

THIRD-ORDER LEVELS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Final Adjustment of 1974

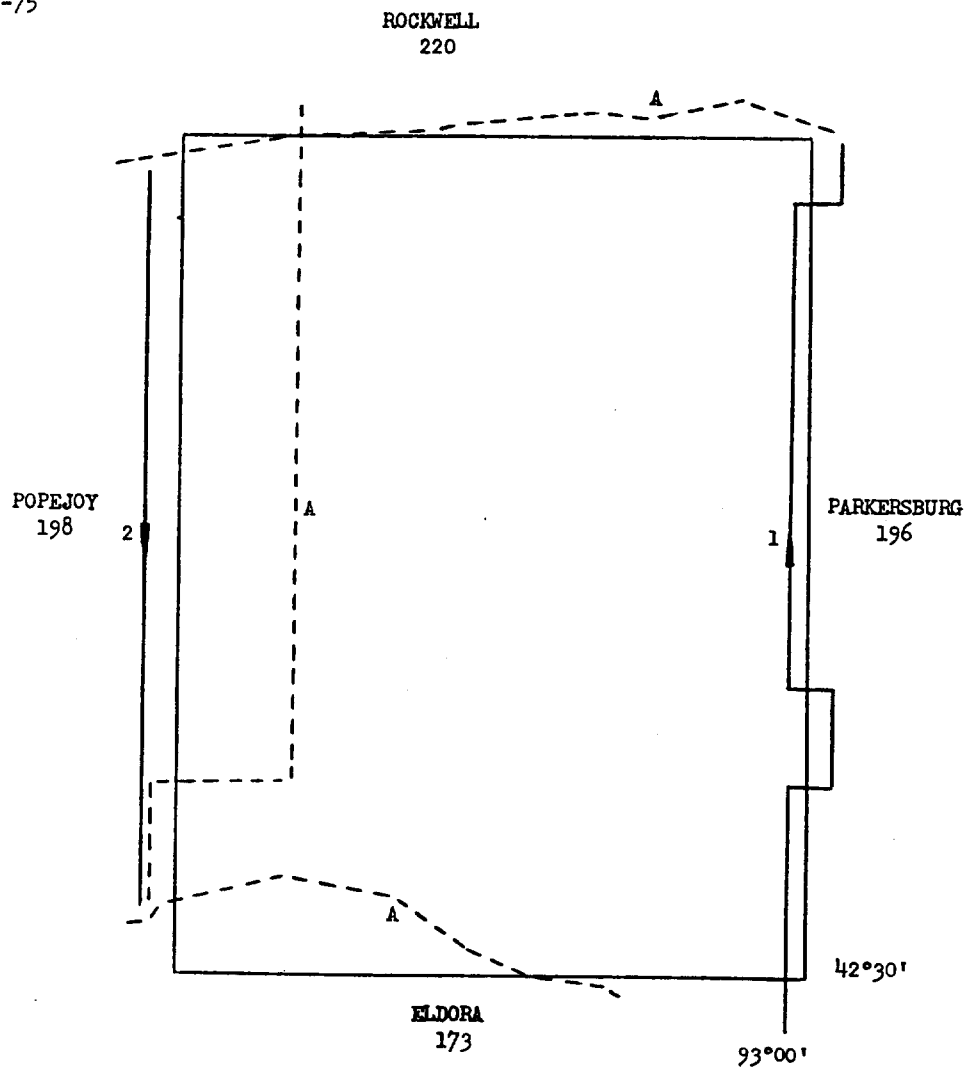
Franklin, Hardin, Grundy
and Butler Counties

Edition of: 1-1-75

PR: ADP/cb

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

42-093-12
ACKLEY QUADRANGLE
197 - IOWA
N4230-W9300/15
DIAGRAM NK 15-5
WATERLOO



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

A. Quadrangle No. 420931

197 B

LINE 1

FEET

L.A. Perry, 1974, Book CV-3123

ELDORA QUAD. - 173

- | | | | | |
|----|-----|---|--|---------|
| 2 | 23 | 5.2 | UE 2 LAP A, about 0.1 mi W. and 1.0 mi N. of BM, at crossroads, 55 ft N. and 50 ft E. of, a painted square on top of SE. end of steel culvert under entrance to cemetery | 1094.81 |
| 25 | 6.2 | UE 2 LAP B, about 0.1 mi W. and 2.0 mi N. of BM, 142 ft S., 26.5 ft W. and 7.3 ft lower than crossroads, top of N. end of 18-in. concrete pipe culvert under driveway W., a chiseled square | 1094.74 | |

ACKLEY QUAD. - 197

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|----|------|--|----------|
| 28 | 6.8 | Reference mark, 357 ft S. of BM, 14.5 ft S. and 25.5 ft W. of road at drive W., a painted square on top of S. end of 18-in. steel culvert | 1057.76 |
| 29 | 6.9 | BM, Cleves, Hardin County, about 2 mi E. and 2.7 mi N. of; Ackley, Hardin County, about 2.5 mi E. and 2.3 mi S. of; in Grundy County, about 0.16 mi N. of E $\frac{1}{4}$ corner sec. 19, T. 89 N., R. 18 W.; 6.7 ft above drain, 14.5 ft W. and 0.8 ft above centerline of road at drain in center of W. headwall of concrete culvert, a standard tablet stamped "3 LAP 1974" | 1052.679 |
| 33 | 7.2 | UE 3 LAP A, about 0.4 mi N. along gravel road from BM, 73 ft N. and 57 ft W. of crossroads, on top of SE. corner of NE. headwall of an erosion concrete structure, a chiseled square | 1044.06 |
| 37 | 8.3 | UE 3 LAP B, about 1.4 mi N. of tablet, 85 ft N., 21 ft W. and 2.4 ft lower than crossroads, top of W. end of culvert, a painted square | 1046.00 |
| 40 | 9.3 | Reference mark, about 270 ft E. of tablet, center of N. headwall of concrete box culvert, a chiseled square | 1087.87 |
| 41 | 9.4 | Ackley, Hardin County, about 0.5 mi S. and 4.5 mi E. of, T. 89 N., R. 18 W., SE. cor. sec. 6, 73.5 ft N., 46 ft W. and 0.7 ft lower than crossroads, 21 ft NE. of SE. corner of building, 29 ft SE. of NE. corner of building, 3.8 ft SW. of well pump, 1 ft W. of USGS witness post, a standard rod supported tablet welded to 0.5 in copper coated rod driven 17.5 ft to refusal set in 6-in. tile filled with gravel and stamped "4 LAP 1974" | 1087.166 |
| 43 | 10.3 | UE 4 LAP A, about 0.9 mi N. of tablet at crossroads, U.S. Hwy. 20 E.-W. county gravel N.-S.; a painted plus | 1080.36 |

PARKERSBURG QUAD. - 196

- | | | | |
|----|------|--|----------|
| 46 | 11.3 | UE 4 LAP B, 1 mi N. and 1 mi E. from BM, 15.5 ft N. and 52.4 ft E. of crossroads, center of N. headwall of concrete box culvert; a chiseled square | 1062.88 |
| 48 | 12.0 | Reference mark, 20 ft S. of BM, 16.5 ft W. of centerline of road, top of W. end of 18-in. steel culvert, a painted square | 1058.41 |
| 50 | 12.0 | Ackley, Hardin County, about 3.5 mi E. and 0.75 mi N. of in Butler County, T. 90 N., R. 18 W., NE. cor. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, 9 ft S., 41 ft W. and 3.9 ft higher than road at entrance W.; 13 ft NNW. of power pole, 2.8 ft W. of fence corner post, 3.8 ft W. of USGS witness post, a standard disk welded on copper coated rod driven 9 ft to refusal, set in 6-in. tile filled with gravel and stamped "5 LAP 1974" | 1064.914 |
| 51 | 12.3 | UE 5 LAP A, about 0.2 mi N. along gravel road from BM; at RR. crossing, head of bolt, with painted square | 1028.51 |
| 55 | 13.3 | UE 5 LAP B, about 1.25 mi N. along gravel road from BM, 20 ft N., 20 ft E. and 4.9 ft lower than crossroads, NE. end of 24-in. steel culvert, a painted square | 1056.76 |

LINE 1 (Cont'd)	ACKLEY QUAD. - 197	FEET
2 59 14.3	Reference mark, 48 ft N., 9 ft E. and 5.2 ft lower than BM, top of N. end of 4 ft concrete pipe, a chiseled square	1058.55
61 14.3	BM, Austinville, Butler County, about 2.5 mi W. of; T. 90 N., R. 18 W., near NW. cor. sec. 29, 118 ft E. of and 6.2 ft lower than T-rd. N., (offset crossroads), 17 ft S. centerline of road and drain, 0.8 ft N. of S. edge and 0.6 ft E. of W. end of concrete headwall, a standard tablet stamped "6 LAP 1974"	1063.738
64 15.3	UE 6 LAP A, about 1 mi N. along gravel from BM, at field entrance E., centerline of road at centerline entrance E.	1021.33
67 16.3	UE 6 LAP B, about 2 mi N. of BM along gravel road, centerline of crossroads	1067.98
69 16.8	Reference mark, about 345 ft S. of BM at road at drive W., top of N. end of 18-in. steel culvert; a painted square	1065.68
71 16.9	Austinville, Butler County, about 2.5 mi W. and 2.6 mi N. of, about 0.1 mi N. of E $\frac{1}{4}$ cor. sec. 7, T. 90 N., R. 18 W.; 12 ft W. and 0.9 ft higher than centerline of road at drain, 9.2 ft above the drain, in center of W. headwall of concrete box culvert, a standard disk stamped "7 LAP 1974"	1058.885
74 17.4	UE 7 LAP A, about 0.46 mi N. of BM along gravel road; 150 ft N. and ft W. of crossroads, top of W. end of concrete culvert, a chiseled square	1082.77
77 18.4	UE 7 LAP B, about 1.6 mi N. of BM along gravel road; about 670 ft N. of crossroads, top of W. end of steel culvert, a chiseled plus and painted square	1106.63
80 19.3	Reference mark, about 370 ft W. of BM 8 LAP 1974; 18.5 ft N. and 60 ft W., and 4.6 ft lower than crossroads, a chiseled square on top of N. of concrete culvert	1073.65
3 1 19.4	BM, Austinville, Butler County, 5 mi N. and 2.5 mi W. of; near SW. cor. sec. 29, T. 19 N., R. 18 W., 34 ft N. and 310 ft E. of crossroads, 2 ft W. of T-fence N., 1 ft WSW. of power pole, and 1 ft N. of USGS witness post, a standard rod supported tablet welded to 0.5-in. copper coated rod driven 25 ft to refusal set in 6-in. concrete drain tile filled with gravel and stamped "8 LAP 1974"	1080.910
6 20.4	UE 8 LAP A, about 0.9 mi N. along gravel road from BM, 8.5 ft W. of centerline of road at N. end of bridge, 10.5 ft above water, on top of head of bridge bolt, a chiseled plus	1056.61
9 21.4	UE 8 LAP B, about 2 mi N. of BM, 18.5 ft W. of centerline of culvert on top of W. end of 3 ft concrete culvert, a chiseled square	1035.45
15 22.5	BM, Dumont, Butler County, about 1.75 mi W., 3.5 mi S. of; near SE. corner of sec. 7, T. 91 N., R. 18 W., 23 ft N., 34 ft W., 4.6 ft higher than, of T-rd. E., 0.5 ft E. of W. right-of-way fence, 1.5 ft S. of power pole, 1.5 ft N. of USGS witness post, a standard rod supported tablet, welded to 0.5 in. copper coated steel rod driven 10 ft to refusal set in 6-in. concrete drain tile filled with gravel and stamped "9 LAP 1974"	1013.666
16 22.5	Reference mark, 87 ft SE. of BM, 35 ft S., 35 ft E. and 2.3 ft lower than T-rd. E., 0.7 ft W. of corner fence post, 1.5 ft E. of 2.5-in. iron pipe, top of rebar projecting 1-in.	1006.79
19 23.6	UE 9 LAP A, about 1 mi N. of BM, near SW. cor. sec. 5, T. 91 N., R. 18 W., 30 ft N., 30 ft E. of T-rd. E.; top of S. edge of 2.5-in. iron pipe, a chiseled plus	1009.43

LINE 1 (Cont'd)

ACKLEY QUAD. - 197 LA.

FEET

- 2 21 23.9 UE 9 LAP B, about 1.3 mi N. along gravel road from BM, at bridge, head of bolt on NW. corner of bridge, stamped "UE" 994.56
- 22 24.6 UE 9 LAP C, about 2 mi N. along gravel road from BM, centerline of T-rd. E., top of rock 1018.51

PARKERSBURG QUAD. - 196

- 23 24.9 Reference mark, 24.8 ft N. of BM, a chiseled square center of N. head of concrete box culvert 1008.39
- 24 24.9 BM, Dumont, Butler County, about 1.5 mi S. and about 1.4 mi W. of; T. 91 N., R. 18 W., about 0.3 mi E. of NW. corner of sec. 5; 12.4 ft S. and 0.8 ft below centerline of road at drain, set in centerline of S. headwall of concrete box culvert, a standard tablet stamped "10 LAP 1974" 1007.526
- 26 25.6 UE 10 LAP A, about 0.7 mi along gravel road from BM, centerline of crossroads 1037.83
- 29 26.6 UE 10 LAP B, about 0.7 mi E. and 1.0 mi N. of BM, along gravel road at jct. State Hwy. 3, 44 ft S. and 27 ft W. and 2.7 ft lower than crossroads; top of SE. end of concrete head-wall, a chiseled square 979.44

MARBLE ROCK QUAD. - 219

- 33 27.3 Dumont, Butler County, 0.65 mi W. along Chicago and North Western RR. (formerly Chicago Great Western RR.) from jct. in; about 110 yards E. of culvert 306, 53 ft NE. of field road crossing, 43.7 ft N. of N. rail, 16 ft E. of right-of-way fence corner, 1 ft W. of N.G.S. witness post, a standard USC&GS tablet set in concrete post projecting 5-in. and stamped "K 29 1934" 990.480

LINE 2

C.D. Lien, 1974; Book CV-3126

POPEJOY QUAD. - 198 IA.

- 3 39 0.0 BM, 2.7 mi W. along the Chicago Great Western RR. from the station at Hampton, 45 yards NW. of a old section road crossing, 40 yards W. of a right-of-way fence corner, 44.7 ft N. of the N. rail and 2 ft S. of a fence, set on top of a concrete post which projects 0.5 ft above ground, a standard disk stamped "B 29 1934" 1195.296
- 41 1.0 UE B 29 A, 0.9 mi S. along road from tablet, T. 91 and 92 N., R. 20 and 21 W., sec. cors. 1, 6, 31 and 36, a bolt centerline of crossroads 1214.95
- 44 1.8 Hampton, 1.25 mi S. and 2 mi W. of; T. 91 N., R. 20 and 21 W., near the S. sixteenth cor. between secs. 1 and 6, 32.2 ft E. of; and 0.1 ft lower than centerline of road at fence line E., 229 ft S. and 32.2 ft E. of centerline of road at a drive E., 1.5 ft N. of a telephone pole and 0.5 ft S. of a fence corner set on top of a concrete post which projects 0.6 ft above ground, a standard disk stamped "KLOUSIA R.M. NO. 2 1926" 1267.439
- 45 1.8 Reference mark, No. 1, 311.6 ft E. and 17.5 ft N. of R.M. 2, 17.5 ft S. of a fence corner the SE. cor. of barnyard and 45 ft N. and 31 ft E. of the NE. cor. of a corn crib, set on top of a concrete post which projects 0.6 ft above ground, a standard USC&GS disk stamped "KLOUSIA R.M. NO. 1 1926" 1272.426
- 46 2.0 UE Klousia A, 0.25 mi S. along from tablet, T. 91 N., R. 20 and 21 W., sec. cors. 1, 6, 7 and 12, on top of a bolt centerline of crossroads 1248.93
- 48 3.0 UE Klousia B, 1.25 mi S. along road from tablet, T. 91 N., R. 20 and 21 W., sec. cors. 7, 12, 13 and 18, on top of bolt centerline of road at crossroads 1241.01

LINE 2 (Cont'd)

POPEJOY QUAD. - 198 LA.

FEET

3	51	4.0	UE Klousia C, 2.25 mi S. along road from tablet, T. 91 N., R. 20 and 21 W., sec. cors. 13, 16, 19 and 24, 29.5 ft N. and 45.9 ft E. of; and 3 ft lower than crossroads, a chiseled square on a concrete culvert	1217.75
	55	5.6	Iowa Falls, jct. of U.S. Hwy. 20 and U.S. Hwy. 65, 10 mi N. of; T. 91 N., R. 20 and 21 W., near the quarter cor. between secs. 25 and 30, 29 ft S. and 18.5 ft W. of; and 0.6 ft higher than centerline of bridge and 162.3 ft N. and 12.5 ft W. of centerline of road at a private drive NW. cemented in the SW. cor. of a concrete bridge, a standard tablet stamped "30 CDL 1974"	1160.448
	56	5.7	Reference mark, 145 ft S. and 34.6 ft W. of tablet, 17 ft S. and 45.6 ft W. of centerline of bridge and 17.3 ft N. and 45.6 ft W. of centerline of road at private drive NW. a chiseled square on a concrete culvert	1154.59
	57	6.1	UE 30 A, 0.45 mi S. along road from tablet, T. 91 N., R. 20 and 21 W., sec. cors. 25, 30, 31 and 36, on top of a bolt centerline of crossroads	1202.92
	60	7.1	UE 30 B, 1.45 mi S. along road from tablet, T. 90 and 91 N., R. 20 and 21 W., sec. cors. 1, 6, 31 and 36, 22 ft S. and 44.8 ft W. of; and 4 ft lower than centerline of crossroads, a chiseled square on a concrete culvert	1256.48
	61	7.8	UE 30 C, 2.16 mi S. along road from tablet, T. 90 N., R. 20 and 21 W., near the S. sixteenth cor. between secs. 1 and 6 on top of a bolt centerline of road at T-rd. E.	1258.99
	63	8.1	Reference mark, 22.4 ft N. and 47.6 ft E. of crossroads and 82.4 ft N. and 97.5 ft E. of tablet; a chiseled square on a concrete culvert	1249.49
	64	8.1	Iowa Falls, at the jcts. of U.S. Hwy. 65 and 20, 7.5 mi N. of; T. 90 N., R. 20 and 21 W., sec. cors. 1, 6, 7 and 12, 1 mi W. and 0.25 mi S. of the community of Bradford, 60 ft S. and 58 ft W. of and 3.9 ft lower than crossroads, 3 ft S. of the E. leg of a sign, and 3.6 ft W. of a telephone pole, set on top of a 0.5-in. copper coated rod which is encircled by a 6-in. tile, a standard tablet stamped "31 CDL 1974"	1248.689
	66	9.1	UE 31 A, 1.0 mi S. along road from tablet, T. 90 N., R. 20 and 21 W., sec. cors. 7, 12, 13 and 18, a bolt centerline of road at T-rd. W.	1233.89
	69	10.1	UE 31 B, 2 mi S. along road from tablet, T. 90 N., R. 20 and 21 W., sec. cors. 13, 18, 19 and 24, 24 ft S. and 50 ft E. of; and 3.1 ft lower than crossroads a chiseled square on a concrete culvert	1206.51
	71	11.1	Iowa Falls at the jct. of U.S. Hwy. 20 and U.S. Hwy. 65, 4.5 mi N. of; T. 90 N., R. 20 and 21 W., sec. cors. 19, 24, 25 and 30, 337.8 ft N. and 24.1 ft E. of, and 2.5 ft lower than crossroads, cemented in the top of a round 5 ft concrete culvert, a standard tablet stamped "32 CDL 1974"	1183.299
	72	11.1	Reference mark, 364.1 ft S. and 5.4 ft E. of tablet and 32.8 ft S. and 29.5 ft E. of crossroads, a chiseled square on a concrete culvert	1181.98
	75	12.1	UE 32 A, 1 mi S. along road from tablet, T. 90 N., R. 20 and 21 W. sec. cors. 25, 30, 31 and 36, a bolt in centerline of crossroads	1176.07
	78	13.2	UE 32 B, 2 mi S. along road from tablet, T. 89 and 90 N., R. 20 and 21 W. sec. cors. 1, 6, 31 and 36, 39.4 ft N. and 32.8 ft E. of; and 3.9 ft lower than centerline of crossroads, a chiseled square on a concrete culvert	1152.59
	80	14.1	Reference mark, 255.8 ft N. and 9.3 ft W. of, tablet, 39.8 ft W. of centerline of road, 0.5 ft SW. of a white witness post, 2.3 ft S. of under ground telephone cable post and 5.9 ft N. and 8.3 ft E. of a cedar tree, on top of a rail used for hwy. right-of-way marker	1151.91

LINE 2 (Cont'd)

POPEJOY QUAD. - 198 IA.

FEET

- 4 1 14.2 Iowa Falls, at the jct. of U.S. Hwy. 20 and U.S. Hwy. 65, 1.5 mi N. of; and 0.3 mi N. of the Iowa Falls Motel, T. 89 N., R. 20 and 21 W., near sec. cors. 1, 6, 7 and 12, 20.5 ft W. of; and 1.4 ft lower than centerline of road opposite, 50.3 ft S. of a speed zone sign, 1.2 ft S. of a round black and white post and 20 ft N. of U.S. Hwy. 20, milepost, 175, cemented in the top of a headwall of a 2 ft box culvert, a standard tablet stamped "33 CDL 1974" 1151.223
- 3 15.2 UE 33 A, 1 mi S. along hwy. 65 from tablet, a copper nail and washer; in centerline of cross streets crescent drive and oak street 1100.71
- 5 15.9 At Iowa Falls, Hardin County, at the intersection of Stevens and Estes Streets, 15 ft W. of the W. curb of Stevens Street, 15 ft S. of the S. curb of Estes Street, 17.5 ft N. and 7 ft E. of the NE. corner of the City Hall and 1.1 ft NE. of the base of a monument to the founders of Iowa Falls, a standard USC&GS disk set in the top of a concrete post projecting 1-in. above side walk stamped "IOWA FALLS 1934" 1113.072