

THIRD-ORDER LEVELS
SEA LEVEL DATUM OF 1929

Madison and Warren Counties

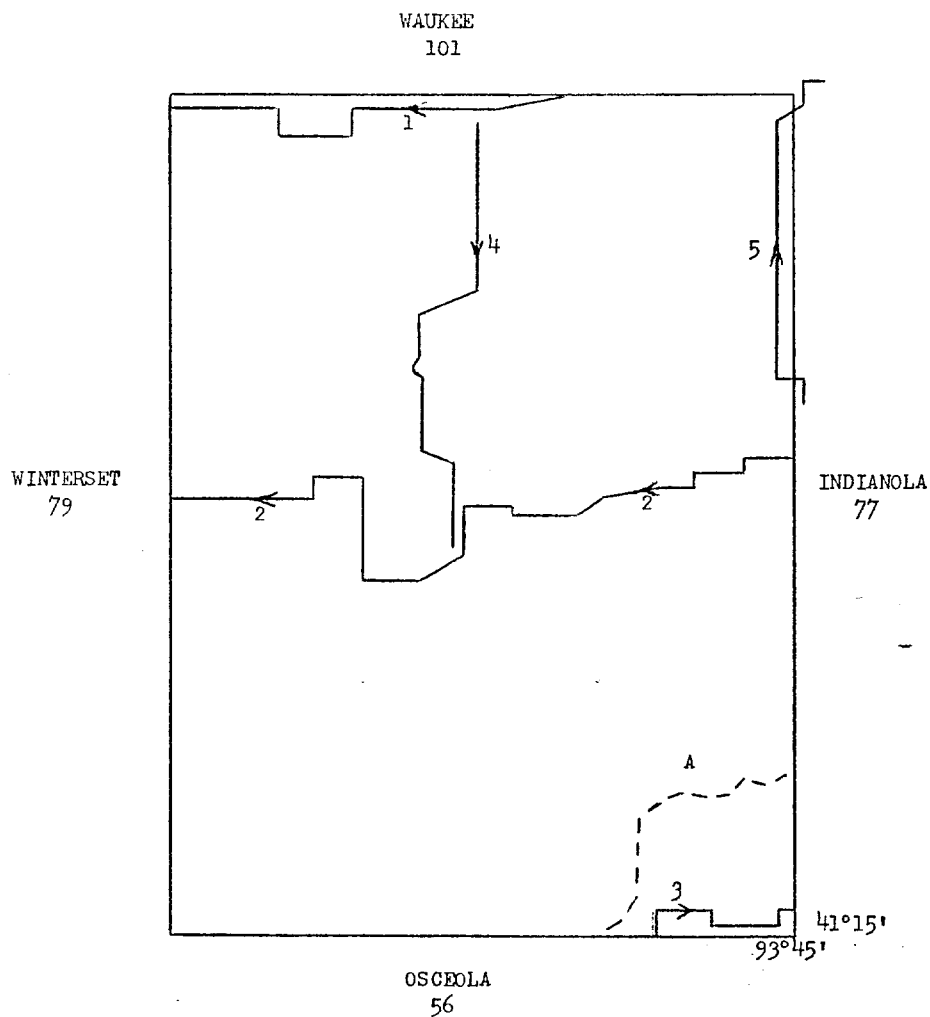
Final Adjustment of 1972

Edition of: 3-17-72

PR:

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ST. CHARLES QUADRANGLE
78 - IOWA
N4115-W9345/15
DIAGRAM NK 15-8
DES MOINES



N.G.S. VERTICAL CONTROL DATA
Quadrangle No. 410932

78-C

LINE 1

FEET

A.D. Pretzer, 1950; Book CV-372

ST. CHARLES QUAD. - 78

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|---|----------|
| 15.3 Cummings, 1.5 mi N. and 5.4 mi W. from, about 2.0 mi S. of Booneville, near center sec. 5, T. 77 N., R. 26 W., 405 ft E. of crossroads, 3/4 ft N. an level with center of rd. in concrete post; standard tablet stamped "8 ADP 1950" | 1014.187 |
| 15.3 Reference mark, 265 ft W. of tablet, 3/4 ft N. of rd., in S. side of telephone pole; rail spike | 1014.89 |
| 17.3 Booneville, 2.0 mi S. and 1.5 mi W. from, along county hwy. near center of W. half sec. 1, T. 77 N., R. 27 W., 0.4 mi W. of crossroads, 125 ft E. of farmhouse, 36 ft S., 24 ft E. and 1 ft lower than rd. at farm entrance S., 3 ft N. of fence corner, in concrete post; standard tablet stamped "9 ADP 1950" | 1017.592 |
| 17.3 Reference mark, 42 ft W. of tablet, 30 ft S. and 20 ft W. from rd. at farm entrance S., in N. root of large maple tree; copper nail and washer | 1017.37 |
| 19.6 Booneville, 2.0 mi S. and 3.8 ft W. from, near quarter cor. between secs. 3 and 4, T. 77 N., R. 27 W., 550 ft W. of crossroads, 3/4 ft N. and 2 ft lower than rd., in concrete post; standard tablet stamped "10 ADP 1950" | 1010.015 |
| 19.6 Reference mark, 210 ft W. of tablet, 28 ft S. of rd. in N. side of telephone pole; rail spike | 1014.17 |
| 21.8 Booneville, 2.0 mi S. and 6.0 mi W. from, 11.4 mi N. along U.S. Hwy. 169, thence 0.9 mi E. along county rd. from Winterset, near center sec. 6, T. 77 N., R. 27 W., 276 ft E. of crossroads, 32 ft S., 22 ft E. and 2 ft lower than rd. at field entrance S. and farm entrance N., in concrete post; standard tablet stamped "11 ADP 1950" | 1044.071 |
| 21.8 Reference mark, 273 ft W. of tablet, 31 ft S. and 30 ft E. from crossroads, in N. side of corner fence post; rail spike | 1051.97 |

LINE 2

A.D. Pretzer, 1950; Book CV-372

ST. CHARLES QUAD. - 78

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| 2.6 Bevington, 2.0 mi N. and 0.3 mi E. from along gravel rds., near center of W. half sec. 8, T. 76 N., R. 25 W., 0.2 mi E. along T-rd. E., 250 ft W. of field entrance N., 240 ft W. of windmill, 32 ft N. and level with rd., in concrete post; standard tablet stamped "20 ADP 1950" | 1013.335 |
| 2.6 Reference mark, 482 ft W. of tablet, 16 ft S. and 1 ft lower than rd., S. concrete culvert chiseled square | 996.59 |
| 5.1 Bevington, 2.0 mi N., thence 2.0 mi W. from, near S. sixteenth cor. between secs. 14 and 15, T. 76 N., R. 26 W., 312 ft W. of farm entrance N., 139 ft W. of T-fence S., 26 ft S. and 1 ft higher than center of rd., 1 ft N. of fence line, in concrete post; standard tablet stamped "21 ADP 1950" | 985.753 |
| 5.1 Reference mark, 188 ft W. of tablet, 10 ft S., on galvanized culvert | 982.42 |
| 7.0 Bevington, 2.0 mi N., thence 4.0 mi W. from, along winding rd., about 2.0 mi N. and 1.0 mi E. from Patterson, near S. sixteenth cor. between secs. 16 and 17, T. 76 N., R. 26 W., about 0.2 mi W. along T-rd. W., 33 ft W. of cross fences, 25 ft N. and 3 ft higher than rd., 18 ft W. of field entrance S., in concrete post; standard tablet stamped "22 ADP 1950" (Destroyed 10-71, KED) | 1009.151 |

4c. 18(?)

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ST. CHARLES QUADRANGLE
78 - IOWA

LINE 2 (Cont'd)

ST. CHARLES QUAD. - 78

FEET

- 7.0 Reference mark, 45 ft N. of tablet, in W. root of hickory tree; copper nail and washer 1005.01
- 10.0 Patterson, 1.0 mi NW., along State Hwy. 92, thence 689 ft N. from along rd., near cor. secs. 30, T. 76 N., R. 26 W., 256 ft S. of T-rd. E., 33 ft E. and 1 ft higher than rd., in concrete post; standard tablet stamped "23 ADP 1950" 1060.144
- 10.0 Reference mark, 689 ft S. of tablet, 34 ft N. and 30 ft E. from crossroads, on orange painted RR. rail 1053.15
- 11.6 Patterson, 2.0 mi NW., along State Hwy. 92, thence 0.5 mi N. from along gravel rd., near center of Sec. 23, T. 76 N., R. 27 W., 595 ft N. of iron bridge, 108 ft E. of farmhouse 89 ft N., 32 ft E. and 4 ft higher than rd. at farm entrance W., in concrete post; standard tablet stamped "24 ADP 1950" 923.792
- 11.6 Reference mark, 64 ft W. of tablet, 33 ft W. of rd. in root on E. side of large tree; copper nail and washer 926.46
- 13.5 Patterson, 2.0 mi NW. along State Hwy. 92, thence 1.6 mi N., thence 0.8 mi W. from, 3.1 mi N. along U.S. Hwy. 169, thence 4.3 mi E. along gravel rd. from Winterset, near S. sixteenth cor. between secs. 14 and 15, T. 76 N., R. 27 W., about 120 ft W. of drain and old abandoned rd. E., 26 ft N. and 1 ft higher than curve in rd., in concrete post; standard tablet stamped "25 ADP 1950" 1002.148
- 13.5 Reference mark, 120 ft E. of tablet, 9 ft N. of old abandoned rd., on concrete headwall; chiseled square 997.88
- 15.7 Winterset, 3.1 mi N. along U.S. Hwy. 169, thence 2.0 mi E. from along gravel rd., near quarter cor. between secs. 16 and 17, T. 76 N., R. 27 W., 478 ft W. of T-rd. N., 32 ft N. and level with rd., in concrete post; standard tablet stamped "26 ADP 1950" 1069.509
- 15.7 Reference mark, 127 ft W. of tablet, 15 ft S. of rd., on S. concrete culvert; chiseled square 1066.82

LINE 3

R.D. Searcy, 1950; Book CV-352

ST. CHARLES QUAD. - 78

- 25.0 Trure, 2.7 mi N. and 4.0 mi E. from, near cor. secs. 5, 6, 31 and 32, Tps. 74 and 75 N., R. 25 W., 350 ft W. of T-rd. S., 21 ft S. of rd., 5 ft W. of power pole, in concrete post; standard tablet stamped "TT 46 MT 1950" 1063.458
- 25.1 Reference mark, 309 ft E. of tablet, 30 ft S. of rd.; iron rod projecting 6-in. 1062.94

LINE 4

K.E. Daly, 1971; Book CV-2752

WAUKEE QUAD. - 101

- 1 57 0.0 Cummings, 1.5 mi N. and 3.4 mi W. from; near center of sec. 3, T. 77 N., R. 26 W., 580 ft E. of T-rd. S.; 30 ft S. of and level with rd., in concrete post; standard tablet stamped "7 ADP 1950" 944.107
- 58 1.1 UE 7 A, 1.1 mi W. of tablet at T-rd. S., 32 ft S., 31 ft E. and 0.9 ft higher than T-rd. S.; NW. side of concrete base of iron fence corner post, chiseled square; painted 1009.20

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ST. CHARLES QUADRANGLE
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LINE 4 (Cont'd)	ST. CHARLES QUAD. - 78	FEET
1 60 2.1 Cummings, 1.5 mi N. and 5.4 mi W. from, about 2.0 mi S. of Booneville, near center sec. 5, T. 77 N., R. 26 W., 405 ft E. of crossroads, 34 ft N. and level with center of rd.; in concrete post; standard tablet stamped "8 ADP 1950"		1014.187
61 0.1 Reference mark is 420 ft SW. of tablet, 81 ft S. and 26 ft E. of crossroads N. end of a 18-in. concrete tube culvert under field entrance; chiseled square		1012.05
62 1.1 UE 8 A, 1.0 mi S. of tablet, at T-rd. E., 22 ft N., 28 ft E. and 1.1 ft lower than T-rd. E., N. end of 1.5 ft metal culvert, punch hole in painted square; painted		1017.33
63 1.6 UE 8 B, 1.5 mi S. of tablet, at crossroads, 45 ft N., 37 ft W. and 1.5 ft lower than crossroads; W. end of 1.8 ft metal culvert; punch hole in painted square; painted		973.28
64 2.3 Cumming, 0.7 mi S. and 6.0 mi W. of near approx. center of S. half of sec. 17, T. 77 N., R. 26 W., 27 ft W. and 5.7 ft lower than rd. at drain; N. end of W. concrete headwall of concrete tube culvert; a standard tablet stamped "8 KED 1971"; painted		919.156
65 2.8 UE 8 C Centerline, 0.5 mi S. of tablet, at wood bridge across Badger Creek, center of bridge, copper nail and washer; painted		885.7
67 4.1 UE 8 D, 1.8 mi S. of tablet, at T-rd. N., 51 ft N., 56 ft E. and 3.3 ft lower than T-rd. N.; NE. end of 1.6 ft metal culvert, under field entrance, punch hole in painted square; painted		1008.68
69 5.3 Reference mark, is 385 ft NNE. of tablet, 26 ft SW. and 61 ft NW. of T-rd. NW. at curve in rd.; SW. end of 2.6 ft metal culvert punch hole in painted square painted		860.73
70 5.4 Cummings, 2.5 mi S. and 7.0 mi W. of near quarter cor. between secs. 25 and 30, T. 77 N., Rs. 26 and 27 W., 367 ft SW. (along rd.), 86 ft W. and 5.2 ft lower than rd. at rd. NW. leading N.; 1 ft S. of E.-W. fence, 2 ft E. of metal witness post and 9 ft E. of fence cor. a standard tablet stamped "9 KED 1971" attached to a driven copper weld rod and centered in a 6-in. tile flush with ground, filled with gravel, tablet is 1-in. below the surface of the ground		857.575
71 5.4 UE 9 A, 1.0 mi S. of tablet, at concrete bridge across North River, 10 ft SE. and 0.9 ft higher than rd. at bridge, center of concrete curbing of SE. railing; chiseled square; painted		866.30
73 7.4 Patterson, 4.0 mi N. and 0.7 mi W. of, approx. 320 ft S. of pipeline crossing near S. sixteenth cor. between secs. 1 and 6, T. 76 N., Rs. 26 and 27 W.; 3 ft S., 34 ft E. and ft lower than rd. at fence E.; 1 ft N. of meal witness post and 0.5 ft W. of right-of-way fence; centered in a 6-in. tile filled with gravel a standard tablet attached to copper weld rod and stamped "10 KED 1971" tablet is 2-in. below surface		989.849
74 7.5 Reference mark is 57 ft SE. of tablet, 30 ft S. and 84 ft E. of rd. at fence E. SW. side of forked 1 ft oak tree, head of a RR. spike		982.43
76 8.4 UE 10 A, 1.0 mi S. of tablet at T-rd. N.; 81 ft N., 26 ft E. and 0.6 ft higher than T-rd. N., N. end of 1.5 ft metal culvert, under field entrance punch hole in painted square; painted		910.66
78 9.3 UE 10 B Centerline, 1.3 mi S. and 0.5 mi E. along rd. from tablet centerline wood bridge across Cedar Creek, copper nail and washer; painted		866.6

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ST. CHARLES QUADRANGLE
78 - IOWA

<u>LINE 4 (Cont'd)</u>		<u>ST. CHARLES QUAD. - 78</u>	<u>FEET</u>
1	79 10.1	Reference mark, is 215 ft SW. of tablet, 67 ft S. and 20 ft W. of T-rd. E., W. end of 2.2 ft metal culvert, punch hole in painted square; painted	967.24
80	10.1	Patterson, 2.0 mi N. and 0.2 mi W. of at T-rd. E., near S. sixteenth cor. between secs. 17 and 18, T. 76 N., R. 26 W., 132 ft N., 40 ft E. and ft higher than T-rd. E., 1 ft W. of right-of-way fence and 1.6 ft S. of metal witness post; centered in a 6-in. tile filled with gravel, a standard tablet, attached to a copper weld rod, stamped "11 KED 1971" and 2-in. below surface; painted	967.198
2	1 10.8	UE 11 A Centerline, 0.7 mi S. of tablet at long driveway W. to farm, centerline rd. at drive W. head of RR. spike, slightly below rd. surface; painted	986.77
	2 11.4	UE 11 B, 1.2 mi S. of tablet at T-rd. N., 130 ft N., 19 ft E. and 1.1 ft higher than T-rd. N., 1 ft W. of E. end of 1.5 ft metal culvert, punch hole in painted square; painted	1031.03
3	12.1	Patterson, 1.0 mi NW., along State Hwy. 92, thence 689 ft N. from along rd., near cor. secs. 30, T. 76 N., R. 26 W., 256 ft S. of T-rd. E., 33 ft E. and 1 ft higher than rd., in concrete post; standard tablet stamped "23 ADP 1950"	1060.144

LINE 5

K.E. Daly, 1971; Book CV-2752

DES MOINES QUAD. - 100

2	8 0.0	USC&GS BM "77 NO 588" Cumming, 2.0 mi N. and 1.5 mi E. of; at N. edge of Ovilla, 40 ft N. and 30 ft W. of T-rd. E. (Ovilla Rd. and County line); approximately 40 ft N. of Polk and Warren County Line; near cor. secs. 3, 4, 33 and 34; Tps. 77 and 78 N., R. 25 W., 15 ft N. of Hi-line pole; 2 ft E. of fence, in concrete post; standard USC&GS and State disk stamped "77 NO 588" (Elev. by USGS)	971.417
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INDIANOLA QUAD. - 77

8	0.5	UE 77 A, 0.5 mi S. of disk at crossroads; 33 ft S., 83 ft W. and 0.8 ft higher than crossroads; N. side of fence cor. post, head of RR. spike; painted	972.46
9	1.6	Cummings, 1.5 mi N. and 1.0 mi E. from; near quarter cor. between secs. 4 and 5, T. 77 N., R. 25 W., 330 ft S. along T-rd. S.; 132 ft S., 21 ft W. and level with center of rd. at farm entrance W., 1 ft E. of fence line, in concrete post; standard tablet stamped "5 ADP 1950" (loose in ground 5-64, WKM)	971.335
10	1.7	Reference mark, is 733 ft S. of tablet, 37 ft N., 27 ft W. and ft lower than rd. at RR.; W. end of 2.6 ft metal culvert punched hole, in painted square, painted	957.78

ST. CHARLES QUAD. - 78

11	2.3	UE 5 A, 0.5 mi S. of tablet at a small wood bridge, 12 ft W. and 1.3 ft lower than rd. at bridge, top of inside wood piling of W. wingwall of S. abutment copper nail and washer; painted	915.86
13	3.3	UE 5 B, 1.5 mi S. of tablet at crossroads, 375 ft S., 25 ft W., and 15.7 ft lower than crossroads; S. end of W. headwall of 6 ft concrete box culvert, chiseled square; painted	932.76
14	3.7	UE 5 C, 2.0 mi S. of tablet, at crossroads, 24 ft N., 24 ft W. and 3.0 ft lower than crossroads, W. end of 2 ft metal culvert; punched hole in painted square; painted	979.44

<u>LINE 5 (Cont'd)</u>		<u>ST. CHARLES QUAD. - 78</u>	<u>FEET</u>
2 15	4.3	Cumming, 1.0 mi S. and 0.5 mi E. of, near cor. secs. 16, 17, 20 and 21, T. 77 N., R. 25 W., 17 ft W. and 1.1 ft lower than rd. at drain, N. end of W. head-wall of 8 ft concrete box culvert, a standard tablet stamped "12 KED 1971"	910.411
16	4.7	UE 12 A, centerline, 0.4 mi S. of tablet at T-rd. W., centerline of T-rd. W. head of RR. spike slightly below rd. surface; painted	963.87
17	5.5	UE 12 B, 0.9 mi S. and 0.2 mi E. of tablet at rd. fork; 24 ft N., 209 ft E. and 11.0 ft lower than rd. fork; W. end 1.4 ft metal culvert, under field entrance punch hole in painted square; painted	929.81
19	6.5	UE 12 C, 1.9 mi S. and 0.2 mi E. of a iron bridge across North River, 11.5 ft E. and 2.5 ft lower than rd. at bridge; 1.0 ft E. of E. railing, top of NE. most; bolt on E. end of a N. I-beam pier, at NE. cor. of iron bridge; chiseled cross; painted	833.57
21	7.5	Reference mark is 114 ft NE. of tablet, 69 ft N. and 13.5 ft E. of rd. at drive W. to farm, 6-in. N. of S. end of E. concrete headwall of culvert; chiseled square; painted	856.84
22	7.5	Churchville, 2.3 mi N. of along gravel rd., near quarter cor. between secs. 32 and 33, T. 77 N., R. 25 W., 328 ft N. of T-rd. E., 30 ft S., 25 ft W. and level with center of rd. at farm entrance W., 2 ft E. of fence line, in concrete post; standard tablet stamped "3 ADP 1950" (BM has been hit by grader, leaning at 15° angle and in bank of ditch, and exposed on one side)	859.282
23	8.3	UE 3 A Centerline, 0.8 mi S. of tablet at a small wood bridge; centerline of rd. at surface; painted	878.96
24	9.1	UE 3 B Centerline; 1.6 mi S. of tablet, at T-rd. N., centerline of T-rd. head of RR. spike slightly below rd. surface; painted	907.1
25	9.7	Reference mark is 343 ft WNW. of tablet, 29 ft N. and 33 ft E. of centerline of T-rd. E., N. end of 1.5 ft metal culvert, punch hole, in painted square; painted	949.09
26	9.7	Churchville, 0.2 mi N. of gravel rd., near S. sixteenth cor. secs. 8 and 9, T. 76 N., R. 25 W., 365 ft E. along T-rd. E., 33 ft S. and level with rd., 1 ft N. of fence line, in concrete post; standard tablet stamped "2 ADP 1950"	956.055

ISOLATED BENCH MARKS

5.3	T. 77 N., R. 25 W., near cor. secs. 20, 21, 28 and 29, 30 ft S. of T-rd. N., in concrete post; standard tablet stamped "PRIM TRAY STA 1-LS 1924"	949.953
6.9	Churchville, 6.0 mi N. of, 1.0 mi E. and 0.5 mi S. from Cummings, near quarter cor. between secs. 16 and 17, T. 77 N., R. 25 W., 308 ft N. of crossroads, 31 ft W. and 1 ft higher than center of rd., 1 ft E. of fenceline, in concrete post; standard tablet stamped "4 ADP 1950" (Not found, 10-71, KED)	980.314
6.9	Reference mark, 606 ft N. of tablet, 10 ft S. and 20 ft E. from rd. at farm entrance E. on S. end of concrete culvert; chiseled square	972.72