Table 3.—*Correlation of data from 977 drilled wells 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 wells in which the two items of data occur simultaneously. For example: Of the 375 wells with a bailer or bucket, only 75.2 percent are adequate and 21.6 percent are inadequate.

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

Topography; Depth of hole (feet below land surface); Water level (feet below land surface)

Row	Topography: Upland	Hillside	Karst	Bottoms	Depth of hole: Measured	Reported	Unknown	< 25	25–50	50–75	75–100	100–150	150–200	200–300	> 300	Water level: Measured	Reported	Unknown	< 25	25–50	50–100	> 100
Topography: Upland	473				55.8	42.5	1.7	2.7	26.6	25.2	18.8	14.2	6.6	2.3	1.9	60.7	24.0	14.6	21.6	34.4	24.9	3.8
Hillside		156			57.7	42.3	----	5.1	26.9	19.2	17.9	17.3	6.4	5.1	1.9	62.2	27.6	10.3	28.2	31.4	23.1	7.1
Karst			244		30.7	68.8	.4	1.6	7.8	18.4	24.2	22.1	13.5	9.4	2.5	42.6	40.6	16.4	15.2	25.4	29.5	13.1
Bottoms				104	42.3	55.8	1.9	15.4	38.5	16.3	6.7	11.5	2.9	1.9	4.8	49.0	32.7	18.3	51.9	23.1	4.8	1.9
Depth of hole: Measured					473																	
Reported						493																
Unknown							11															
< 25								41								63.4	29.3	7.3	92.7	----	----	----
25–50									227							71.8	16.3	11.9	51.1	37.0	----	----
50–75										211						59.7	27.0	13.3	19.4	50.6	16.8	----
75–100											183.					53.0	29.5	16.4	9.3	34.4	38.8	----
100–150												160				46.3	36.3	16.3	5.6	17.5	51.3	8.1
150–200													77			35.1	46.8	18.1	7.8	7.8	35.0	31.2
200–300														44		31.8	56.8	11.4	2.3	9.1	27.3	50.0
> 300															23	39.1	43.5	17.4	34.8	21.7	13.0	13.0
Water level: Measured																539						
Reported																	290					
Unknown																		148				
< 25																			237			
25–50																				298		
50–100																					231	
> 100																						63

Use; Quality (reported); Pumping equipment; Adequacy

Row	Use: Domestic-stock	Public supply	Irrigation	Industrial	Quality: Sulfur	Unsatisfactory	Pumping: None	Hand pump	Bailer or bucket	Power	Adequacy: Unknown	Inadequate	Adequate
Topography: Upland	97.7	1.9	----	0.4	1.9	7.2	4.7	9.0	49.0	37.3	4.7	20.7	74.6
Hillside	96.8	2.6	----	.6	.6	6.4	7.7	11.5	45.5	35.3	3.8	18.6	77.6
Karst	84.8	11.5	0.4	3.3	3.1	3.1	5.7	6.1	21.3	66.8	1.6	8.6	89.7
Bottoms	83.7	13.4	----	2.9	1.9	5.8	2.9	27.9	19.2	50.0	1.0	10.6	88.4
Depth of hole: < 25	100	----	----	----	----	12.2	4.9	29.3	46.3	19.5	2.4	17.1	80.5
25–50	99.2	.4	.4	----	----	4.4	3.1	19.4	56.4	21.1	1.8	21.6	76.6
50–75	95.7	3.8	----	.5	----	5.7	3.8	9.5	45.5	41.2	5.7	16.6	77.7
75–100	91.8	5.5	----	1.6	3.3	6.0	4.9	7.6	36.6	49.8	2.7	16.9	80.3
100–150	93.1	4.4	----	1.3	3.8	6.9	5.0	3.1	29.4	61.3	5.6	12.5	81.9
150–200	88.3	10.4	----	1.3	1.3	2.6	6.5	6.5	13.0	74.0	1.3	7.8	90.9
200–300	56.8	29.5	----	13.6	4.5	4.5	4.5	----	9.1	86.4	2.3	13.6	84.0
> 300	60.8	34.8	----	4.3	17.4	17.4	26.1	8.7	13.0	52.2	---	4.3	95.7
Water level: < 25	93.7	5.1	.4	.8	.4	5.5	5.5	15.2	48.1	31.2	2.1	16.0	81.8
25–50	94.6	4.4	----	1.0	3.0	6.7	4.7	6.7	51.0	37.6	4.7	15.8	79.5
50–100	96.1	2.2	----	1.7	1.7	6.5	4.8	3.5	42.0	49.8	4.3	17.7	77.9
> 100	77.8	17.5	----	4.8	1.6	1.6	4.8	----	17.5	77.8	3.2	6.3	90.5
Use: Domestic-stock	902												
Public supply		56											
Irrigation			1										
Industrial				14									
Quality: Sulfur					19		15.8	----	21.0	63.1	---	5.3	94.7
Unsatisfactory						57	24.6	8.8	45.6	21.0	12.3	29.8	57.9
Pumping equipment: None							51				21.6	47.0	31.4
Hand pump								105			1.9	20.0	78.1
Bailer or bucket									375		3.2	21.6	75.2
Power										446	1.8	7.4	90.8
Adequacy: Unknown											33		
Inadequate												159	
Adequate													785

Type of material; Age of aquifer

Row	Type: Mantle	Limestone	Sandstone	Shale	Gravel	Chert	Siltstone	Age: Quaternary (alluvium)	Cretaceous	Pennsylvanian	Mississippian (Chester)	Mississippian (Meramec)	Mississippian (Osage)	Devonian	Silurian	Ordovician
Topography: Upland	3.4	71.0	24.1	0.4	0.4	0.4	0.2	----	0.4	9.5	30.4	42.5	17.1	----	----	----
Hillside	1.3	75.6	20.5	1.3	1.3	----	----	0.6	.6	6.4	36.5	35.3	14.7	2.6	0.6	2.6
Karst	.8	98.8	.4	----	----	----	----	----	----	----	4.1	94.3	1.6	----	----	----
Bottoms	1.0	77.9	5.8	1.9	11.5	1.9	----	10.6	1.0	2.9	13.5	21.1	18.3	7.7	1.0	24.0
Depth of hole: < 25	2.4	82.9	14.6	----	----	----	----	----	----	2.4	22.0	17.1	29.3	7.3	----	22.0
25–50	5.3	74.9	15.9	1.3	2.2	----	.4	1.8	.4	6.6	17.6	37.9	25.1	3.1	----	7.5
50–75	2.4	79.6	15.6	----	1.9	.5	----	1.4	.5	8.0	25.6	50.7	12.3	.9	----	.5
75–100	.5	82.5	13.7	.5	2.7	----	----	2.2	.5	6.6	24.6	58.5	7.6	----	----	----
100–150	.6	80.6	16.3	.6	.6	1.2	----	.6	----	5.0	26.3	60.0	7.5	----	.6	----
150–200	----	79.2	19.5	----	----	1.3	----	----	----	3.9	23.4	71.4	1.3	----	----	----
200–300	----	79.5	18.2	2.3	----	----	----	----	----	2.3	22.7	70.4	4.5	----	----	----
> 300	----	87.0	13.0	----	----	----	----	----	----	----	21.7	60.8	8.7	----	4.3	4.3
Water level: < 25	3.8	78.5	14.8	.4	1.7	.8	----	1.3	.4	4.6	24.0	39.2	17.7	4.2	.4	8.0
25–50	2.7	74.5	20.1	----	2.3	----	.3	2.0	.3	9.4	27.2	44.6	15.1	----	----	1.3
50–100	.9	80.1	15.6	1.3	1.7	.4	----	.9	.9	5.2	22.5	62.8	7.8	----	----	----
> 100	----	87.3	11.1	----	----	1.6	----	----	----	4.8	11.1	79.4	4.8	----	----	----
Use: Domestic-stock		100	----	----	----	----	----	----	----	----	36.8	57.9	5.2	----	----	----
Public supply		68.4	28.1	1.7	----	----	1.7	----	----	10.5	40.3	31.6	10.5	1.7	1.7	3.5
Quality: Sulfur	0															
Unsatisfactory	0															
Pumping equipment: None	----	90.2	9.8	----	----	----	----	----	----	3.9	27.4	52.9	11.8	----	2.0	2.0
Hand pump	1.9	84.8	10.5	2.8	----	----	----	----	----	3.8	14.3	42.8	15.2	5.7	1.0	17.1
Bailer or bucket	4.5	73.0	20.8	.8	.3	.3	.3	.3	----	9.5	27.7	41.3	18.9	1.1	----	1.1
Power	.4	82.3	13.2	----	3.4	.7	----	2.5	.9	3.6	20.6	63.0	7.6	.4	----	1.3
Adequacy: Unknown	3.0	75.7	21.2	----	----	----	----	----	----	3.0	39.4	45.4	12.1	----	----	----
Inadequate	6.3	70.4	20.7	1.9	----	----	.6	----	----	6.3	35.8	35.2	17.0	1.2	----	4.4
Adequate	1.3	81.4	14.4	.4	2.0	.5	----	1.5	.5	6.0	19.7	55.7	12.2	1.3	.2	2.8
Type of material: Mantle	21															
Limestone		776														
Sandstone			153													
Shale				6												
Gravel					16											
Chert						4										
Siltstone							1									
Age of aquifer: Quaternary (alluvium)								12								
Cretaceous									4							
Pennsylvanian										58						
Mississippian (Chester)											225					
Mississippian (Meramec)												508				
Mississippian (Osage)													127			
Devonian														12		
Silurian															2	
Ordovician																29

Yield (gpm); Distance from sink (feet)

Row	Yield: < 5	5–50	> 50	Sink: < 500	500–1,000	1,000–2,000	2,000–4,000	> 4,000	None
Topography: Upland	90.7	8.5	0.8	12.9	7.6	11.6	7.8	3.6	56.4
Hillside	89.7	10.3	----	10.9	6.4	12.8	12.8	5.1	51.9
Karst	69.6	23.4	7.0	60.7	14.8	12.3	8.6	2.5	1.2
Bottoms	74.0	13.5	12.5	7.7	1.0	6.7	1.9	5.8	76.9
Depth of hole: < 25	87.8	12.2	----	4.9	2.4	9.8	2.4	4.9	75.6
25–50	93.8	5.7	.4	9.7	6.2	12.8	6.2	4.4	60.8
50–75	92.9	5.7	1.4	20.9	10.4	12.8	14.7	5.7	35.5
75–100	85.8	9.8	4.4	29.0	9.8	10.9	8.7	2.2	39.3
100–150	77.5	16.9	5.6	31.8	8.8	11.3	6.3	2.5	39.4
150–200	63.6	32.5	3.9	42.9	13.0	11.7	5.2	2.6	24.7
200–300	45.4	40.9	13.6	56.8	2.3	4.5	2.3	----	34.1
> 300	43.5	39.1	17.4	8.7	13.0	4.3	8.7	13.0	52.2
Water level: < 25	86.9	9.7	3.4	8.9	7.6	15.2	7.2	4.6	56.5
25–50	88.3	8.7	3.0	16.8	8.4	10.7	9.4	5.7	49.0
50–100	82.7	14.7	2.6	38.1	8.6	10.0	9.1	2.2	32.0
> 100	58.7	34.9	6.3	52.4	19.0	6.3	1.6	----	20.6
Use: Domestic-stock	57.9	21.0	21.0	10.5	21.0	5.3	10.5	10.5	42.1
Public supply	89.4	5.3	5.3	12.3	7.0	7.0	7.0	8.8	57.9
Pumping equipment: None	92.2	3.9	3.9	21.6	7.8	7.8	5.9	5.9	51.0
Hand pump	99.0	1.0	----	19.0	1.9	7.6	3.8	5.7	61.9
Bailer or bucket	98.1	1.9	----	16.8	9.1	13.1	8.3	4.0	48.8
Power	66.6	26.2	7.2	31.4	9.6	11.4	9.4	2.9	35.2
Adequacy: Unknown	97.0	3.0	----	24.2	6.1	27.3	6.1	6.1	30.3
Inadequate	100	----	----	15.7	10.1	10.1	9.4	2.5	52.2
Adequate	79.6	16.0	4.3	25.6	8.3	11.1	8.0	3.9	43.1
Type of material: Mantle	100	----	----						
Limestone	82.5	14.2	3.4						
Sandstone	90.3	8.5	1.3						
Shale	100	----	----						
Gravel	43.8	25.0	31.2						
Chert	100	----	----						
Siltstone	100	----	----						
Age of aquifer: Quaternary (alluvium)	41.7	16.7	41.7	----	----	----	----	----	100
Cretaceous	50.0	50.0	----	----	----	----	----	----	100
Pennsylvanian	94.8	5.2	----	3.4	----	----	5.2	1.7	89.6
Mississippian (Chester)	91.1	7.5	1.3	10.2	7.1	9.8	8.9	4.0	60.0
Mississippian (Meramec)	76.9	18.3	4.7	40.0	12.6	15.2	8.9	3.4	19.9
Mississippian (Osage)	93.7	4.7	1.6	3.9	2.4	10.2	7.9	7.9	67.7
Devonian	91.7	8.3	----	----	----	----	8.3	----	91.7
Silurian	50.0	50.0	----	----	----	----	----	----	100
Ordovician	93.1	6.9	----	3.4	----	----	----	----	96.5
Yield (gpm): < 5	816			22.0	8.1	11.1	8.8	3.7	46.2
5–50		127		36.2	11.8	12.6	4.7	3.1	31.5
> 50			34	23.5	5.9	14.7	5.9	8.8	41.2

Distance from stream (feet); Height of water level in well above stream (feet)

Row	Stream: Bottoms	< 1,000	1,000–2,500	2,500–5,000	5,000–10,000	> 10,000	Height: < 25	25–50	50–75	75–100	100–150	150–200	200–300	> 300	Unknown
Topography: Upland	----	10.6	15.2	27.4	30.7	16.1	14.2	7.4	8.9	5.7	17.1	13.7	15.9	4.7	12.5
Hillside	1.3	23.7	17.9	21.8	13.5	21.8	34.6	14.1	11.5	9.0	6.4	6.4	6.4	1.3	10.3
Karst	----	8.2	12.3	16.8	20.0	42.6	36.9	14.3	9.8	7.8	10.6	2.9	2.0	----	15.6
Bottoms	19.2	49.0	11.5	8.7	5.8	5.8	60.6	12.5	1.9	1.0	3.8	1.9	1.0	----	17.3
Depth of hole: < 25	7.3	29.3	17.1	17.1	17.1	12.2	41.5	19.5	4.9	4.9	9.8	2.4	12.2	2.4	2.4
25–50	4.4	22.0	14.1	22.5	21.1	15.9	23.8	7.9	7.9	6.6	15.0	12.8	12.3	4.0	9.7
50–75	1.9	12.8	14.7	26.5	25.6	18.5	26.0	6.6	9.0	8.1	10.9	11.8	14.2	3.3	10.0
75–100	1.6	11.5	14.7	24.6	25.1	22.4	30.6	5.5	6.0	4.4	15.3	7.1	10.4	3.3	17.5
100–150	1.2	16.3	14.4	20.6	24.4	23.1	27.5	17.5	13.1	5.6	10.0	6.3	3.8	----	16.3
150–200	----	9.1	13.0	15.6	16.9	45.4	35.1	13.0	11.7	3.9	13.0	3.9	1.3	----	18.2
200–300	----	15.9	13.6	11.4	11.4	47.7	29.5	22.7	11.4	15.9	4.5	2.3	2.3	----	11.4
> 300	----	21.7	17.4	8.7	30.4	21.7	34.8	26.1	----	----	17.4	4.3	----	4.3	13.0
Water level: < 25	3.4	24.0	15.6	21.5	18.6	16.9	34.6	13.1	10.1	7.6	12.7	10.1	8.0	3.8	----
25–50	1.7	17.5	11.4	27.2	25.8	16.4	32.2	7.7	9.1	6.7	15.1	13.1	13.1	2.7	.3
50–100	.4	8.6	18.2	22.5	26.0	24.2	29.4	13.8	13.0	8.2	16.4	6.9	9.1	3.0	----
> 100	----	7.9	11.1	11.1	19.0	50.8	38.1	30.1	7.9	4.8	7.9	4.8	6.3	----	----
Use: Domestic-stock	----	15.8	21.0	5.3	36.8	21.0	42.1	21.0	----	----	10.5	5.3	----	----	21.0
Public supply	----	5.3	8.3	12.3	8.8	7.0	8.8	5.3	8.8	3.5	8.8	3.5	1.7	----	1.7
Pumping equipment: None	----	19.6	17.6	21.6	17.6	23.5	31.4	11.8	5.9	5.9	9.8	5.9	11.8	----	17.6
Hand pump	8.6	22.8	10.5	19.0	23.8	15.2	27.6	8.6	3.8	4.8	6.7	2.8	11.4	3.8	30.5
Bailer or bucket	.5	11.7	15.2	26.9	28.5	17.1	22.4	9.9	9.9	9.3	17.3	14.1	13.1	3.7	.3
Power	2.5	17.9	14.6	18.2	18.2	28.7	32.5	11.9	9.4	4.0	9.9	5.6	5.4	1.3	19.9
Adequacy: Unknown	----	21.2	6.1	36.4	15.1	21.2	18.2	15.1	21.2	3.0	15.1	12.1	6.1	3.0	6.1
Inadequate	1.9	17.6	15.1	23.9	28.3	13.2	22.6	8.8	10.1	8.2	11.9	10.7	9.4	2.5	15.7
Adequate	2.4	15.7	14.8	20.8	21.9	24.5	29.6	10.9	8.0	6.0	12.4	8.0	9.3	2.4	13.2
Age of aquifer: Quaternary (alluvium)	58.3	33.3	8.3	----	----	----	91.7	----	----	----	----	----	----	----	8.3
Cretaceous	----	----	50.0	50.0	----	----	50.0	50.0	----	----	----	----	----	----	----
Pennsylvanian	----	5.2	15.5	25.9	32.7	20.7	15.5	8.6	6.9	8.6	15.5	8.6	20.7	10.3	5.2
Mississippian (Chester)	.4	19.5	16.0	19.5	26.7	17.8	25.3	11.5	9.3	9.3	15.5	8.0	7.5	.9	12.4
Mississippian (Meramec)	.6	11.6	13.2	22.4	21.2	30.9	28.3	10.2	10.2	4.9	12.2	8.6	8.2	2.4	14.8
Mississippian (Osage)	2.4	18.9	17.3	28.3	25.2	7.9	21.2	10.2	6.3	6.3	11.8	13.4	15.7	3.1	11.8
Devonian	25.0	58.3	8.3	----	----	8.3	66.7	----	----	16.7	----	----	----	----	16.7
Silurian	----	50.0	50.0	----	----	----	50.0	----	----	----	----	----	----	----	50.0
Ordovician	17.2	55.2	10.3	6.9	10.3	----	51.7	24.1	3.4	----	----	----	----	----	20.7
Yield (gpm): < 5	1.8	15.3	14.9	23.0	23.5	21.3	24.5	10.4	9.1	7.0	13.2	9.8	10.8	2.4	12.7
5–50	3.9	15.7	12.6	18.1	21.2	28.3	44.1	11.8	9.4	3.1	7.9	2.4	2.4	3.1	15.7
> 50	5.9	38.2	11.6	5.9	8.8	29.4	52.9	14.7	----	----	8.8	2.9	----	----	20.6

644509 O - 63 (In pocket)