

UNITED STATES DEPARTMENT OF THE INTERIOR
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**Spectrographic analyses of insoluble-residue samples in and
adjacent to the Joplin 1° x 2° quadrangle, Missouri and Kansas:
Drill hole nos. 100, 101, and 102**

By

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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.

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CONTENTS

	Page
Introduction.....	1
Preparation and analysis of samples.....	1
Description of data tables.....	3
Explanation of data.....	3
RASS.....	4
Acknowledgments.....	4
References.....	4

FIGURE

Figure 1. Locations of drill hole nos. 100, 101, and 102, Joplin 1° x 2° quadrangle, Missouri and Kansas.....	2
---	---

TABLES

Table 1. Spectrographic analyses of insoluble-residue samples from drill hole no. 100, Joplin 1° x 2° quadrangle, Missouri and Kansas.....	5
Table 2. Spectrographic analyses of insoluble-residue samples from drill hole no. 101, Joplin 1° x 2° quadrangle, Missouri and Kansas....	15
Table 3. Spectrographic analyses of insoluble-residue samples from drill hole no. 102, Joplin 1° x 2° quadrangle, Missouri and Kansas....	27

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. 100 (#26,768 - MGLS), drill hole no. 101 (#21407, #22146 - MGLS), and drill hole no. 102 (#22563 - MGLS) are given in this report. Drill hole no. 100 is located in sec. 26, T. 28 N., R. 32 W. in Jasper County, Missouri; drill hole no. 101 is located in sec. 20, T. 29 N., R. 23 E. in Ottawa County, Oklahoma; drill hole no. 102 is located in sec. 1, T. 29 N., R. 23 E. in Ottawa County, Oklahoma (fig. 1). Data for the insoluble-residue samples from drill holes 100, 101, and 102 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).

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

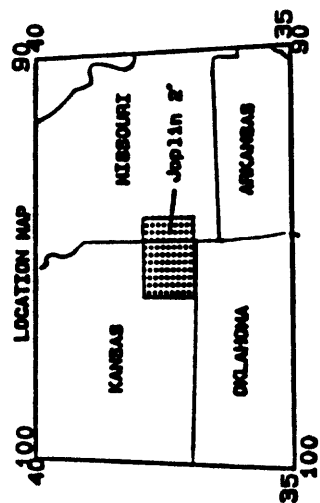
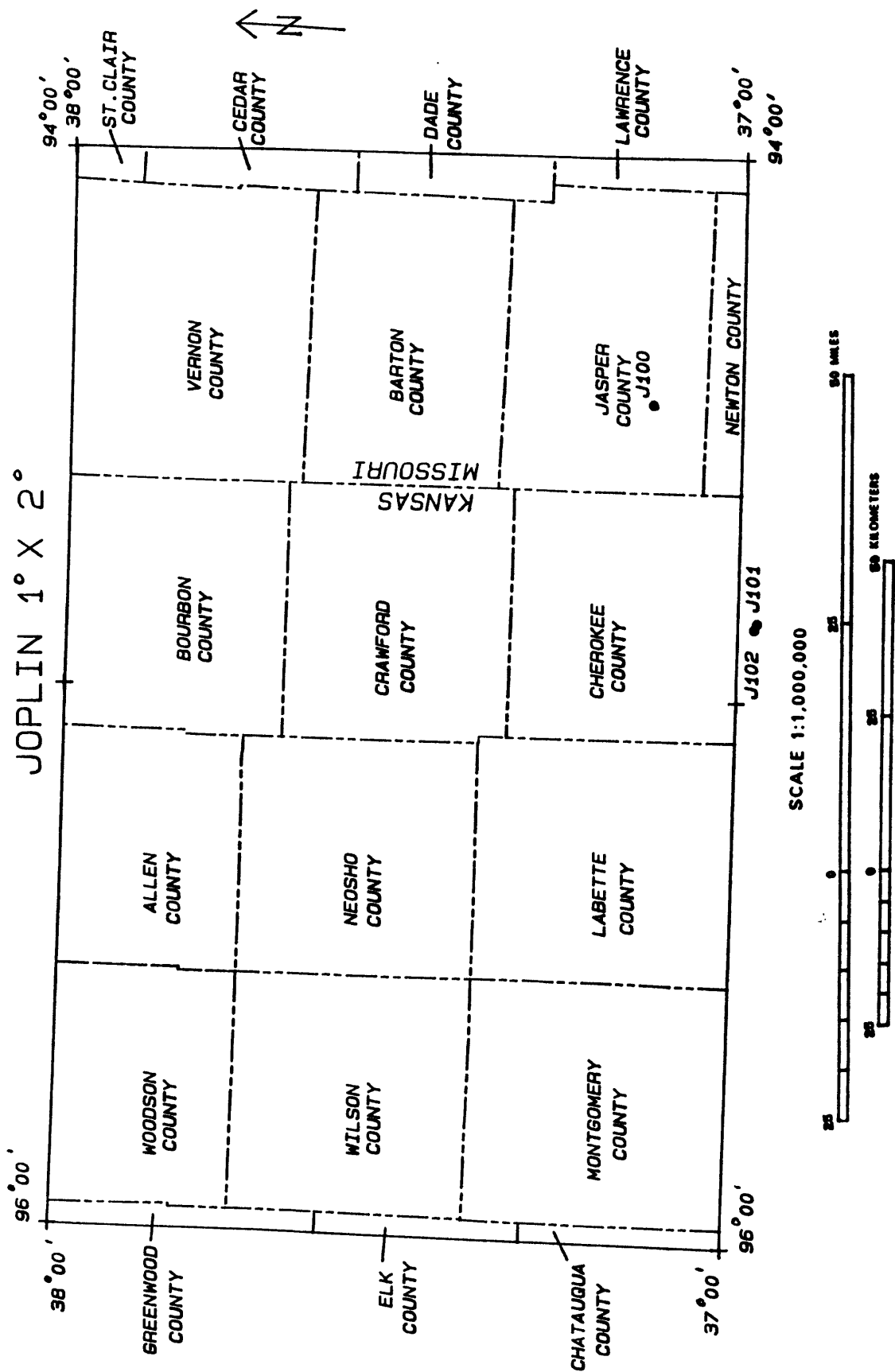


Figure 1. Locations of drill holes 100, 101, and 102, Joplin 1° x 2° quadrangle, Missouri and Kansas

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
80	Cambrian Undifferentiated
81	Eminence
83	Derby / Doerun
85	Lamotte Sandstone
89	Bonneterre 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

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- 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. 100, 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
J1000030	37 8 0	94 27 10	2.00	.50	.50	.150	200	N	N	N
J1000040	37 8 0	94 27 10	1.50	.15	.70	.070	50	N	N	N
J1000050	37 8 0	94 27 10	1.00	.10	.20	.100	100	N	N	N
J1000060	37 8 0	94 27 10	.70	.03	.20	.050	10	N	N	N
J1000070	37 8 0	94 27 10	.10	.02	.20	.005	<10	N	N	N
J1000080	37 8 0	94 27 10	.10	.02	.20	.005	10	N	N	N
J1000090	37 8 0	94 27 10	.10	.02	.30	.007	<10	N	N	N
J1000100	37 8 0	94 27 10	.10	.02	.30	.005	10	N	N	N
J1000110	37 8 0	94 27 10	.15	.02	.70	.010	<10	N	N	N
J1000120	37 8 0	94 27 10	.15	<.02	.10	.007	<10	N	N	N
J1000130	37 8 0	94 27 10	.05	<.02	.20	.005	<10	N	N	N
J1000140	37 8 0	94 27 10	.07	.02	.15	.007	<10	N	N	N
J1000150	37 8 0	94 27 10	.20	.02	.20	.010	10	N	N	N
J1000160	37 8 0	94 27 10	.07	.02	.15	.005	10	N	N	N
J1000170	37 8 0	94 27 10	.15	.02	.20	.010	<10	N	N	N
J1000180	37 8 0	94 27 10	.15	.02	.30	.010	<10	N	N	N
J1000190	37 8 0	94 27 10	.10	.02	.20	.005	<10	N	N	N
J1000200	37 8 0	94 27 10	.15	.02	.20	.005	<10	N	N	N
J1000210	37 8 0	94 27 10	.10	.02	.30	.005	<10	N	N	N
J1000220	37 8 0	94 27 10	.15	.02	.05	.003	<10	N	N	N
J1000230	37 8 0	94 27 10	.30	.02	<.05	.005	50	N	N	N
J1000240	37 8 0	94 27 10	.50	.02	.05	.010	20	N	N	N
J1000250	37 8 0	94 27 10	.20	.02	.07	.007	10	N	N	N
J1000260	37 8 0	94 27 10	.20	.02	.10	.010	10	N	N	N
J1000270	37 8 0	94 27 10	.15	.03	.50	.015	10	N	N	N
J1000280	37 8 0	94 27 10	.15	.10	.20	.020	15	N	N	N
J1000290	37 8 0	94 27 10	.30	.20	.20	.050	10	N	N	N
J1000300	37 8 0	94 27 10	.50	.15	.30	.050	20	N	N	N
J1000310	37 8 0	94 27 10	.30	.10	.30	.050	20	N	N	N
J1000320	37 8 0	94 27 10	.50	.10	.20	.050	20	N	N	N
J1000330	37 8 0	94 27 10	.15	.10	.30	.030	20	N	N	N
J1000340	37 8 0	94 27 10	2.00	.07	.30	.050	70	N	N	N
J1000350	37 8 0	94 27 10	.50	.03	.10	.020	10	N	N	N
J1000360	37 8 0	94 27 10	3.00	.03	.10	.020	100	N	N	N
J1000370	37 8 0	94 27 10	1.50	.05	.50	.030	50	N	N	N
J1000380	37 8 0	94 27 10	2.00	.05	.20	.030	50	N	N	N
J1000380	37 8 0	94 27 10	.50	.20	.30	.007	<10	N	N	N
J1000390	37 8 0	94 27 10	10.00	.07	.30	.030	100	N	N	N
J1000390	37 8 0	94 27 10	.70	.10	.15	.015	<10	N	N	N
J1000400	37 8 0	94 27 10	2.00	.02	.10	.015	50	N	N	N
J1000410	37 8 0	94 27 10	5.00	2.00	1.50	.300	200	N	N	N
J1000420	37 8 0	94 27 10	1.00	.20	.20	.100	10	N	N	N
J1000430	37 8 0	94 27 10	1.50	.10	.20	.070	15	N	N	N
J1000440	37 8 0	94 27 10	1.50	.07	.15	.030	10	N	N	N
J1000450	37 8 0	94 27 10	2.00	.05	.07	.020	15	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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
J1000030	50	150	N	N	N	N	100	7	N	N	N	10
J1000040	50	50	1.5	N	N	N	100	10	N	N	N	20
J1000050	50	70	1.5	N	N	N	100	15	N	N	N	20
J1000060	30	70	N	N	N	N	30	5	N	N	N	20
J1000070	30	70	N	N	N	N	N	<5	N	N	N	5
J1000080	30	30	N	N	N	N	N	<5	N	N	N	5
J1000090	30	30	N	N	N	N	N	<5	N	N	N	5
J1000100	50	50	N	N	N	N	N	<5	N	N	N	5
J1000110	50	50	N	N	N	N	N	<5	N	N	N	7
J1000120	20	30	N	N	N	N	N	<5	N	N	N	5
J1000130	50	50	N	N	N	N	N	<5	N	N	N	N
J1000140	50	30	N	N	N	N	N	<5	N	N	N	N
J1000150	50	50	N	N	N	N	N	<5	N	N	N	10
J1000160	50	30	N	N	N	N	N	<5	N	N	N	N
J1000170	50	30	N	N	N	N	N	<5	N	N	N	5
J1000180	50	30	N	N	N	N	N	<5	N	N	N	5
J1000190	50	20	N	N	N	N	N	<5	N	N	N	5
J1000200	50	30	N	N	N	N	N	5	N	N	N	7
J1000210	100	50	N	N	N	N	N	<5	N	N	N	5
J1000220	70	70	N	N	N	N	N	5	N	N	N	N
J1000230	70	50	N	N	N	N	N	10	N	N	N	5
J1000240	150	300	N	N	N	N	10	7	N	N	N	5
J1000250	70	50	N	N	N	N	N	<5	N	N	N	5
J1000260	70	150	N	N	N	N	N	5	N	N	N	10
J1000270	30	300	N	N	N	N	N	<5	N	N	N	7
J1000280	30	50	N	N	N	N	N	<5	N	N	N	10
J1000290	50	50	N	N	N	5	N	5	N	N	N	15
J1000300	50	70	N	N	N	5	N	5	N	N	N	15
J1000310	50	50	N	N	N	5	N	5	N	N	N	70
J1000320	50	50	N	N	N	5	N	5	N	5	N	30
J1000330	50	50	N	N	N	5	N	<5	N	N	N	10
J1000340	70	50	N	N	N	5	N	10	20	N	N	20
J1000350	50	30	N	N	N	10	N	20	N	N	N	100
J1000360	50	100	N	N	N	15	N	50	N	N	N	200
J1000370	50	50	N	N	N	20	10	10	N	N	N	500
J1000380	50	50	N	N	N	10	10	7	N	N	N	50
J1000380	70	50	N	N	N	N	N	5	N	N	N	7
J1000390	70	50	N	N	N	20	20	20	N	N	N	150
J1000390	70	70	N	N	N	N	N	10	N	N	N	7
J1000400	70	50	N	N	N	5	N	10	20	N	N	20
J1000410	50	200	2.0	N	N	15	50	20	20	7	N	50
J1000420	70	100	N	N	N	N	N	10	N	N	N	10
J1000430	50	100	N	N	N	5	N	10	N	N	N	15
J1000440	50	70	N	N	N	5	N	10	N	N	N	10
J1000450	70	100	N	N	N	N	N	10	N	N	N	15

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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 #
J1000030	15	N	N	N	N	100	N	N	N	100	N	40
J1000040	N	N	N	N	N	50	N	N	N	20	N	40
J1000050	<10	N	N	N	N	50	N	N	N	20	N	40
J1000060	<10	N	N	N	N	30	N	N	N	10	N	40
J1000070	N	N	N	N	N	N	N	N	N	N	N	40
J1000080	N	N	N	N	N	N	N	N	N	N	N	40
J1000090	N	N	N	N	N	N	N	N	N	15	N	40
J1000100	N	N	N	N	N	N	N	N	N	15	N	40
J1000110	N	N	N	N	N	N	N	N	N	N	N	40
J1000120	N	N	N	N	N	N	N	N	N	N	N	40
J1000130	N	N	N	N	N	N	N	N	N	N	N	40
J1000140	N	N	N	N	N	N	N	N	N	N	N	40
J1000150	N	N	N	N	N	N	N	N	200	N	N	40
J1000160	N	N	N	N	N	N	N	N	700	N	N	40
J1000170	N	N	N	N	N	N	N	N	1,000	N	N	40
J1000180	N	N	N	N	N	N	N	N	N	N	N	40
J1000190	N	N	N	N	N	N	N	N	N	N	N	40
J1000200	N	N	N	N	N	N	N	N	N	N	N	40
J1000210	10	N	N	N	N	N	N	N	N	N	N	40
J1000220	N	N	N	N	N	N	N	N	1,000	N	N	40
J1000230	N	N	N	N	N	N	N	N	2,000	N	N	40
J1000240	N	N	N	N	N	N	N	N	2,000	10	N	40
J1000250	N	N	N	N	N	N	N	N	200	N	N	40
J1000260	N	N	N	N	N	N	N	N	200	N	N	40
J1000270	N	N	N	N	N	N	N	N	200	N	N	40
J1000280	70	N	N	N	N	N	N	N	200	10	N	40
J1000290	<10	N	N	N	N	15	N	N	<200	15	N	40
J1000300	N	N	N	N	N	15	N	N	200	15	N	40
J1000310	N	N	N	N	N	10	N	N	N	10	N	40
J1000320	N	N	N	N	N	10	N	N	<200	15	N	40
J1000330	N	N	N	N	N	N	N	N	N	10	N	40
J1000340	N	N	N	N	N	15	N	N	N	10	N	40
J1000350	N	N	N	N	N	N	N	N	<200	N	N	40
J1000360	N	N	N	N	N	N	N	N	<200	N	N	40
J1000370	N	N	N	N	N	N	N	N	200	N	N	40
J1000380	N	N	N	N	N	10	N	N	<200	N	N	40
J1000380	N	N	N	N	N	N	N	N	N	N	N	40
J1000390	15	N	N	N	N	10	N	N	300	N	N	40
J1000390	N	N	N	N	N	N	N	N	N	N	N	40
J1000400	<10	N	N	N	N	N	N	N	300	N	N	40
J1000410	20	N	5	N	N	100	N	15	N	100	N	40
J1000420	N	N	N	N	N	10	N	N	N	50	N	66
J1000430	10	N	N	N	N	<10	N	N	N	50	N	66
J1000440	N	N	N	N	N	N	N	N	N	15	N	66
J1000450	N	N	N	N	N	N	N	N	N	10	N	66

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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
J1000460	37 8 0	94 27 10	2.00	.07	.10	.020	<10	N	N	N
J1000470	37 8 0	94 27 10	1.50	.10	.20	.020	10	N	N	N
J1000480	37 8 0	94 27 10	.30	.05	.10	.015	10	N	N	N
J1000490	37 8 0	94 27 10	.10	.20	.30	.020	<10	N	N	N
J1000500	37 8 0	94 27 10	.70	.15	.20	.020	10	N	N	N
J1000510	37 8 0	94 27 10	.70	.20	.50	.020	10	N	N	N
J1000520	37 8 0	94 27 10	3.00	.10	.10	.015	30	<.5	N	N
J1000530	37 8 0	94 27 10	.70	.03	.10	.010	10	N	N	N
J1000540	37 8 0	94 27 10	1.00	.05	.10	.015	10	N	N	N
J1000550	37 8 0	94 27 10	.50	.15	.15	.015	N	N	N	N
J1000560	37 8 0	94 27 10	.50	.05	.07	.010	<10	N	N	N
J1000570	37 8 0	94 27 10	.50	.20	.15	.020	<10	N	N	N
J1000580	37 8 0	94 27 10	3.00	.15	.15	.020	15	<.5	N	N
J1000590	37 8 0	94 27 10	.50	.05	.10	.007	<10	N	N	N
J1000600	37 8 0	94 27 10	.70	.20	.15	.070	10	N	N	N
J1000610	37 8 0	94 27 10	.50	.10	.10	.010	10	N	N	N
J1000620	37 8 0	94 27 10	.50	.10	.15	.010	15	.5	N	N
J1000630	37 8 0	94 27 10	1.00	.20	.20	.015	10	N	N	N
J1000640	37 8 0	94 27 10	1.50	.30	.20	.015	10	N	N	N
J1000650	37 8 0	94 27 10	1.50	.20	.20	.015	15	N	N	N
J1000660	37 8 0	94 27 10	.50	.10	.10	.030	<10	N	N	N
J1000670	37 8 0	94 27 10	.05	.10	.10	.010	<10	N	N	N
J1000700	37 8 0	94 27 10	.70	.10	.20	.010	10	N	N	N
J1000710	37 8 0	94 27 10	.15	.02	.05	.005	<10	N	N	N
J1000720	37 8 0	94 27 10	1.50	.05	.10	.007	50	N	N	N
J1000730	37 8 0	94 27 10	1.00	.10	.20	.015	15	N	N	N
J1000740	37 8 0	94 27 10	1.00	.15	.20	.010	10	N	N	N
J1000750	37 8 0	94 27 10	1.00	.15	.20	.010	10	N	N	N
J1000760	37 8 0	94 27 10	1.50	.05	.10	.050	70	N	N	N
J1000770	37 8 0	94 27 10	.50	.20	.30	.015	10	N	N	N
J1000780	37 8 0	94 27 10	.70	.15	.20	.015	10	N	N	N
J1000790	37 8 0	94 27 10	1.00	.10	.10	.015	10	N	N	N
J1000800	37 8 0	94 27 10	.50	.05	.10	.020	50	N	N	N
J1000810	37 8 0	94 27 10	1.00	.03	.10	.007	20	N	N	N
J1000820	37 8 0	94 27 10	.50	.07	.07	.010	<10	N	N	N
J1000840	37 8 0	94 27 10	1.50	.07	.10	.030	50	N	N	N
J1000850	37 8 0	94 27 10	2.00	.03	.07	.010	50	N	N	N
J1000860	37 8 0	94 27 10	.50	.02	.05	.005	15	N	N	N
J1000870	37 8 0	94 27 10	.70	.02	.05	.007	15	N	N	N
J1000880	37 8 0	94 27 10	.50	.03	.05	.010	15	N	N	N
J1000890	37 8 0	94 27 10	.50	.02	.05	.010	15	N	N	N
J1000900	37 8 0	94 27 10	.50	.02	.05	.010	20	N	N	N
J1000910	37 8 0	94 27 10	1.50	.05	.05	.050	20	N	N	N
J1000920	37 8 0	94 27 10	.10	.02	<.05	.002	<10	N	N	N
J1000930	37 8 0	94 27 10	1.00	.05	.05	.020	20	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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
J1000460	50	100	N	N	N	N	N	10	N	N	N	15
J1000470	100	100	N	N	N	N	N	10	N	N	N	15
J1000480	20	100	N	N	N	N	N	5	N	N	N	5
J1000490	20	150	N	N	N	N	N	7	N	N	N	<5
J1000500	30	150	N	N	N	N	N	7	N	N	N	10
J1000510	30	150	N	N	N	N	N	10	N	N	N	7
J1000520	50	100	N	N	50	5	N	20	N	5	N	15
J1000530	50	1,000	N	N	N	N	N	5	N	N	N	7
J1000540	50	200	N	N	N	5	N	10	N	N	N	15
J1000550	70	100	N	N	N	N	N	<5	N	N	N	7
J1000560	70	100	N	N	N	N	N	<5	N	N	N	5
J1000570	70	100	N	N	N	N	N	5	N	N	N	10
J1000580	50	>5,000	N	N	N	7	N	30	N	5	N	20
J1000590	50	100	N	N	N	5	N	5	N	N	N	5
J1000600	100	150	N	N	N	N	N	7	N	N	N	15
J1000610	100	70	N	N	N	N	N	5	N	N	N	7
J1000620	70	200	N	N	N	N	N	7	N	N	N	5
J1000630	70	100	N	N	N	N	N	7	N	N	N	7
J1000640	70	2,000	N	N	N	N	N	10	N	N	N	10
J1000650	100	200	N	N	N	5	N	10	N	N	N	10
J1000660	20	30	N	N	N	N	N	5	N	N	N	5
J1000670	100	50	N	N	N	N	N	<5	N	N	N	N
J1000700	70	70	N	N	N	N	N	7	N	N	N	7
J1000710	70	100	N	N	N	N	N	<5	N	N	N	5
J1000720	70	50	N	N	N	N	N	15	N	N	N	15
J1000730	50	50	N	N	N	N	N	7	N	N	N	10
J1000740	50	50	N	N	N	N	N	7	N	N	N	10
J1000750	50	30	N	N	N	N	N	10	N	N	N	10
J1000760	50	50	N	N	N	N	N	15	N	N	N	10
J1000770	70	70	N	N	N	N	N	7	N	N	N	5
J1000780	70	100	N	N	N	N	N	10	N	N	N	7
J1000790	70	100	N	N	N	N	N	15	N	N	N	15
J1000800	50	70	N	N	N	N	N	5	N	N	N	5
J1000810	50	100	N	N	N	N	N	7	N	N	N	7
J1000820	70	50	N	N	N	N	N	<5	N	N	N	5
J1000840	70	150	N	N	N	N	N	10	N	N	N	15
J1000850	70	100	N	N	N	N	N	10	N	N	N	15
J1000860	50	50	N	N	N	N	N	5	N	N	N	5
J1000870	50	50	N	N	N	N	N	5	N	N	N	10
J1000880	30	50	N	N	N	N	N	5	N	N	N	5
J1000890	30	50	N	N	N	N	N	7	N	N	N	5
J1000900	50	200	N	N	N	N	N	20	N	N	N	5
J1000910	30	50	N	N	N	N	N	15	N	5	N	15
J1000920	10	50	N	N	N	N	N	<5	N	N	N	N
J1000930	50	70	N	N	N	N	N	10	N	N	N	15

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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 #
J1000460	N	N	N	N	N	N	N	N	N	15	N	66
J1000470	N	N	N	N	N	N	N	N	N	50	N	66
J1000480	N	N	N	N	N	N	N	N	200	50	N	66
J1000490	N	N	N	N	N	N	N	N	N	20	N	66
J1000500	N	N	N	N	N	N	N	N	<200	30	N	66
J1000510	N	N	N	N	N	N	N	N	<200	30	N	66
J1000520	N	N	N	N	N	N	N	N	5,000	30	N	66
J1000530	N	N	N	N	N	N	N	N	N	15	N	66
J1000540	N	N	N	N	N	N	N	N	N	20	N	66
J1000550	N	N	N	N	N	N	N	N	N	10	N	66
J1000560	N	N	N	N	N	N	N	N	N	20	N	66
J1000570	N	N	N	N	N	N	N	N	N	15	N	66
J1000580	200	N	N	N	N	N	N	N	500	10	N	66
J1000590	N	N	N	N	N	N	N	N	N	N	N	66
J1000600	N	N	N	N	N	10	N	N	N	50	N	66
J1000610	N	N	N	N	N	N	N	N	N	<10	N	66
J1000620	N	N	N	N	N	N	N	N	N	10	N	66
J1000630	N	N	N	N	N	N	N	N	N	10	N	66
J1000640	N	N	N	N	N	N	N	N	N	10	N	66
J1000650	N	N	N	N	N	N	N	N	N	10	N	66
J1000660	N	N	N	N	N	N	N	N	N	20	N	66
J1000670	N	N	N	N	N	N	N	N	N	N	N	66
J1000700	N	N	N	N	N	N	N	N	300	10	N	66
J1000710	N	N	N	N	N	N	N	N	<200	N	N	66
J1000720	N	N	N	N	N	N	N	N	N	N	N	66
J1000730	N	N	N	N	N	N	N	N	N	N	N	66
J1000740	N	N	N	N	N	N	N	N	N	N	N	66
J1000750	N	N	N	N	N	N	N	N	N	N	N	66
J1000760	N	N	N	N	N	N	N	N	N	10	N	66
J1000770	N	N	N	N	N	N	N	N	N	10	N	66
J1000780	N	N	N	N	N	N	N	N	N	10	N	66
J1000790	N	N	N	N	N	N	N	N	N	N	N	66
J1000800	N	N	N	N	N	N	N	N	N	10	N	66
J1000810	N	N	N	N	N	N	N	N	N	N	N	66
J1000820	N	N	N	N	N	N	N	N	N	50	N	67
J1000840	<10	N	N	N	N	N	N	N	200	30	N	67
J1000850	N	N	N	N	N	N	N	N	N	N	N	67
J1000860	N	N	N	N	N	N	N	N	N	N	N	67
J1000870	N	N	N	N	N	N	N	N	N	N	N	67
J1000880	N	N	N	N	N	N	N	N	N	20	N	67
J1000890	N	N	N	N	N	N	N	N	N	15	N	67
J1000900	N	N	N	N	N	N	N	N	500	15	N	67
J1000910	N	N	N	N	N	10	N	N	N	70	N	67
J1000920	N	N	N	N	N	N	N	N	N	N	N	67
J1000930	N	N	N	N	N	N	N	N	N	20	N	67

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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
J1000940	37	8	0	94	27	10	.05	<.02	<.05	.003	N	N	N	N
J1000950	37	8	0	94	27	10	<.05	<.02	<.05	.005	N	N	N	N
J1000960	37	8	0	94	27	10	.20	.02	.07	.005	20	N	N	N
J1000970	37	8	0	94	27	10	.15	.10	.10	.002	<10	N	N	N
J1000980	37	8	0	94	27	10	2.00	.02	.05	.015	20	N	N	N
J1000990	37	8	0	94	27	10	1.00	<.02	<.05	.003	10	N	N	N
J1001000	37	8	0	94	27	10	.50	<.02	.05	.002	15	N	N	N
J1001010	37	8	0	94	27	10	.05	.02	.05	.005	N	N	N	N
J1001020	37	8	0	94	27	10	.05	.02	.05	.002	<10	N	N	N
J1001030	37	8	0	94	27	10	.10	.02	.07	.002	<10	N	N	N
J1001040	37	8	0	94	27	10	.05	.02	.07	.003	<10	N	N	N
J1001050	37	8	0	94	27	10	.05	.02	.05	.003	<10	N	N	N
J1001060	37	8	0	94	27	10	.05	.02	.07	.002	<10	N	N	N
J1001070	37	8	0	94	27	10	1.00	<.02	.05	.002	70	N	N	N
J1001080	37	8	0	94	27	10	.20	.02	.07	.005	10	N	N	N
J1001090	37	8	0	94	27	10	.30	.02	.05	.007	10	N	N	N
J1001100	37	8	0	94	27	10	.15	.02	<.05	.003	<10	N	N	N
J1001110	37	8	0	94	27	10	.10	<.02	<.05	<.002	<10	N	N	N
J1001120	37	8	0	94	27	10	.10	<.02	<.05	<.002	<10	N	N	N
J1001130	37	8	0	94	27	10	.15	.07	.10	.002	<10	N	N	N
J1001140	37	8	0	94	27	10	.15	.02	<.05	<.002	<10	N	N	N
J1001150	37	8	0	94	27	10	.20	.03	.07	.002	<10	N	N	N
J1001160	37	8	0	94	27	10	.30	.02	<.05	.005	<10	N	N	N
J1001170	37	8	0	94	27	10	1.00	.02	.07	.007	20	N	N	N
J1001180	37	8	0	94	27	10	1.50	.10	.10	.030	15	N	N	N
J1001190	37	8	0	94	27	10	3.00	.20	.20	.050	10	N	N	N
J1001200	37	8	0	94	27	10	1.00	.10	.10	.020	N	N	N	N
J1001210	37	8	0	94	27	10	.70	.05	.07	.010	20	N	N	N
J1001220	37	8	0	94	27	10	.70	.03	.07	.010	<10	N	N	N
J1001230	37	8	0	94	27	10	.70	.02	<.05	.010	<10	N	N	N
J1001240	37	8	0	94	27	10	.50	.02	<.05	.010	10	N	N	N
J1001250	37	8	0	94	27	10	.20	.07	.07	.010	<10	N	N	N
J1001260	37	8	0	94	27	10	1.00	.02	.05	.007	20	N	N	N
J1001270	37	8	0	94	27	10	2.00	.10	.07	.020	20	N	N	N
J1001280	37	8	0	94	27	10	3.00	.20	.10	.050	30	N	N	N
J1001290	37	8	0	94	27	10	5.00	1.00	.20	.200	100	N	N	N
J1001300	37	8	0	94	27	10	5.00	.20	.05	.100	100	.5	N	N
J1001310	37	8	0	94	27	10	7.00	.15	.07	.050	100	.5	N	N
J1001320	37	8	0	94	27	10	5.00	.10	.05	.070	100	<.5	N	N
J1001330	37	8	0	94	27	10	2.00	.10	.05	.050	50	N	N	N
J1001340	37	8	0	94	27	10	1.50	.02	<.05	.010	30	N	N	N
J1001350	37	8	0	94	27	10	3.00	.10	.20	.030	70	N	N	N
J1001360	37	8	0	94	27	10	2.00	.03	.70	.010	50	N	N	N
J1001370	37	8	0	94	27	10	5.00	.03	.05	.003	50	.5	200	N
J1001380	37	8	0	94	27	10	5.00	.07	.07	.002	50	<.5	200	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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
J1000940	N	20	N	N	N	N	N	N	N	N	N	N
J1000950	N	20	N	N	N	N	N	N	N	N	N	N
J1000960	N	20	N	N	N	N	N	<5	N	N	N	N
J1000970	N	20	N	N	N	N	N	<5	N	N	N	N
J1000980	N	20	N	N	N	N	N	7	N	N	N	10
J1000990	N	<20	N	N	N	N	N	5	N	N	N	5
J1001000	10	20	N	N	N	N	N	<5	N	N	N	5
J1001010	15	50	N	N	N	N	N	<5	N	N	N	N
J1001020	20	30	N	N	N	N	N	<5	N	N	N	N
J1001030	20	50	N	N	N	N	N	<5	N	N	N	N
J1001040	20	50	N	N	N	N	N	<5	N	N	N	N
J1001050	15	30	N	N	N	N	N	<5	N	N	N	N
J1001060	15	50	N	N	N	N	N	<5	N	N	N	N
J1001070	10	<20	N	N	N	N	N	7	N	N	N	20
J1001080	20	200	N	N	N	N	N	5	N	N	N	N
J1001090	20	200	N	N	N	N	N	<5	N	N	N	5
J1001100	20	<20	N	N	N	N	N	10	N	N	N	5
J1001110	20	20	N	N	N	N	N	<5	N	N	N	5
J1001120	20	<20	N	N	N	N	N	<5	N	N	N	N
J1001130	20	20	N	N	N	N	N	<5	N	N	N	N
J1001140	20	<20	N	N	N	N	N	<5	N	N	N	N
J1001150	20	<20	N	N	N	N	N	<5	N	N	N	N
J1001160	20	<20	N	N	N	N	N	<5	N	N	N	5
J1001170	50	50	N	N	N	N	N	10	N	N	N	7
J1001180	50	50	N	N	N	N	N	10	N	5	N	10
J1001190	70	100	N	N	N	N	N	20	N	5	N	30
J1001200	50	50	N	N	N	N	N	7	N	N	N	10
J1001210	30	50	N	N	N	N	N	7	N	N	N	5
J1001220	20	50	N	N	N	N	N	5	N	N	N	5
J1001230	10	70	N	N	N	N	N	7	N	N	N	5
J1001240	10	20	N	N	N	N	N	5	N	N	N	5
J1001250	20	30	N	N	N	N	N	<5	N	N	N	N
J1001260	20	50	N	N	N	N	N	15	N	N	N	10
J1001270	50	30	1.0	N	N	N	N	15	N	7	N	10
J1001280	50	100	1.0	N	N	N	N	50	N	7	N	20
J1001290	150	50	5.0	N	N	10	100	50	N	7	N	30
J1001300	100	20	1.0	N	N	10	15	50	N	7	N	50
J1001310	100	20	1.0	N	N	10	15	70	N	7	N	70
J1001320	100	50	<1.0	N	N	5	20	50	N	7	N	50
J1001330	100	20	<1.0	N	N	5	N	20	N	7	N	20
J1001340	20	20	N	N	N	N	N	15	N	N	N	10
J1001350	70	20	N	N	N	5	N	30	N	5	N	20
J1001360	70	<20	<1.0	N	N	N	N	20	N	5	N	20
J1001370	30	150	N	N	N	5	N	30	N	15	N	20
J1001380	20	<20	N	N	N	7	N	30	N	10	N	30

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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 #
J1000940	N	N	N	N	N	N	N	N	N	20	N	67
J1000950	N	N	N	N	N	N	N	N	N	20	N	67
J1000960	N	N	N	N	N	N	N	N	N	15	N	68
J1000970	N	N	N	N	N	N	N	N	N	10	N	68
J1000980	N	N	N	N	N	N	N	N	N	50	N	68
J1000990	N	N	N	N	N	N	N	N	N	30	N	68
J1001000	N	N	N	N	N	N	N	N	N	10	N	68
J1001010	N	N	N	N	N	N	N	N	N	N	N	68
J1001020	N	N	N	N	N	N	N	N	N	N	N	68
J1001030	N	N	N	N	N	N	N	N	200	N	N	68
J1001040	N	N	N	N	N	N	N	N	N	N	N	68
J1001050	N	N	N	N	N	N	N	N	N	N	N	68
J1001060	N	N	N	N	N	N	N	N	N	N	N	68
J1001070	N	N	N	N	N	N	N	N	200	N	N	68
J1001080	N	N	N	N	N	N	N	N	N	N	N	68
J1001090	N	N	N	N	N	N	N	N	N	20	N	68
J1001100	N	N	N	N	N	N	N	N	N	N	N	68
J1001110	N	N	N	N	N	N	N	N	N	N	N	68
J1001120	N	N	N	N	N	N	N	N	N	N	N	68
J1001130	N	N	N	N	N	N	N	N	N	N	N	68
J1001140	N	N	N	N	N	N	N	N	N	N	N	68
J1001150	N	N	N	N	N	N	N	N	N	N	N	68
J1001160	N	N	N	N	N	N	N	N	N	N	N	68
J1001170	N	N	N	N	N	N	N	N	N	N	N	68
J1001180	N	N	N	N	N	10	N	N	N	20	N	68
J1001190	20	N	N	N	N	15	N	N	N	30	N	68
J1001200	N	N	N	N	N	N	N	N	N	30	N	68
J1001210	N	N	N	N	N	N	N	N	200	N	N	68
J1001220	N	N	N	N	N	N	N	N	N	50	N	68
J1001230	N	N	N	N	N	N	N	N	N	15	N	69
J1001240	N	N	N	N	N	N	N	N	N	30	N	69
J1001250	N	N	N	N	N	N	N	N	N	15	N	69
J1001260	N	N	N	N	N	N	N	N	N	10	N	80
J1001270	10	N	N	N	N	10	N	N	N	15	N	80
J1001280	20	N	N	N	N	20	N	N	N	20	N	80
J1001290	70	N	5	N	N	100	N	10	N	100	N	80
J1001300	50	N	N	N	N	20	N	N	N	30	N	80
J1001310	50	N	N	N	N	10	N	N	200	15	N	80
J1001320	30	N	N	N	N	20	N	N	N	100	N	80
J1001330	10	N	N	N	N	15	N	N	200	10	N	80
J1001340	100	N	N	N	N	N	N	N	N	N	N	80
J1001350	70	N	N	N	N	N	N	N	N	10	N	80
J1001360	20	N	N	N	N	N	N	N	N	15	N	80
J1001370	2,000	N	N	N	N	N	N	N	N	N	N	80
J1001380	20	N	N	N	N	N	N	N	N	N	N	80

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 100, 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
J1001400	37 8 0	94 27 10	5.00	.02	.05	.005	70	.5	<200	N
J1001410	37 8 0	94 27 10	5.00	.03	.05	.010	70	.5	200	N
J1001420	37 8 0	94 27 10	5.00	.10	.10	.015	70	.5	N	N
J1001430	37 8 0	94 27 10	1.50	.10	.05	.030	70	N	N	N
J1001440	37 8 0	94 27 10	1.00	.30	.30	.020	15	N	N	N
J1001450	37 8 0	94 27 10	1.50	.07	.05	.030	20	N	N	N
J1001460	37 8 0	94 27 10	5.00	.10	.05	.050	50	N	N	N
J1001470	37 8 0	94 27 10	7.00	.20	.10	.100	100	.5	N	N

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
J1001400	30	70	N	N	N	7	N	50	N	7	N	30
J1001410	50	20	N	N	N	7	N	50	N	10	N	50
J1001420	50	70	<1.0	N	N	7	N	70	N	5	N	30
J1001430	50	20	1.0	N	N	5	10	20	N	N	N	15
J1001440	50	70	N	N	N	5	N	200	N	N	N	15
J1001450	70	<20	N	N	N	N	N	15	N	5	N	15
J1001460	150	200	<1.0	N	N	7	N	30	N	10	N	20
J1001470	100	100	1.0	N	N	10	15	30	N	10	N	30

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 #
J1001400	30	N	N	N	N	N	N	N	N	N	N	80
J1001410	30	N	N	N	N	N	N	N	N	N	N	80
J1001420	50	N	N	N	N	N	N	N	N	20	N	80
J1001430	15	N	N	N	N	20	N	N	500	15	N	80
J1001440	10	N	N	N	N	N	N	N	N	50	N	80
J1001450	15	N	N	N	N	N	N	N	N	10	N	80
J1001460	50	N	N	N	N	N	N	N	N	70	N	80
J1001470	100	N	N	N	N	15	N	N	N	100	N	80

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1010070	36 58 50	94 51 14	15.00	.02	<.05	.050	50	N	N	N
J1010080	36 58 50	94 51 14	10.00	.15	.05	.150	100	<.5	N	N
J1010090	36 58 50	94 51 14	10.00	.15	.05	.150	150	.5	N	N
J1010100	36 58 50	94 51 14	5.00	.15	.30	.150	500	N	N	N
J1010110	36 58 50	94 51 14	.70	.07	.50	.070	15	N	N	N
J1010120	36 58 50	94 51 14	.20	.03	.30	.030	N	N	N	N
J1010130	36 58 50	94 51 14	.50	.20	.15	.100	<10	N	N	N
J1010140	36 58 50	94 51 14	.20	.05	.20	.050	N	N	N	N
J1010150	36 58 50	94 51 14	.50	.10	.30	.050	10	N	N	N
J1010160	36 58 50	94 51 14	.30	.05	.05	.030	N	N	N	N
J1010170	36 58 50	94 51 14	.30	.03	<.05	.030	<10	N	N	N
J1010180	36 58 50	94 51 14	1.50	.02	N	.030	30	<.5	N	N
J1010190	36 58 50	94 51 14	.15	.02	N	.015	N	N	N	N
J1010190	36 58 50	94 51 14	1.00	.20	.10	.070	<10	N	N	N
J1010200	36 58 50	94 51 14	.05	.03	N	.015	N	N	N	N
J1010210	36 58 50	94 51 14	.50	.03	N	.030	30	N	N	N
J1010220	36 58 50	94 51 14	.15	.02	<.05	.020	<10	N	N	N
J1010230	36 58 50	94 51 14	.20	.02	<.05	.010	10	N	N	N
J1010240	36 58 50	94 51 14	.10	<.02	.05	.005	50	N	N	N
J1010250	36 58 50	94 51 14	.30	<.02	.05	.007	20	N	N	N
J1010260	36 58 50	94 51 14	5.00	.03	.05	.050	300	N	N	N
J1010270	36 58 50	94 51 14	3.00	.02	.20	.050	200	N	N	N
J1010280	36 58 50	94 51 14	1.50	.02	.15	.020	50	N	N	N
J1010290	36 58 50	94 51 14	1.50	.02	.10	.030	150	N	N	N
J1010300	36 58 50	94 51 14	.50	.02	.20	.030	30	N	N	N
J1010310	36 58 50	94 51 14	.70	.05	.30	.030	50	N	N	N
J1010320	36 58 50	94 51 14	.20	.07	.50	.030	15	N	N	N
J1010330	36 58 50	94 51 14	.15	.07	.30	.030	15	N	N	N
J1010340	36 58 50	94 51 14	.15	.05	.50	.030	15	N	N	N
J1010350	36 58 50	94 51 14	.15	.03	.30	.030	15	N	N	N
J1010360	36 58 50	94 51 14	.20	.05	.30	.030	15	N	N	N
J1010370	36 58 50	94 51 14	.15	.07	1.00	.030	15	N	N	N
J1010380	36 58 50	94 51 14	.50	.10	.70	.030	30	N	N	N
J1010390	36 58 50	94 51 14	.30	.15	1.00	.050	20	N	N	N
J1010400	36 58 50	94 51 14	.70	.30	.50	.050	50	N	N	N
J1010410	36 58 50	94 51 14	1.50	.15	.30	.070	70	<.5	N	N
J1010420	36 58 50	94 51 14	7.00	1.00	1.00	.500	150	N	N	N
J1010430	36 58 50	94 51 14	.70	.50	.50	.100	15	N	N	N
J1010440	36 58 50	94 51 14	.15	.20	.50	.030	<10	N	N	N
J1010450	36 58 50	94 51 14	.10	.15	.30	.015	<10	N	N	N
J1010460	36 58 50	94 51 14	.05	.10	.20	.010	N	N	N	N
J1010470	36 58 50	94 51 14	.10	.07	.15	.010	N	N	N	N
J1010480	36 58 50	94 51 14	.70	.02	.10	.010	N	N	N	N
J1010500	36 58 50	94 51 14	1.00	.10	.05	.070	<10	N	N	N
J1010510	36 58 50	94 51 14	2.00	.30	.15	.100	10	<.5	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1010070	20	100	<1.0	N	N	15	N	15	N	N	N	70
J1010080	100	150	1.0	N	N	15	70	20	20	N	N	50
J1010090	100	200	1.0	N	N	10	70	20	20	N	N	50
J1010100	100	150	1.0	N	N	7	50	15	20	N	N	30
J1010110	70	100	N	N	N	N	20	<5	N	N	N	10
J1010120	50	30	N	N	N	N	N	N	N	N	N	10
J1010130	100	50	1.0	N	N	N	15	5	N	N	N	7
J1010140	50	30	N	N	N	N	N	N	N	N	N	5
J1010150	50	50	<1.0	N	N	N	N	5	N	<5	N	7
J1010160	30	30	N	N	N	N	N	<5	N	N	N	5
J1010170	30	50	N	N	30	N	N	7	N	N	N	5
J1010180	30	70	<1.0	N	<20	N	10	5	N	N	N	5
J1010190	50	50	N	N	N	N	N	N	N	N	N	<5
J1010190	100	200	<1.0	N	N	N	<10	10	N	N	N	10
J1010200	50	50	N	N	N	N	N	N	N	N	N	<5
J1010210	30	50	N	N	N	N	N	N	N	N	N	N
J1010220	30	30	N	N	N	N	N	<5	N	<5	N	15
J1010230	30	30	N	N	N	N	N	<5	N	<5	N	7
J1010240	20	20	N	N	N	N	N	N	N	N	N	<5
J1010250	70	20	N	N	N	N	N	N	N	<5	N	10
J1010260	50	50	1.0	N	N	<5	50	5	20	N	N	10
J1010270	100	50	<1.0	N	N	N	30	5	N	N	N	15
J1010280	70	30	<1.0	N	N	N	N	<5	N	<5	N	10
J1010290	50	30	<1.0	N	N	N	N	<5	N	N	N	7
J1010300	50	50	N	N	N	N	N	<5	N	N	N	7
J1010310	70	50	N	N	N	N	N	<5	N	<5	N	10
J1010320	50	50	N	N	N	N	N	<5	N	N	N	5
J1010330	50	30	N	N	N	N	N	<5	N	N	N	5
J1010340	50	30	N	N	N	N	N	N	N	<5	N	5
J1010350	70	20	N	N	N	N	N	5	N	N	N	<5
J1010360	70	30	N	N	N	N	N	N	N	N	N	5
J1010370	50	30	N	N	N	N	N	<5	N	N	N	7
J1010380	50	30	N	N	N	N	10	N	N	N	N	10
J1010390	70	70	N	N	N	N	N	<5	N	N	N	15
J1010400	70	70	N	N	N	N	N	5	N	<5	N	30
J1010410	70	70	<1.0	N	N	10	N	7	N	5	N	70
J1010420	300	300	5.0	N	N	30	100	30	20	7	N	150
J1010430	70	100	<1.0	N	N	N	15	5	N	N	N	10
J1010440	50	150	N	N	N	N	N	<5	N	N	N	<5
J1010450	30	50	N	N	N	N	N	N	N	N	N	N
J1010460	50	50	N	N	N	N	N	N	N	N	N	N
J1010470	50	70	N	N	N	N	N	N	N	N	N	N
J1010480	30	70	N	N	N	N	N	<5	N	N	N	<5
J1010500	100	150	N	N	N	N	N	30	N	<5	N	15
J1010510	100	100	<1.0	N	N	5	<10	200	N	5	N	20

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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 #
J1010070	<10	N	N	N	N	10	<50	N	300	20	N	40
J1010080	15	N	5	N	N	50	<50	15	700	70	N	40
J1010090	30	N	5	N	N	50	<50	10	<200	150	N	40
J1010100	10	N	5	N	N	70	<50	10	N	100	N	40
J1010110	N	N	N	N	N	15	<50	N	N	15	N	40
J1010120	N	N	N	N	N	10	<50	N	N	10	N	40
J1010130	N	N	N	N	N	30	<50	N	N	30	N	40
J1010140	N	N	N	N	N	<10	<50	N	N	10	N	40
J1010150	N	N	N	N	N	15	<50	N	N	10	N	40
J1010160	N	N	N	N	N	10	<50	N	N	10	N	40
J1010170	N	N	N	N	N	10	<50	N	5,000	10	N	40
J1010180	N	N	N	N	N	20	<50	N	3,000	10	N	40
J1010190	15	N	N	N	N	<10	<50	N	<200	<10	N	40
J1010190	N	N	N	N	N	10	<50	N	<200	50	N	40
J1010200	N	N	N	N	N	<10	<50	N	200	N	N	40
J1010210	N	N	N	N	N	15	<50	N	<200	10	N	40
J1010220	150	N	N	N	N	10	<50	N	<200	<10	N	40
J1010230	N	N	N	N	N	<10	<50	N	300	N	N	40
J1010240	N	N	N	N	N	N	<50	N	N	N	N	40
J1010250	<10	N	N	N	N	N	<50	N	<200	<10	N	40
J1010260	N	N	N	N	N	50	<50	N	200	70	N	40
J1010270	N	N	N	N	N	50	<50	N	N	20	N	40
J1010280	N	N	N	N	N	20	<50	N	<200	10	N	40
J1010290	N	N	N	N	N	20	<50	N	<200	20	N	40
J1010300	N	N	N	N	N	15	<50	N	N	10	N	40
J1010310	N	N	N	N	N	20	<50	N	<200	15	N	40
J1010320	N	N	N	N	N	15	<50	N	N	10	N	40
J1010330	N	N	N	N	N	15	<50	N	N	10	N	40
J1010340	N	N	N	N	N	10	<50	N	N	10	N	40
J1010350	N	N	N	N	N	10	<50	N	N	<10	N	40
J1010360	N	N	N	N	N	15	<50	N	<200	10	N	40
J1010370	N	N	N	N	N	15	<50	N	N	10	N	40
J1010380	N	N	N	N	N	20	<50	N	<200	10	N	40
J1010390	N	N	N	N	N	30	<50	N	N	15	N	40
J1010400	N	N	N	N	N	30	<50	N	N	15	N	40
J1010410	N	N	N	N	N	30	<50	N	N	20	N	40
J1010420	30	N	7	N	N	150	<50	20	<200	300	N	40
J1010430	<10	N	N	N	N	20	<50	N	N	30	N	65
J1010440	N	N	N	N	N	N	<50	N	N	10	N	65
J1010450	N	N	N	N	N	N	<50	N	N	15	N	65
J1010460	N	N	N	N	N	N	<50	N	N	N	N	65
J1010470	N	N	N	N	N	N	<50	N	N	30	N	65
J1010480	N	N	N	N	N	N	<50	N	N	20	N	65
J1010500	N	N	N	N	N	<10	<50	N	N	70	N	65
J1010510	150	N	N	N	N	15	<50	N	500	50	N	65

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1010520	36 58 50	94 51 14	1.00	.20	.15	.050	<10	N	N	N
J1010530	36 58 50	94 51 14	1.50	.07	.10	.070	<10	N	N	N
J1010540	36 58 50	94 51 14	.20	.05	.15	.010	N	N	N	N
J1010550	36 58 50	94 51 14	.15	.03	.10	.005	N	N	N	N
J1010560	36 58 50	94 51 14	.50	.05	.10	.007	N	N	N	N
J1010570	36 58 50	94 51 14	.70	.50	.70	.030	15	N	N	N
J1010580	36 58 50	94 51 14	.50	.10	.15	.050	<10	N	N	N
J1010590	36 58 50	94 51 14	.30	.10	.10	.050	<10	N	N	N
J1010590	36 58 50	94 51 14	.70	.30	.20	.200	15	N	N	N
J1010600	36 58 50	94 51 14	.70	.10	.10	.030	<10	N	N	N
J1010610	36 58 50	94 51 14	1.50	.05	.10	.050	<10	<.5	N	N
J1010620	36 58 50	94 51 14	1.00	.02	.05	.030	N	N	N	N
J1010630	36 58 50	94 51 14	1.00	.15	.10	.070	<10	N	N	N
J1010640	36 58 50	94 51 14	.50	.02	.05	.020	N	N	N	N
J1010650	36 58 50	94 51 14	.20	.50	.70	.030	10	N	N	N
J1010660	36 58 50	94 51 14	1.00	.07	.05	.050	<10	N	N	N
J1010670	36 58 50	94 51 14	3.00	.20	.15	.200	20	<.5	N	N
J1010680	36 58 50	94 51 14	.70	.05	.10	.050	<10	N	N	N
J1010690	36 58 50	94 51 14	.15	.05	.05	.030	N	N	N	N
J1010700	36 58 50	94 51 14	.30	.03	<.05	.020	N	N	N	N
J1010710	36 58 50	94 51 14	.30	.07	.05	.030	N	N	N	N
J1010720	36 58 50	94 51 14	.50	.20	.10	.070	<10	N	N	N
J1010730	36 58 50	94 51 14	.70	.50	.20	.100	15	N	N	N
J1010740	36 58 50	94 51 14	.50	.10	.05	.050	<10	N	N	N
J1010750	36 58 50	94 51 14	.20	.30	.30	.030	<10	N	N	N
J1010760	36 58 50	94 51 14	.70	.20	.15	.100	10	N	N	N
J1010770	36 58 50	94 51 14	.20	.07	.05	.030	15	N	N	N
J1010780	36 58 50	94 51 14	.20	.07	.05	.020	N	N	N	N
J1010790	36 58 50	94 51 14	.70	.10	.10	.030	<10	N	N	N
J1010800	36 58 50	94 51 14	.50	.07	.05	.030	<10	N	N	N
J1010810	36 58 50	94 51 14	.15	.02	<.05	.010	N	N	N	N
J1010820	36 58 50	94 51 14	.30	.03	<.05	.010	N	N	N	N
J1010830	36 58 50	94 51 14	.50	.10	.05	.030	<10	N	N	N
J1010840	36 58 50	94 51 14	.30	.15	.15	.050	N	N	N	N
J1010850	36 58 50	94 51 14	.20	.07	.10	.030	N	N	N	N
J1010860	36 58 50	94 51 14	1.50	.07	.05	.030	<10	N	N	N
J1010870	36 58 50	94 51 14	1.00	.05	.10	.020	<10	<.5	N	N
J1010880	36 58 50	94 51 14	.20	.07	<.05	.030	N	N	N	N
J1010890	36 58 50	94 51 14	.70	.10	.15	.050	10	<.5	N	N
J1010900	36 58 50	94 51 14	.50	.07	<.05	.050	N	N	N	N
J1010910	36 58 50	94 51 14	.15	.03	.05	.015	N	N	N	N
J1010920	36 58 50	94 51 14	.20	.07	.05	.030	<10	N	N	N
J1010930	36 58 50	94 51 14	.50	3.00	.05	.030	<10	N	N	N
J1010940	36 58 50	94 51 14	.70	.02	<.05	.020	<10	N	N	N
J1010950	36 58 50	94 51 14	.70	.02	<.05	.020	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1010520	70	100	N	N	N	N	N	10	N	N	N	15
J1010530	100	100	<1.0	N	N	5	<10	15	N	<5	N	20
J1010540	50	70	N	N	N	N	N	5	N	<5	N	10
J1010550	70	50	N	N	N	N	N	<5	N	N	N	10
J1010560	50	30	N	N	N	N	N	5	N	<5	N	15
J1010570	50	70	N	N	N	N	N	7	N	N	N	7
J1010580	50	100	N	N	N	N	N	5	N	<5	N	10
J1010590	100	70	<1.0	N	N	N	<10	<5	N	N	N	10
J1010590	30	700	2.0	N	N	5	N	5	20	5	N	7
J1010600	50	100	N	N	N	N	N	<5	N	<5	N	15
J1010610	50	150	N	N	N	N	N	7	N	<5	N	20
J1010620	50	100	N	N	N	N	N	<5	N	N	N	7
J1010630	70	200	<1.0	N	N	N	<10	5	N	N	N	7
J1010640	50	150	N	N	N	N	N	<5	N	N	N	7
J1010650	70	50	N	N	N	N	N	N	N	<5	N	10
J1010660	50	50	<1.0	N	N	N	N	7	N	5	N	10
J1010670	100	150	1.5	N	N	7	30	30	20	20	N	30
J1010680	30	70	N	N	N	N	N	7	N	5	N	10
J1010690	100	100	N	N	N	N	N	<5	N	<5	N	<5
J1010700	70	70	N	N	N	N	N	<5	N	<5	N	5
J1010710	70	50	N	N	N	N	N	5	N	7	N	7
J1010720	70	70	<1.0	N	N	N	<10	5	N	5	N	10
J1010730	100	150	1.0	N	N	N	10	10	N	7	N	10
J1010740	50	50	<1.0	N	N	N	N	7	N	7	N	10
J1010750	50	50	<1.0	N	N	N	N	<5	N	N	N	5
J1010760	70	100	<1.0	N	N	N	N	7	N	<5	N	15
J1010770	70	70	N	N	N	N	N	N	N	N	N	7
J1010780	50	50	N	N	N	N	N	<5	N	N	N	<5
J1010790	70	70	N	N	N	N	N	<5	N	N	N	<5
J1010800	50	70	N	N	N	N	N	5	N	<5	N	30
J1010810	50	50	N	N	N	N	N	N	N	<5	N	7
J1010820	50	30	N	N	N	N	N	N	N	<5	N	7
J1010830	50	70	N	N	N	N	N	<5	N	5	N	10
J1010840	70	100	<1.0	N	N	N	N	<5	N	5	N	7
J1010850	70	70	N	N	N	N	N	N	N	<5	N	5
J1010860	50	70	N	N	N	N	N	7	N	15	N	5
J1010870	50	50	N	N	N	N	N	7	N	5	N	10
J1010880	50	50	N	N	N	N	N	<5	N	N	N	5
J1010890	70	50	N	N	N	N	N	<5	N	N	N	<5
J1010900	50	50	<1.0	N	N	N	N	5	N	N	N	5
J1010910	100	70	N	N	N	N	N	N	N	N	N	5
J1010920	70	50	N	N	N	N	N	<5	N	<5	N	10
J1010930	50	50	N	N	N	N	N	5	N	N	N	7
J1010940	50	50	N	N	N	N	N	<5	N	<5	N	15
J1010950	50	50	N	N	N	N	N	<5	N	N	N	5

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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 #
J1010520	N	N	N	N	N	10	<50	N	N	20	N	65
J1010530	20	N	N	N	N	10	<50	N	N	20	N	65
J1010540	N	N	N	N	N	N	<50	N	N	N	N	65
J1010550	N	N	N	N	N	N	<50	N	N	N	N	65
J1010560	N	N	N	N	N	N	<50	N	N	N	N	65
J1010570	N	N	N	N	N	<10	<50	N	N	15	N	65
J1010580	N	N	N	N	N	<10	<50	N	N	30	N	65
J1010590	N	N	N	N	N	10	<50	N	N	50	N	65
J1010590	30	N	<5	N	N	10	<50	15	N	200	N	65
J1010600	N	N	N	N	N	<10	<50	N	<200	30	N	65
J1010610	50	N	N	N	N	<10	<50	N	N	50	N	65
J1010620	N	N	N	N	N	10	<50	N	N	30	N	65
J1010630	N	N	N	N	N	15	<50	N	N	150	N	65
J1010640	N	N	N	N	N	<10	<50	N	N	20	N	65
J1010650	N	N	N	N	N	15	<50	N	N	15	N	65
J1010660	N	N	N	N	N	10	<50	N	N	15	N	65
J1010670	30	N	N	N	N	30	<50	<10	<200	70	N	65
J1010680	N	N	N	N	N	10	<50	N	N	30	N	66
J1010690	N	N	N	N	N	<10	<50	N	N	10	N	66
J1010700	N	N	N	N	N	<10	<50	N	N	10	N	66
J1010710	N	N	N	N	N	<10	<50	N	<200	10	N	66
J1010720	N	N	N	N	N	10	<50	N	N	30	N	66
J1010730	N	N	N	N	N	20	<50	N	<200	100	N	66
J1010740	N	N	N	N	N	10	<50	N	N	50	N	66
J1010750	N	N	N	N	N	<10	<50	N	N	15	N	66
J1010760	N	N	N	N	N	15	<50	N	N	20	N	66
J1010770	N	N	N	N	N	<10	<50	N	N	30	N	66
J1010780	N	N	N	N	N	<10	<50	N	N	20	N	66
J1010790	N	N	N	N	N	<10	<50	N	N	10	N	66
J1010800	N	N	N	N	N	10	<50	N	N	10	N	66
J1010810	N	N	N	N	N	<10	<50	N	N	N	N	66
J1010820	N	N	N	N	N	<10	<50	N	N	N	N	66
J1010830	N	N	N	N	N	10	<50	N	N	20	N	66
J1010840	N	N	N	N	N	15	<50	N	N	50	N	66
J1010850	N	N	N	N	N	<10	<50	N	N	20	N	66
J1010860	N	N	N	N	N	N	<50	N	<200	N	N	66
J1010870	N	N	N	N	N	<10	<50	N	<200	10	N	66
J1010880	N	N	N	N	N	10	<50	N	N	20	N	66
J1010890	20	N	N	N	N	10	<50	N	N	10	N	66
J1010900	N	N	N	N	N	10	<50	N	N	10	N	66
J1010910	N	N	N	N	N	<10	<50	N	N	N	N	66
J1010920	N	N	N	N	N	10	<50	N	N	15	N	67
J1010930	N	N	N	N	N	10	<50	N	N	10	N	67
J1010940	N	N	N	N	N	10	<50	N	N	N	N	67
J1010950	N	N	N	N	N	<10	<50	N	N	20	N	67

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1010960	36 58 50	94 51 14	.50	.02	<.05	.010	<10	N	N	N
J1010970	36 58 50	94 51 14	.05	.02	N	.007	<10	N	N	N
J1010980	36 58 50	94 51 14	<.05	<.02	N	.007	N	N	N	N
J1010990	36 58 50	94 51 14	.15	.02	<.05	.007	N	N	N	N
J1011000	36 58 50	94 51 14	.10	.02	N	.010	N	N	N	N
J1011010	36 58 50	94 51 14	.20	.03	N	.015	N	N	N	N
J1011020	36 58 50	94 51 14	.05	.02	<.05	.002	N	N	N	N
J1011030	36 58 50	94 51 14	.20	.05	.10	.003	N	N	N	N
J1011040	36 58 50	94 51 14	<.05	.02	N	.005	N	N	N	N
J1011050	36 58 50	94 51 14	<.05	.02	N	.003	N	N	N	N
J1011060	36 58 50	94 51 14	.05	.03	.05	.003	N	N	N	N
J1011070	36 58 50	94 51 14	.15	.03	.05	.007	N	N	N	N
J1011080	36 58 50	94 51 14	.15	.03	.05	.005	N	N	N	N
J1011090	36 58 50	94 51 14	.50	.02	N	.005	<10	N	N	N
J1011100	36 58 50	94 51 14	.10	.02	N	.002	N	N	N	N
J1011110	36 58 50	94 51 14	1.00	.02	<.05	.005	10	<.5	N	N
J1011120	36 58 50	94 51 14	.50	.05	.10	.003	N	N	N	N
J1011130	36 58 50	94 51 14	.05	.03	.05	.005	N	N	N	N
J1011140	36 58 50	94 51 14	<.05	.02	N	N	N	N	N	N
J1011150	36 58 50	94 51 14	.20	.03	N	.015	N	N	N	N
J1011160	36 58 50	94 51 14	<.05	.02	N	<.002	N	N	N	N
J1011170	36 58 50	94 51 14	.05	.02	.15	.002	N	N	N	N
J1011180	36 58 50	94 51 14	.05	.02	N	.002	N	N	N	N
J1011190	36 58 50	94 51 14	<.05	.02	<.05	<.002	N	N	N	N
J1011200	36 58 50	94 51 14	.10	.02	<.05	.005	N	N	N	N
J1011210	36 58 50	94 51 14	.05	.02	<.05	.005	N	N	N	N
J1011220	36 58 50	94 51 14	.15	.03	<.05	.020	N	N	N	N
J1011230	36 58 50	94 51 14	.10	.02	.05	.005	N	N	N	N
J1011240	36 58 50	94 51 14	.15	.02	<.05	.002	N	N	N	N
J1011250	36 58 50	94 51 14	.15	.10	.20	.007	N	N	N	N
J1011260	36 58 50	94 51 14	.05	.02	<.05	.002	N	N	N	N
J1011270	36 58 50	94 51 14	.20	.03	.05	.007	N	N	N	N
J1011280	36 58 50	94 51 14	2.00	.07	<.05	.070	300	N	N	N
J1011290	36 58 50	94 51 14	1.00	.10	.10	.050	100	N	N	N
J1011300	36 58 50	94 51 14	.10	.02	<.05	.005	N	N	N	N
J1011310	36 58 50	94 51 14	.70	.02	<.05	.100	<10	N	N	N
J1011320	36 58 50	94 51 14	1.50	.50	.70	.100	15	<.5	N	N
J1011330	36 58 50	94 51 14	1.00	.05	.05	.200	10	<.5	N	N
J1011340	36 58 50	94 51 14	.20	.02	<.05	.007	N	N	N	N
J1011350	36 58 50	94 51 14	.15	.03	<.05	.007	N	N	N	N
J1011360	36 58 50	94 51 14	.05	.05	.05	.005	N	N	N	N
J1011365	36 58 50	94 51 14	.10	.02	<.05	.100	N	N	N	N
J1011460	36 58 50	94 51 14	.70	.15	N	.500	10	<.5	N	N
J1011480	36 58 50	94 51 14	5.00	.15	.15	.150	50	1.5	N	N
J1011490	36 58 50	94 51 14	.15	.50	.50	.050	10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1010960	30	70	N	N	N	N	N	<5	N	<5	N	10
J1010970	10	50	N	N	N	N	N	N	N	N	N	<5
J1010980	10	50	N	N	N	N	N	N	N	N	N	N
J1010990	20	100	N	N	N	N	N	N	N	N	N	<5
J1011000	30	70	N	N	N	N	N	N	N	N	N	<5
J1011010	30	70	N	N	N	N	N	<5	N	N	N	7
J1011020	30	70	N	N	N	N	N	N	N	N	N	<5
J1011030	50	50	N	N	N	N	N	<5	N	N	N	<5
J1011040	30	20	N	N	N	N	N	N	N	N	N	N
J1011050	10	20	N	N	N	N	N	N	N	N	N	N
J1011060	15	20	N	N	N	N	N	N	N	N	N	N
J1011070	15	30	N	N	N	N	N	<5	N	N	N	5
J1011080	15	30	N	N	N	N	N	10	N	N	N	<5
J1011090	15	150	N	N	N	N	N	5	N	<5	N	5
J1011100	15	50	N	N	N	N	N	N	N	N	N	<5
J1011110	20	70	N	N	N	N	N	10	N	5	N	7
J1011120	30	70	N	N	N	N	N	<5	N	<5	N	<5
J1011130	50	70	N	N	N	N	N	N	N	N	N	N
J1011140	30	20	N	N	N	N	N	N	N	N	N	N
J1011150	50	30	N	N	N	N	N	7	N	<5	N	10
J1011160	30	20	N	N	N	N	N	N	N	N	N	N
J1011170	20	30	N	N	N	N	N	N	N	N	N	N
J1011180	30	50	N	N	N	N	N	70	N	N	N	<5
J1011190	30	30	N	N	N	N	N	7	N	N	N	<5
J1011200	20	70	N	N	N	N	N	<5	N	N	N	20
J1011210	30	70	N	N	N	N	N	N	N	N	N	N
J1011220	50	70	N	N	N	N	N	7	N	<5	N	10
J1011230	20	70	N	N	N	N	N	N	N	N	N	N
J1011240	30	30	N	N	N	N	N	N	N	N	N	N
J1011250	30	100	N	N	N	N	N	30	N	<5	N	<5
J1011260	30	50	N	N	N	N	N	7	N	N	N	N
J1011270	20	70	N	N	N	N	N	5	N	N	N	<5
J1011280	50	100	<1.0	N	N	N	10	100	N	N	N	15
J1011290	50	70	<1.0	N	N	N	<10	20	N	N	N	10
J1011300	30	30	N	N	N	N	N	5	N	N	N	<5
J1011310	70	50	N	N	N	N	N	10	N	N	N	5
J1011320	50	50	N	N	N	5	N	20	N	<5	N	20
J1011330	30	100	N	N	N	N	N	15	N	<5	N	15
J1011340	15	50	N	N	N	N	N	<5	N	N	N	<5
J1011350	50	70	N	N	N	N	N	<5	N	N	N	<5
J1011360	70	20	N	N	N	N	N	N	N	N	N	N
J1011365	50	20	N	N	N	N	N	N	N	N	N	10
J1011460	30	700	2.0	N	N	N	N	7	N	<5	<20	10
J1011480	30	500	<1.0	N	N	15	N	50	20	10	N	50
J1011490	70	100	N	N	N	N	N	7	N	N	N	10

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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 #
J1010960	N	N	N	N	N	<10	<50	N	N	70	N	67
J1010970	N	N	N	N	N	N	<50	N	N	30	N	67
J1010980	N	N	N	N	N	N	<50	N	N	20	N	67
J1010990	N	N	N	N	N	<10	<50	N	N	20	N	67
J1011000	N	N	N	N	N	N	<50	N	N	10	N	67
J1011010	N	N	N	N	N	<10	<50	N	N	20	N	67
J1011020	N	N	N	N	N	N	<50	N	N	N	N	67
J1011030	N	N	N	N	N	N	<50	N	N	10	N	67
J1011040	N	N	N	N	N	N	<50	N	N	20	N	67
J1011050	N	N	N	N	N	N	<50	N	N	15	N	67
J1011060	N	N	N	N	N	<10	<50	N	N	20	N	67
J1011070	N	N	N	N	N	N	<50	N	N	70	N	68
J1011080	N	N	N	N	N	N	<50	N	N	50	N	68
J1011090	N	N	N	N	N	N	<50	N	N	30	N	68
J1011100	N	N	N	N	N	N	<50	N	N	10	N	68
J1011110	<10	N	N	N	N	<10	<50	N	N	20	N	68
J1011120	N	N	N	N	N	<10	<50	N	N	30	N	68
J1011130	N	N	N	N	N	N	<50	N	N	N	N	68
J1011140	N	N	N	N	N	N	<50	N	N	N	N	68
J1011150	N	N	N	N	N	10	<50	N	N	N	N	68
J1011160	N	N	N	N	N	N	<50	N	N	N	N	68
J1011170	N	N	N	N	N	N	<50	N	N	N	N	68
J1011180	N	N	N	N	N	N	<50	N	N	N	N	68
J1011190	N	N	N	N	N	N	<50	N	N	N	N	68
J1011200	N	N	N	N	N	N	<50	N	N	N	N	68
J1011210	N	N	N	N	N	N	<50	N	N	N	N	68
J1011220	N	N	N	N	N	20	<50	N	N	N	N	68
J1011230	N	N	N	N	N	N	<50	N	N	N	N	68
J1011240	N	N	N	N	N	N	<50	N	N	N	N	68
J1011250	N	N	N	N	N	<10	<50	N	N	N	N	68
J1011260	N	N	N	N	N	N	<50	N	N	N	N	68
J1011270	N	N	N	N	N	N	<50	N	N	N	N	68
J1011280	30	N	N	N	N	20	<50	N	<200	30	N	68
J1011290	N	N	N	N	N	10	<50	N	<200	50	N	68
J1011300	N	N	N	N	N	N	<50	N	N	N	N	68
J1011310	N	N	N	N	N	N	<50	N	N	N	N	68
J1011320	20	N	N	N	N	<10	<50	N	N	10	N	68
J1011330	20	N	N	N	N	<10	<50	N	N	10	N	68
J1011340	N	N	N	N	N	N	<50	N	N	30	N	69
J1011350	N	N	N	N	N	N	<50	N	N	15	N	69
J1011360	N	N	N	N	N	N	<50	N	N	N	N	69
J1011365	N	N	N	N	N	N	<50	N	N	10	N	81
J1011460	30	N	N	N	N	10	<50	15	<200	>1,000	N	83
J1011480	300	N	N	N	N	<10	<50	N	N	150	N	83
J1011490	N	N	N	N	N	N	<50	N	N	70	N	83

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1011500	36 58 50	94 51 14	1.00	.70	.30	.150	15	<.5	N	N
J1011510	36 58 50	94 51 14	2.00	1.00	.30	.500	20	.5	N	N
J1011520	36 58 50	94 51 14	2.00	1.00	.50	.300	20	.5	N	N
J1011530	36 58 50	94 51 14	2.00	1.00	.70	.300	150	<.5	N	N
J1011540	36 58 50	94 51 14	3.00	1.00	.50	.300	30	.5	N	N
J1011550	36 58 50	94 51 14	1.50	.70	.20	.300	20	N	N	N
J1011560	36 58 50	94 51 14	1.50	1.00	.50	.500	30	N	N	N
J1011570	36 58 50	94 51 14	1.50	.50	.30	.300	20	N	N	N
J1011580	36 58 50	94 51 14	1.00	.30	.15	.300	15	N	N	N
J1011600	36 58 50	94 51 14	1.00	.50	.15	.300	15	N	N	N
J1011610	36 58 50	94 51 14	1.00	.30	.15	.300	15	N	N	N
J1011620	36 58 50	94 51 14	.50	.30	.15	.300	15	N	N	N
J1011630	36 58 50	94 51 14	.70	.50	.15	.300	15	N	N	N
J1011640	36 58 50	94 51 14	.30	.10	.10	.200	10	N	N	N
J1011650	36 58 50	94 51 14	.15	.05	.05	.150	<10	N	N	N
J1011660	36 58 50	94 51 14	.50	.15	.10	.300	10	N	N	N
J1011670	36 58 50	94 51 14	.50	.20	.07	.300	10	N	N	N
J1011680	36 58 50	94 51 14	.20	.07	<.05	.300	<10	N	N	N
J1011690	36 58 50	94 51 14	.10	.03	N	.100	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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
J1011500	100	200	1.0	N	N	<5	<10	15	N	<5	N	30
J1011510	100	300	5.0	N	N	15	N	30	30	7	<20	30
J1011520	70	500	3.0	N	N	15	N	30	100	5	N	30
J1011530	70	300	5.0	N	N	15	N	30	50	10	N	30
J1011540	50	500	3.0	N	N	7	N	30	70	7	N	20
J1011550	70	300	3.0	N	N	5	N	15	30	15	<20	15
J1011560	50	500	3.0	N	N	7	N	10	30	10	<20	10
J1011570	50	700	3.0	N	N	7	N	7	30	10	N	10
J1011580	50	700	3.0	N	N	7	N	7	20	5	N	7
J1011600	50	500	2.0	N	N	7	N	7	30	7	N	10
J1011610	50	700	5.0	N	N	<5	N	5	20	<5	<20	<5
J1011620	30	500	1.5	N	N	<5	N	<5	N	N	N	<5
J1011630	30	500	2.0	N	N	<5	N	<5	20	<5	N	<5
J1011640	20	300	1.0	N	N	<5	N	N	N	5	N	10
J1011650	15	500	<1.0	N	N	N	N	N	N	<5	N	5
J1011660	20	700	1.0	N	N	N	N	7	N	5	<20	7
J1011670	50	700	1.5	N	N	<5	N	10	N	7	N	15
J1011680	20	700	1.0	N	N	N	N	<5	N	5	<20	15
J1011690	30	300	1.0	N	N	N	N	5	20	N	N	<5

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 101, 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 #
J1011500	50	N	N	N	N	30	<50	N	N	100	N	83
J1011510	70	N	<5	N	N	50	<50	15	N	150	N	71
J1011520	50	N	<5	N	N	30	<50	20	N	100	N	71
J1011530	100	N	<5	N	N	30	<50	20	N	150	N	71
J1011540	70	N	<5	N	N	30	<50	30	N	150	N	71
J1011550	50	N	<5	N	N	20	<50	20	N	200	N	71
J1011560	50	N	<5	N	N	30	<50	30	N	300	N	71
J1011570	30	N	N	N	N	20	<50	20	N	300	N	71
J1011580	30	N	N	N	N	20	<50	20	N	200	N	71
J1011600	50	N	N	N	N	15	<50	30	N	500	N	71
J1011610	30	N	N	N	N	10	<50	20	N	700	N	71
J1011620	20	N	N	N	N	<10	<50	10	N	500	N	89
J1011630	20	N	N	N	N	<10	<50	10	N	300	N	89
J1011640	15	N	N	N	N	10	<50	N	N	150	N	89
J1011650	15	N	N	N	N	<10	<50	N	N	150	N	89
J1011660	20	N	N	N	N	10	<50	10	N	300	N	89
J1011670	30	N	N	N	N	10	<50	10	N	300	N	89
J1011680	10	N	N	N	N	10	<50	15	N	1,000	N	89
J1011690	N	N	N	N	N	<10	<50	N	N	300	N	85

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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
J1020260	36 59 15	94 51 14	.05	.02	N	.002	N	N	N	N
J1020270	36 59 15	94 51 14	.05	.02	N	.007	N	N	N	N
J1020280	36 59 15	94 51 14	.15	.02	.05	.015	<10	N	N	N
J1020290	36 59 15	94 51 14	.30	.05	.10	.050	15	N	N	N
J1020300	36 59 15	94 51 14	3.00	.30	.20	.300	50	N	N	N
J1020300	36 59 15	94 51 14	.10	.02	<.05	.010	N	N	N	N
J1020310	36 59 15	94 51 14	.30	.07	.15	.070	10	N	N	N
J1020320	36 59 15	94 51 14	.15	.02	.10	.015	<10	N	N	N
J1020330	36 59 15	94 51 14	.20	.10	.20	.050	15	N	N	N
J1020340	36 59 15	94 51 14	.15	.05	.15	.030	10	N	N	N
J1020350	36 59 15	94 51 14	.30	.07	.10	.030	15	N	N	N
J1020360	36 59 15	94 51 14	3.00	.15	.05	.070	100	N	N	N
J1020370	36 59 15	94 51 14	5.00	.50	.07	.200	150	N	N	N
J1020380	36 59 15	94 51 14	1.00	.50	.70	.030	30	N	N	N
J1020380	36 59 15	94 51 14	.20	.10	.15	.030	<10	N	N	N
J1020390	36 59 15	94 51 14	.70	.50	.50	.070	15	N	N	N
J1020400	36 59 15	94 51 14	2.00	.30	.30	.070	20	N	N	N
J1020410	36 59 15	94 51 14	1.00	.20	.30	.070	15	N	N	N
J1020420	36 59 15	94 51 14	1.00	.20	.15	.070	20	<.5	N	N
J1020430	36 59 15	94 51 14	1.50	.15	.15	.050	20	<.5	N	N
J1020440	36 59 15	94 51 14	3.00	.50	.10	.150	100	<.5	N	N
J1020450	36 59 15	94 51 14	.70	.50	.70	.050	20	N	N	N
J1020460	36 59 15	94 51 14	2.00	.20	.20	.100	20	N	N	N
J1020470	36 59 15	94 51 14	1.50	.10	.05	.070	15	<.5	N	N
J1020480	36 59 15	94 51 14	.70	.15	.15	.020	N	N	N	N
J1020490	36 59 15	94 51 14	1.00	.20	.10	.070	15	N	N	N
J1020500	36 59 15	94 51 14	3.00	.15	.15	.050	30	<.5	N	N
J1020510	36 59 15	94 51 14	.70	.10	.15	.010	<10	N	N	N
J1020520	36 59 15	94 51 14	1.00	.15	.15	.030	10	N	N	N
J1020530	36 59 15	94 51 14	.20	.07	<.05	.030	N	N	N	N
J1020540	36 59 15	94 51 14	.30	.05	<.05	.030	<10	N	N	N
J1020550	36 59 15	94 51 14	1.50	.15	.30	.050	15	N	N	N
J1020560	36 59 15	94 51 14	.20	.15	.20	.050	<10	N	N	N
J1020570	36 59 15	94 51 14	1.50	.20	.20	.100	10	<.5	N	N
J1020580	36 59 15	94 51 14	.15	.07	.05	.010	<10	N	N	N
J1020590	36 59 15	94 51 14	.20	.05	.10	.007	N	N	N	N
J1020600	36 59 15	94 51 14	.30	.10	.10	.030	<10	N	N	N
J1020610	36 59 15	94 51 14	.70	.10	.05	.050	10	N	N	N
J1020620	36 59 15	94 51 14	.15	.07	.05	.030	<10	N	N	N
J1020630	36 59 15	94 51 14	.15	.10	.05	.030	N	N	N	N
J1020640	36 59 15	94 51 14	.15	.05	<.05	.020	N	N	N	N
J1020650	36 59 15	94 51 14	.10	.07	.05	.020	N	N	N	N
J1020660	36 59 15	94 51 14	.20	.05	<.05	.030	N	N	N	N
J1020670	36 59 15	94 51 14	.50	.15	.10	.050	10	N	N	N
J1020690	36 59 15	94 51 14	.70	1.00	1.00	.150	20	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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
J1020260	30	30	N	N	N	N	N	N	N	N	N	N
J1020270	70	<20	N	N	N	N	N	N	N	N	N	N
J1020280	50	20	N	N	N	N	N	N	N	<5	N	7
J1020290	50	20	<1	N	N	N	N	N	N	<5	N	5
J1020300	100	150	<1	N	N	70	30	150	N	N	N	500
J1020300	30	<20	N	N	N	N	N	N	N	<5	N	5
J1020310	70	30	<1	N	N	N	<10	N	N	<5	N	10
J1020320	50	20	N	N	N	N	N	N	N	<5	N	<5
J1020330	50	30	<1	N	N	N	<10	N	N	N	N	7
J1020340	30	30	<1	N	N	N	N	N	N	N	N	<5
J1020350	30	30	<1	N	N	N	N	N	N	N	N	5
J1020360	70	20	1	N	N	70	<10	15	N	10	N	100
J1020370	100	70	3	N	N	7	50	15	20	15	N	30
J1020380	70	50	<1	N	N	<5	N	5	N	N	N	20
J1020380	70	70	N	N	N	N	N	<5	N	5	N	5
J1020390	70	70	<1	N	N	<5	N	<5	N	N	N	10
J1020400	70	50	1	N	N	N	<10	7	N	<5	N	15
J1020410	70	150	<1	N	N	N	<10	5	N	<5	N	10
J1020420	70	100	1	N	N	N	<10	10	N	<5	N	15
J1020430	50	100	<1	N	150	N	10	15	N	<5	N	20
J1020440	150	150	2	N	N	7	50	15	N	5	N	30
J1020450	50	100	N	N	50	N	N	5	N	N	N	5
J1020460	70	150	<1	N	N	5	<10	10	N	5	N	20
J1020470	50	70	<1	N	N	N	N	10	N	5	N	15
J1020480	50	70	N	N	N	N	N	5	N	<5	N	7
J1020490	70	70	1	N	N	N	10	10	N	<5	N	15
J1020500	50	70	<1	N	N	N	<10	15	N	10	N	20
J1020510	50	50	N	N	N	N	N	5	N	N	N	5
J1020520	50	100	N	N	N	N	N	5	N	<5	N	7
J1020530	30	150	N	N	N	N	<10	N	N	N	N	<5
J1020540	30	200	N	N	N	N	N	N	N	N	N	<5
J1020550	50	100	<1	N	N	N	<10	15	N	5	N	15
J1020560	70	100	<1	N	N	N	<10	30	N	N	N	5
J1020570	100	200	1	N	N	N	10	15	N	<5	N	15
J1020580	50	70	N	N	N	N	N	N	N	N	N	N
J1020590	70	70	N	N	N	N	N	N	N	N	N	<5
J1020600	70	50	<1	N	N	N	N	<5	N	<5	N	<5
J1020610	100	70	<1	N	N	N	N	5	N	<5	N	7
J1020620	50	150	<1	N	N	N	N	<5	N	N	N	<5
J1020630	70	50	<1	N	N	N	N	<5	N	N	N	<5
J1020640	30	50	N	N	N	N	N	<5	N	N	N	<5
J1020650	70	70	N	N	N	N	N	N	N	N	N	<5
J1020660	50	70	N	N	N	N	N	<5	N	N	N	<5
J1020670	70	200	<1	N	N	N	N	5	N	5	N	5
J1020690	50	100	1	N	N	N	10	15	N	<5	N	15

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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 #
J1020260	N	N	N	N	N	N	<50	N	<200	N	N	40
J1020270	N	N	N	N	N	N	<50	N	<200	N	N	40
J1020280	N	N	N	N	N	<10	<50	N	<200	N	N	40
J1020290	N	N	N	N	N	20	<50	N	200	20	N	40
J1020300	<10	N	5	N	N	70	N	N	N	70	N	40
J1020300	N	N	N	N	N	N	<50	N	N	N	N	40
J1020310	N	N	N	N	N	20	<50	N	N	20	N	40
J1020320	N	N	N	N	N	<10	<50	N	N	N	N	40
J1020330	N	N	N	N	N	30	<50	N	N	15	N	40
J1020340	N	N	N	N	N	15	<50	N	N	10	N	40
J1020350	N	N	N	N	N	10	<50	N	N	<10	N	40
J1020360	N	N	N	N	N	20	<50	N	300	30	N	40
J1020370	20	N	5	N	N	70	<50	15	<200	150	N	40
J1020380	50	N	N	N	N	10	<50	N	<200	15	N	65
J1020380	N	N	N	N	N	<10	<50	N	<200	30	N	65
J1020390	N	N	N	N	N	20	<50	N	N	30	N	65
J1020400	N	N	N	N	N	30	<50	N	N	30	N	65
J1020410	N	N	N	N	N	20	<50	N	N	70	N	65
J1020420	10	N	<5	N	N	30	<50	N	3,000	150	N	65
J1020430	<10	N	N	N	N	10	<50	N	>10,000	30	N	65
J1020440	500	N	N	N	N	70	<50	N	500	70	N	65
J1020450	10	N	N	N	N	10	<50	N	3,000	50	N	65
J1020460	N	N	N	N	N	20	<50	N	500	50	N	65
J1020470	1,000	N	N	N	N	10	<50	N	N	20	N	65
J1020480	300	N	N	N	N	<10	<50	N	N	<10	N	65
J1020490	200	N	N	N	N	20	<50	N	N	30	N	65
J1020500	150	N	N	N	N	10	<50	N	<200	20	N	65
J1020510	N	N	N	N	N	N	<50	N	N	30	N	65
J1020520	N	N	N	N	N	N	<50	N	<200	70	N	65
J1020530	N	N	N	N	N	N	<50	N	N	100	N	65
J1020540	N	N	N	N	N	N	<50	N	N	100	N	65
J1020550	N	N	N	N	N	10	<50	N	<200	50	N	65
J1020560	N	N	N	N	N	15	<50	N	N	30	N	65
J1020570	<10	N	N	N	N	30	<50	N	N	100	N	65
J1020580	N	N	N	N	N	N	<50	N	N	N	N	65
J1020590	N	N	N	N	N	N	<50	N	<200	N	N	65
J1020600	N	N	N	N	N	10	<50	N	N	10	N	65
J1020610	N	N	N	N	N	10	<50	N	N	15	N	65
J1020620	N	N	N	N	N	<10	<50	N	N	10	N	66
J1020630	N	N	N	N	N	<10	<50	N	N	10	N	66
J1020640	N	N	N	N	N	N	<50	N	N	15	N	66
J1020650	N	N	N	N	N	N	<50	N	N	15	N	66
J1020660	N	N	N	N	N	<10	<50	N	300	20	N	66
J1020670	N	N	N	N	N	10	<50	N	200	30	N	66
J1020690	10	N	N	N	N	30	<50	N	<200	50	N	66

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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
J1020700	36 59 15	94 51 14	.15	.02	<.05	.020	N	N	N	N
J1020710	36 59 15	94 51 14	.20	.05	<.05	.030	<10	N	N	N
J1020720	36 59 15	94 51 14	.20	.03	<.05	.020	N	N	N	N
J1020730	36 59 15	94 51 14	.15	.15	.20	.015	N	N	N	N
J1020740	36 59 15	94 51 14	.15	.05	<.05	.020	N	N	N	N
J1020750	36 59 15	94 51 14	.10	.10	.10	.020	N	N	N	N
J1020760	36 59 15	94 51 14	.10	.15	.30	.015	N	N	N	N
J1020770	36 59 15	94 51 14	.20	.10	<.05	.030	<10	N	N	N
J1020780	36 59 15	94 51 14	.50	.20	.30	.050	10	N	N	N
J1020790	36 59 15	94 51 14	.15	.05	<.05	.020	N	N	N	N
J1020800	36 59 15	94 51 14	.70	.20	.20	.050	10	N	N	N
J1020810	36 59 15	94 51 14	.30	.07	<.05	.030	<10	N	N	N
J1020820	36 59 15	94 51 14	.50	.15	.15	.070	10	N	N	N
J1020830	36 59 15	94 51 14	.70	.10	.05	.050	<10	N	N	N
J1020840	36 59 15	94 51 14	.20	.07	.10	.030	<10	N	N	N
J1020850	36 59 15	94 51 14	.15	.02	.05	.020	N	N	N	N
J1020860	36 59 15	94 51 14	15.00	.10	.15	.030	<10	N	N	N
J1020870	36 59 15	94 51 14	.30	.07	.07	.050	<10	N	N	N
J1020880	36 59 15	94 51 14	.10	.05	.05	.020	<10	N	N	N
J1020890	36 59 15	94 51 14	.50	.07	.10	.030	<10	N	N	N
J1020900	36 59 15	94 51 14	.20	.02	<.05	.020	N	N	N	N
J1020910	36 59 15	94 51 14	.30	.05	.05	.030	<10	N	N	N
J1020920	36 59 15	94 51 14	.05	<.02	N	.007	<10	N	N	N
J1020930	36 59 15	94 51 14	.10	<.02	N	.050	<10	N	N	N
J1020940	36 59 15	94 51 14	.30	.03	<.05	.030	<10	N	N	N
J1020950	36 59 15	94 51 14	1.00	.05	N	.050	10	<.5	N	N
J1020960	36 59 15	94 51 14	.05	.02	.05	.003	N	N	N	N
J1020970	36 59 15	94 51 14	.05	.03	.05	.002	N	N	N	N
J1020980	36 59 15	94 51 14	.15	.02	<.05	.010	<10	N	N	N
J1020990	36 59 15	94 51 14	.05	<.02	N	.003	N	N	N	N
J102100	36 59 15	94 51 14	.05	<.02	N	.005	<10	N	N	N
J1021000	36 59 15	94 51 14	.05	<.02	N	.005	<10	N	N	N
J1021010	36 59 15	94 51 14	.50	.05	.15	.007	<10	N	N	N
J1021020	36 59 15	94 51 14	.30	<.02	<.05	.007	10	N	N	N
J1021030	36 59 15	94 51 14	.70	.05	<.05	.030	15	<.5	N	N
J1021040	36 59 15	94 51 14	.10	.02	<.05	.010	<10	N	N	N
J1021050	36 59 15	94 51 14	.05	<.02	N	.007	<10	N	N	N
J1021070	36 59 15	94 51 14	.15	.02	<.05	.007	<10	N	N	N
J1021080	36 59 15	94 51 14	.10	.02	.05	.007	<10	N	N	N
J1021090	36 59 15	94 51 14	.20	.02	<.05	.007	<10	N	N	N
J1021100	36 59 15	94 51 14	.10	.02	.05	.005	N	N	N	N
J1021110	36 59 15	94 51 14	.20	<.02	<.05	.007	N	N	N	N
J1021120	36 59 15	94 51 14	.70	.02	.05	.150	10	N	N	N
J1021130	36 59 15	94 51 14	.20	.03	.05	.150	<10	N	N	N
J1021140	36 59 15	94 51 14	.10	.02	<.05	.002	<10	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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
J1020700	20	70	N	N	N	N	N	N	N	N	N	N
J1020710	30	70	N	N	N	N	N	<5	N	N	N	<5
J1020720	30	50	N	N	N	N	N	<5	N	N	N	<5
J1020730	50	50	N	N	N	N	N	N	N	N	N	N
J1020740	30	30	N	N	N	N	N	<5	N	N	N	<5
J1020750	50	50	N	N	N	N	N	N	N	N	N	N
J1020760	50	70	N	N	N	N	N	N	N	N	N	N
J1020770	50	70	N	N	N	N	N	<5	N	N	N	<5
J1020780	70	70	N	N	N	N	<10	5	N	7	N	5
J1020790	30	50	N	N	N	N	N	<5	N	N	N	N
J1020800	50	70	N	N	N	N	<10	5	N	N	N	7
J1020810	50	50	N	N	N	N	N	5	N	N	N	5
J1020820	70	70	N	N	N	N	<10	5	N	N	N	5
J1020830	70	50	N	N	N	N	N	5	N	N	N	<5
J1020840	70	50	N	N	N	N	N	5	N	N	N	<5
J1020850	50	50	N	N	N	N	N	N	N	N	N	5
J1020860	50	50	N	N	N	N	N	<5	N	<5	N	7
J1020870	30	50	N	N	N	N	<10	<5	N	<5	N	5
J1020880	30	70	N	N	N	N	N	N	N	<5	N	N
J1020890	20	70	N	N	N	N	N	5	N	<5	N	<5
J1020900	30	20	N	N	N	N	N	<5	N	N	N	<5
J1020910	30	50	<1	N	N	N	N	5	N	N	N	7
J1020920	20	30	N	N	N	N	N	N	N	N	N	N
J1020930	20	50	N	N	N	N	N	N	N	N	N	N
J1020940	30	50	N	N	N	N	N	<5	N	N	N	5
J1020950	20	50	<1	N	N	<5	N	7	N	5	N	30
J1020960	20	50	N	N	N	N	N	N	N	N	N	N
J1020970	20	50	N	N	N	N	N	N	N	N	N	N
J1020980	15	50	N	N	N	N	N	<5	N	N	N	<5
J1020990	10	20	N	N	N	N	N	N	N	N	N	N
J102100	15	50	N	N	N	N	N	N	N	N	N	N
J1021000	10	30	N	N	N	N	N	N	N	N	N	N
J1021010	10	30	N	N	N	N	N	<5	N	N	N	<5
J1021020	10	20	N	N	N	N	N	<5	N	N	N	<5
J1021030	30	50	N	N	N	N	N	7	N	<5	N	5
J1021040	20	30	N	N	N	N	N	<5	N	N	N	<5
J1021050	15	30	N	N	N	N	N	N	N	N	N	N
J1021070	30	50	N	N	N	N	N	N	N	N	N	N
J1021080	20	100	N	N	N	N	N	N	N	N	N	N
J1021090	20	50	N	N	N	N	N	5	N	N	N	<5
J1021100	20	30	N	N	N	N	N	5	N	N	N	N
J1021110	20	50	N	N	N	N	N	15	N	N	N	N
J1021120	20	50	N	N	N	N	N	150	N	N	N	5
J1021130	30	50	N	N	N	N	N	5	N	N	N	<5
J1021140	30	30	N	N	N	N	N	N	N	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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 #
J1020700	N	N	N	N	N	N	<50	N	N	20	N	66
J1020710	N	N	N	N	N	<10	<50	N	N	30	N	66
J1020720	30	N	N	N	N	N	<50	N	N	10	N	66
J1020730	N	N	N	N	N	<10	<50	N	N	10	N	66
J1020740	N	N	N	N	N	<10	<50	N	N	10	N	66
J1020750	N	N	N	N	N	<10	<50	N	N	N	N	66
J1020760	N	N	N	N	N	<10	<50	N	N	<10	N	66
J1020770	N	N	N	N	N	10	<50	N	N	15	N	66
J1020780	N	N	N	N	N	10	<50	N	N	20	N	66
J1020790	N	N	N	N	N	<10	<50	N	N	<10	N	66
J1020800	N	N	N	N	N	10	<50	N	N	10	N	66
J1020810	N	N	N	N	N	10	<50	N	N	10	N	66
J1020820	N	N	N	N	N	10	<50	N	N	10	N	66
J1020830	N	N	N	N	N	10	<50	N	N	15	N	66
J1020840	N	N	N	N	N	<10	<50	N	200	10	N	66
J1020850	N	N	N	N	N	<10	<50	N	N	N	N	66
J1020860	N	N	N	N	N	<10	<50	N	N	<10	N	67
J1020870	N	N	N	N	N	10	<50	N	N	10	N	67
J1020880	N	N	N	N	N	N	<50	N	N	15	N	67
J1020890	N	N	N	N	N	N	<50	N	N	20	N	67
J1020900	N	N	N	N	N	N	<50	N	N	<10	N	67
J1020910	N	N	N	N	N	10	<50	N	N	20	N	67
J1020920	N	N	N	N	N	N	<50	N	N	30	N	67
J1020930	N	N	N	N	N	N	<50	N	N	50	N	67
J1020940	N	N	N	N	N	<10	<50	N	<200	20	N	67
J1020950	<10	N	N	N	N	15	<50	N	700	30	N	67
J1020960	N	N	N	N	N	N	<50	N	N	10	N	67
J1020970	N	N	N	N	N	N	<50	N	N	<10	N	67
J1020980	N	N	N	N	N	N	<50	N	N	30	N	67
J1020990	N	N	N	N	N	N	<50	N	N	50	N	67
J102100	N	N	N	N	N	N	<50	N	N	20	N	67
J1021000	N	N	N	N	N	N	<50	N	N	50	N	67
J1021010	N	N	N	N	N	N	<50	N	N	70	N	68
J1021020	N	N	N	N	N	N	<50	N	N	20	N	68
J1021030	<10	N	N	N	N	<10	<50	N	N	70	N	68
J1021040	N	N	N	N	N	N	<50	N	N	10	N	68
J1021050	N	N	N	N	N	N	<50	N	N	20	N	68
J1021070	N	N	N	N	N	N	<50	N	N	30	N	68
J1021080	N	N	N	N	N	N	<50	N	N	N	N	68
J1021090	N	N	N	N	N	<10	<50	N	N	N	N	68
J1021100	N	N	N	N	N	N	<50	N	N	N	N	68
J1021110	N	N	N	N	N	N	<50	N	N	N	N	68
J1021120	N	N	N	N	N	<10	<50	N	N	<10	N	68
J1021130	N	N	N	N	N	<10	<50	N	N	<10	N	68
J1021140	N	N	N	N	N	N	<50	N	N	N	N	68

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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		
J1021150	36 59 15	94 51 14	.15	<.02	<.05	.005	N	N	N	N		
J1021160	36 59 15	94 51 14	.50	.02	<.05	.300	N	N	N	N		
J1021170	36 59 15	94 51 14	.20	<.02	<.05	.007	N	N	N	N		
J1021180	36 59 15	94 51 14	.15	.02	.05	.010	N	N	N	N		
J1021190	36 59 15	94 51 14	.10	.02	.05	.007	N	N	N	N		
J1021200	36 59 15	94 51 14	.10	<.02	<.05	.005	N	N	N	N		
J1021210	36 59 15	94 51 14	.20	.02	.05	.015	N	N	N	N		
J1021220	36 59 15	94 51 14	.50	<.02	.05	.010	N	N	N	N		
J1021230	36 59 15	94 51 14	N									
J1021311	36 59 15	94 51 14	.70	.07	.10	.015	10	N	N	N		
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
J1021150	30	30	N	N	N	N	N	N	N	N	N	N
J1021160	30	50	N	N	N	N	N	10	N	<5	N	15
J1021170	30	30	N	N	N	N	N	<5	N	<5	N	5
J1021180	30	50	N	N	N	N	N	N	N	<5	N	N
J1021190	50	70	N	N	N	N	N	N	N	<5	N	<5
J1021200	30	50	N	N	N	N	N	N	N	N	N	<5
J1021210	50	70	N	N	N	N	N	<5	N	N	N	<5
J1021220	30	70	N	N	N	N	N	300	N	N	N	5
J1021230	50	70	N	N	N	N	N	100	N	N	N	<5
J1021240	30	50	N	N	N	N	N	150	N	<5	N	10
J1021250	30	30	N	N	N	N	N	50	N	7	N	7
J1021260	50	50	N	N	N	N	N	20	N	5	N	5
J1021270	50	30	N	N	N	N	N	15	N	N	N	N
J1021280	20	70	N	N	N	N	N	15	N	N	N	N
J1021290	10	30	N	N	N	N	N	10	N	N	N	<5
J1021300	50	30	N	N	N	N	N	7	N	N	N	<5
J1021311	50	50	N	N	N	N	N	100	N	N	N	5

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 102, 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 #
J1021150	N	N	N	N	N	N	<50	N	N	N	N	68
J1021160	N	N	N	N	N	10	<50	N	N	N	N	68
J1021170	N	N	N	N	N	N	<50	N	N	N	N	68
J1021180	N	N	N	N	N	<10	<50	N	N	N	N	68
J1021190	N	N	N	N	N	10	<50	N	N	N	N	68
J102120	68											
J1021240	20	N	N	N	N	<10	<50	N	500	N	N	68
J1021250	N	N	N	N	N	N	<50	N	<200	N	N	68
J1021260	N	N	N	N	N	N	<50	N	<200	N	N	68
J1021270	N	N	N	N	N	N	<50	N	N	N	N	68
J1021280	N	N	N	N	N	N	<50	N	N	30	N	69
J1021290	N	N	N	N	N	N	<50	N	N	150	N	69
J1021300	N	N	N	N	N	N	<50	N	N	10	N	69
J1021311	N	N	N	N	N	N	<50	N	N	30	N	81