

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

**Spectrographic analyses of insoluble-residue samples within and
adjacent to the Joplin 1° x 2° quadrangle, Missouri and Kansas:
Drill hole nos. 103, 104, and 105**

By

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Open-File Report 90-3

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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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. 103 (#2302 - MGLS), drill hole no. 104 (#4595 - MGLS), and drill hole no. 105 (#22145-MGLS) are given in this report. Drill hole no. 103 is located in sec. 13, T. 29 N., R. 22 E. in Ottawa County, Oklahoma; drill hole no. 104 is located in sec. 19, T. 29 N., R. 23 E. in Ottawa County, Oklahoma; drill hole no. 105 is located in sec. 12, T. 35 S., R. 23 E. in Cherokee County, Kansas (fig.1). Data for the insoluble-residue samples from drill holes 103, 104, and 105 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.

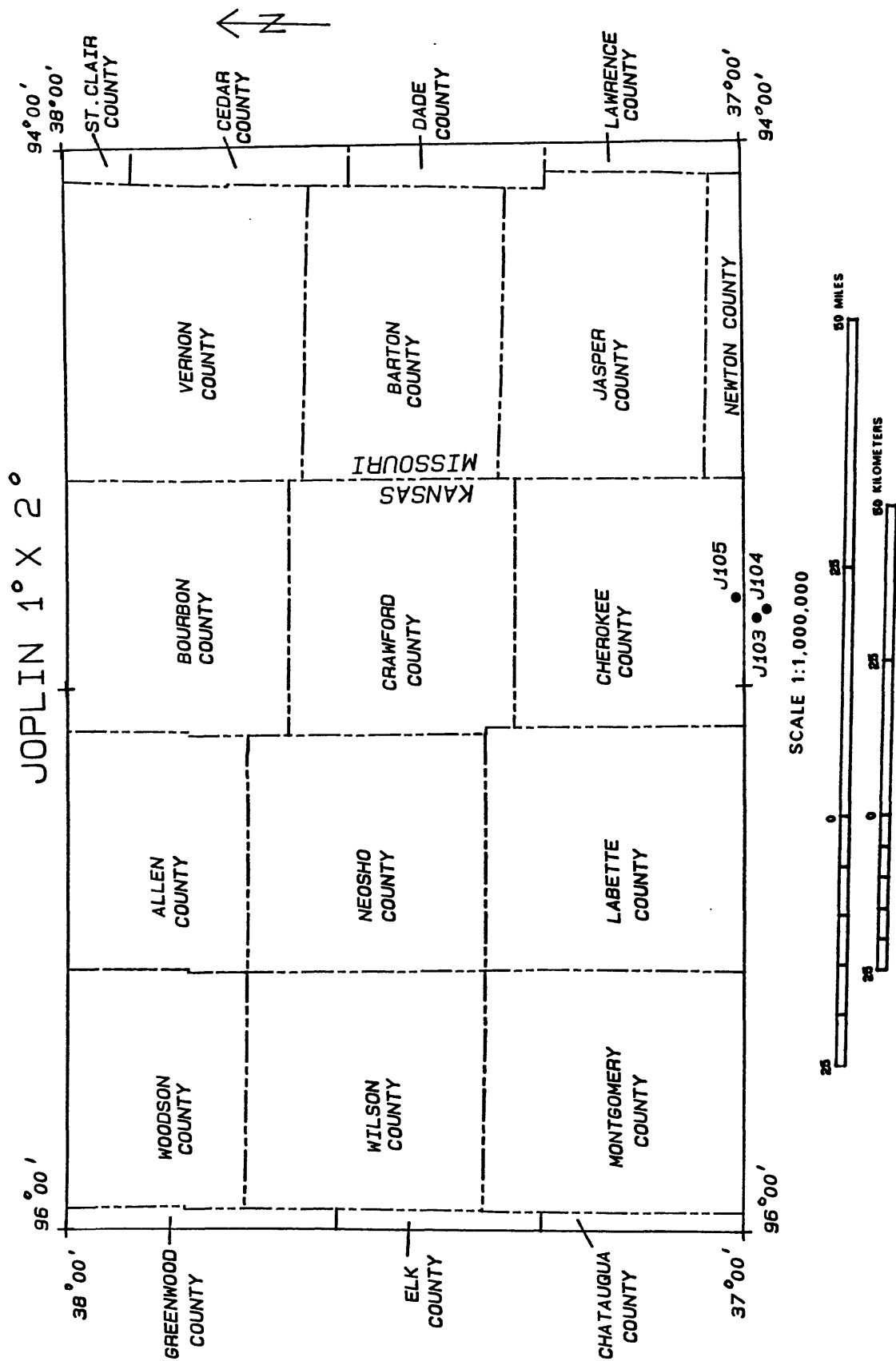
Each sample was analyzed semiquantitatively for 31 elements using a six-step D.C.-arc optical-emission spectrographic method (Grimes and Marranzino, 1968).

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



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
70	Jefferson City and Cotter Dolomite
71	Davis Shale
81	Emminence
83	Derby / Doerun
85	Lamotte Sandstone
87	Post Bonneterre Cambrian Undifferentiated
89	Bonneterre Transition Zone
90	Precambrian Undifferentiated
92	Richland
93	Van Buren

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. 103, 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
J1030110	36 59 19	94 52 15	>20.00	.05	.15	.150	150	.7	N	N
J1030120	36 59 19	94 52 15	7.00	.30	.05	.150	70	<.5	N	N
J1030130	36 59 19	94 52 15	7.00	.50	.10	.200	150	N	N	N
J1030140	36 59 19	94 52 15	5.00	.15	<.05	.100	100	N	N	N
J1030150	36 59 19	94 52 15	2.00	.20	.15	.300	50	N	N	N
J1030160	36 59 19	94 52 15	1.50	.02	.20	.050	30	N	N	N
J1030170	36 59 19	94 52 15	.50	.02	.70	.030	15	N	N	N
J1030180	36 59 19	94 52 15	.10	<.02	.15	.015	N	N	N	N
J1030190	36 59 19	94 52 15	.10	<.02	.10	.020	<10	N	N	N
J1030200	36 59 19	94 52 15	.15	<.02	.05	.015	<10	N	N	N
J1030210	36 59 19	94 52 15	.50	.03	.10	.030	10	N	N	N
J1030220	36 59 19	94 52 15	.30	<.02	<.05	.020	10	N	N	N
J1030230	36 59 19	94 52 15	.20	<.02	.15	.020	10	N	N	N
J1030240	36 59 19	94 52 15	.05	<.02	<.05	.015	<10	N	N	N
J1030250	36 59 19	94 52 15	.20	.02	<.05	.020	<10	N	N	N
J1030260	36 59 19	94 52 15	.10	<.02	N	.015	N	N	N	N
J1030270	36 59 19	94 52 15	.10	<.02	<.05	.010	N	N	N	N
J1030280	36 59 19	94 52 15	.15	<.02	.15	.007	10	N	N	N
J1030290	36 59 19	94 52 15	.15	<.02	.20	.002	10	N	N	N
J1030300	36 59 19	94 52 15	1.00	.03	.10	.030	30	.5	N	N
J1030310	36 59 19	94 52 15	.70	.02	.07	.020	20	N	N	N
J1030320	36 59 19	94 52 15	.30	.02	.05	.030	15	N	N	N
J1030330	36 59 19	94 52 15	.20	.02	N	.020	<10	N	N	N
J1030340	36 59 19	94 52 15	.70	.07	N	.030	10	N	N	N
J1030350	36 59 19	94 52 15	.10	.02	N	.005	<10	N	N	N
J1030360	36 59 19	94 52 15	.05	<.02	N	.002	<10	N	N	N
J1030370	36 59 19	94 52 15	.20	.02	N	.003	15	N	N	N
J1030380	36 59 19	94 52 15	.10	.02	<.05	.005	10	N	N	N
J1030390	36 59 19	94 52 15	.20	<.02	.05	.007	<10	N	N	N
J1030400	36 59 19	94 52 15	.70	.05	<.05	.050	30	N	N	N
J1030410	36 59 19	94 52 15	.15	<.02	N	.010	10	N	N	N
J1030420	36 59 19	94 52 15	1.00	.03	<.05	.020	30	N	N	N
J1030430	36 59 19	94 52 15	.30	.05	<.05	.030	10	N	N	N
J1030440	36 59 19	94 52 15	2.00	.10	<.05	.050	30	N	N	N
J1030450	36 59 19	94 52 15	1.50	.02	<.05	.020	15	N	N	N
J1030460	36 59 19	94 52 15	1.50	.03	.05	.030	15	N	N	N
J1030470	36 59 19	94 52 15	2.00	.02	<.05	.020	10	N	N	N
J1030480	36 59 19	94 52 15	.20	<.02	<.05	.002	<10	N	N	N
J1030490	36 59 19	94 52 15	1.00	.03	<.05	.030	<10	N	N	N
J1030500	36 59 19	94 52 15	1.00	.03	.05	.020	<10	N	N	N
J1030510	36 59 19	94 52 15	1.00	.02	N	.030	<10	N	N	N
J1030520	36 59 19	94 52 15	.70	.02	<.05	.020	<10	N	N	N
J1030530	36 59 19	94 52 15	1.50	.15	.05	.050	10	N	N	N
J1030540	36 59 19	94 52 15	2.00	.07	N	.070	10	N	N	N
J1030550	36 59 19	94 52 15	.50	.07	N	.050	<10	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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
J1030110	50	100	1.0	N	N	50	50	30	20	N	N	150
J1030120	150	70	1.5	N	N	7	30	30	N	<5	N	50
J1030130	150	100	2.0	N	N	10	50	20	N	N	N	50
J1030140	70	100	1.0	N	N	5	30	50	N	N	N	30
J1030150	100	150	1.5	N	N	5	50	15	20	N	N	15
J1030160	50	50	<1.0	N	N	N	10	10	N	N	N	10
J1030170	70	30	N	N	N	N	<10	5	N	N	N	5
J1030180	50	<20	N	N	N	N	N	N	N	N	N	<5
J1030190	30	<20	N	N	N	N	N	<5	N	N	N	<5
J1030200	30	<20	N	N	N	N	N	N	N	N	N	<5
J1030210	50	20	N	N	N	N	<10	<5	N	N	N	<5
J1030220	30	<20	N	N	N	N	N	<5	N	N	N	5
J1030230	30	<20	N	N	N	N	N	N	N	N	N	5
J1030240	30	20	N	N	N	N	N	N	N	N	N	<5
J1030250	50	20	N	N	N	N	N	<5	N	N	N	7
J1030260	30	<20	N	N	N	N	N	15	N	N	N	<5
J1030270	30	20	N	N	N	N	N	<5	N	N	N	<5
J1030280	30	30	N	N	N	N	N	<5	N	N	N	<5
J1030290	30	20	N	N	N	N	N	5	N	N	N	5
J1030300	30	20	<1.0	N	N	N	<10	7	N	<5	N	15
J1030310	30	<20	<1.0	N	N	N	<10	5	N	<5	N	10
J1030320	50	30	N	N	N	N	<10	N	N	N	N	<5
J1030330	30	50	N	N	N	N	N	<5	N	<5	N	10
J1030340	50	30	<1.0	N	N	N	<10	<5	N	N	N	7
J1030350	50	20	N	N	N	N	N	N	N	N	N	5
J1030360	50	20	N	N	N	N	N	N	N	N	N	<5
J1030370	70	30	N	N	N	N	N	5	N	<5	N	5
J1030380	50	30	N	N	N	N	N	N	N	N	N	<5
J1030390	50	20	N	N	N	N	N	N	N	N	N	<5
J1030400	50	20	<1.0	N	N	N	N	5	N	<5	N	30
J1030410	50	<20	N	N	N	N	N	N	N	<5	N	5
J1030420	50	20	<1.0	N	N	N	N	150	N	<5	N	20
J1030430	30	50	N	N	<20	N	N	70	N	N	N	7
J1030440	50	70	<1.0	N	20	N	<10	50	N	<5	N	10
J1030450	30	50	N	N	20	N	<10	30	N	5	N	10
J1030460	50	70	<1.0	N	20	N	<10	20	N	5	N	20
J1030470	50	50	N	N	<20	N	N	15	N	5	N	15
J1030480	50	50	N	N	N	N	N	<5	N	N	N	<5
J1030490	50	30	N	N	N	N	N	7	N	5	N	15
J1030500	50	50	N	N	N	N	N	5	N	<5	N	5
J1030510	30	70	N	N	N	N	N	5	N	<5	N	5
J1030520	70	50	N	N	N	N	N	5	N	<5	N	7
J1030530	70	700	<1.0	N	N	N	N	5	N	5	N	7
J1030540	50	100	<1.0	N	N	5	N	200	N	7	N	15
J1030550	70	100	N	N	N	N	N	7	N	<5	N	<5

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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 #
J1030110	50	N	5	N	100	50	N	10	300	30	N	40
J1030120	70	N	5	N	N	30	N	N	N	150	N	40
J1030130	10	N	7	N	N	50	N	N	N	100	N	40
J1030140	<10	N	<5	N	N	30	N	N	<200	100	N	40
J1030150	50	N	5	N	N	70	N	10	<200	200	N	40
J1030160	N	N	N	N	N	20	N	N	N	50	N	40
J1030170	N	N	N	N	N	10	<50	N	N	20	N	40
J1030180	N	N	N	N	N	<10	<50	N	<200	10	N	40
J1030190	N	N	N	N	N	<10	<50	N	N	10	N	40
J1030200	N	N	N	N	N	<10	<50	N	200	10	N	40
J1030210	200	N	N	N	N	10	<50	N	<200	20	N	40
J1030220	N	N	N	N	N	<10	<50	N	N	10	N	40
J1030230	N	N	N	N	N	<10	<50	N	N	15	N	40
J1030240	10	N	N	N	N	<10	<50	N	N	10	N	40
J1030250	N	N	N	N	N	<10	<50	N	N	15	N	40
J1030260	N	N	N	N	N	<10	<50	N	N	10	N	40
J1030270	N	N	N	N	N	<10	<50	N	N	N	N	40
J1030280	N	N	N	N	N	<10	<50	N	N	N	N	40
J1030290	N	N	N	N	N	<10	<50	N	N	N	N	40
J1030300	70	N	N	N	N	10	<50	N	N	10	N	40
J1030310	300	N	N	N	N	<10	<50	N	200	10	N	40
J1030320	N	N	N	N	N	10	<50	N	300	20	N	40
J1030330	N	N	N	N	N	10	<50	N	N	30	N	40
J1030340	N	N	N	N	N	20	<50	N	N	10	N	40
J1030350	N	N	N	N	N	<10	<50	N	N	N	N	40
J1030360	N	N	N	N	N	<10	<50	N	N	N	N	40
J1030370	N	N	N	N	N	<10	<50	N	N	N	N	40
J1030380	N	N	N	N	N	<10	<50	N	<200	<10	N	40
J1030390	N	N	N	N	N	<10	<50	N	N	<10	N	40
J1030400	N	N	N	N	N	15	<50	N	200	10	N	40
J1030410	N	N	N	N	N	10	<50	N	N	<10	N	40
J1030420	50	N	N	N	N	15	<50	N	1,000	10	N	40
J1030430	N	N	N	N	N	10	<50	N	3,000	20	N	70
J1030440	N	N	N	N	N	15	<50	N	7,000	70	N	70
J1030450	N	N	N	N	N	10	<50	N	5,000	50	N	70
J1030460	N	N	N	N	N	15	<50	N	7,000	20	N	70
J1030470	N	N	N	N	N	<10	<50	N	3,000	15	N	70
J1030480	N	N	N	N	N	N	<50	N	300	N	N	70
J1030490	N	N	N	N	N	<10	<50	N	200	10	N	70
J1030500	N	N	N	N	N	<10	<50	N	<200	10	N	70
J1030510	N	N	N	N	N	<10	<50	N	<200	20	N	70
J1030520	N	N	N	N	N	<10	<50	N	<200	10	N	70
J1030530	N	N	N	N	N	10	<50	N	N	100	N	70
J1030540	N	N	N	N	N	15	<50	N	<200	70	N	70
J1030550	N	N	N	N	N	10	<50	N	N	20	N	70

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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
J1030560	36 59 19	94 52 15	3.00	.10	<.05	.150	10	<.5	N	N
J1030570	36 59 19	94 52 15	.15	<.02	N	.002	N	N	N	N
J1030580	36 59 19	94 52 15	.30	.10	.10	.050	<10	N	N	N
J1030590	36 59 19	94 52 15	2.00	.07	<.05	.050	10	<.5	N	N
J1030600	36 59 19	94 52 15	10.00	.20	.15	.200	30	.5	N	N
J1030610	36 59 19	94 52 15	1.00	.02	.05	.010	<10	N	N	N
J1030620	36 59 19	94 52 15	.70	.10	<.05	.030	15	N	N	N
J1030630	36 59 19	94 52 15	.50	.05	.05	.020	20	N	N	N
J1030640	36 59 19	94 52 15	1.00	.07	N	.070	10	N	N	N
J1030650	36 59 19	94 52 15	.70	.05	<.05	.030	15	N	N	N
J1030660	36 59 19	94 52 15	1.00	.20	.20	.070	15	N	N	N
J1030670	36 59 19	94 52 15	.30	.15	.15	.030	<10	N	N	N
J1030680	36 59 19	94 52 15	.50	.10	.07	.050	10	N	N	N
J1030690	36 59 19	94 52 15	.50	.03	N	.030	<10	N	N	N
J1030700	36 59 19	94 52 15	.50	.50	.30	.020	10	N	N	N
J1030715	36 59 19	94 52 15	.70	.50	.50	.030	10	N	N	N
J1030725	36 59 19	94 52 15	.30	.20	.20	.020	N	N	N	N
J1030730	36 59 19	94 52 15	.20	<.02	N	.005	<10	N	N	N
J1030740	36 59 19	94 52 15	.20	.02	N	.005	<10	N	N	N
J1030750	36 59 19	94 52 15	.20	.70	.70	.015	15	N	N	N
J1030760	36 59 19	94 52 15	2.00	.50	.10	.070	50	<.5	N	N
J1030770	36 59 19	94 52 15	2.00	.30	.20	.030	50	N	N	N
J1030780	36 59 19	94 52 15	.70	.70	1.50	.020	15	N	N	N
J1030790	36 59 19	94 52 15	.10	.20	.30	.050	15	N	N	N
J1030800	36 59 19	94 52 15	1.50	3.00	5.00	.050	30	N	N	N
J1030810	36 59 19	94 52 15	.50	.50	.70	.070	10	N	N	N
J1030820	36 59 19	94 52 15	.70	.50	1.00	.050	15	N	N	N
J1030830	36 59 19	94 52 15	2.00	.20	.20	.070	100	N	N	N
J1030840	36 59 19	94 52 15	5.00	.20	.05	.100	50	<.5	N	N
J1030850	36 59 19	94 52 15	1.50	.05	<.05	.030	20	N	N	N
J1030860	36 59 19	94 52 15	.70	.02	<.05	.002	<10	N	N	N
J1030870	36 59 19	94 52 15	10.00	3.00	5.00	.010	50	.5	N	N
J1030880	36 59 19	94 52 15	2.00	.05	.10	.030	15	N	N	N
J1030890	36 59 19	94 52 15	1.00	.07	.05	.050	15	<.5	N	N
J1030900	36 59 19	94 52 15	.15	<.02	<.05	.010	<10	N	N	N
J1030910	36 59 19	94 52 15	.05	<.02	N	.005	<10	N	N	N
J1030920	36 59 19	94 52 15	.70	.02	<.05	.015	10	<.5	N	N
J1030930	36 59 19	94 52 15	.05	<.02	N	.005	N	N	N	N
J1030940	36 59 19	94 52 15	.05	.02	.30	.007	<10	N	N	N
J1030950	36 59 19	94 52 15	.20	.02	.10	.007	10	N	N	N
J1030960	36 59 19	94 52 15	.05	<.02	N	.005	N	N	N	N
J1030970	36 59 19	94 52 15	.30	.02	<.05	.002	10	N	N	N
J1030980	36 59 19	94 52 15	1.50	.50	.50	.010	10	N	N	N
J1030990	36 59 19	94 52 15	1.00	.02	.10	.010	10	N	N	N
J1031000	36 59 19	94 52 15	.70	.20	3.00	.050	30	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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
J1030560	70	200	<1.0	N	N	N	10	15	N	7	N	30
J1030570	50	50	N	N	N	N	N	<5	N	N	N	5
J1030580	100	70	N	N	N	N	N	15	N	10	N	10
J1030590	50	50	1.0	N	N	5	N	300	N	10	N	20
J1030600	100	200	1.0	N	N	15	30	150	N	20	N	50
J1030610	30	70	N	N	N	N	N	5	N	<5	N	5
J1030620	70	100	<1.0	N	N	<5	N	30	N	<5	N	5
J1030630	50	50	N	N	N	<5	N	20	N	<5	N	5
J1030640	70	150	<1.0	N	N	5	N	10	N	7	N	15
J1030650	50	100	N	N	N	N	N	15	N	<5	N	7
J1030660	100	700	<1.0	N	N	<5	N	10	N	7	N	20
J1030670	70	300	N	N	N	N	N	<5	N	5	N	10
J1030680	50	150	N	N	N	N	N	5	N	N	N	7
J1030690	50	100	N	N	N	N	N	N	N	<5	N	5
J1030700	50	200	N	N	N	N	N	<5	N	5	N	7
J1030715	50	100	N	N	N	N	N	5	N	5	N	15
J1030725	70	150	N	N	N	N	N	<5	N	<5	N	<5
J1030730	70	50	N	N	N	N	N	N	N	<5	N	<5
J1030740	70	50	N	N	N	N	N	N	N	N	N	<5
J1030750	50	50	N	N	N	N	N	<5	N	<5	N	5
J1030760	70	50	1.0	N	<20	5	<10	15	N	5	N	20
J1030770	50	30	N	N	N	<5	N	10	N	20	N	10
J1030780	50	50	N	N	N	N	N	<5	N	5	N	20
J1030790	70	70	N	N	N	<5	N	5	N	7	N	15
J1030800	50	50	N	N	N	N	N	50	N	7	N	20
J1030810	70	100	N	N	N	N	N	7	N	<5	N	10
J1030820	70	70	N	N	N	N	N	7	N	<5	N	15
J1030830	100	100	<1.0	N	N	5	10	30	N	10	N	30
J1030840	70	70	<1.0	N	N	10	10	20	N	10	N	20
J1030850	50	30	N	N	N	<5	<10	7	N	<5	N	10
J1030860	50	20	N	N	N	N	N	<5	N	<5	N	<5
J1030870	30	<20	N	N	N	5	10	20	N	10	N	15
J1030880	50	30	N	N	N	<5	<10	7	N	5	N	10
J1030890	30	70	N	N	N	<5	<10	10	N	7	N	30
J1030900	10	30	N	N	N	N	N	N	N	N	N	<5
J1030910	10	<20	N	N	N	N	N	N	N	N	N	<5
J1030920	15	70	N	N	N	N	N	<5	N	<5	N	5
J1030930	10	30	N	N	N	N	N	150	N	N	N	5
J1030940	70	50	N	N	N	N	N	70	N	N	N	5
J1030950	15	30	N	N	N	N	N	300	N	N	N	5
J1030960	10	20	N	N	N	N	N	20	N	N	N	<5
J1030970	10	<20	N	N	N	N	N	30	N	N	N	<5
J1030980	10	30	N	N	N	N	N	200	N	N	N	5
J1030990	10	<20	N	N	N	N	N	30	N	<5	N	<5
J1031000	10	30	N	N	N	N	N	50	N	N	N	<5

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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 #
J1030560	15	N	N	N	N	20	<50	10	700	150	N	70
J1030570	N	N	N	N	N	N	<50	N	N	N	N	70
J1030580	N	N	N	N	N	15	<50	N	N	20	N	70
J1030590	15	N	N	N	N	20	<50	N	<200	20	N	70
J1030600	70	N	N	N	N	30	<50	N	300	70	N	70
J1030610	N	N	N	N	N	<10	<50	N	N	10	N	70
J1030620	N	N	N	N	N	<10	<50	N	N	15	N	70
J1030630	N	N	N	N	N	<10	<50	N	<200	15	N	70
J1030640	N	N	N	N	N	<10	<50	N	N	30	N	70
J1030650	N	N	N	N	N	<10	<50	N	N	20	N	70
J1030660	N	N	N	N	N	<10	<50	15	N	30	N	70
J1030670	N	N	N	N	N	<10	<50	N	N	70	N	70
J1030680	N	N	N	N	N	<10	<50	N	300	70	N	70
J1030690	N	N	N	N	N	<10	<50	N	200	10	N	70
J1030700	N	N	N	N	N	N	<50	N	200	N	N	70
J1030715	N	N	N	N	N	10	<50	N	200	10	N	70
J1030725	N	N	N	N	N	<10	<50	N	N	N	N	70
J1030730	N	N	N	N	N	N	<50	N	<200	N	N	70
J1030740	N	N	N	N	N	N	<50	N	N	<10	N	70
J1030750	N	N	N	N	N	N	<50	N	<200	<10	N	70
J1030760	N	N	N	N	N	10	<50	N	3,000	15	N	70
J1030770	N	N	N	N	N	<10	<50	N	<200	15	N	70
J1030780	N	N	N	N	N	<10	<50	N	<200	10	N	70
J1030790	N	N	N	N	N	10	<50	N	N	15	N	70
J1030800	15	N	N	N	N	10	<50	N	<200	15	N	70
J1030810	N	N	N	N	N	10	<50	N	<200	20	N	70
J1030820	N	N	N	N	N	10	<50	N	200	20	N	70
J1030830	30	N	N	N	N	20	<50	N	<200	20	N	70
J1030840	30	N	N	N	N	30	<50	N	500	20	N	70
J1030850	N	N	N	N	N	10	<50	N	N	10	N	70
J1030860	N	N	N	N	N	N	<50	N	N	N	N	70
J1030870	150	N	N	N	N	<10	<50	N	<200	N	N	70
J1030880	20	N	N	N	N	<10	<50	N	<200	10	N	70
J1030890	<10	N	N	N	N	10	<50	N	N	20	N	70
J1030900	N	N	N	N	N	N	<50	N	N	150	N	67
J1030910	N	N	N	N	N	N	<50	N	N	15	N	67
J1030920	N	N	N	N	100	N	<50	N	N	20	N	67
J1030930	N	N	N	N	N	N	<50	N	N	30	N	67
J1030940	N	N	N	N	100	N	<50	N	N	N	N	67
J1030950	N	N	N	N	N	N	<50	N	<200	<10	N	67
J1030960	N	N	N	N	N	N	<50	N	N	70	N	67
J1030970	N	N	N	N	N	N	<50	N	<200	10	N	67
J1030980	N	N	N	N	N	N	<50	N	200	30	N	92
J1030990	N	N	N	N	N	N	<50	N	200	100	N	92
J1031000	N	N	N	N	100	N	<50	N	700	70	N	92

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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
J1031010	36 59 19	94 52 15	.20	<.02	.05	.002	N	N	N	N
J1031020	36 59 19	94 52 15	.05	<.02	N	.003	N	N	N	N
J1031030	36 59 19	94 52 15	.05	.02	N	.005	N	N	N	N
J1031040	36 59 19	94 52 15	.10	.02	N	.005	<10	N	N	N
J1031050	36 59 19	94 52 15	.10	.02	N	.002	10	N	N	N
J1031060	36 59 19	94 52 15	3.00	.05	.15	.010	20	<.5	N	N
J1031070	36 59 19	94 52 15	.30	.15	.20	.005	<10	N	N	N
J1031080	36 59 19	94 52 15	.10	.02	N	.003	N	N	N	N
J1031090	36 59 19	94 52 15	.20	.03	<.05	.007	10	N	N	N
J1031100	36 59 19	94 52 15	.30	.05	N	.030	15	N	N	N
J1031110	36 59 19	94 52 15	.10	.02	N	.003	N	N	N	N
J1031120	36 59 19	94 52 15	.15	.03	.05	.005	15	N	N	N
J1031130	36 59 19	94 52 15	5.00	<.02	N	.002	15	N	N	N
J1031140	36 59 19	94 52 15	15.00	<.02	N	.010	20	.5	N	N
J1031150	36 59 19	94 52 15	10.00	.02	<.05	.010	100	.5	N	N
J1031160	36 59 19	94 52 15	15.00	.07	<.05	.070	150	.7	N	N
J1031170	36 59 19	94 52 15	10.00	.50	<.05	.150	30	.5	N	N
J1031180	36 59 19	94 52 15	20.00	.30	.15	.007	150	.7	N	N
J1031185	36 59 19	94 52 15	3.00	.05	N	.150	10	N	N	N
J1031190	36 59 19	94 52 15	2.00	.15	<.05	.500	20	N	N	N
J1031200	36 59 19	94 52 15	2.00	.10	.20	.300	200	N	N	N
J1031206	36 59 19	94 52 15	2.00	.50	.50	.500	1,000	N	N	N

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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
J1031010	30	50	N	N	N	N	N	5	N	N	N	5
J1031020	20	50	N	N	N	N	N	<5	N	N	N	<5
J1031030	20	50	N	N	N	N	N	15	N	N	N	<5
J1031040	50	30	N	N	N	N	N	20	N	<5	N	<5
J1031050	30	<20	N	N	N	N	N	7	N	N	N	<5
J1031060	30	20	N	N	N	N	N	200	N	<5	N	10
J1031070	50	20	N	N	N	N	N	150	N	<5	N	5
J1031080	30	20	N	N	N	N	N	5	N	N	N	<5
J1031090	30	20	N	N	N	N	N	150	N	N	N	<5
J1031100	50	50	N	N	N	N	N	150	N	N	N	5
J1031110	30	50	N	N	N	N	N	<5	N	N	N	<5
J1031120	30	70	N	N	N	N	N	<5	N	N	N	<5
J1031130	15	20	N	N	N	N	N	150	N	5	N	<5
J1031140	20	30	N	N	N	N	20	150	N	20	N	10
J1031150	15	70	N	N	N	<5	10	70	N	10	N	15
J1031160	30	150	<1.0	N	N	7	20	300	N	200	N	30
J1031170	50	70	1.0	N	N	5	<10	150	N	70	N	30
J1031180	30	300	1.0	N	N	5	20	100	N	20	N	20
J1031185	20	700	N	N	N	N	N	15	20	<5	N	5
J1031190	20	1,500	1.0	N	N	<5	N	50	N	5	N	10
J1031200	15	1,000	2.0	N	N	N	N	10	20	<5	N	5
J1031206	10	1,000	2.0	N	N	<5	N	5	50	<5	N	5

TABLE 1--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 103, 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 #
J1031010	N	N	N	N	N	N	<50	N	N	N	N	92
J1031020	N	N	N	N	N	N	<50	N	N	N	N	68
J1031030	N	N	N	N	N	N	<50	N	N	N	N	68
J1031040	N	N	N	N	N	10	<50	N	N	N	N	68
J1031050	N	N	N	N	N	N	<50	N	N	N	N	68
J1031060	N	N	N	N	N	N	<50	N	<200	N	N	68
J1031070	N	N	N	N	N	N	<50	N	200	N	N	68
J1031080	N	N	N	N	N	N	<50	N	N	N	N	68
J1031090	N	N	N	N	N	10	<50	N	<200	N	N	68
J1031100	N	N	N	N	N	15	<50	N	N	N	N	68
J1031110	N	N	N	N	N	N	<50	N	N	N	N	93
J1031120	N	N	N	N	N	<10	<50	N	N	N	N	93
J1031130	N	N	N	N	N	N	<50	N	<200	N	N	93
J1031140	15	N	N	N	N	N	<50	N	300	N	N	93
J1031150	20	N	N	N	N	N	<50	N	300	N	N	93
J1031160	30	N	N	30	N	30	<50	N	2,000	30	N	93
J1031170	50	N	N	N	N	100	<50	N	1,500	50	N	93
J1031180	70	N	N	N	N	50	<50	N	<200	30	N	93
J1031185	N	N	N	N	N	<10	<50	10	N	150	N	90
J1031190	30	N	5	N	N	20	<50	15	N	200	N	90
J1031200	N	N	5	N	100	10	<50	20	<200	200	N	90
J1031206	N	N	5	N	200	<10	<50	30	<200	300	N	90

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1040305	36 58 27	94 51 20	.70	.02	<.05	.030	20	N	N	N
J1040310	36 58 27	94 51 20	.30	<.02	N	.003	10	N	N	N
J1040320	36 58 27	94 51 20	.20	<.02	N	.002	<10	N	N	N
J1040330	36 58 27	94 51 20	.50	.02	<.05	.015	15	N	N	N
J1040340	36 58 27	94 51 20	.20	<.02	<.05	.010	10	N	N	N
J1040350	36 58 27	94 51 20	.30	.07	.30	.030	15	N	N	N
J1040360	36 58 27	94 51 20	.10	<.02	.05	.020	N	N	N	N
J1040370	36 58 27	94 51 20	.05	<.02	.10	.015	N	N	N	N
J1040380	36 58 27	94 51 20	.20	.10	.20	.050	15	N	N	N
J1040390	36 58 27	94 51 20	.15	.05	.05	.030	10	N	N	N
J1040400	36 58 27	94 51 20	.10	.02	<.05	.020	<10	N	N	N
J1040410	36 58 27	94 51 20	.10	.03	N	.030	<10	N	N	N
J1040420	36 58 27	94 51 20	.05	<.02	.05	.010	<10	N	N	N
J1040430	36 58 27	94 51 20	.10	<.02	<.05	.007	<10	N	N	N
J1040440	36 58 27	94 51 20	.15	.02	.10	.015	10	N	N	N
J1040450	36 58 27	94 51 20	3.00	.50	.05	.300	30	N	N	N
J1040460	36 58 27	94 51 20	.70	.30	.30	.015	<10	N	N	N
J1040470	36 58 27	94 51 20	.50	.50	.30	.020	N	N	N	N
J1040480	36 58 27	94 51 20	.30	.70	.70	.030	20	N	N	N
J1040490	36 58 27	94 51 20	.15	.50	.50	.020	10	N	N	N
J1040500	36 58 27	94 51 20	.20	.30	.30	.070	15	N	N	N
J1040510	36 58 27	94 51 20	.10	.20	.20	.020	N	N	N	N
J1040520	36 58 27	94 51 20	.30	1.00	1.00	.070	15	N	N	N
J1040530	36 58 27	94 51 20	.20	.10	.15	.030	<10	N	N	N
J1040540	36 58 27	94 51 20	.50	.07	.15	.020	15	N	N	N
J1040550	36 58 27	94 51 20	1.00	.05	.10	.070	20	N	N	N
J1040560	36 58 27	94 51 20	.70	.03	.15	.050	30	N	N	N
J1040570	36 58 27	94 51 20	.20	.15	.15	.050	10	N	N	N
J1040580	36 58 27	94 51 20	.70	.02	.05	.050	15	N	N	N
J1040590	36 58 27	94 51 20	10.00	<.02	<.05	.030	500	2.0	N	N
J1040600	36 58 27	94 51 20	1.50	.05	.05	.050	30	N	N	N
J1040610	36 58 27	94 51 20	.70	.03	<.05	.030	<10	N	N	N
J1040620	36 58 27	94 51 20	.20	.02	N	.050	<10	N	N	N
J1040630	36 58 27	94 51 20	1.00	.07	.05	.030	15	N	N	N
J1040640	36 58 27	94 51 20	.20	.05	<.05	.030	10	N	N	N
J1040650	36 58 27	94 51 20	.15	.15	.15	.050	<10	N	N	N
J1040660	36 58 27	94 51 20	.50	.05	.10	.030	<10	N	N	N
J1040670	36 58 27	94 51 20	.30	.02	<.05	.015	<10	N	N	N
J1040680	36 58 27	94 51 20	.10	.02	<.05	.010	N	N	N	N
J1040690	36 58 27	94 51 20	2.00	3.00	5.00	.050	20	<.5	N	N
J1040700	36 58 27	94 51 20	.20	.02	<.05	.010	<10	N	N	N
J1040710	36 58 27	94 51 20	.10	.20	.20	.020	<10	N	N	N
J1040720	36 58 27	94 51 20	.05	.02	N	.007	N	N	N	N
J1040730	36 58 27	94 51 20	.20	.02	N	.020	N	N	N	N
J1040740	36 58 27	94 51 20	.15	.15	.10	.050	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1040305	70	70	N	N	N	N	<10	N	N	N	<20	<5
J1040310	30	30	N	N	N	N	N	N	N	N	N	<5
J1040320	30	20	N	N	N	N	N	<5	N	N	N	<5
J1040330	70	20	N	N	N	N	N	N	N	N	N	5
J1040340	50	20	N	N	N	N	N	<5	N	<5	N	7
J1040350	50	50	<1.0	N	N	N	N	N	N	<5	N	7
J1040360	30	<20	N	N	N	N	N	N	N	<5	N	10
J1040370	30	20	N	N	N	N	N	N	N	N	N	<5
J1040380	70	30	<1.0	N	N	N	<10	<5	N	<5	<20	5
J1040390	50	50	<1.0	N	N	N	<10	<5	N	<5	<20	10
J1040400	50	50	N	N	N	N	N	N	N	N	N	5
J1040410	50	30	<1.0	N	N	N	N	<5	N	N	N	15
J1040420	30	<20	N	N	N	N	N	N	N	N	N	<5
J1040430	50	<20	N	N	N	N	N	N	N	N	N	<5
J1040440	50	50	<1.0	N	N	N	N	N	N	N	N	10
J1040450	150	150	1.5	N	N	10	30	15	20	5	N	30
J1040460	50	50	N	N	N	N	N	5	N	<5	N	15
J1040470	70	70	N	N	N	N	N	<5	N	N	N	7
J1040480	70	100	N	N	N	N	N	5	N	N	N	5
J1040490	50	70	N	N	N	N	N	N	N	<5	N	7
J1040500	100	150	<1.0	N	N	N	<10	5	N	<5	N	10
J1040510	50	100	N	N	N	N	N	N	N	N	N	<5
J1040520	70	150	N	N	N	N	N	5	N	5	N	10
J1040530	70	100	N	N	N	N	N	<5	N	N	N	5
J1040540	50	150	N	N	N	N	N	<5	N	<5	N	7
J1040550	50	300	<1.0	N	N	N	N	15	N	<5	N	20
J1040560	30	500	<1.0	N	N	N	N	<5	N	N	N	5
J1040570	70	150	<1.0	N	N	N	N	N	N	<5	N	10
J1040580	50	200	<1.0	N	N	N	N	5	N	N	N	10
J1040590	30	70	<1.0	N	70	N	10	50	N	15	N	50
J1040600	50	50	N	N	20	N	N	15	N	N	N	20
J1040610	50	50	N	N	N	N	N	5	N	<5	N	10
J1040620	30	70	N	N	N	N	<10	<5	N	N	N	<5
J1040630	30	200	N	N	N	N	N	5	N	<5	N	10
J1040640	50	50	N	N	N	N	N	<5	N	N	N	<5
J1040650	70	70	N	N	N	N	N	N	N	N	N	<5
J1040660	50	70	N	N	N	N	N	5	N	N	N	5
J1040670	70	50	N	N	N	N	N	<5	N	N	N	<5
J1040680	70	30	N	N	N	N	N	N	N	N	N	<5
J1040690	70	50	N	N	N	N	N	15	N	10	N	20
J1040700	30	50	N	N	N	N	N	<5	N	N	N	5
J1040710	70	70	N	N	N	N	N	5	N	<5	N	10
J1040720	50	50	N	N	N	N	N	N	N	N	N	5
J1040730	30	70	N	N	N	N	N	<5	N	<5	N	<5
J1040740	70	70	<1.0	N	N	N	N	<5	N	5	N	5

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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 #
J1040305	N	N	N	N	N	10	<50	N	N	15	N	40
J1040310	N	N	N	N	N	N	<50	N	N	N	N	40
J1040320	N	N	N	N	N	N	<50	N	N	N	N	40
J1040330	N	N	N	N	N	10	<50	N	N	<10	N	40
J1040340	N	N	N	N	N	10	<50	N	N	<10	N	40
J1040350	N	N	N	N	N	10	<50	N	<200	10	N	40
J1040360	N	N	N	N	N	<10	<50	N	N	N	N	40
J1040370	N	N	N	N	N	<10	<50	N	N	N	N	40
J1040380	N	N	N	N	N	10	<50	N	N	15	N	40
J1040390	N	N	N	N	N	10	<50	N	N	10	N	40
J1040400	N	N	N	N	N	10	<50	N	300	<10	N	40
J1040410	N	N	N	N	N	10	<50	N	N	10	N	40
J1040420	N	N	N	N	N	<10	<50	N	N	N	N	40
J1040430	N	N	N	N	N	<10	<50	N	N	N	N	40
J1040440	N	N	N	N	N	<10	<50	N	N	N	N	40
J1040450	N	N	<5	N	100	20	<50	10	<200	150	N	40
J1040460	N	N	N	N	N	N	<50	N	N	15	N	65
J1040470	N	N	N	N	N	N	<50	N	N	10	N	65
J1040480	N	N	N	N	N	N	<50	N	<200	15	N	65
J1040490	N	N	N	N	N	<10	<50	N	N	15	N	65
J1040500	N	N	N	N	N	10	<50	N	N	30	N	65
J1040510	N	N	N	N	N	N	<50	N	N	30	N	65
J1040520	N	N	N	N	N	10	<50	N	N	50	N	65
J1040530	N	N	N	N	N	<10	<50	N	N	30	N	65
J1040540	N	N	N	N	200	<10	<50	N	N	70	N	65
J1040550	N	N	N	N	N	10	<50	N	N	30	N	65
J1040560	N	N	N	N	N	<10	<50	N	<200	100	N	65
J1040570	N	N	N	N	N	10	<50	N	N	30	N	65
J1040580	N	N	N	N	N	<10	<50	N	200	20	N	65
J1040590	20	N	N	N	N	15	<50	N	10,000	15	N	65
J1040600	N	N	N	N	N	10	<50	N	5,000	15	N	65
J1040610	N	N	N	N	N	10	<50	N	1,500	10	N	65
J1040620	N	N	N	N	N	<10	<50	N	700	150	N	65
J1040630	N	N	N	N	N	<10	<50	N	<200	150	N	65
J1040640	300	N	N	N	N	<10	<50	N	200	20	N	65
J1040650	N	N	N	N	N	<10	<50	N	N	15	N	65
J1040660	<10	N	N	N	N	N	<50	N	300	30	N	65
J1040670	N	N	N	N	N	N	<50	N	<200	N	N	65
J1040680	N	N	N	N	N	N	<50	N	N	N	N	65
J1040690	<10	N	N	N	N	20	<50	N	N	15	N	65
J1040700	N	N	N	N	N	N	<50	N	300	15	N	65
J1040710	N	N	N	N	N	10	<50	N	<200	15	N	66
J1040720	N	N	N	N	N	N	<50	N	N	N	N	66
J1040730	N	N	N	N	N	N	<50	N	N	15	N	66
J1040740	N	N	N	N	N	<10	<50	N	N	30	N	66

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1040750	36 58 27	94 51 20	1.50	1.00	.50	.200	20	N	N	N
J1040760	36 58 27	94 51 20	.20	.10	.05	.030	<10	N	N	N
J1040770	36 58 27	94 51 20	.70	.30	.20	.070	10	N	N	N
J1040780	36 58 27	94 51 20	.20	.02	<.05	.020	<10	N	N	N
J1040790	36 58 27	94 51 20	.20	.15	.10	.020	<10	N	N	N
J1040800	36 58 27	94 51 20	.20	1.00	1.00	.015	15	N	N	N
J1040810	36 58 27	94 51 20	1.00	.15	.10	.050	15	N	N	N
J1040820	36 58 27	94 51 20	.20	.05	<.05	.020	10	N	N	N
J1040830	36 58 27	94 51 20	.10	.03	<.05	.007	<10	N	N	N
J1040840	36 58 27	94 51 20	.20	.02	<.05	.010	<10	N	N	N
J1040850	36 58 27	94 51 20	.70	.10	.05	.050	10	N	N	N
J1040860	36 58 27	94 51 20	.50	.10	.10	.050	10	N	N	N
J1040870	36 58 27	94 51 20	.30	.07	.15	.020	<10	N	N	N
J1040880	36 58 27	94 51 20	.20	.02	<.05	.015	<10	N	N	N
J1040890	36 58 27	94 51 20	.70	.07	.05	.050	10	N	N	N
J1040900	36 58 27	94 51 20	.50	.07	.05	.030	10	N	N	N
J1040910	36 58 27	94 51 20	.30	.10	.10	.030	10	N	N	N
J1040920	36 58 27	94 51 20	.50	.05	<.05	.030	10	N	N	N
J1040930	36 58 27	94 51 20	.70	.50	.50	.050	15	N	N	N
J1040940	36 58 27	94 51 20	.70	.10	.10	.050	15	N	N	N
J1040950	36 58 27	94 51 20	.70	.05	.05	.030	20	N	N	N
J1040960	36 58 27	94 51 20	.20	.05	.05	.030	<10	N	N	N
J1040970	36 58 27	94 51 20	.30	.05	.05	.030	<10	N	N	N
J1040980	36 58 27	94 51 20	.20	.03	<.05	.020	<10	N	N	N
J1040990	36 58 27	94 51 20	.70	.03	<.05	.050	15	N	N	N
J1041000	36 58 27	94 51 20	.10	.02	N	.007	<10	N	N	N
J1041010	36 58 27	94 51 20	.15	.03	.05	.015	10	N	N	N
J1041020	36 58 27	94 51 20	.20	.02	<.05	.010	N	N	N	N
J1041030	36 58 27	94 51 20	.15	.05	.05	.007	N	N	N	N
J1041040	36 58 27	94 51 20	.05	.05	.10	.005	N	N	N	N
J1041050	36 58 27	94 51 20	1.00	.07	.10	.002	<10	N	N	N
J1041060	36 58 27	94 51 20	.05	.02	N	.005	N	N	N	N
J1041070	36 58 27	94 51 20	.05	.02	N	.070	N	N	N	N
J1041080	36 58 27	94 51 20	.05	.03	<.05	.010	N	N	N	N
J1041090	36 58 27	94 51 20	.20	.10	.07	.015	<10	N	N	N
J1041100	36 58 27	94 51 20	.20	.02	N	.010	<10	N	N	N
J1041110	36 58 27	94 51 20	.30	.07	<.05	.020	<10	N	N	N
J1041120	36 58 27	94 51 20	.20	.20	.20	.007	N	N	N	N
J1041130	36 58 27	94 51 20	.70	.05	<.05	.007	15	N	N	N
J1041140	36 58 27	94 51 20	.30	.07	.05	.005	10	N	N	N
J1041150	36 58 27	94 51 20	.05	.02	<.05	.005	N	N	N	N
J1041160	36 58 27	94 51 20	.05	.05	.05	.015	<10	N	N	N
J1041170	36 58 27	94 51 20	.10	.03	.05	.020	N	N	N	N
J1041180	36 58 27	94 51 20	.70	.03	<.05	.015	<10	N	N	N
J1041190	36 58 27	94 51 20	.05	.02	<.05	.002	N	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1040750	100	300	1.0	N	N	5	20	15	N	30	N	20
J1040760	50	30	N	N	N	N	N	<5	N	10	N	15
J1040770	70	50	<1.0	N	N	N	10	7	N	15	N	10
J1040780	30	20	N	N	N	N	N	N	N	N	N	<5
J1040790	50	50	N	N	N	N	N	<5	N	10	N	5
J1040800	50	70	N	N	N	N	N	<5	N	15	N	5
J1040810	70	30	<1.0	N	N	N	<10	7	N	10	N	10
J1040820	50	20	N	N	N	N	N	N	N	N	N	<5
J1040830	50	20	N	N	N	N	N	<5	N	N	N	<5
J1040840	50	<20	N	N	N	N	N	N	N	N	N	<5
J1040850	50	50	<1.0	N	N	N	<10	10	N	5	N	10
J1040860	70	70	<1.0	N	N	N	<10	10	N	5	N	15
J1040870	50	30	N	N	N	N	N	N	N	<5	N	5
J1040880	50	20	N	N	N	N	N	<5	N	5	N	5
J1040890	50	50	<1.0	N	N	N	<10	7	N	<5	N	10
J1040900	50	30	<1.0	N	N	N	N	5	N	10	N	15
J1040910	50	30	N	N	N	N	N	7	N	10	N	7
J1040920	50	20	N	N	N	N	N	<5	N	5	N	7
J1040930	70	50	<1.0	N	N	N	N	5	N	7	N	15
J1040940	70	50	N	N	N	N	N	7	N	5	N	15
J1040950	50	70	N	N	N	N	N	7	N	<5	N	10
J1040960	70	50	N	N	N	N	N	<5	N	<5	N	7
J1040970	50	50	N	N	N	N	N	5	N	20	N	10
J1040980	30	20	N	N	N	N	N	<5	N	N	N	5
J1040990	20	70	N	N	N	N	N	5	N	10	N	10
J1041000	15	<20	N	N	N	N	N	N	N	N	N	N
J1041010	10	50	N	N	N	N	N	<5	N	<5	N	5
J1041020	15	30	N	N	N	N	N	<5	N	<5	N	<5
J1041030	20	30	N	N	N	N	N	N	N	<5	N	5
J1041040	20	50	N	N	N	N	N	N	N	N	N	<5
J1041050	20	20	N	N	N	N	N	5	N	N	N	<5
J1041060	10	20	N	N	N	N	N	N	N	N	N	<5
J1041070	10	20	N	N	N	N	N	N	N	N	N	N
J1041080	10	20	N	N	N	N	N	N	N	N	N	N
J1041090	15	30	N	N	N	N	N	<5	N	<5	N	7
J1041100	15	30	N	N	N	N	N	7	N	N	N	5
J1041110	20	50	N	N	N	N	N	7	N	<5	N	7
J1041120	15	30	N	N	N	N	N	<5	N	N	N	N
J1041130	15	30	N	N	N	N	N	70	N	<5	N	<5
J1041140	20	50	N	N	N	N	N	10	N	N	N	5
J1041150	50	50	N	N	N	N	N	N	N	N	N	<5
J1041160	70	70	N	N	N	N	N	N	N	<5	N	<5
J1041170	50	50	N	N	N	N	N	N	N	N	N	N
J1041180	30	30	N	N	N	N	N	7	N	N	N	<5
J1041190	20	30	N	N	N	N	N	N	N	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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 #
J1040750	N	N	N	N	N	50	<50	10	N	300	N	66
J1040760	N	N	N	N	N	10	<50	N	N	20	N	66
J1040770	N	N	N	N	N	20	<50	N	N	50	N	66
J1040780	N	N	N	N	N	N	<50	N	<200	10	N	66
J1040790	20	N	N	N	N	N	<50	N	N	N	N	66
J1040800	70	N	N	N	N	N	<50	N	N	<10	N	66
J1040810	N	N	N	N	N	10	<50	N	N	15	N	66
J1040820	N	N	N	N	N	<10	<50	N	N	N	N	66
J1040830	N	N	N	N	N	N	<50	N	N	N	N	66
J1040840	N	N	N	N	N	N	<50	N	N	N	N	66
J1040850	N	N	N	N	N	10	<50	N	<200	30	N	66
J1040860	N	N	N	N	N	10	<50	N	N	20	N	66
J1040870	N	N	N	N	N	<10	<50	N	N	10	N	66
J1040880	N	N	N	N	N	N	<50	N	<200	10	N	66
J1040890	N	N	N	N	N	10	<50	N	N	15	N	66
J1040900	N	N	N	N	N	10	<50	N	N	20	N	66
J1040910	N	N	N	N	N	<10	<50	N	N	10	N	66
J1040920	N	N	N	N	N	<10	<50	N	N	10	N	66
J1040930	N	N	N	N	N	15	<50	N	N	20	N	67
J1040940	N	N	N	N	N	10	<50	N	N	30	N	67
J1040950	N	N	N	N	N	<10	<50	N	<200	70	N	67
J1040960	N	N	N	N	N	N	<50	N	N	10	N	67
J1040970	N	N	N	N	N	10	<50	N	N	30	N	67
J1040980	N	N	N	N	N	N	<50	N	N	50	N	67
J1040990	N	N	N	N	N	10	<50	N	<200	50	N	67
J1041000	N	N	N	N	N	N	<50	N	N	10	N	67
J1041010	N	N	N	N	N	N	<50	N	N	150	N	67
J1041020	30	N	N	N	N	N	<50	N	N	15	N	67
J1041030	N	N	N	N	N	N	<50	N	N	10	N	67
J1041040	N	N	N	N	N	N	<50	N	N	N	N	67
J1041050	N	N	N	N	N	<10	<50	N	<200	N	N	67
J1041060	N	N	N	N	N	N	<50	N	N	30	N	68
J1041070	N	N	N	N	N	N	<50	N	N	20	N	68
J1041080	N	N	N	N	N	N	<50	N	N	20	N	68
J1041090	N	N	N	N	N	N	<50	N	N	50	N	68
J1041100	N	N	N	N	N	N	<50	N	<200	20	N	68
J1041110	N	N	N	N	N	N	<50	N	200	30	N	68
J1041120	N	N	N	N	N	N	<50	N	N	30	N	68
J1041130	N	N	N	N	N	N	<50	N	N	30	N	68
J1041140	N	N	N	N	N	N	<50	N	N	N	N	68
J1041150	N	N	N	N	N	N	<50	N	N	N	N	68
J1041160	N	N	N	N	N	N	<50	N	N	N	N	68
J1041170	N	N	N	N	N	<10	<50	N	N	N	N	68
J1041180	N	N	N	N	N	10	<50	N	N	N	N	68
J1041190	N	N	N	N	N	N	<50	N	N	N	N	68

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1041200	36 58 27	94 51 20	.15	.05	.05	.005	N	N	N	N
J1041210	36 58 27	94 51 20	.30	.07	.05	.007	N	N	N	N
J1041220	36 58 27	94 51 20	.05	.02	<.05	.003	N	N	N	N
J1041230	36 58 27	94 51 20	.30	.05	.05	.030	<10	N	N	N
J1041240	36 58 27	94 51 20	.10	.02	<.05	.010	N	N	N	N
J1041250	36 58 27	94 51 20	.50	.10	.10	.020	<10	N	N	N
J1041260	36 58 27	94 51 20	.70	.05	<.05	.020	<10	N	N	N
J1041270	36 58 27	94 51 20	.30	.03	<.05	.010	N	N	N	N
J1041280	36 58 27	94 51 20	.10	.02	<.05	.010	N	N	N	N
J1041290	36 58 27	94 51 20	.10	.02	.05	.015	N	N	N	N
J1041300	36 58 27	94 51 20	.05	.02	N	.010	N	N	N	N
J1041310	36 58 27	94 51 20	.10	.03	.05	.007	N	N	N	N
J1041320	36 58 27	94 51 20	.05	.05	.10	.007	N	N	N	N
J1041330	36 58 27	94 51 20	.15	.15	.20	.007	<10	N	N	N
J1041340	36 58 27	94 51 20	1.50	.05	.05	.015	N	<.5	200	N
J1041350	36 58 27	94 51 20	3.00	.07	.05	.015	<10	<.5	300	N
J1041360	36 58 27	94 51 20	1.00	.05	.05	.020	10	N	N	N
J1041370	36 58 27	94 51 20	1.50	.50	.50	.050	10	N	N	N
J1041380	36 58 27	94 51 20	1.00	.50	.30	.030	10	N	N	N
J1041390	36 58 27	94 51 20	.20	.03	.05	.007	<10	N	N	N
J1041400	36 58 27	94 51 20	2.00	.03	.07	.030	15	<.5	N	N
J1041410	36 58 27	94 51 20	2.00	.30	.30	.050	15	<.5	N	N
J1041420	36 58 27	94 51 20	1.50	.70	.70	.020	<10	N	N	N
J1041430	36 58 27	94 51 20	7.00	.15	.15	.030	30	.5	N	N
J1041440	36 58 27	94 51 20	10.00	.30	.05	.015	50	.5	N	N
J1041450	36 58 27	94 51 20	10.00	.20	.05	.070	100	.7	N	N
J1041460	36 58 27	94 51 20	10.00	.20	.05	.070	70	.5	N	N
J1041470	36 58 27	94 51 20	15.00	.15	.05	.020	100	<.5	N	N
J1041480	36 58 27	94 51 20	15.00	.70	.05	.150	150	.7	N	N
J1041490	36 58 27	94 51 20	15.00	1.00	.05	.300	100	1.0	N	N
J1041500	36 58 27	94 51 20	10.00	.70	.05	.200	100	.7	N	N
J1041510	36 58 27	94 51 20	15.00	.70	.05	.150	70	1.0	N	N
J1041520	36 58 27	94 51 20	10.00	.70	<.05	.100	50	.7	N	N
J1041530	36 58 27	94 51 20	10.00	.50	.10	.070	70	1.0	N	N
J1041540	36 58 27	94 51 20	15.00	.07	<.05	.050	50	1.0	N	N
J1041550	36 58 27	94 51 20	10.00	.20	.05	.150	30	.5	N	N
J1041560	36 58 27	94 51 20	7.00	.30	.05	.200	20	<.5	N	N
J1041570	36 58 27	94 51 20	5.00	.07	N	.100	15	<.5	N	N
J1041580	36 58 27	94 51 20	5.00	.15	<.05	.200	15	<.5	N	N
J1041590	36 58 27	94 51 20	3.00	.15	.05	.100	10	<.5	N	N
J1041600	36 58 27	94 51 20	2.00	.15	N	.200	10	N	N	N
J1041610	36 58 27	94 51 20	1.50	.20	<.05	.200	15	<.5	N	N
J1041620	36 58 27	94 51 20	2.00	.50	.05	.300	15	<.5	N	N
J1041630	36 58 27	94 51 20	1.50	.10	<.05	.150	10	N	N	N
J1041640	36 58 27	94 51 20	1.00	.07	N	.150	<10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1041200	15	20	N	N	N	N	N	10	N	N	N	<5
J1041210	15	<20	N	N	N	N	N	<5	N	N	N	<5
J1041220	50	50	N	N	N	N	N	N	N	N	N	N
J1041230	30	50	N	N	N	N	N	5	N	5	N	<5
J1041240	50	30	N	N	N	N	N	<5	N	10	N	5
J1041250	50	50	N	N	N	N	N	10	N	20	N	15
J1041260	50	50	N	N	N	N	N	5	N	70	N	10
J1041270	70	70	N	N	N	N	N	<5	N	15	N	10
J1041280	50	50	N	N	N	N	N	N	N	<5	N	<5
J1041290	70	50	N	N	N	N	N	<5	N	<5	N	<5
J1041300	50	30	N	N	N	N	N	N	N	N	N	<5
J1041310	30	<20	N	N	N	N	N	N	N	N	N	N
J1041320	30	20	N	N	N	N	N	N	N	N	N	<5
J1041330	30	30	N	N	N	N	N	N	N	5	N	<5
J1041340	70	30	N	N	N	5	N	15	N	30	N	20
J1041350	100	30	N	N	N	10	N	50	N	70	N	30
J1041360	50	30	N	N	N	<5	N	10	N	20	N	15
J1041370	70	70	N	N	N	<5	N	10	N	30	N	15
J1041380	50	30	N	N	N	N	N	5	N	15	N	10
J1041390	30	<20	N	N	N	N	N	<5	N	N	N	5
J1041400	20	50	N	N	N	N	N	10	N	<5	N	15
J1041410	50	50	N	N	N	N	N	10	N	<5	N	15
J1041420	50	20	N	N	N	N	N	10	N	<5	N	10
J1041430	70	70	N	N	N	<5	N	20	N	N	N	20
J1041440	150	70	<1.0	N	N	5	N	50	N	N	N	20
J1041450	50	30	<1.0	N	N	10	10	100	N	15	N	70
J1041460	50	70	<1.0	N	N	7	10	100	N	10	N	50
J1041470	10	<20	N	N	N	5	30	50	N	15	N	30
J1041480	300	70	2.0	N	N	10	50	70	N	15	N	70
J1041490	200	70	5.0	N	N	15	30	70	N	20	N	70
J1041500	200	70	3.0	N	N	10	50	70	N	15	N	70
J1041510	200	50	2.0	N	N	15	30	70	N	15	N	100
J1041520	150	30	2.0	N	N	10	30	70	N	15	N	50
J1041530	100	150	1.0	N	N	10	20	70	N	<5	N	70
J1041540	10	200	<1.0	N	N	10	20	70	N	10	N	50
J1041550	50	500	1.0	N	N	10	10	30	50	15	N	50
J1041560	30	500	1.0	N	N	10	<10	20	70	15	N	50
J1041570	10	500	<1.0	N	N	N	N	15	N	10	N	20
J1041580	20	700	1.0	N	N	5	<10	15	50	10	N	30
J1041590	15	500	<1.0	N	N	N	N	10	N	<5	N	15
J1041600	15	500	1.0	N	N	N	N	7	N	5	N	10
J1041610	50	700	3.0	N	N	5	<10	5	N	5	N	10
J1041620	50	1,000	3.0	N	N	5	<10	5	20	5	N	5
J1041630	30	700	2.0	N	N	5	N	7	N	<5	N	5
J1041640	30	700	1.0	N	N	5	N	5	N	5	N	7

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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 #
J1041200	N	N	N	N	N	N	<50	N	N	N	N	68
J1041210	N	N	N	N	N	N	<50	N	N	N	N	68
J1041220	N	N	N	N	N	N	<50	N	N	N	N	68
J1041230	N	N	N	N	N	10	<50	N	N	<10	N	68
J1041240	N	N	N	N	N	<10	<50	N	300	N	N	68
J1041250	N	N	N	N	N	<10	<50	N	N	<10	N	68
J1041260	N	N	N	N	N	10	<50	N	N	10	N	68
J1041270	N	N	N	N	N	<10	<50	N	N	10	N	68
J1041280	N	N	N	N	N	N	<50	N	N	N	N	68
J1041290	N	N	N	N	N	N	<50	N	N	N	N	68
J1041300	N	N	N	N	N	N	<50	N	N	N	N	68
J1041310	N	N	N	N	N	N	<50	N	N	N	N	68
J1041320	N	N	N	N	N	N	<50	N	N	N	N	68
J1041330	N	N	N	N	N	N	<50	N	N	N	N	68
J1041340	N	N	N	N	N	10	<50	N	N	15	N	68
J1041350	10	N	N	N	N	10	<50	N	N	15	N	68
J1041360	N	N	N	N	N	10	<50	N	N	15	N	68
J1041370	N	N	N	N	N	10	<50	N	N	20	N	68
J1041380	N	N	N	N	N	<10	<50	N	N	<10	N	68
J1041390	10	N	N	N	N	N	<50	N	N	15	N	69
J1041400	N	N	N	N	N	N	<50	N	N	70	N	69
J1041410	N	N	N	N	N	10	<50	N	N	10	N	69
J1041420	N	N	N	N	N	N	<50	N	N	30	N	81
J1041430	30	N	N	N	N	<10	<50	N	<200	70	N	81
J1041440	10	N	N	N	N	<10	<50	N	<200	<10	N	81
J1041450	50	N	N	N	N	10	<50	N	200	70	N	81
J1041460	30	N	N	N	N	10	<50	N	1,000	100	N	81
J1041470	70	N	N	N	N	<10	<50	N	700	10	N	81
J1041480	70	N	<5	70	N	50	<50	N	1,500	50	N	81
J1041490	300	N	5	N	N	70	<50	10	<200	100	N	81
J1041500	100	N	5	N	N	50	<50	10	200	150	N	81
J1041510	200	N	<5	N	N	50	<50	N	300	70	N	83
J1041520	150	N	N	N	N	50	<50	N	200	50	N	83
J1041530	100	N	N	N	N	30	<50	N	200	20	N	83
J1041540	100	N	N	N	N	<10	<50	N	<200	30	N	83
J1041550	100	N	N	N	N	10	<50	15	200	100	N	71
J1041560	100	N	N	N	N	10	<50	15	300	100	N	71
J1041570	70	N	N	N	N	<10	<50	N	<200	150	N	71
J1041580	50	N	N	N	100	10	<50	20	200	200	N	71
J1041590	30	N	N	N	N	<10	<50	<10	<200	150	N	71
J1041600	30	N	N	N	N	10	<50	20	N	200	N	71
J1041610	50	N	N	N	N	15	<50	20	N	200	N	71
J1041620	100	N	N	N	100	15	<50	30	N	300	N	71
J1041630	30	N	N	N	N	<10	<50	15	N	200	N	71
J1041640	20	N	N	N	N	<10	<50	15	N	500	N	71

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1041650	36 58 27	94 51 20	1.00	.10	N	.200	10	N	N	N
J1041660	36 58 27	94 51 20	1.00	.15	N	.150	10	N	N	N
J1041670	36 58 27	94 51 20	.50	.07	N	.100	<10	N	N	N
J1041680	36 58 27	94 51 20	.30	.02	N	.070	<10	N	N	N
J1041690	36 58 27	94 51 20	.50	.05	<.05	.070	<10	N	N	N
J1041700	36 58 27	94 51 20	.10	.02	N	.050	<10	N	N	N
J1041710	36 58 27	94 51 20	.20	.03	<.05	.070	<10	N	N	N
J1041720	36 58 27	94 51 20	.30	.05	<.05	.070	<10	N	N	N
J1041730	36 58 27	94 51 20	.50	.03	<.05	.070	<10	N	N	N
J1041740	36 58 27	94 51 20	.07	<.02	<.05	.020	<10	N	N	N
J1041750	36 58 27	94 51 20	.05	.02	<.05	.020	<10	N	N	N
J1041760	36 58 27	94 51 20	.15	.02	N	.030	<10	N	N	N
J1041770	36 58 27	94 51 20	1.50	.05	<.05	.100	10	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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
J1041650	50	700	2.0	N	N	5	N	<5	N	5	N	5
J1041660	30	700	1.5	N	N	5	N	<5	N	<5	N	<5
J1041670	30	700	1.0	N	N	<5	N	N	N	<5	N	<5
J1041680	20	300	1.0	N	N	N	N	<5	N	<5	N	5
J1041690	20	500	1.0	N	N	N	N	<5	N	<5	N	7
J1041700	15	150	<1.0	N	N	N	N	<5	N	N	N	<5
J1041710	15	200	1.0	N	N	N	N	N	N	N	N	N
J1041720	20	200	1.0	N	N	N	N	<5	N	<5	N	5
J1041730	20	200	<1.0	N	N	N	N	<5	N	<5	N	10
J1041740	10	70	N	N	N	N	N	N	N	N	N	<5
J1041750	10	20	N	N	N	N	N	N	N	N	N	N
J1041760	15	<20	N	N	N	N	N	N	N	N	N	N
J1041770	50	150	<1.0	N	N	N	N	5	20	N	N	N

TABLE 2--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 104, 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 #
J1041650	10	N	N	N	100	<10	<50	15	300	300	N	71
J1041660	20	N	N	N	100	<10	<50	20	N	500	N	71
J1041670	10	N	N	N	N	<10	<50	N	N	200	N	89
J1041680	10	N	N	N	N	<10	<50	N	N	300	N	89
J1041690	N	N	N	N	N	<10	<50	N	N	150	N	89
J1041700	N	N	N	N	N	N	<50	N	N	100	N	89
J1041710	N	N	N	N	N	N	<50	10	N	150	N	89
J1041720	70	N	N	N	N	N	<50	N	N	200	N	89
J1041730	50	N	N	30	N	<10	<50	N	N	150	N	89
J1041740	N	N	N	N	N	N	<50	N	N	300	N	85
J1041750	N	N	N	N	N	N	<50	10	N	300	N	85
J1041760	N	N	N	N	N	N	<50	N	N	200	N	85
J1041770	N	N	N	N	N	<10	<50	10	N	200	N	85

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1050450	37 0 42	94 50 27	5.00	.70	.20	.700	150	N	N	N
J1050460	37 0 42	94 50 27	7.00	1.00	.30	.700	300	N	N	N
J1050470	37 0 42	94 50 27	7.00	.50	.15	.300	150	N	N	N
J1050480	37 0 42	94 50 27	3.00	.20	<.05	.300	10	N	N	N
J1050490	37 0 42	94 50 27	3.00	.30	.05	.500	100	N	N	N
J1050500	37 0 42	94 50 27	5.00	.50	<.05	.300	100	N	N	N
J1050510	37 0 42	94 50 27	2.00	.20	.20	.200	150	N	N	N
J1050520	37 0 42	94 50 27	3.00	.70	.07	.300	30	N	N	N
J1050530	37 0 42	94 50 27	2.00	.70	.05	.300	10	N	N	N
J1050540	37 0 42	94 50 27	.50	.10	<.05	.070	<10	N	N	N
J1050551	37 0 42	94 50 27	.10	.02	N	.030	N	N	N	N
J1050560	37 0 42	94 50 27	.20	.03	N	.030	N	N	N	N
J1050571	37 0 42	94 50 27	.20	.03	N	.050	N	N	N	N
J1050580	37 0 42	94 50 27	.05	<.02	N	.020	N	N	N	N
J1050589	37 0 42	94 50 27	.30	.03	<.05	.030	<10	N	N	N
J1050600	37 0 42	94 50 27	.15	<.02	N	.030	N	N	N	N
J1050611	37 0 42	94 50 27	.20	.05	<.05	.070	N	N	N	N
J1050620	37 0 42	94 50 27	1.00	.15	.05	.070	<10	<.5	N	N
J1050630	37 0 42	94 50 27	.15	.03	<.05	.030	N	N	N	N
J1050640	37 0 42	94 50 27	.10	.02	N	.015	N	N	N	N
J1050650	37 0 42	94 50 27	.05	<.02	N	.015	N	N	N	N
J1050660	37 0 42	94 50 27	.30	.02	<.05	.030	N	N	N	N
J1050669	37 0 42	94 50 27	.30	.05	<.05	.030	<10	N	N	N
J1050680	37 0 42	94 50 27	.70	.05	<.05	.050	10	N	N	N
J1050690	37 0 42	94 50 27	.50	.02	<.05	.020	10	N	N	N
J1050700	37 0 42	94 50 27	.15	<.02	N	.010	N	N	N	N
J1050711	37 0 42	94 50 27	.20	.02	<.05	.030	<10	N	N	N
J1050720	37 0 42	94 50 27	.10	<.02	<.05	.007	N	N	N	N
J1050730	37 0 42	94 50 27	.05	<.02	N	.007	N	N	N	N
J1050740	37 0 42	94 50 27	.07	.02	<.05	.015	N	N	N	N
J1050750	37 0 42	94 50 27	.20	.07	.15	.030	15	N	N	N
J1050760	37 0 42	94 50 27	.70	.02	.15	.020	20	N	N	N
J1050770	37 0 42	94 50 27	.50	.02	.20	.020	15	N	N	N
J1050780	37 0 42	94 50 27	.50	.05	.20	.030	15	N	N	N
J1050790	37 0 42	94 50 27	.70	.02	.15	.020	30	N	N	N
J1050800	37 0 42	94 50 27	.50	.05	.20	.020	10	N	N	N
J1050810	37 0 42	94 50 27	.70	.05	.15	.030	30	N	N	N
J1050820	37 0 42	94 50 27	1.50	.15	.20	.020	20	<.5	N	N
J1050830	37 0 42	94 50 27	.50	.20	.20	.020	<10	N	N	N
J1050840	37 0 42	94 50 27	.20	.15	.15	.020	N	N	N	N
J1050850	37 0 42	94 50 27	.20	.20	.30	.030	N	N	N	N
J1050860	37 0 42	94 50 27	.70	.20	.15	.070	N	N	N	N
J1050870	37 0 42	94 50 27	.20	.07	.05	.030	<10	N	N	N
J1050880	37 0 42	94 50 27	1.00	.20	.15	.070	15	N	N	N
J1050890	37 0 42	94 50 27	1.50	.07	.05	.050	20	<.5	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1050450	300	150	7.0	N	N	15	100	20	70	N	<20	30
J1050460	200	200	5.0	N	N	20	100	30	70	N	<20	70
J1050470	150	100	2.0	N	N	15	70	20	20	N	N	50
J1050480	70	150	1.0	N	N	5	50	15	N	N	N	30
J1050490	100	150	2.0	N	N	10	100	10	N	N	N	30
J1050500	150	100	5.0	N	N	7	100	15	N	N	N	50
J1050510	70	70	1.5	N	N	<5	30	7	N	N	N	15
J1050520	70	70	5.0	N	N	7	50	20	20	N	N	30
J1050530	50	70	3.0	N	N	5	30	15	N	N	N	20
J1050540	30	50	<1.0	N	N	N	15	<5	N	N	N	<5
J1050551	15	30	N	N	N	N	N	N	N	N	N	N
J1050560	15	20	N	N	N	N	<10	N	N	N	N	<5
J1050571	15	20	N	N	N	N	10	<5	N	N	N	5
J1050580	10	<20	N	N	N	N	N	N	N	N	N	<5
J1050589	15	30	N	N	N	N	10	N	N	N	N	7
J1050600	15	20	N	N	N	N	N	N	N	N	N	<5
J1050611	15	20	<1.0	N	N	N	10	<5	N	N	N	5
J1050620	30	30	2.0	N	N	<5	30	5	N	<5	N	15
J1050630	20	50	N	N	N	<5	N	N	N	N	N	N
J1050640	15	30	N	N	N	N	N	N	N	N	N	N
J1050650	15	<20	N	N	N	<5	N	N	N	N	N	N
J1050660	30	20	N	N	N	N	N	7	N	N	N	<5
J1050669	50	20	N	N	20	N	<10	15	N	N	N	<5
J1050680	30	20	N	N	N	N	<10	<5	N	N	N	<5
J1050690	50	20	N	N	N	N	<10	<5	N	<5	N	<5
J1050700	20	<20	N	N	N	N	N	N	N	N	N	<5
J1050711	50	20	N	N	N	N	<10	10	N	<5	N	<5
J1050720	30	<20	N	N	N	N	N	N	N	N	N	5
J1050730	20	<20	N	N	N	N	N	N	N	N	N	<5
J1050740	20	<20	N	N	N	N	N	N	N	N	N	<5
J1050750	70	30	N	N	N	N	N	N	N	N	N	5
J1050760	30	20	N	N	N	N	N	<5	N	N	N	10
J1050770	50	20	N	N	N	5	N	<5	N	N	N	30
J1050780	30	50	N	N	N	<5	N	<5	N	N	N	15
J1050790	20	<20	N	N	N	<5	N	<5	N	N	N	30
J1050800	30	30	N	N	N	N	N	N	N	N	N	10
J1050810	20	20	N	N	N	N	N	7	N	N	N	15
J1050820	50	50	N	N	N	5	N	15	N	<5	N	30
J1050830	30	30	N	N	N	N	N	N	N	N	N	5
J1050840	30	30	N	N	N	N	N	N	N	N	N	<5
J1050850	30	50	N	N	N	N	N	N	N	N	N	5
J1050860	30	70	N	N	N	N	N	10	N	N	N	10
J1050870	50	100	N	N	N	N	N	5	N	N	N	7
J1050880	70	100	N	N	N	N	<10	15	N	<5	N	10
J1050890	100	70	N	N	N	N	<10	15	N	N	N	20

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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 #
J1050450	30	N	15	N	N	150	N	30	N	150	N	40
J1050460	50	N	15	N	N	100	N	30	N	300	N	40
J1050470	300	N	7	N	N	70	N	15	N	150	N	40
J1050480	7,000	N	<5	N	N	50	N	<10	500	300	N	40
J1050490	300	N	7	N	N	70	N	10	N	200	N	40
J1050500	5,000	N	10	N	N	70	N	10	300	150	N	40
J1050510	3,000	N	<5	N	N	30	N	N	<200	100	N	40
J1050520	1,500	N	7	N	N	50	N	10	<200	150	N	40
J1050530	300	N	7	N	N	50	N	10	N	100	N	40
J1050540	N	N	N	N	N	15	N	N	N	50	N	40
J1050551	N	N	N	N	N	<10	N	N	N	10	N	40
J1050560	10	N	N	N	N	<10	N	N	N	15	N	40
J1050571	30	N	N	N	N	10	N	N	N	20	N	40
J1050580	N	N	N	N	N	<10	N	N	N	10	N	40
J1050589	10	N	N	N	N	10	N	N	N	10	N	40
J1050600	N	N	N	N	N	<10	N	N	N	10	N	40
J1050611	N	N	N	N	N	20	N	N	N	30	N	40
J1050620	N	N	N	N	N	30	N	N	N	20	N	40
J1050630	10	N	N	N	N	<10	N	N	N	15	N	40
J1050640	N	N	N	N	N	N	N	N	N	N	N	40
J1050650	N	N	N	N	N	N	N	N	N	<10	N	40
J1050660	10	N	N	N	N	10	N	N	N	10	N	40
J1050669	N	N	N	N	N	10	N	N	7,000	10	N	40
J1050680	N	N	N	N	N	20	N	N	<200	20	N	40
J1050690	N	N	N	N	N	10	N	N	N	10	N	40
J1050700	30	N	N	N	N	<10	N	N	300	N	N	40
J1050711	N	N	N	N	N	10	N	N	<200	<10	N	40
J1050720	N	N	N	N	N	<10	N	N	<200	N	N	40
J1050730	N	N	N	N	N	<10	N	N	N	N	N	40
J1050740	N	N	N	N	N	<10	N	N	N	<10	N	40
J1050750	N	N	N	N	N	15	N	N	N	<10	N	40
J1050760	N	N	N	N	N	10	N	N	N	10	N	40
J1050770	10	N	N	N	N	<10	N	N	N	<10	N	40
J1050780	N	N	N	N	N	10	N	N	N	<10	N	40
J1050790	N	N	N	N	N	<10	N	N	N	<10	N	40
J1050800	N	N	N	N	N	10	N	N	N	<10	N	40
J1050810	N	N	N	N	N	10	N	N	N	30	N	40
J1050820	N	N	N	N	N	10	N	N	<200	10	N	40
J1050830	N	N	N	N	N	<10	N	N	N	<10	N	65
J1050840	N	N	N	N	N	<10	N	N	N	<10	N	65
J1050850	15	N	N	N	N	<10	N	N	N	10	N	65
J1050860	N	N	N	N	N	10	N	N	N	15	N	65
J1050870	N	N	N	N	N	<10	N	N	N	50	N	65
J1050880	30	N	N	N	N	10	N	N	N	30	N	65
J1050890	N	N	N	N	N	10	N	N	N	20	N	65

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1050900	37 0 42	94 50 27	1.50	.15	.15	.020	<10	<.5	N	N
J1050910	37 0 42	94 50 27	.70	.05	.05	.030	10	<.5	N	N
J1050920	37 0 42	94 50 27	3.00	.03	<.05	.020	10	.5	N	N
J1050930	37 0 42	94 50 27	.70	.05	<.05	.030	<10	<.5	N	N
J1050940	37 0 42	94 50 27	1.00	.10	.05	.030	10	<.5	N	N
J1050950	37 0 42	94 50 27	1.50	.02	<.05	.020	<10	<.5	N	N
J1050960	37 0 42	94 50 27	1.50	.03	<.05	.020	15	<.5	N	N
J1050970	37 0 42	94 50 27	.70	.02	<.05	.015	<10	N	N	N
J1050980	37 0 42	94 50 27	3.00	.30	.05	.100	20	<.5	N	N
J1050990	37 0 42	94 50 27	.50	.03	.05	.020	<10	N	N	N
J1051000	37 0 42	94 50 27	.70	.07	.10	.030	10	N	N	N
J1051010	37 0 42	94 50 27	1.50	.05	<.05	.020	10	<.5	N	N
J1051020	37 0 42	94 50 27	.30	.07	.05	.007	N	N	N	N
J1051030	37 0 42	94 50 27	.30	.15	.10	.010	<10	N	N	N
J1051040	37 0 42	94 50 27	.10	.20	.20	.010	N	N	N	N
J1051050	37 0 42	94 50 27	.70	.05	<.05	.010	N	N	N	N
J1051060	37 0 42	94 50 27	1.00	.07	<.05	.070	15	N	N	N
J1051070	37 0 42	94 50 27	.30	.07	.05	.020	10	.7	N	N
J1051080	37 0 42	94 50 27	.15	<.02	<.05	.010	<10	N	N	N
J1051090	37 0 42	94 50 27	.70	.07	.10	.070	10	N	N	N
J1051100	37 0 42	94 50 27	.10	.02	<.05	.010	<10	N	N	N
J1051110	37 0 42	94 50 27	.50	.05	.07	.030	10	N	N	N
J1051130	37 0 42	94 50 27	.20	.02	.05	.020	10	N	N	N
J1051140	37 0 42	94 50 27	.50	.03	.07	.020	10	N	N	N
J1051150	37 0 42	94 50 27	.10	.03	.05	.020	10	N	N	N
J1051160	37 0 42	94 50 27	.20	.05	.10	.020	10	N	N	N
J1051170	37 0 42	94 50 27	.20	.02	.05	.030	10	N	N	N
J1051180	37 0 42	94 50 27	.05	.07	.10	.010	<10	N	N	N
J1051190	37 0 42	94 50 27	.50	.07	.07	.015	10	N	N	N
J1051200	37 0 42	94 50 27	.15	.02	<.05	.010	<10	N	N	N
J1051210	37 0 42	94 50 27	.70	.15	.20	.030	10	N	N	N
J1051220	37 0 42	94 50 27	.20	.02	.05	.020	<10	N	N	N
J1051230	37 0 42	94 50 27	.30	<.02	<.05	.007	<10	N	N	N
J1051240	37 0 42	94 50 27	.20	.02	.05	.020	10	N	N	N
J1051260	37 0 42	94 50 27	.70	.07	.05	.070	15	N	N	N
J1051270	37 0 42	94 50 27	.30	.03	.05	.050	10	N	N	N
J1051280	37 0 42	94 50 27	.70	.05	<.05	.050	15	N	N	N
J1051290	37 0 42	94 50 27	.10	<.02	N	.015	10	N	N	N
J1051300	37 0 42	94 50 27	.20	<.02	<.05	.010	10	N	N	N
J1051310	37 0 42	94 50 27	.20	.02	<.05	.010	<10	N	N	N
J1051320	37 0 42	94 50 27	.10	.02	<.05	.002	<10	N	N	N
J1051330	37 0 42	94 50 27	.15	<.02	.05	.003	10	N	N	N
J1051340	37 0 42	94 50 27	.50	.02	.10	.007	10	N	N	N
J1051350	37 0 42	94 50 27	.20	.02	.05	.007	10	N	N	N
J1051360	37 0 42	94 50 27	.15	.02	<.05	.010	<10	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1050900	50	50	N	N	N	N	N	15	N	N	N	10
J1050910	70	50	N	N	N	N	N	10	N	N	N	15
J1050920	50	30	N	N	N	N	N	20	N	<5	N	30
J1050930	100	50	N	N	N	N	N	7	N	N	N	10
J1050940	70	50	N	N	N	N	N	15	N	N	N	15
J1050950	50	30	N	N	N	N	N	15	N	N	N	15
J1050960	100	70	N	N	N	N	N	15	N	N	N	10
J1050970	100	70	N	N	N	N	N	7	N	N	N	7
J1050980	150	70	<1.0	N	N	N	<10	20	N	<5	N	15
J1050990	50	150	N	N	N	N	N	5	N	N	N	5
J1051000	70	100	N	N	N	N	N	7	N	5	N	10
J1051010	50	50	N	N	N	N	N	15	N	N	N	15
J1051020	70	50	N	N	N	N	N	5	N	N	N	<5
J1051030	100	70	N	N	N	N	N	<5	N	N	N	<5
J1051040	70	20	N	N	N	N	N	N	N	N	N	<5
J1051050	50	20	N	N	N	N	N	7	N	<5	N	5
J1051060	70	70	N	N	N	N	N	10	N	5	N	10
J1051070	70	50	N	N	N	N	N	5	N	<5	N	5
J1051080	50	50	N	N	N	N	N	<5	N	N	N	<5
J1051090	70	70	<1.0	N	N	N	N	5	N	N	N	10
J1051100	50	30	N	N	N	N	N	<5	N	N	N	<5
J1051110	50	100	N	N	N	N	N	10	N	N	N	5
J1051130	30	50	N	N	N	N	N	<5	N	N	N	<5
J1051140	20	30	N	N	N	N	N	5	N	N	N	5
J1051150	30	50	N	N	N	N	N	<5	N	N	N	<5
J1051160	50	70	N	N	N	N	N	<5	N	<5	N	<5
J1051170	50	50	N	N	N	N	N	<5	N	N	N	<5
J1051180	50	30	N	N	N	N	N	N	N	N	N	N
J1051190	70	20	N	N	N	N	N	5	N	N	N	<5
J1051200	50	20	N	N	N	N	N	<5	N	N	N	<5
J1051210	30	70	N	N	N	N	N	5	N	5	N	5
J1051220	30	50	N	N	N	N	N	<5	N	N	N	<5
J1051230	20	<20	N	N	N	N	N	7	N	N	N	<5
J1051240	20	20	N	N	N	N	N	<5	N	N	N	<5
J1051260	70	30	<1.0	N	N	N	N	10	N	<5	N	10
J1051270	50	100	<1.0	N	N	N	N	5	N	<5	N	<5
J1051280	30	30	<1.0	N	N	N	N	15	N	5	N	7
J1051290	10	20	N	N	N	N	N	N	N	N	N	N
J1051300	15	<20	N	N	N	N	N	<5	N	N	N	<5
J1051310	20	<20	N	N	N	N	N	<5	N	N	N	5
J1051320	30	20	N	N	N	N	N	N	N	N	N	N
J1051330	30	20	N	N	N	N	N	N	N	N	N	N
J1051340	20	20	N	N	N	N	N	N	N	N	N	<5
J1051350	10	<20	N	N	N	N	N	N	N	N	N	<5
J1051360	15	20	N	N	N	N	N	N	N	N	N	<5

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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 #
J1050900	N	N	N	N	N	<10	N	N	N	30	N	65
J1050910	N	N	N	N	N	<10	N	N	N	10	N	65
J1050920	150	N	N	N	N	<10	N	N	N	50	N	65
J1050930	N	N	N	N	N	N	N	N	N	10	N	65
J1050940	N	N	N	N	N	<10	N	N	N	10	N	65
J1050950	N	N	N	N	N	N	N	N	N	10	N	65
J1050960	N	N	N	N	N	N	N	N	N	15	N	65
J1050970	N	N	N	N	N	N	N	N	N	15	N	65
J1050980	20	N	N	N	N	15	N	N	N	70	N	65
J1050990	10	N	N	N	N	<10	N	N	N	15	N	65
J1051000	N	N	N	N	N	<10	N	N	N	15	N	65
J1051010	<10	N	N	N	N	N	N	N	<200	15	N	65
J1051020	N	N	N	N	N	N	N	N	N	15	N	65
J1051030	N	N	N	N	N	N	N	N	N	10	N	65
J1051040	N	N	N	N	N	N	N	N	N	N	N	65
J1051050	N	N	N	N	N	N	N	N	N	N	N	65
J1051060	N	N	N	N	N	<10	N	N	N	20	N	65
J1051070	N	N	N	N	N	N	N	N	N	10	N	66
J1051080	N	N	N	N	N	N	N	N	N	N	N	66
J1051090	N	N	N	N	N	10	N	N	N	15	N	66
J1051100	N	N	N	N	N	N	N	N	N	N	N	66
J1051110	N	N	N	N	N	<10	N	N	200	20	N	66
J1051130	30	N	N	N	N	<10	N	N	<200	10	N	66
J1051140	150	N	N	N	N	<10	N	N	N	10	N	66
J1051150	20	N	N	N	N	<10	N	N	N	10	N	66
J1051160	70	N	N	N	N	<10	N	N	N	10	N	66
J1051170	20	N	N	N	N	<10	N	N	<200	15	N	66
J1051180	N	N	N	N	N	<10	N	N	<200	N	N	66
J1051190	<10	N	N	N	N	<10	N	N	N	10	N	66
J1051200	10	N	N	N	N	<10	N	N	N	10	N	66
J1051210	30	N	N	N	N	<10	N	N	<200	20	N	66
J1051220	N	N	N	N	N	<10	N	N	<200	15	N	66
J1051230	20	N	N	N	N	N	N	N	<200	N	N	66
J1051240	N	N	N	N	N	<10	N	N	N	10	N	66
J1051260	20	N	N	N	N	15	N	N	<200	20	N	66
J1051270	N	N	N	N	N	10	N	N	<200	70	N	66
J1051280	N	N	N	N	N	10	N	N	<200	20	N	66
J1051290	N	N	N	N	N	<10	N	N	N	50	N	67
J1051300	N	N	N	N	N	N	N	N	<200	10	N	67
J1051310	<10	N	N	N	N	N	N	N	<200	15	N	67
J1051320	N	N	N	N	N	N	N	N	<200	N	N	67
J1051330	N	N	N	N	N	N	N	N	<200	20	N	67
J1051340	N	N	N	N	N	N	N	N	<200	10	N	67
J1051350	N	N	N	N	N	N	N	N	<200	15	N	67
J1051360	N	N	N	N	N	N	N	N	<200	30	N	67

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1051370	37 0 42	94 50 27	.50	.02	<.05	.010	<10	N	N	N
J1051380	37 0 42	94 50 27	.30	.02	<.05	.007	10	N	N	N
J1051390	37 0 42	94 50 27	.70	.03	.05	.015	10	N	N	N
J1051400	37 0 42	94 50 27	.10	<.02	<.05	.003	N	N	N	N
J1051410	37 0 42	94 50 27	.20	.02	<.05	.010	<10	N	N	N
J1051420	37 0 42	94 50 27	.50	.05	<.05	.020	<10	N	N	N
J1051430	37 0 42	94 50 27	.30	<.02	<.05	.015	<10	N	N	N
J1051440	37 0 42	94 50 27	1.00	.05	<.05	.030	15	.5	N	N
J1051450	37 0 42	94 50 27	.20	<.02	<.05	.005	<10	N	N	N
J1051460	37 0 42	94 50 27	.20	<.02	<.05	.007	<10	N	N	N
J1051470	37 0 42	94 50 27	.30	.02	<.05	.002	<10	N	N	N
J1051480	37 0 42	94 50 27	.50	.03	<.05	.010	<10	N	N	N
J1051490	37 0 42	94 50 27	.50	.02	<.05	.010	<10	N	N	N
J1051500	37 0 42	94 50 27	.70	<.02	<.05	.005	<10	<.5	N	N
J1051510	37 0 42	94 50 27	.15	<.02	<.05	.002	N	N	N	N
J1051520	37 0 42	94 50 27	.10	<.02	N	.005	N	N	N	N
J1051530	37 0 42	94 50 27	.30	<.02	<.05	.007	10	N	N	N
J1051540	37 0 42	94 50 27	.20	.02	<.05	.010	<10	N	N	N
J1051550	37 0 42	94 50 27	.30	<.02	<.05	.002	<10	N	N	N
J1051560	37 0 42	94 50 27	.20	.02	.05	.005	<10	N	N	N
J1051570	37 0 42	94 50 27	.15	<.02	N	.007	N	N	N	N
J1051580	37 0 42	94 50 27	3.00	.30	.20	.200	200	<.5	N	N
J1051590	37 0 42	94 50 27	1.50	.02	.05	.030	15	<.5	N	N
J1051600	37 0 42	94 50 27	1.00	.05	.05	.050	30	N	N	N
J1051610	37 0 42	94 50 27	.50	.02	<.05	.010	10	N	N	N
J1051620	37 0 42	94 50 27	.70	<.02	N	.007	10	N	N	N
J1051630	37 0 42	94 50 27	.50	.02	.05	.005	<10	<.5	N	N
J1051640	37 0 42	94 50 27	.50	.02	.07	.003	10	N	N	N
J1051650	37 0 42	94 50 27	1.50	<.02	<.05	.002	20	<.5	N	N
J1051660	37 0 42	94 50 27	5.00	.05	.05	.010	50	.5	N	N
J1051668	37 0 42	94 50 27	7.00	.10	<.05	.030	10	.7	N	N
J1051678	37 0 42	94 50 27	>20.00	.70	<.05	.200	150	7.0	<200	N
J1051687	37 0 42	94 50 27	>20.00	<.02	N	.015	700	10.0	N	N
J1051696	37 0 42	94 50 27	20.00	.10	<.05	.020	150	3.0	N	N
J1051706	37 0 42	94 50 27	20.00	.50	<.05	.150	300	2.0	N	N
J1051716	37 0 42	94 50 27	20.00	1.50	.05	.300	300	3.0	200	N
J1051725	37 0 42	94 50 27	10.00	.50	.05	.100	30	1.0	700	N
J1051735	37 0 42	94 50 27	2.00	.07	<.05	.010	10	<.5	<200	N
J1051745	37 0 42	94 50 27	20.00	.30	.05	.050	200	3.0	700	N
J1051753	37 0 42	94 50 27	1.00	.05	<.05	.007	N	<.5	N	N
J1051763	37 0 42	94 50 27	.50	.20	.30	.050	<10	N	N	N
J1051773	37 0 42	94 50 27	7.00	.70	.10	.300	20	.5	N	N
J1051782	37 0 42	94 50 27	7.00	1.50	.50	.700	50	.5	N	N
J1051793	37 0 42	94 50 27	7.00	1.00	.10	.500	30	.5	N	N
J1051801	37 0 42	94 50 27	7.00	.70	.15	.300	20	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1051370	10	<20	N	N	N	N	N	<5	N	N	N	<5
J1051380	15	20	N	N	N	N	N	10	N	N	N	5
J1051390	30	30	N	N	N	N	N	<5	N	N	N	5
J1051400	15	20	N	N	N	N	N	N	N	N	N	N
J1051410	20	30	N	N	N	N	N	5	N	N	N	<5
J1051420	30	30	N	N	N	N	N	7	N	N	N	5
J1051430	20	50	N	N	N	N	N	5	N	<5	N	<5
J1051440	30	20	N	N	N	N	N	15	N	5	N	10
J1051450	20	30	N	N	N	N	N	<5	N	N	N	<5
J1051460	15	20	N	N	N	N	N	<5	N	N	N	<5
J1051470	30	70	N	N	N	N	N	N	N	<5	N	N
J1051480	50	70	N	N	N	N	N	<5	N	N	N	<5
J1051490	30	30	N	N	N	N	N	5	N	N	N	5
J1051500	30	<20	N	N	N	N	N	7	N	N	N	<5
J1051510	30	<20	N	N	N	N	N	<5	N	N	N	<5
J1051520	30	20	N	N	N	N	N	<5	N	N	N	<5
J1051530	30	30	N	N	N	N	N	5	N	<5	N	<5
J1051540	20	20	N	N	N	N	N	<5	N	N	N	<5
J1051550	20	<20	N	N	N	N	N	<5	N	N	N	<5
J1051560	30	<20	N	N	N	N	N	N	N	N	N	<5
J1051570	70	<20	N	N	N	N	N	N	N	N	N	<5
J1051580	100	150	1.0	N	N	7	50	50	20	5	N	30
J1051590	50	20	N	N	N	N	N	10	N	7	N	15
J1051600	20	70	N	N	N	N	N	5	N	7	N	10
J1051610	70	<20	N	N	N	N	N	N	N	N	N	<5
J1051620	15	20	N	N	N	N	N	5	N	N	N	5
J1051630	50	50	N	N	N	N	N	<5	N	N	N	N
J1051640	30	20	N	N	N	N	N	<5	N	N	N	N
J1051650	20	<20	N	N	N	N	N	10	N	<5	N	7
J1051660	20	<20	N	N	N	N	10	100	N	5	N	30
J1051668	20	20	<1.0	N	N	N	N	30	N	10	N	50
J1051678	70	70	3.0	N	N	15	30	200	N	30	N	150
J1051687	<10	<20	N	N	N	10	N	150	N	70	N	200
J1051696	10	20	1.0	N	N	<5	N	100	N	30	N	100
J1051706	50	100	1.5	N	N	7	N	300	N	50	N	100
J1051716	150	100	7.0	N	N	30	50	300	N	150	N	150
J1051725	150	30	2.0	N	N	10	15	100	N	20	N	50
J1051735	20	20	N	N	N	5	N	30	N	50	N	20
J1051745	15	20	2.0	N	N	30	N	300	N	70	N	150
J1051753	15	30	N	N	N	<5	N	15	N	15	N	15
J1051763	50	50	N	N	N	N	N	7	N	15	N	15
J1051773	70	200	1.0	N	N	7	20	50	20	30	<20	30
J1051782	150	200	5.0	N	N	5	30	50	50	20	<20	20
J1051793	100	300	3.0	N	N	10	20	30	50	15	<20	15
J1051801	100	200	7.0	N	N	10	15	15	50	10	<20	15

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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 #
J1051370	N	N	N	N	N	N	N	N	<200	20	N	67
J1051380	N	N	N	N	N	N	N	N	<200	20	N	68
J1051390	N	N	N	N	N	<10	N	N	<200	15	N	68
J1051400	N	N	N	N	N	N	N	N	<200	10	N	68
J1051410	N	N	N	N	N	<10	N	N	<200	15	N	68
J1051420	N	N	N	N	N	10	N	N	<200	10	N	68
J1051430	N	N	N	N	N	<10	N	N	<200	10	N	68
J1051440	10	N	N	N	N	10	N	N	<200	10	N	68
J1051450	N	N	N	N	N	N	N	N	N	N	N	68
J1051460	N	N	N	N	N	N	N	N	N	N	N	68
J1051470	N	N	N	N	N	N	N	N	N	N	N	68
J1051480	N	N	N	N	N	N	N	N	N	N	N	68
J1051490	N	N	N	N	N	N	N	N	N	N	N	68
J1051500	N	N	N	N	N	N	N	N	N	N	N	68
J1051510	N	N	N	N	N	N	N	N	N	N	N	68
J1051520	N	N	N	N	N	N	N	N	N	N	N	68
J1051530	N	N	N	N	N	<10	N	N	N	N	N	68
J1051540	N	N	N	N	N	<10	N	N	N	N	N	68
J1051550	N	N	N	N	N	N	N	N	N	30	N	68
J1051560	N	N	N	N	N	N	N	N	N	N	N	68
J1051570	N	N	N	N	N	N	N	N	N	N	N	68
J1051580	30	N	7	N	N	30	N	10	<200	70	N	68
J1051590	N	N	N	N	N	<10	N	N	<200	15	N	68
J1051600	N	N	N	N	N	10	N	N	N	15	N	68
J1051610	N	N	N	N	N	N	N	N	N	<10	N	68
J1051620	N	N	N	N	N	N	N	N	200	N	N	69
J1051630	N	N	N	N	N	N	N	N	N	<10	N	69
J1051640	N	N	N	N	N	N	N	N	N	10	N	87
J1051650	30	N	N	N	N	N	N	N	<200	<10	N	87
J1051660	20	N	N	N	N	N	N	N	<200	N	N	87
J1051668	20	N	N	N	N	10	<50	N	N	10	N	87
J1051678	300	N	N	N	N	30	<50	<10	N	70	N	87
J1051687	20	N	N	N	N	N	<50	N	N	N	N	87
J1051696	30	N	N	N	N	10	<50	N	N	10	N	87
J1051706	200	N	N	N	N	30	<50	N	N	50	N	87
J1051716	700	N	5	N	N	100	<50	10	N	70	N	87
J1051725	200	N	N	N	N	100	<50	N	N	50	N	87
J1051735	20	N	N	N	N	30	<50	N	N	N	N	87
J1051745	150	N	N	N	N	50	<50	N	N	20	N	87
J1051753	10	N	N	N	N	10	<50	N	N	70	N	87
J1051763	10	N	N	N	N	<10	<50	N	N	30	N	87
J1051773	50	N	N	N	N	50	<50	15	N	200	N	87
J1051782	100	N	5	N	N	70	<50	30	N	150	N	87
J1051793	50	N	<5	N	N	50	<50	30	N	200	N	87
J1051801	50	N	<5	N	N	50	<50	20	N	150	N	87

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1051811	37 0 42	94 50 27	2.00	.70	<.05	.500	15	N	N	N
J1051821	37 0 42	94 50 27	3.00	.70	.20	.500	20	N	N	N
J1051830	37 0 42	94 50 27	15.00	.50	<.05	.300	30	<.5	N	N
J1051840	37 0 42	94 50 27	10.00	.50	.05	.300	20	<.5	N	N
J1051849	37 0 42	94 50 27	20.00	.15	N	.200	70	.5	N	N
J1051859	37 0 42	94 50 27	3.00	.50	N	.500	20	N	N	N
J1051869	37 0 42	94 50 27	5.00	.50	N	.300	20	N	N	N
J1051878	37 0 42	94 50 27	7.00	.70	<.05	.500	30	N	N	N
J1051888	37 0 42	94 50 27	1.50	.70	N	.500	15	N	N	N
J1051897	37 0 42	94 50 27	1.00	.50	N	.300	15	N	N	N
J1051907	37 0 42	94 50 27	2.00	.70	<.05	.500	15	N	N	N
J1051917	37 0 42	94 50 27	1.50	.50	<.05	.500	15	N	N	N
J1051927	37 0 42	94 50 27	1.50	.70	<.05	.500	20	N	N	N
J1051933	37 0 42	94 50 27	2.00	.70	<.05	.300	15	N	N	N
J1051942	37 0 42	94 50 27	.30	.15	N	.300	10	N	N	N
J1051946	37 0 42	94 50 27	5.00	.50	N	.500	15	N	N	N
J1051956	37 0 42	94 50 27	3.00	1.00	N	.500	20	N	N	N
J1051965	37 0 42	94 50 27	1.00	1.00	<.05	.700	70	N	N	N
J1051975	37 0 42	94 50 27	3.00	1.00	N	.700	150	N	N	N
J1051984	37 0 42	94 50 27	3.00	1.50	N	.300	200	N	N	N
J1051993	37 0 42	94 50 27	2.00	1.00	N	.200	150	N	N	N
J1052002	37 0 42	94 50 27	5.00	1.50	N	.700	200	N	N	N
J1052011	37 0 42	94 50 27	5.00	1.50	<.05	.500	700	N	N	N
J1052021	37 0 42	94 50 27	3.00	1.50	.30	.300	700	N	N	N
J1052030	37 0 42	94 50 27	3.00	2.00	.15	.500	500	N	N	N

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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
J1051811	150	300	5.0	N	N	5	15	15	30	7	N	20
J1051821	100	300	3.0	N	N	7	10	20	30	10	N	20
J1051830	50	700	2.0	N	N	7	N	30	30	30	<20	15
J1051840	50	700	2.0	N	N	5	N	20	30	30	N	10
J1051849	30	500	1.5	N	N	5	N	50	30	20	N	10
J1051859	70	700	2.0	N	N	5	10	15	20	10	<20	5
J1051869	50	700	1.5	N	N	5	10	15	20	15	<20	5
J1051878	70	700	2.0	N	N	7	15	20	50	20	<20	7
J1051888	70	700	5.0	N	N	5	<10	10	30	<5	<20	5
J1051897	100	700	5.0	N	N	N	N	7	30	<5	N	N
J1051907	100	1,000	10.0	N	N	5	<10	10	30	<5	<20	<5
J1051917	100	700	7.0	N	N	<5	<10	7	30	<5	<20	<5
J1051927	100	1,000	5.0	N	N	<5	<10	7	50	<5	<20	<5
J1051933	100	700	15.0	N	N	7	<10	20	30	N	<20	5
J1051942	30	<20	<1.0	N	N	N	N	<5	N	N	N	N
J1051946	500	70	1.5	N	N	N	10	10	N	N	<20	5
J1051956	700	200	3.0	N	N	N	50	7	20	N	N	<5
J1051965	500	300	3.0	N	N	7	N	<5	N	N	<20	7
J1051975	300	150	2.0	N	N	10	<10	15	30	N	<20	10
J1051984	300	500	5.0	N	N	7	<10	<5	50	N	<20	5
J1051993	200	300	3.0	N	N	<5	N	N	20	N	N	N
J1052002	300	700	3.0	N	N	10	50	<5	50	N	<20	5
J1052011	300	500	5.0	N	N	15	15	15	N	N	N	15
J1052021	30	300	3.0	N	N	10	N	15	30	N	N	5
J1052030	150	500	7.0	N	N	10	10	<5	20	N	<20	5

TABLE 3--SPECTROGRAPHIC ANALYSES OF INSOLUBLE-RESIDUE SAMPLES FROM DRILL HOLE NO. 105, 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 #
J1051811	30	N	<5	N	N	30	<50	20	N	100	N	87
J1051821	30	N	<5	N	N	30	<50	20	N	100	N	87
J1051830	50	N	<5	N	N	20	<50	30	N	150	N	87
J1051840	50	N	N	N	N	20	<50	30	N	150	N	87
J1051849	30	N	N	N	N	15	<50	20	N	150	N	87
J1051859	30	N	N	N	N	30	<50	20	N	300	N	87
J1051869	30	N	N	N	N	15	<50	20	N	300	N	87
J1051878	30	N	N	N	N	20	<50	30	N	300	N	87
J1051888	20	N	N	N	100	30	<50	20	N	300	N	87
J1051897	15	N	N	N	100	20	<50	20	N	300	N	87
J1051907	30	N	N	N	100	30	<50	30	N	1,000	N	87
J1051917	20	N	N	N	N	30	<50	20	N	700	N	87
J1051927	30	N	N	N	100	30	<50	30	N	500	N	87
J1051933	30	N	N	N	N	30	<50	20	N	300	N	87
J1051942	N	N	N	N	N	<10	<50	20	N	>1,500	N	87
J1051946	N	N	5	N	N	30	<50	15	N	150	N	89
J1051956	N	N	10	N	N	50	<50	30	N	150	N	89
J1051965	N	N	10	N	N	30	<50	20	N	200	N	90
J1051975	N	N	7	N	N	30	<50	30	N	300	N	90
J1051984	N	N	7	N	N	20	<50	50	N	300	N	90
J1051993	N	N	5	N	N	10	<50	30	N	200	N	90
J1052002	15	N	15	N	N	50	<50	50	N	300	N	90
J1052011	N	N	15	N	N	70	<50	30	<200	150	N	90
J1052021	<10	N	7	N	N	30	<50	30	N	150	N	90
J1052030	10	N	10	N	N	30	<50	50	N	200	N	90