

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

41-092-33
ALBIA QUADRANGLE
52 - IOWA
N4100-W9245/15
DIAGRAM NK 15-8
DES MOINES

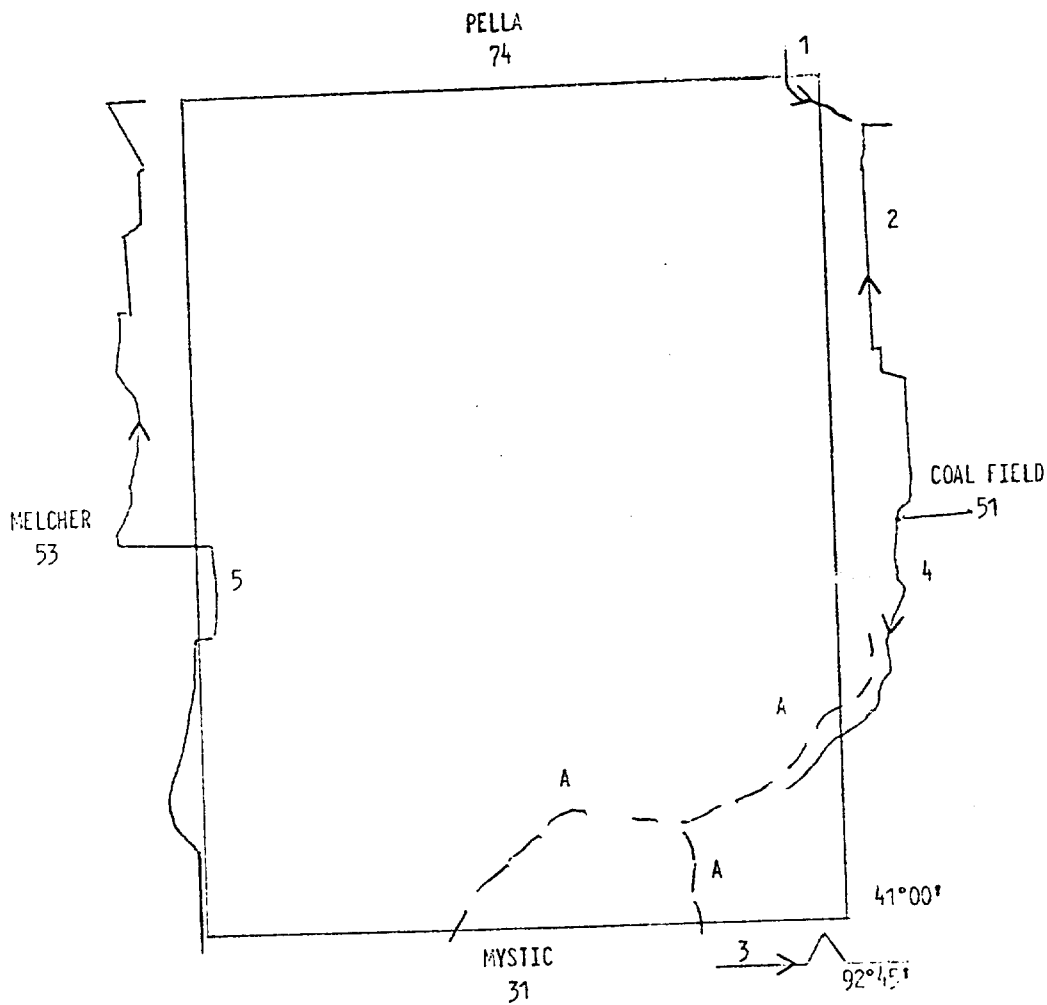
ORDER LEVELS

ADDITIONAL GEODETIC VERTICAL DATUM OF 1929
Final adjustment of 1967

Marion, Mahaska and
Monroe Counties

Edition of: 2/21/80

PR: DB/rs



N.G.S. (USC&GS) VERTICAL CONTROL DATA

Quadrangle No. 410923

52 D

LINE 1

FEET

W. E. Knouse, 1967; Book CV-2192

PELLA QUAD. - 74

1 64 8.0 Reference mark; T. 74 N., R. 17 W.; in NE. portion of sec. 1; 139 ft N. and 18 ft W. of T-rd. W.; on top of W. end of a corrugated steel culvert; punched hole 681.05

65 8.0 Leighton, 6.25 mi S. and 1.5 mi E. from; 3.0 mi S. and 6.0 mi W. from Oskaloosa; T. 74 N., R. 17 W.; in NE. portion of sec. 1; 21 ft W. of center of rd., about 100 ft SW. of rd. at curve; about 400 ft N. of T-rd. W., on top and near center of W. headwall of culvert; a standard tablet stamped "8 WEK 1967" 681.645

COAL FIELD QUAD. - 51

66 8.5 UE 8 WEK A; T. 74 N., R. 16 W.; in N. central portion of sec. 6; 11 ft S. of center of rd., about 900 ft E. of T-rd. N., on E. end of S. concrete wheel guard of bridge; chiseled square (UE is 17.5 ft above water level, 6/7/67: UE is about 0.6 ft higher than center of bridge) 686.01

67 9.0 UE 8 WEK B; T. 74 N., R. 16 W.; between NW $\frac{1}{4}$ sec. 5 and NE $\frac{1}{4}$ sec. 6; ground level at center of crossroads 683.16

68 9.4 Oskaloosa; about 4.0 mi S. and 5.0 mi W. of; at approx. S $\frac{1}{2}$ between secs. 5 and 6; T. 74 N., R. 16 W.; at NE. cor. of concrete bridge over Des Moines River; standard tablet stamped "4 HK 1966" 693.85

LINE 2

H. Kablesh, 1966; Book CV-2086

COAL FIELD QUAD. - 51

1.1 UE 112 D; about 1.0 mi W. of BM., in W $\frac{1}{2}$ between secs. 16 and 21; T. 73 N., R. 16 W.; 13 ft N. and 88 ft E. of T-rd. N. at E. point of grassy triangle, chiseled square in N. end of concrete culvert 842.05

1.9 UE 112 E; about 1.7 mi W. of BM. at approximate center between secs. 17 and 20; T. 73 N., R. 16 W.; 16 ft S. and 27 ft E. of T-rd. E.; rail spike in fence cor. post (T-rd. opposite at same elevation) 870.76

1.9 UE 112 F; about 4.5 mi SW. of Eddyville, along State Hwy. 137; T-rd. S. Hayden Chapel; top of rail spike at center of T-rd. S. 853.29

2.5 UE 112 G; about 0.25 mi E. of Hayden Chapel along Hwy. 137; at E. center of sec. 17, T. 73 N., R. 16 W.; rail spike in center of T-rd. N. 855.62

3.5 Reference mark; about 400 ft S. and 60 ft E. of BM; chiseled square in NE. end of concrete culvert 829.15

3.5 UE; T-rd. W., about 130 ft S. of BM. 837.26

3.5 Eddyville, about 4.25 mi W. and 1.5 mi S. of; at E. center of sec. 8, T. 73 N., R. 16 W.; 123 ft N. and 31 ft W. of T-rd. W.; 3 ft S. of power pole, 1 ft E. of fence; in concrete post, standard tablet stamped "1 HK 1966" 857.26

4.0 UE 1 A; about 0.4 mi N. of BM., 110 ft N. and 24 ft W. of S. tip of grassy triangle and T-rd. NW.; rail spike in fence corner post 857.16

LINE 2 (Cont'd)

	FEET
4.6 UE 1 B; 0.6 mi N. of BM; center of N.-S. rd. at drive E. to house	834.38
4.9 UE 1 C; about 1.4 mi N. of BM; in NE $\frac{1}{4}$ of sec. 5; T. 73 N., R. 16 W.; a copper nail and washer in center of wooden bridge over creek; water level - 14 ft lower = 699 ft	713.18
5.1 UE 1 D; about 1.5 mi N. of BM; in E $\frac{1}{4}$ between secs. 5 and 32; Ts. 73 and 74 N., R. 16 W.; center of T-rd. S.	742.5
5.6 UE 1 E; about 1.5 mi N. and 0.5 mi W. of BM; in W $\frac{1}{4}$ between secs. 5 and 32; Ts. 73 and 74 N., R. 16 W.; rail spike in center of crossroads	733.40
6.1 Eddyville, about 4.75 mi W. and 1.0 mi N. of, in approximate NE. cor. of SW $\frac{1}{4}$ of sec. 32; T. 74 N., R. 16 W.; about 55 ft E. of center of rd. curve at drive NE. to farm house; standard tablet on top of a concrete culvert; stamped "2 HK 1966"	775.172
6.6 UE 2 A; about 0.25 mi W. and 0.25 mi N. of BM; in N $\frac{1}{4}$ between secs. 31 and 32; T. 74 N., R. 16 W.; center of N.-S. rd. at drive E. to Old School House	847.7
7.1 UE 2 B; about 0.25 mi W. and 0.75 mi N. of BM; in S $\frac{1}{4}$ between secs. 29 and 30; T. 74 N., R. 16 W.; center of N.-S. rd. at fence W.	830.8
UE 2 C; about 0.25 mi W. and 1.27 mi N. of BM; at approximate quarter cor. between secs. 29 and 30; T. 74 N., R. 16 W.; chiseled square on N. wing of W. headwall of concrete culvert (water level - 8 ft. = 745 ft.)	752.62
7.6 UE 2 D; about 0.25 mi W. and 1.5 mi N. of BM; in N $\frac{1}{4}$ between secs. 29 and 30; T. 74 N., R. 16 W.; rail spike in center of crossroads	821.40
8.0 UE 2 E; about 0.25 mi W. and 2.0 mi N. of BM; in approximate S $\frac{1}{4}$ between secs. 19 and 20; T. 74 N., R. 16 W.; rail spike in center of T-rd. E.	746.11
8.5 Eddyville, 5.0 mi W. and 3.0 mi N. of; at approximate center between secs. 19 and 20; T. 74 N., R. 16 W.; at NE. cor. of concrete bridge over Bluff Creek, standard tablet stamped "3 HK 1966" (water level -28 ft. = 682 Ft.)	711.167
8.5 Reference mark; 70 ft S. and 24 ft W. of tablet; at SW. cor. of concrete bridge, chiseled square, painted "RM"	711.06
8.8 UE 3 A; about 0.3 mi N. of BM; rail spike at center of crossroads; cor. secs. 17, 18, 19 and 20; T. 74 N., R. 16 W.	752.63
9.3 UE 3 B; about 0.8 mi N. of BM; at center between secs. 17 and 18; T. 74 N., R. 16 W.; T-rd. W.	813.3
10.3 UE 3 C; about 1.8 mi N. of BM; at approximate center between secs. 7 and 8; T. 74 N., R. 16 W.; 25 ft N. and 65 ft W. of crossroads and about 6 ft lower than crossroads; painted square at top of W. end of steel culvert	731.59
11.2 Oskaloosa; about 4.0 mi S. and 5.0 mi W. of; at approximate S $\frac{1}{4}$ between secs. 5 and 6; T. 74 N., R. 16 W.; at NE. cor. of concrete bridge over Des Moines River; standard tablet stamped "4 HK 1966"	693.851
11.2 Reference mark; 1140 ft S. and 25 ft W. of tablet, chiseled square in SW. abutment of concrete bridge over Des Moines River	702.81
11.4 UE 4 A; about 0.4 mi N. of BM; rail spike at center of crossroads	683.04

FEET

LINE 2 (Cont'd)

- 12.7 UE 4 B; about 0.4 mi N. and 1.2 mi E. of BM; in NW $\frac{1}{4}$ of sec. 4; T. 74 N., R. 16 W.; at center of N. side of concrete bridge; chiseled square 683.87
- 13.2 Oskaloosa, 4.0 mi S. and 3.0 mi W. of; at approximate center of sec. 4; T. 74 N., R. 16 W.; at SW. cor. of concrete bridge over creek; standard tablet stamped "5 HK 1966" 686.018
- 13.2 Reference mark; 21 ft N. and 30 ft E. of tablet; chiseled square in NE. cor. of concrete bridge over creek 685.96

LINE 3

H. Kablesh, 1966; Book CV-2086

MYSTIC QUAD. - 31

- 0.0 Albia, 3.1 mi S. along Wabash RR. from crossing of Chicago, Burlington and Quincy RR. at Monroe County; 8 $\frac{1}{2}$ poles NW. of milepost 269 at rd. crossing; 30 ft N. and 46 ft E. of center of grade crossing; 15 ft N. of a telephone pole #42; 6 ft W. of right-of-way fence; standard USC&GS disk stamped "P 119 1935" and set in top of a concrete post 967.193
- 0.5 UE 119 A; about 0.5 mi S. of BM. at E $\frac{1}{2}$ between secs. 3 and 34; Ts. 71 and 72 N., R. 17 W.; 54 ft N. and 20 ft E. of crossroads; chiseled square at E. end of concrete culvert 964.94
- UE 119 B; about 0.5 mi S. and 0.5 mi E. of BM. at center between secs. 2 and 35; Ts. 71 and 72 N., R. 17 W.; center of T-rd. S. 958.9
- 1.8 UE 119 C; about 0.5 mi S. of, 1.2 mi E. of BM; at approximate cor. of secs. 1, 2, 35 and 36; Ts. 71 and 72 N., R. 17 W.; 12 ft N. and 6 ft W. of gate at field entrance E.; painted square on N. end of steel culvert 952.6
- 2.3 UE 119 D; about 0.5 mi S., thence 1.2 mi E., then 0.5 mi N. of BM., at approx. center between secs. 35 and 36; T. 72 N., R. 17 W.; at N.-S. rd. at field rd. W. 956.2
- 2.8 Albia; 2.0 mi S. and 2.0 mi E. of; in SE $\frac{1}{4}$ sec. 26, T. 72 N., R. 17 W.; 225 ft S. and 30 ft W. of T-rd. S.; 90 ft N. and 1 ft E. of T-fence W., 3 ft NE. of telephone pole; in concrete post; standard tablet stamped "10 HK 1966" 957.069
- 2.8 Reference mark, 180 ft N. and 55 ft E. of BM; 27 ft E. and 25 ft S. of T-rd. S., painted square on E. end of steel culvert 951.33
- 3.5 UE 10 A; about 0.7 mi SE. of BM; at approximate N. center of sec. 36; T. 72 N., R. 17 W.; 25 ft S. and 18 ft W. of T-rd. S. to airport; chiseled square at W. end of concrete culvert 957.06
- 4.5 UE 10 B; about 1.64 mi SE. of BM along County Road "C"; in SW $\frac{1}{4}$ of sec. 31, T. 72 N., R. 16 W.; center of T-rd. S. 959.0
- 4.9 UE 10 C; about 2.1 mi E. along County Road "C" from BM; in SE $\frac{1}{4}$ of sec. 31, T. 72 N., R. 16 W.; 45 ft S. and 27 ft W. of T-rd. S.; chiseled square at W. end of concrete culvert 899.36

BLAKESBURG QUAD. - 30

- UE 10 D; about 2.6 mi E. along Co. Rd. "C" from BM; in SW $\frac{1}{4}$ of sec. 32; T. 72 N., R. 16 W.; center of E.-W. rd. at field entrance N. 941.7

FEET

LINE 3 (Cont'd)

- 5.9 Albia, 3.0 mi S. and 4.7 mi E. of; Blakesburg, 2.0 mi N. and 4.5 mi W. of; in E. center of sec. 32; T. 72 N., R. 16 W.; 50 ft W. and 44 ft N. of center of E.-W. rd. at drive S. to Emmet Van Dalen farm house; 3 ft W. of a power pole and 2 ft S. of right-of-way fence; in concrete post; standard tablet stamped "11 HK 1966" 941.753
- 5.9 Reference mark; 100 ft E. and 6 ft S. of BM; 35 ft N. of center of E.-W. rd., painted square at W. end of steel culvert 940.32
- 5.9 UE 11 A; about 0.6 mi E. along Co. Rd. "C" from BM; at approximate W. center of sec. 33; T. 72 N., R. 16 W.; center of E.-W. rd. at drive N. to Robert Picknell's house 930.4
- 7.1 UE 11 B; about 1.1 mi E. along Co. Rd. "C" from BM; at approximate E. center of sec. 33; T. 72 N., R. 16 W.; chiseled square in concrete base of flag pole, at old schoolhouse 915.97

LINE 4

H. Kablesh, 1966; Book CV-2086

COAL FIELD QUAD. - 51

- 0.0 UE 112 E (previously described in line 2) 870.76
- UE 112 H; Avery, 3.7 mi N. and 0.5 mi W. of; 0.47 mi S. of UE 112 E; at approximate center of secs. 20, T. 73 N., R. 16 W.; center of N.-S. rd. at drive E. to house 841.6
- 0.8 UE 112 J; about 0.75 mi S. of UE 112 E; in approximate S. center of sec. 20; T. 73 N., R. 16 W.; copper nail and washer at SW. cor. of wooden bridge over creek 738.15
- 0.8 UE 112 K; about 1.03 mi S. of UE 112 E; near center of N. edge of sec. 29; T. 73 N., R. 16 W.; copper nail and washer in E. side of bridge over creek (Water level 14 ft lower = 714.4 ft) 728.41
- 1.2 UE 112 L; about 1.2 mi S. of UE 112 E; at approximate N. center of sec. 29, T. 73 N., R. 16 W.; center of grade crossing 737.2
- 2.1 Avery, 1.0 mi W. and 1.75 mi N. of; in SW $\frac{1}{4}$ of sec. 29, T. 73 N., R. 16 W.; at NE. cor. of cemetery, 38 ft W. of center of rd.; 2 ft E. of fence corner; in concrete post, standard tablet stamped "16 HK 1966" 875.573
- 1.9 Reference mark; about 830 ft N. of BM; 18 ft E. of center of gravel rd.; painted square at E. end of culvert 870.94
- 2.1 Reference mark; 300 ft S. of BM; about 8 ft N. and 25 ft W. of center of rd. at entrance W. to cemetery; chiseled square at N. end of culvert 874.05
- 2.6 UE 16 A; about 0.6 mi S. of BM; at approximate W. center of sec. 32; T. 73 N., R. 16 W.; center of T-rd. W. 895.9
- 3.1 UE 16 B; about 1.0 mi S. of BM; at approximate W. center between secs. 5 and 32; T. 72 and 73 N., R. 16 W.; center of T-rd. E. 896.31
- 3.7 UE 16 C; about 1.6 mi S. of BM; at approximate center between secs. 5 and 6; T. 72 N., R. 16 W.; top of bolt, painted white; at E. center of wooden bridge over Chicago, Burlington and Quincy RR. 916.73

FEET

LINE 4 (Cont'd)

- 4.1 UE 16 D; about 2.0 mi S. of BM; in S½ between secs. 5 and 6; T. 72 N., R. 16 W.; center of I-rd. N. 912.1
- 4.7 Maxon, 1.2 mi N. and 1.5 mi E. of; in approximate W½ between secs. 6 and 7; T. 72 N., R. 16 W.; at SE. cor. of concrete bridge over C.B. & Q. RR., standard tablet stamped "17 HK 1966" 945.455
- 4.7 Reference mark; about 200 ft W. of BM; chiseled square at SW. cor. of bridge over C.B. & Q. RR. 745.05

ALBIA QUAD. - 52

- 5.2 UE 17 A; about 0.4 mi W. of BM; at approximate cor. of secs. 1, 6, 7 and 12; T. 72 N., Rs. 16 and 17 W.; center of I-rd. S. 928.9
- 5.9 UE 17 B; about 0.5 mi W. and 0.5 mi S. of BM; top of bolt painted white; about 6 in. S. of N. rail of E. bound track of C.B. & Q. RR. 925.11
- 6.0 UE 17 C; about 0.5 mi W. and 0.7 mi S. of BM; in SE¼ of sec. 12; T. 72 N., R. 17 W.; center of I-rd. E. 933.7
- 6.5 UE 17 D; about 1.0 mi W. and 1.0 mi S. of BM; at approx. center between secs. 12 and 13; T. 72 N., R. 17 W.; chiseled square at E. edge of sidewalk at gate of entrance to farmhouse 928.40
- UE 17 E; about 0.25 mi E. of Maxon, copper nail and washer, at about 6 in. S. of S. rail of E. bound track of C.B. & Q. RR. 942.82
- 7.3 UE 17 F; at Maxon; center of I-rd. NE. of station 942.7
- 7.4 At Maxon, Monroe County; 180 ft NE. of the center of the crossing of the C.B. & Q. RR. and the Minneapolis and St. Louis RR.; 9 ft SE. of the center of the M. & S.L. RR. track in the center of the top of an abandoned concrete semaphore base, and about 8 in. lower than the track, a standard USC&GS disk stamped "B 112 1935" 942.839

LINE 5

A. J. Keeps, 1979; Book CV-3531 A

MYSTIC QUAD. - 31

- 1 41 4.3 RM, 30 ft N. & 110 ft W. of tablet, 0.5 ft E. of W. end of concrete railing of bridge, a chiseled square 845.13
- 42 4.3 Melrose, 3.7 mi E. of, in SW¼ of sec. 6, T. 71 N., R. 18 W., at a concrete bridge over Contrary creek, 55 ft E. and 15 ft S. and 1.7 ft lower than bridge, set in concrete footing of bridge; a standard tablet stamped "3 KEE 1979" 842.301
- 45 5.1 UE 3 A; near center of sec. 6, T. 71 N., R. 18 W., 16 ft N., 31 ft E. and 1.8 ft lower than I-rd. E., an "X" on N. end of a corrugated culvert 943.16
- 48 6.2 UE 3 C, near ¼ cor. secs. 31-36, T. 72 N., R. 18 and 19 W., 53 ft W. and 4.1 ft lower than drive W., 17 ft N. of drive W., on N. end of a corrugated culvert and "X" 972.15
- 51 7.5 UE 3 F, centerline of Highway 34 near N1/16 cor. secs. 25 & 30, T. 72 N., Rs. 18 and 19 W., a nail and copper washer 976.24

ALBIA QUAD. - 52

LINE 5 (Cont'd)

MELCHER QUAD. - 53

FEET

1	53	8.6	RM, 705 ft S. and 37 ft W. of BM, 364 ft S. and 17 ft W. of "Y" fork, on W. end of a corrugated culvert, a nail and copper washer	979.84
	54	8.8	BM, Melrose, 3.0 mi E. and 3.5 mi N. of, 0.7 mi N. and 2.1 mi W. of Georgetown (church), near center of sec. 24, T. 72 N., R. 19 W., 338 ft N. and 20 ft E. of "Y" fork, 2 ft S. of a pole, 1.5 ft W. of a witness post, on a copper steel rod; a standard tablet stamped "4 KEE 1979"	979.436
	56	9.8	UE 4 A, in NE¼ of sec. 23, T. 72 N., R. 19 W., 12 ft W. of S. end of a concrete bridge over Whippoorwill Creek, 1.3 ft higher than centerline of bridge, 1 ft S. of W. railing of bridge, in concrete abutment; a nail and copper washer	853.91
	58	10.43	UE 4 B, near center of sec. 14, T. 72 N., R. 19 W., 26 ft S., 30 ft E. and 4.2 ft lower than I-rd. W., 18 ft N. of rd. E., on N. end of a damaged corrugated culvert, an "X"	965.68
	61	11.69	UE 4 D, in SW¼ sec. 11, T. 72 N., R. 19 W., 12 ft S., 30 ft W. and 3.1 ft lower than drive W. (middle one of 3), on S. end of a concrete culvert; a chiseled square	963.67
	65	12.90	RM, 403 ft S. and 56 ft W. of BM, 17 ft W. of rd., on W. end of a corrugated culvert, a nail and copper washer	949.46
	5	12.90	BM, Georgetown (church), 3.4 mi N. and 1.8 mi W. of, in SE¼ sec. 1, T. 72 N., R. 19 W., 810 ft N. of a "Y" fork, 39 ft E. and 8 ft S. of rd. at fence E., 8 ft S. and 2 ft W. of a fence corner, 2 ft W. of a witness post, on a copper coated steel rod; a standard tablet stamped "5 KEE 1979"	951.622
	68	14.4	UE 5 C, in NE¼ cor. sec. 36, T. 73 N., R. 19 W., 24 ft E., 8 ft S., and 0.5 ft lower than drive E., on S. end of a corrugated culvert, a nail	778.10
	71	14.8	UE 5 D, in SE¼ sec. 25, T. 73 N., R. 19 W., 10 ft E. of centerline of bridge (midstream) a copper nail and washer in wooden bridge floor of bridge over Whites Creek	778.06
	73	15.3	UE 5 E, near center of sec. 25, T. 73 N., R. 19 W., 256 ft N., and 5.4 ft higher than I-rd. E., 13 ft S. and 16 ft W. of a field entrance W., on S. end of a corrugated culvert, a nail	804.44
	77	16.1	UE 5 G, near center of sec. 24, T. 73 N., R. 19 W., 18 ft S., 20 ft W. and 1.8 ft lower than x-rds. on S. end of a concrete culvert; a chiseled square	898.85
	80	16.8	UE 5 H, at ¼ cor. sec. 13 and 24, T. 73 N., R. 19 W., 24 ft N., 13 ft E. and 0.4 ft lower than x-rds. an "X" on a corrugated culvert	862.55
2	4	17.3	RM, 26 ft N. and 19 ft E. of x-rds., on E. end of a concrete culvert, high point, in a chiseled square	863.68
	5	17.3	BM, Georgetown, 7.2 mi N. and 2.6 mi W. of, 7.7 mi S. and 0.7 mi E. of Attica, at cor. secs. 13, 14, 23 and 24, T. 73 N., R. 19 W., 73 ft N., 28 ft W. and 2.9 ft higher than I-rd. N., 25 ft N. and 1.0 ft E. of a fence cor., 0.5 ft E. of a witness post, on a copper coated steel rod, a standard tablet stamped "6 KEE 1979"	865.962

LINE 5 (Cont'd)

FEET

2	6	17.6	UE 6 A, near E. sixteenth cor. secs. 14&23, T. 73 N., R. 19 W., 12 ft N. and 0.1 ft higher than centerline of (midstream) of a bridge; a chiseled square on N. concrete railing	791.06
	9	18.6	UE 6 B, near E. sixteenth cor. secs. 15&22, T. 73 N., R. 19 W., 12 ft N. and 0.6 ft higher than centerline of (midstream) of bridge, on N. railing; a chiseled square	817.14
	12	19.41	UE 6 C, at cor. secs. 15, 16, 21 and 22, T. 73 N., R. 19 W., 28 ft N., 24 ft E. and 0.8 ft higher than I-rd. N., on E. end of a corrugated culvert, a nail	934.64
	14	20.4	UE 6 E, at cor. secs. 9, 10, 15 and 16, T. 73 N., R. 19 W., 10 ft E. and 220 ft lower than rd. at S. end of curve, on E. end of a corrugated culvert a nail	833.11
	17	20.9	UE 6 F, at 1/2 cor. secs. 10&15, T. 73 N., R. 19 W., 80 ft W., 20 ft S. and 0.1 ft lower than I-rd. N., on S. end of a corrugated culvert a nail	867.10
	22	22.4	UE 6 I, at cor. secs. 2, 3, 10 and 11, T. 73 N., R. 19 W., 15 ft E. and 0.1 ft higher than rd. at curve, 1 ft S. of N. end of a concrete headwall; a chiseled square	915.440
	23	22.9	RM, 26 ft S. of E.-W. rd., 15 ft W. of rd. S. at offset rds, on W. end of a 18-in. corrugated culvert (damaged) a nail	917.89
	25	22.9	RM, Attica, 5.3 mi S. & 0.3 mi W. of, T. 73 N., R. 19 W., near 1/2 cor. secs. 2 and 3, 44 ft N., 30 ft E. and 2.4 ft lower than rd. N. at offset x-rds., 3 ft W. & 1.0 ft N. of a fence corner, 1 ft NW. of a witness post, on a copper coated steel rod, a standard tablet stamped "7 KEE 1979"	917.495
	29	24.0	UE 7 B, near center of sec. 34, T. 74 N., R. 19 W., 20 ft S. of rd., 35 ft E. of field rd. S. and 2.7 ft lower than rd. at field rd. S., on S. end of a corrugated culvert a nail	886.25
	32	24.8	UE 7 C, in SE 1/4 sec. 27, T. 74 N., R. 19 W., 55 ft N., 13 ft W. and 0.2 ft lower than centerline of a bridge over N. Cedar Creek, on top of a 4 x 4 wooden piling at SE. cor. of NW. wingwall a copper nail and washer	748.78
	35	25.6	Attica, 3.0 mi S. & 0.2 mi W. of in NW 1/4 of sec. 26, T. 74 N., R. 19 W., 310 ft E., 35 ft N. and 21.7 ft higher than x-rds. at S. sixteenth cor. sec. 26 and 27, 21 ft E. & 35 ft N. of rd. at a yard fence N., 2 ft N. of a Catalpa tree, on an iron post projecting 1 ft; standard tablet stamped "PTS No 11 1913-1914 868"	890.092
	36	25.7	UE 11 A, about 360 ft W.-NW. of tablet, about 270 ft N. and 14 ft E. of x-rds., on E. end of a 18-in. damaged corrugated culvert a nail	859.00
	39	27.1	RM, 2 ft S. & 80 ft E. of tablet at NE. cor. of cemetery, 4-in. SW. of steel corner post; the top of a 5 ft copper coated steel rod, flush with the ground	909.10
	40	27.1	BM, Attica, 1.8 mi S. & 0.3 mi W. of, near cor. secs. 14, 15, 22 and 23, 85 ft S., 13 ft E. and 3.6 ft lower than Hwy. at entrance to cemetery, 1 ft N. of cemetery fence, on a copper coated steel rod; a standard tablet stamped "8 KEE 1979"	916.478

LINE 5 (Cont'd)

FEET

- 2 44 29.1 UE 8 0, near W. sixteenth cor. sec. 2, T. 74 N., R. 19 W., just N. of Attica, 94 ft N., 30 ft W. and 5.2 ft lower than centerline of Hwy. 5, on E. end of a concrete culvert a chiseled square 911.29
- 45 29.7 UE 8 0, near $\frac{1}{2}$ cor. secs. 2 and 3, T. 74 N., R. 19 W., 18 ft E. and about 4 ft higher than centerline of bridge over Walnut Creek, on top of N. end of E. abutment a state highway washer and rivet 828.34
- 47 30.7 BM, Attica, 1.3 mi N. of; 1.5 mi S. & 1.0 mi W. of Pershing, T. 74 and 75 N., R. 19 W., near cor. secs. 2, 3, 34 and 35, 20 ft E. of rd. S. and W., 10 ft N. of drive E. on a iron post projecting 2 ft and tilted (but solid); a standard disk stamped "PTS 2 1908 908 Iowa" 906.269

F. A. Denforth, 1924; Book B-1844

ISOLATED BENCH MARKS

ALBIA QUAD. - 52

- T. 72 N., Rs. 18 and 19 W.; N. sixteenth cor. between secs. 25 and 30; 165 ft N. and 1 ft W. from old position at NE. cor. of intersection of T-rd. E.; iron post marked "Prim Trav Sta No. 8 Iowa 1914" also "E.B. No. 1 1924 Iowa" (as reset 1926 by C.V. Bair, Iowa State Hwy. Comm., Albia, Iowa) (Not Found 4-79 AJK) 973.936
- Reference mark; 40 ft W. of P.B.M., on W. side of rd.; 8-in. E. of cor. fence post; 1-in. gas pipe projecting 3-in. above ground 983.86
- 72 N., R. 18 W., 0.2 mi SW. of NE. cor. sec. 30; at right angle bend in SE. angle of rd.; 5 ft E. of cor. fence post; gas pipe projecting 3-in. above ground 983.55
- T. 72 N., R. 18 W.; at NE. cor. sec. 22; in SW. angle of rds. at T-rd. W.; 5 ft W. and 1 ft N. from cor. fence post; in concrete post, standard tablet stamped "E.B. No. 2 1924 Iowa" (set by Brooks) (Not Found 4-79 AJK) 962.852
- T. 72 N., Rs. 17 and 18 W.; just S. of quarter cor. secs. 25 and 30; at SW. cor. of crossroads; 6-in. NW. of cor. fence post; 1-in. gas pipe projecting 2-in. 959.62
- T. 72 N., Rs. 17 and 18 W.; quarter cor. secs. 19 and 30; 250 ft W. of T-rd. N.; 60 ft SW. of house; 1 ft W. of cor. fence post; 1-in. gas pipe projecting 3-in. above ground 930.03
- Albia, 1 mi S. 3 mi W. of, T. 72 N., R. 17 W., near $\frac{1}{4}$ cor. secs. 19 and 30; 80 ft E., 35 ft N. and 1.0 ft lower than old Hwy. 34 a N.-S. fence, 1 ft N. of a fence and witness post in a concrete post; a standard tablet stamped "E.B. No. 3 1924 Iowa" 926.821
- Albia, at N. entrance to Monroe Co. Courthouse; on W. end of third step; standard tablet stamped "E.B. No. 4 1924 Iowa" (set by Brooks) (tied by USC&GS) 968.780
- Reference mark; 25 ft E. of tablet; on E. end of lowest step of N. entrance to courthouse; chiseled square 967.74

E. O. Brooks, 1924; Book B-1844

- T. 72 N., R. 17 W.; about 0.38 mi E. of center of sec. 8; in NW. angle of crossroads; on N. end of concrete abutment under rd. to W.; chiseled square 952.55
- 72 N., R. 17 W.; at N. sixteenth cor. secs. 5 and 6; in NE. angle of crossroads; 5 ft W. and 3 ft N. from cor. fence post; in concrete post; standard tablet stamped "E.B. No. 5 1924 Iowa" painted (Not Found 4-79 AJK) 956.235

ISOLATED BENCH MARKS (Cont'd)

FEET

Lovilia, 7.0 mi S. along Hwy. 5 from, near N. sixteenth cor. secs. 5 and 6, T. 72 N., R. 17 W., 305 ft N. 75 ft E. of I-rd. W., on W. end of a concrete culvert under W. track at the N. western RR. a chiseled square, culvert is dated 1911	957.62
T. 73 N., Rs. 17 and 18 W.; near quarter cor. secs. 31 and 36; 150 ft NW. of crossroads; in top of center of concrete headwall at E. end of bridge under rd.; chiseled square	947.32
T. 73 N., R. 18 W.; near E. sixteenth cor. secs. 25 and 36; in NE. angle of crossroads; 5 ft N. of cor. fence post; on fence post; on fence line top of 0.75-in. gas pipe driven in ground	958.17
T. 73 N., R. 18 W.; near center SE $\frac{1}{4}$ sec. 23; 280 ft S. of I-rd. E.; on W. side of hwy. in top of center of concrete headwall to culvert under rd.; chiseled square; painted	943.89
Lovilia, 2 mi S. & 0.4 mi E. of T. 73 N., R. 18 W., near center of sec. 23, 26 ft S. of drive at curve, 4 ft E. of a fence corner, 1 ft E. of a witness post, in a concrete post projecting 2 ft; a standard tablet stamped "E.B. No. 6 1924 Iowa"	931.007
T. 73 N., R. 18 W.; near SW. cor. sec. 13; 1800 ft NE. of switch to coal mine; on NE. cor. of small trestle over small drain; along Chicago and Northwestern RR.; on large bolthead; chiseled cross	863.12
Alia, 2 mi E. & 1 mi S., near center of sec. 13, T. 73 N., R. 18 W., in top at center of E. headwall of a small concrete bridge, a chiseled square	828.91
T. 73 N., Rs. 17 and 18 W.; cor. secs. 1, 6, 7 and 12; in NW. angle of crossroads; 5 ft N. and 0.5 ft E. from fence post; top of 0.75-in. gas pipe, driven in ground	918.11
Ts. 73 and 74 N., Rs. 17 and 18 W.; township cor. in SE. angle of yard fence to farmhouse in concrete post; standard tablet stamped "E.B. No. 7 1924 Iowa" (Not Found 4-79 AJK)	914.965
T. 74 N., R. 17 W.; at quarter cor. secs. 30 and 31; in NW. angle of crossroads; in top of center of concrete headwall to culvert under rd.; chiseled square	845.43
T. 74 N., R. 17 W.; center sec. 30; in NE. angle of crossroads; in top of SW. cor. of concrete base to cor. fence post; chiseled square	872.81
T. 74 N., R. 17 W.; cor. secs. 17, 18, 19 and 20; in NE. angle of rds. at I-rd. N.; 6 ft N. and 0.5 ft W. from cor. fence post; in concrete post; standard tablet stamped "E.B. No. 8 1924 Iowa" (Not Found 4-79 AJK)	835.270
T. 74 N., R. 17 W.; cor. secs. 7, 8, 17 and 18; in NW. angle of rds. at I-rd. W.; in top of E. side of concrete base to cor. fence post; chiseled square	786.46
T. 74 N., R. 17 W.; quarter cor. secs. 7 and 8; in NW. angle of crossroads; in top of E. side of concrete base to cor. fence post; chiseled square	844.78
Russey, 3 mi N. & 1.9 mi E. of; Tracy, 1.7 mi S. & 12 mi E. of, at cor. secs. 31, 32, 5 and 6, T. 74 and 75 N., R. 17 W., 31 ft N., 2 ft E. and 2.2 ft higher than I-rd. S., in a concrete post, a standard tablet stamped "E.B. No. 9 1924 Iowa" (elevation by 4th order leveling	817.0

ISOLATED BENCH MARKS (Cont'd)

FEET

- Reference mark; 30 ft E. and 1 ft N. from tablet; in top of center of E. end of concrete retaining wall to metal culvert under rd.; chiseled square 809.33
- I. 72 N., R. 17 W.; at SE. cor. of SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1; 4 ft N. and 1 ft E. from fence corner, in concrete post; standard tablet stamped "E.B. No. 10 1924 Iowa" (Not Found 4-79 AJK) 917.553
- I. 73 N., R. 16 W.; near NE. cor. of SW $\frac{1}{4}$ sec. 30; in NE. angle of rds.; at T-rd. N.; 160 ft W. of angle in rd. to S.; 40 ft E. and 25 ft N. from center of rd. junction; in concrete post; standard tablet stamped "E.B. No. 11 1924 Iowa" (Not Found 4-79 AJK) 855.871
- I. 73 and 74 N., R. 17 W.; near cor. secs. 1, 2, 35 and 36; on county line; in SE. angle of rds. at T-rd. S.; 4 ft S. of cor. fence post; in concrete post; standard tablet stamped "E. B. No. 13 1924 Iowa" (Not Found 4-79 AJK) 849.675
- I. 74 N., R. 17 W.; at cor. secs. 13, 14, 23 and 24; in NE. angle of crossroads; 7 ft N. and 1 ft W. from cor. fence post; in concrete post; standard tablet stamped "E.B. No. 14 1924 Iowa" (Not Found 4-79 AJK) 735.575
- Riverside Church; at forks of rd. just N. of Eveland Bridge; in NE. cor. of yard; iron post stamped "Prim Trav Sta No. 9 1908" also "E.B. No. 15 1924 Iowa", (USCE BM 54, Bul 569, P. 117) (Note; found leaning and rectified by Broadbuss, 1926) (Not Found 8-63, State Official) 680.663
- Land, top of upstream end of second pier of hwy. bridge from N. (left) bank (no definite BM found; only rough surface of pier) (USCE BM 72, Bul. 569, p. 117) 687.428