COHEN, DIPPELL AND EVERIST, P. C.

SUPPLEMENTAL DAYTIME FIELD STRENGTH MEASUREMENTS ON TEST TRANSMITTER TAKEN IN 1962 ON WMSG, OAKLAND, MARYLAND JANUARY 2007

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

N 36° E

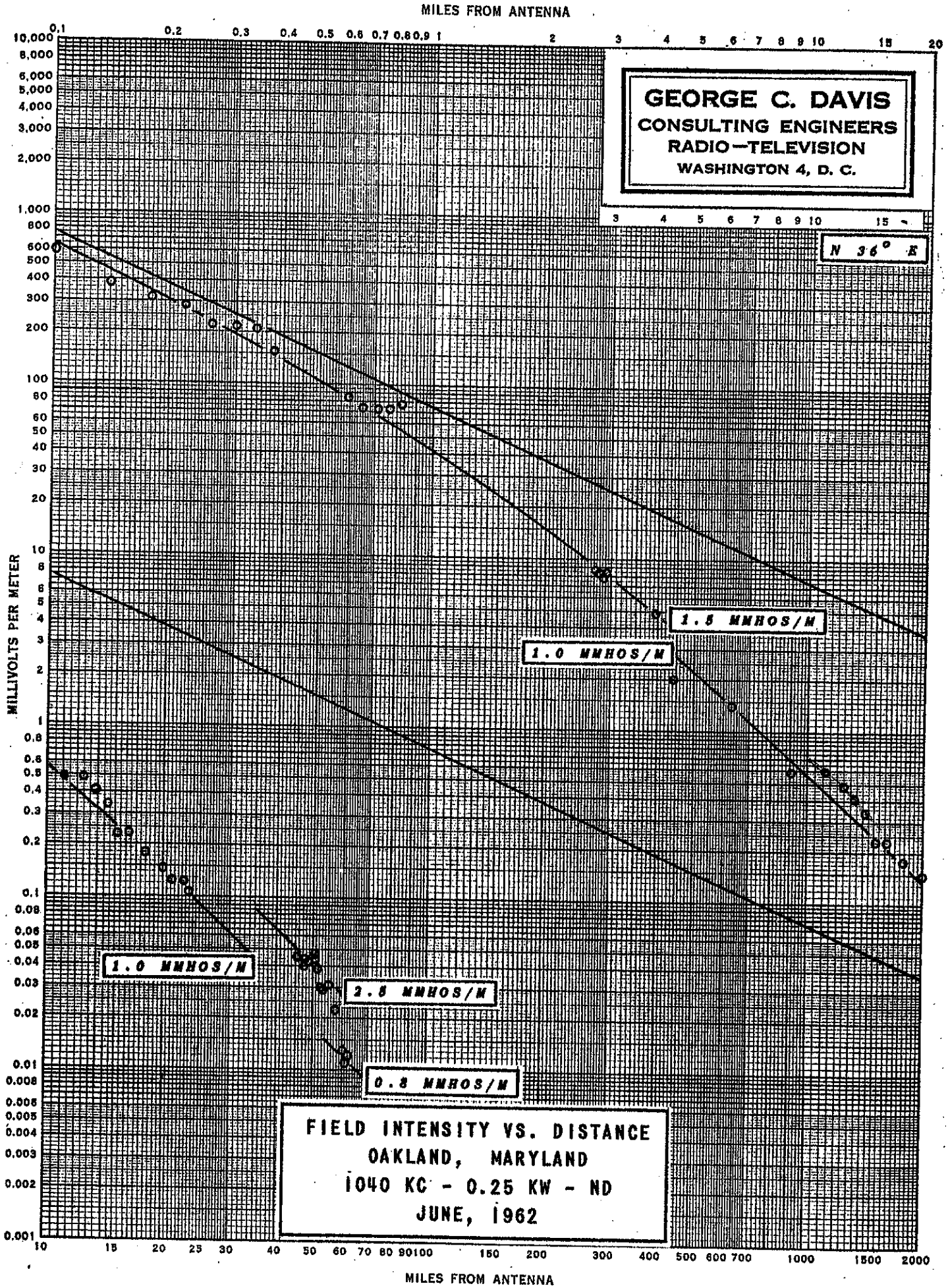
Point Number	Distance Miles	Field Strength mv/m
1	0.1	588
2	0.14	382
3	0.18	320
4	0.22	278
5	0.26	227
6	0.30	217
7	0.34	206
8	0.38	155
9	0.60	84
10	0.65	73.5
11	0.72	71.5
12	0.77	73.5
13	0.83	76.8
14	2.73	8.55
15	2.80	8.25
16	2.86	7.85
17	2.92	8.25
18	2.97	8.05
19	3.98	4.95
20	4.46	2.0
21	6.34	1.4
22	57.1	0.022
23	55.1	0.031
24	60.0	0.013
25	62.3	0.012
26	61.4	0.011
27	52.9	0.030
28	53.6	0.029
29	50.8	0.046
30	51.7	0.038

GEORGE C. DAVIS

FIELD STRENGTH MEASUREMENTS

N 36° E
(Continued)

Point Number	Distance Miles	Field Strength mv/m
31	50.2	0.047
32	48.7	0.043
33	47.9	0.044
34	47.4	0.040
35 A	45.7	0.045
35	23.5	0.108
36	22.8	0.126
37	21.3	0.127
38	20.0	0.147
39	18.0	0.179
40	16.3	0.230
41	15.2	0.230
42	14.2	0.340
43	13.4	0.410
44	12.5	0.480
45	11.1	0.495
46	9.1	0.58

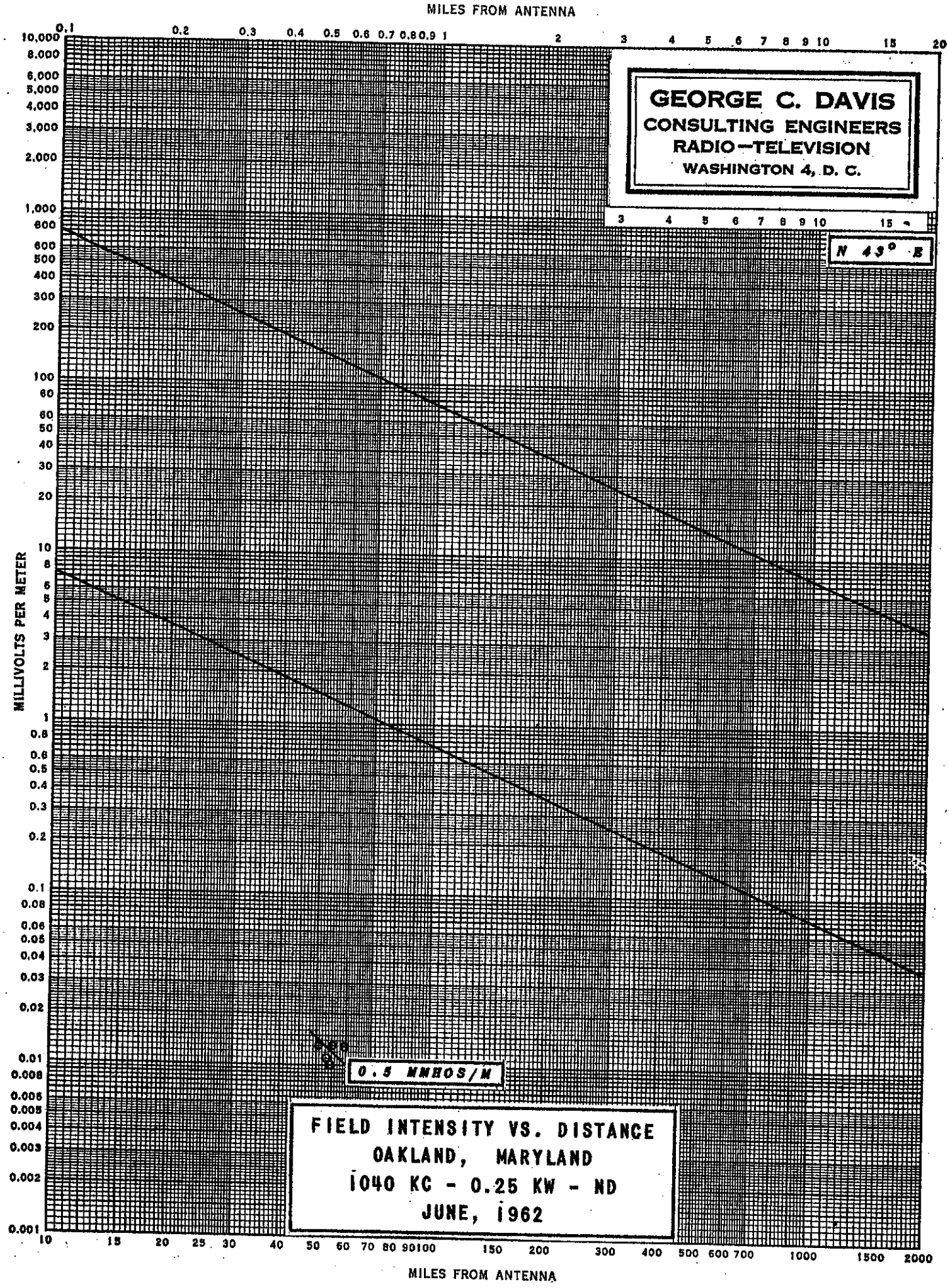

MILES FROM ANTENNA
0,1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5 6 7 8 9 10 15 20
10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 80 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 36° E
1.5 MMHOS/M
1.0 MMHOS/M
1.0 MMHOS/M
2.5 MMHOS/M
0.8 MMHOS/M
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

N 43° E

Point Number	Distance Miles	Field Strength mv/m
1	50.9	0.013
2	53.2	0.011
3	54.3	<0.01
4	55.5	0.013
5	59.9	0.013


MILES FROM ANTENNA
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5 6 7 8 9 10 15 20
10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 43° E
0.5 MMHOS/M
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

N 53.5° E

Point Number	Distance Miles	Field Strength mv/m
2	0.14	430
3	0.19	350
4	0.25	255
5	0.3	220
6	0.36	200
7	0.43	140
8	0.5	90
9	0.57	80
10	0.61	77
11	0.74	78
12	0.82	80
13	0.89	66
14	0.94	62
15	1.52	14
16	1.60	13
17	1.67	13
18	1.74	14
19	1.82	14.5
20	1.90	11.5
21	1.98	11.0
22	2.06	12.0
23	2.10	11.0
24	2.22	11.0
25	2.30	13.0
26	2.38	9.8
27	2.46	10.1
28	2.54	9.7
29	2.62	10.5
30	3.1	5.8

FIELD STRENGTH MEASUREMENTS

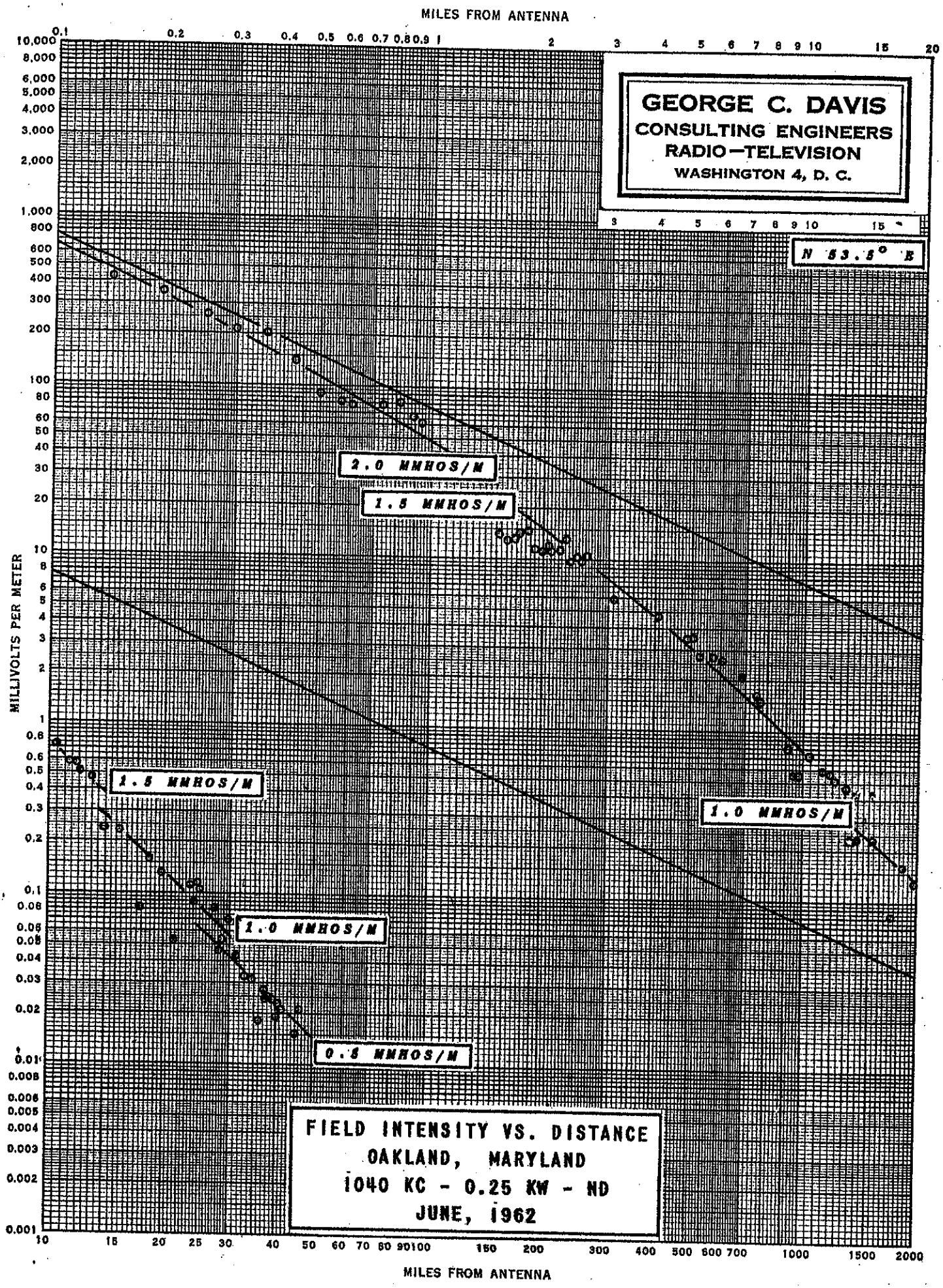
N 53.5° E
(Continued)

Point Number	Distance Miles	Field Strength mv/m
31	4.18	4.7
32	5.1	3.55
33	4.9	3.5
34	5.73	2.7
35	6.08	2.6
36	6.83	2.1
37	7.48	1.6
38	7.61	1.5
39	5.33	2.7
41	9.1	0.80
42	9.5	0.55
43	9.8	0.56
44	10.4	0.72
45	11.3	0.58
46	11.8	0.57
47	12.1	0.51
48	13.0	0.47
49	13.9	0.237
50	15.3	0.235
51	17.2	0.082
52	18.4	0.160
53	19.7	0.130
54	21.3	0.053
55	23.6	0.110
56	24.1	0.089
57	24.6	0.115
58	25.0	0.103
59	27.5	0.082
60	27.2	0.081
61	28.3	0.046
62	28.8	0.054
63	29.9	0.069
64	31.2	0.043

FIELD STRENGTH MEASUREMENTS

N 53.5° E
(Continued)

Point Number	Distance Miles	Field Strength mv/m
65	33.0	0.033
66	34.7	0.031
67	36.0	0.018
68	37.1	0.027
69	37.6	0.024
70	38.0	0.025
71	39.3	0.024
72	40.0	0.019
73	40.8	0.023
74	41.5	0.021
75	45.0	0.015
76	46.1	0.021


MILES FROM ANTENNA
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10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 80 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 53.5° E
2.0 MMHOS/M
1.5 MMHOS/M
1.5 MMHOS/M
1.0 MMHOS/M
1.0 MMHOS/M
0.5 MMHOS/M
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

N 73.5° E

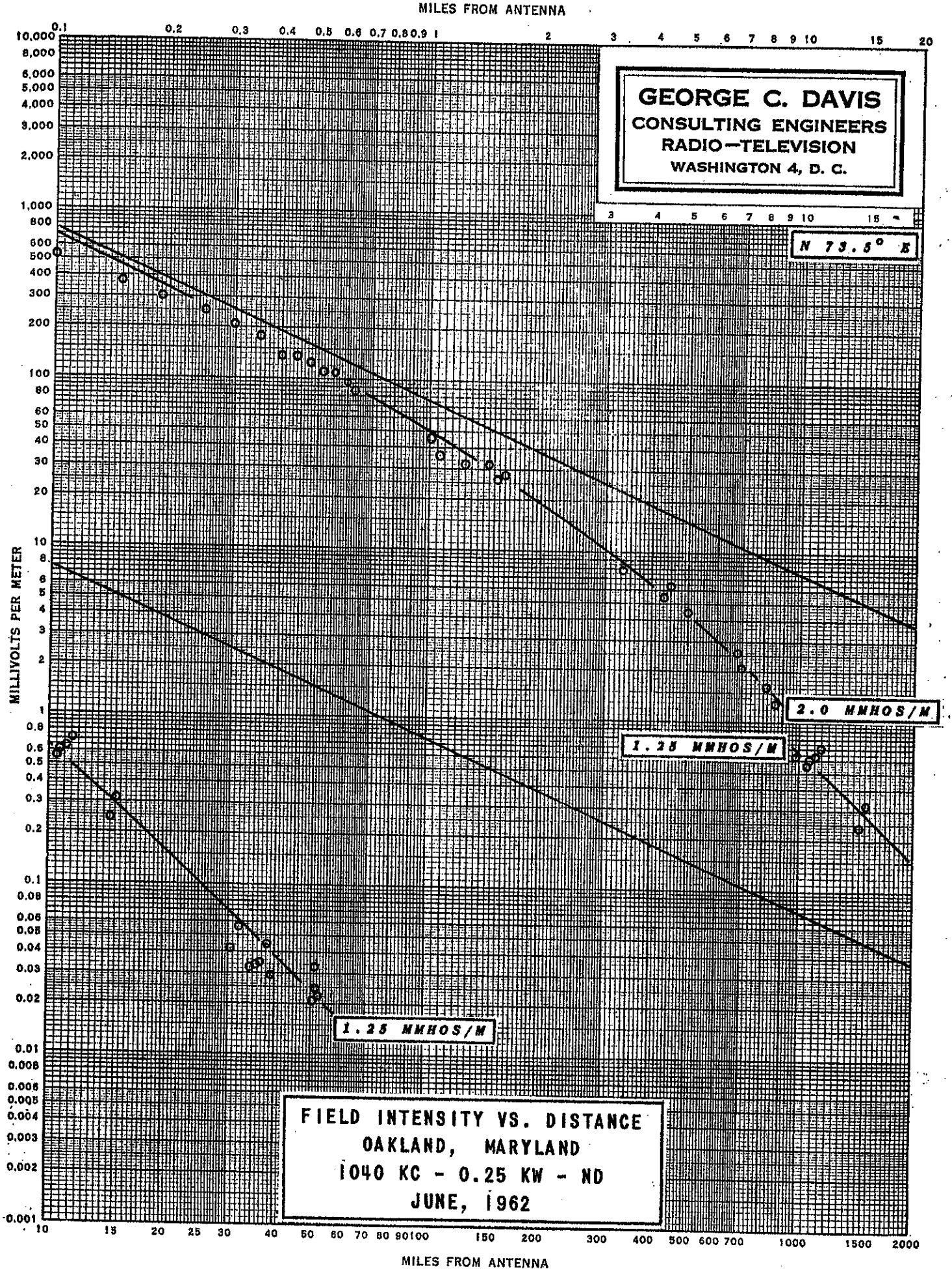
Point Number	Distance Miles	Field Strength mv/m
2	0.1	525
3	0.15	370
4	0.19	300
5	0.25	250
6	0.30	210
7	0.35	175
8	0.4	138
9	0.44	138
10	0.48	126
11	0.52	110
12	0.56	110
13	0.60	96
14	0.63	86
16	1.07	36
17	1.01	45.5
18	1.25	32
19	1.33	29
20	1.45	32
21	1.53	26
22	1.60	27.8
23	4.5	6.4
24	5.07	4.5
25	4.32	5.5
26	3.35	7.9
29	6.82	2.58
30	7.00	2.14
31	8.16	1.6
32	8.62	1.3

GEORGE C. DAVIS

FIELD STRENGTH MEASUREMENTS

N 73.5° E
(Continued)

Point Number	Distance Miles	Field Strength mv/m
33	9.93	0.64
34	10.5	0.56
35	10.65	0.60
36	11.1	0.64
37	11.5	0.71
38	14.6	0.24
39	15.1	0.32
41	30.8	0.042
42	32.1	0.056
43	34.7	0.033
44	35.8	0.034
45	36.9	0.035
46	38.2	0.044
47	39.1	0.029
48	50.3	0.021
49	51.1	0.033
50	51.6	0.024
51	52.3	0.022


MILES FROM ANTENNA
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5 6 7 8 9 10 15 20
10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 80 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
3 4 5 6 7 8 9 10 15
N 73.5° E
2.0 MMHOS/M
1.25 MMHOS/M
1.25 MMHOS/M
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

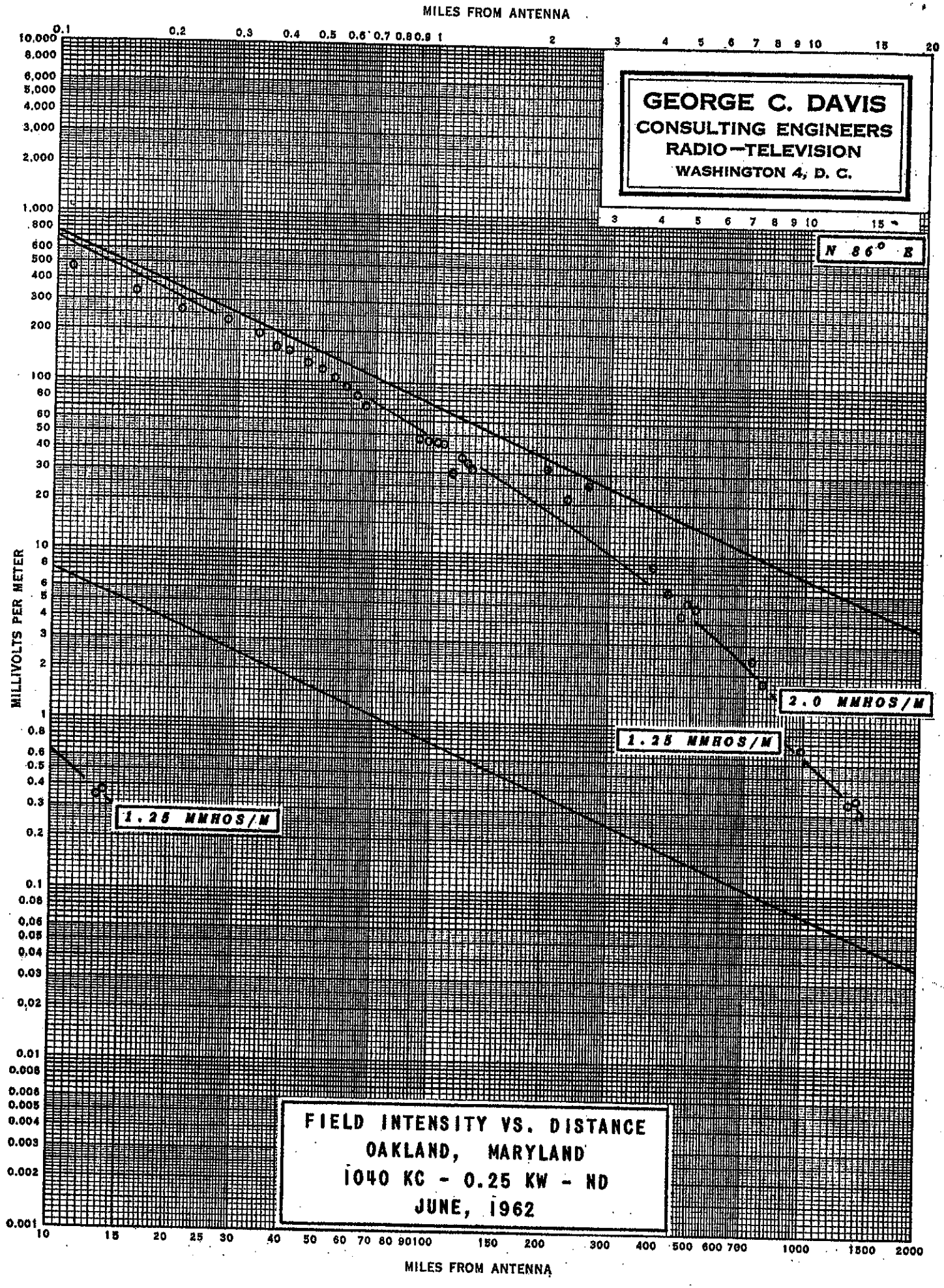
N 86° E

Point Number	Distance Miles	Field Strength mv/m
2	0.11	461
3	0.16	338
4	0.21	263
5	0.28	225
6	0.34	193
7	0.38	155
8	0.42	150
9	0.46	129
10	0.50	117
11	0.54	103
12	0.58	92
13	0.62	83.5
14	0.66	74
15	0.92	47
16	0.97	46
17	1.03	45
18	1.08	44
19	1.13	30
20	1.20	36
21	1.24	34
22	1.27	31
23	2.04	32
24	3.93	8.6
25	4.32	6.0
26	4.70	4.4
27	4.90	5.2
28	5.11	4.95
29	13.88	0.37
30	13.20	0.35

FIELD STRENGTH MEASUREMENTS

N 86° E
(Continued)

Point Number	Distance Miles	Field Strength mv/m
31	9.86	0.73
32	7.32	2.4
33	7.80	1.8
34	2.62	25.5
35	2.30	21

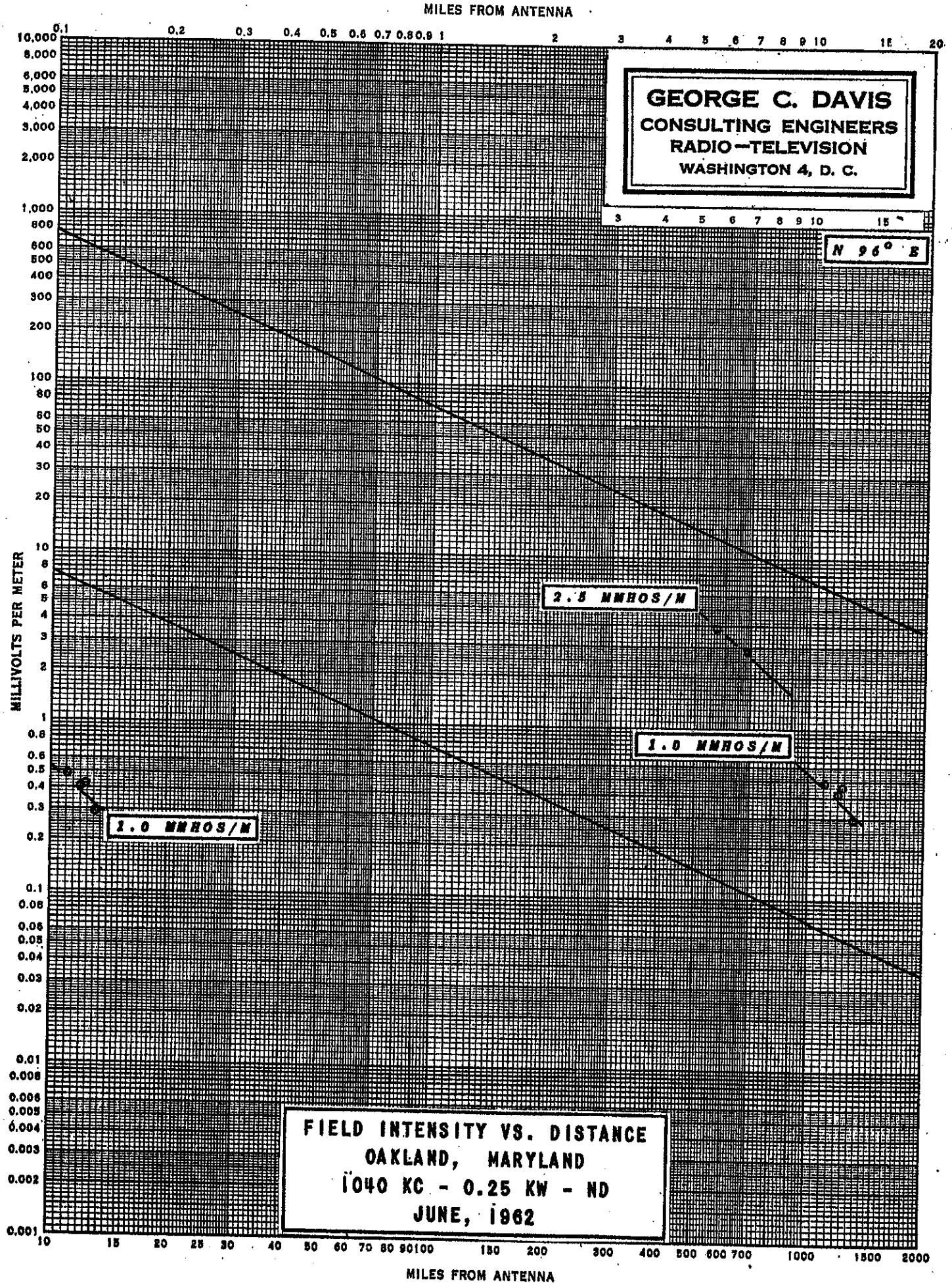

MILES FROM ANTENNA
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5 6 7 8 9 10 15 20
10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 80 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 86° E
2.0 MMHOS/M
1.25 MMHOS/M
1.25 MMHOS/M
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

N 96° E

Point Number	Distance Miles	Field Strength mv/m
1	11.12	0.48
2	12.00	0.41
3	12.32	0.45
4	13.02	0.29
5	5.70	3.8
6	6.89	2.8

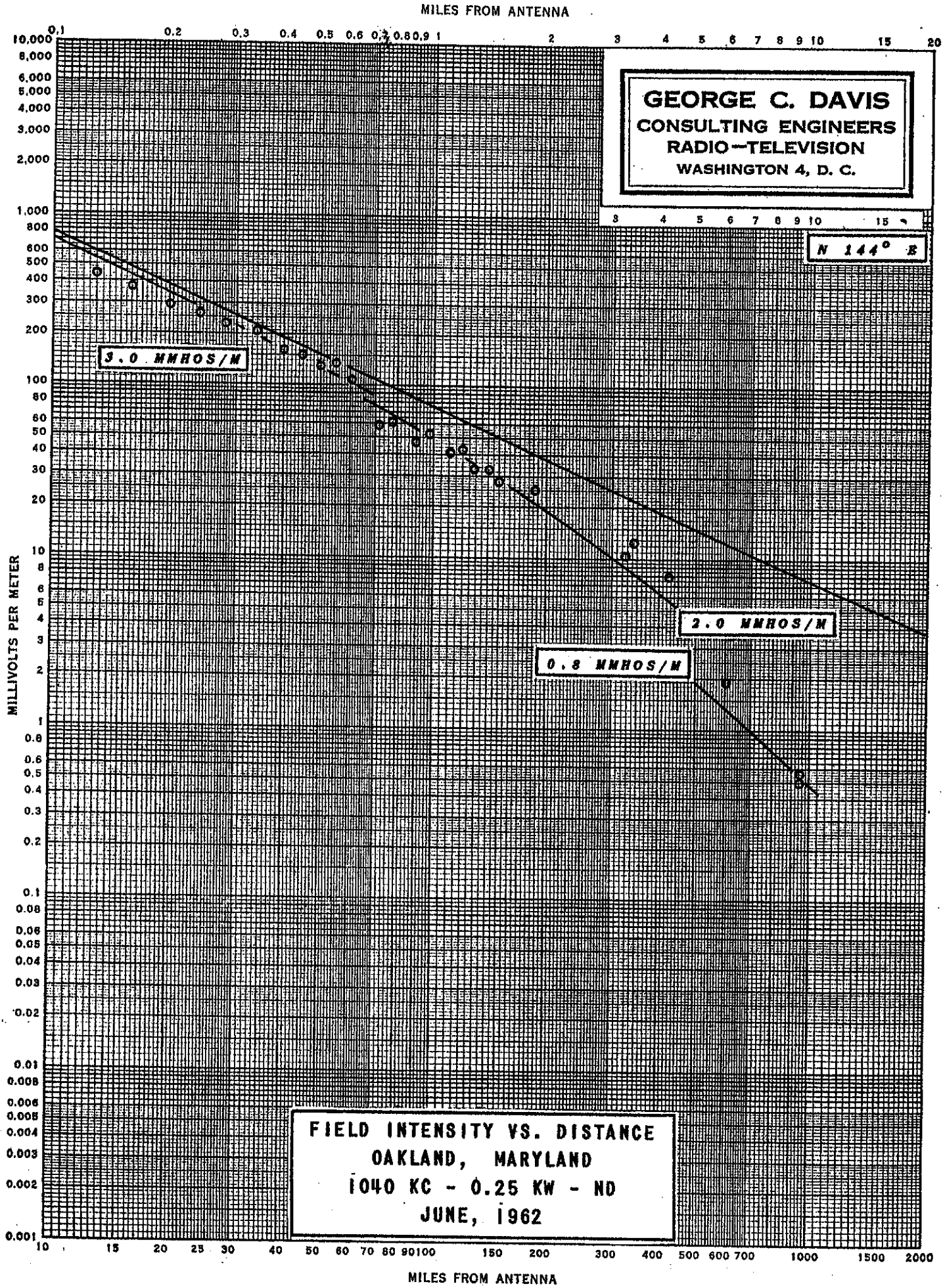

MILES FROM ANTENNA
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5 6 7 8 9 10 15 20
10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 80 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 96° E
2.5 MMHOS/M
1.0 MMHOS/M
1.0 MMHOS/M
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

N 144° E

Point Number	Distance Miles	Field Strength mv/m
2	0.13	440
3	0.16	370
4	0.20	290
5	0.24	262
6	0.28	230
7	0.34	210
8	0.40	162
9	0.45	150
10	0.50	129
11	0.55	134
12	0.61	107
13	0.72	58
14	0.78	60
15	0.90	47
16	0.98	52.0
17	1.12	40
18	1.20	42
19	1.29	33
20	1.42	33
21	1.50	28
22	1.88	25.0
23	7.34	2.3
24	9.42	0.56
25	9.48	0.50
26	6.13	1.9
27	4.26	7.9
28	3.43	12.5
29	3.29	10.5


MILES FROM ANTENNA
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 144° E
3.0 MMHOS/M
2.0 MMHOS/M
0.8 MMHOS/M
MILLIVOLTS PER METER
FIELD INTENSITY VS. DISTANCE
OAKLAND, MARYLAND
1040 KC - 0.25 KW - ND
JUNE, 1962
MILES FROM ANTENNA

GEORGE C. DAVIS

TABULATION OF FIELD STRENGTH MEASUREMENTS KGI-342 1040 KC OAKLAND, MARYLAND MAY 1962

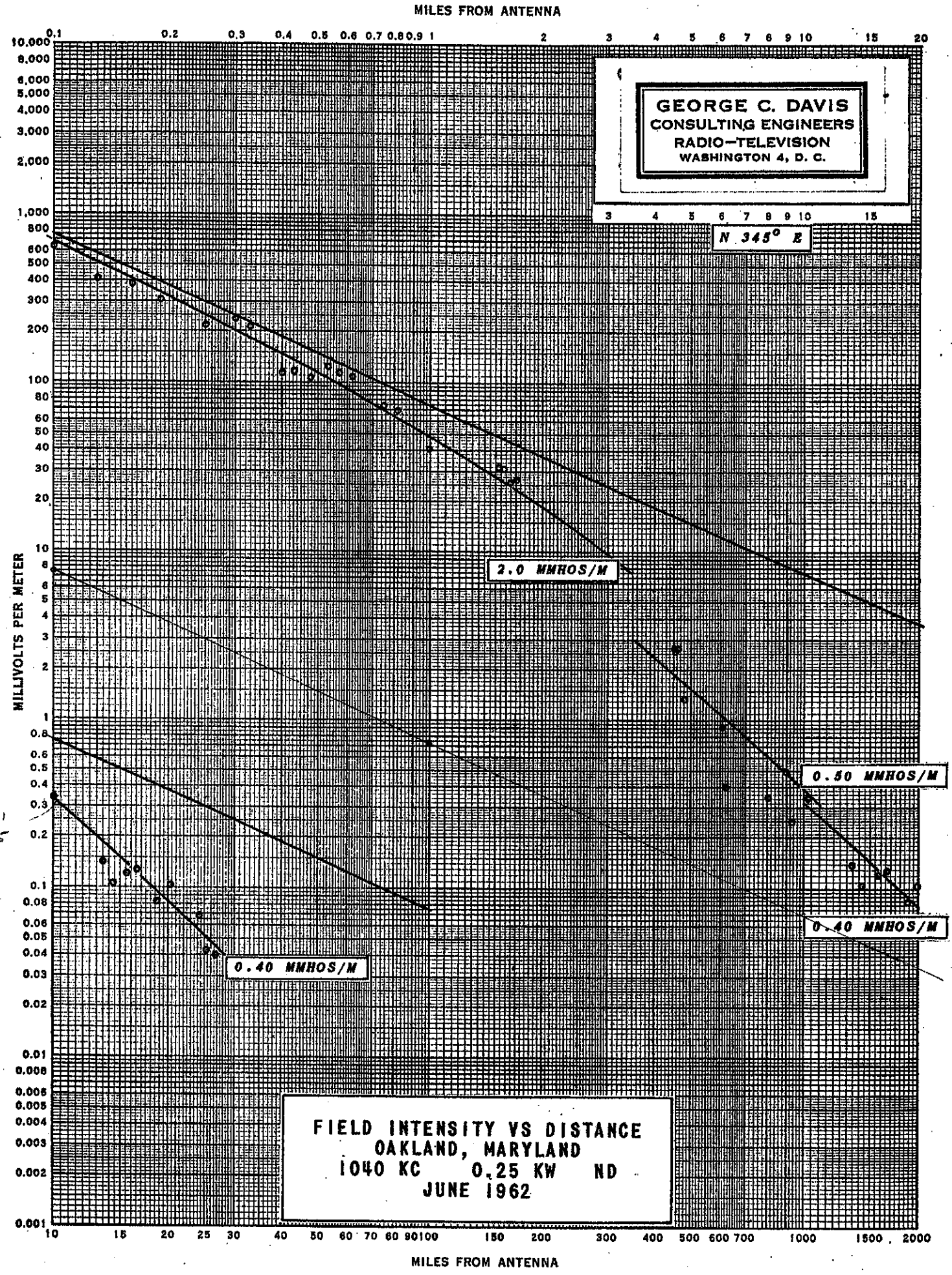
N 345° E

Point Number	Distance Miles	Field Strength mv/m
1	0.1	640
2	0.13	408
3	0.16	382
4	0.19	309
5	0.25	216
6	0.30	232
7	0.33	211
8	0.40	113
9	0.43	118
10	0.48	108
11	0.53	124
12	0.57	113
13	0.62	108
14	0.75	74
15	0.82	68
16	0.98	41.2
17	1.53	32
18	1.57	31
19	1.65	26
20	1.71	27
21	4.53	2.65
22	4.56	2.55
23	4.62	2.6
24	4.89	1.35
25	6.1	0.92
26	6.2	0.40
27	8.1	0.35
28	9.0	0.50
29	9.3	0.25
30	10.2	0.34

FIELD STRENGTH MEASUREMENTS

N 345° E
(Continued)

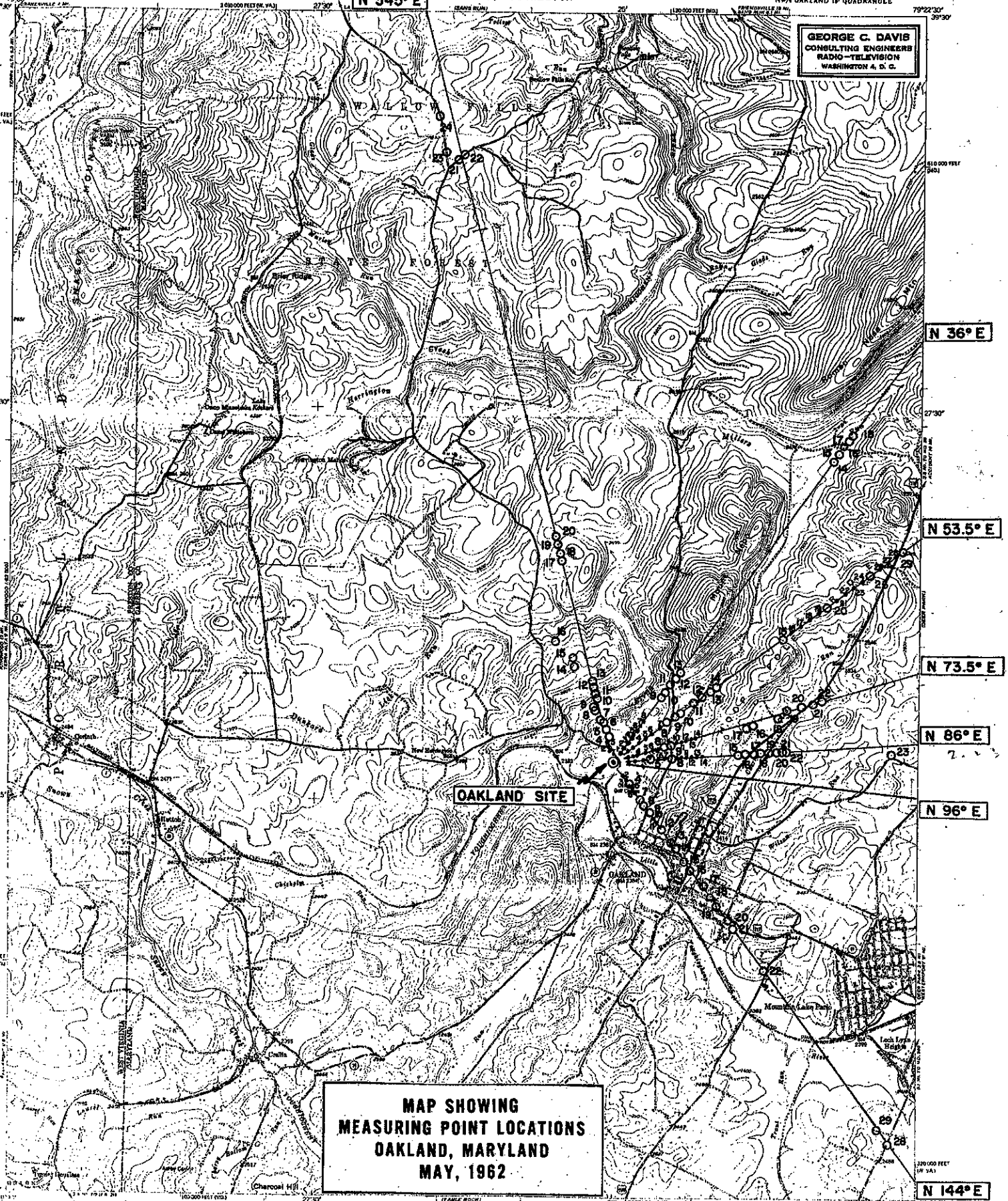
Point Number	Distance Miles	Field Strength mv/m
31	13.4	0.140
32	14.3	0.106
33	15.6	0.122
34	16.6	0.129
35	18.7	0.084
36	20.3	0.104
37	24.1	0.069
38	25.3	0.043
39	26.7	0.040


MILES FROM ANTENNA
0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1 2 3 4 5 6 7 8 9 10 15 20
10,000 8,000 6,000 5,000 4,000 3,000 2,000 1,000 800 600 500 400 300 200 100 80 60 50 40 30 20 10 8 6 5 4 3 2 1 0.8 0.6 0.5 0.4 0.3 0.2 0.1 0.08 0.06 0.05 0.04 0.03 0.02 0.01 0.008 0.006 0.005 0.004 0.003 0.002 0.001
MILLIVOLTS PER METER
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
3 4 5 6 7 8 9 10 15
N 345° E
2.0 MMHOS/M
0.50 MMHOS/M
0.40 MMHOS/M
0.40 MMHOS/M
FIELD INTENSITY VS DISTANCE
OAKLAND, MARYLAND
1040 KC 0.25 KW ND
JUNE 1962
10 15 20 25 30 40 50 60 70 80 90 100 150 200 300 400 500 600 700 1000 1500 2000
MILES FROM ANTENNA

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
WILMER INGEWALD, JR., DIRECTOR

OAKLAND QUADRANGLE
MARYLAND-WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 OAKLAND 15' QUADRANGLE



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

DEPARTMENT OF INTERNAL AFFAIRS
WILLIAM S. LIVENGOOD, JR., SECRETARY
TOPOGRAPHIC AND GEOLOGIC SURVEY
STANLEY HOLMAN CATHCART, STATE GEOLOGIST

GRANTSVILLE QUADRANGLE
MARYLAND-PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON A. D. C.

N 36° E

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1946

Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system
and Pennsylvania coordinate system, south zone.

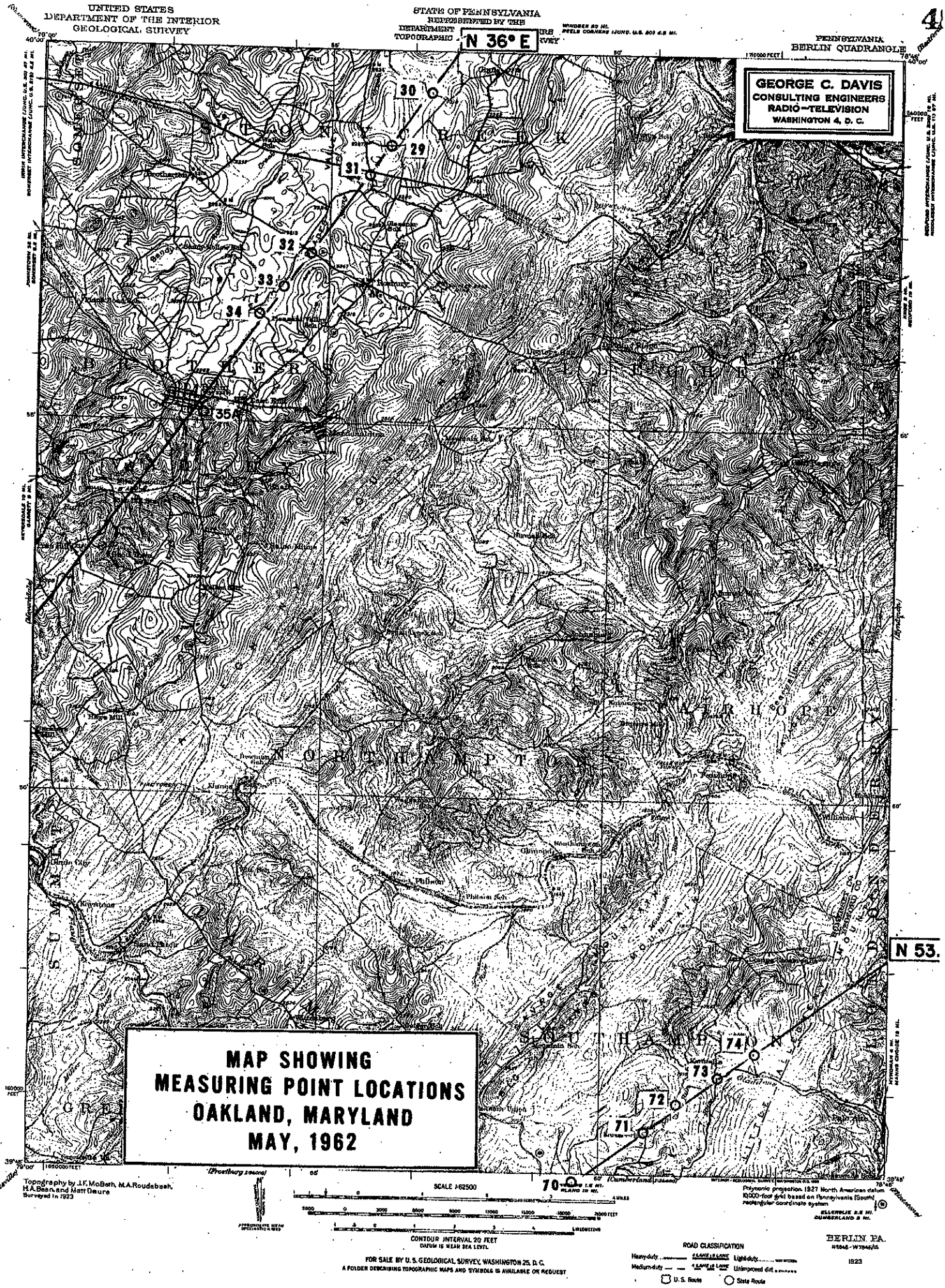
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

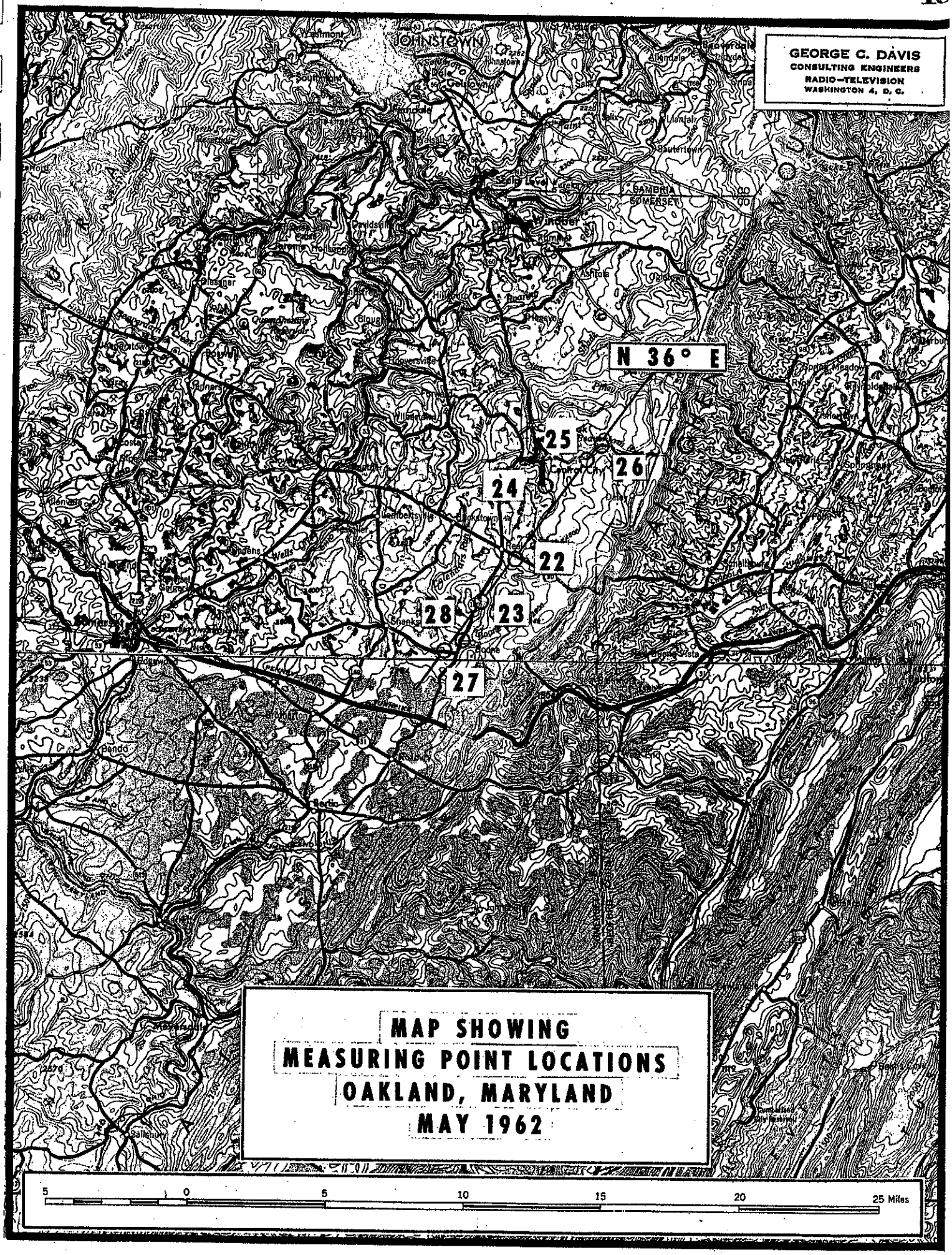
ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS	DRY WEATHER ROADS
Heavy-duty	Improved dirt
Medium-duty	Unimproved dirt
Loose-surface, graded, or narrow hard-surface	

U. S. Route ○ State Route

GRANTSVILLE, MD.-PA.


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
STATE OF PENNSYLVANIA
REPRESENTED BY THE
DEPARTMENT OF TOPOGRAPHIC AND GEOLOGIC SURVEY
N 36° E
PENNSYLVANIA
BERLIN QUADRANGLE
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
4
N 53.
MAP SHOWING
MEASURING POINT LOCATIONS
OAKLAND, MARYLAND
MAY, 1962
Topography by J.F. McBeth, M.A. Roudabush, H.A. Bean, and Matt Daura
Surveyed in 1923
SCALE 1:62500
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL
FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST
Polyconic projection 1927 North American datum
10,000-foot grid based on Pennsylvania (South)
rectangular coordinate system
ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light-duty
Unimproved dirt
U.S. Route
State Route
BERLIN, PA.
1923


GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
N 36° E
25
26
24
22
28
23
27
MAP SHOWING
MEASURING POINT LOCATIONS
OAKLAND, MARYLAND
MAY 1962
5 0 5 10 15 20 25 Miles

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF PENNSYLVANIA
REPRESENTED BY THE
DEPARTMENT OF INTERNAL AFFAIRS
TOPOGRAPHIC AND GEOLOGIC SURVEY

PENNSYLVANIA
BEDFORD QUADRANGLE

N 43° E

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

R B Marshall, Chief Geographer
Frank Sutton, Geographer in charge
Topography by J D Forster and W O Tuffs
Control by Geo T Hawkins and H D Hilton
Surveyed in 1908
SURVEYED IN COOPERATION WITH THE STATE OF PENNSYLVANIA

Scale 1:62500

Edition of Apr. 1910, reprinted 1947.
Polyconic projection. North American datum

PA.
BEDFORD

BEDFORD CO., PENNSYLVANIA 1:62,500

WAR DEPARTMENT
CORPS OF ENGINEERS, U. S. ARMY

FIRST EDITION - AMS 1

HYNDMAN QUADRANGLE
15 MINUTE SERIES

N 43° E

N 53.5° E

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

First Edition 1944.
Prepared under the direction of the Chief of Engineers, U. S. Army, by the Army Map Service, Kansas City unit, 1944.
Based on U. S. G. S. quadrangle, Hyndman, 1:62,500 (1911).
Vertical control by U. S. Geological Survey
Horizontal control by U. S. Geological Survey in cooperation with Pennsylvania Railroad, Baltimore and Ohio Railroad, and the State of Pennsylvania, 1927
Revised from single lens vertical aerial photographs,
Aerial photography A. A. A., Department of Agriculture, 1938.
Polyconic Projection, North American Datum
ZONE CLASSIFICATION 1941

Scale 1:62,500

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

LEGEND
BRUSH

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

BITTINGER QUADRANGLE
MARYLAND-GARRETT CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

N 36° E

N 53.5° E

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 6, D. C.

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1960. Field check, 1947

Polyconic projection. 1927 North American datum
10,000-foot grid based on Maryland coordinate system

Extent of state forest areas uncertain

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS — ORY WEATHER ROADS
Heavy-duty. ——— ——— Improved dirt. ———
Medium-duty. ——— ——— Unimproved dirt. ———
Loose-surface, graded, or narrow hard-surface — — —
U. S. Route ◯ State Route

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

BARTON QUADRANGLE
MARYLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)

N 53.5° E

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

N 73.5°

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1948. Field check, 1952

Horizontal projection. 1927 North American datum
10,000-foot grid based on Maryland coordinate system

Extent of state forest and reservation

1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS	DRY WEATHER ROADS
Heavy-duty	Improved dirt
Medium-duty	Unimproved dirt
Loose-surface, graded, or narrow hard-surface	

U. S. Route State Route

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGIC

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

STATE OF PENNSYLVANIA
DEPARTMENT OF INTERNAL AFFAIRS
WILLIAM S. LIVENGOOD, JR., SECRETARY
TOPOGRAPHIC AND GEOLOGIC SURVEY
STANLEY HOLMAN CATHCART, STATE GEOLOGIST

AVILTON QUADRANGLE
MARYLAND-PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

N 36° E

N 53.5° E

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1947

Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system and Pennsylvania coordinate system, south zone

Extent of state forest areas uncertain.

1/2 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS — DRY WEATHER ROADS

Heavy-duty. ——— Improved dirt. ———

Medium-duty. ——— Unimproved dirt. ———

Loose-surface, graded, or narrow hard-surface. — — —

U. S. Route ◯ State Route

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

STATE OF PENNSYLVANIA
DEPARTMENT OF INTERNAL AFFAIRS
TOPOGRAPHIC AND GEOLOGIC SURVEY

FROSTBURG QUADRANGLE
MARYLAND-PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

N 53.5°

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1947 and 1949

Polyconic projection. 1927 North American datum
10,000 foot grids based on Maryland coordinate system
and Pennsylvania coordinate system, south zone

Red tint indicates area in which only
landmark buildings are shown

1/2 0 MILE

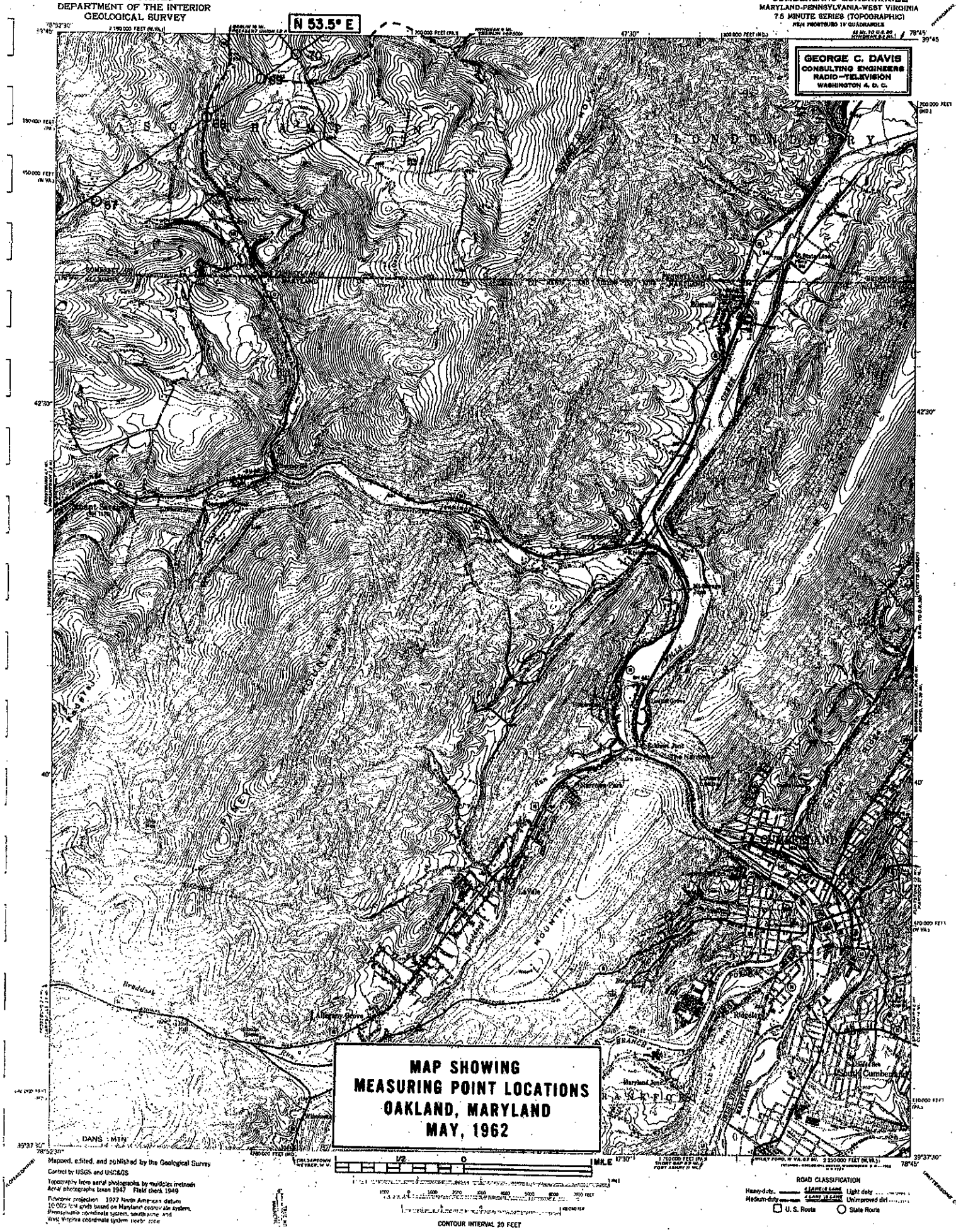
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

Heavy-duty ..... 4 LANES OR MORE 4 LANES OR LESS Light duty .....
Medium-duty ..... Unimproved dirt .....

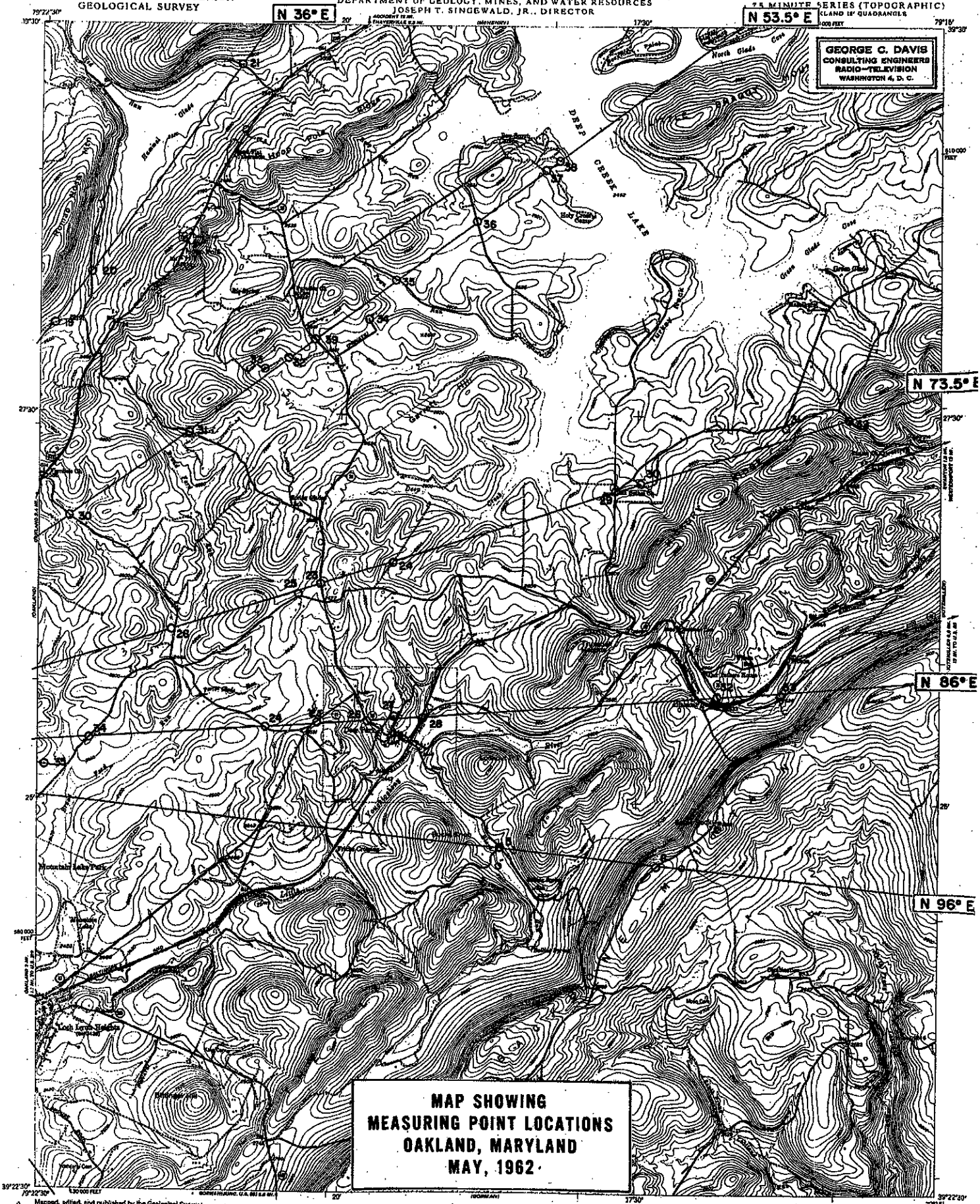
U. S. Route State Route


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY
CUMBERLAND QUADRANGLE
MARYLAND-PENNSYLVANIA-WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
N 53.5° E
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
MAP SHOWING
MEASURING POINT LOCATIONS
OAKLAND, MARYLAND
MAY, 1962
Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography from aerial photographs by multiplex methods
Aerial photographs taken 1947 Field check 1949
Polyconic projection 1927 North American datum
10,000-foot grids based on Maryland coordinate system,
Pennsylvania coordinate system, south zone, and
West Virginia coordinate system, north zone
CONTOUR INTERVAL 20 FEET
ROAD CLASSIFICATION
Heavy-duty
Medium-duty
Light duty
Unimproved dirt
U. S. Route
State Route

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

DEER PARK QUADRANGLE
MARYLAND-GARRETT CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)
CLAND 15' QUADRANGLE



MAP SHOWING
MEASURING POINT LOCATIONS
OAKLAND, MARYLAND
MAY, 1962

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS
Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1948
Polyconic projection. 1927 North American datum
10,000-foot grid based on Maryland coordinate system
Extent of state forest areas uncertain

1/2 0 MILE
1 0 1 KILOMETER
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION
HARD-SURFACE ALL WEATHER ROADS — DRY WEATHER ROADS
Heavy-duty ——— Improved dirt ———
Medium-duty ——— Unimproved dirt - - - -
Loose-surface, graded, or narrow hard-surface
U. S. Route — State Route

6/

JC

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

CRESAPTOWN QUADRANGLE
WEST VIRGINIA-MARYLAND
7.5 MINUTE SERIES (TOPOGRAPHIC)
SE/4 FROSTBURG 15' QUADRANGLE

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

N 73.5° E

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1947. Field check 1949

Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system
and West Virginia coordinate system, north zone

Red tint indicates area in which only
landmark buildings are shown

1/2 0 1 MILE

1 0 1 KILOMETER

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS	DRY WEATHER ROADS
Heavy-duty	Improved dirt
Medium-duty	Unimproved dirt
Loose-surface, graded, or narrow hard-surface	

U. S. Route State Route

CRESAPTOWN, W. VA.-MD.
SE/4 FROSTBURG 15' QUADRANGLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PATTERSONS CREEK QUADRANGLE
MARYLAND-WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
SW/4 FLINTSTONE 15' QUADRANGLE

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

N 73.5° E

51
50
49
48
47
46

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

FRANKFORT

SPRINGFIELD

North Branch

Patterson Creek

Green Spring

MARYLAND

ALLEGANY CO.

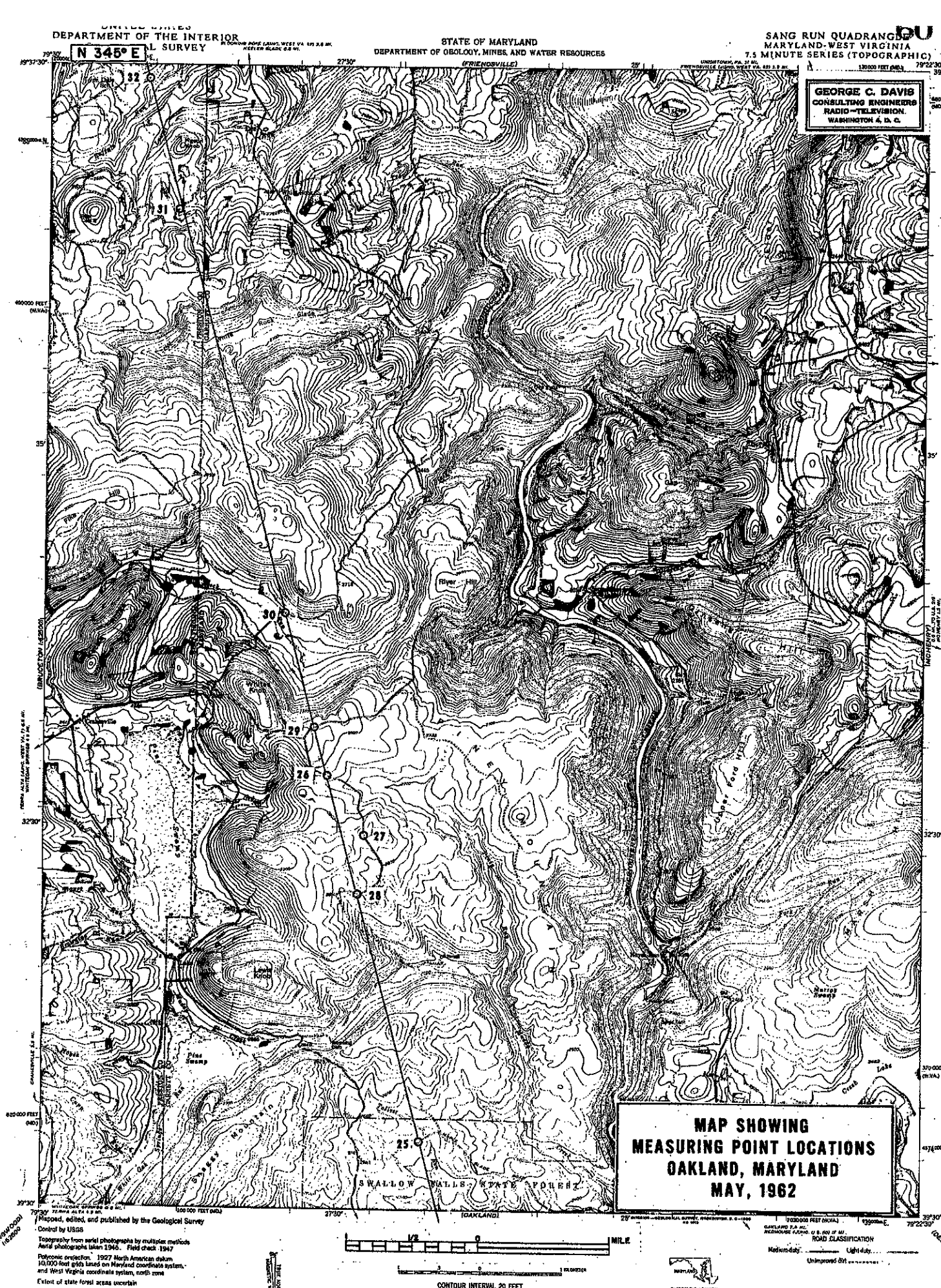
1/2 0 1 MILE

CONTOUR INTERVAL 20 FEET

ROAD CLASSIFICATION

Heavy duty ——— Light duty ———
Medium duty ——— Unimproved dirt ———
U. S. Route ○ State Route

PATTERSONS CREEK, MD.-W. VA.
SW/4 FLINTSTONE 15' QUADRANGLE


DEPARTMENT OF THE INTERIOR
N 345° E
STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
SANG RUN QUADRANGLE
MARYLAND-WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.
MAP SHOWING
MEASURING POINT LOCATIONS
OAKLAND, MARYLAND
MAY, 1962
Mapped, edited, and published by the Geological Survey
Control by USGS
Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1947
Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system,
and West Virginia coordinate system, north zone
Extent of state forest areas uncertain
CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL
ROAD CLASSIFICATION
Medium duty
Light duty
Unimproved dirt
SANG RUN, MD.-W. VA.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

GORMAN QUADRANGLE
MARYLAND-WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
SEE OAKLAND 15' QUADRANGLE

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

N 144°E

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1948 and 1949

Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system
and West Virginia coordinate system, earth zone

1/2 0 MILE

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS — DRY WEATHER ROADS
Heavy-duty ——— Improved dirt - - - -
Medium-duty —— —— Unimproved dirt - - - -
Loose-surface, graded, or narrow hard-surface — - —
U. S. Route ◯ State Route

GORMAN, MD.-W. VA.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

REPRESENTED BY THE
STATE OF WEST VIRGINIA GEOLOGICAL SURVEY
AND OTHER STATE AGENCIES

BRANDONVILLE QUADRANGLE
WEST VIRGINIA—PENNSYLVANIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

N 345° E

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by photogrammetric methods
Aerial photographs taken 1957. Field check 1959

Polyconic projection. 1927 North American datum
10,000-foot grids based on West Virginia coordinate system, north zone, and Pennsylvania coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

Fine red dashed lines indicate selected fence and field lines visible on aerial photographs. This information is unchecked

1/2 0 MILE

DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION
Medium duty ——— Light duty - - - -
Unimproved dirt .....
State Route

BRANDONVILLE, W. VA.—PA.
N3937.5—W7930/7.5

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

KITZMILLER QUADRANGLE
MARYLAND-WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)
NW/4 ELK GARDEN 15' QUADRANGLE

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

N 73.5°

N 86° E

N 96° E

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1948

Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system, and
West Virginia coordinate system, north zone

Extent of state forest areas uncertain

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

ROAD CLASSIFICATION

HARD-SURFACE ALL WEATHER ROADS	DRY WEATHER ROADS
Heavy-duty	Improved dirt
Medium-duty	Unimproved dirt
Loose-surface, graded, or narrow hard-surface	

U. S. Route State Route

KITZMILLER, MD.-W.VA.
NW/4 ELK GARDEN 15' QUADRANGLE

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

DEPARTMENT OF INTERNAL AFFAIRS
WILLIAM S. LIVENGOOD, JR., SECRETARY
TOPOGRAPHIC AND GEOLOGIC SURVEY
STANLEY HOLMAN CATHCART, STATE GEOLOGIST

FRIENDSVILLE QUADRANGLE
MARYLAND-PENNSYLVANIA-
WEST VIRGINIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

GEORGE C. DAVIS
CONSULTING ENGINEERS
RADIO—TELEVISION
WASHINGTON 4, D. C.

MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

N 345° E

Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and USES

Topography from aerial photographs by stereoplanigraph methods
Aerial photographs taken 1948. Field check 1947

Polyconic projection. 1927 North American datum
10,000-foot grids based on Maryland coordinate system,
Pennsylvania coordinate system, south zone and
West Virginia coordinate system, north zone

Blue tinting indicates areas subject to controlled inundation
Normal pool elevation 1439 feet. Spillway elevation 1468 feet

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

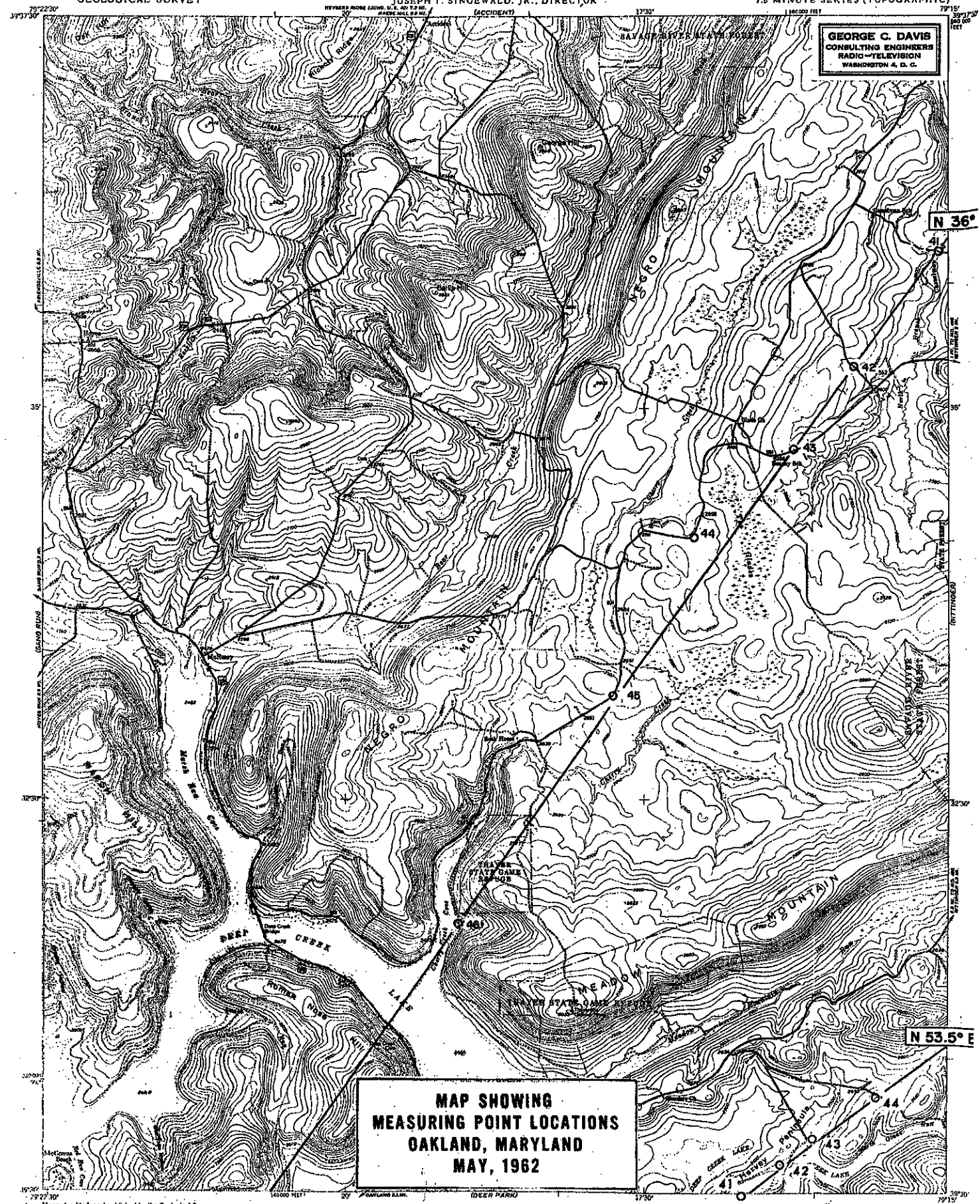
ROAD CLASSIFICATION
HARD-SURFACE ALL WEATHER ROADS — DRY WEATHER ROADS
Heavy-duty ——— Improved dirt ———
Medium-duty ——— Unimproved dirt ———
Loose-surface, graded, or narrow hard-surface — — —
U. S. Route ○ State Route

FRIENDSVILLE, MD.-PA.-W. VA.
N3937.5-W07952.5—15

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES, AND WATER RESOURCES
JOSEPH T. SINGEWALD, JR., DIRECTOR

MC HENRY QUADRANGLE
MARYLAND-GARRETT CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



MAP SHOWING MEASURING POINT LOCATIONS OAKLAND, MARYLAND MAY, 1962

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS

Topography by aerial photographs by multiplex methods
Aerial photographs taken 1946. Field check 1947

Polyconic projection. 1927 North American datum
10,000-foot grid based on Maryland coordinate system

1/2 0 1 MILE

CONTOUR INTERVAL 20 FEET

ROAD CLASSIFICATION

	HARD-SURFACE ALL WEATHER ROADS	DRY WEATHER ROADS
Heavy duty		Improved dirt
Medium-duty		Unimproved dirt
Loose surface, graded, or narrow hard-surface		

U. S. Route ○ State Route

MC HENRY, MD.

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF PENNSYLVANIA
REPRESENTED BY THE
DEPARTMENT OF INTERNAL AFFAIRS
TOPOGRAPHIC AND GEOLOGIC SURVEY

PENNSYLVANIA
(FAYETTE COUNTY)
UNIONTOWN QUADRANGLE

N 345° E

MAP SHOWING
MEASURING POINT LOCATIONS
OAKLAND, MARYLAND
MAY, 1962

Topography by Frank Sutton, R.D. Cummin, and H.C. Frick Coke Company
Surveyed in 1919 in cooperation with the State of Pennsylvania
Culture revised 1931 by J.H. Wilke and C.S. Wells

ROAD CLASSIFICATION

Heavy-duty — Light-duty - - -
Medium-duty — Unimproved dirt .....

SCALE 1:62500

CONTOUR INTERVAL 20 FEET
DATUM IS MEAN SEA LEVEL

Polyconic projection. 1927 North American datum
10,000-foot grid based on Pennsylvania (South)
rectangular coordinate system
1000-meter Universal Transverse Mercator grid ticks,
zone 17, shown in blue

UNIONTOWN, PA.