Table 7.—*Correlation of data from 244 springs in the Mississippian Plateau region, Kentucky*

Any two items of data may be correlated by locating the number in the small rectangle formed by the intersection of the column and row of the two items of data. Each such number is the percentage of springs in which the two items of data occur simultaneously. For example: Of the 51 springs that occur in sinks, 88.3 percent occur in Mississippian rocks of Meramec age and the remaining 11.7 percent occur in other aquifers.

Each large rectangle enclosed by heavy lines includes data on all springs under consideration.
If the sum of all numbers in each row enclosed by heavy lines is not equal to 100 percent, the remaining percentage is an unknown.
The total number of springs for each column and row is at the base of each column and to the left of each row, respectively.

Row	Topography: In sink	Topography: Top of hill	Topography: Hillside	Topography: Stream level	Aquifer (material): Limestone	Aquifer (material): Sandstone	Aquifer (material): Shale	Underlying beds (materials): Limestone	Underlying beds (materials): Sandstone	Underlying beds (materials): Shale	Structure: Faulted area	Structure: Flat-lying beds	Structure: Collapsed sink	Type of spring: Seepage	Type of spring: Tubular	Depression: With discharge	Depression: Without discharge	Number of openings: 1	Number of openings: 2–4	Number of openings: > 4	Number of openings: Seepage	Source: Series of sinks	Source: Seepage from above	Source: Faulted zone
Topography: In sink	51				100	-	-	98	-	2	3.9	39.2	56.9	2.0	70.6	23.5	3.9	68.6	23.5	3.9	-	96	4	-
Topography: Top of hill		2			100	-	-	50	-	50	-	100	-	-	100	-	-	100	-	-	-	-	50	-
Topography: Hillside			84		92.9	4.8	2.3	81	1.2	17.8	3.6	91.8	3.6	10.6	87	-	-	71.5	15.5	3.5	3.5	47.7	52.3	-
Topography: Stream level				107	96.3	2.8	.9	95.3	-	4.7	6.5	73.9	18.6	9.4	71.1	18.6	.9	72.8	16.8	3.7	5.7	73.9	18.6	3.7
Aquifer (material): Limestone					234			93.6	.4	6.0	5.1	71.4	22.8	6.0	78.3	13.7	1.4	73.1	18.9	3.9	2.1	71.8	24.4	1.7
Aquifer (material): Sandstone						7		18.6	-	81.4	-	-	100	71.4	28.6	-	-	42.9	-	-	57.1	-	100	-
Aquifer (material): Shale							3	-	-	100	-	-	100	33	67	-	-	33.3	33.3	33.3	-	-	100	-
Underlying beds (material): Limestone								221			4.5	71.5	23.6	6.3	77	14.4	1.3	71.5	20.2	4.1	2.7	74.3	21.9	2.0
Underlying beds (material): Sandstone									1		-	-	-	100	-	-	-	100	-	-	-	-	100	-
Underlying beds (material): Shale										22	9.1	86.4	-	23.7	77.3	-	-	72.8	9.1	4.5	13.6	19.1	81.9	-
Structre: Faulted area											12			8.3	75.0	16.7	-	75.0	16.7	-	8.3	41.7	25.0	33.3
Structre: Flat lying beds												177		9.6	79.1	9.6	1.3	71.8	18.1	4.0	4.5	63.8	35.6	-
Structre: Collapsed sink													52	3.8	71.1	23.1	1.9	75.0	17.3	5.8	-	96.2	3.8	-
Type of spring: Seepage														20				45.0	5.0	-	45.0	-	90.0	5.0
Type of spring: Tubular															187			74.4	18.7	4.8	-	73.3	24.1	.9
Type of spring: With discharge																32		75.0	21.9	3.1	-	87.5	6.3	3.1
Type of spring: Without discharge																	3	100	-	-	-	100	-	-
Number of openings: 1																		175				70.9	26.3	.6
Number of openings: 2–4																			43			79.1	16.2	4.7
Number of openings: > 4																				10		80	20	-
Number of openings: Seepage																					9	-	77.8	11.1
Source: Series of sinks																						168		
Source: Seepage from above																							67	
Source: Faulted zone																								4

Row	Chemical analysis: Partial	Chemical analysis: Comprehensive	Chemical analysis: More than one analysis	Chemical analysis: Gas	Chemical analysis: Deposit	Yield (1 cfs = about 450 gpm): Measured	Yield: Estimated	Yield: Two or more measurements	Yield: 100-10 cfs	Yield: 10-1 cfs	Yield: 1 cfs-100 gpm	Yield: 100-10 gpm	Yield: 10-1 gpm	Yield: 1-1/8 gpm	Yield: <1/8 gpm	Yield: Goes dry	Variability of spring: 0–100	Variability of spring: 100–200	Variability of spring: 200–400	Variability of spring: 400–800	Variability of spring: > 800
Topography: In sink	31.4	17.7	13.7	-	6.4	35.3	56.8	15.7	9.8	29.4	35.3	7.8	7.8	-	-	2	-	2	7.8	2	2
Topography: Top of hill	50	-	-	-	-	-	50	-	-	-	-	-	50	-	-	-	-	-	-	-	-
Topography: Hillside	14.3	3.6	2.4	-	4.8	41.7	54.8	2.4	-	7.1	16.7	23.8	35.7	11.9	1.2	1.2	-	-	-	2.4	-
Topography: Stream level	29.9	6.5	11.2	1.9	6.5	54.2	42	11.2	5.6	27.1	31.8	24.3	5.6	.9	.9	2.8	0.9	1.9	1.9	3.7	.9
Aquifer (material): Limestone	25.4	8.1	9.0	.8	5.1	46.3	48.7	9.4	4.7	21.8	27.8	19.7	16.7	3.0	.8	2.2	.4	1.4	4.3	3.0	.8
Aquifer (material): Sandstone	28.6	-	-	-	14.3	14.3	85.7	-	-	-	14.3	42.9	14.3	28.6	-	-	-	-	-	-	-
Aquifer (material): Shale	-	-	-	-	-	67	33	-	-	-	-	33.3	33.3	33.3	-	-	-	-	-	-	-
Underlying beds (material): Limestone	2.6	.8	9.5	.9	54	47.5	47.5	10.0	5.0	21.7	28.5	18.6	14.9	3.2	.9	2.3	.5	1.3	2.7	3.2	.9
Underlying beds (material): Sandstone	-	-	-	-	-	-	100	-	-	-	-	-	100	-	-	-	-	-	-	-	-
Underlying beds (material): Shale	18.2	4.5	-	-	4.5	27.3	72.7	-	-	-	13.6	36.4	31.8	13.6	-	4.5	-	-	-	-	-
Structre: Faulted area	25.0	-	83.0	16.7	8.3	41.7	53.4	8.3	-	8.3	3.3	33.3	8.3	8.3	-	-	-	8.3	-	-	-
Structre: Flat lying beds	23.1	4.5	4.0	-	4.5	43.5	52.0	4.0	3.4	16.4	13.7	13.7	20.8	5.1	.5	-	-	-	1.1	1.1	-
Structre: Collapsed sink	38.4	19.2	25.0	-	7.6	53.9	44.4	16.9	9.6	36.6	38.4	5.8	5.8	-	1.9	3.8	1.9	3.8	7.7	7.7	3.8
Type of spring: Seepage	15.0	-	-	5.0	5.0	40.0	60.0	-	-	-	5.0	25.0	45.0	20.0	-	5.0	-	-	-	-	-
Type of spring: Tubular	24.6	7.5	8.0	.5	3.7	41.8	49.3	8.6	4.8	19.3	27.3	17.2	16.6	2.7	.9	2.1	.5	.9	1.6	3.2	.9
Type of spring: With discharge	37.5	15.6	18.8	-	9.4	53.1	40.7	18.8	6.3	40.7	37.5	9.4	-	-	-	-	-	3.1	9.4	3.1	-
Type of spring: Without discharge	-	-	-	-	-	-	66.7	-	-	-	100	-	-	-	-	-	-	-	-	-	-
Number of openings: 1	22.9	7.4	9.1	.6	6.3	45.3	48.6	9.1	4.6	20.6	24.0	21.2	18.9	2.3	.6	1.7	.6	1.7	2.9	1.7	1.1
Number of openings: 2–4	30.3	11.6	11.6	-	-	51.8	46.6	14.0	4.7	18.6	48.9	14.0	7.0	4.7	-	-	-	-	2.3	7.0	-
Number of openings: > 4	30	-	-	-	-	60	40	-	10	40	20	20	-	-	10	10.0	-	-	-	-	-
Number of openings: Seepage	22.2	-	-	11.1	-	22.2	77.8	-	-	-	-	33.3	33.3	22.2	-	11.1	-	-	-	-	-
Source: Series of sinks	25.6	9.5	12.0	-	6.5	40.5	48.8	12.5	6.5	28.6	31.6	17.3	8.9	.6	.6	1.8	.6	1.8	3.6	3.6	1.2
Source: Seepage from above	19.4	-	-	-	-	41.8	52.2	1.5	-	-	16.4	23.9	37.3	11.9	1.5	3.0	-	-	1.5	-	-
Source: Faulted zone	25.0	-	-	50.0	25.0	75.0	25.0	-	-	-	50.0	25.0	-	25.0	-	-	-	-	-	-	-
Chemical analysis: Partial	61																				
Chemical analysis: Comprehensive		19																			
Chemical analysis: More than one analysis			21																		
Chemical analysis: Gas				2																	
Chemical analysis: Deposit					13																
Yield: Measured						111															
Yield: Estimated							121														
Yield: Two or more measurements								22													
Yield: 100–10 cfs									11								-	-	-	-	-
Yield: 10–1 cfs										50							2	2	6	4	2
Yield: 1 cfs-100 gpm											66						-	1.5	4.5	7.5	1.5
Yield: 100–10 gpm												49					-	2.0	-	-	-
Yield: 10–1 gpm													40				-	-	-	-	-
Yield: 1–1/8 gpm														10			-	-	-	-	-
Yield: < 1/8															2		-	-	-	-	-
Yield: Goes dry																5	-	-	-	-	-
Variability of spring: 0–100																	1				
Variability of spring: 100–200																		3			
Variability of spring: 200–400																			6		
Variability of spring: 400–800																				7	
Variability of spring: > 800																					2

Row	Age of aquifer: Pennsylvanian	Age of aquifer: Mississippian (Chester)	Age of aquifer: Mississippian (Mermec)	Age of aquifer: Mississippian (Osage)	Age of aquifer: Devonian	Age of aquifer: Silurian	Age of aquifer: Ordovician	Distance from stream (feet): Bottoms	Distance from stream: < 1,000	Distance from stream: 1,000–2,500	Distance from stream: 2,500–5,000	Distance from stream: 5,000–10,000	Distance from stream: > 10,000	Distance from sink (feet): 0–500	Distance from sink: 500–1,000	Distance from sink: 1,000–2,000	Distance from sink: 2,000–4,000	Distance from sink: 5,000–8,000	Distance from sink: 8,000	Distance from sink: No sink	Height of spring above stream (feet): < 25	Height: 25–50	Height: 50–100	Height: 100–200	Height: > 200
Topography: In sink	-	7.8	88.3	2	-	2	-	-	23.5	9.8	13.7	23.5	29.4	80.2	9.8	2	3.9	-	-	3.9	54.9	9.8	13.7	15.7	9.5
Topography: Top of hill	-	-	100	-	-	-	-	-	50	-	50	-	-	-	-	-	50	-	-	50	-	-	-	100	-
Topography: Hillside	2.4	26.2	44.1	25.0	2.4	2.4	-	2.4	37.0	4.8	15.5	25	15.5	16.7	15.5	13.1	14.3	4.8	-	35.7	16.7	17.9	23.8	22.6	17.9
Topography: Stream level	-	9.3	78.5	8.4	.9	.9	1.9	10.3	45.8	11.2	9.3	12.1	10.3	27.1	20.6	18.7	9.3	2.8	3.7	17.7	67.3	14.0	11.2	8.4	-
Aquifer (material): Limestone	-	13.2	71.4	12.4	.8	1.4	.8	5.1	39.3	9.0	13.2	17.1	15.8	35.9	17.1	12.4	9.8	3.0	1.4	20.5	47.4	15.0	15.8	15.8	6.0
Aquifer (material): Sandstone	28.6	57.1	14.3	-	-	-	-	-	14.3	-	-	71.4	14.3	-	-	42.9	14.3	-	-	42.9	28.6	-	28.6	-	42.9
Aquifer (material): Shale	-	33	-	67	-	-	-	-	33.3	-	-	33.3	33.3	-	-	-	33.3	-	33.3	33.3	33.3	-	-	33.3	33.3
Underlying beds (material): Limestone	-	10.0	75.1	11.8	.9	1.3	.9	4.5	41.2	9.0	12.7	16.7	15.4	37.6	17.2	12.2	10.0	2.7	1.3	19.0	49.7	14.9	14.9	15.8	4.5
Underlying beds (material): Sandstone	-	-	-	100	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	100	-	-	-	-	100
Underlying beds (material): Shale	9.1	63.6	9.1	18.2	-	-	-	9.1	13.6	4.5	13.6	41.0	18.2	4.5	9.1	22.7	13.6	4.5	4.5	41.0	18.2	9.1	27.3	13.6	31.8
Structre: Faulted area	-	33.3	66.7	-	-	-	-	-	33.3	-	25.0	33.3	8.3	33.3	16.7	-	-	-	-	50.0	83.4	8.3	-	-	8.3
Structre: Flat lying beds	1.1	16.4	63.9	16.4	1.1	.5	.5	5.1	40.2	9.0	11.3	17.5	17.0	25.4	16.4	16.4	13.6	2.8	2.3	23.2	37.9	16.4	19.2	18.1	8.5
Structre: Collapsed sink	-	5.8	88.5	1.9	-	3.8	-	3.8	36.5	9.6	19.2	17.4	13.5	65.2	17.4	5.8	1.9	3.8	-	5.8	67.3	9.6	7.7	11.5	3.8
Type of spring: Seepage	10.0	15.0	30.0	40.0	5.0	-	-	5.0	20.0	5.0	5.0	30.0	35.0	-	5.0	25.0	15.0	5.0	-	50.0	25.0	15.0	25.0	15.0	15.0
Type of spring: Tubular	-	16.2	70.0	11.9	.5	.5	.9	5.9	43.3	7.5	13.4	15.0	14.4	32.6	18.7	12.8	10.7	3.2	1.6	20.3	43.3	13.9	17.1	17.6	7.5
Type of spring: With discharge	-	6.2	84.5	3.1	-	6.2	-	-	46.9	18.8	6.3	12.5	15.6	62.5	12.5	9.4	6.3	-	3.1	6.3	78.1	12.5	3.1	6.3	-
Type of spring: Without discharge	-	33.3	66.7	-	-	-	-	-	33.3	-	-	66.7	-	100	-	-	-	-	-	-	66.7	33.3	-	-	-
Number of openings: 1	.6	17.1	65.8	12.0	1.1	1.7	1.1	5.1	37.7	9.7	13.1	18.8	14.9	33.7	16.6	13.7	11.4	1.7	1.1	21.7	46.9	13.7	16.0	14.9	7.4
Number of openings: 2–4	-	9.3	79.1	11.6	-	-	-	4.7	37.0	9.3	16.3	16.3	16.3	46.6	21.0	11.6	9.3	2.3	2.3	7.0	44.2	16.3	11.6	23.3	4.7
Number of openings: > 4	-	-	90	10	-	-	-	10	60	-	10	10	10	40	20	-	-	20	10	10	60	10	20	10	-
Number of openings: Seepage	11.1	22.2	55.6	11.1	-	-	-	-	22.2	-	11.1	33.3	33.3	11.1	11.1	33.3	-	-	-	44.5	33.3	11.1	55.6	-	-
Source: Series of sinks	-	9.5	83.9	4.8	-	1.8	-	4.8	41.1	9.5	14.3	12.5	17.9	47.6	19.7	12.5	8.3	3.0	1.8	7.1	54.2	14.3	16.1	12.5	3.0
Source: Seepage from above	3.0	29.8	29.8	32.9	3.0	-	1.5	4.5	32.8	7.5	7.5	35.8	11.8	1.5	10.5	16.4	14.9	1.5	1.5	55.2	23.9	14.9	16.4	23.9	20.4
Source: Faulted zone	-	-	100	-	-	-	-	-	50.0	-	50.0	-	-	25.0	25.0	-	-	-	-	50.0	100	-	-	-	-
Yield: 100–10 cfs	-	-	100	-	-	-	-	-	63.6	-	18.2	9.1	9.1	45.5	36.4	9.1	9.1	-	-	-	72.7	18.2	9.1	-	-
Yield: 10–1 cfs	-	6	86	4	-	4	-	6.0	42.0	12.0	8.0	10.0	20	56.0	16.0	6.0	6.0	2.0	4.0	10.0	70.0	10.0	14.0	4.0	-
Yield: 1 cfs-100 gpm	-	10.6	81.8	4.5	-	1.5	1.5	7.5	48.5	6.0	15.2	16.7	6.0	44.0	18.2	16.7	4.5	6.0	-	10.6	62.2	12.1	9.1	12.1	4.5
Yield: 100–10 gpm	-	22.4	61.2	12.2	2.0	-	2.0	6.1	28.6	8.2	12.2	18.4	26.5	8.2	26.5	16.3	16.3	2.0	2.0	28.6	34.7	18.4	24.5	16.3	6.1
Yield: 10–1 gpm	2.5	22.5	32.5	37.5	5.0	-	-	-	27.5	10.0	22.5	22.5	17.5	10.0	22.5	10.0	10.0	2.5	-	45.0	17.5	7.5	17.5	32.5	20.0
Yield: 1–1/8 gpm	10	30	30	30	-	-	-	-	30	10	10	40	10	-	-	30	20	-	-	50	10	30	-	20	40
Yield: < 1/8	-	50	50	-	-	-	-	50	50	-	-	-	-	50	-	-	-	-	-	50	50	50	-	-	-
Yield: Goes dry	-	-	40	60	-	-	-	20	40	-	-	20	20	20	20	20	-	-	20	20	40	40	20	-	-
Variability of spring: 0–100	-	-	100	-	-	-	-	-	100	-	-	-	-	100	-	-	-	-	-	-	100	-	-	-	-
Variability of spring: 100–200	-	-	100	-	-	-	-	-	66.7	-	33.3	-	-	66.7	-	-	-	-	-	33.3	100	-	-	-	-
Variability of spring: 200–400	-	-	83.5	-	-	16.5	-	-	66.7	-	33.3	-	-	83.5	-	-	-	-	-	16.5	83.5	16.5	-	-	-
Variability of spring: 400–800	-	-	57.2	14.3	-	28.5	-	-	42.9	14.3	28.6	14.3	-	42.9	28.6	14.3	14.3	-	-	-	100	-	-	-	-
Variability of spring: > 800	-	-	100	-	-	-	-	50	-	-	-	50	-	100	-	-	-	-	-	-	100	-	-	-	-
Age of aquifer: Pennsylvanian	2							-	-	-	-	100	-	-	-	-	50	-	-	50	-	-	50	-	50
Age of aquifer: Mississippian (Chester)		36						2.8	27.8	11.1	8.3	27.8	22.2	19.4	16.7	22.2	11.1	2.8	2.8	25.0	22.2	22.2	19.4	19.4	16.7
Age of aquifer: Mississippian (Meramec)			168					4.8	42.3	7.7	15.5	14.3	15.5	43.4	18.4	11.9	8.9	3.0	.6	13.7	55.4	11.3	15.5	14.9	3.0
Age of aquifer: Mississippian (Osage)				31				6.5	32.3	12.9	6.5	22.6	16.1	3.2	9.7	12.9	16.1	3.2	6.5	48.4	25.8	22.6	9.7	19.4	19.4
Age of aquifer: Devonian					3			-	33.3	-	-	66.7	-	-	-	-	-	-	-	100	33.3	-	66.7	-	-
Age of aquifer: Silurian						3		-	66.7	-	33.3	-	-	66.7	-	-	-	-	-	33.3	100	-	-	-	-
Age of aquifer: Ordovician							2	50	50	-	-	-	-	50	-	-	-	-	-	50	100	-	-	-	-

644509 O - 63 (In pocket)