

THIRD-ORDER LEVELING
NATIONAL GEODETIC VERTICAL DATUM OF 1929

35-082-12
MARION QUADRANGLE
159 NORTH CAROLINA
N3530-W8200/15
DIAGRAM NI 17-1
KNOXVILLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

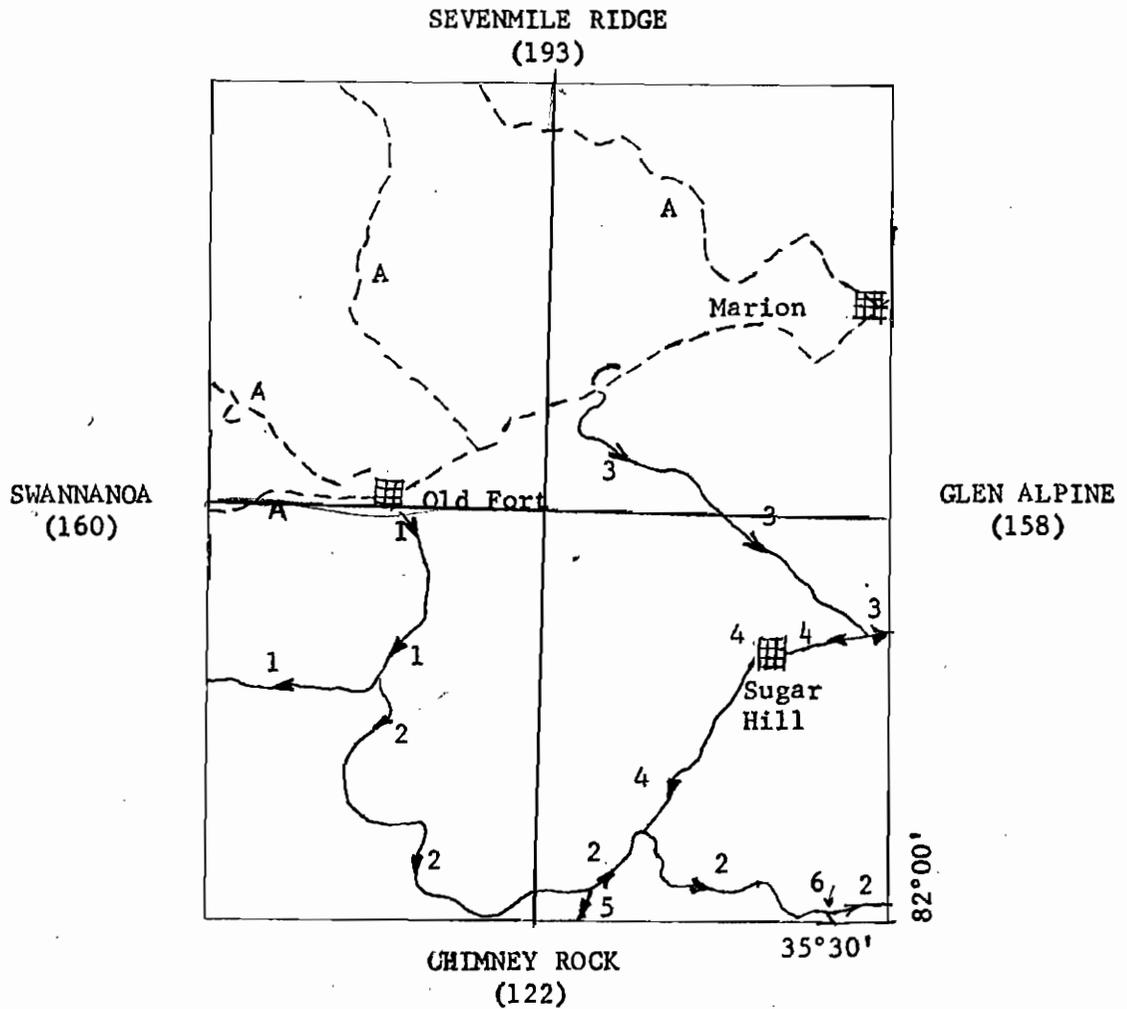
Buncombe, McDowell, and Rutherford Counties

Final adjustment of 1978

Edition of 7/31/78

PR: WSM/stc

NGVD 29
Elevations



NGS (USC&GS) VERTICAL CONTROL DATA

A. Quadrangle 350821

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NGVD 29
Elevations

ISOLATED BENCH MARKS (By W. C. Hall, 1896; Bull. 441, 646)	<u>Feet</u>
Marion, at SE. corner of Main and Court Streets, at county courthouse; at Main Street side of building; set vertically in SW. corner of stone water table, 1 ft N. of SW. corner, and 2.5 ft higher than ground; standard tablet stamped "1437" (Tied by NGS, 1935) <i>GOOD - 89</i>	1436.720
Greenlee; at E. end of platform; 11.7 ft S. of N. rail; on iron post; standard cap stamped "1286" (Reported destroyed, 1935)	1284.434
Old Fort, 40.7 ft N. of N. rail on main track; at SW. corner of ticket office; on iron post; standard cap stamped "1437" (Reported destroyed, 1935)	1436.095
Round Knob, 9 ft S. of N. rail and 46.1 ft E. of entrance to Round Knob Hotel; in face of solid rock; standard tablet stamped "1829" (Reported destroyed, 1935)	1828.176
Mud Cut, 14.2 ft S. of N. rail of main track; 293 ft E. of switch point; on iron post; standard cap stamped "2153" (Reported destroyed, 1935)	2151.574
Sugar Hill, 1.0 mi E. of post office; at rd. fork; 20 ft S. of center of rd.; on iron post; standard cap stamped "1282 ASH"	1280.619
Byers, 500 ft W. of Dougherty's mill on Little Crooked Creek; 20 ft N. of rd.; in solid rock; copper bolt stamped "1534 ASH"	1533.466
By R. W. Goebel, 1934; Book B5322	
Busick, about 2.9 mi SW. of post office, along rd.; about 2.3 mi SW. of junction of State Highway 80; at Mt. Mitchell State Game Refuge; 135 ft W. of corner of game refuge office; 84 ft W. of centerline of rd. through game refuge grounds; in center of triangular plot formed by intersecting rds.; in concrete post projecting about 0.5 ft above ground; standard tablet stamped "GL 13 1934 3031" (Tied by NGS, 1935)	3031.598
Mount Mitchell Game Refuge; 2.6 mi SW. of warden station; 100 ft W. of mouth of Upper Creek and on S. bank; 4 ft above water surface; in rock outcrop; standard tablet stamped "GL 14 1934 3225"	3225.547

			<u>LINE 1.</u>	NGVD 29 Elevations	<u>Feet</u>
By W. D. Leech, 1956; Book AV 492					
1	7	0.00	"RV 637" (NGS)		1447.753
1	7	0.98	U.E., at Y-rd. fork; SW. of rd.; on SE. corner of culvert; chiseled square		1440.72
1	9	2.02	Old Fort, 1.9 mi S. of; in NW. angle of T-rd. SW.; in E. end of stone masonry culvert; standard tablet stamped "68 WDL 1956 1611"		1610.557
1	9	2.02	Reference mark, 190 ft SE. of tablet; SW. of rd.; in root of 18-in. oak tree; copper nail and washer		1595.78
1	12	4.83	Old Fort, 4.8 mi S. of; along Bat Cave Rd., thence 0.1 mi W.; 66 ft W. and 19 ft S. of, and about 2 ft higher than T-rd.; 55 ft NW. of power pole; in concrete post; standard tablet stamped "TT 17 JCS 1955 1498"		1497.670
1	14	7.02	U. E., on W. end of pipe N. of rd.; at rd. ford S. to Mt. Hebron Church; chiseled square		1632.07
1	16	8.01	Bat Cave (junction of Highways 74 and 9), 10.9 mi N. of, along State Highway 9, thence 2.6 mi E. along Crooked Creek Road; 1.8 mi E. of McDowell County line; 21 ft S. and 6 ft E. of private rd. intersection; 3 ft N. of 24-in. white oak tree; in concrete post; standard tablet stamped "TT 16 JCS 1955 1887"		1886.534
1	17	8.02	Reference mark, 8 ft W. of tablet; in W. root of 24-in. oak tree; copper nail and washer		1887.52
1	18	8.71	U.E., 30 ft W. and 20 ft N. of junction of private rd. SW.; on E. end of concrete masonry headwall; chiseled square		2127.67
1	23	10.47	"LHT 1834 1941" (Described in TVA Bulletin 201)		2524.339
1	24	11.10	"LHT 1835 1941" (Described in TVA Bulletin 201)		2391.235

		<u>LINE 2.</u>	NGVD 29 Elevations	<u>Feet</u>
By W. D. Leech, 1956; Book AV 492				
1	25	0.00	"TT 17 JCS 1955 1498" (Described in Line 1)	1497.670
1	27	1.80	U.E., W. of rd.; on center of 25-ft culvert; chiseled square	1748.70
1	29	2.82	Old Fort, 7.8 mi S. of, along Bat Cave Road; in NE. corner of grass triangle at junction of Cedar Creek Road; 16 ft SE. of centerline of Bat Cave Road; 19 ft NW. of centerline of Cedar Creek Road; 46 ft W. of centerline of private drive S.; in concrete post; standard tablet stamped "TT 18 JCS 1955 2048"	2047.952
1	32	4.66	Old Fort, 7.8 mi S. of, along Bat Cave Road, thence 2.0 mi E. along Cedar Creek Road; at Buncombe County line; 25 ft N. and 2 ft E. of woods rd. junction; 45 ft NW. of center of small wooden bridge; in concrete post; standard tablet stamped "TT 19 JCS 1955 1647"	1647.046
1	33	4.67	Reference mark, 50 ft SE. of tablet; 20 ft NE. of rd.; on ledge; chiseled square	1644.34
1	37	6.71	Lake Lure (power dam), 8.4 mi N. of, along Buffalo Creek Road; at junction of Cedar Creek Road; 28 ft S. and 3 ft E. of, and about 4 ft higher than rd. intersection; in concrete post; standard tablet stamped "TT 20 JCS 1955 1172"	1172.310
1	38	6.73	Reference mark, 70 ft E. of tablet; 15 ft N. of rd.; in root 2.7 ft W. of base of 18-in. walnut tree; copper nail and washer	1164.25
1	38	7.57	U.E., 10 ft E. of rd.; at rapids in stream and opposite woods rd. W.; on large ledge; chiseled square	1123.72
1	39	8.36	Lake Lure (power dam), 8.4 mi N. of, along Buffalo Creek Road, thence 1.8 mi E. along Cedar Creek Road; 21 ft N. and 7 ft E. of, and about level with Y-rd.; 59 ft SE. of bridge over creek; in concrete post; standard tablet stamped "TT 21 JCS 1955 1089"	1089.361
1	40	8.38	Reference mark, 80 ft N. of tablet; in wooden stringer at NW. corner of bridge; copper nail and washer	1086.99

Line 2 (Cont'd.)Feet

1	41	9.35	U.E., 10 ft S. of rd.; on large ledge; chiseled square	1170.53
1	43	10.78	White House, 1.9 mi SW. of, along Lake Lure Road; 49 ft W. and 10 ft N. of, and about 2 ft lower than T-rd. junction; 55 ft SW. of 18-in. oak tree; in concrete post; standard tablet stamped "TT 22 JCS 1955 1148"	1148.348
1	44	10.80	Reference mark, 80 ft E. of tablet; on NE. end of L-shaped culvert; chiseled square	1153.53
1	45	12.04	U.E., 100 ft NW. of rd. fork SSW.; 40 ft SW. of rd.; in SE. root of 36-in. oak tree; copper nail and washer	1199.92
1	46	12.59	White House, 84 ft E. and 12 ft S. of rd. junction; 69.5 ft W. of SW. corner of concrete block store; in SE. corner of grass triangle at rd. junction; in concrete post; standard tablet stamped "TT 23 JCS 1955 1197"	1196.959
1	47	12.60	Reference mark, 70 ft NW. of tablet; on E. end of culvert; chiseled square	1193.90
1	48	13.21	U.E., 40 ft W. of rd. fork; on NE. wingwall of bridge; chiseled square	1119.56
1	49	14.15	U.E., 60 ft W. of rd.; 3 ft NE. of house; in root of 20-in. walnut tree; 2.5 ft NE. of trunk; copper nail and washer	1165.07
1	50	14.63	White House, 2.1 mi E. of, along Union Mills Road; 57 ft S. of private rd. junction; 13 ft E. of centerline of field rd.; 36 ft NW. of powerline pole; in concrete post; standard tablet stamped "TT 24 JCS 1955 1178"	1177.970
1	51	15.75	U.E., S. of rd.; on stone over pipe under rd.; chiseled square	1157.72
1	52	16.58	White House, 4.2 mi E. of, along Union Mills Road; 0.1 mi E. of Welcome Home Church; at Pinnacle Lookout Tower Road; 43 ft N. and 7 ft E. of, and about 3 ft higher than rd. junction; 3 ft N. of lookout tower sign; 55 ft SE. of SW. corner of old house; in concrete post; standard tablet stamped "TT 25 JCS 1955 1299"	1299.884

Line 2 (Cont'd.)Feet

1	53	16.59	Reference mark, 40 ft S. of tablet; on S. end of concrete pipe; chiseled square	1297.84
1	54	17.76	U.E., 60 ft NE. of rd. at Y-rd. fork; 5.8 ft S. of base of 8-in. hickory tree; copper nail and washer	1146.09
1	55	18.21	Thermal City, 4.0 mi SW. of; 25 ft NW. of junction of rd. SW.; in concrete post; standard tablet stamped "69 WDL 1956 1190"	1190.610
1	56	18.24	Reference mark, 140 ft NE. of tablet; 25 ft NW. of rd.; in root of 8-in. pine tree; copper nail and washer	1191.21
1	56	18.67	U.E., center of N. side of bridge; copper nail and washer	1083.09
1	57	19.06	U.E., NE. angle of rd. N. on pipe; chiseled square	1071.92

LINE 3.

By W. D. Leech, 1956; Book AV 492

2	1	0.00	"RV 636" (NGS)	1302.504
2	5	1.59	U.E., 40 ft S. of junction of T-rd. SE. on masonry culvert; chiseled square	1345.92
2	6	2.07	U.E., W. end of S. bridge seat of bridge over Catawba River; chiseled square	1321.25
2	7	2.63	Zion Hill Church, 2.7 mi NE. of; in SW. angle of poor rd. S.; at W. end of small clearing; 25 ft S. of rd.; in concrete post; standard tablet stamped "71 WDL 1956 1367"	1367.011
2	7	2.64	Reference mark, 40 ft SE. of tablet; in forks of small triple tree; copper nail and washer	1366.78
2	8	3.14	U.E., 60 ft W. of rd. at junction of woods rd. SW.; in root of oak tree; copper nail and washer	1573.47

Line 3 (Cont'd.)Feet

2	11	4.66	Zion Hill Church, 0.7 mi NE. of; 25 ft W. and 30 ft N. of junction of rd. fork N.; in concrete post; standard tablet stamped "72 WDL 1956 1321" (erroneously stamped)	1567.582
2	11	4.67	Reference mark, 6.5 ft W. of tablet; in S. root of 12-in. oak tree; copper nail and washer	1567.84
2	11	5.32	U.E., 80 ft E. of crossroads; in W. root of 10-in. oak tree; copper nail and washer	1615.37
1	12	5.81	U.E., 20 ft W. of junction of poor rd. fork SW.; in root of 6-in. oak tree; copper nail and washer	1570.09
2	13	6.20	U.E., 50 ft S. and 25 ft E. of rd. fork W. to Mt. Zion Church; on S. end of culvert; chiseled square	1490.83
2	13	6.83	Zion Hill Church, 1.5 mi SE. of; about 1.5 mi NE., thence 1.7 mi NW. of Sugar Hill; 0.66 mi SE. of rd. fork to Zion Hill Church; 70 ft NW. of poor rd. S.; 30 ft SW. of rd.; in ledge at ground level; standard tablet stamped "73 WDL 1956 1449"	1449.026
2	14	6.85	Reference mark, 100 ft SE. of tablet on ledge; chiseled square	1443.62
2	15	8.51	U.E., at rd. fork to Sugar Hill; on W. side of SE. culvert of drive to house NE. of rd.; chiseled square	1361.87
2	16	9.49	U.E., NE. corner bridge; on concrete back wall, chiseled square	1322.29
2	16	9.92	Sugar Hill, 1.8 mi E. of; 50 ft S. and 25 ft W. of crossroad; in concrete post; standard tablet stamped "74 WDL 1956 1362"	1362.443
2	17	9.93	Reference mark, 15 ft N. of tablet; on W. end of steel pipe under rd.; chiseled cross	1360.95
2	17	10.61	U.E., on NE. backwall of bridge; chiseled square	1295.58

LINE 4.NGVD 29
ElevationsFeet

By W. D. Leech, 1956; Book AV 492

2	25	0.00	"74 WDL 1956 1362" (Described in line 3)	1362.443
2	26	0.95	U.E., on curve of W. end of bottom concrete step at entrance to Sugar Hill Missionary Baptist Church; chiseled square	1276.11
2	27	1.93	Sugar Hill, 0.3 mi SW. of; 70 ft SW. and 40 ft NW. of bridge over Cove Creek; in concrete post; standard tablet stamped "76 WDL 1956 1199"	1198.852
2	27	1.92	Reference mark, 50 ft E. of tablet; on SW. wingwall of bridge; chiseled square	1198.02
2	29	3.23	U.E., SW. corner of bridge, on concrete backwall; chiseled square	1174.29
2	30	4.48	Sugar Hill, 2.8 mi SW. of; 420 ft SE. of private rd. NW.; 30 ft SE. of rd.; in concrete post; standard tablet stamped "77 WDL 1956 1185"	1185.165
2	30	4.50	Reference mark, 130 ft SW. of tablet; 30 ft SE. of rd.; in root of 10-in. maple tree; copper nail and washer	1185.63
2	31	5.18	U.E., NW. concrete wingwall of bridge; chiseled square	1151.27
2	32	6.00	U.E., NE. corner bridge, on concrete wingwall; chiseled square	1135.85
2	32	6.54	"TT 23 JCS 1955 1197" (Described in line 2)	1196.959

LINE 5.

By W. D. Leech, 1956; Book AV 491

3	1	0.00	"TT 22 JCS 1956 1148" (Described in line 2)	1148.348
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LINE 6.

By W. D. Leech, 1956; Book AV 492

5	17	12.20	"69 WDL 1956 1190" (Described in line 2)	1190.610
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