION OF DATA

The columns in tables 1 through 3 have headings of sample, elements, and formation. The letter S over the columns signifies emission-spectrographic data.

Iron, magnesium, calcium, and titanium are reported in weight percent (%); all other elements are in parts per million. Other symbols shown on the tables are:

- N = Not detected at the limit of determination;
- < = Detected, but below the limit of determination shown; and
- > = Greater than the limit of determination shown.

Because of the formatting used in the computer program that produced tables 1-3, some of the elements listed in these tables (Fe, Mg, Ca, Ti, Ag, and Be) may carry one or more nonsignificant zeros to the right of the significant digits. The analyst did not determine these elements to the accuracy suggested by the extra zeros.

## RASS

Upon completion of all analytical work, the information from the samples is entered into a computer-based file called RASS (Rock Analysis Storage System). This RASS file contains both descriptive geological information and analytical data. Any or all of this information may be retrieved and placed in a standard form (STATPAC) for computerized statistical manipulation or publication (VanTrump and Miesch, 1977).

## ACKNOWLEDGMENTS

The authors wish to thank the Missouri Division of Geology and Land Survey--Dr. Wallace B. Howe, former Director, and Dr. J. Hadley Williams, Director, and their staff, for making these drill-hole samples available from their sample library.

## 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.
- VanTrump, George, Jr., and Miesch, A.T., 1977, The U.S. Geological Survey RASS-STATPAC system for management and statistical reduction of geochemical data: Computers and Geosciences, v. 3, p. 475-488.

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1060100	37 0 17	94 50 11	7.00	.20	.20	.200	200	.5	N	N
J1060110	37 0 17	94 50 11	10.00	.20	.07	.200	500	.5	N	N
J1060120	37 0 17	94 50 11	5.00	.50	.05	.500	200	.5	N	N
J1060130	37 0 17	94 50 11	7.00	.50	.10	.300	150	<.5	N	N
J1060140	37 0 17	94 50 11	1.00	.10	1.00	.100	70	<.5	N	N
J1060150	37 0 17	94 50 11	.20	.05	.50	.020	15	N	N	N
J1060160	37 0 17	94 50 11	.70	.10	.30	.150	20	N	N	N
J1060170	37 0 17	94 50 11	.50	.20	.20	.150	20	N	N	N
J1060180	37 0 17	94 50 11	1.00	.30	.15	.200	70	<.5	N	N
J1060190	37 0 17	94 50 11	2.00	.50	.10	.300	50	<.5	N	N
J1060200	37 0 17	94 50 11	1.00	.15	.10	.200	20	<.5	N	N
J1060210	37 0 17	94 50 11	.70	.15	.20	.200	20	.5	N	N
J1060220	37 0 17	94 50 11	.20	.05	.07	.030	10	N	N	N
J1060230	37 0 17	94 50 11	.07	.02	<.05	.005	10	N	N	N
J1060240	37 0 17	94 50 11	.10	.02	<.05	.010	10	N	N	N
J1060250	37 0 17	94 50 11	.10	.03	<.05	.020	10	N	N	N
J1060260	37 0 17	94 50 11	.15	.03	.05	.010	10	N	N	N
J1060270	37 0 17	94 50 11	.10	.02	.05	.003	10	N	N	N
J1060280	37 0 17	94 50 11	.15	.03	.05	.002	10	N	N	N
J1060290	37 0 17	94 50 11	.15	.02	.05	.005	10	N	N	N
J1060300	37 0 17	94 50 11	.10	.03	.05	.007	10	N	N	N
J1060305	37 0 17	94 50 11	.05	.02	<.05	.002	10	N	N	N
J1060340	37 0 17	94 50 11	.15	.05	.10	.030	10	N	N	N
J1060350	37 0 17	94 50 11	.20	.05	.15	.020	10	N	N	N
J1060360	37 0 17	94 50 11	.15	.02	.10	.010	10	N	N	N
J1060370	37 0 17	94 50 11	.10	.02	.15	.010	10	N	N	N
J1060380	37 0 17	94 50 11	.10	.03	.20	.005	10	N	N	N
J1060390	37 0 17	94 50 11	.15	.03	.30	.015	10	N	N	N
J1060400	37 0 17	94 50 11	.10	.02	.10	.003	<10	N	N	N
J1060410	37 0 17	94 50 11	.20	.02	.50	.020	10	N	N	N
J1060420	37 0 17	94 50 11	.20	.02	.50	.020	10	N	N	N
J1060430	37 0 17	94 50 11	.15	.03	.70	.030	15	N	N	N
J1060440	37 0 17	94 50 11	.10	.02	.30	.010	10	N	N	N
J1060450	37 0 17	94 50 11	.10	.02	.50	.010	10	N	N	N
J1060460	37 0 17	94 50 11	.50	.15	1.00	.050	150	N	N	N
J1060470	37 0 17	94 50 11	1.00	.15	.50	.050	100	N	N	N
J1060480	37 0 17	94 50 11	5.00	2.00	1.50	1.000	300	<.5	N	N
J1060490	37 0 17	94 50 11	.20	.10	.10	.050	10	N	N	N
J1060500	37 0 17	94 50 11	.20	.50	.50	.030	10	N	N	N
J1060510	37 0 17	94 50 11	.20	.10	.15	.030	10	N	N	N
J1060520	37 0 17	94 50 11	1.00	.10	.05	.100	20	<.5	N	N
J1060530	37 0 17	94 50 11	2.00	.05	.07	.050	10	<.5	N	N
J1060540	37 0 17	94 50 11	.50	.20	.20	.030	<10	N	N	N
J1060550	37 0 17	94 50 11	1.00	.20	.10	.100	10	N	N	N
J1060560	37 0 17	94 50 11	2.00	.20	.10	.150	10	<.5	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1060100	150	100	2.0	N	N	5	100	15	N	<5	N	20
J1060110	300	100	2.0	N	N	10	150	50	N	10	N	50
J1060120	200	100	3.0	N	N	15	200	50	50	<5	N	70
J1060130	300	1,000	5.0	N	N	7	300	30	50	<5	N	50
J1060140	50	100	N	N	N	<5	50	10	N	N	N	5
J1060150	30	20	N	N	N	N	20	5	N	N	N	<5
J1060160	50	70	1.0	N	N	N	50	7	N	N	N	5
J1060170	50	50	1.0	N	N	N	50	7	N	N	N	10
J1060180	100	50	3.0	N	N	5	100	10	N	N	N	15
J1060190	100	50	5.0	N	N	5	150	15	30	N	N	15
J1060200	100	30	1.5	N	N	N	70	5	N	N	N	10
J1060210	70	30	1.5	N	N	N	50	5	N	N	N	5
J1060220	50	20	N	N	N	N	20	5	N	N	N	<5
J1060230	20	20	N	N	N	N	20	<5	N	N	N	N
J1060240	20	20	N	N	N	N	20	<5	N	N	N	N
J1060250	20	20	N	N	N	N	20	<5	N	N	N	N
J1060260	30	20	N	N	N	N	10	5	N	N	N	<5
J1060270	20	20	N	N	N	N	10	5	N	N	N	<5
J1060280	20	20	N	N	N	N	10	5	N	N	N	<5
J1060290	20	20	N	N	N	N	10	5	N	N	N	<5
J1060300	30	20	N	N	N	N	10	<5	N	N	N	N
J1060305	20	20	N	N	N	N	10	<5	N	N	N	N
J1060340	100	20	N	N	N	N	N	100	N	N	N	N
J1060350	100	20	N	N	N	N	N	<5	N	N	N	N
J1060360	70	<20	N	N	N	N	N	<5	N	N	N	N
J1060370	70	<20	N	N	N	N	N	<5	N	N	N	N
J1060380	100	20	N	N	N	N	N	<5	N	N	N	N
J1060390	100	<20	N	N	N	N	N	5	N	N	N	<5
J1060400	100	<20	N	N	N	N	N	<5	N	N	N	N
J1060410	100	20	N	N	N	N	N	<5	N	N	N	N
J1060420	70	50	N	N	N	N	N	<5	N	N	N	N
J1060430	70	30	N	N	N	N	N	5	N	N	N	N
J1060440	70	20	N	N	N	N	N	<5	N	N	N	N
J1060450	70	20	N	N	N	N	N	<5	N	N	N	N
J1060460	70	70	N	N	N	<5	N	7	N	N	N	10
J1060470	50	100	N	N	N	20	N	10	N	N	N	70
J1060480	200	200	5.0	N	N	30	200	30	50	5	<20	100
J1060490	50	50	N	N	N	N	N	7	N	N	N	5
J1060500	50	100	N	N	N	N	N	5	N	N	N	N
J1060510	50	100	N	N	N	N	N	5	N	N	N	<5
J1060520	100	200	N	N	N	N	N	50	<20	N	N	15
J1060530	70	150	N	N	N	N	N	15	<20	N	N	10
J1060540	50	100	N	N	N	N	N	10	N	N	N	5
J1060550	50	100	N	N	N	N	N	10	N	N	N	10
J1060560	100	100	N	N	N	10	N	50	N	<5	N	20



TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1060100	10	N	5	N	N	20	N	10	N	100	N	40
J1060110	20	N	7	N	N	50	N	20	N	300	N	40
J1060120	20	N	20	N	N	100	N	50	N	200	N	40
J1060130	20	N	15	N	N	150	N	30	N	150	N	40
J1060140	N	N	N	N	N	30	N	N	N	100	N	40
J1060150	N	N	N	N	N	N	N	N	N	10	N	40
J1060160	N	N	N	N	N	20	N	N	N	50	N	40
J1060170	10	N	N	N	N	20	N	N	N	100	N	40
J1060180	15	N	7	N	N	50	N	N	N	200	N	40
J1060190	15	N	10	N	N	100	N	N	N	200	N	40
J1060200	N	N	N	N	N	30	N	N	N	100	N	40
J1060210	N	N	N	N	N	20	N	N	N	70	N	40
J1060220	N	N	N	N	N	N	N	N	1,500	20	N	40
J1060230	20	N	N	N	N	N	N	N	<200	N	N	40
J1060240	N	N	N	N	N	N	N	N	N	<10	N	40
J1060250	N	N	N	N	N	N	N	N	1,000	10	N	40
J1060260	15	N	N	N	N	N	N	N	N	10	N	40
J1060270	N	N	N	N	N	N	N	N	700	N	N	40
J1060280	N	N	N	N	N	N	N	N	1,500	N	N	40
J1060290	N	N	N	N	N	N	N	N	5,000	N	N	40
J1060300	N	N	N	N	N	N	N	N	<200	N	N	40
J1060305	N	N	N	N	N	N	N	N	N	N	N	40
J1060340	N	N	N	N	N	N	N	N	N	10	N	40
J1060350	N	N	N	N	N	N	N	N	N	10	N	40
J1060360	N	N	N	N	N	N	N	N	N	N	N	40
J1060370	N	N	N	N	N	N	N	N	N	N	N	40
J1060380	N	N	N	N	N	N	N	N	N	N	N	40
J1060390	N	N	N	N	N	N	N	N	N	N	N	40
J1060400	N	N	N	N	N	N	N	N	N	N	N	40
J1060410	N	N	N	N	N	N	N	N	N	<10	N	40
J1060420	N	N	N	N	N	N	N	N	N	10	N	40
J1060430	N	N	N	N	N	N	N	N	N	15	N	40
J1060440	N	N	N	N	N	N	N	N	N	N	N	40
J1060450	N	N	N	N	N	N	N	N	N	N	N	40
J1060460	N	N	N	N	N	20	N	N	<200	20	N	40
J1060470	15	N	N	N	N	20	N	N	<200	30	N	40
J1060480	50	N	20	10	N	300	N	30	<200	300	N	40
J1060490	<10	N	N	N	N	10	N	N	N	50	N	65
J1060500	N	N	N	N	N	N	N	N	N	20	N	65
J1060510	N	N	N	N	N	<10	N	N	N	20	N	65
J1060520	30	N	N	N	N	15	N	N	N	50	N	65
J1060530	15	N	N	N	N	10	N	N	N	50	N	65
J1060540	N	N	N	N	N	10	N	N	N	70	N	65
J1060550	15	N	N	N	N	20	N	N	N	30	N	65
J1060560	50	N	N	N	N	20	N	N	N	50	N	65

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1060570	37 0 17	94 50 11	.50	.10	.07	.030	10	N	N	N
J1060580	37 0 17	94 50 11	1.00	.15	.07	.070	10	N	N	N
J1060590	37 0 17	94 50 11	1.00	.20	.10	.100	10	N	N	N
J1060600	37 0 17	94 50 11	3.00	.10	.07	.100	15	<.5	N	N
J1060610	37 0 17	94 50 11	1.00	.15	.07	.150	10	N	N	N
J1060620	37 0 17	94 50 11	.50	.10	.05	.030	<10	N	N	N
J1060630	37 0 17	94 50 11	.70	.05	.07	.010	<10	N	N	N
J1060640	37 0 17	94 50 11	.50	.05	.05	.007	<10	N	N	N
J1060650	37 0 17	94 50 11	.70	.03	.07	.010	10	N	N	N
J1060660	37 0 17	94 50 11	1.00	.03	.05	.020	10	2.0	N	N
J1060670	37 0 17	94 50 11	.70	.03	.05	.030	<10	N	N	N
J1060680	37 0 17	94 50 11	1.50	.05	.07	.020	<10	<.5	N	N
J1060690	37 0 17	94 50 11	3.00	.10	.05	.050	15	1.0	N	N
J1060700	37 0 17	94 50 11	2.00	.03	.05	.015	10	.5	N	N
J1060710	37 0 17	94 50 11	1.00	.05	.05	.030	<10	N	N	N
J1060720	37 0 17	94 50 11	1.00	.03	.05	.020	<10	N	N	N
J1060730	37 0 17	94 50 11	.30	.02	<.05	.005	<10	N	N	N
J1060740	37 0 17	94 50 11	.20	.03	.05	.015	<10	N	N	N
J1060750	37 0 17	94 50 11	.50	.03	.05	.005	<10	N	N	N
J1060760	37 0 17	94 50 11	.50	.05	.05	.030	N	N	N	N
J1060770	37 0 17	94 50 11	.50	.10	.07	.030	N	N	N	N
J1060780	37 0 17	94 50 11	1.00	.15	.07	.050	N	<.5	N	N
J1060790	37 0 17	94 50 11	.30	.10	.05	.030	N	N	N	N
J1060800	37 0 17	94 50 11	.30	.03	.05	.010	N	N	N	N
J1060810	37 0 17	94 50 11	.50	.03	.05	.015	N	N	N	N
J1060820	37 0 17	94 50 11	.30	.03	.10	.010	N	N	N	N
J1060830	37 0 17	94 50 11	.10	.02	<.05	.005	N	N	N	N
J1060840	37 0 17	94 50 11	.15	.03	.07	.010	N	N	N	N
J1060850	37 0 17	94 50 11	.20	.05	.10	.020	N	N	N	N
J1060860	37 0 17	94 50 11	.20	.05	.15	.020	N	N	N	N
J1060870	37 0 17	94 50 11	.50	.03	.07	.030	N	N	N	N
J1060880	37 0 17	94 50 11	.70	.02	.05	.015	N	N	N	N
J1060890	37 0 17	94 50 11	.70	.03	.05	.020	N	N	N	N
J1060900	37 0 17	94 50 11	1.00	.03	.05	.020	N	N	N	N
J1060910	37 0 17	94 50 11	1.00	.02	<.05	.015	N	N	N	N
J1060920	37 0 17	94 50 11	.50	.02	<.05	.010	N	N	N	N
J1060930	37 0 17	94 50 11	.50	.10	.07	.050	N	N	N	N
J1060940	37 0 17	94 50 11	.50	.10	.20	.030	N	N	N	N
J1060950	37 0 17	94 50 11	.30	.05	.07	.020	N	N	N	N
J1060960	37 0 17	94 50 11	.50	.03	.05	.015	N	N	N	N
J1060970	37 0 17	94 50 11	.20	.10	.05	.020	N	N	N	N
J1060980	37 0 17	94 50 11	.50	.10	.07	.030	N	N	N	N
J1060990	37 0 17	94 50 11	.50	.10	.07	.020	N	N	N	N
J1061000	37 0 17	94 50 11	.10	.03	<.05	.007	N	N	N	N
J1061010	37 0 17	94 50 11	.10	.05	.05	.005	N	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1060570	50	70	N	N	N	N	N	7	N	N	N	5
J1060580	70	100	N	N	N	N	N	20	N	N	N	10
J1060590	100	100	N	N	N	N	N	20	N	N	N	10
J1060600	100	150	N	N	N	<5	N	20	N	N	N	15
J1060610	100	150	N	N	N	N	N	15	N	N	N	7
J1060620	70	100	N	N	N	N	N	10	N	N	N	<5
J1060630	50	100	N	N	N	N	N	20	N	N	N	5
J1060640	70	70	N	N	N	N	N	7	N	N	N	<5
J1060650	50	100	N	N	N	N	N	10	N	N	N	<5
J1060660	50	100	N	N	N	N	N	100	N	N	N	10
J1060670	70	70	N	N	N	N	N	7	N	N	N	5
J1060680	50	30	N	N	N	N	N	10	N	N	N	10
J1060690	50	70	N	N	N	5	N	50	N	5	N	20
J1060700	30	50	N	N	N	N	N	15	N	<5	N	15
J1060710	50	70	N	N	N	N	N	7	N	<5	N	5
J1060720	50	70	N	N	N	N	N	10	N	<5	N	5
J1060730	30	50	N	N	N	N	N	5	N	N	N	<5
J1060740	50	70	N	N	N	N	N	7	N	N	N	<5
J1060750	50	50	N	N	N	N	N	7	N	N	N	5
J1060760	70	150	N	N	N	N	N	7	N	N	N	5
J1060770	70	200	N	N	N	N	N	7	N	N	N	<5
J1060780	50	50	N	N	N	N	N	10	N	N	N	10
J1060790	70	150	N	N	N	N	N	7	N	N	N	<5
J1060800	70	70	N	N	N	N	N	5	N	N	N	<5
J1060810	70	50	N	N	N	N	N	5	N	N	N	<5
J1060820	50	30	N	N	N	N	N	5	N	N	N	N
J1060830	50	20	N	N	N	N	N	<5	N	N	N	N
J1060840	70	50	N	N	N	N	N	<5	N	N	N	N
J1060850	50	70	N	N	N	N	N	5	N	N	N	N
J1060860	70	50	N	N	N	N	N	5	N	N	N	N
J1060870	50	50	N	N	N	N	N	70	N	N	N	<5
J1060880	50	<20	N	N	N	N	N	7	N	<5	N	5
J1060890	50	20	N	N	N	N	N	7	N	N	N	<5
J1060900	50	20	N	N	N	N	N	10	N	N	N	5
J1060910	50	50	N	N	N	N	N	10	N	N	N	<5
J1060920	<10	50	N	N	N	N	N	5	N	N	N	N
J1060930	100	70	N	N	N	N	N	7	N	N	N	<5
J1060940	70	70	N	N	N	N	N	10	N	N	N	<5
J1060950	70	50	N	N	N	N	N	<5	N	N	N	N
J1060960	70	20	N	N	N	N	N	5	N	N	N	N
J1060970	100	50	N	N	N	N	N	<5	N	N	N	<5
J1060980	100	70	N	N	N	N	N	5	N	N	N	5
J1060990	100	70	N	N	N	N	N	5	N	N	N	5
J1061000	N	<20	N	N	N	N	N	N	N	N	N	N
J1061010	N	20	N	N	N	N	N	N	N	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1060570	N	N	N	N	N	N	N	N	N	10	N	65
J1060580	10	N	N	N	N	20	N	N	N	20	N	65
J1060590	20	N	N	N	N	20	N	N	N	30	N	65
J1060600	10	N	N	N	N	15	N	N	N	100	N	65
J1060610	15	N	N	N	N	15	N	N	N	100	N	65
J1060620	N	N	N	N	N	10	N	N	<200	20	N	65
J1060630	N	N	N	N	N	<10	N	N	N	20	N	65
J1060640	N	N	N	N	N	N	N	N	N	10	N	65
J1060650	N	N	N	N	N	N	N	N	N	20	N	65
J1060660	<10	N	N	N	N	N	N	N	N	50	N	65
J1060670	N	N	N	N	N	N	N	N	N	15	N	65
J1060680	N	N	N	N	N	N	N	N	N	N	N	65
J1060690	10	N	N	N	N	10	N	N	N	20	N	66
J1060700	N	N	N	N	N	N	N	N	200	10	N	66
J1060710	N	N	N	N	N	10	N	N	N	15	N	66
J1060720	N	N	N	N	N	N	N	N	N	20	N	66
J1060730	N	N	N	N	N	N	N	N	N	15	N	66
J1060740	N	N	N	N	N	N	N	N	N	20	N	66
J1060750	N	N	N	N	N	N	N	N	N	N	N	66
J1060760	N	N	N	N	N	N	N	N	N	10	<100	66
J1060770	N	N	N	N	N	N	N	N	N	10	<100	66
J1060780	N	N	N	N	N	N	N	N	N	20	100	66
J1060790	N	N	N	N	N	N	N	N	N	15	<100	66
J1060800	N	N	N	N	N	N	N	N	N	N	<100	66
J1060810	N	N	N	N	N	N	N	N	N	N	<100	66
J1060820	N	N	N	N	N	N	N	N	N	N	N	66
J1060830	N	N	N	N	N	N	N	N	N	N	N	66
J1060840	N	N	N	N	N	N	N	N	N	N	N	66
J1060850	N	N	N	N	N	N	N	N	N	15	N	66
J1060860	N	N	N	N	N	N	N	N	N	20	N	66
J1060870	N	N	N	N	N	N	N	N	N	10	<100	66
J1060880	N	N	N	N	N	N	N	N	N	10	100	66
J1060890	N	N	N	N	N	N	N	N	N	20	<100	66
J1060900	N	N	N	N	N	N	N	N	N	15	100	66
J1060910	N	N	N	N	N	N	N	N	N	20	150	66
J1060920	N	N	N	N	N	N	N	N	N	30	<100	66
J1060930	N	N	N	N	N	N	N	N	N	20	<100	66
J1060940	N	N	N	N	N	N	N	N	N	30	<100	67
J1060950	N	N	N	N	N	N	N	N	N	10	N	67
J1060960	N	N	N	N	N	N	N	N	N	N	N	67
J1060970	N	N	N	N	N	N	N	N	N	15	N	67
J1060980	20	N	N	N	N	N	N	N	N	15	N	67
J1060990	N	N	N	N	N	N	N	N	N	10	N	67
J1061000	N	N	N	N	N	N	N	N	N	20	N	67
J1061010	N	N	N	N	N	N	N	N	N	30	N	67

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1061020	37 0 17	94 50 11	.15	.03	.05	.003	N	N	N	N
J1061030	37 0 17	94 50 11	.50	.02	.05	.002	N	N	N	N
J1061040	37 0 17	94 50 11	.10	.03	.05	.002	N	N	N	N
J1061050	37 0 17	94 50 11	.20	.03	.05	.002	N	N	N	N
J1061060	37 0 17	94 50 11	.07	.02	<.05	.003	N	N	N	N
J1061070	37 0 17	94 50 11	1.50	.02	<.05	.002	N	N	N	N
J1061080	37 0 17	94 50 11	1.00	.02	<.05	.002	N	N	N	N
J1061090	37 0 17	94 50 11	.70	.03	<.05	.020	<10	N	N	N
J1061100	37 0 17	94 50 11	.70	.05	.07	.010	15	N	N	N
J1061110	37 0 17	94 50 11	.20	.03	.05	.003	N	N	N	N
J1061120	37 0 17	94 50 11	.10	.03	.05	.003	<10	N	N	N
J1061130	37 0 17	94 50 11	.10	.02	<.05	.002	N	N	N	N
J1061140	37 0 17	94 50 11	.10	.02	<.05	.002	N	N	N	N
J1061150	37 0 17	94 50 11	.20	.03	<.05	.005	N	N	N	N
J1061160	37 0 17	94 50 11	.20	.05	.05	.010	N	N	N	N
J1061170	37 0 17	94 50 11	.15	.03	.05	.003	N	N	N	N
J1061180	37 0 17	94 50 11	.50	.05	<.05	.020	N	N	N	N
J1061190	37 0 17	94 50 11	.70	.10	.07	.030	N	N	N	N
J1061200	37 0 17	94 50 11	.15	.02	.05	.005	N	N	N	N
J1061210	37 0 17	94 50 11	.10	.02	.05	.003	N	N	N	N
J1061220	37 0 17	94 50 11	.30	.05	.07	.007	N	N	N	N
J1061230	37 0 17	94 50 11	.50	.05	.07	.015	N	N	N	N
J1061240	37 0 17	94 50 11	.20	.02	.05	.005	N	N	N	N
J1061250	37 0 17	94 50 11	.30	.02	<.05	.003	N	N	N	N
J1061260	37 0 17	94 50 11	.30	.02	<.05	.002	N	N	N	N
J1061270	37 0 17	94 50 11	.50	.03	<.05	.005	N	N	N	N
J1061280	37 0 17	94 50 11	.70	.03	.05	.007	N	1.0	N	N
J1061290	37 0 17	94 50 11	.30	.02	.05	.003	N	N	N	N
J1061300	37 0 17	94 50 11	.50	.03	.07	.007	N	N	N	N
J1061310	37 0 17	94 50 11	1.50	.02	<.05	.010	N	<.5	N	N
J1061320	37 0 17	94 50 11	.15	.02	<.05	.003	N	N	<200	N
J1061330	37 0 17	94 50 11	5.00	.03	<.05	.030	10	.5	N	N
J1061340	37 0 17	94 50 11	3.00	.10	.10	.030	15	.5	N	N
J1061350	37 0 17	94 50 11	.50	.02	<.05	.007	N	N	N	N
J1061360	37 0 17	94 50 11	.50	.03	.05	.010	N	N	N	N
J1061370	37 0 17	94 50 11	1.00	.05	.07	.010	N	N	N	N
J1061383	37 0 17	94 50 11	2.00	.03	.05	.010	N	N	N	N
J1061397	37 0 17	94 50 11	20.00	7.00	10.00	.070	500	10.0	1,000	N
J1061407	37 0 17	94 50 11	10.00	1.00	.30	.200	100	5.0	200	N
J1061417	37 0 17	94 50 11	7.00	2.00	.50	.500	100	3.0	N	N
J1061427	37 0 17	94 50 11	15.00	5.00	5.00	.150	300	5.0	300	N
J1061437	37 0 17	94 50 11	10.00	1.50	.50	.200	100	5.0	200	N
J1061447	37 0 17	94 50 11	2.00	5.00	7.00	.100	200	1.0	N	N
J1061457	37 0 17	94 50 11	20.00	.50	.10	.150	70	10.0	5,000	N
J1061467	37 0 17	94 50 11	7.00	.20	.50	.020	30	2.0	1,500	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1061020	N	50	N	N	N	N	N	N	N	N	N	N
J1061030	N	20	N	N	N	N	N	N	N	N	N	5
J1061040	N	30	N	N	N	N	N	N	N	N	N	N
J1061050	N	20	N	N	N	N	N	N	N	N	N	N
J1061060	N	<20	N	N	N	N	N	N	N	N	N	<5
J1061070	N	<20	N	N	N	N	N	N	N	<5	N	<5
J1061080	N	20	N	N	N	N	N	N	N	N	N	5
J1061090	N	30	N	N	N	N	N	N	N	N	N	<5
J1061100	N	20	N	N	N	N	N	N	N	N	N	<5
J1061110	N	30	N	N	N	N	N	N	N	N	N	N
J1061120	N	50	N	N	N	N	N	N	N	N	N	N
J1061130	N	20	N	N	N	N	N	N	N	N	N	N
J1061140	N	20	N	N	N	N	N	N	N	N	N	N
J1061150	N	20	N	N	N	N	N	N	N	N	N	N
J1061160	N	150	N	N	N	N	N	N	N	N	N	N
J1061170	N	100	N	N	N	N	N	N	N	N	N	N
J1061180	15	30	N	N	N	N	N	7	N	N	N	<5
J1061190	15	30	N	N	N	N	N	7	N	N	N	5
J1061200	30	70	N	N	N	N	N	N	N	N	N	N
J1061210	30	50	N	N	N	N	N	10	N	N	N	N
J1061220	30	100	N	N	N	N	N	5	N	N	N	N
J1061230	50	70	N	N	N	N	N	5	N	N	N	5
J1061240	50	30	N	N	N	N	N	<5	N	N	N	<5
J1061250	30	70	N	N	N	N	N	<5	N	N	N	N
J1061260	30	30	N	N	N	N	N	7	N	N	N	<5
J1061270	30	20	N	N	N	N	N	5	N	N	N	<5
J1061280	50	30	N	N	N	N	N	10	N	N	N	5
J1061290	30	30	N	N	N	N	N	<5	N	N	N	N
J1061300	50	20	N	N	N	N	N	<5	N	<5	N	N
J1061310	50	20	N	N	N	N	N	10	N	5	N	5
J1061320	20	<20	N	N	N	N	N	5	N	N	N	<5
J1061330	50	20	N	N	N	N	N	20	N	10	N	20
J1061340	50	20	N	N	N	N	N	15	N	<5	N	15
J1061350	30	20	N	N	N	N	N	<5	N	N	N	N
J1061360	50	30	N	N	N	N	N	15	N	N	N	5
J1061370	30	20	N	N	N	N	N	7	N	N	N	5
J1061383	30	20	N	N	N	N	N	15	N	5	N	5
J1061397	30	50	N	N	N	10	N	10,000	N	20	N	100
J1061407	200	50	5.0	N	N	10	70	200	N	50	N	100
J1061417	300	50	5.0	N	N	10	100	500	N	20	N	70
J1061427	200	50	3.0	N	N	10	70	500	N	30	N	100
J1061437	300	50	10.0	N	N	20	100	200	N	30	N	150
J1061447	200	20	3.0	N	N	5	30	70	N	20	N	20
J1061457	500	30	7.0	N	N	100	50	500	N	1,000	N	300
J1061467	15	<20	N	N	N	5	N	150	N	50	N	30

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1061020	N	N	N	N	N	N	N	N	N	10	N	67
J1061030	N	N	N	N	N	N	N	N	N	15	N	67
J1061040	N	N	N	N	N	N	N	N	N	N	N	67
J1061050	N	N	N	N	N	N	N	N	N	N	N	67
J1061060	N	N	N	N	N	N	N	N	N	20	N	67
J1061070	N	N	N	N	N	N	N	N	N	10	N	67
J1061080	N	N	N	N	N	N	N	N	N	150	N	67
J1061090	N	N	N	N	N	N	N	N	N	30	N	67
J1061100	15	N	N	N	N	N	N	N	N	70	N	67
J1061110	N	N	N	N	N	N	N	N	N	20	N	68
J1061120	N	N	N	N	N	N	N	N	N	20	N	68
J1061130	N	N	N	N	N	N	N	N	N	15	N	68
J1061140	N	N	N	N	N	N	N	N	N	50	N	68
J1061150	N	N	N	N	N	N	N	N	N	N	N	68
J1061160	N	N	N	N	N	N	N	N	N	10	N	68
J1061170	N	N	N	N	N	N	N	N	N	N	N	68
J1061180	N	N	N	N	N	20	N	N	N	N	N	68
J1061190	N	N	N	N	N	30	N	N	N	N	N	68
J1061200	N	N	N	N	N	N	N	N	N	N	N	68
J1061210	N	N	N	N	N	N	N	N	N	N	N	68
J1061220	N	N	N	N	N	N	N	N	N	N	N	68
J1061230	N	N	N	N	N	N	N	N	N	N	N	68
J1061240	N	N	N	N	N	N	N	N	<200	N	N	68
J1061250	N	N	N	N	N	N	N	N	N	N	N	68
J1061260	N	N	N	N	N	N	N	N	N	N	N	68
J1061270	N	N	N	N	N	N	N	N	N	N	N	68
J1061280	N	N	N	N	N	N	N	N	<200	N	N	68
J1061290	N	N	N	N	N	N	N	N	N	N	N	68
J1061300	N	N	N	N	N	N	N	N	N	20	N	68
J1061310	10	N	N	N	N	N	N	N	<200	N	N	68
J1061320	<10	N	N	N	N	N	N	N	N	N	N	68
J1061330	20	N	N	N	N	N	N	N	N	N	N	68
J1061340	15	N	N	N	N	N	N	N	N	20	N	68
J1061350	N	N	N	N	N	N	N	N	N	30	N	69
J1061360	N	N	N	N	N	N	N	N	N	15	N	69
J1061370	N	N	N	N	N	N	N	N	N	N	N	87
J1061383	N	N	N	N	N	N	N	N	N	N	N	87
J1061397	500	N	N	N	N	20	N	N	N	30	N	87
J1061407	200	N	5	N	N	300	N	10	N	70	N	87
J1061417	150	N	7	N	N	300	N	15	<200	70	N	87
J1061427	200	N	<5	N	N	100	N	10	N	70	N	87
J1061437	300	N	5	N	N	500	N	10	N	70	N	87
J1061447	200	N	N	N	N	70	N	<10	N	30	N	87
J1061457	500	N	5	N	N	150	N	<10	200	30	N	87
J1061467	150	N	N	N	N	10	N	N	N	<10	N	87

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1061477	37 0 17	94 50 11	20.00	.70	1.50	.200	100	7.0	1,500	N
J1061487	37 0 17	94 50 11	10.00	2.00	2.00	.300	100	3.0	200	N
J1061497	37 0 17	94 50 11	.70	.15	.20	.150	20	<.5	N	N
J1061506	37 0 17	94 50 11	1.00	.10	.10	.015	20	N	N	N
J1061516	37 0 17	94 50 11	1.00	.50	1.00	.070	50	N	N	N
J1061525	37 0 17	94 50 11	3.00	1.00	.10	.500	100	.5	N	N
J1061535	37 0 17	94 50 11	5.00	1.00	.15	.500	70	<.5	N	N
J1061545	37 0 17	94 50 11	5.00	1.00	.05	.500	70	N	N	N
J1061555	37 0 17	94 50 11	5.00	1.00	.50	.500	70	N	N	N
J1061565	37 0 17	94 50 11	5.00	1.00	.10	.500	70	N	N	N
J1061575	37 0 17	94 50 11	10.00	.20	.05	.300	70	1.0	N	N
J1061584	37 0 17	94 50 11	2.00	.20	.10	.300	30	N	N	N
J1061594	37 0 17	94 50 11	1.50	.30	.05	.500	50	N	N	N
J1061604	37 0 17	94 50 11	1.50	.30	<.05	.500	50	N	N	N
J1061614	37 0 17	94 50 11	2.00	.50	.07	.500	50	N	N	N
J1061623	37 0 17	94 50 11	3.00	.50	<.05	.500	50	N	N	N
J1061635	37 0 17	94 50 11	1.50	.20	.07	.150	50	N	N	N
J1061643	37 0 17	94 50 11	2.00	.50	.10	.300	50	N	N	N
J1061653	37 0 17	94 50 11	1.00	.15	.10	.150	200	N	N	N
J1061663	37 0 17	94 50 11	1.00	.15	.10	.150	300	N	N	N



TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1061477	200	50	7.0	N	N	30	70	300	N	100	N	150
J1061487	500	70	7.0	N	N	15	100	200	N	50	N	100
J1061497	20	200	N	N	N	N	N	20	N	5	N	5
J1061506	50	50	N	N	N	N	N	15	N	5	N	5
J1061516	50	70	N	N	N	N	N	15	N	7	N	7
J1061525	100	300	5.0	N	N	10	50	70	70	15	<20	30
J1061535	100	500	10.0	N	N	15	50	50	50	10	<20	30
J1061545	100	500	5.0	N	N	10	50	50	50	10	<20	20
J1061555	70	500	5.0	N	N	10	30	50	50	15	<20	20
J1061565	100	500	7.0	N	N	10	30	50	50	15	<20	20
J1061575	70	700	5.0	N	N	5	10	100	30	20	N	15
J1061584	30	700	2.0	N	N	5	N	30	20	10	N	10
J1061594	70	700	5.0	N	N	5	20	20	50	5	N	10
J1061604	50	1,000	7.0	N	N	5	20	15	50	5	N	10
J1061614	50	1,000	7.0	N	N	7	20	20	50	10	N	7
J1061623	100	1,000	7.0	N	N	5	20	20	70	5	N	7
J1061635	50	500	3.0	N	N	5	N	10	30	N	N	5
J1061643	50	1,000	10.0	N	N	15	N	20	50	7	N	10
J1061653	20	100	5.0	N	N	N	N	N	50	N	<20	N
J1061663	15	100	3.0	N	N	N	N	N	50	N	<20	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 106, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1061477	300	N	<5	N	N	100	N	10	N	150	N	87
J1061487	200	N	5	N	N	500	N	15	N	150	N	87
J1061497	20	N	N	N	N	15	N	10	N	150	N	87
J1061506	<10	N	N	N	N	N	N	N	N	10	N	87
J1061516	50	N	N	N	N	10	N	N	N	30	N	87
J1061525	100	N	5	10	N	100	N	20	N	200	N	87
J1061535	100	N	5	N	N	70	N	20	N	300	N	87
J1061545	70	N	<5	<10	N	70	N	20	N	300	N	87
J1061555	100	N	5	10	N	70	N	30	N	300	N	87
J1061565	100	N	5	10	N	70	N	30	N	300	N	87
J1061575	150	N	N	N	N	50	N	30	N	200	N	87
J1061584	70	N	N	N	N	20	N	20	N	300	N	87
J1061594	50	N	<5	N	N	70	N	20	N	500	N	87
J1061604	50	N	N	N	N	70	N	30	N	500	N	87
J1061614	70	N	N	N	N	50	N	30	N	500	N	87
J1061623	50	N	N	N	N	50	N	30	N	300	N	87
J1061635	70	N	N	<10	N	10	N	15	N	200	N	87
J1061643	50	N	N	N	N	30	N	20	N	500	N	87
J1061653	50	N	N	N	N	10	N	20	N	100	N	87
J1061663	50	N	N	<10	N	<10	N	20	N	100	N	87

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1070130	37 0 25	94 51 49	>20.00	.07	.15	.100	150	<.5	N	N
J1070140	37 0 25	94 51 49	1.00	.02	.20	.010	10	N	N	N
J1070150	37 0 25	94 51 49	.30	.05	.50	.050	15	N	N	N
J1070160	37 0 25	94 51 49	.30	.02	.50	.030	15	N	N	N
J1070170	37 0 25	94 51 49	.50	.02	.30	.030	10	N	N	N
J1070180	37 0 25	94 51 49	.15	.02	.20	.015	20	N	N	N
J1070190	37 0 25	94 51 49	.10	.02	.15	.015	<10	N	N	N
J1070200	37 0 25	94 51 49	.05	.02	.20	.010	<10	N	N	N
J1070210	37 0 25	94 51 49	.15	<.02	.15	.007	<10	N	N	N
J1070220	37 0 25	94 51 49	.15	.05	.15	.030	10	N	N	N
J1070230	37 0 25	94 51 49	.05	<.02	<.05	.002	<10	N	N	N
J1070240	37 0 25	94 51 49	.10	.02	.05	.010	<10	N	N	N
J1070250	37 0 25	94 51 49	.05	.02	<.05	.007	<10	N	N	N
J1070260	37 0 25	94 51 49	.15	.10	.05	.070	10	N	N	N
J1070270	37 0 25	94 51 49	.05	.03	.10	.007	<10	N	N	N
J1070280	37 0 25	94 51 49	.10	.02	<.05	.005	<10	N	N	N
J1070290	37 0 25	94 51 49	.10	.02	.15	.002	<10	N	N	N
J1070300	37 0 25	94 51 49	.15	.02	.20	.005	<10	N	N	N
J1070310	37 0 25	94 51 49	.10	.03	.30	.015	10	N	N	N
J1070320	37 0 25	94 51 49	.10	.02	.20	.007	<10	N	N	N
J1070330	37 0 25	94 51 49	.10	.02	.30	.010	10	N	N	N
J1070340	37 0 25	94 51 49	.05	.02	.30	.010	<10	N	<200	N
J1070350	37 0 25	94 51 49	.10	<.02	.15	.020	<10	N	N	N
J1070360	37 0 25	94 51 49	.15	.03	.20	.030	15	N	N	N
J1070370	37 0 25	94 51 49	.15	<.02	.10	.010	10	N	N	N
J1070380	37 0 25	94 51 49	.10	.02	.70	.020	15	N	N	N
J1070390	37 0 25	94 51 49	.10	<.02	.20	.007	10	N	N	N
J1070400	37 0 25	94 51 49	.15	.02	.30	.015	15	N	N	N
J1070410	37 0 25	94 51 49	.20	.05	.50	.030	15	N	N	N
J1070420	37 0 25	94 51 49	.15	.02	.50	.010	10	N	N	N
J1070430	37 0 25	94 51 49	.20	.05	.50	.030	15	N	N	N
J1070440	37 0 25	94 51 49	3.00	1.00	.30	.500	100	N	N	N
J1070450	37 0 25	94 51 49	1.00	.20	.20	.150	20	<.5	N	N
J1070460	37 0 25	94 51 49	.50	.10	.15	.030	10	N	N	N
J1070470	37 0 25	94 51 49	.20	.02	.05	.010	<10	N	N	N
J1070480	37 0 25	94 51 49	.10	.15	.30	.007	<10	N	N	N
J1070490	37 0 25	94 51 49	.50	.07	.10	.020	<10	N	N	N
J1070500	37 0 25	94 51 49	.20	.07	<.05	.030	<10	N	N	N
J1070510	37 0 25	94 51 49	.20	.05	<.05	.030	<10	N	N	N
J1070520	37 0 25	94 51 49	1.00	.15	.20	.070	<10	N	N	N
J1070530	37 0 25	94 51 49	.70	.10	.20	.030	<10	N	N	N
J1070540	37 0 25	94 51 49	.70	.07	.10	.020	<10	N	N	N
J1070550	37 0 25	94 51 49	2.00	.20	.15	.070	10	N	N	N
J1070560	37 0 25	94 51 49	.70	.30	.15	.070	15	N	N	N
J1070570	37 0 25	94 51 49	.20	.15	.10	.020	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1070130	30	70	<1.0	N	N	15	20	30	N	N	N	70
J1070140	30	20	N	N	N	N	N	N	N	N	N	5
J1070150	70	70	N	N	N	N	10	N	N	N	N	10
J1070160	50	50	N	N	N	N	<10	N	N	N	N	15
J1070170	70	20	N	N	N	N	<10	N	N	N	N	5
J1070180	70	30	N	N	<20	N	N	N	N	N	N	<5
J1070190	70	30	N	N	20	N	N	<5	N	N	N	N
J1070200	50	30	N	N	N	N	N	N	N	N	N	N
J1070210	50	20	N	N	<20	N	N	5	N	N	N	5
J1070220	70	50	N	N	N	N	N	<5	N	N	N	5
J1070230	30	20	N	N	N	N	N	N	N	N	N	N
J1070240	50	30	N	N	N	N	N	N	N	N	N	<5
J1070250	50	20	N	N	N	N	N	N	N	N	N	N
J1070260	50	70	N	N	N	N	N	N	N	N	N	<5
J1070270	50	30	N	N	N	N	N	N	N	N	N	N
J1070280	30	30	N	N	N	N	N	N	N	N	N	N
J1070290	70	20	N	N	N	N	N	N	N	N	N	N
J1070300	100	20	N	N	N	N	N	N	N	N	N	5
J1070310	70	20	N	N	N	N	N	N	N	N	N	<5
J1070320	70	20	N	N	N	N	N	N	N	N	N	N
J1070330	70	20	N	N	N	N	N	N	N	N	N	N
J1070340	50	20	N	N	N	N	100	N	N	N	N	<5
J1070350	70	30	N	N	N	N	100	N	N	N	N	<5
J1070360	100	70	N	N	N	N	100	N	N	N	N	10
J1070370	70	30	N	N	N	N	100	N	N	N	N	<5
J1070380	70	30	N	N	N	N	100	N	N	N	N	5
J1070390	50	20	N	N	N	N	100	<5	N	N	N	<5
J1070400	70	70	N	N	N	N	100	N	N	N	N	<5
J1070410	50	50	N	N	N	N	100	N	N	N	N	5
J1070420	100	30	N	N	N	N	100	N	N	N	N	<5
J1070430	70	70	N	N	N	N	100	N	N	N	N	5
J1070440	70	100	5.0	N	N	30	100	30	20	20	<20	70
J1070450	150	150	1.5	N	N	<5	30	7	N	10	<20	20
J1070460	70	100	N	N	N	N	N	<5	N	5	<20	<5
J1070470	30	30	N	N	N	N	N	<5	N	<5	<20	<5
J1070480	50	70	N	N	N	N	N	<5	N	N	<20	<5
J1070490	30	70	N	N	N	N	N	10	N	N	<20	<5
J1070500	50	100	N	N	N	N	N	<5	N	<5	<20	<5
J1070510	50	100	N	N	N	N	N	7	N	N	<20	<5
J1070520	70	70	N	N	N	N	N	5	N	<5	<20	10
J1070530	70	70	N	N	N	N	N	<5	N	N	<20	<5
J1070540	70	70	N	N	N	N	N	<5	N	<5	<20	5
J1070550	70	100	N	N	N	<5	N	10	N	<5	N	15
J1070560	100	100	<1.0	N	N	N	N	5	N	N	N	5
J1070570	50	50	N	N	N	N	N	N	N	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1070130	10	N	10	N	N	20	N	N	300	50	N	40
J1070140	N	N	N	N	N	N	N	N	N	N	N	40
J1070150	N	N	N	N	N	10	N	N	N	30	N	40
J1070160	N	N	N	N	N	<10	N	N	200	15	N	40
J1070170	300	N	N	N	N	<10	N	N	300	30	N	40
J1070180	100	N	N	N	N	N	N	N	3,000	10	N	40
J1070190	70	N	N	N	N	N	N	N	10,000	15	N	40
J1070200	700	N	N	N	N	N	N	N	2,000	N	N	40
J1070210	500	N	N	N	N	N	N	N	5,000	N	N	40
J1070220	N	N	N	N	N	<10	N	N	1,000	N	N	40
J1070230	1,000	N	N	N	N	N	N	N	2,000	N	N	40
J1070240	200	N	N	N	N	N	N	N	2,000	N	N	40
J1070250	N	N	N	N	N	N	N	N	N	N	N	40
J1070260	N	N	N	N	N	10	N	N	N	N	N	40
J1070270	N	N	N	N	N	N	N	N	N	N	N	40
J1070280	N	N	N	N	N	N	N	N	N	N	N	40
J1070290	N	N	N	N	N	N	N	N	N	N	N	40
J1070300	N	N	N	N	N	N	N	N	N	N	N	40
J1070310	N	N	N	N	N	N	N	N	N	10	N	40
J1070320	N	N	N	N	N	N	N	N	N	N	N	40
J1070330	N	N	N	N	N	N	N	N	N	N	N	40
J1070340	N	N	N	N	N	10	N	N	<200	N	N	40
J1070350	N	N	N	N	N	N	N	N	N	N	N	40
J1070360	N	N	N	N	N	N	N	N	300	<10	N	40
J1070370	30	N	N	N	N	N	N	N	N	N	N	40
J1070380	N	N	N	N	N	N	N	N	N	N	N	40
J1070390	N	N	N	N	N	N	N	N	N	N	N	40
J1070400	N	N	N	N	N	N	N	N	N	N	N	40
J1070410	N	N	N	N	N	N	N	N	N	<10	N	40
J1070420	N	N	N	N	N	N	N	N	N	N	N	40
J1070430	N	N	N	N	N	N	N	N	N	15	N	40
J1070440	30	N	5	N	N	150	N	20	N	200	N	40
J1070450	10	N	N	N	N	70	N	N	N	70	N	65
J1070460	N	N	N	N	N	N	N	N	<200	20	N	65
J1070470	N	N	N	N	N	N	N	N	3,000	10	N	65
J1070480	N	N	N	N	N	N	N	N	300	<10	N	65
J1070490	30	N	N	N	N	N	N	N	N	50	N	65
J1070500	N	N	N	N	N	N	N	N	N	30	N	65
J1070510	N	N	N	N	N	N	N	N	N	50	N	65
J1070520	N	N	N	N	N	N	N	N	N	20	N	65
J1070530	N	N	N	N	N	N	N	N	N	15	N	65
J1070540	50	N	N	N	N	N	N	N	N	<10	N	65
J1070550	N	N	N	N	N	20	N	N	N	20	N	65
J1070560	N	N	N	N	N	20	N	N	N	30	N	65
J1070570	N	N	N	N	N	<10	N	N	N	10	N	65

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1070580	37 0 25	94 51 49	1.00	.15	.15	.050	10	N	N	N
J1070590	37 0 25	94 51 49	1.00	.15	.05	.100	10	N	N	N
J1070600	37 0 25	94 51 49	.70	.15	.05	.070	10	N	N	N
J1070610	37 0 25	94 51 49	.70	.05	N	.030	10	N	N	N
J1070620	37 0 25	94 51 49	2.00	.10	<.05	.070	10	<.5	N	N
J1070630	37 0 25	94 51 49	1.50	.05	.20	.030	15	N	N	N
J1070640	37 0 25	94 51 49	.50	.07	.10	.020	<10	N	N	N
J1070650	37 0 25	94 51 49	.50	.15	.15	.050	<10	N	N	N
J1070660	37 0 25	94 51 49	1.50	.30	.50	.070	15	N	N	N
J1070670	37 0 25	94 51 49	.70	.10	.15	.020	<10	N	N	N
J1070680	37 0 25	94 51 49	1.50	.15	<.05	.070	10	N	N	N
J1070690	37 0 25	94 51 49	.70	.15	.15	.050	10	N	N	N
J1070700	37 0 25	94 51 49	.50	.10	.10	.030	10	N	N	N
J1070710	37 0 25	94 51 49	.30	.10	.10	.030	10	N	N	N
J1070720	37 0 25	94 51 49	.30	.07	.07	.030	<10	N	N	N
J1070730	37 0 25	94 51 49	.50	.10	.05	.030	10	N	N	N
J1070740	37 0 25	94 51 49	1.50	.70	.70	.150	20	N	N	N
J1070750	37 0 25	94 51 49	.70	.15	<.05	.030	<10	N	N	N
J1070760	37 0 25	94 51 49	.70	.10	.10	.020	15	N	N	N
J1070770	37 0 25	94 51 49	1.00	.15	.15	.030	10	N	N	N
J1070780	37 0 25	94 51 49	1.00	.10	.10	.070	<10	N	N	N
J1070810	37 0 25	94 51 49	.20	.07	.10	.010	<10	N	N	N
J1070820	37 0 25	94 51 49	.20	.05	.05	.015	10	N	N	N
J1070830	37 0 25	94 51 49	.20	.05	.05	.010	<10	N	N	N
J1070840	37 0 25	94 51 49	.10	.02	<.05	.005	<10	N	N	N
J1070850	37 0 25	94 51 49	.20	.05	.05	.010	10	N	N	N
J1070860	37 0 25	94 51 49	.30	.10	.05	.020	10	N	N	N
J1070870	37 0 25	94 51 49	.70	.10	.15	.050	10	N	N	N
J1070880	37 0 25	94 51 49	.50	.07	.05	.030	<10	N	N	N
J1070890	37 0 25	94 51 49	.30	.07	<.05	.030	<10	N	N	N
J1070900	37 0 25	94 51 49	.30	.10	.10	.020	10	N	N	N
J1070910	37 0 25	94 51 49	.30	.07	.15	.010	<10	N	N	N
J1070920	37 0 25	94 51 49	.50	.05	.05	.020	10	N	N	N
J1070930	37 0 25	94 51 49	1.00	.10	.10	.050	10	N	N	N
J1070940	37 0 25	94 51 49	.30	.10	.10	.015	10	N	N	N
J1070950	37 0 25	94 51 49	.15	.05	.05	.007	<10	N	N	N
J1070960	37 0 25	94 51 49	.15	.05	<.05	.007	10	N	N	N
J1070970	37 0 25	94 51 49	.05	.02	N	.005	<10	N	N	N
J1070980	37 0 25	94 51 49	.70	.02	N	.003	10	N	N	N
J1070990	37 0 25	94 51 49	.15	.05	.05	.010	<10	N	N	N
J1071000	37 0 25	94 51 49	.15	.05	<.05	.010	<10	N	N	N
J1071010	37 0 25	94 51 49	.20	.05	.05	.007	<10	N	N	N
J1071020	37 0 25	94 51 49	.10	.05	.05	.015	<10	N	N	N
J1071030	37 0 25	94 51 49	.20	.03	.15	.015	<10	N	N	N
J1071040	37 0 25	94 51 49	.15	.02	<.05	.005	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1070580	70	150	N	N	N	N	N	10	N	<5	N	5
J1070590	50	150	N	N	N	N	N	5	N	N	N	5
J1070600	70	200	N	N	N	N	N	<5	N	N	N	30
J1070610	30	150	N	N	N	N	N	<5	N	N	N	<5
J1070620	50	70	N	N	N	N	N	20	N	7	N	20
J1070630	70	100	N	N	N	N	N	15	N	<5	N	10
J1070640	70	150	N	N	N	N	N	N	N	N	N	<5
J1070650	70	70	N	N	N	N	N	<5	N	N	N	<5
J1070660	100	150	N	N	N	N	N	15	N	<5	N	15
J1070670	50	70	N	N	N	N	N	7	N	<5	N	5
J1070680	70	100	<1.0	N	N	N	N	10	N	5	N	15
J1070690	100	150	N	N	N	N	N	<5	N	<5	N	<5
J1070700	70	100	N	N	N	N	N	N	N	N	N	<5
J1070710	70	100	N	N	N	N	N	N	N	N	N	10
J1070720	70	100	N	N	N	N	N	N	N	N	N	5
J1070730	50	100	N	N	N	N	N	<5	N	<5	N	10
J1070740	100	150	1.5	N	N	N	20	10	N	N	N	15
J1070750	50	70	N	N	N	N	N	<5	N	N	N	5
J1070760	70	70	N	N	N	N	N	<5	N	7	N	5
J1070770	50	50	N	N	N	N	N	<5	N	5	N	5
J1070780	50	70	N	N	N	N	N	7	N	7	N	10
J1070810	50	30	N	N	N	N	N	N	N	N	N	N
J1070820	70	20	N	N	N	N	N	N	N	<5	N	N
J1070830	50	50	N	N	N	N	N	N	N	N	N	N
J1070840	50	30	N	N	N	N	N	N	N	N	N	N
J1070850	50	30	N	N	N	N	N	N	N	N	N	N
J1070860	30	50	N	N	N	N	N	<5	N	N	N	<5
J1070870	70	70	N	N	N	N	N	5	N	<5	N	<5
J1070880	70	50	N	N	N	N	N	<5	N	N	N	<5
J1070890	50	30	N	N	N	N	N	N	N	N	N	<5
J1070900	70	20	N	N	N	N	N	5	N	<5	N	N
J1070910	50	30	N	N	N	N	N	N	N	N	N	N
J1070920	100	30	N	N	N	N	N	<5	N	<5	N	<5
J1070930	70	70	N	N	N	N	N	7	N	5	N	<5
J1070940	50	50	N	N	N	N	N	<5	N	<5	N	<5
J1070950	20	20	N	N	N	N	N	N	N	<5	N	N
J1070960	20	70	N	N	N	N	N	N	N	<5	N	N
J1070970	15	<20	N	N	N	N	N	N	N	N	N	N
J1070980	15	<20	N	N	N	N	N	<5	N	N	N	N
J1070990	30	70	N	N	N	N	N	N	N	N	N	N
J1071000	20	30	N	N	N	N	N	<5	N	N	N	N
J1071010	30	50	N	N	N	N	N	N	N	N	N	N
J1071020	30	30	N	N	N	N	N	N	N	N	N	N
J1071030	20	70	N	N	N	N	N	<5	N	N	N	N
J1071040	15	20	N	N	N	N	N	N	N	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1070580	N	N	N	N	N	10	N	N	N	70	N	65
J1070590	N	N	N	N	N	10	N	N	N	100	N	65
J1070600	N	N	N	N	N	15	N	N	N	150	N	65
J1070610	N	N	N	N	N	<10	N	N	N	50	N	65
J1070620	N	N	N	N	N	<10	N	N	1,000	30	N	65
J1070630	N	N	N	N	N	<10	N	N	N	20	N	65
J1070640	N	N	N	N	N	<10	N	N	N	15	N	65
J1070650	N	N	N	N	N	10	N	N	N	20	N	66
J1070660	N	N	N	N	N	20	N	N	N	30	N	66
J1070670	N	N	N	N	N	<10	N	N	N	10	N	66
J1070680	N	N	N	N	N	20	N	N	N	30	N	66
J1070690	N	N	N	N	N	10	N	N	N	50	N	66
J1070700	N	N	N	N	N	<10	N	N	700	70	N	66
J1070710	N	N	N	N	N	<10	N	N	N	30	N	66
J1070720	N	N	N	N	N	10	N	N	N	50	N	66
J1070730	N	N	N	N	N	10	N	N	500	30	N	66
J1070740	N	N	N	N	N	50	N	N	N	70	N	66
J1070750	N	N	N	N	N	<10	N	N	N	50	N	66
J1070760	N	N	N	N	N	<10	N	N	200	10	N	66
J1070770	N	N	N	N	N	<10	N	N	<200	10	N	66
J1070780	N	N	N	N	N	10	N	N	N	20	N	66
J1070810	N	N	N	N	N	N	N	N	N	30	N	66
J1070820	N	N	N	N	N	N	N	N	N	10	N	66
J1070830	N	N	N	N	N	N	N	N	N	<10	N	66
J1070840	N	N	N	N	N	N	N	N	N	N	N	66
J1070850	N	N	N	N	N	N	N	N	N	<10	N	66
J1070860	N	N	N	N	N	N	N	N	N	10	N	66
J1070870	70	N	N	N	N	N	N	N	N	15	N	66
J1070880	N	N	N	N	N	N	N	N	N	10	N	66
J1070890	N	N	N	N	N	N	N	N	N	10	N	66
J1070900	N	N	N	N	N	N	N	N	N	<10	N	66
J1070910	N	N	N	N	N	N	N	N	N	10	N	66
J1070920	N	N	N	N	N	N	N	N	N	10	N	66
J1070930	10	N	N	N	N	<10	N	N	N	30	N	66
J1070940	N	N	N	N	N	N	N	N	N	15	N	67
J1070950	N	N	N	N	N	N	N	N	N	15	N	67
J1070960	N	N	N	N	N	N	N	N	N	20	N	67
J1070970	N	N	N	N	N	N	N	N	N	15	N	67
J1070980	N	N	N	N	N	N	N	N	N	70	N	67
J1070990	N	N	N	N	N	N	N	N	N	15	N	67
J1071000	N	N	N	N	N	N	N	N	N	30	N	67
J1071010	N	N	N	N	N	N	N	N	N	30	N	67
J1071020	N	N	N	N	N	N	N	N	N	N	N	67
J1071030	N	N	N	N	N	N	N	N	N	N	N	67
J1071040	N	N	N	N	N	N	N	N	N	15	N	67



TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1071050	37 0 25	94 51 49	.15	.02	N	.007	<10	N	N	N
J1071060	37 0 25	94 51 49	.20	.02	N	.007	15	N	N	N
J1071070	37 0 25	94 51 49	.70	.30	.15	.002	10	N	N	N
J1071080	37 0 25	94 51 49	2.00	.02	<.05	.005	10	N	N	N
J1071090	37 0 25	94 51 49	1.50	.03	<.05	.003	10	N	N	N
J1071100	37 0 25	94 51 49	1.00	.03	<.05	.003	10	N	N	N
J1071110	37 0 25	94 51 49	.70	.03	.07	.002	10	N	N	N
J1071120	37 0 25	94 51 49	1.00	.03	.05	.002	10	N	N	N
J1071130	37 0 25	94 51 49	.50	.05	<.05	.015	<10	N	N	N
J1071140	37 0 25	94 51 49	1.50	.05	<.05	.005	10	N	N	N
J1071150	37 0 25	94 51 49	1.50	.03	.05	.002	10	N	N	N
J1071160	37 0 25	94 51 49	2.00	.03	.05	.002	15	N	N	N
J1071170	37 0 25	94 51 49	1.00	.05	.15	.002	10	N	N	N
J1071180	37 0 25	94 51 49	.70	.03	.05	.003	<10	N	N	N
J1071190	37 0 25	94 51 49	.30	.02	<.05	.003	<10	N	N	N
J1071200	37 0 25	94 51 49	.20	.05	.10	.005	<10	N	N	N
J1071210	37 0 25	94 51 49	.70	.05	.10	.005	<10	N	N	N
J1071220	37 0 25	94 51 49	.70	.07	.10	.015	<10	N	N	N
J1071230	37 0 25	94 51 49	.10	.03	.05	.002	<10	N	N	N
J1071240	37 0 25	94 51 49	.20	.03	.05	.007	<10	N	N	N
J1071250	37 0 25	94 51 49	1.00	.02	<.05	.005	20	N	N	N
J1071260	37 0 25	94 51 49	1.50	.02	<.05	.003	<10	N	N	N
J1071270	37 0 25	94 51 49	1.50	.15	.10	.070	15	<.5	N	N
J1071280	37 0 25	94 51 49	1.50	.20	.30	.007	10	<.5	N	N
J1071290	37 0 25	94 51 49	5.00	.05	.15	.015	20	.5	N	N
J1071300	37 0 25	94 51 49	7.00	.05	<.05	.030	15	1.0	<200	N
J1071310	37 0 25	94 51 49	.70	.02	N	.010	<10	N	N	N
J1071320	37 0 25	94 51 49	5.00	<.02	N	.020	10	N	N	N
J1071330	37 0 25	94 51 49	3.00	<.02	N	.015	<10	N	N	N
J1071340	37 0 25	94 51 49	3.00	.30	.30	.030	15	<.5	N	N
J1071350	37 0 25	94 51 49	3.00	.07	<.05	.030	20	<.5	N	N
J1071360	37 0 25	94 51 49	7.00	.10	.15	.015	100	2.0	N	N
J1071460	37 0 25	94 51 49	15.00	1.50	.10	.300	150	5.0	700	N
J1071470	37 0 25	94 51 49	7.00	1.00	.05	.300	100	3.0	N	N
J1071480	37 0 25	94 51 49	3.00	.50	.30	.100	15	<.5	N	N
J1071490	37 0 25	94 51 49	5.00	1.00	.50	.200	30	.5	N	N
J1071500	37 0 25	94 51 49	3.00	1.50	.70	.300	70	<.5	N	N
J1071510	37 0 25	94 51 49	7.00	2.00	1.50	.200	100	<.5	N	N
J1071520	37 0 25	94 51 49	3.00	1.50	1.00	.500	70	N	N	N
J1071530	37 0 25	94 51 49	2.00	1.50	1.00	.300	70	N	N	N
J1071540	37 0 25	94 51 49	2.00	1.00	.30	.300	30	N	N	N
J1071550	37 0 25	94 51 49	3.00	.70	.50	.500	30	N	N	N
J1071560	37 0 25	94 51 49	1.50	.70	.70	.700	50	N	N	N
J1071570	37 0 25	94 51 49	3.00	.70	.30	.300	30	<.5	N	N
J1071580	37 0 25	94 51 49	1.50	.50	.20	.300	30	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1071050	10	<20	N	N	N	N	N	N	N	N	N	N
J1071060	15	30	N	N	N	N	N	N	N	N	N	<5
J1071070	10	20	N	N	N	N	N	<5	N	N	N	<5
J1071080	15	30	N	N	N	N	N	10	N	<5	N	5
J1071090	10	30	N	N	N	N	N	7	N	<5	N	5
J1071100	15	50	N	N	N	N	N	5	N	<5	N	<5
J1071110	20	100	N	N	N	N	N	<5	N	<5	N	<5
J1071120	30	70	N	N	N	N	N	<5	N	<5	N	<5
J1071130	15	70	N	N	N	N	N	N	N	N	N	<5
J1071140	15	70	N	N	N	N	N	7	N	<5	N	5
J1071150	10	30	N	N	N	N	N	10	N	<5	N	7
J1071160	15	20	N	N	N	N	N	7	N	<5	N	5
J1071170	15	50	N	N	N	N	N	5	N	N	N	<5
J1071180	15	30	N	N	N	N	N	<5	N	N	N	<5
J1071190	20	20	N	N	N	N	N	N	N	N	N	N
J1071200	30	<20	N	N	N	N	N	<5	N	N	N	<5
J1071210	20	50	N	N	N	N	N	5	N	<5	N	<5
J1071220	30	70	N	N	N	N	N	5	N	<5	N	<5
J1071230	50	50	N	N	N	N	N	N	N	N	N	N
J1071240	30	30	N	N	N	N	N	<5	N	N	N	N
J1071250	20	20	N	N	N	N	N	5	N	N	N	<5
J1071260	15	<20	N	N	N	N	N	10	N	<5	N	<5
J1071270	50	100	N	N	N	N	10	7	N	<5	N	10
J1071280	20	20	N	N	N	N	N	15	N	<5	N	5
J1071290	15	<20	N	N	N	N	N	20	N	7	N	20
J1071300	10	30	N	N	N	N	<10	20	N	10	N	30
J1071310	20	<20	N	N	N	N	N	<5	N	N	N	<5
J1071320	10	<20	N	N	N	N	<10	10	N	<5	N	10
J1071330	<10	20	N	N	N	N	N	7	N	<5	N	5
J1071340	20	50	N	N	N	N	<10	15	N	<5	N	10
J1071350	20	30	N	N	N	N	N	15	N	N	N	15
J1071360	10	<20	N	N	N	N	<10	70	N	10	N	30
J1071460	300	300	7.0	N	N	30	70	200	50	150	<20	100
J1071470	150	1,000	5.0	N	N	20	30	50	30	70	<20	50
J1071480	30	150	N	N	N	10	N	20	N	30	N	30
J1071490	70	700	1.0	N	N	15	10	30	N	20	<20	50
J1071500	150	700	5.0	N	N	10	15	30	70	15	<20	30
J1071510	150	500	7.0	N	N	15	20	30	70	10	<20	50
J1071520	100	500	5.0	N	N	7	15	30	50	7	<20	30
J1071530	70	500	3.0	N	N	5	15	20	30	7	N	20
J1071540	50	700	2.0	N	N	5	N	30	20	15	N	15
J1071550	70	1,500	5.0	N	N	7	10	20	70	7	<20	20
J1071560	70	3,000	7.0	N	N	5	15	15	70	7	<20	20
J1071570	50	2,000	3.0	N	N	15	15	30	50	15	<20	15
J1071580	50	1,500	2.0	N	N	5	N	15	N	5	<20	<5

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1071050	N	N	N	N	N	N	N	N	N	15	N	67
J1071060	N	N	N	N	N	N	N	N	N	70	N	67
J1071070	N	N	N	N	N	N	N	N	N	15	N	67
J1071080	N	N	N	N	N	N	N	N	N	15	N	67
J1071090	N	N	N	N	N	N	N	N	N	15	N	68
J1071100	N	N	N	N	N	N	N	N	N	20	N	68
J1071110	N	N	N	N	N	N	N	N	N	15	N	68
J1071120	N	N	N	N	N	N	N	N	N	10	N	68
J1071130	N	N	N	N	N	N	N	N	N	N	N	68
J1071140	N	N	N	N	N	N	N	N	N	N	N	68
J1071150	N	N	N	N	N	N	N	N	N	N	N	68
J1071160	N	N	N	N	N	N	N	N	N	N	N	68
J1071170	<10	N	N	N	N	N	N	N	300	N	N	68
J1071180	N	N	N	N	N	N	N	N	N	N	N	68
J1071190	N	N	N	N	N	N	N	N	N	N	N	68
J1071200	N	N	N	N	N	N	N	N	N	N	N	68
J1071210	N	N	N	N	N	<10	N	N	N	N	N	68
J1071220	N	N	N	N	N	10	N	N	N	N	N	68
J1071230	N	N	N	N	N	<10	N	N	N	N	N	68
J1071240	N	N	N	N	N	<10	N	N	N	N	N	68
J1071250	N	N	N	N	N	N	N	N	N	<10	N	68
J1071260	20	N	N	N	N	N	N	N	700	N	N	68
J1071270	10	N	N	N	N	20	N	N	N	50	N	68
J1071280	10	N	N	N	N	N	N	N	N	30	N	68
J1071290	50	N	N	N	N	N	N	N	500	10	N	68
J1071300	70	N	N	N	N	<10	N	N	N	20	N	68
J1071310	N	N	N	N	N	N	N	N	N	N	N	68
J1071320	15	N	N	N	N	N	N	N	N	30	N	69
J1071330	<10	N	N	N	N	N	N	N	N	20	N	69
J1071340	20	N	N	N	N	10	N	N	N	50	N	69
J1071350	70	N	N	N	N	10	N	N	N	30	N	81
J1071360	100	N	N	N	N	N	N	N	N	30	N	81
J1071460	500	N	5	N	N	100	N	20	N	150	N	83
J1071470	300	N	<5	N	N	70	N	20	N	300	N	83
J1071480	150	N	N	N	N	10	N	N	N	100	N	83
J1071490	100	N	N	N	N	30	N	15	N	150	N	71
J1071500	70	N	<5	N	N	50	N	30	N	300	N	71
J1071510	150	N	<5	N	N	30	N	20	N	150	N	71
J1071520	70	N	5	N	N	50	N	30	N	200	N	71
J1071530	70	N	<5	N	N	30	N	30	N	300	N	71
J1071540	50	N	N	N	N	20	N	20	N	200	N	71
J1071550	30	N	N	N	N	20	N	30	N	300	N	71
J1071560	30	N	N	N	N	30	N	30	N	1,000	N	71
J1071570	50	N	N	N	N	20	N	20	N	700	N	71
J1071580	20	N	N	N	N	15	N	20	N	700	N	71

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1071590	37 0 25	94 51 49	2.00	.70	.50	.300	50	N	N	N
J1071600	37 0 25	94 51 49	2.00	.70	.30	.500	30	N	N	N
J1071610	37 0 25	94 51 49	1.50	.50	.20	.300	30	N	N	N
J1071620	37 0 25	94 51 49	2.00	.50	.20	.300	30	N	N	N
J1071630	37 0 25	94 51 49	1.00	.30	.15	.300	20	N	N	N
J1071640	37 0 25	94 51 49	1.00	.30	.10	.300	20	N	N	N
J1071650	37 0 25	94 51 49	1.50	.70	.30	.300	70	N	N	N
J1071660	37 0 25	94 51 49	1.50	1.00	.70	.300	150	N	N	N
J1071670	37 0 25	94 51 49	2.00	.50	.30	.500	50	N	N	N
J1071680	37 0 25	94 51 49	.50	.05	<.05	.150	10	N	N	N
J1071685	37 0 25	94 51 49	1.50	.02	N	.030	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1071590	100	1,500	3.0	N	N	5	10	15	50	5	<20	<5
J1071600	100	1,000	7.0	N	N	7	N	15	70	5	<20	7
J1071610	70	1,000	5.0	N	N	5	N	10	N	<5	<20	5
J1071620	70	700	7.0	N	N	5	N	15	N	<5	N	10
J1071630	50	2,000	3.0	N	N	<5	N	7	N	N	<20	<5
J1071640	30	1,500	2.0	N	N	<5	N	5	N	N	<20	<5
J1071650	70	1,000	7.0	N	N	<5	N	10	100	N	<20	5
J1071660	70	1,500	7.0	N	N	5	N	7	70	N	<20	5
J1071670	50	1,500	5.0	N	N	7	15	15	50	<5	<20	10
J1071680	20	500	<1.0	N	N	N	10	5	N	N	N	N
J1071685	15	<20	N	N	N	N	N	<5	N	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 107, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1071590	50	N	N	N	N	30	N	20	N	500	N	71
J1071600	70	N	N	N	N	30	N	30	N	700	N	71
J1071610	30	N	N	N	N	15	N	20	N	>1,000	N	71
J1071620	100	N	N	N	N	10	N	20	N	700	N	71
J1071630	30	N	N	N	N	<10	N	15	N	>1,000	N	89
J1071640	20	N	N	N	N	<10	N	20	N	1,000	N	89
J1071650	50	N	N	N	N	10	N	30	N	700	N	89
J1071660	50	N	N	N	N	15	N	30	N	700	N	89
J1071670	70	N	N	N	N	10	N	30	N	1,000	N	89
J1071680	10	N	N	N	N	N	N	10	N	1,000	N	89
J1071685	N	N	N	N	N	N	N	N	N	30	N	89

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.

[N, not detected; <, detected but below the limit of determination shown; >, determined to be greater than the value shown.]

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1080010	37 5 35	94 36 52	1.00	.07	<.05	.030	70	N	N	N
J1080020	37 5 35	94 36 52	2.00	.10	<.05	.070	50	<.5	N	N
J1080030	37 5 35	94 36 52	2.00	.05	.05	.020	50	N	N	N
J1080040	37 5 35	94 36 52	.50	.02	.15	.015	10	N	N	N
J1080050	37 5 35	94 36 52	.70	.03	.30	.015	15	N	N	N
J1080060	37 5 35	94 36 52	.70	.02	.70	.020	15	N	N	N
J1080070	37 5 35	94 36 52	.10	.05	1.00	.007	15	N	N	N
J1080080	37 5 35	94 36 52	.15	.02	.70	.005	15	N	N	N
J1080090	37 5 35	94 36 52	1.50	<.02	.70	.010	20	N	N	N
J1080100	37 5 35	94 36 52	.15	.02	.30	.007	10	N	N	N
J1080110	37 5 35	94 36 52	.05	.02	.20	<.002	<10	N	N	N
J1080120	37 5 35	94 36 52	.10	.07	1.00	.015	15	N	N	N
J1080130	37 5 35	94 36 52	.10	.05	.70	.005	15	N	N	N
J1080140	37 5 35	94 36 52	.05	.02	.50	.002	<10	N	N	N
J1080150	37 5 35	94 36 52	.07	.02	.30	.003	<10	N	N	N
J1080160	37 5 35	94 36 52	.10	.03	.20	.007	<10	N	N	N
J1080170	37 5 35	94 36 52	.07	.07	.10	.015	<10	N	N	N
J1080180	37 5 35	94 36 52	1.00	.30	.30	.070	30	N	N	N
J1080190	37 5 35	94 36 52	.15	.07	.20	.020	<10	N	N	N
J1080200	37 5 35	94 36 52	.20	.20	.50	.030	10	N	N	N
J1080210	37 5 35	94 36 52	.20	.10	.30	.030	15	N	N	N
J1080220	37 5 35	94 36 52	.30	.15	.70	.070	15	N	N	N
J1080230	37 5 35	94 36 52	.70	.15	.70	.100	20	N	N	N
J1080240	37 5 35	94 36 52	.70	.30	2.00	.150	30	N	N	N
J1080250	37 5 35	94 36 52	.50	.15	.50	.150	15	<.5	N	N
J1080260	37 5 35	94 36 52	.50	.15	.70	.100	20	N	N	N
J1080270	37 5 35	94 36 52	.70	.20	.70	.100	30	N	N	N
J1080280	37 5 35	94 36 52	.50	.30	.30	.150	20	N	N	N
J1080290	37 5 35	94 36 52	1.50	.30	.30	.150	20	N	N	N
J1080310	37 5 35	94 36 52	15.00	.15	1.50	.070	300	N	N	N
J1080320	37 5 35	94 36 52	15.00	.10	.30	.070	100	N	N	N
J1080330	37 5 35	94 36 52	3.00	.30	.30	.500	15	N	N	N
J1080340	37 5 35	94 36 52	1.50	.70	.20	.500	20	N	N	N
J1080350	37 5 35	94 36 52	.70	.50	.30	.500	15	N	N	N
J1080360	37 5 35	94 36 52	3.00	.50	.30	.300	20	<.5	N	N
J1080370	37 5 35	94 36 52	1.50	.70	.20	.200	15	<.5	N	N
J1080380	37 5 35	94 36 52	1.50	.20	.15	.100	10	<.5	N	N
J1080390	37 5 35	94 36 52	1.50	.20	.15	.150	10	<.5	N	N
J1080400	37 5 35	94 36 52	.70	.30	.30	.100	10	N	N	N
J1080410	37 5 35	94 36 52	1.50	.20	.15	.200	15	<.5	N	N
J1080420	37 5 35	94 36 52	1.50	.30	.30	.150	10	<.5	N	N
J1080430	37 5 35	94 36 52	.30	.30	.70	.070	30	N	N	N
J1080440	37 5 35	94 36 52	.70	.20	.05	.150	10	N	N	N
J1080450	37 5 35	94 36 52	.70	.15	.15	.070	10	N	N	N
J1080460	37 5 35	94 36 52	1.00	.30	.15	.150	10	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1080010	70	70	<1.0	N	N	5	300	<5	20	5	N	70
J1080020	100	70	1.0	N	N	5	150	15	50	5	N	70
J1080030	70	50	1.0	N	N	5	30	<5	50	N	N	30
J1080040	50	20	N	N	N	N	N	N	50	N	N	7
J1080050	50	50	N	N	N	N	N	N	50	N	N	5
J1080060	50	30	N	N	N	N	10	N	50	N	N	7
J1080070	50	70	N	N	N	N	N	N	50	N	N	<5
J1080080	50	70	N	N	N	N	N	N	50	N	N	<5
J1080090	50	50	N	N	N	N	10	N	50	N	N	30
J1080100	50	30	N	N	N	N	N	N	50	N	N	<5
J1080110	30	<20	N	N	N	N	N	N	50	N	N	N
J1080120	150	70	N	N	N	N	N	N	50	N	N	N
J1080130	100	30	N	N	N	N	N	N	50	N	N	N
J1080140	70	20	N	N	N	N	N	N	50	N	N	N
J1080150	150	50	N	N	N	N	N	N	50	N	N	N
J1080160	70	70	N	N	N	N	N	N	50	N	N	N
J1080170	50	30	N	N	N	N	N	N	50	10	N	N
J1080180	70	70	1.5	N	N	<5	20	5	50	15	N	30
J1080190	50	50	N	N	N	<5	N	N	50	N	N	5
J1080200	50	70	N	N	N	<5	N	N	50	N	N	15
J1080210	50	50	N	N	N	5	N	<5	50	N	N	20
J1080220	70	50	N	N	N	15	N	N	N	N	<20	30
J1080230	100	70	N	N	N	5	N	<5	N	N	N	20
J1080240	70	150	N	N	N	7	N	<5	N	N	<20	20
J1080250	50	50	N	N	N	5	N	N	N	N	N	15
J1080260	50	50	N	N	N	5	N	5	N	N	N	70
J1080270	50	70	N	N	N	10	N	<5	N	N	N	30
J1080280	70	70	N	N	N	15	N	7	N	5	N	70
J1080290	50	70	N	N	N	30	N	5	N	<5	N	300
J1080310	70	3,000	N	N	N	150	30	100	N	10	N	>5,000
J1080320	30	700	N	N	N	15	15	15	N	N	N	150
J1080330	70	500	1.0	N	20	15	50	30	50	N	N	100
J1080340	70	300	1.0	N	150	7	30	15	30	N	N	30
J1080350	70	150	1.0	N	20	5	30	10	20	N	N	20
J1080360	150	300	<1.0	N	N	15	20	30	20	<5	N	30
J1080370	100	200	N	N	<20	5	15	15	N	<5	N	20
J1080380	100	150	N	N	<20	<5	N	15	N	<5	N	20
J1080390	70	100	N	N	N	10	N	20	N	<5	N	30
J1080400	70	100	N	N	N	<5	30	5	N	N	N	5
J1080410	150	150	1.0	N	N	7	10	20	N	10	N	30
J1080420	100	200	<1.0	N	N	5	N	15	N	5	N	15
J1080430	70	150	N	N	N	<5	N	15	N	N	N	30
J1080440	70	500	N	N	N	<5	<10	20	N	5	N	10
J1080450	50	200	N	N	N	N	N	<5	N	N	N	15
J1080460	100	300	1.0	N	N	N	<10	10	N	<5	N	10



TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1080010	N	N	<5	N	N	20	N	10	N	20	N	40
J1080020	N	N	5	N	N	70	N	15	N	30	N	40
J1080030	N	N	<5	N	N	30	N	15	N	15	N	40
J1080040	N	N	N	N	N	<10	N	N	N	N	N	40
J1080050	N	N	N	N	N	<10	N	N	N	N	N	40
J1080060	N	N	N	N	N	20	N	N	N	<10	N	40
J1080070	N	N	N	N	N	<10	N	N	N	10	N	40
J1080080	N	N	N	N	N	<10	N	N	N	N	N	40
J1080090	N	N	N	N	N	30	N	N	N	<10	N	40
J1080100	N	N	N	N	N	<10	N	N	N	<10	N	40
J1080110	N	N	N	N	N	N	N	N	N	N	N	40
J1080120	N	N	N	N	N	10	N	N	N	<10	N	40
J1080130	N	N	N	N	N	N	N	N	N	<10	N	40
J1080140	N	N	N	N	N	N	N	N	N	N	N	40
J1080150	N	N	N	N	N	N	N	N	N	N	N	40
J1080160	N	N	N	N	N	N	N	N	N	N	N	40
J1080170	N	N	N	N	N	N	N	N	N	<10	N	40
J1080180	N	N	N	N	N	70	N	N	<200	15	N	40
J1080190	N	N	N	N	N	10	N	N	N	N	N	40
J1080200	N	N	N	N	N	20	N	N	N	15	N	40
J1080210	N	N	N	N	N	30	N	N	<200	15	N	40
J1080220	N	N	N	N	N	30	N	N	N	15	N	40
J1080230	15	N	N	N	N	50	N	N	N	20	N	40
J1080240	N	N	N	N	N	70	N	N	N	30	N	40
J1080250	N	N	N	N	N	30	N	N	N	20	N	40
J1080260	N	N	N	N	N	50	N	N	N	15	N	40
J1080270	N	N	N	N	N	50	N	N	N	20	N	40
J1080280	N	N	N	N	N	70	N	N	N	30	N	40
J1080290	N	N	<5	N	N	70	N	N	N	50	N	40
J1080310	20	N	N	N	N	10	N	N	200	10	N	40
J1080320	10	N	N	N	N	15	N	N	<200	10	N	40
J1080330	100	N	<5	N	N	70	N	10	3,000	150	N	40
J1080340	200	N	N	N	N	70	N	15	7,000	150	N	40
J1080350	700	N	N	N	N	70	N	15	3,000	150	N	65
J1080360	10	N	N	N	N	70	N	N	<200	70	N	65
J1080370	30	N	N	N	N	50	N	N	700	70	N	65
J1080380	N	N	N	N	N	20	N	N	1,500	30	N	65
J1080390	<10	N	N	N	N	15	N	N	N	70	N	65
J1080400	N	N	N	N	N	50	N	N	N	15	N	65
J1080410	<10	N	N	N	N	30	N	N	N	50	N	65
J1080420	10	N	N	N	N	20	N	N	N	100	N	65
J1080430	N	N	N	N	N	30	N	N	N	70	N	65
J1080440	<10	N	N	N	N	70	N	N	N	200	N	65
J1080450	N	N	N	N	N	20	N	N	N	100	N	65
J1080460	<10	N	N	N	N	30	N	N	N	100	N	65

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1080470	37 5 35	94 36 52	.30	.20	.07	.070	10	N	N	N
J1080480	37 5 35	94 36 52	.70	.15	.15	.050	15	N	N	N
J1080490	37 5 35	94 36 52	1.50	.50	.15	.150	15	N	N	N
J1080500	37 5 35	94 36 52	.10	.30	.30	.030	10	N	N	N
J1080510	37 5 35	94 36 52	2.00	1.00	1.00	.200	20	<.5	N	N
J1080520	37 5 35	94 36 52	.15	.70	1.00	.030	20	N	N	N
J1080530	37 5 35	94 36 52	.05	.02	<.05	.015	<10	N	N	N
J1080540	37 5 35	94 36 52	.15	.20	.30	.300	150	N	N	N
J1080550	37 5 35	94 36 52	.10	.07	.10	.007	100	N	N	N
J1080560	37 5 35	94 36 52	1.00	.50	.20	.150	15	<.5	N	N
J1080570	37 5 35	94 36 52	.10	.07	.10	.010	N	N	N	N
J1080580	37 5 35	94 36 52	.70	.15	.10	.070	<10	N	N	N
J1080590	37 5 35	94 36 52	1.50	.15	.05	.070	15	<.5	N	N
J1080600	37 5 35	94 36 52	7.00	.70	.10	.700	70	1.5	N	N
J1080610	37 5 35	94 36 52	.20	.20	.30	.015	10	N	N	N
J1080620	37 5 35	94 36 52	.70	.70	.70	.070	15	N	N	N
J1080630	37 5 35	94 36 52	5.00	.30	<.05	.200	100	<.5	N	N
J1080640	37 5 35	94 36 52	.15	.05	.05	.020	<10	N	N	N
J1080650	37 5 35	94 36 52	.15	.02	.05	.015	<10	N	N	N
J1080660	37 5 35	94 36 52	1.00	.20	.15	.070	15	N	N	N
J1080670	37 5 35	94 36 52	10.00	.15	.10	.030	50	<.5	N	N
J1080680	37 5 35	94 36 52	1.50	.20	.15	.150	20	N	N	N
J1080690	37 5 35	94 36 52	2.00	.30	.15	.070	10	<.5	N	N
J1080700	37 5 35	94 36 52	.30	.15	.30	.020	<10	N	N	N
J1080710	37 5 35	94 36 52	.15	.50	.50	.020	15	N	N	N
J1080720	37 5 35	94 36 52	5.00	1.00	.30	.200	50	<.5	N	N
J1080730	37 5 35	94 36 52	2.00	.07	.10	.010	10	N	N	N
J1080740	37 5 35	94 36 52	.15	.20	.10	.070	10	N	N	N
J1080750	37 5 35	94 36 52	.20	.20	.10	.100	10	N	N	N
J1080760	37 5 35	94 36 52	2.00	.15	.05	.100	30	<.5	N	N
J1080770	37 5 35	94 36 52	2.00	.50	.15	.300	20	.5	N	N
J1080780	37 5 35	94 36 52	.30	.15	.15	.050	10	N	N	N
J1080790	37 5 35	94 36 52	.10	.10	.10	.020	<10	N	N	N
J1080800	37 5 35	94 36 52	.20	.15	.07	.070	<10	N	N	N
J1080810	37 5 35	94 36 52	.10	.10	.15	.020	<10	N	N	N
J1080820	37 5 35	94 36 52	.05	.03	<.05	.007	<10	N	N	N
J1080830	37 5 35	94 36 52	1.00	.30	.05	.150	15	N	N	N
J1080840	37 5 35	94 36 52	.20	.05	<.05	.030	<10	N	N	N
J1080850	37 5 35	94 36 52	.10	.20	.15	.020	<10	N	300	N
J1080860	37 5 35	94 36 52	.15	.20	.15	.030	<10	N	300	N
J1080870	37 5 35	94 36 52	.05	.03	<.05	.010	<10	N	300	N
J1080880	37 5 35	94 36 52	.05	.02	N	.010	<10	N	300	N
J1080895	37 5 35	94 36 52	.07	<.02	N	.015	30	N	300	N
J1080905	37 5 35	94 36 52	.05	.03	N	.007	<10	N	300	N
J1080915	37 5 35	94 36 52	.70	.20	<.05	.100	<10	N	300	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1080470	70	200	N	N	N	N	N	7	N	N	N	5
J1080480	70	150	<1.0	N	N	<5	N	7	N	N	N	7
J1080490	100	150	1.0	N	N	5	<10	15	N	5	N	30
J1080500	50	70	N	N	<20	N	N	N	N	N	N	<5
J1080510	150	200	1.5	N	<20	15	70	20	N	15	N	50
J1080520	70	100	N	N	N	N	N	5	N	N	N	5
J1080530	70	150	N	N	N	N	N	N	N	30	N	<5
J1080540	100	300	N	N	N	N	<10	N	N	N	N	<5
J1080550	50	30	N	N	N	N	N	5	N	N	N	<5
J1080560	70	300	1.0	N	N	15	20	15	N	30	N	30
J1080570	50	70	N	N	N	N	N	N	N	5	N	<5
J1080580	70	150	N	N	N	N	N	<5	N	7	N	15
J1080590	50	200	N	N	N	10	30	15	N	10	N	20
J1080600	200	300	5.0	N	N	70	150	150	20	500	N	150
J1080610	70	70	N	N	N	N	N	N	N	15	N	5
J1080620	70	100	N	N	N	<5	N	15	N	5	N	20
J1080630	100	150	<1.0	N	N	15	70	30	N	20	N	50
J1080640	100	70	N	N	N	N	N	N	N	N	N	<5
J1080650	70	100	N	N	N	N	N	N	N	N	N	<5
J1080660	100	150	<1.0	N	N	N	<10	7	N	<5	N	15
J1080670	50	100	N	N	N	30	N	50	N	30	N	70
J1080680	70	150	<1.0	N	N	7	15	20	N	15	N	20
J1080690	70	150	<1.0	N	N	7	N	15	N	15	N	15
J1080700	50	70	N	N	N	N	N	7	N	<5	N	<5
J1080710	100	50	N	N	N	N	N	N	N	<5	N	N
J1080720	150	150	1.0	N	N	15	30	50	N	300	N	70
J1080730	70	100	N	N	N	5	N	7	N	15	N	15
J1080740	50	150	N	N	N	N	N	5	N	N	N	<5
J1080750	50	150	N	N	N	N	N	<5	N	N	N	<5
J1080760	50	150	N	N	N	10	N	30	N	5	N	30
J1080770	150	300	1.5	N	N	15	70	20	30	7	<20	70
J1080780	70	70	N	N	N	N	N	5	N	N	N	5
J1080790	50	150	N	N	N	N	N	<5	N	N	N	<5
J1080800	100	200	N	N	N	N	<10	<5	N	N	N	<5
J1080810	30	100	N	N	N	N	N	N	N	N	N	N
J1080820	30	70	N	N	N	N	N	N	N	N	N	N
J1080830	100	100	<1.0	N	N	N	15	7	N	5	N	7
J1080840	50	200	N	N	N	N	N	10	N	N	N	<5
J1080850	50	100	N	N	N	N	N	N	N	N	N	N
J1080860	70	70	N	N	N	N	N	N	N	N	N	N
J1080870	15	30	N	N	N	5	N	N	N	N	N	N
J1080880	15	70	N	N	N	5	N	N	N	N	N	N
J1080895	15	70	N	N	N	200	N	N	N	N	N	15
J1080905	15	100	N	N	N	15	N	N	N	N	N	N
J1080915	50	100	<1.0	N	N	10	<10	<5	N	<5	N	10

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1080470	N	N	N	N	N	20	N	N	N	50	N	65
J1080480	N	N	N	N	N	30	N	N	1,500	20	N	65
J1080490	15	N	N	N	N	50	N	N	N	70	N	65
J1080500	N	N	N	N	N	10	N	N	200	N	N	65
J1080510	70	N	N	N	N	70	N	N	1,500	70	N	65
J1080520	N	N	N	N	N	15	N	N	N	30	N	65
J1080530	N	N	N	N	N	N	N	N	N	N	N	65
J1080540	<10	N	N	N	200	20	N	N	N	150	N	65
J1080550	N	N	N	N	N	N	N	N	N	N	N	65
J1080560	10	N	N	N	N	50	N	N	N	150	N	66
J1080570	N	N	N	N	N	N	N	N	N	N	N	66
J1080580	N	N	N	N	N	<10	N	N	N	30	N	66
J1080590	<10	N	N	N	N	10	N	N	N	150	N	66
J1080600	300	N	5	N	N	150	N	20	N	150	N	66
J1080610	N	N	N	N	N	N	N	N	N	N	N	66
J1080620	20	N	N	N	N	20	N	N	N	30	N	66
J1080630	30	N	N	N	N	30	N	N	N	70	N	66
J1080640	N	N	N	N	N	<10	N	N	N	N	N	66
J1080650	N	N	N	N	N	N	N	N	N	N	N	66
J1080660	N	N	N	N	N	15	N	N	N	30	N	66
J1080670	30	N	N	N	N	<10	N	N	<200	30	N	66
J1080680	<10	N	N	N	N	10	N	N	N	100	N	66
J1080690	15	N	N	N	N	10	N	N	N	30	N	66
J1080700	N	N	N	N	N	<10	N	N	N	N	N	66
J1080710	N	N	N	N	N	<10	N	N	N	N	N	66
J1080720	100	N	5	N	N	30	N	N	N	50	N	66
J1080730	N	N	N	N	N	N	N	N	N	N	N	66
J1080740	N	N	N	N	N	20	N	N	N	50	N	66
J1080750	N	N	N	N	N	20	N	N	N	70	N	67
J1080760	30	N	5	N	N	10	N	N	N	30	N	67
J1080770	50	N	N	N	N	100	N	10	N	100	N	67
J1080780	N	N	N	N	N	10	N	N	N	20	N	67
J1080790	N	N	N	N	N	<10	N	N	N	70	N	67
J1080800	N	N	N	N	N	10	N	N	N	50	N	67
J1080810	N	N	N	N	N	<10	N	N	N	100	N	67
J1080820	N	N	N	N	N	N	N	N	N	15	N	67
J1080830	N	N	N	N	N	20	N	N	N	50	N	67
J1080840	N	N	N	N	N	10	N	N	N	10	N	67
J1080850	N	N	N	N	N	<10	N	N	N	15	N	67
J1080860	N	N	N	N	N	<10	N	N	N	10	N	67
J1080870	N	N	N	N	N	<10	50	N	N	15	N	67
J1080880	N	N	N	N	N	N	50	N	N	70	N	67
J1080895	N	N	N	N	N	N	1,500	N	N	30	N	67
J1080905	N	N	N	N	N	N	<50	N	N	20	N	67
J1080915	N	N	N	N	N	50	<50	N	N	70	N	68

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Latitude	Longitude	Fe-pct. s	Mg-pct. s	Ca-pct. s	Ti-pct. s	Mn-ppm s	Ag-ppm s	As-ppm s	Au-ppm s
J1080920	37 5 35	94 36 52	.70	.15	.15	.030	15	N	300	N
J1080930	37 5 35	94 36 52	.10	.20	.20	.020	<10	N	300	N
J1080940	37 5 35	94 36 52	.07	.10	.10	.015	<10	N	300	N
J1080950	37 5 35	94 36 52	.05	.03	<.05	.010	N	N	300	N
J1080960	37 5 35	94 36 52	<.05	<.02	<.05	.002	N	N	300	N
J1080970	37 5 35	94 36 52	15.00	.50	.15	.100	10	<.5	300	N
J1080980	37 5 35	94 36 52	.05	.05	.15	.010	<10	N	300	N
J1080990	37 5 35	94 36 52	<.05	.05	.10	.002	<10	N	300	N
J1081000	37 5 35	94 36 52	.07	.03	.20	.020	<10	N	300	N
J1081010	37 5 35	94 36 52	.15	.15	.15	.050	10	N	300	N
J1081020	37 5 35	94 36 52	<.05	.20	.05	.010	N	N	300	N
J1081030	37 5 35	94 36 52	.20	.30	.15	.070	<10	N	300	N
J1081040	37 5 35	94 36 52	.05	.10	.10	.020	<10	N	300	N
J1081050	37 5 35	94 36 52	<.05	.07	.15	.020	<10	N	300	N
J1081060	37 5 35	94 36 52	.30	.07	.05	.010	N	N	N	N
J1081070	37 5 35	94 36 52	.05	.05	<.05	.030	N	N	N	N
J1081080	37 5 35	94 36 52	3.00	.07	<.05	.030	20	.5	N	N
J1081090	37 5 35	94 36 52	.20	.07	.10	.010	<10	N	N	N
J1081100	37 5 35	94 36 52	.50	.10	.07	.030	<10	N	N	N
J1081110	37 5 35	94 36 52	1.50	.05	.05	.030	<10	<.5	N	N
J1081120	37 5 35	94 36 52	.20	.02	<.05	.002	N	N	N	N
J1081130	37 5 35	94 36 52	3.00	.70	.05	.300	15	.5	<200	N
J1081140	37 5 35	94 36 52	2.00	.10	<.05	.070	10	N	N	N
J1081150	37 5 35	94 36 52	1.50	.10	.05	.100	<10	N	N	N
J1081160	37 5 35	94 36 52	.05	.02	<.05	.015	N	N	N	N
J1081170	37 5 35	94 36 52	2.00	.30	.15	.150	15	.5	N	N
J1081180	37 5 35	94 36 52	.05	.02	<.05	.010	N	N	N	N
J1081190	37 5 35	94 36 52	.05	.02	<.05	.007	N	N	N	N
J1081200	37 5 35	94 36 52	1.00	.15	.05	.070	<10	<.5	N	N
J1081210	37 5 35	94 36 52	3.00	2.00	<.05	.300	20	.5	N	N
J1081220	37 5 35	94 36 52	1.00	.05	.07	.005	10	<.5	N	N
J1081230	37 5 35	94 36 52	2.00	1.50	<.05	.300	200	.5	N	N
J1081240	37 5 35	94 36 52	1.00	.07	.07	.030	100	.5	N	N
J1081250	37 5 35	94 36 52	3.00	2.00	.10	.500	100	.5	N	N
J1081260	37 5 35	94 36 52	7.00	.70	.30	.150	30	.7	300	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	B-ppm s	Ba-ppm s	Be-ppm s	Bi-ppm s	Cd-ppm s	Co-ppm s	Cr-ppm s	Cu-ppm s	La-ppm s	Mo-ppm s	Nb-ppm s	Ni-ppm s
J1080920	30	200	N	N	N	10	3,000	5	N	<5	N	5
J1080930	20	70	N	N	N	10	N	N	N	N	N	N
J1080940	70	150	N	N	N	20	N	N	N	N	N	N
J1080950	50	100	N	N	N	15	N	N	N	N	N	N
J1080960	50	70	N	N	N	5	N	N	N	N	N	N
J1080970	150	150	<1.0	N	N	5	70	15	N	N	N	30
J1080980	50	100	N	N	N	7	N	N	N	N	N	N
J1080990	50	70	N	N	N	<5	N	N	N	N	N	N
J1081000	30	150	N	N	N	N	N	N	N	N	N	N
J1081010	30	70	N	N	N	N	<10	N	N	<5	N	N
J1081020	50	150	N	N	N	N	N	N	N	N	N	N
J1081030	50	100	N	N	N	N	<10	N	N	N	N	<5
J1081040	30	150	N	N	N	N	N	N	N	N	N	N
J1081050	30	200	N	N	N	5	N	N	N	N	N	N
J1081060	30	20	N	N	N	<5	N	<5	N	N	N	5
J1081070	20	20	N	N	N	N	N	<5	N	N	N	<5
J1081080	15	20	N	N	N	<5	<10	30	N	N	N	15
J1081090	20	30	N	N	N	10	N	<5	N	N	N	<5
J1081100	20	<20	N	N	N	N	N	5	N	5	N	<5
J1081110	20	30	N	N	N	N	<10	20	N	5	N	100
J1081120	20	<20	N	N	N	N	N	N	N	N	N	<5
J1081130	70	150	2.0	N	N	15	70	30	N	200	N	70
J1081140	30	200	N	N	N	7	<10	15	N	20	N	30
J1081150	30	30	<1.0	N	N	15	10	15	N	70	N	20
J1081160	20	<20	N	N	N	N	N	N	N	5	N	N
J1081170	50	100	1.0	N	N	15	10	30	N	5	N	150
J1081180	30	30	N	N	N	N	N	N	N	N	N	N
J1081190	20	<20	N	N	N	N	N	N	N	N	N	N
J1081200	50	100	<1.0	N	N	<5	<10	15	N	15	N	20
J1081210	200	70	7.0	N	N	10	70	20	N	10	N	50
J1081220	15	<20	N	N	N	<5	N	15	N	<5	N	10
J1081230	200	30	5.0	N	N	15	50	30	N	20	N	70
J1081240	20	20	<1.0	N	N	<5	N	15	N	<5	N	20
J1081250	300	50	10.0	N	N	7	30	70	N	5	N	50
J1081260	150	20	3.0	N	N	10	15	70	N	20	N	70

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 108, JOPLIN 1 x 2 QUADRANGLE,  
MISSOURI AND KANSAS.--Continued

Sample	Pb-ppm s	Sb-ppm s	Sc-ppm s	Sn-ppm s	Sr-ppm s	V-ppm s	W-ppm s	Y-ppm s	Zn-ppm s	Zr-ppm s	Th-ppm s	Form #
J1080920	7,000	700	N	N	N	10	N	N	N	50	N	68
J1080930	N	N	N	N	N	<10	50	N	N	15	N	68
J1080940	N	N	N	N	N	<10	70	N	N	15	N	68
J1080950	N	N	N	N	N	N	70	N	N	N	N	68
J1080960	N	N	N	N	N	N	N	N	N	N	N	68
J1080970	300	N	N	N	N	70	200	N	N	20	N	68
J1080980	N	N	N	N	N	N	<50	N	N	<10	N	68
J1080990	N	N	N	N	N	N	N	N	N	<10	N	68
J1081000	N	N	N	N	N	<10	N	N	N	N	N	68
J1081010	N	N	N	N	N	10	N	N	N	10	N	68
J1081020	N	N	N	N	N	N	N	N	N	N	N	68
J1081030	N	N	N	N	N	50	N	N	N	15	N	68
J1081040	N	N	N	N	N	<10	N	N	N	N	N	68
J1081050	N	N	N	N	N	<10	N	N	N	<10	N	68
J1081060	N	N	N	N	N	<10	N	N	N	N	N	68
J1081070	N	N	N	N	N	10	N	N	N	<10	N	68
J1081080	70	N	N	N	N	10	N	N	N	10	N	68
J1081090	N	N	N	N	N	<10	<50	N	N	<10	N	68
J1081100	10	N	N	N	N	20	N	N	N	10	N	68
J1081110	20	N	N	N	N	N	N	N	N	50	N	68
J1081120	N	N	N	N	N	N	N	N	N	N	N	68
J1081130	300	N	5	N	N	70	N	10	N	70	N	68
J1081140	50	N	N	N	N	<10	N	N	N	150	N	68
J1081150	15	N	N	N	N	30	N	N	N	30	N	68
J1081160	N	N	N	N	N	N	N	N	N	<10	N	68
J1081170	100	N	N	N	N	30	N	N	N	70	N	69
J1081180	N	N	N	N	N	N	N	N	N	15	N	69
J1081190	N	N	N	N	N	N	N	N	N	N	N	81
J1081200	10	N	N	N	N	50	N	N	N	20	N	81
J1081210	150	N	7	N	N	200	N	10	<200	100	N	81
J1081220	N	N	N	N	N	<10	N	N	N	10	N	81
J1081230	200	N	5	N	N	200	N	10	<200	70	N	81
J1081240	10	N	N	N	N	<10	N	N	<200	150	N	81
J1081250	300	N	7	N	N	150	N	10	<200	100	N	81
J1081260	150	N	N	N	N	50	N	N	<200	70	N	81