

THIRD-ORDER LEVELS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

Buena Vista and Sac
Counties

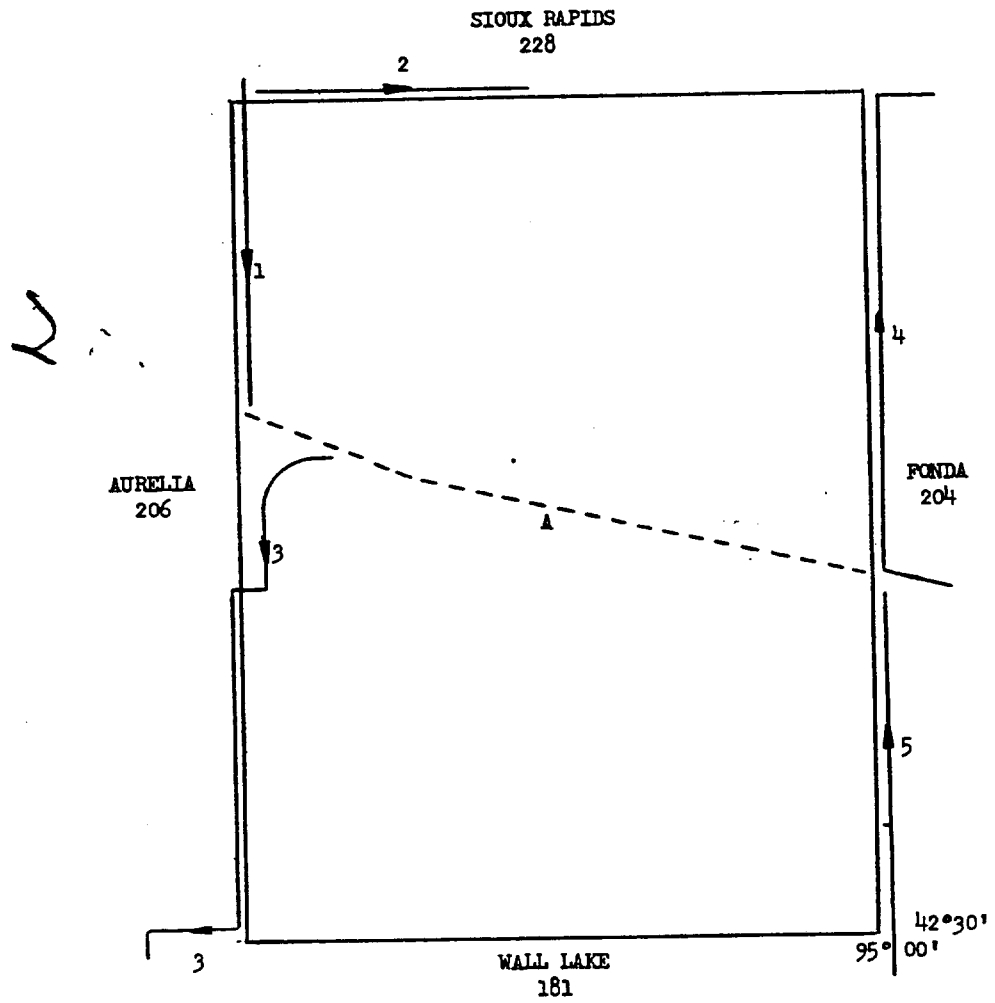
Final Adjustment of 1975

Edition of: 3-10-75

PR: ADP/ob

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

42-095-12
STORM LAKE QUADRANGLE
205 - IOWA
N4230-W9500/15
DIAGRAM NK 15-4
FT. DODGE



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

A. Quadrangle No. 420951

205A

FEET

LINE 1

J. H. Tyndale, 1968; Book CV-2324

SIoux RAPIDS QUAD. - 228

§ 25 18.1 Rembrandt, 5.25 mi S. and 4.5 mi W. of; 61 ft S., 176 ft W. and 2.7 ft lower than crossroad, cor. secs. 29, 30, 31 and 32, T. 92 N., R. 37 W.; (Iowa Hwy. 3 E.-W.); 7 ft W. of metal witness sign; 1 ft N. of S. right-of-way fence; on 7.5 ft copper coated steel rod inside 6 in. concrete tile; standard tablet stamped "61 T 1968 1433" 1433.102

STORM LAKE QUAD. - 205

26 19.1 UE; center of crossroad (Co. Hwy. N.-S.), cor. secs. 31, 32, 5 and 6, Tps. 91 and 92 N., R. 37 W.; $\frac{1}{4}$ in. bolt; painted "UE Centerline" 1416.10

27 20.1 UE; center of crossroad (co. paved hwy. N.-S.), cor. secs. 5, 6, 7 and 8, T. 91 N., R. 37 W.; round-headed rivet; painted "UE Centerline" 1406.09

28 21.1 Reference mark, 98 ft N. of tablet, 143 ft S. and 30 ft W. of crossroad; 4 ft concrete tile culvert; chiseled square, painted "RM" 1404.03

29 21.2 Truesdale, 1.5 mi S. and 3.25 mi W. of; 241 ft S., 51 ft W. and 4.4 ft lower than crossroad, cor. secs. 7, 8, 17 and 18, T. 91 N., R. 37 W.; 8 ft N. of metal witness sign; 1 ft E. of W. right-of-way fence; on 10 ft copper coated steel rod inside 6 in. concrete tile; standard tablet stamped "60 T 1968 1405" (Erroneously stamped 1405) 1402.356

30 22.1 UE; center of crossroad, cor. secs. 17, 18, 19 and 20, T. 91 N., R. 37 W.; round-headed rivet; painted "UE Centerline" 1426.44

31 23.1 UE; center of crossroad, cor. secs. 19, 20, 29 and 30, T. 91 N., R. 37 W.; round-headed rivet; painted "UE Centerline" 1451.23

32 24.1 UE; center of T-rd. E., cor. secs. 29, 30, 31 and 32, T. 91 N., R. 37 W.; round-headed rivet; painted "UE Centerline" 1440.41

33 24.4 UE; center of crossroad (Iowa Hwy. 5 E.-W.), near N. sixteenth cor. secs. 31 and 32, T. 91 N., R. 37 W.; $\frac{1}{2}$ in. rebar; painted "UE Centerline" 1425.21

34 25.5 UE; center of crossroad (Iowa Hwy. 5 E.-W.; 110 S.), near W. limits Storm Lake; near S. sixteenth cor. secs. 32 and 33, T. 91 N., R. 37 W.; copper nail and washer, painted "UE Centerline" 1443.52

35 26.6 At Storm Lake, 0.6 mi NW. of the Illinois Central RR. station, 200 ft SE. of MP 429, 41 yards SW. of the center of State Hwy. 5, 47 ft SW. of the center of a rd. crossing, and 27.9 ft SW. of the SW. rail; a standard disk, stamped "V 23 1934" and set in the top of a concrete post projecting 5 in. above ground 1438.478

LINE 2

J. H. Tyndale, 1968; Book CV-2324

SIoux RAPIDS QUAD. - 228

10 1 0.0 "61 T 1968 1433" (Described in Line 1) 1433.102

1 1.0 UE; center of T-rd. N. (Iowa Hwy. 3 E.-W.), cor. secs. 28, 29, 32 and 33, T. 92 N., R. 37 W.; round-headed rivet; painted "UE Centerline" 1382.89

2 2.1 Reference mark, 495 ft WNW. of tablet, 38 ft N., 192 ft W. of crossroad, 2 ft concrete tile drive culvert; chiseled square, painted "RM" 1380.22

LINE 2 (Cont'd)

FEET

SIOUX RAPIDS QUAD. - 228

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|------|-----|--|----------|
| 10 3 | 2.2 | Rembrandt, 5.25 mi S. and 2.5 mi W. of; 66 ft S., 290 ft E. and 2.7 ft lower than crossroad (Iowa Hwy. 3 E.-W.; paved co. rd. N.-S.), cor. secs. 27, 28, 33 and 34, T. 92 N., R. 37 W.; 8 ft E. of large power pole and metal witness sign, 1 ft N. of S. right-of-way fence; on 7.5 ft copper coated steel rod inside 6 in. concrete tile; standard tablet stamped "67 T 1968 1379" | 1378.810 |
| 4 | 3.1 | UE; center of crossroad (Iowa Hwy. 3 E.-W.), cor. secs. 26, 27, 34 and 35, T. 92 N., R. 37 W.; X-mark in concrete; painted square, painted "UE Centerline" | 1354.84 |
| 5 | 4.2 | UE; center of crossroad (Iowa Hwy. 3 E.-W.), cor. secs. 25, 26, 35 and 36, T. 92 N., R. 37 W.; X-mark in concrete; painted square, painted "UE Centerline" | 1327.59 |
| 6 | 4.4 | Azimuth mark to Triangulation Station TRUESDALE, is stamped "TRUESDALE 1940", and projects 6 in., it is 32 ft N. of the center of State Hwy. 221, 9 ft W. of the center of a farm driveway, 1 ft S. of a fence and 2 ft SW. of a gate post, 1.5 ft W. of a reference post | 1328.082 |
| 7 | 5.2 | UE; center of crossroad (U.S. Hwy. 71 N.-S.; Iowa 3 E.-W.), cor. secs. 30, 31, 25 and 36, T. 92 N., Rs. 36 and 37 W.; X-mark and round-headed rivet; painted square, painted "UE Centerline" | 1306.13 |
| 8 | 6.2 | Reference mark, 177 ft E. of tablet; 54 ft S. and 32 ft W. of crossroad, 2.5 ft concrete tile culvert; chiseled square, painted "RM" | 1287.47 |
| 9 | 6.3 | Rembrandt, 5.25 mi S. and 1.5 mi E. of; 93 ft S., 209 ft W. and 2.4 ft lower than crossroad, cor. secs. 29, 30, 31 and 32, T. 92 N., R. 36 W.; 9 ft W. of S. of a pair of highline power poles and metal witness sign; 1 ft N. of S. right-of-way fence; on 12 ft copper coated steel rod inside 6 in. concrete tile; standard tablet stamped "68 T 1968 1290" | 1289.691 |
| 10 | 7.3 | UE; 56 ft N., 18 ft W. and 0.7 ft lower than crossroad, cor. secs. 19, 20, 29 and 30, T. 92 N., R. 36 W.; 2 ft concrete tile culvert; chiseled square, painted "UE" | 1293.42 |

LINE 3

K.E. Daly, 1974; Book CV-3132

STORM LAKE QUAD. - 205

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|----|-----|--|----------|
| 1 | 5 | 0.6 BM, at Storm Lake, 0.6 mi NW. of the Illinois Central RR. station, 200 ft SE. of milepost 429, 41 yards SW. of the centerline of State Hwy. 5, 47 ft SW. of the center of a road crossing, and 27.9 ft SW. of the SW. rail, a standard USC&GS disk stamped "V 23 1934" and set in the top of a concrete post projecting 5-in. above ground | 1438.478 |
| 5 | 1.1 | UE V 23 A, 1 mi W. of disk along State Hwy. 110 at Hwy. N. at W. edge of town, 26 ft S., 17 ft E. and 0.3 ft lower than hwy. at hwy. N.; top of NW. cor. of concrete storm drain intake in E. curbing of street, chiseled square | 1407.20 |
| 7 | 1.8 | UE V 23 B, 1.8 mi W. and S. along State Hwy. 110 from disk at bridge across stream connecting Storm Lake and Little Storm Lake; 18 ft E. and 0.5 ft higher than road at bridge in the base of NE. cor. of E. concrete railing of bridge, a 1-in. brass disk stamped "I.H.C. BM" | 1405.641 |
| 9 | 2.5 | Reference mark, is 61 ft W. of tablet; 29 ft W. of centerline of road center of W. headwall of 13 ft concrete box culvert; a 1-in. brass Iowa Hwy. Commission disk, not stamped | 1407.82 |
| 10 | 2.6 | Storm Lake, 1.2 mi S. and 1.5 mi W. of, along State Hwy. 110 at a drain; near center of sec. 8, T. 90 N., R. 37 W., 410 ft N., 32 ft E. and 0.4 ft lower than hwy. at road E. leading to lake; N. end of E. headwall of 12 ft concrete box culvert, a standard tablet stamped "1 KED 1974" | 1407.362 |

LINE 3 (Cont'd)

STORM LAKE QUAD. - 205

FEET

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|----|-----|-----|--|---------|
| 1 | 12 | 3.0 | UE 1 A Centerline, 0.4 mi S. of tablet at road W., centerline hwy. at road W.; painted circle | 1438.62 |
| 14 | 4.1 | | UE 1 B, at Storm Lake airport near quarter cor. between secs. 17 and 20, T. 90 N., R. 37 W., on the E. side of concrete base of Flag pole at airport office, a chiseled square | 1473.08 |

AURELIA QUAD. - 206

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|----|------|--|---|----------|
| 16 | 4.7 | | UE 1 C, 1.5 mi S. and 0.5 mi W. of tablet along State Hwy. 110, 50 ft S., 31 ft W. and 0.9 ft lower than hwy. at N.-S. road, top of iron rod centered in a 3.5-in. by 3.5-in. concrete right-of-way post projecting 4-in. | 1488.97 |
| 18 | 5.7 | | Reference mark is 430 ft N. of tablet, 19 ft N. and 28 ft W. of road at driveway W. to house; N. end of 1.5 ft round concrete culvert, chiseled square | 1427.28 |
| 19 | 5.8 | | Storm Lake, 3.5 mi S. and 2 mi W. of; near cor. secs. 19, 20, 29 and 30; T. 90 N., R. 37 W., 410 ft S. of road at driveway W. to farm house and 21 ft W. of centerline of road; S. end of W. headwall of 5 ft concrete box culvert; a standard tablet stamped "2 KED 1974" | 1421.656 |
| 21 | 6.7 | | UE 2 A, 0.9 mi S. of tablet at crossroads; 19 ft S., 38 ft E., and 2.1 ft lower than crossroads S. end of 2 ft metal culvert; punched hole in painted square | 1387.06 |
| 23 | 7.7 | | Reference mark, is 75 ft E. of tablet, 14 ft S. and 43 ft E. of T-rd. E., center of S. headwall of 3.5 ft concrete box culvert; chiseled square | 1366.61 |
| 24 | 7.7 | | Schaller, 4.2 mi N. and 2.2 mi E. of; near cor. secs. 31, 32, 5 and 6, T. 89 and 90 N., R. 37 W., 14 ft S., 33 ft W. and 1.7 ft lower than T-rd. E., W. end of L-shaped S. headwall of concrete box culvert, a standard tablet stamped "3 KED 1974" | 1366.674 |
| 26 | 8.7 | | UE 3 A, 1 mi S. of tablet, at crossroads, 35 ft S., 23 ft E. and 4.2 ft lower than crossroads, E. end of 2 ft concrete pipe culvert, chiseled square | 1373.90 |
| 28 | 9.7 | | UE 3 B, 2 mi S. of tablet at crossroads; 32 ft S., 50 ft E., 2.7 ft lower than crossroads; 1 ft E. of fence corner, top of 0.75-in. pipe projecting 7-in. | 1400.65 |
| 29 | 10.6 | | Reference mark is 35.5 ft W. of tablet, 18 ft W. of centerline of road, 2 ft N. of S. end of W. headwall of 14 ft concrete box culvert, head of bolt, set in culvert | 1378.98 |
| 30 | 10.6 | | Schaller, 1.2 mi N. and 2.2 mi E. of, approx. 0.1 mi N. of cor. secs. 17, 18, 19 and 20, T. 89 N., R. 37 W.; 560 ft N., 18 ft E. and 11.4 ft lower than hwy. at N.-S. road; center of N. end of E. headwall of 14 ft concrete box culvert, a standard tablet stamped "4 KED 1974" | 1378.941 |
| 33 | 11.8 | | UE 4 A, 1.1 mi S. of tablet at crossroads, 26 ft N., 28 ft E. and 1.2 ft lower than crossroads; N. end of 2.4 ft concrete pipe culvert; chiseled square | 1403.71 |
| 36 | 12.9 | | UE 4 B, 1 mi S. and 1 mi W. of tablet, 26 ft N., 260 ft W. and 8.5 ft lower than crossroads; E. end of 1.5 ft round concrete pipe culvert under driveway N.; chiseled square | 1423.47 |
| 38 | 13.8 | | UE 4 C Centerline, 1.1 mi S. and 2 mi W. of tablet, at NE. edge of Schaller centerline of State Hwy. 110 at E.-W. road | 1389.6 |
| 39 | 14.3 | | At Schaller, 131 ft W. of the W. end of the Chicago and North Western RR. station, 67.3 ft NE. of the NE. cor. of a grain elevator, 20.5 ft S. of the centerline of the main track and 15.2 ft W. of the W. curb line of a paved street, a standard USC&GS disk, stamped "1396.690 Y 13 1933" and set in the top of a concrete post | 1396.690 |

LINE 4

FEET

K.E. Daly, 1974; Book CV-3132

PONDA QUAD. - 204

1 47	1.1	UE L 23 A CENTERLINE, RR. at N.-S. road, (top of N. rail)	1257.4
50	2.1	Reference mark, is 41.4 ft SSE. of tablet, 13 ft S. of S. rail of RR. track and 37 ft W. of centerline of road, 3.3 ft SW. of RR. communication control box, top of 1-in. rod (ground rod) projecting 0.8 ft	1257.33
51	2.2	Newell, at RR. crossing at E. edge of town, near cor. secs. 16, 17, 20 and 21, T. 90 N., R. 35 W., 21.5 ft N. of N. rail, 40.5 ft W. and 1.1 ft lower than N.-S. road at RR. crossing 28.5 ft NW. of RR. crossing signal and 1.2 ft E. of metal witness post; attached to a driven copper coated steel rod centered in a 6-in. gravel filled tile a standard tablet stamped "5 KED 1974" and 3-in. below ground surface	1257.308
53	3.1	UE 5 A, 0.9 mi N. along county hwy. M 54, at T-rd. E., centerline of hwy. at road E., top of metal rod in hwy.	1264.217
54	4.1	UE 5 B, 1.9 mi N. along county hwy. M 56 at crossroads, 31 ft S., 47.5 ft E. and 2.6 ft lower than hwy. at E.-W. road NW. side of the corner post, head of RR. spike	1260.40
57	5.1	Reference mark is 112 ft WNW. of tablet, 30 ft N. and 36.5 ft W. of hwy. at road W. of offset E.-W. road, E. end of 1.5 ft metal culvert under field entrance N., punched hole	1264.57
58	5.1	Newell, 2.8 mi N. and 0.5 mi E. of near cor. secs. 4, 5, 32 and 33, T. 90 and 91 N., R. 35 W., 32 ft S., 61 ft E. and 3 ft lower than hwy. at road E. of offset E.-W. road, 21 ft E. of fence corner, 0.5 ft N. of right-of-way fence and 1 ft W. of metal witness sign, attached to a driven copper coated steel rod centered in a 6-in. gravel filled tile, a standard tablet stamped "6 KED 1974"	1266.728
60	6.1	UE 6 A, 1 mi N. of tablet, along county hwy. M 54, at cross highways, 50.5 ft N., 93.5 ft W. and 3.5 ft lower than cross highways, SW. cor. of concrete base for gas pumps at vacant service station; chiseled square	1274.17
61	7.2	UE 6 B CENTERLINE, 2.0 mi N. along Co. Hwy. N 54 at E.-W. road centerline of Hwy. at E.-W. road top of 0.5-in. iron pin in hwy.	1310.3
62	8.1	Reference mark is 282 ft SSW. of tablet, 197 ft S. and 22 ft W. of crossroads; W. end of 2 ft round concrete culvert; chiseled square	1298.12
63	8.2	Newell, 5.8 mi N. and 0.5 mi E. of, near cor. secs. 16, 17, 20 and 21, T. 91 N., R. 35 W., 77 ft N., 39.5 ft E. and 4.1 ft lower than hwy. at E.-W. road, 44.5 ft N. of fence corner, 1 ft W. of right-of-way fence and 1 ft S. of metal witness post; attached to a driven copper coated steel rod and centered in a 6-in. gravel filled tile, a standard tablet stamped "7 KED 1974" and 2-in. below ground surface	1299.660
66	9.3	UE 7 A, 1.1 mi N. of tablet along county hwy. M 54; 570 ft N., 23 ft W. and 8.3 ft lower than hwy. at E.-W. road W. end of 2.5 ft round concrete culvert; chiseled square	1320.13
67	10.2	UE 7 B, 2.0 mi N. of tablet, at crossroads, 36.5 ft S., 31 ft W. and 2.5 ft lower than crossroads; S. end of 2 ft round concrete culvert; chiseled square	1322.99
70	11.4	Reference mark No. 1 is 30 ft W. of the centerline of the road, and 11 ft E. of a right-of-way fence, 254 ft N. and 30 ft W. of crossroad, 10.5 ft E. of right-of-way fence, the mark is set flush with the surface of the bottom of the road ditch, and the disk is stamped "ANDERSON NO 1 1940"	1334.886

LINE 4 (Cont'd)

PONDA QUAD. - 204

FEET

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|------|------|--|----------|
| 1 71 | 11.4 | Reference mark No. 2, is set in the bottom of the W. road ditch, 33 ft W. of the centerline of the road, 9.9 ft E. of a fence, and 9 ft E. of a witness post, 410 ft N. and 30.5 ft W. of crossroads; 10 ft E. of right-of-way fence, the mark is set 4-in. above the surface of the ground and the disk is stamped "ANDERSON NO 2 1940" | 1336.615 |
| 72 | 12.3 | UE Reference mark No. 2 ANDERSON A, 1.0 mi N. of disk at junction of county hwy. and State Hwy. No. 3; 56.5 ft S., 54.5 ft E. and 2.5 ft lower than cross hwy., top of 0.5-in. rod centered in a 4-in. square concrete post; projecting 6-in. | 1311.23 |
| 74 | 13.3 | Reference mark is 118.5 ft W. of tablet, 58.3 ft S. and 61.5 ft W. of crossroads, 3 ft N. of right-of-way fence, top of 0.5-in. rod centered in a 4-in. concrete post; projecting 3-in. | 1312.14 |
| 75 | 13.4 | Albert City, 2 mi S. and 1.2 mi W. of; near cor. secs. 27, 28, 33 and 34, T. 92 N., R. 35 W., 59 ft S., 57 ft E. and 4.9 ft lower than hwy. at N.-S. road, 24 ft E. of fence corner, 1.4 ft N. of right-of-way fence, 1.5 ft S. of concrete right-of-way marker and 1 ft E. of metal witness post; attached to a driven copper coated steel rod centered in a 6-in. gravel filled tile a standard tablet stamped "8 KED 1974" and 1-in. below ground surface | 1313.150 |

LINE 5

K.E. Daly, 1974; Book CV-3132

SAC LAKE QUAD. - 180

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|----|-----|---|---------|
| 17 | 4.5 | UE 9 A, 1 mi N. of tablet, approx. 1190 ft N. of crossroads; 24.5 ft W. and 7.7 ft lower than crossroads, 20 ft N. of fence W., W. end of 2 ft concrete pipe culvert; a chiseled square | 1248.93 |
| 19 | 5.4 | UE 9 B, 2 mi N. of tablet, at T-rd. E., 40 ft N., 19.5 ft W. and 2.2 ft lower than T-rd. E., W. end of 3 ft concrete pipe culvert; chiseled square | 1251.73 |

PONDA QUAD. - 204

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|----|-----|---|----------|
| 21 | 6.4 | Sac City, 5.5 mi N. of along county hwy. M 54, at, crossroads; near cor. secs. 20, 21, 28 and 29, T. 89 N., R. 35 W., 32 ft S., 64.8 ft W. and 1.4 ft lower than crossroads, 18.5 ft W. of fence corner and 1 ft W. of metal witness post, attached to a driven copper coated steel rod centered in a 6-in. gravel filled tile a standard tablet stamped "10 KED 1974" and set 1-in. below ground surface | 1271.380 |
| 22 | 6.4 | Reference mark is 190 ft NNE. of tablet, 153 ft N. and 25 ft W. of crossroads, W. end of 3 ft concrete pipe culvert; chiseled square | 1269.13 |
| 24 | 7.5 | UE 10 A, 1 mi N. of tablet at cross hwy., 50.5 ft N., 50 ft W. and 1.9 ft lower than crossroads, 9.5 ft N. of fence corner and in right-of-way fence line, top of T-iron fence post; projecting 0.6 ft | 1265.04 |
| 26 | 8.5 | UE 10 B, 2 mi N. of tablet at crossroads, 50 ft S., 20 ft W. and 1.9 ft lower than crossroads, center of W. headwall of 4 ft concrete box culvert, chiseled square | 1244.66 |

LINE 5 (Cont'd)

FONDA QUAD. - 204

FEET

DOUBLE RUN SPUR LINE

2	28	0.4	Reference mark No. 1 is 37 ft S. of the centerline of the road, 5.3 ft E. of a powerline pole and 1 ft N. of the right-of-way fence. The mark projects 4-in. and the disk is stamped "DOUGLAS NO 1 1950" (USC&GS)	1273.699
	29	0.5	Reference mark No. 2 is 38 ft S. of the centerline of the road and 1 ft N. of the right-of-way fence, the mark projects 4-in. and the disk is stamped "DOUGLAS NO 2 1950" (USC&GS)	1275.218
	30	0.5	USC&GS Triangulation Station DOUGLAS 1950, the station is located about 5 mi S. of the town, of Newell, 4.5 mi E.-NE. of Nemaha and along the N. side of a graveled road, at the entrance to Mr. Harold Pullen's farm home. It is 74 ft SE. of the SE. cor. of the house, 31.6 ft N. of the centerline of the road and 19 ft E. of the centerline of the driveway. The mark is flush with the surface of the ground and the disk is stamped "DOUGLAS 1950".	1276.134
END OF SPUR				
	32	9.5	UE Douglas A, 1 mi N. and 0.4 mi E. of disk at crossroads; 181 ft S., 28.5 ft E. and 5.6 ft lower than crossroads; E. end of 3 ft metal culvert; punched hole	1239.84
	34	10.5	Reference mark, is 10.5 ft N. of tablet, 32.5 ft S. and 52 ft E. of T-rd. W., SW. side of 2.5 ft soft maple tree, head of a RR. spike	1267.74
	5	10.5	Newell, 3.2 mi S. and 0.5 mi E. of near cor. secs. 4, 5, 32 and 33, T. 89 and 90 N., R. 35 W., 43.5 ft S., 53 ft E. and 2.3 ft lower than hwy. (Co. M-54) at road W., 11.5 ft S. of 2.5 ft maple tree; at NW. cor. of grove of trees and 1 ft N. of metal witness post; attached to driven copper coated steel rod centered in a 6-in. gravel filled tile, a standard tablet stamped "11 KED 1974" and approx. 1-in. below ground surface	1266.475
	38	11.6	UE 11 A, 1 mi N. of tablet, at crossroads, 35.5 ft N., 44 ft E. and 2.7 ft lower than crossroads, 1.5 ft N. and 1 ft W. of fence corner, top of 0.5-in. iron rod, projecting 0.6 ft	1259.00
	40	12.6	UE 11 B, 2 mi N. of tablet, at crossroads; 57 ft N., 22.5 ft E. and 3.9 ft lower than crossroads; E. end of 2 ft concrete pipe culvert; chiseled square	1253.05
	41	13.7	EM 5 DED 1974 (Described in Line 3)	1257.308