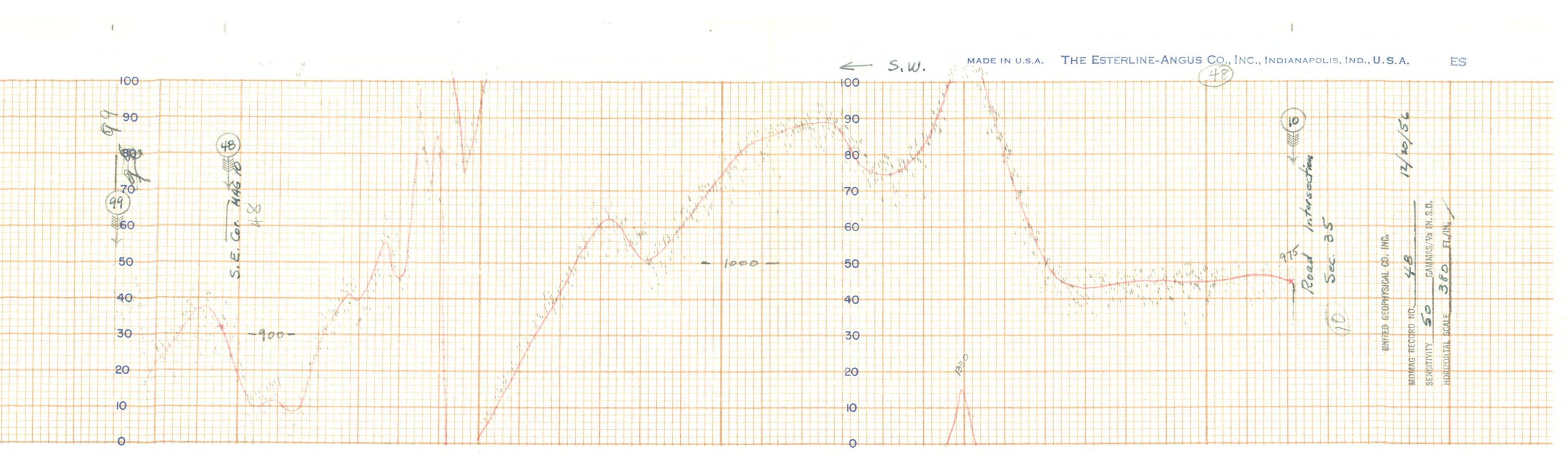
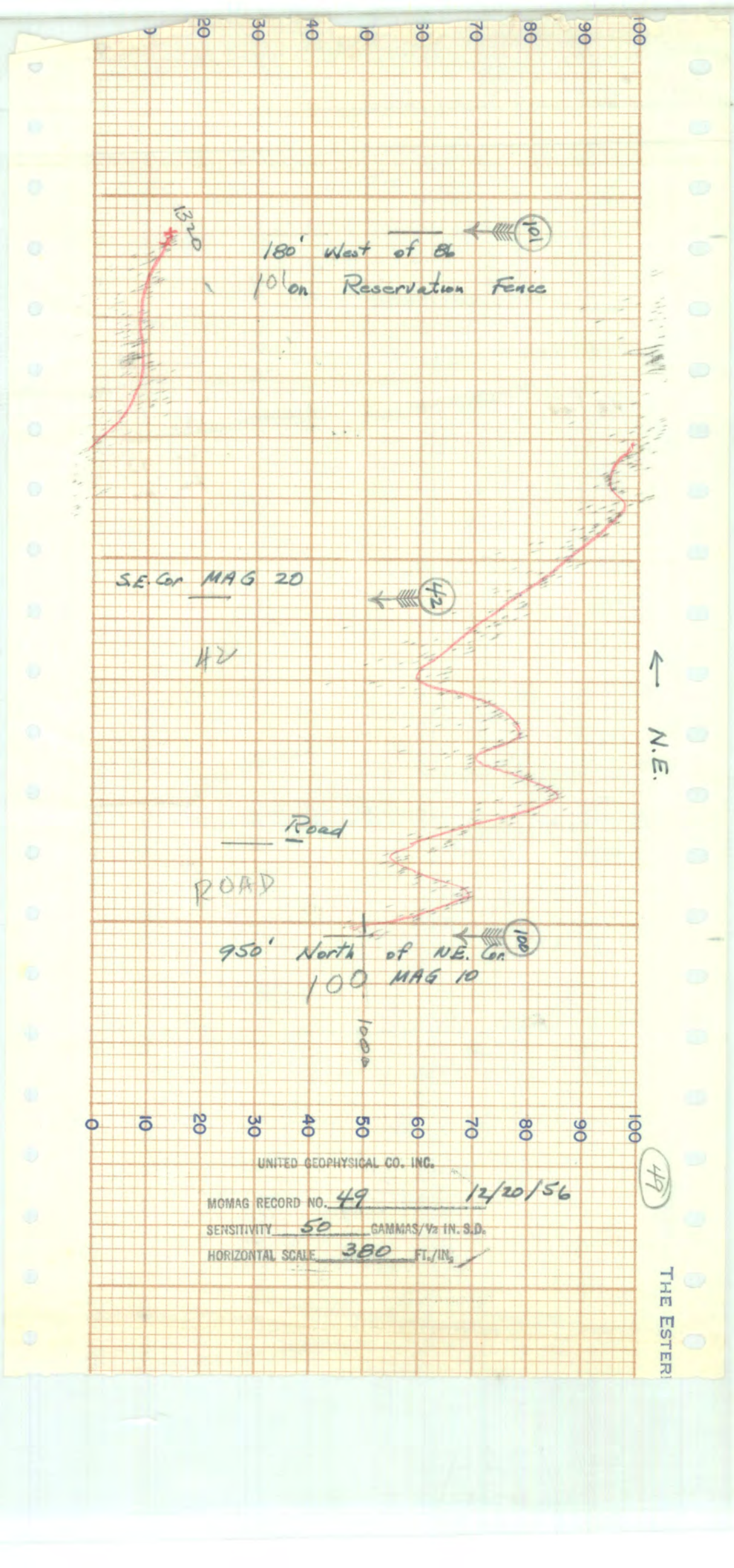
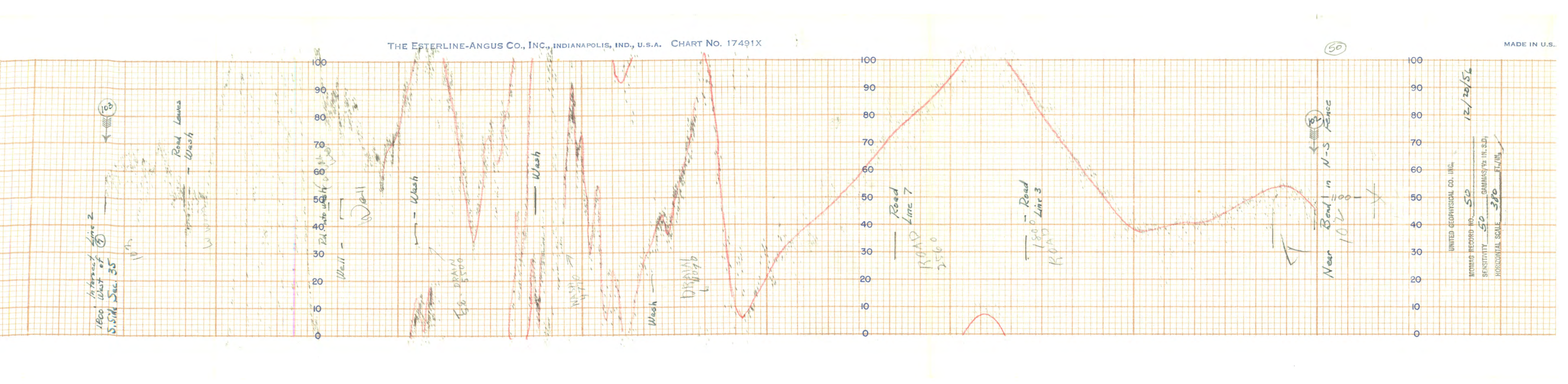
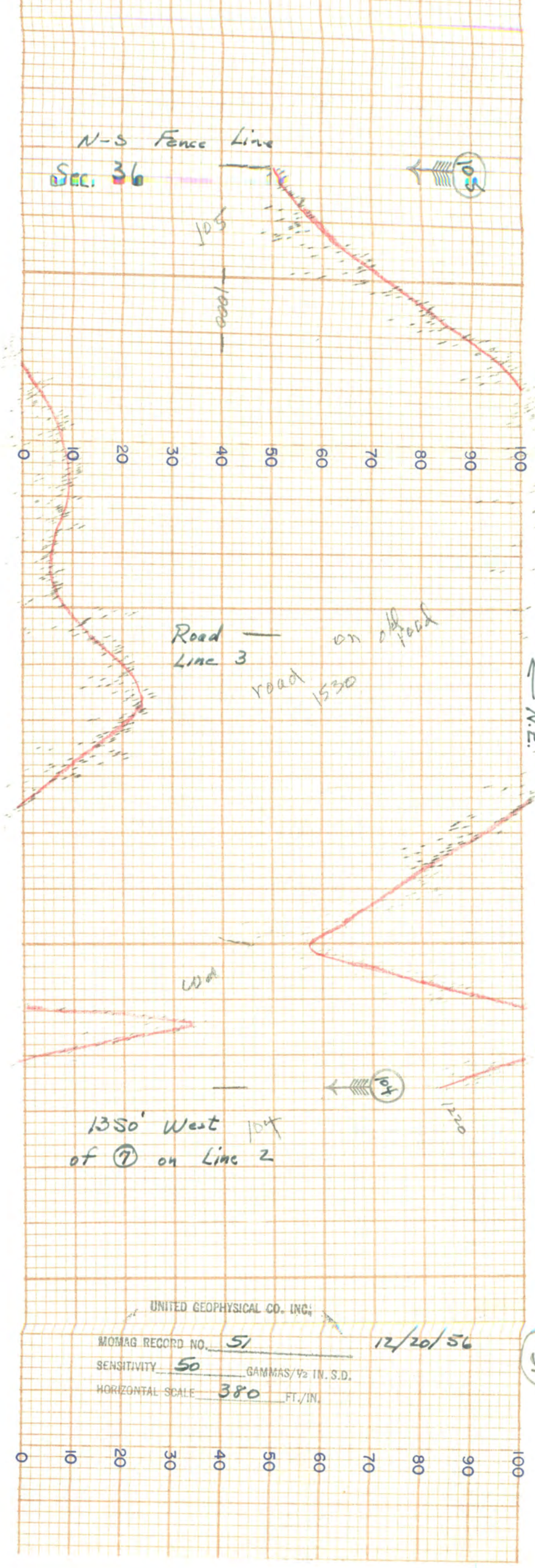

MADE IN U.S.A.
THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A.
ES
S.W.
100
90
80
70
60
50
40
30
20
10
0
99
48
S.E. Cor. MAG 10
48
-900-
-1000-
1330
975
Road Intersection
Sec. 35
10
48
10
UNITED GEOPHYSICAL CO. INC.
MOMAG RECORD NO. 48
SENSITIVITY 50 GAMMAS/½ IN. S.D.
HORIZONTAL SCALE 380 FT./IN.
12/20/56


0 10 20 30 40 50 60 70 80 90 100
1320
180' West of BL
101 on Reservation Fence
101
S.E. Cor MAG 20
42
N.E.
Road
ROAD
950' North of N.E. Cor.
100 MAG 10
100
0 10 20 30 40 50 60 70 80 90 100
UNITED GEOPHYSICAL CO. INC.
MOMAG RECORD NO. 49 12/20/56
SENSITIVITY 50 GAMMAS/½ IN. S.D.
HORIZONTAL SCALE 380 FT./IN.
49
THE ESTER

THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X

MADE IN U.S.A.

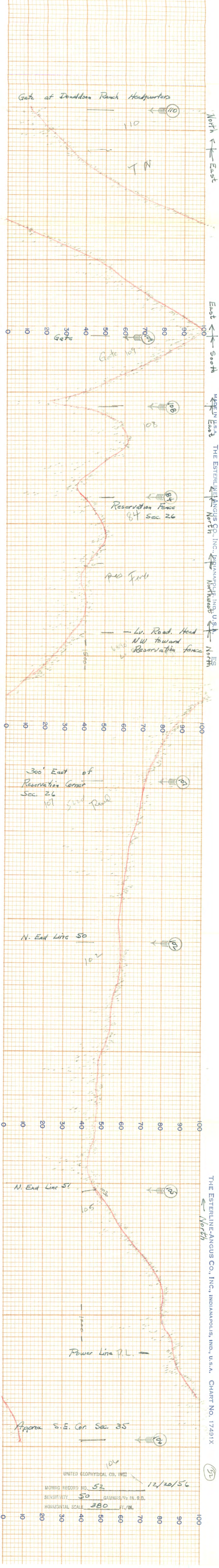





MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A.

ES

51




MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. ES
THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X

UNITED GEOPHYSICAL CO. INC.

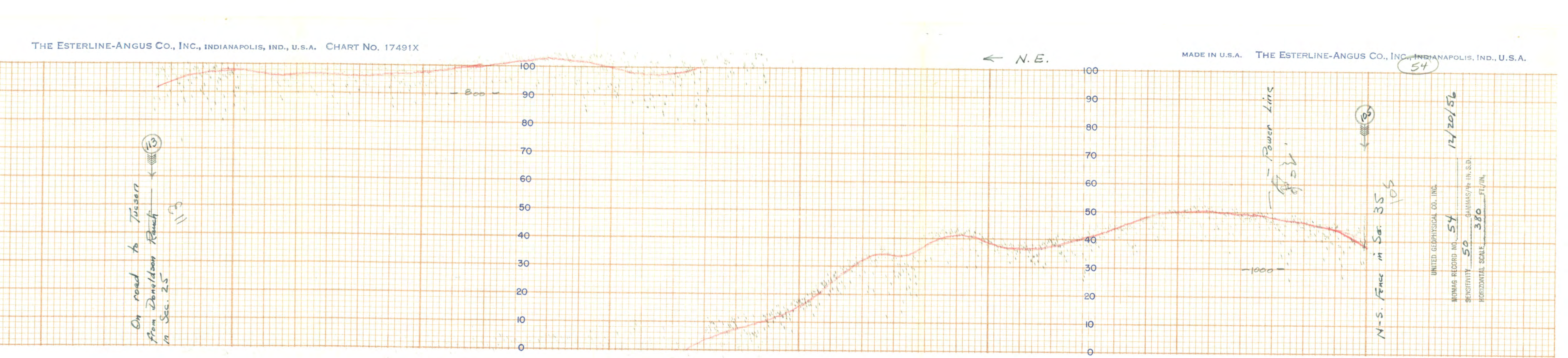
MOMAG RECORD NO. 53

SENSITIVITY 50 GAMMAS/½ IN. S.D.

HORIZONTAL SCALE 380 FT./IN.

THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 1

53


THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X
← N.E.
MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A.
54
100
90
80
70
60
50
40
30
20
10
0
800
1000
On road to Tucson from Davidson Ranch in Sec. 25
N-S. Fence in Sec. 35
Power Line
UNITED GEOPHYSICAL CO. INC.
MONAG RECORD NO. 54
SENSITIVITY 50 GAMMAS/½" IN. S.D.
HORIZONTAL SCALE 380 FT./IN.
14/20/56

MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A.

UNITED GEOPHYSICAL CO. INC.

MOMAG RECORD NO. 55 12/20/56

SENSITIVITY 50 GAMMAS/½ IN. S.D.

HORIZONTAL SCALE 380 FT./IN.

55

UNITED GEOPHYSICAL CO. INC.

MOMAG RECORD NO. 56 12/20/56

SENSITIVITY 50 GAMMAS/½ IN. S.D.

HORIZONTAL SCALE 380 FT./IN.

56

INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X

DEC 20TH 1956
1:00 P.M.
County Road
115
115 County Road
THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A. CHART NO. 17491X
Power — Line
House
Gate
Gate
MADE IN U.S.A. THE ESTERLINE-ANGUS CO., INC., INDIANAPOLIS, IND., U.S.A.
ES
Gate
Gate
End Line 54
113
800
110
Gate Donaldson Ranch Hdqrs.
Line follows road to Tucson
Ends at main county road.
UNITED GEOPHYSICAL CO. INC.
MOMAG RECORD NO. 57 12/20/56
SENSITIVITY 50 GAMMAS/½ IN. S.D.
HORIZONTAL SCALE 380 FT./IN.
57

Electormagnetic Notes
Roskruge

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1SW | 0 | G 400 | V 850 | ~~+2.1~~ +1.5 | +1.9 | 1.198 | | 1.208 | Roskruge Area |
| | REVERSE | | E 750 | T 460 | -1.7 | | 0.822 | 1.217 | | Setup #1 |
| | 1SW | 0 | G 390 | V 860 | +2.2 | +2.0 | 1.196 | | 1.207 | |
| | REVERSE | | E 750 | T 450 | ~~-1.7~~ -1.8 | | 0.821 | 1.218 | | |
| | 2SW | 1SW | G 300 | V 560 | +1.3 | +1.0 | 1.160 | | 1.171 | 2 not in-paced |
| | REVERSE | | E 830 | T 640 | -0.9 | | 0.846 | 1.182 | | |
| | ~~3W~~ | ~~2W~~ | G 240 | V 550 | +1.6 | Do | Not | | | |
| | REVERSE | | E 850 | T 640 | 1.0 | | Use | | | |
| ? | 3W | 2W | G 250 | V 550 | +1.5 | +1.2 | 1.154 | ~~1.185~~ | 1.165 | |
| | REVERSE | | E 860 | T 660 | ~~-0.9~~ -1.0 | | 0.850 | 1.176 | | |
| | 4W | 3W | G 130 | W 0 | ~~+4.1~~ +4.0 | +3.9 | 1.188 | | 1.198 | Comp ~~Eff~~ |
| | REVERSE | | E 920 | T 330 | -3.6 | | 0.828 | 1.208 | | |
| | 5W | 4W | F 960 | V 640 | +3.3 | +3.1 | 1.136 | | 1.149 | |
| | REVERSE | | F 060 | T 560 | -2.9 | | 0.861 | 1.161 | | |

LINE VOLTAGE 460 CURRENT 2.8 RESISTANCE 155 Ω / 288

OBSERVER Clark

JOB Roskruge

FREQUENCY 395 GEN. VOLTAGE 115 POWER

DATE 2/20/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | ~~6W~~ | ~~5W~~ | ~~F1000~~ | ~~V640~~ | ~~+3.2~~ | | | | | 5W Paced |
| | REVERSE | | | | | | | | | |
| | ~~6W~~ | ~~5W~~ | ~~G070~~ | ~~T450~~ | ~~-8.9~~ | | | | | |
| | ~~REVERSE~~ | | ~~F400~~ | ~~V160~~ | ~~-1.2~~ | | | | | |
| | 6W | 5W | G100 | T450 | -9.0 | -9.1 | .957 | | .952 | |
| | REVERSE | | E950 | V680 | +9.1 | | 1.057 | .946 | | |
| | ~~7W~~ | ~~6W~~ | ~~G0~~ | ~~V230~~ | ~~+1.2~~ | | | | | Fence 695' |
| | ~~REVERSE~~ | | ~~F050~~ | ~~T930~~ | ~~-0.5~~ | | | | | |
| | ~~7W~~ | ~~6W~~ | ~~G0~~ | ~~T070~~ | ~~-11.0~~ | | | | | |
| | REVERSE | | ~~F070~~ | ~~W070~~ | ~~+9.9~~ | | | | | amR |
| | 7W | 6W | G0 | T090 | -10.8 | -10.4 | .918 | | .912 | |
| | REVERSE | | F050 | W050 | +9.9 | | 1.103 | .907 | | |
| | 8W | 7W | G110 | T490 | -8.8 | -9.0 | .961 | | .961 | 8W Paced |
| | REVERSE | | E850 | V600 | +9.2 | | 1.041 | .961 | | |

Comp. ~~[illegible]~~

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 9W | 8W | G 0 | V 560 | +2.8 | | | | | |
| | REVERSE | | | | | | | | | Comp. Rugg |
| | 9W | 8W | G140 | T 450 | -9.2 | -9.4 | 0.960 | | 0.958 | |
| | REVERSE | | E830 | V 680 | +9.7 | | 1.047 | .955 | | |
| | 10W | 9W | G+4/50 | V 450 | +1.6 | +1.7 | 1.135 | | 1.146 | |
| | REVERSE | | F 0 | T 680 | -1.8 | | .864 | 1.157 | | |
| | 11W | 10W | G 0 | X 080 | +8.8 | +8.4 | 1.288 | | 1.309 | |
| | REVERSE | | E770 | S 600 | -8.0 | | .752 | 1.330 | | |
| | 12W | 11W | F800 | W 810 | ~~+7.4~~ 8.2 | +8.5 | 1.243 | | 1.261 | |
| | REVERSE | | E 950 | S 750 | -8.8 | | .782 | 1.279 | | |
| | 13W | 12W | F800 | V800 | +4.8 | +4.6 | 1.138 | | 1.148 | |
| | REVERSE | | F 200 | T440 | -4.5 | | .864 | 1.157 | | |
| | 14W | 13W | G 50 | V 100 | +.3 | +0.3 | 1.091 | | 1.099 | |
| | REVERSE | | F 100 | U 0 | -0.3 | | .903 | 1.107 | | |

LINE VOLTAGE _____ CURRENT _____ RESISTANCE _____

FREQUENCY _____ GEN. VOLTAGE _____ POWER _____

OBSERVER Clark & Rugg

JOB Ros Krupp

DATE 2/20/57

| LINE | Red COIL | Black COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 15W | 14W | ~~F 900~~ | ~~V 270~~ | ~~+1.7~~ | | ~~1.07~~ | | | Comp Rugg |
| | REVERSE | | ~~E 50~~ | ~~T 900~~ | ~~-.07~~ | | | | | |
| | RR | above | F 900 | V 100 | +1.2 | +1.2 | 1.078 | | 1.090 | |
| | REVERSE | | E 200 | T 940 | -1.2 | | .908 | 1.101 | | |
| | 16W | 15W | F 910 | V 300 | +2.0 +1.5 | +1.8 +2.2 | 1.098 | | 1.102 | ON Tr. Rd. |
| | REVERSE | | E 200 | T 900 | -2.5 | | .903 | 1.107 | | |
| | 17W | 16W | ~~F 650~~ | ~~V 800~~ | ~~+5.5~~ | | | | | |
| | REVERSE | | ~~E 210~~ | ~~T 950~~ | ~~-4.6~~ | | | | | |
| | RR | | F 600 | V 800 | +5.8 | +5.3 | 1.120 | | 1.130 | Check |
| | REVERSE | | E 300 | T 500 | -4.8 | | .878 | 1.139 | | " |
| | 18W | 17W | ~~E 600~~ | ~~V 500~~ | ~~+4.5~~ | | | | | cut Near Mag & dozer |
| | REVERSE | | ~~F 400~~ | ~~T 630~~ | ~~-6.2~~ | | | | 1.102 | |
| ? | RR | | F 400 | J 700 | -3.9 | | .905 | 1.105 | 1.102 | |
| ? | REVERSE | | F 700 | V 500 | +4.0 | +4.0 | 1.099 | | | |

Comp. Rugg

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 19 18W | 18 19W | F800 | Y100 | +1.7 | +1.8 | 1.070 | | 1.074 | |
| | REVERSE | | F350 | U 0. | +1.8 | | .927 | 1.079 | | Comp. Rugg |
| | 20 19W | 19 20W | F0 | U500 | +3.0 | | | | | |
| | REVERSE | | G0 | U500 | 2.4 | | | | | |
| | REVERSE | | | | | | | | | |
| | 20 19W | 19 20W | G.0 | U500 | -2.4 | -2.7? | 1.032 | | 1.047? | |
| | REVERSE | | F0 | U500 | +3.0 | | .942 | 1.062 | | End Line 0 |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |

Do not

LINE VOLTAGE _____ CURRENT _____ RESISTANCE _____ OBSERVER _____ JOB _____

FREQUENCY _____ GEN. VOLTAGE _____ POWER _____ DATE _____

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 | 1W | 0 | ~~G 625~~ | ~~V 925~~ | ~~+1.3~~ | | | | | |
| | REVERSE | | ~~F 020~~ | ~~T 560~~ | ~~-2.6~~ | | | | | |
| | 1W | 0 | | | | | | | | |
| | REVERSE | | ~~E 660~~ | ~~T 500~~ | | | | | | Broken Coil lead |
| | ~~1W~~ | 0 | ~~G 285~~ | ~~V 860~~ | ~~+5.1°~~ | | | | | |
| | REVERSE | | ~~F 020~~ | ~~T 650~~ | ~~-2.0°~~ | | | | | |
| | ~~1W~~ | ~~0~~ | ~~G 660~~ | ~~V 860~~ | ~~+1.0°~~ | | | | | Comp. A. Rugg |
| | ~~REVERSE~~ | | ~~E 775~~ | ~~T 360~~ | ~~-2.4°~~ | | | | | |
| | 1W | 0 | G 530 | V 850 | +1.5° | 1.2 | 1.208 | | 1.220 | |
| | REVERSE | | E 650 | T 460 | -0.9° | | .811 | 1.233 | | |
| | ~~2W~~ | ~~1W~~ | ~~G 340~~ | ~~V 940~~ | ~~+2.8°~~ | | | | | |
| | ~~REVERSE~~ | | ~~E 840~~ | ~~T 440~~ | ~~-2.5°~~ | | | | | |
| | Repeat 2W | 1W | G 315 | V 915 | +2.8° | 2.6 | 1.196 | | 1.206 | |
| | REVERSE | | E 825 | T 400 | -2.4° | | .823 | 1.215 | | |

Not Use

LINE VOLTAGE 424 CURRENT 3.0 A RESISTANCE 175 Ω OBSERVER Heinrichs JOB R-D

FREQUENCY 395 GEN. VOLTAGE 106 POWER 1272 DATE 2/21/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3S | ~~3W~~ | ~~2W~~ | ~~G 200~~ | ~~V 650~~ | ~~+2.2°~~ | | | | | Comp. Rugg |
| | REVERSE | | ~~F 0~~ | ~~T 560~~ | ~~-2.4°~~ | | | | | |
| | 3W | 2W | G 260 | V 660 | +1.9° | +1.7 | 1.165 | | 1.173 | |
| | REVERSE | | E 880 | T 600 | -1.5° | | .847 | 1.181 | | |
| | 4W | 3W | ~~G 355~~ | ~~U 420~~ | ~~-4.7°~~ | | | | | Fence 420' |
| | REVERSE | | ~~E 640~~ | ~~U 550~~ | ~~+5.4°~~ | | | | | |
| | 4W | 3W | G 330 | U 410 | -4.4 | -4.6 | 1.057 | 1.0 | 1.071 | Before fence cut |
| | REVERSE | | E 750 | U 520 | +4.8 | | .922 | 1.085 | | " " |
| | 4W | 3W | G 100 | V 580 | +2.3 | +2.2 | 1.142 | | 1.154 | Fence cut & dropped |
| | REVERSE | | E 980 | T 620 | -2.0 | | .858 | 1.166 | | " " |
| | 4W | 3W | G 80 | V 600 | +2.5 | +2.3 | 1.142 | | 1.154 | Fence thrown |
| | REVERSE | | E 990 | T 610 | -2.1 | | .858 | 1.166 | | back 50' |
| | 4W | 3W | G 040 | V 550 | +2.5 | +2.4 | 1.132 | | 1.146 | with insulators |
| | REVERSE | | F 040 | T 620 | -2.3 | | .863 | 1.159 | | |

# E. M. FIELD NOTES

5

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 33 | 5W | 4W | ~~F 000~~ | ~~V 000~~ | ~~+5.5~~ | | | | | Rain |
| | REVERSE | | ~~E 000~~ | ~~T 850~~ | ~~-3.5~~ | | | | | |
| | 5W | 4W | ~~F 020~~ G 160 | ~~V 950~~ | ~~+3.5~~ | | | | | |
| | REVERSE | | ~~F 020~~ | ~~T 850~~ | ~~-4.9~~ | | | | | Comp Rugg |
| | 5W | 4W | G 160 | W-0 | +3.8 | +3.8 | 1.190 | | 1.199 | ~~Comp Rugg~~ |
| | REVERSE | | E 970 | T-330 | -3.7 | | .828 | 1.208 | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |

Not

LINE VOLTAGE _____ CURRENT _____ RESISTANCE _____ OBSERVER _____ JOB R-D

FREQUENCY _____ GEN. VOLTAGE _____ POWER _____ DATE 2/21/57

# E. M. FIELD NOTES

6

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1W | 0W | G 420 | V980 | +2.5 | | | | | yellow set #4 |
| | REVERSE | | E 710 | T 360 | -2.3 | | | | | A/C. |
| " | " | " | G-360 | V-860 | +2.4 | | | | | Green " #5 |
| | REVERSE | | E-760 | T-440 | -1.8 | | | | | EGH " |
| " | " | " | G-380 | V-850 | +2.2 | | | | | A/C. Green " |
| " | ~~REVERSE~~ Foreward | | ~~G-390~~ | ~~V-865~~ | | | | | | " |
| " | " | " | G-390 | V-865 | +2.2 | | | | | WEH Green " |
| | REVERSE | | E-745 | T-450 | -1.6 | | | | | " " " |
| " | " | " | G-470 | T-600 | -9.1 | | | | | " " " |
| | REVERSE | | E 620 | V 510 | +10.1 | | | | | " " " |
| " | " | " | G 350 | V 850 | +2.4 | | | | | Set #4 yellow - black " |
| | REVERSE | | E 770 | T 450 | -1.7 | | | | | cable to [illegible] used |
| " | " | " | G 360 | V 900 | +2.5 | | | | | Set #4 yellow both " |
| | REVERSE | | E 750 | T 410 | -2.0 | | | | | cables used #5 bridge dg |

Experimental Do not use

LINE VOLTAGE 424 CURRENT 3.4 RESISTANCE 180 Ω OBSERVER WEH A.O.C. EG.H JOB R-D

FREQUENCY 395 GEN. VOLTAGE 106 POWER DATE 2/27/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| O | IW | OW | G 370 | V 980 | 2.8 | Confusion: #5 | | | | #5 bridge off #4 coils & cables |
| | REVERSE | | E 750 | T 380 | -2.3 | | | | | E.G.H." |
| | IW | OW | G-400 | V 980 | 2.7 | set not balanced for better | | | | W.E.H. above checker |
| | REVERSE | | E-735 | T-360 | -2.1 | reciprocal than 0.C + | | | | |
| O | " | " | G-420 | V-980 | +2.5 | eventually should turn | | | | #4 Set complete |
| | REVERSE | | E-730 | T-360 | -2.2 | out with coppers? | | | | time check |
| O | " | " | G-360 | V-930 | +2.7 | #5 black cable broken? at | | | | #4 set & cables |
| | REVERSE | | E-750 | T-390 | -2.3 | " bridge intermittent? | | | | #5 coils |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | 4+ 0° | 0° + 45° | | | | | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 1-W | 0-W | G 380 | V-850 | +2.1 | | | | | |
| | REVERSE | | E 760 | T-470 | -1.7 | | | | | |
| | 2-W | 1-W | G-300 | V-600 | | | | | | Repeaton Line 0 |
| | REVERSE | | E 850 | T-650 | | | | | | |
| ? | 3-W | 2-W | G-250 | T-320 | -10.5 | | | | | This set of readings with bridge set # 5 |
| | REVERSE | | E-790 | V-760 | +10.3 | | | | | |
| | R.R. | | E-790 | V-760 | | | | | | |
| | REVERSE | | G-260 | T-350 | | | | | | |
| | 4-W | 3-W | G-270 | T-690 | -8.3 | | | | | |
| | REVERSE | | E-850 | V-460 | +8.8 | | | | | |
| | 5-W | 4-W | G-90 | T-480 | -8.7 | | | | | |
| | REVERSE | | F-0 | V-660 | +7.9 | | | | | |
| | R | R | G-0 | V-760 | +8.4 | +8.3 | | | | |
| | REVERSE | | F-70 | T-510 | -8.1 | | | | | |

Experimental
Do not use

LINE VOLTAGE 424 CURRENT 3.9 RESISTANCE 180 Ω OBSERVER J-W. JOB R-D

FREQUENCY 395 GEN. VOLTAGE 106 POWER 1674 DATE 2/27/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 5W | 4W | G10 | V840 | +3.9 | | | | | Changed bridge set |
| | REVERSE | | F0 | T420 | -3.2 | | | | | to #4 |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | E1 Do not use | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| OW | 1W | O | G430 | WO | +2.6 | +2.4 | 1.216 | | 1.225 | Set # 4 |
| | REVERSE | | E710 | T360 | -2.0 | | 0.811 | 1.233 | | |
| | 2W | 1W | G320 | V730 | +1.7 | +1.7 | 1.178 | | 1.190 | |
| | REVERSE | | E780 | T530 | -1.3 | | 0832 | 1.202 | 1.192 | Computed by [illegible] |
| | 3W | 2W | G260 | V700 | +2.1 | +1.9 | 1.170 | | 1.187 | Checked by Rok |
| | REVERSE | | E830 | T540 | -1.7 | | 0.838 | 1.193 | | |
| | R | R | ~~G250~~ | ~~V700~~ | +2.1 | | ~~1.168~~ | | | |
| | REVERSE | | ~~E830~~ | ~~T530~~ | -1.7 | | ~~0.837~~ | | | |
| | 4W | 3W | G140 | W110 | +4.4 | +4.2 | 1.200 | | 1.212 | |
| | REVERSE | | E890 | T240 | -3.9 | | 0.817 | 1.224 | 1.193 | |
| | 5W | 4W | GO | V830 | ~~+4.0~~ +3.7 | ~~+3.5~~ | ~~1.148~~ | | ~~1.167~~ | Rok |
| | REVERSE | | FO | T430 | -3.4 | | 0.843 | 1.186 | | |
| | 6W | 3W | G20 | V760 | ~~+3.5~~ +3.3 | +3.4 | 1.152 | | 1.167 | |
| | REVERSE | | FO | T460 | -3.2 | | 0.846 | 1.182 | | |

LINE VOLTAGE 424 CURRENT ~~3.4~~ 3.4 RESISTANCE 180Ω OBSERVER A.O.C JOB R-D

FREQUENCY 396 GEN. VOLTAGE 106 POWER ~~1674~~ DATE 2/27/57

| LINE | Rcd COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | 1.129 | | 1141 | Set # 4 |
| 0 | 7W | 6W | G190 | V370 | +1.0' | +0.7 | ~~1.137~~ | | ~~1143~~ | fence insulated P |
| | REVERSE | | E900 | T780 | -0.4' | | 0.867 | 1.153 | | |
| | R | R | F740 | X150 | +10.2 | +9.9 | | | | fence connected |
| | REVERSE | | E930 | S520 | -9.6 | | | | | |
| | R | R | G110 | V280 | +0.9 | +0.6 | | | | wire laid back + off fence post |
| | REVERSE | | E950 | T850 | -0.3 | | | | | |
| | | | | | | | | | 1179 | |
| | 8W | 7W | G80 | V850 | +3.7' | +3.6 | 1.168 | 1190 | ~~1183~~ | |
| | REVERSE | | E950 | T370 | -3.4' | | ~~0.855~~ 0.840 | ~~1198~~ | | |
| | 9W | 8W | ~~F950~~ | ~~V660~~ | ~~+3.3~~ | | | | | |
| | REVERSE | | ~~F0~~ | ~~T650~~ | ~~-2.5~~ | | | | | E.G.H. obs. |
| | R | R | G50 | V660 | +3.0' | +2.8 | 1.146 | | 1.156 | |
| | REVERSE | | F10 | T570 | -2.6 | | 0.858 | 1.166 | | |
| | 10W | 9W | G150 | V620 | ~~+2.4~~ +2.3 | +2.2 | 1.150 | | 1156 ~~1155~~ | |
| | REVERSE | | F0 | T620 | ~~-2.0~~ -2.0 | | 0.861 | 1.161 | | P |

20

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 11W | 10W | G0 | X150 | 9.1 | +8.8 | 1.296 | | 1.315 | Hendricks |
| | REVERSE | | E780 | S550 | -8.4 | | 0.749 | 1.334 | | |
| | R | R | G50 | X180 | +8.9 | | | | | |
| | REVERSE | | E730 | S570 | -7.9 | | | | | |
| | R | R | G0 | X250 | 9.4 | | | | | Comp. by [illegible] |
| | REVERSE | | E750 | S540 | -8.3 | | | | | Checked by Pat |
| | R | R | G20 | X250 | +9.3 | | | | | |
| | REVERSE | | E780 | S540 | -8.6 | | | | | |
| | 12W | 11W | F750 | W950 | 9.5 | +9.3 | 1.255 | | 1.269 | |
| | REVERSE | | F0 | S640 | -9.0 | | 0.780 | 1.282 | | |
| | 13W | 12W | F-900 | V-970 | +5.5 +5.4 | +5.3 | 1.154 | | 1.169 1.169 | Clark |
| 2/28/57 | REVERSE | | F-150 | T-290 | -5.2 | | 0.847 | 1.181 | | |
| | 14W | 13W | F-950 | T- | | | | | | Leads broke |
| | REVERSE | | F-30 | T-860 | -.09 | | | | | " " |

| | | | | | |
|---|---|---|---|---|---|
| LINE VOLTAGE 424 | CURRENT 3.4 | RESISTANCE 180 Ω | OBSERVER A.O.C. | JOB R-D |
| FREQUENCY 395 | GEN. VOLTAGE 106 | POWER | | DATE 2/27/57 2/28 |

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| O-W | 14 | 13 | F 910 | V 160 | +1.3 | +1.1 | 1.085 | | 1.106 | changed cables on Red. |
| | REVERSE | | F 50 | T 870 | -0.8 ~~-0.9~~ | | 0.888 | 1.126 | | using #5 Red C. |
| | 15 | 14 | F 50 | V 310 | +6.8 ~~+9~~ | +4.8 ~~+6.8~~ | 1.030 ~~1.028~~ | | 10.80 | Clark N.G. |
| | REVERSE | | F 100 | T 780 | -1.7 ~~-1.8~~ | | 0.885 ~~0.885~~ | 1.130 ~~1.130~~ | Do OVER | N.G. |
| | 16 | 15 | ~~F 890~~ | ~~V 350~~ | ~~+2.5~~ | | | | | |
| | REVERSE | | ~~F 150~~ | ~~T 850~~ | ~~-1.5~~ | | | | | |
| | RR | | ~~F 850~~ | ~~V 350~~ | ~~+2.7~~ | | | | | |
| | REVERSE | | ~~F 170~~ | ~~T 820~~ | ~~-1.8~~ | | | | | |
| | RR | | F 850 | V 350 | 2.5 ~~+2.7~~ | 2.4 ~~+2.5~~ | 1.098 ~~1.088~~ | | 1.105 ~~1.108~~ | |
| | REVERSE | | F 210 | T 800 | -2.2 | | ~~0.887~~ 0.899 | 1.112 ~~1.128~~ | | |
| | 17 | 16 | ~~F 600~~ | ~~V 900~~ | ~~+6.3~~ | | | | | |
| | REVERSE | | ~~F 250~~ | ~~T 400~~ | ~~-5.0~~ | | | | | |
| | RR | | F 650 | V 850 | 5.8 ~~+5.9~~ | +5.6 | 1.130 ~~1.132~~ | | 1.145 ~~1.146~~ | |
| | REVERSE | | F 250 | T 350 | -5.4 | | 0.862 | 1.160 | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| O-W | 18 | 17 | F 560 | ~~V-430~~ | +4.5 | | | | | Continued Line |
| | REVERSE | | ~~F-250~~ | ~~T-370~~ | ~~-5.3~~ -4.3 | 4.3 | | | | O E.G.H |
| | RR | | F 740 | V-620 | +4.5 | ~~+4.4~~ | 1.116 | | 1.119 | |
| | REVERSE | | F-350 | T-600 | -4.2 | | 0.892 | 1.121 | | |
| " | 19 | 18 | ~~F-760~~ | ~~V-710~~ | ~~+1.5~~ | | | | | |
| | REVERSE | | ~~F-220~~ | ~~U-0~~ | ~~-1.0~~ | | | | | Computed by E.G.H |
| | RR | | G-0 | V-300 | ~~+1.8~~ +1.0 | +1.4 | 1.107 | | 1.0984 | Checked by Pat |
| | REVERSE | | F-240 | U-0 | -1.1 | | 0.918 | 1.089 | | |
| " | 20 | 19 | G-0 | U-600 | -1.8 | -2.1 | 1.042 | | 1.059 | |
| | REVERSE | | F-0 | U-360 | +2.3 | | 0.930 | 1.075 | | |
| | ~~R~~ | ~~R~~ | ~~G-0~~ | ~~U-650~~ | ~~-1.5~~ | | | | | |
| | REVERSE | | ~~F-0~~ | ~~U-350~~ | ~~+2.2~~ | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

LINE VOLTAGE 400 CURRENT 3.5 RESISTANCE 140Ω OBSERVER JOB R-D

FREQUENCY 395 GEN. VOLTAGE 100 POWER 1400 E.G.H. DATE 2/27/57

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3-S | 1W | 0 | G570 | V980 | +1.9 | +1.7 | 1.226 | | 1.237 | |
| | REVERSE | | E620 | T360 | -1.4 | | 0.801 | 1.248 | | |
| | R | R | G-560 | V-990 | +1.9 | | | | | |
| | REVERSE | | E-620 | T370 | -1.4 | | | | | |
| | R | R | G-560 | V-990 | +1.9 | | | | | Computed by [illegible] |
| | REVERSE | | E620 | T360 | -1.4 | | | | | Checked by M.E.E. |
| | 2W | 1W | G310 | W100 | +3.5 3.0 | +3.4 | 1.215 | | 1.227 | |
| | REVERSE | | E770 | T260 | -3.1 3.0 | | 0.808 | 1.238 | | |
| | 3W | 2W | G220 | V870 | +3.1 | +2.8 | 1.183 | | 1.196 | |
| | REVERSE | | E840 | T410 | -2.5 2.3 | | 0.828 | 1.208 | | |
| | 4W | 3W | G130 | V700 | +2.8 | +2.6 | 1.159 | | 1.172 | |
| | REVERSE | | E930 | T520 | -2.3 | | 0.844 | 1.185 | | |
| | 5W | 4W | G160 | W80 | +4.2 | +4.0 | 1.198 | | 1.210 | |
| | REVERSE | | E870 | T260 | -3.7 | | 0.818 | 1.223 | | |

LINE VOLTAGE 408 CURRENT 3.6 RESISTANCE 134Ω OBSERVER A.O.C. JOB RD

FREQUENCY 390 GEN. VOLTAGE 102 POWER 1468 DATE 3/1/67

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3S | 6W | 5W | G 10 | V 770 | +3.6 | +3.4 | 1·153 | | 1·168 | |
| | REVERSE | | E 990 | T 460 | ~~3.1~~ 3.4 | | 0·846 | 1·182 | | |
| | 7W | 6W | G 100 | V 710 | ~~3.0~~ 3.1 | +2·7 | 1·157 | | 1·171 | |
| | REVERSE | | E 940 | T 310 | ~~5.4~~ 5.0 | | 0·844 | 1·185 | | Computed by E.G.H. |
| | 8W | 7W | G 80 | V 820 | ~~3.6~~ 3.7 | +3·3 | 1·166 | | 1·179 | Checked by N.E.E. |
| | REVERSE | | E 940 | T 430 | 3.0 | | 0·839 | 1·192 | | |
| | 9W | 8W | G 150 | V 810 | ~~3.2~~ 3.3 | +3·0 | 1·171 | | 1·184 | |
| | REVERSE | | E 900 | T 440 | 2.7 | | 0·836 | 1·196 | | |
| | 10W | 9W | G 130 | X 220 | +8.7 | +8·3 | 1·314 | | ~~1.328~~ | |
| | REVERSE | | E 730 | S 570 | 7.9 | | 0·745 | ~~1.343~~ | | |
| | 11W | 10W | F 800 | X 100 | ~~+9.8~~ | +9·5 | 1·276 | | 1·293 | |
| | REVERSE | | E 910 | S 550 | 9.2 | | 0·764 | 1·309 | | |
| | 12W | 11W | ~~F 710~~ | ~~W 280~~ | ~~+7.1~~ | | | | | |
| | REVERSE | | ~~F 100~~ | ~~T 100~~ | ~~6.0~~ | | | | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 35 | R | R | F700 | W220 | +7.1 +7.2 | +6.8 | 1.174 | | 1.188 | |
| | REVERSE | | F150 | T100 | +6.5 | | 0.832 | 1.202 | | |
| | 13W | 12W | ~~G100~~ | ~~V100~~ | ~~+0.1~~ | | | | | |
| | REVERSE | | ~~F20~~ | ~~U0~~ | ~~+0.1~~ | | | | | Computed by ~~EHH~~ |
| | R | R | G50 | V150 | +0.6 | +0.4 | 1.097 | | 1.105 | Checked by MEE. |
| | REVERSE | | F20 | U0 | +0.2 +0.1 | | 0.898 | 1.114 | | |
| | 14W | 13W | G20 | U880 | 0.0 ~~0.1~~ | -0.3 | 1.069 | | 1.089 | |
| | REVERSE | | F20 | U150 | +1.0 | | 0.911 | 1.098 | | |
| | R | R | G120 | U870 | -1.0 -1.1 | | 1.078 | | 1.086 | |
| | REVERSE | | F50 | U150 | +0.9 | | 0.914 | 1.094 | | |
| | 15W | 14W | F880 | V0 | +0.3 +0.1 | +0.4 | 1.066 | | 1.078 | |
| | REVERSE | | F150 | U100 | 0 | | 0.919 | 1.088 | | |
| ? | 16W | 15W | F850 | V250 | +2.1 | +1.7 | 1.089 | | 1.101 | |
| ? | REVERSE | | F150 | T900 | -1.7 | | 0.899 | 1.112 | | |

LINE VOLTAGE 408 CURRENT 3.6 RESISTANCE 124½ OBSERVER Clark JOB R-D

FREQUENCY 390 GEN. VOLTAGE 102 POWER 1468 DATE 3/1/52

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3S ? | 16R | 15R | F850 | V250 | 12.1 | - | | | | |
| ? | REVERSE | | F150 | T910 | -1.0 | | | | | |
| | 17W | 16W | F800 | V450 | +~~3.3~~ 3.7 | +3.0 | 1.102 | | 1.109 | |
| | REVERSE | | F250 | T750 | -2.7 | | 0.897 | 1.115 | | |
| | 18W | 17W | F300 | W300 | +~~8.7~~ 8.5 | +8.2 | 1.168 | | 1.174 | 18 in wash by wells |
| | REVERSE | | F350 | T50 | -7.9 | | 0.848 | 1.179 | | |
| ? | 19W | 18W | F200 | W100 | +9.3 | +8.9 | 1.121 | | 1.132 | 18450 old well shaft |
| ? | REVERSE | | F550 | T130 | -~~8.4~~ 8.0 | | 0.876 | 1.142 | | |
| | 20W | 19W | G100 | U600 | -2.4 | -2.6 | 1.051 | | 1.059 | Computed by: E.G.H. |
| | REVERSE | | F0 | U450 | +2.8 | | 0.938 | 1.066 | | Checked by: N.E.E. |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| L-S | 20 | 19 | F-10 | W-100 | +10.2 | +9.9 | 1.104 | | 1.134 | |
| | REVERSE | | F-530 | S-970 | -9.6 | | 0.860 | 1.163 | | |
| " | 19 | 18 | F-750 | V-920 | +3.5 | +3.2 | 1.096 | | 1.112 | |
| | REVERSE | | F-200 | T-690 | -2.9 | | 0.887 | 1.128 | | |
| " | 18 | 17 | F-700 | W-250 | +7.7 | +7.2 | 1.177 | | 1.196 | |
| | REVERSE | | F-150 | T-0 | -7.1 | | 0.823 | 1.215 | | Computed by [illegible] |
| | 17 | 16 | F-950 | V-20 | +0.6 | +0.6 | 1.076 | | 1.088 | Checked by Pat |
| | REVERSE | | F-150 | U-0 | -0.6 | | 0.909 | 1.100 | | |
| | 16 | 15 | ~~F-0~~ | ~~U-0~~ | ~~+0.2~~ | | | | | |
| | REVERSE | | ~~F-0~~ | ~~U-0~~ | ~~+0.2~~ | | | | | |
| | R | R | ~~F-900~~ | ~~U-980~~ | ~~+0.5~~ | | ~~1.088~~ | | | Do not use |
| | REVERSE | | ~~F-50~~ | ~~U-100~~ | ~~+0.5~~ | | ~~0.908~~ | 1.101 | | use on back of page |
| | R | R | ~~F-900~~ | ~~U-900~~ | ~~+0.1~~ | | | | | |
| | REVERSE | | ~~F-200~~ | ~~U-200~~ | ~~+0.2~~ | | | | | |

LINE VOLTAGE 408 CURRENT 3.6 RESISTANCE 124½ OBSERVER WAITE JOB RD

FREQUENCY 390 GEN. VOLTAGE 102 POWER 1468 DATE 3/1/57

| LINE | COIL 16 | COIL 15 | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 6S | R | R | 7850 | 4900 | ~~+0.5~~ 0.3 | +.3* | 1.056 | | 1.071 | Avg.* with 16-15 |
| → | REVERSE | | 7150 | 4140 | +0.2 | | ~~0.923~~ 0.921 | 1.085 ~~1.086~~ | | on pg. 14 |
| | R | R | 7900 | 4860 | 0 | +.3 | 1.056 | | 1.073 | +0.3 |
| → | REVERSE | | 7100 | 4150 | +0.5 | | 0.910 | 1.089 | | -0.2 |
| | | | | | | | | | | +0.1 ÷2 = 0.05 |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| GS | 16 | 15 | F880 | U860 | +0.1 | -0.15 | 1.057 | | 1.069 | (see back pg. 13) |
| | REVERSE | | F150 | U180 | +0.4 | +0.15 | 0.924 | 1.082 | | Computed by: N.E.E. |
| | 15 | 14 | F-0 | V-0 | +0.2 | -0.05 | 1.079 | | 1.098 | Checked by: E.G.H. |
| | REVERSE | | F-0 | U-0 | +0.3 | +0.05 | 0.895 | 1.117 | | PAT |
| | 14 | 13 | F-0 | V-0 | +0.2 | -0.45 | 1.079 | | 1.090 | |
| | REVERSE | | F-0 | U-150 | +1.1 | +0.45 | 0.909 | 1.100 | | |
| | 13 | 12 | ~~F-900~~ | ~~V-0~~ | ~~+0.4~~ | | | | | Use (-) figure |
| | REVERSE | | F-0 | V-100 | +0.9 | | | | | daly on phase A |
| | R | R. | F-900 | V-0 | +0.7 | +0.35 | 1.069 | | 1.079 | |
| | REVERSE | | F-150 | U-100 | .0 | | 0.918 | 1.089 | | |
| NG? | 12 | 11 | F-900 | V-500 | +3.1 | +2.4 | LHT | | 1.126 | NG |
| NG? | REVERSE | | F-100 | T-750 | ~~-1.8~~ -1.7 | -2.4 | ~~0.882~~ | ~~1.134~~ | | NG |
| | 11 | 10 | F-650 | W-900 | +9.2 | +9.65 | 1.242 | | 1.253 | |
| | REVERSE | | F-100 | S-650 | ~~-9.4~~ | | 0.791 | 1.264 | | |

LINE VOLTAGE 404 CURRENT 3.15 RESISTANCE 135Ω OBSERVER WAITE JOB RD

FREQUENCY 390 GEN. VOLTAGE 102 POWER 1432 DATE 3-4-57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 65 | 10 | 9 | F-900 | X-450 | +10.5 | +10.1 | 1.321 | | 1.339 | |
| | REVERSE | | E-770 | S-400 | -9.7 | | 0.737 | 1.356 | | use ○ figure |
| | 9 | 8 | G-150 | W-500 | +5.9 | +5.6 | 1.239 | | 1.254 | on phase Δ |
| | REVERSE | | E-800 | T-0 | -5.1 | | 0.788 | 1.269 | | |
| | 8 | 7 | G-100 | N-100 | +4.6 | +4.2 | 1.196 | | 1.207 | Wide Spread ? |
| | REVERSE | | E-900 | T-300 | -3.7 | | 0.822 | 1.217 | | |
| | 7 | 6 | G-210 | V-950 | +3.5 | +3.3 | 1.190 | | 1.203 | BARB WIRE 150' N |
| | REVERSE | | E-870 | T-350 | -3.0 | | 0.823 | 1.215 | | |
| | 6 | 5 | G-100 | V-860 | +3.6 | +3.4 | 1.170 | | 1.183 | Computed E.G.H. |
| | REVERSE | | E-950 | T-400 | -3.2 | | 0.836 | 1.196 | | Checked Pat |
| | 5 | 4 | G-200 | W-60 | +4.0 | +3.8 | 1.200 | | 1.213 | |
| | REVERSE | | E-850 | T-280 | -3.5 | | 0.816 | 1.225 | | |
| | 4 | 3 | G-200 | V-800 | +2.9 | +2.5 | 1.174 | | 1.184 | " " 150' N |
| | REVERSE | | E-870 | T-500 | -2.0 | | 0.838 | 1.193 | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 65 | 3 | 2 | G-300 | V-730 | +12.1 | 1.3 | | | | FENCE UNINSULATED |
| | REVERSE | | E-800 | I-510 | -1.5 | | | | | |
| | R | R | G-280 | V-820 | +3.8 | | | | | FENCE INSULATED |
| | REVERSE | | E-800 | I-470 | -1.9 | | | | | Comp E.G.H. |
| | R | R | G-270 | V-800 | +2.6 | 2.3 | 1.181 | | 1.193 | Chs Pat |
| | REVERSE | | E-820 | I-470 | -2.0 | | 0.830 | 1.205 | | |
| | 2 | 1 | G-460 | W-120 | +3.9 +2.1 | 2.7 | 1.228 | | 1.241 | |
| | REVERSE | | E-660 | I-260 | -2.3 | | 0.798 | 1.253 | | FENCE 1+10 |
| | 1 | 0 | G-430 | W-0 | +2.6 | 2.4 | 1.215 | | 1.227 | |
| | REVERSE | | E-700 | I-340 | -2.1 -2.0 | | 0.808 | 1.238 | | |
| | R | R | G-420 | W-10 | +3.6 | | | | | |
| | REVERSE | | E-700 | I-340 | -2.0 | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

LINE VOLTAGE 404 CURRENT 3.5 RESISTANCE 135 OBSERVER WAITE JOB RD

FREQUENCY 390 GEN. VOLTAGE 102 POWER 1432 DATE 3/4/57

| LINE | Red COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9S | 1W | 0 | G480 | V900 | +2.0 | +1.6 | 1.210 | | 1.222 | |
| | REVERSE | | E670 | T410 | -1.3 | | 0.811 | 1.233 | | |
| | 2W | 1W | G420 | V800 | +1.8 | +1.6 | 1.194 | | 1.208 | |
| | REVERSE | | E710 | T460 | -1.3 | | 0.819 | 1.221 | | |
| | 3W | 2W | G340 | V840 | +2.4 | +2.1 | 1.190 | | 1.204 | |
| | REVERSE | | E760 | T440 | -1.8 | | 0.821 | 1.218 | | |
| | 4W | 3W | G260 | V820 | +2.7 | +2.4 | 1.181 | | 1.195 | |
| | REVERSE | | E820 | T450 | -2.1 | | 0.828 | 1.208 | | |
| | 5W | 4W | G170 | V850 | +3.2 | +3.0 | 1.177 | | 1.190 | |
| | REVERSE | | E880 | T420 | -2.7 | | 0.831 | 1.203 | | |
| | 6W | 5W | G240 | W120 | +4.0 | +3.8 | 1.210 | | 1.223 | |
| | REVERSE | | E820 | T240 | -3.6 | | 0.810 | 1.235 | ~~1.262~~ | |
| | 7W | 6W | G200 | W600 | +6.0 | +5.8 | 1.254 | | ~~1.271~~ | |
| | REVERSE | | E770 | S940 | -5.5 | | 0.781 | 1.280 | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9-5 | 8W | 7W | G140 | W160 | +4.6 | +4.3 | 1.204 | | 1.218 | |
| | REVERSE | | E870 | T210 | -4.9 | | 0.812 | 1.232 | | |
| | 9W | 8W | G80 | W120 | +3.9 +3.9 | +4.7 | 1.196 | | 1.213 | use |
| | REVERSE | | E920 | T180 | -3.9 -3.9 | | 0.814 | 1.229 | | Comp.: E.G.H. |
| | R | R | G90 | W210 | +5.1 | +4.9 | 1.206 | | 1.218 | Checked: N.E.E. |
| | REVERSE | | E910 | T190 | -3.8 -3.8 | | 0.814 | 1.229 | | |
| | 10W | 9W | F610 | X350 | +11.5 | +11.5 | 1.288 | | 1.305 1.310 | |
| | REVERSE | | F0 | S350 | -11.4 | | 0.757 | 1.321 | | |
| | 11W | 10W | F750 | W130 | +6.5 | +6.3 | 1.168 | | 1.182 | |
| | REVERSE | | F150 | T160 | -6.0 | | 0.836 | 1.196 | | |
| | 12W | 11W | ~~G70~~ | V50 | ~~+8.9~~ +8.1 | +0.1 | 1.090 | | 1.104 | use |
| | REVERSE | | ~~F0~~ | U0 | +0.2 | | 0.895 | 1.117 | | use |
| | R | R | G50 | V50 | +0.1 +0.0 | +0.3 | 1.088 | | | |
| | REVERSE | | F0 | U70 | +0.2 +0.6 | | 0.901 | 1.110 | | |

LINE VOLTAGE 404 CURRENT 3.5 RESISTANCE 135 OBSERVER Clark JOB

FREQUENCY 390 GEN. VOLTAGE 102 POWER 1432 DATE

| LINE | Red COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 95 | 13W | 12W | G 20 | V130 | ~~+0.6~~ +0.7 | +0.4 | 1.092 | | 1.102 | |
| | REVERSE | | F50 | U0 | 0 | | 0.900 | 1.111 | | |
| | 14W | 13W | F880 | U860 | 0 | +0.3 | 1.055 | | 1.071 | |
| | REVERSE | | F130 | U170 | ~~+0.2~~ +0.5 | | 0.921 | 1.086 | | |
| | 15W | 14W | F910 | U960 | +0.3 | +0.1 | 1.066 | | 1.081 | 14450W @ C5 |
| | REVERSE | | F110 | U100 | ~~+0.2~~ +0.0 | | 0.913 | 1.095 | | |
| | 16W | 15W | F880 | V160 | +1.6 | +1.2 | 1.083 | | 1.098 | Computed by: EGH |
| | REVERSE | | F100 | T950 | ~~-0.6~~ -0.7 | | 0.899 | 1.112 | | Checked by: N.E.E. |
| | R | R | F890 | V160 | ~~+1.5~~ +1.4 | +1.2 | 1.083 | | 1.095 | |
| | REVERSE | | F150 | T950 | -0.9 | | 0.903 | 1.107 | | |
| | 17W | 16W | F900 | V250 | ~~+1.7~~ +1.9 | +1.7 | 1.092 | | 1.104 | |
| | REVERSE | | F150 | T850 | -1.5 | | 0.896 | 1.116 | | |
| | 18W | 17W | F800 | V670 | +4.3 | +4.1 | 1.125 | | 1.142 | |
| | REVERSE | | F150 | T500 | -3.8 | | 0.863 | 1.159 | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 95 | 19W | 18W | F800 | V690 | +4.3 | +4.2 | 1·128 | | 1·140 | |
| | REVERSE | | 7200 | T500 | -4.0 | | 0·869 | 1·151 | | |
| | 20W | 19W | 7950 | V450 | +2.6 +2.5 | +2.2 | 1·116 | | 1·120 | Comp. E.G.H. |
| | REVERSE | | 7150 | T800 | -1.8 | | 0·890 | 1·124 | | Checked by: NEE |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

LINE VOLTAGE _____ CURRENT _____ RESISTANCE _____ OBSERVER _____ JOB _____

FREQUENCY _____ GEN. VOLTAGE _____ POWER _____ DATE _____

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 0" W | 15 | 14 | F-920 | V-360 | +2.3 | +2.1 | 1.104 | | 1.119 | See Line 0 This is a Repeat |
| | REVERSE | | F-100 | T-760 | -1.9 | | 0.882 | 1.134 | | |
| | | | | | | | | | | |
| | REVERSE | | Jobbig a Spread | | | | | | | |
| 12S ? | TW | 0 | G-550 | V-930 | + 1.8 | +1.3 ? | 1.218 ? | | 1.224 ? | Computed by [illegible] |
| ? | REVERSE | | E-630 | T-490 | - .7 | | 0.813 ? | 1.230 ? | | Checked by NEE. |
| | 2 | 1 | G-400 | V-820 | +2.0 | +1.7 | 1.193 | | 1206 | |
| | REVERSE | | E-720 | T-460 | -1.3 | | 0.820 | 1.220 | | |
| | 3 | 2 | G-460 | V-940 | +2.3 | +2.0 | 1.211 | | 1225 | |
| | REVERSE | | E-680 | T-380 | -1.6 | | 0.808 | 1.238 | | |
| | 4 | 3 | G-230 | V-730 | +2.4 | +2.1 | 1.169 | | 1182 | |
| | REVERSE | | E-850 | T-520 | -1.7 | | 0.837 | 1.195 | | |
| | 5 | 4 | G-260 | V-870 | +2.9 | +2.6 | 1.186 | | 1.206 | |
| | REVERSE | | E-820 | T-410 | -2.3 | | 0.824 | 1.214 | | |

LINE VOLTAGE 400 CURRENT 3.7 RESISTANCE 130 ? OBSERVER J.W. JOB R-D.

FREQUENCY 385 GEN. VOLTAGE 100 POWER 1548 DATE 3/5/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 6 | 5 | G-330 | W-640 | +5.6 | +5.2 | 1.268 | | 1.280 ✓ | |
| | REVERSE | | E-690 | S-970 | -4.9 | | 0.774 | 1.292 | | |
| | 7 | 6 | G-160 | W-700 | +~~5.6~~ 6.4 | +6.4 | 1.261 | | 1.278 ✓ | |
| | REVERSE | | E-790 | S-850 | -6.1 | | 0.773 | 1.294 | | |
| | 8 | 7 | G-150 | V-850 | +3.3 | +3.2 | 1.174 | | 1.186 ✓ | Checked by NEE |
| | REVERSE | | E-940 | T-400 | -~~3.1~~ 3.2 | | 0.835 | 1.198 | | |
| | 9 | 8 | F-900 | W-400 | +6.8 | +6.5 | 1.209 | | 1.227 ✓ | |
| | REVERSE | | E-970 | T-0 | -6.1 | | 0.804 | 1.244 | | |
| | 10 | 9 | F-950 | W-50 | +~~5.1~~ 4.9 | +4.9 | ~~1.176~~ 1.172 | | ~~1.194~~ 1.191 | |
| | REVERSE | | F-0 | T-220 | -4.9 | | 0.826 | 1.211 | | |
| | 11 | 10 | F-800 | V-800 | +4.9 | +4.5 | 1.138 | | 1.150 ✓ | |
| | REVERSE | | F-150 | T-450 | -~~4.0~~ 4.1 | | 0.860 | 1.163 | | |
| | 12 | 11 | F-800 | V-700 | +~~4.5~~ 4.2 | +4.1 | 1.128 | | 1.138 ✓ | |
| | REVERSE | | F-200 | T-550 | -~~3.7~~ 3.8 | | 0.872 | 1.147 | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 13 | 12 | F-900 | V-450 | +2.8 | +2.5 | 1.112 | | 1.128 | |
| | REVERSE | | F-100 | T-700 | -2.1 | | 0.878 | 1.139 | | |
| | 14 | 13 | F-850 | V-300 | +2.3 +1.8 | +2.1 | 1.092 | | 1.108 | |
| | REVERSE | | F-150 | + 800 | -1.9 | | 0.890 | 1.124 | | |
| | 15 | 14 | G-0 | V-200 | +1.1 | +1.2 | 1.098 | | 1.105 | |
| | REVERSE | | F-150 | T-900 | -1.1 +1.2 | | 0.900 | 1.111 | | Comp. by EBH |
| | 16 | 15 | G-0 | V-100 | +0.6 | +0.5 | 1.088 | | 1.098 | Checked by MEB. |
| | REVERSE | | F-100 | u-0 | -0.3 | | 0.903 | 1.107 | | |
| | 17 | 16 | G-0 | V-100 | +0.6 | +0.5 | 1.088 | | 1.098 | |
| | REVERSE | | F-100 | u-0 | -0.3 | | 0.903 | 1.107 | | |
| | 18 | 17 | G-0 | V-0 | +0.1 +0.2 | +0.2* | 1.079 | | 1.090 | Avg. by 0.5+0.2 |
| | REVERSE | | F-50 | u-100 | +0.5 +0.4 | | 0.908 | 1.101 | | ÷ 2 = 0.35 ÷ 2 |
| | 19 | 18 | F-800 | V-800 | +4.8 | +4.5 | 1.138 | | 1.151 | = 0.175 take sign |
| | REVERSE | | F-150 | + 450 | -9.0 | | 0.859 | 1.164 | | at dominate figure |

LINE VOLTAGE 400 CURRENT 3.7 RESISTANCE 130 ? OBSERVER J W. JOB R.D.

FREQUENCY 385 GEN. VOLTAGE 100 POWER 1548 DATE 3/5/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 125 | 20 | 19 | F-700 | V-900 | +5.7 | 45.4 | 1.140 | | 1.154 | Checked by NEE |
| | REVERSE | | F-200 | T-350 | -5.1 | | 0.857 | 1.167 | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 N | 1 | 0 | G 520 | W 70 | +2.6 | +2.5 | 1.230. | | 1.247 | Pat |
| | REVERSE | | E 640 | T 240 | +2.3 | | 0.791 | 1.264 | | |
| " | R | R | G 520 | W 70 | +2.6 | +2.5 | 1.230. | | 1.247 | |
| | REVERSE | | E 640 | T 240 | +2.3 | | 0.791 | 1.264 | | |
| " | 2 | 1 | G 280 | V 880 | +2.8 | +2.5 | 1.188 826 | 1.208 | 1.198 ~~1.197~~ | Computed by: P.R. |
| | REVERSE | | E 820 | T 430 | +2.1 | | ~~0.838~~ | ~~1.193~~ | | Checked by: NEF |
| " | 3 | 2 | G 250 | V 830 | +2.8 | +2.6 | 1.178 | | 1.192 | |
| | REVERSE | | E 840 | T 440 | +2.3 | | 0.829 | 1.206 | | |
| " | 4 | 3 | G 190 | W 130 | +4.3 | +4.1 | 1.205 | | 1.220 | |
| | REVERSE | | E 850 | T 230 | +3.8 | | 0.810 | 1.235 | | |
| " | 5 | 4 | G 30 | W 40 | ~~+4.7~~ +4.2 | +4.5 | 1.680 | 1.211 | ~~1.196~~ ~~1.200~~ | |
| | REVERSE | | E 960 | T 270 | ~~+4.3~~ | | ~~0.826~~ 0.820 | ~~1.220~~ | | |
| " | 6 | 5 | F 920 | V 320 | +2.1 | +1.8 | 1.101 | | 1.113 | |
| | REVERSE | | F 110 | T 810 | +1.5 | | 0.889 | 1.125 | | |

LINE VOLTAGE 404 CURRENT 3.7 RESISTANCE 135 OBSERVER CLARK JOB RD

FREQUENCY 385 GEN. VOLTAGE 101 POWER 1495 DATE 3/6/52

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 N | 7 | 6 | G 130 | V 520 | +2.0 | +1.8 | ~~1.140~~ ~~1.119~~ | | ~~1.153~~ ~~1.143~~ | |
| | REVERSE | | E 950 | T 670 | -1.5 | | 0.858 | 1.166 | | |
| " | 8 | 7 | G 60 | V 590 | +2.6 | +2.3 | 1.140 | | 1.155 | Computed by: PR |
| | REVERSE | | E 960 | T 600 | -2.0 | | 0.855 | 1.170. | | Checked by: NEE |
| " | 9 | 8 | G 30 | V 450 | +2.2 | +2.0 | 1.120 | | 1.135 | |
| | REVERSE | | F 10 | T 710 | -1.7 | | 0.870 | 1.149 | | |
| " | 10 | 9 | G 110 | V 910 | +3.7 | 3.4 | 1.177 | | 1.191 | fence 9+90 |
| | REVERSE | | E 910 | T 390 | -3.1 | | 0.830 | 1.205 | | |
| " | 11 | 10 | G 60 | W 160 | +5.9 | +4.8 | 1.200 | | 1.212 | |
| | REVERSE | | E 930 | T 200 | ~~-4.8~~ | | 0.818 | 1.223 | | |
| " | 12 | 11 | G 0 | W 0 | +4.6 | +4.3 | 1.175 | | 1.189 | |
| | REVERSE | | F 0 | T 310 | -4.0 | | 0.832 | 1.202 | | |
| " | 13 | 12 | F 480 | X 860 | +13.8 | +12.3 | 1.340 | | 1.355 | use next pg. |
| | REVERSE | | E 890 | S 100 | -12.8 | | 0.728 | 1.373 | | repeat |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 N | R | R | F 450 | X 850 | +13.9 | +13.5 | 1.332 | | 1.356 | Pat |
| | REVERSE | | E 880 | S 70 | -13.0 | | 0725 | 1.379 | | |
| " | 14 | 13 | G 70 | V 130 | +0.5 | +0.3 | 1.098 | | 1.110 | |
| | REVERSE | | F 20 | T 970 | -0.1 | | 0.892 | 1.121 | | |
| " | 15 | 14 | F 750 | V 920 | +5.6 | +5.4 | 1.148 | | 1.163 | Computed by PR |
| | REVERSE | | F 150 | T 310 | -5.1 | | 0849 | 1.178 | | checked by MEE |
| " | 16 | 15 | F 810 | Y 700 | +4.3 | 4.2 | 1.130 | | 1.141 | |
| | REVERSE | | F 180 | T 500 | -4.0 | | 0.869 | 1.151 | | |
| " | 17 | 16 | F 500 | W O | +7.2 | +7.0 | 1.133 | | 1.152 | |
| | REVERSE | | F 300 | T 200 | -6.8 | | 0.855 | 1.190 | | |
| " | 18 | 17 | G 100 | U 450 | -3.2 | -3.5 | 1.038 | | 1.057 | |
| | REVERSE | | E 900 | U 500 | +3.7 | | 0.930 | 1.095 | | |
| " | 19 | 18 | G 100 | U 750 | -1.6 | +1.8 | 1.065 | | 1.085 | |
| | REVERSE | | E 950 | U 250 | +2.0 | | 0.912 | 1.096 | | |

LINE VOLTAGE 404 CURRENT 3.7 RESISTANCE 135 ? OBSERVER CLARK JOB RD

FREQUENCY 385 GEN. VOLTAGE 101 POWER 1495 DATE 3/6/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 3 N | 20 | 19 | F800 | V250 | +2.3 | +2.2 | 1.084 | | 1.101 | |
| | REVERSE | | F200 | T800 | -2.0 | | 0.895 | 1.117 | | |
| | | | | | | | | | | Computed by: PR |
| | REVERSE | | | | | | | | | Checked by: NEE |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 6N | 20 | 19 | F 800 | U 800 | ~~+0.1~~ ~~+0.0~~ | +0.1 | 1.041 | | 1.054 | Pat |
| | REVERSE | | F 250 | U 200 | +0.0 | | 0.937 | 1.067 | | |
| " | 19 | 18 | ~~E 800~~ | ~~V 0~~ | ~~+1.2~~ | ~~+1.2~~ | 1.060 | | ~~1.075~~ | |
| | REVERSE | | ~~F 150~~ | ~~U 100~~ | ~~0.0~~ | | 0.918 | 1.089 | | |
| " | R | R | F 800 | U 900 | +0.7 | ~~+0.4~~ ~~+0.7~~ | 1.050 | | 1.064 | 4SE |
| | REVERSE | | F 200 | U 150 | 0.0 | | 0.928 | 1.078 | | Computed by PR |
| " | 18 | 17 | F 820 | U 800 | +0.1 | +0.2 | 1.042 | | 1.058 | |
| | REVERSE | | F 200 | U 210 | +0.3 | | 0.932 | 1.073 | | Checked by: NEE. |
| " | 17 | 16 | G 0 | U 400 | ~~-2.9~~ ~~3.1~~ | +3.0 | 1.021 | | 1.043 | |
| | REVERSE | | F 0 | U 500 | ~~+3.0~~ | | 0.940 | 1.064 | | |
| " | ~~16~~ | ~~15~~ | ~~F 200~~ | ~~W 750~~ | ~~+11.6~~ | | | | | |
| | REVERSE | | ~~F 350~~ | ~~S 600~~ | ~~11.2~~ | | STATIONS OF | | | |
| " | ~~15~~ | ~~14~~ | ~~F 900~~ | ~~V 300~~ | ~~+2.1~~ | | LINE | | | 150' from |
| | REVERSE | | ~~F 100~~ | ~~T 800~~ | ~~-1.4~~ | | | | | fence |

LINE VOLTAGE 404 CURRENT 3.7 RESISTANCE 135? OBSERVER WAITE JOB RD

FREQUENCY 385 GEN. VOLTAGE 101 POWER 1495 DATE 3/6/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 N | ~~14~~ | ~~13~~ | ~~F 800~~ | ~~W 250~~ | ~~+6.7~~ | | | | | |
| | REVERSE | | ~~F 50~~ | ~~T 50~~ | ~~-6.1~~ | | | | | |
| " | 16 | 15 | F 200 | W 700 | +11.5 | +11.3 | 1.185 | | 1.209 | |
| | REVERSE | | F 350 | S 600 | -11.1 | | 0.811 | 1.233 | | |
| " | 15 | 14 | F 900 | V 600 | +3.5 | +3.3 | 1.125 | | 1.142 | |
| | REVERSE | | F 100 | T 550 | -3.1 | | 0.862 | 1.160 | | |
| " | 14 | 13 | F 700 | W 550 | +8.4 | +8.2 | 1.207 | | 1.225 | fence 12+90 |
| | REVERSE | | F 100 | S 850 | -7.9 | | 0.805 | 1.242 | | |
| " | 13 | 12 | G 0 | W 50 | +4.9 | +4.6 | 1.179 | | ~~1.203~~ 1.196 | Checked by: NEE |
| | REVERSE | | E 900 | T 200 | -4.3 | | ~~0.825~~ | ~~1.227~~ 1.212 | | |
| " | 12 | 11 | G 0 | W 150 | +5.3 | +5.2 | 1.190 | | 1.202 | |
| | REVERSE | | F 0 | T 200 | -5.0 | | 0.824 | 1214 | | |
| " | 11 | 10 | G 0 | V 850 | +4.1 | +3.8 | 1.161 | | 1.175 | |
| | REVERSE | | F 0 | T 400 | -3.5 | | 0.841 | 1.189 | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 6 N | 10 | 9 | G 120 | W 100 | +4.5 | +4.3 | 1.195 | | 1.208 | Pat. |
| | REVERSE | | E 900 | T 250 | ~~-5.0~~ -4.0 | | 0.819 | 1.221 | | |
| " | 9 | 8 | G 50 | V 550 | +2.5 | 2.3 | 1.135 | | 1.150 | |
| | REVERSE | | F 0 | T 600 | -2.1 | | 0.859 | 1.164 | | |
| " | 8 | 7 | G 70 | V 450 | +2.0 | +1.7 | 1.129 | | 1.144 | Computed by PR |
| | REVERSE | | E 980 | T 700 | -1.4 | | 0.863 | 1.159 | | |
| " | 7 | 6 | G 150 | V 440 | +1.5 | +1.3 | 1.131 | | 1.146 | Checked by: NEF |
| | REVERSE | | E 940 | T 730 | -1.0 | | 0.861 | 1.161 | | |
| " | 6 | 5 | G 100 | V 300 | +1.2 | +1.0 | 1.114 | | 1.127 | |
| | REVERSE | | E 980 | T 830 | -0.7 | | 0.877 | 1.140 | | |
| " | 5 | 4 | G 0 | V 620 | +3.1 | +2.8 | 1.138 | | 1.151 | |
| | REVERSE | | F 20 | T 570 | -2.5 | | 0.859 | 1.164 | | |
| " | 4 | 3 | G 80 | W 380 | +5.8 | +5.5 | 1.220 | | 1.234 | |
| | REVERSE | | E 890 | T 60 | -5.2 | | 0.802 | 1.247 | | |

LINE VOLTAGE 404 CURRENT 3.7 RESISTANCE 135? OBSERVER Waite JOB RD

FREQUENCY 385 GEN. VOLTAGE 101 POWER 1495 DATE 3/6/57

| LINE 6N | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 11 | 3 | 2 | G170 | V880 | +4.4 +3.8 | +3.1 | 1.179 | | 1.195 | |
| | REVERSE | | E880 | T400 | -3.8 -3.8 | | 0.829 | 1.206 | | Computed by: P.R. |
| 11 | 2 | 1 | G320 | V580 | +1.3 | +1.1 | 1.161 | | 1.175 | |
| | REVERSE | | E800 | T620 | -0.8 | | 0.841 | 1.189 | | Checked by: N.E.E. |
| 11 | 1 | 0 | G-580 | W380 | +3.5 | +3.2 | 1.262 | | 1.278 | |
| | REVERSE | | E-580 | T-110 | -2.8 | | 0.793 | 1.294 | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |

15N — P

12N — P

9N — P

6N — P

3N — P

0 — P

3S — P

6S — P+R

9S — P+R

12S — P+R

15S — P+R

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 6S | 12W | 11W | F930 | V420 | +2.5 | +2.3 | 1.110 | | 1.125 | Repeat reading |
| | REVERSE | | F100 | T700 | -2.2 | | 0.878 | 1.139 | | |
| 12S | 1W | 0 | G550 | V940 | +1.8 | +1.6 | 1.218 | | 1.231 | " " |
| | REVERSE | | E630 | T390 | -1.3 | | 0.804 | 1.244 | | |
| | | | | | | | | | | Computed by: EGH |
| | REVERSE | | | | | | | | | Checked by: NEE |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |

LINE VOLTAGE 400 CURRENT 3.8 RESISTANCE 135? OBSERVER

FREQUENCY 390 GEN. VOLTAGE 100 POWER 1520 Clark

JOB RD DATE 3/7/57

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9N | 1W | 0 | G540 | W340 | +4.3 | +3.9 | 1.278 | | 1.290 | |
| | REVERSE | | E590 | T 20 | -3.5 | | 0.768 | 1.302 | | |
| | 2W | 1W | G370 | W120 | +3.4 | +3.2 | 1.221 | | 1.234 | Comp.: E.G.H. |
| | REVERSE | | E740 | T260 | -2.9 | | 0802 | 1.247 | | Checked: NEE |
| | 3W | 2W | G220 | W120 | +4.1 | +3.9 | 1.208 | | 1.220 | |
| | REVERSE | | E830 | T250 | -3.6 | | 0.812 | 1.232 | | |
| | 4W | 3W | F980 | V390 | +3.1 | +2.9 | 1.132 | | 1.147 | |
| | REVERSE | | F40 | T590 | -2.6 | | 0.861 | 1.161 | | |
| | 5W | 4W | G130 | V340 | +1.2 | +0.9 | 1.122 | | 1.135 | |
| | REVERSE | | E940 | T800 | -0.6 | | 0.871 | 1.148 | | |
| | 6W | 5W | G180 | V510 | +1.7 | +1.5 | 1.142 | | 1.155 | |
| | REVERSE | | E910 | T670 | -1.3 | | 0.856 | 1.168 | | |
| | 7W | 6W | G 20 | V310 | +1.6 | +1.3 | 1.109 | | 1.122 | |
| | REVERSE | | F30 | T820 | -0.9 | | 0.881 | 1.135 | | |

LINE VOLTAGE 400 CURRENT 3.8 RESISTANCE 135? OBSERVER Clark JOB RD

FREQUENCY 390. GEN. VOLTAGE 100 POWER 1520 DATE 3/7/57

| LINE | Red COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9N | 8W | 7W | G 70 | V510 | +~~3.2~~ 3.4 | +2.0 | 1.133 | | 1.147 ✓ | |
| | REVERSE | | E970 | T650 | -~~1.6~~ 1.7 | | 0.861 | 1.161 | | |
| | 9W | 8W | F960 | V640 | +3.4 | +3.1 | 1.137 | | 1.149 ✓ | Computed by: E.G.H. |
| | REVERSE | | F50 | T570 | -~~2.8~~ 2.7 | | 0.861 | 1.161 | | Checked by: N.E.E. |
| | 10W | 9W | F980 | V930 | +~~4.3~~ 4.6 | +4.3 | 1.168 | | 1.178 ✓ | |
| | REVERSE | | F 40 | T370 | -4.0 | | 0.842 | 1.188 | | |
| W Sp ? | 11W | 10W | F960 | V560 | +3.0 | +2.6 | 1.128 | | 1.140 ✓ | |
| " ? | REVERSE | | F 50 | T640 | -2.2 | | 0.868 | 1.152 | | |
| W. Sp? | 12W | 11W | F970 | V690 | +3.6 | +3.2 | 1.141 | | 1.159 | |
| " ? | REVERSE | | F0 | T530 | -~~2.7~~ 2.5 | | 0.852 | 1.174 | | |
| | R | R | ~~G0~~ | ~~V690~~ | ~~+3.4~~ | | | | | |
| | REVERSE | | ~~F0~~ | ~~T540~~ | ~~-2.4~~ | | | | | |
| | 13W | 12W | G 60 | V930 | +4.1 | +3.8 | 1.175 | | 1.186 ✓ | |
| | REVERSE | | E960 | T380 | -~~3.7~~ 3.5 | | 0.836 | 1.196 | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9N | 14W | 13W | G 60 | V900 | +14.0 | +3.9 | 1.171 | | 1.186 | |
| | REVERSE | | E960 | T350 | -3.7 | | 0.833 | 1.200 | | |
| | 15W | 14W | ~~E630~~ | ~~X100~~ | +10.6 | +10.2 | 1.262 | | 1.278 | fence uncut Do not use |
| | REVERSE | | F0 | S550 | ~~-9.8~~ -9.4 | | 0.773 | 1.294 | | |
| | R | R | F460 | X500 | +12.7 | +12.5 | 1.294 | | 1.313 | " insulated |
| | REVERSE | | F0 | S260 | ~~-12.6~~ -12.4 | x | 0.751 | 1.332 | | |
| | 16W | 15W | F300 | W810 | +11.3 | +11.3 | 1.207 | | 1.223 | 15+92 Fence |
| | REVERSE | | F300 | S570 | ~~-11.5~~ -11.4 | | 0.807 | 1.239 | | |
| | 17W | 16W | F930 | U120 | ~~-4.7~~ -4.3 | -4.5 | 0.997 | | 1.009 | Comp. N.E.E. |
| | REVERSE | | F30 | U850 | ~~+4.6~~ +4.5 | | 0.980 | 1.020 | | Checked E.G.H. |
| | 18W | 17W | F900 | U750 | -0.5 | -0.7 | 1.047 | | 1.060 | |
| | REVERSE | | F150 | U230 | +.8 | | 0.932 | 1.073 | | |
| | 19W | 18W | F690 | V300 | ~~+3.3~~ +3.3 | +3.0 | 1.080 | | 1.093 | |
| | REVERSE | | F300 | T800 | -2.8 | | 0.904 | 1.106 | | |

LINE VOLTAGE 400 CURRENT 3.8 RESISTANCE 135? OBSERVER Clark JOB RD

FREQUENCY 390 GEN. VOLTAGE 100 POWER 1520 DATE 3/7/57

| LINE | red COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 9N | 20W | 19W | F700 | U700 | +0.2 | +0.1 | 1.022 | | 1.040 | Computed by: NEE |
| | REVERSE | | F300 | U260 | ~~+8.9~~ +8.7 | | 0.946 | 1.057 | | Checked by: E.G.H. |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 2N | 20W | 19W | D500 | ~~Z+ (no null)~~ | +25+ | Do not use | | | | 1970' Fence |
| | REVERSE | | D600 | P150 | -40+ | | | | | fence uncut |
| | R | R | F450 | W50 | +7.8 | +7.7 | 1.136 | | 1.150 | " insulated |
| | REVERSE | | F400 | T150 | -7.5 | | 0.860 | 1.163 | | |
| | 19 | 18 | F-900 | U-600 | -1.4 | -1.8 | 1.033 | | 1.040 | |
| | REVERSE | | F-150 | U-500 | ~~+2.1~~ +2.0 | | 0.955 | 1.047 | | Computed by: WEE |
| | 18 | 17 | F-800 | U-600 | ~~-0.8~~ -1.4 | -1.0 | 1.023 | | 1.040 | Checked by: E.G.H. |
| | REVERSE | | F-200 | U-350 | +1.1 | | 0.946 | 1.057 | | |
| | 17 | 16 | F-750 | U-600 | ~~-0.8~~ -1.3 | ~~-0.7~~ -0.5 | 1.018 | | 1.031 | |
| | REVERSE | | F-300 | U-410 | ~~+0.8~~ +1.4 | | 0.959 | 1.043 | | |
| | 16 | 15 | F-130 | X-800 | +15.3 | +15.0 | 1.306 | | 1.329 | |
| | REVERSE | | F-50 | S-0 | -14.7 | | 0.740 | 1.351 | | |
| | 15 | 14 | G-0 | W-0 | +4.7 | +4.5 | 1.177 | | 1.188 | |
| | REVERSE | | F-0 | T-500 | ~~-4.3~~ -4.2 | | 0.834 | 1.199 | | |

LINE VOLTAGE 400 CURRENT 3.8 RESISTANCE 135?

FREQUENCY 390 GEN. VOLTAGE 100 POWER 1520

OBSERVER WAITE

JOB RD

DATE 3/7/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 12N | 14 | 13 | F-950 | W-800 | +8.1 | +7.8 | 1.255 | | 1.263 | |
| | REVERSE | | E-950 | S-800 | -7.4 | | 0.787 | 1.271 | | |
| | 13 | 12 | F-950 | V-800 | +4.1 | +4.0 | 1.152 | | 1.167 | |
| | REVERSE | | F-50 | T-400 | -3.8 | | 0.847 | 1.181 | | Computed by: NEE |
| | 12 | 11 | ~~F-950~~ | ~~V-900~~ | ~~+4.5~~ | Do not use | | | | Checked by: E.GH |
| | REVERSE | | ~~F-0~~ | ~~T-400~~ | ~~-3.5~~ | | | | | |
| | R | R | F-950 | V-900 | +4.5 | +4.2 | 1.161 | | 1.177 | |
| | REVERSE | | F-0 | T-350 | ~~-3.9~~ -4.3 | | 0.838 | 1.193 | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |
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| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 12N | 1 | 0 | G-480 | W-410 | +4.2 | +3.9 | 1.259 | | 1.270 | |
| | REVERSE | | E-650 | T-80 | -3.6 | | 0.781 | 1.280 | | Comp. E.G.L. |
| | 2 | 1 | G-420 | V-950 | +2.4 | +2.2 | 1.208 | | 1.220. | Checked Pat |
| | REVERSE | | E-910 | T-380 | -2.0 | | 0.812 | 1.232 | | |
| | 3 | 2 | G-280 | V-740 | +2.3 | +2.0 | 1.176 | | 1.189 | |
| | REVERSE | | E-820 | T-510 | -1.8 | | 0.8325 | 1.202 | | |
| | 4 | 3 | G-100 | W-200 | +5.0 | +4.8 | 1.205 | | 1.219 | |
| | REVERSE | | E-910 | T-180 | 4.6 | | 0.812 | 1.232 | | |
| | 5 | 4 | G-130 | V-910 | +3.7 | +3.5 | 1.180 | | 1.192 | |
| | REVERSE | | E-920 | T-370 | -3.2 | | 0.831 | 1.203 | | |
| | 6 | 5 | G-50 | V-430 | +1.9 | +1.6 | 1.124 | | 1.136. | |
| | REVERSE | | F-0. | T-730 | -1.3 | | 0.871 | 1.148 | | |
| | 7 | 6 | G-0 | V-290 | +1.5 | +1.3 | 1.105 | | 1.119 | |
| | REVERSE | | F-50 | T-820 | -1.1 | | 0.883 | 1.132 | | |

| | | | | | |
|---|---|---|---|---|---|
| LINE VOLTAGE 424 | CURRENT 3.7 | RESISTANCE 135(?) | OBSERVER WAITE | JOB RD | |
| FREQUENCY 390 | GEN. VOLTAGE 106 | POWER 1568 | | DATE 3/11/57 | |

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | 8 | 7 | G-0 | V-650 | +3.2 | +2.9 | 1.141 | | 1.156 | |
| | REVERSE | | F-0 | T-550 | -2.6 ~~-2.5~~ | | 0.855 | 1.170 | | |
| | 9 | 8 | G-0 | V-710 | 3.4 ~~+3.5~~ | +3.1 | 1.147 | | 1.161 | |
| | REVERSE | | F-0 | T-510 | -2.8 ~~-2.9~~ | | 0.851 | 1.175 | | Comp. E.G.H. |
| | 10 | 9 | G-0 | V.250 | +1.4 | +1.2 | 1.101 | | 1.113 | Checked |
| | REVERSE | | F-90 | T-860 | -1.0 | | 0.890 | 1.124 | | |
| | 11 | 10 | G-0 | V-340 | +1.8 | +1.6 ~~+1.8~~ | 1.110 | | 1.121 ~~1.129~~ | |
| | REVERSE | | F-50 | T-800 | ~~-1.8~~ ~~-1.3~~ | | 0.883 ~~0.812~~ | 1.132 ~~1.147~~ | | |
| | 12 | 11 | G-0 | V-950 | +4.5 | +4.2 | 1.171 | | 1.183 | |
| | REVERSE | | F-0 | T-350 | -3.9 | | 0.837 | 1.195 | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | | | | | | | | | | |
| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 15N | 1 | 0 | G-500 | W-230 | +3.3 | +3.1 | 1.241 | | 1.254 | Alluvium |
| | REVERSE | | E-650 | T-200 | -2.8 | | 790 | 1.266 | | |
| | 2 | 1 | G-470 | V-920 | +2.2 | +1.9 | 1.209 | | 1.222 | " |
| | REVERSE | | E-690 | T-400 | -1.5 | | 810 | 1.235 | | Comp By PAT |
| | 3 | 2 | G-310 | W-0 | +3.2 | +3.0 | 1.205 | | 1.218 | " Ckd by E.G.H. |
| | REVERSE | | E-780 | T-330 | -2.5 | | 813 | 1.230 | | |
| | 4 | 3 | G-110 | W-260 | +5.1 | +4.9 | 1.213 | | 1.226 1.231 | " |
| | REVERSE | | E-880 | T-140 | -4.7 | | 870 .808 | 1.149 1.238 | | |
| | | | G-110 | W-240 | | | | | | " |
| | REVERSE | | E-890 | T-150 | | | | | | |
| | 5 | 4 | G 50 | W-180 | +5.0 | +4.9 | 1.200 | 1225 | 1.213 1.188 | " |
| | REVERSE | | E-930 | T-180 | -4.8 | | 856 | 1.176 | | |
| | 6 | 5 | G-0 | V-850 | +4.0 | +3.9 | 1.160 | | 1.177 | " |
| | REVERSE | | E-0 | T-370 | -3.8 | | 838 | 1.193 | | |

LINE VOLTAGE 424 CURRENT 8.7 RESISTANCE 135 (?) OBSERVER Waite JOB RD

FREQUENCY 396 GEN. VOLTAGE 106 POWER 1568 DATE 3/11/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | F 950 | V 250 | +1.6 | +1.5 | 1.090 | | 1.117 | 7+00 END OF OUTCROP |
| | REVERSE | | F 80 | T-800 | -1.4 | | 885 | 1.130 | | |
| | 8 | 7 | G 0 | V-200 | +1.0 | +0.9 | 1.090 | | 1.107 | MED GRAY DK SIL. |
| | REVERSE | | F 50 | T-900 | -0.6 | | 890 | 1.124 | | FINE GR VOL OTCP |
| | 9 | 8 | F 930 | V 250 | +1.7 | +1.5 | 1.098 | | 1.111 | |
| | REVERSE | | F 100 | T 850 | -1.2 | | 890 | 1.124 | | |
| | 10 | 9 | F-950 | V-400 | +2.4 | +2.3 | 1.111 | | 1.125 | |
| | REVERSE | | F 100 | T 700 | -2.0 | | 878 | 1.139 | | 50'S OF SCALE, DK. SILICEOUS FINE GR |
| | 11 | 10 | F-950 | V-750 | +3.9 | +3.9 | 1.141 | | 1.166 | VOL OUTCP |
| | REVERSE | | F-50 | T-400 | -3.8 | | 845 | 1.183 | | |
| | 12 | 11 | F 850 | V 350 | +2.6 | +2.4 | 1098 | | 1.114 | Val Alum. |
| | REVERSE | | F 160 | T 750 | -2.1 | | 885 | 1.130 | | |
| | 12 | 13 | F 900 | V 550 | +3.3 | 3.1 | 1.123 | | 1.137 | " |
| | REVERSE | | F 100 | T 600 | -2.9 | | 869 | 1.151 | | Comp. by Pat<br>Checked E.G.H. |

# E. M. FIELD NOTES

30

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 15N | 14 | 13 | G 0 | V 250 | +1.3 | +1.2 | 1.101 | | 1.115 | Vol. alluvium + outcrop |
| | REVERSE | | F 60 | T 850 | -1.0 | | 886 | 1.129 | | |
| | 15 | 14 | F 850 | V 550 | +3.5 | +3.2 ~~+3.9~~ | 1.117 | | 1.135 | " |
| | REVERSE | | F 100 | T 600 | -2.8 | | 868 | 1.152 | | " |
| | 16 | 15 | F 700 | X-130 | +10.4 | +10.2 | 1.271 | | 1.289 | " |
| | REVERSE | | E 970 | S-500 | -10.0 | | 765 | 1.307 | | |
| | 17 | 16 | F 300 | X-150 | +12.4 | +12.3 | 1.245 | | 1.260 | 16+30 qtz outcrop? |
| | REVERSE | | F 200 | S-400 | -12.1 | | 785 | 1.274 | | |
| | 18 | 17 | F 500 | V-200 | +3.7 | +3.5 | 1.053 | | 1.073 | |
| | REVERSE | | F 400 | T-800 | ~~-3.1~~ | | 915 | 1.093 | | |
| RR | 19 | 18 | F-850 | U-450 | -1.9 | +2.2 | 1.014 | | 1.029 | QTZ OUTCP-60' NW |
| ✓ | REVERSE | | F 160 | U-550 | +2.5 | | 958 | 1.044 | | 18+00. PROSPECT. |
| | 19 | 18 | F 800 | U-550 | | | | | | CTRY OUTCP-MED GRD |
| | REVERSE | | F 200 | U-550 | | | | | | GRAY, INTRUSIVE? (DOLW) |

LINE VOLTAGE 424 CURRENT 3.7 RESISTANCE 135-(?) OBSERVER Waite JOB 13-0

FREQUENCY 990 GEN. VOLTAGE 106 POWER 1568 DATE 3/11/52

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 19 | F-650 | 4-650 | ~~+0.1~~ | +0.2 | ~~1.013~~ 1.018 | | ~~1.026~~ 1.030 | |
| | REVERSE | | F 350 | 4-400 | +0.5 | | ~~0.987~~ 0.961 | 1.039 1.041 | | |
| | REVERSE | | | | | | | | | Comp. Pat Checked E.G.H. |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |

# E. M. FIELD NOTES

31

| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 155 | 1 | 0 | G 680 | W 260 | +2.6 | +2.3 | 1.262 | | 1.272 | |
| | REVERSE | | E 540 | T 200 | -2.0 | | 0.760 | 1.282 | | |
| | 2 | 1 | G 500 | V 920 | +1.9 | +1.6 | 1.212 | | 1.224 | Comp. E.G.H. |
| | REVERSE | | E 650 | T 400 | -1.3 | | 0.809 | 1.236 | | Checked Pat |
| | 3 | 2 | G 450 | V 900 | | | | | | |
| | REVERSE | | E 660 | T 410. | | | | | | |
| | R | R. | G 470 | V 900 | +2.0 | +1.7 | 1.209 | | 1.221 | |
| | REVERSE | | E 670 | T 410. | -1.3 | | 0.812 | 1.232 | | |
| | 4 | 3 | G 430 | W-80 | +3.0 | +2.7 | 1.222 | | 1.234 | |
| | REVERSE | | E 700 | T 300 | -2.3 | | 0.803 | 1.245 | | |
| | 5 | 4 | G 390 | W 780 | +5.7 | +5.6 | 1.289 | | 1.303 | |
| | REVERSE | | E 650 | S 860 | -5.3 -5.2 | | 0.760 | 1.316 | | |
| 8 | 6 | 5 | G 200 | W 610 | +6.2 | +5.8 | 1.255 | | 1.270 | |
| ? | REVERSE | | E 750 | S 940 | -5.3 -5.4 | | 0.779 | 1.284 | | |

LINE VOLTAGE 392 CURRENT 3.7 RESISTANCE 136 (?) OBSERVER J + C. JOB RD

FREQUENCY 390 GEN. VOLTAGE 98 POWER 1450 DATE 3/11/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | 7 | 6 | G180 | V930 | ~~+3.5~~ +3.6 | +3.3 | 1.1866 | | 1.201 | |
| | REVERSE | | E860 | T350 | -3.0 | | 0.823 | 1.215 | | |
| | 8 | 7 | G70 | W.80 | ~~+4.6~~ +4.5 | +4.5 | 1.190 | | 1.205 | |
| | REVERSE | | E930 | T-240 | ~~-4.3~~ -4.3 | | 0.820 | 1.220 | | Comp. E.G.H. |
| | 9 | 8 | G30 | V660 | | | | | | Checked Pat |
| | REVERSE | | F0 | T10 | ~~+3.5~~ ~~+3.0~~ | +3.0 | 1140 | | 1154 | |
| | R | R | F970 | V660 | ~~+3.4~~ +2.9 | +2.9 | ~~1129~~ | | ~~1149~~ | x |
| | REVERSE | | F20 | T020 | ~~-3.4~~ -2.9 | | 0.856 | 1.168 | | |
| | 10 | 9 | F980 | V260 | +1.6 | +1.3 | 1.100 | | 1.118 | |
| | REVERSE | | F70 | T870 | -0.9 | | 0.880 | 1.136 | | |
| | 11 | 10 | F950 | V440 | +2.5 | +2.2 | 1.116 | | 1.129 | |
| | REVERSE | | F70 | T710 | -1.9 | | 0.876 | 1.142 | | |
| | 12 | 11 | F930 | V580 | +3.2 | +3.1 | 1.128 | | 1.142 | |
| | REVERSE | | F90 | T590 | -2.9 | | 0.866 | 1.155 | | |

# E. M. FIELD NOTES



| LINE | COIL LOCATION RED | COIL LOCATION BLACK | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| 155. | 13 | 12 | F930 | V550 | +3.1 | +2.9 | 1.123 | | 1.138 | |
| | REVERSE | | F80 | T620 | ~~-2.4~~ 2.6 | | 0.868 | 1.152 | | |
| | 14 | 13 | F890 | V550 | ~~+3.4~~ 3.3 | +3.1 | 1.121 | | 1.137 | |
| | REVERSE | | F100. | T590 | ~~-3.0~~ 2.9 | | 0.868 | 1.152 | | Comp. EC-H |
| | 15 | 14 | F770 | V760 | +4.9 | +4.6 | 1.131 | | 1.146 | Checked Pat |
| | REVERSE | | F180 | T450 | ~~-4.1~~ 4.3 | | 0.862 | 1.160 | | |
| | 16 | 15 | F900 | V290 | +2.0 | +1.8 | 1.097 | | 1.110 | |
| | REVERSE | | F140 | T820 | ~~-1.5~~ 1.6 | | 0.891 | 1.122 | | |
| | 17 | 16 | G50 | U900 | ~~-0.5~~ 0.6 | ~~0.5~~ | 1.073 | | 1.086 | |
| | REVERSE | | F70 | U100 | +0.4 | | 0.910 | 1.099 | | |
| R. | 18 | 17 | F950 | V550 | ~~+3.1~~ 3.0 | +2.6 | 1.127 | | 1.139 | |
| ? | REVERSE | | F70. | T650 | -2.2 | | 0.869 | 1.151 | | |
| | 19 | 18 | F700 | W290 | +7.3 | +7.2 | ~~1.01~~ 1.179 | | ~~1.197~~ 1.198 | |
| | REVERSE | | F150. | T0 | -7.1 | | 0.823 | 1.215 | | |

LINE VOLTAGE _____ CURRENT _____ RESISTANCE _____ OBSERVER J. & C JOB R-D

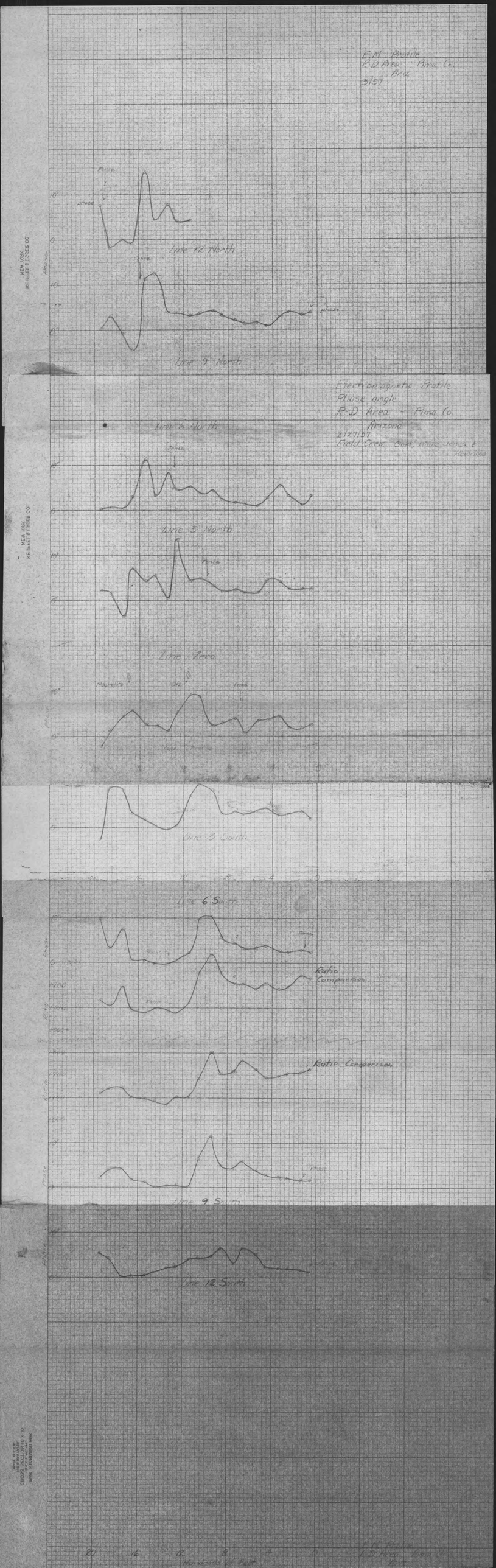
FREQUENCY _____ GEN. VOLTAGE _____ POWER _____ DATE 3/11/57

| LINE | COIL | COIL | BRIDGE READING LEFT | BRIDGE READING RIGHT | PHASE ANGLE | AVE. PH. ANGLE | RATIO | RECIPTICAL RATIO | AVERAGE RATIO | REMARKS |
|---|---|---|---|---|---|---|---|---|---|---|
| | 20 | 19 | F 800 | R 800 | +4.9 | +4.6 | 1.138 | | 1.155 | |
| | REVERSE | | F 130 | T 410 | -4.3 | | 0.854 | 1.171 | | Comp. E.G.H. Checked Pat |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |
| | REVERSE | | | | | | | | | |

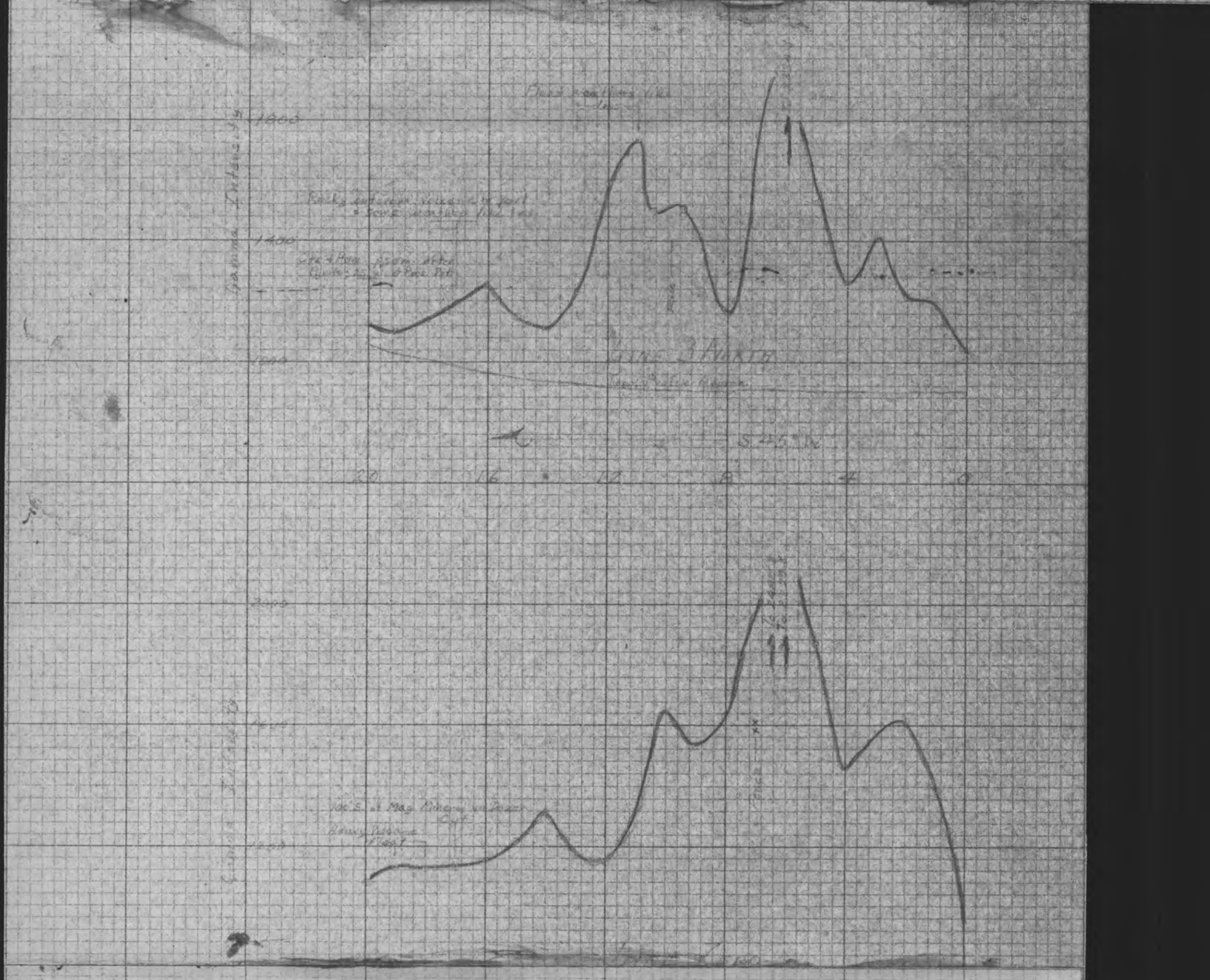
new valve on gas can
fix lead

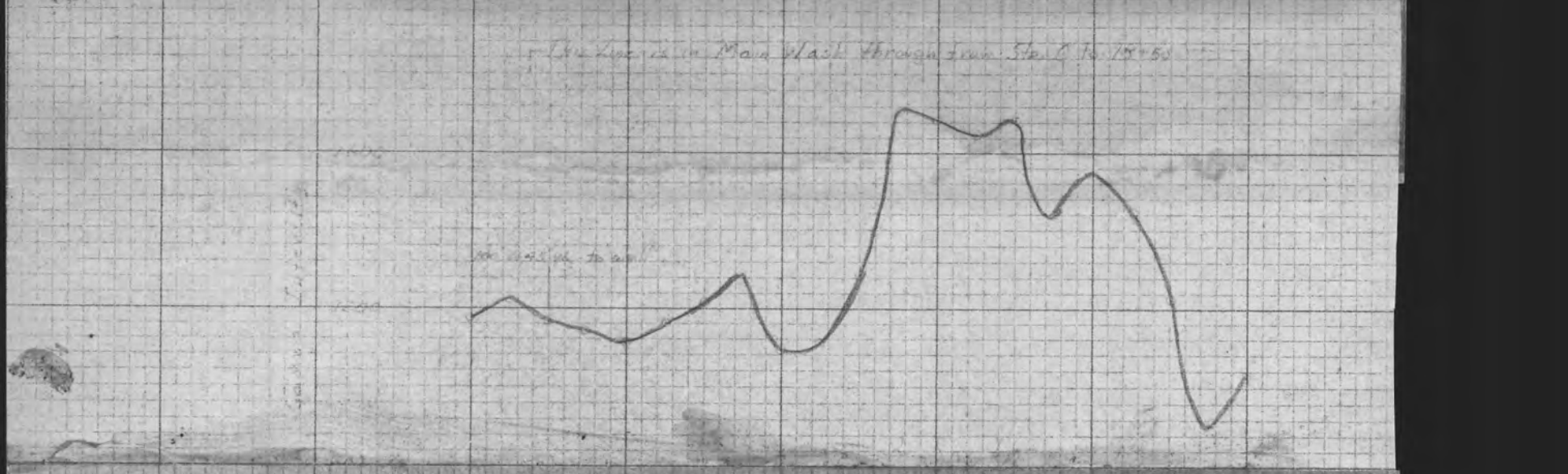
112
3.00
336.00
3.4
1344
1008
1142

98
1400
392.00
3.7
2794
1176
1450

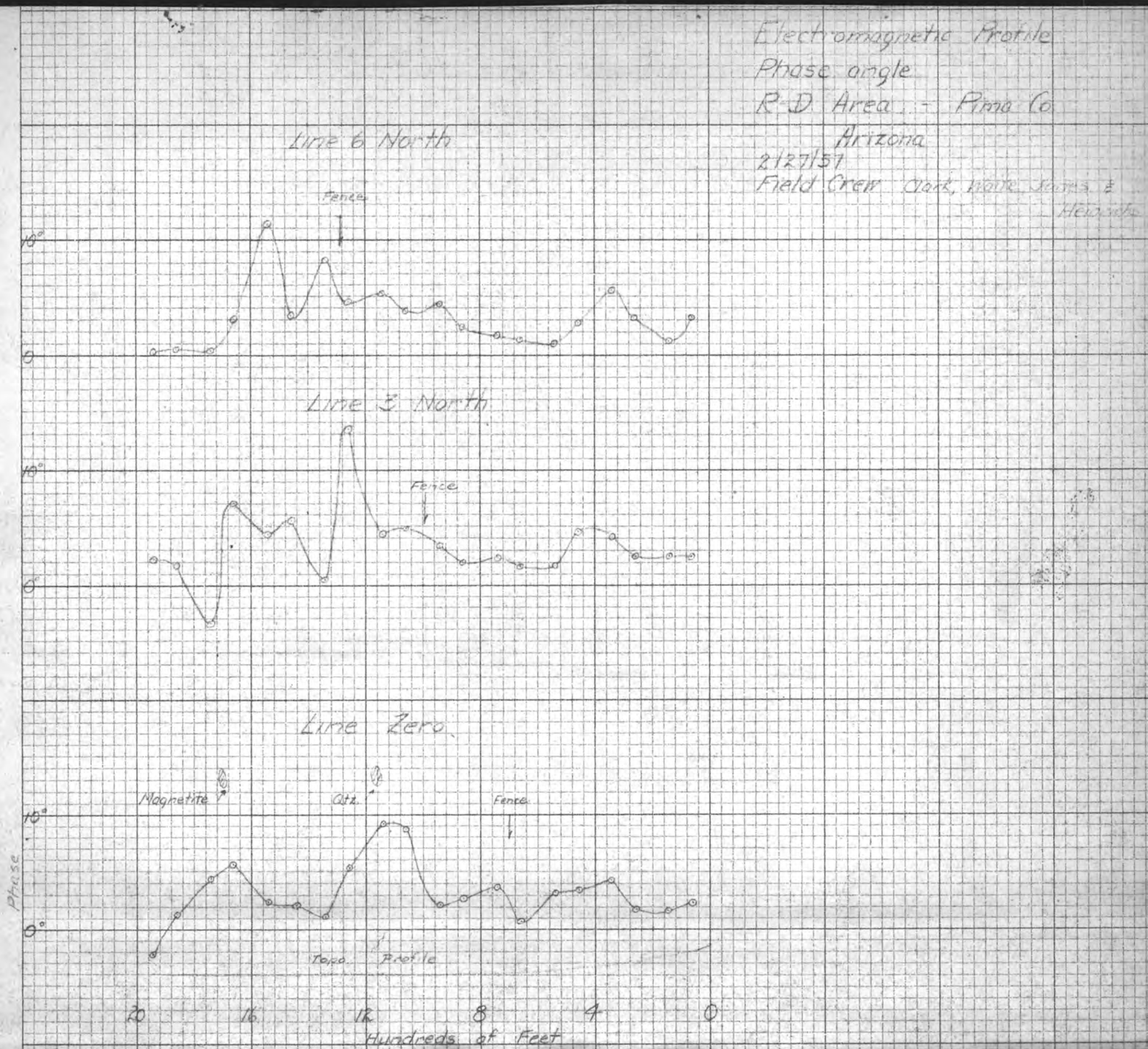

E.M. Profile
R.D. Area Pima Co.
Ariz.
3/57
Line 12 North
Line 9 North
Electromagnetic Profile
Phase angle
R-D Area - Pima Co.
Arizona
2/27/57
Field Crew Clark, White, Jones & Hendricks
Line 6 North
Line 3 North
Line Zero
Line 3 South
Line 6 South
Ratio Comparison
Ratio Comparison
Line 9 South
Line 12 South
Hundreds of Feet
E.M. Profile
R.D. Area Pima Co.
Ariz.

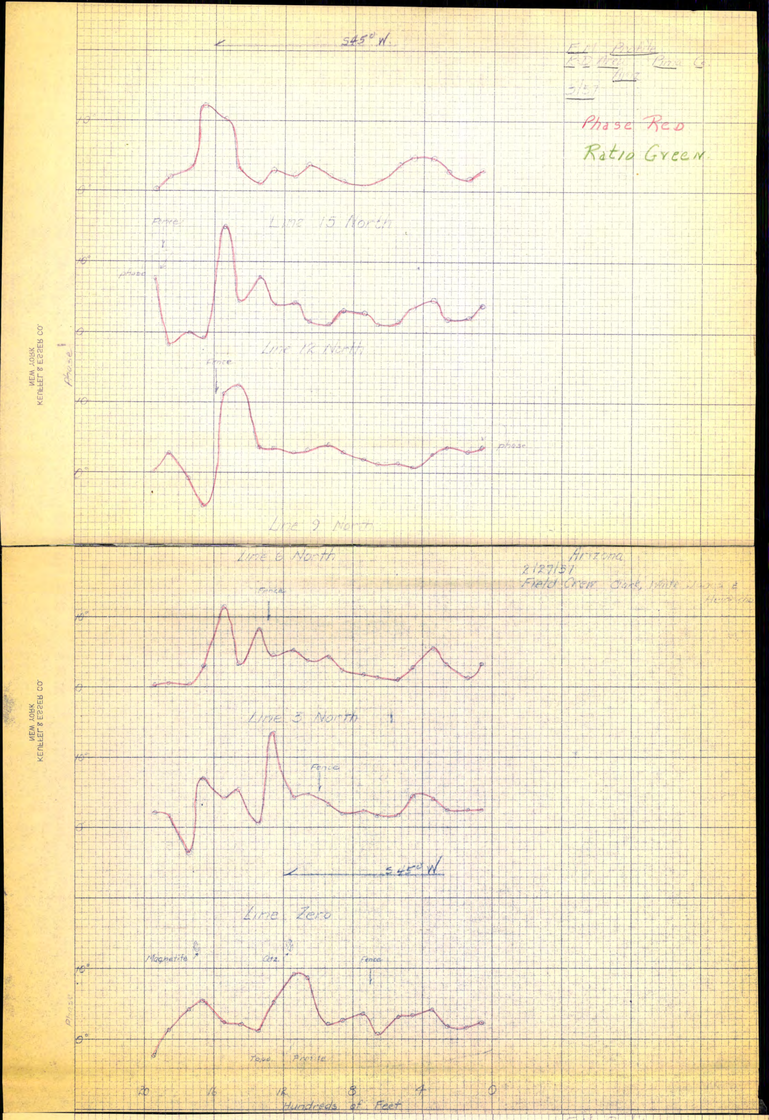
Line 9 North
Hundreds of feet


Line 3 North
Sta. 5+00 E.
20
16
12
8
4
0

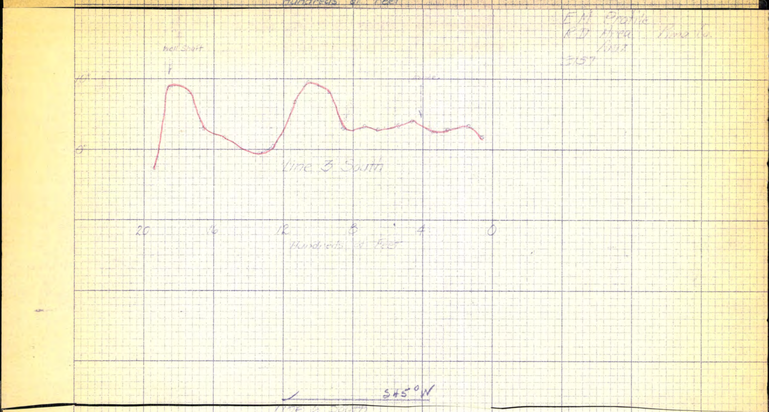

Line 1 East of Main Block through from Sta. 0 to 15+50

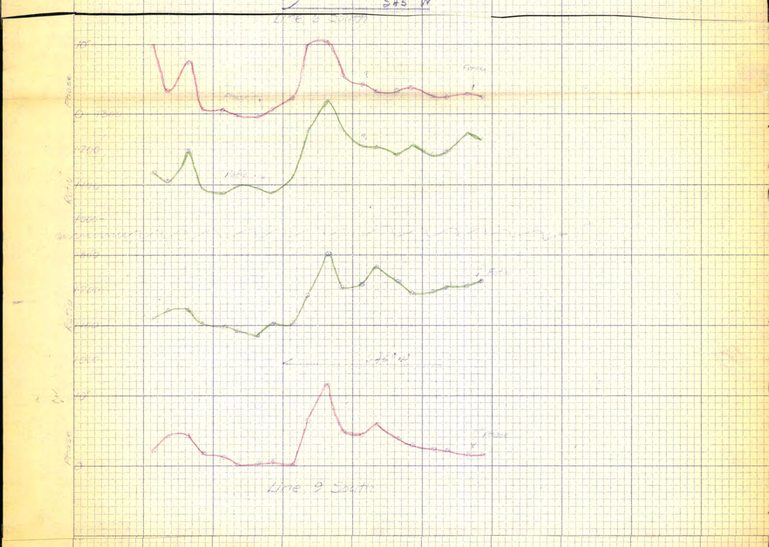
Magnetic
Vertical Intensity
3157
K-D Area
Line 6 South
10
20
16
12
8
4
0
Hundreds of feet


Electromagnetic Profile
Phase angle
R-D Area - Pima Co
Arizona
2/27/57
Field Crew Clark, Waite, James & Heinrich
Line 6 North
Fence
10°
0
Line 3 North
Fence
10°
0°
Line Zero
Magnetite
Qtz.
Fence
10°
0°
Phase
Topo. Profile
20
16
12
8
4
0
Hundreds of Feet


345° W
Phase Red
Ratio Green
Line 15 North
Line 12 North
Line 9 North


Line 6 North
Line 3 North
345° W
Line Zero
Magnetite
Quartz
Fence
Talus
Pyrite
Hundreds of Feet


Line 3 South
Hundreds of Feet

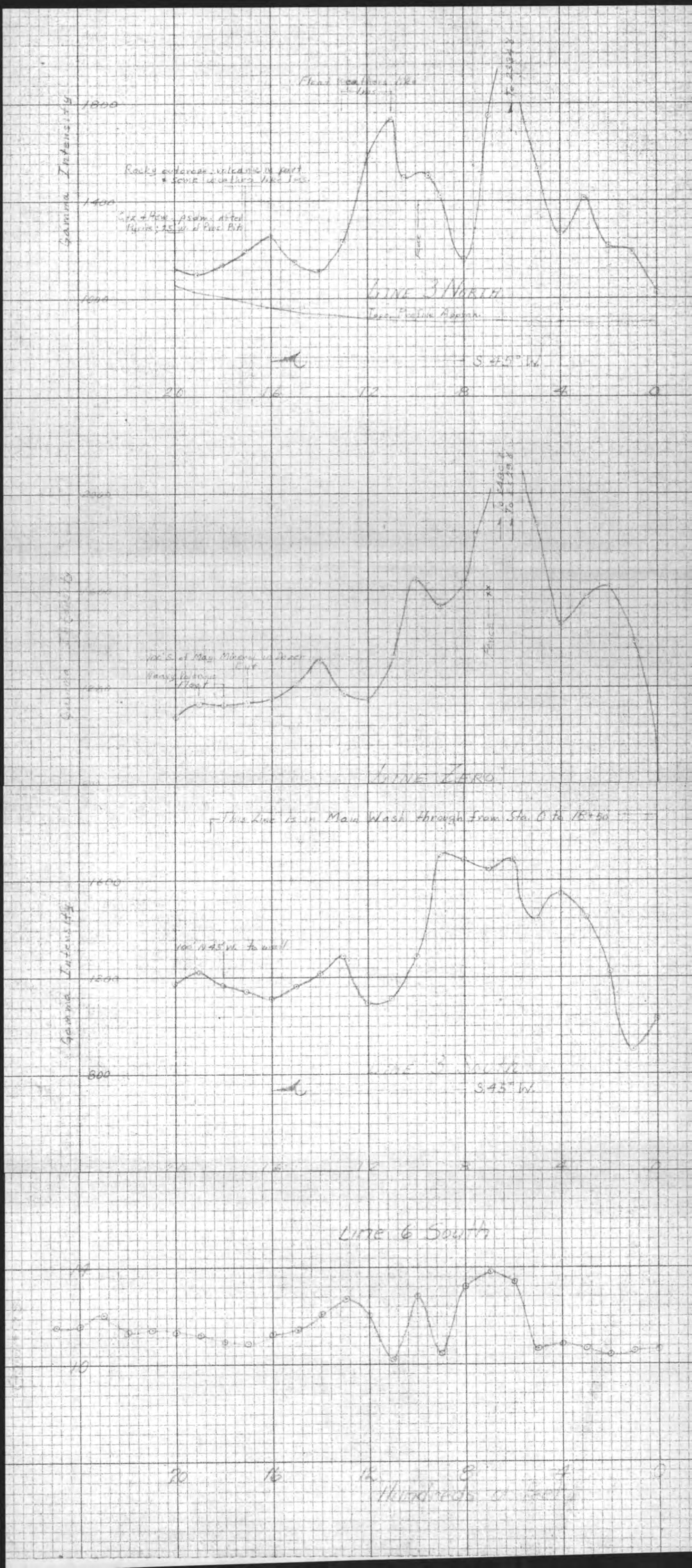

345° W
Line 6 South
Line 9 South

Line 12 South
Line 15 South
345° W
Hundreds of Feet

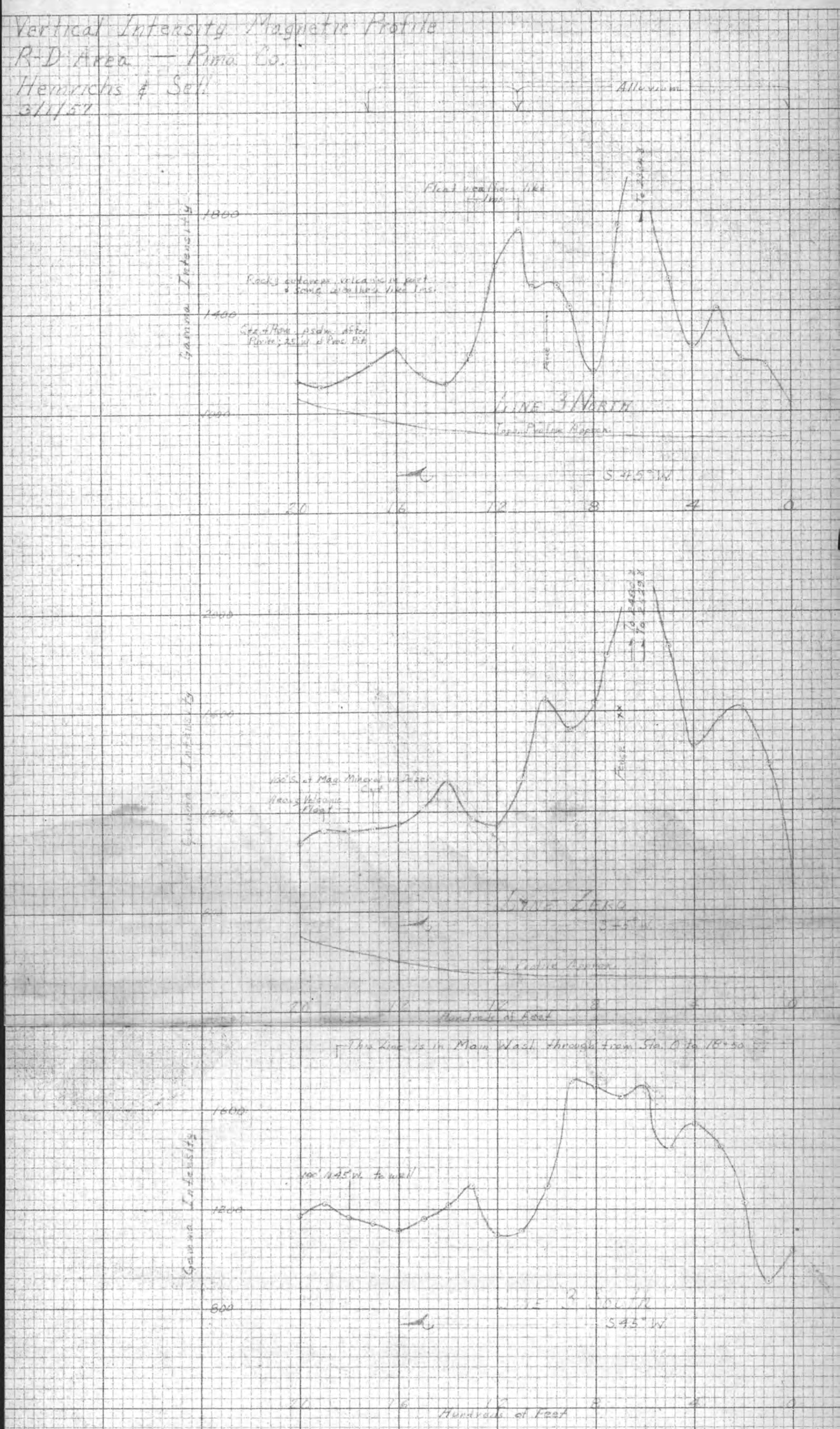
MISC. - EXTRAS

R-D.

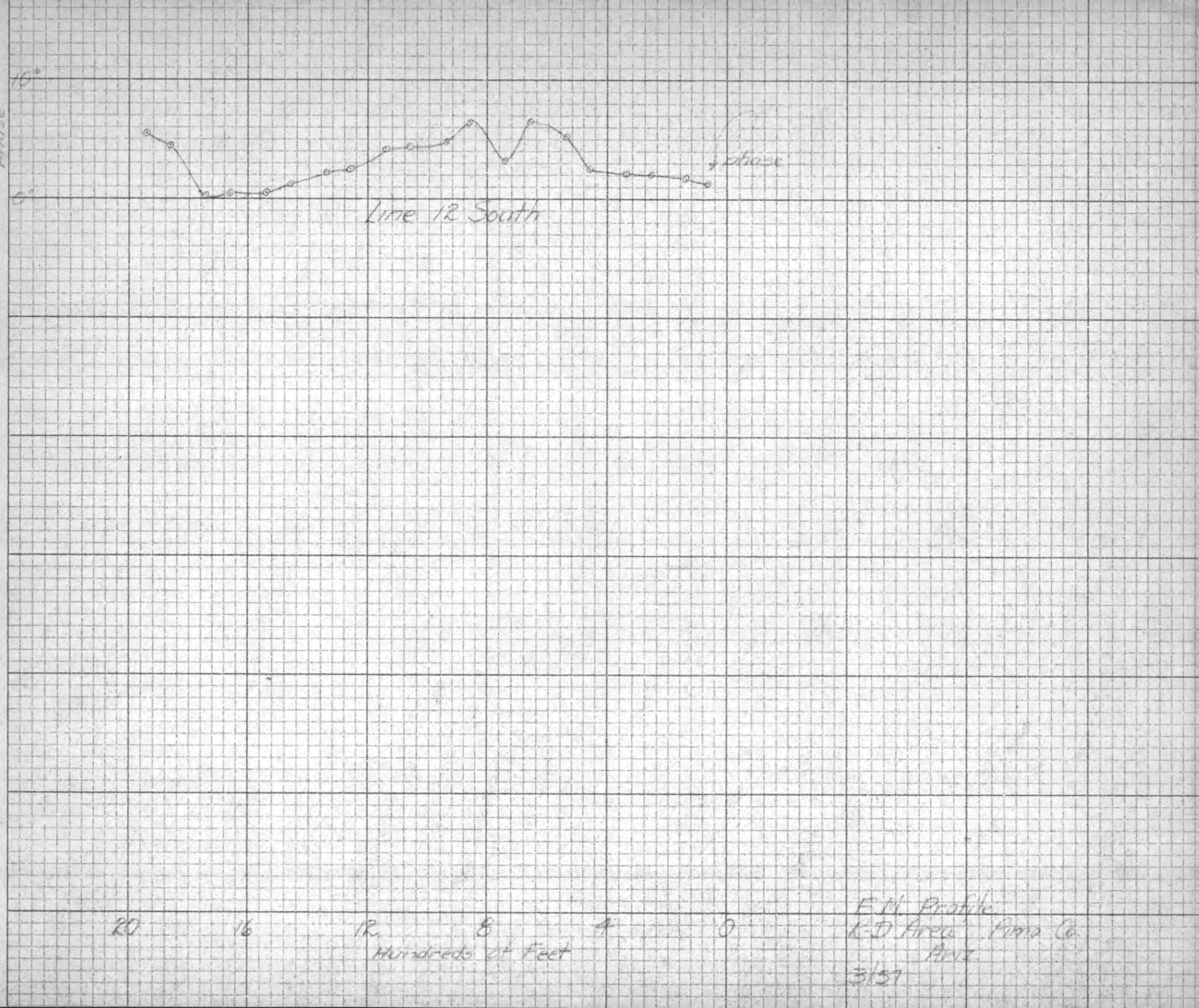
E-M PROFILE — Magnetic Vertical Intensity


Gamma Intensity
1800
1400
1000
Float weathers like Ims.
Rocky outcrops, volcanic in part
Line 3 North
Topo. Profile Approx.
S 45° W
20
16
12
8
4
0
Line Zero
This Line is in Main Wash through from Sta. 0 to 18+50
1600
1200
800
100' N 45° W. to wall
Line 3 South
S 45° W.
Line 6 South
14
10
Hundreds of Feet

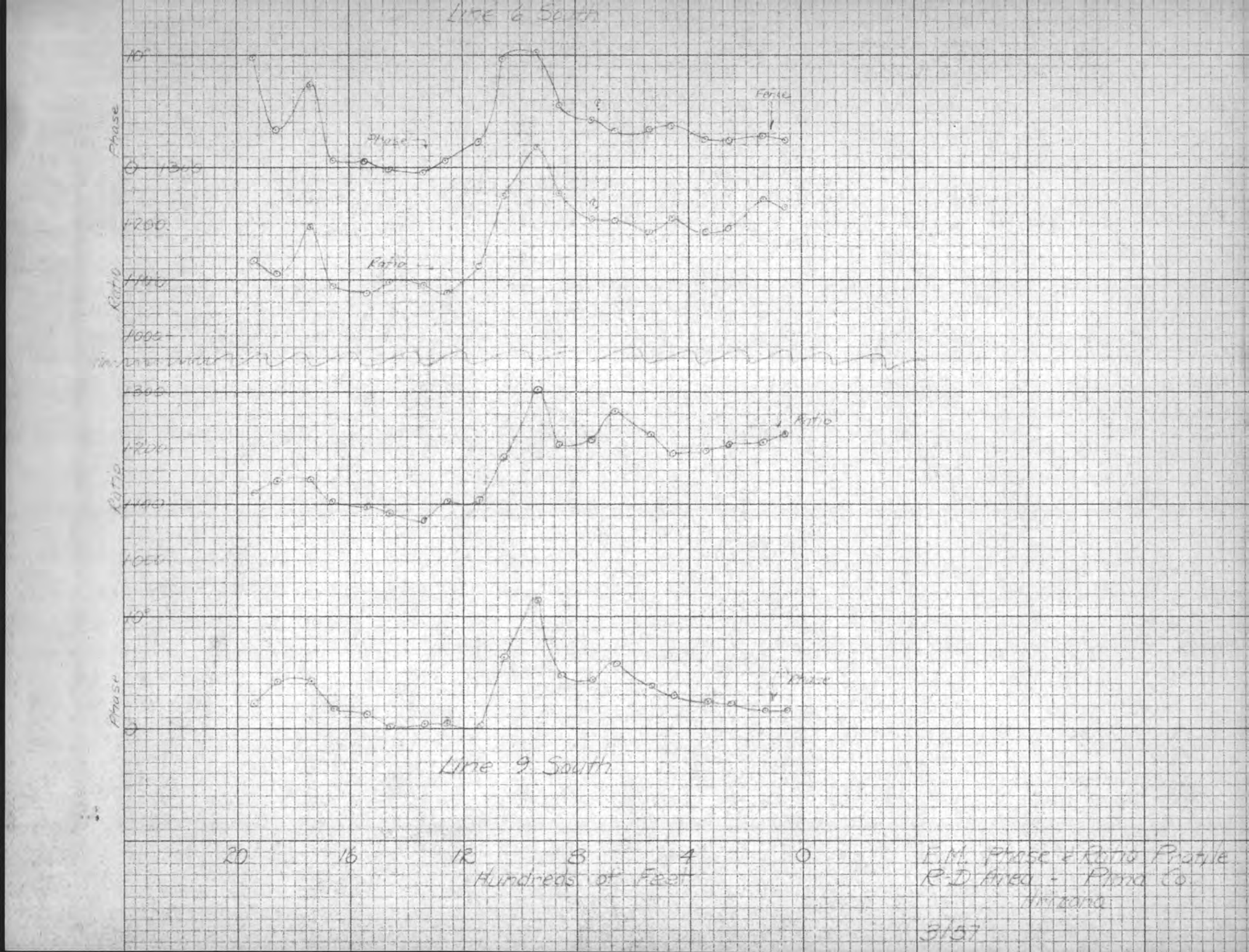
Vertical Intensity Magnetic Profile
R-D Area — Pima Co.
Hemrichs & Sell
3/1/57



TRADE STANDARD MARK
REG. U.S. PAT. OFF.
CROSS SECTION 10 X 10
100% RAG PAPER
MADE IN U.S.A.

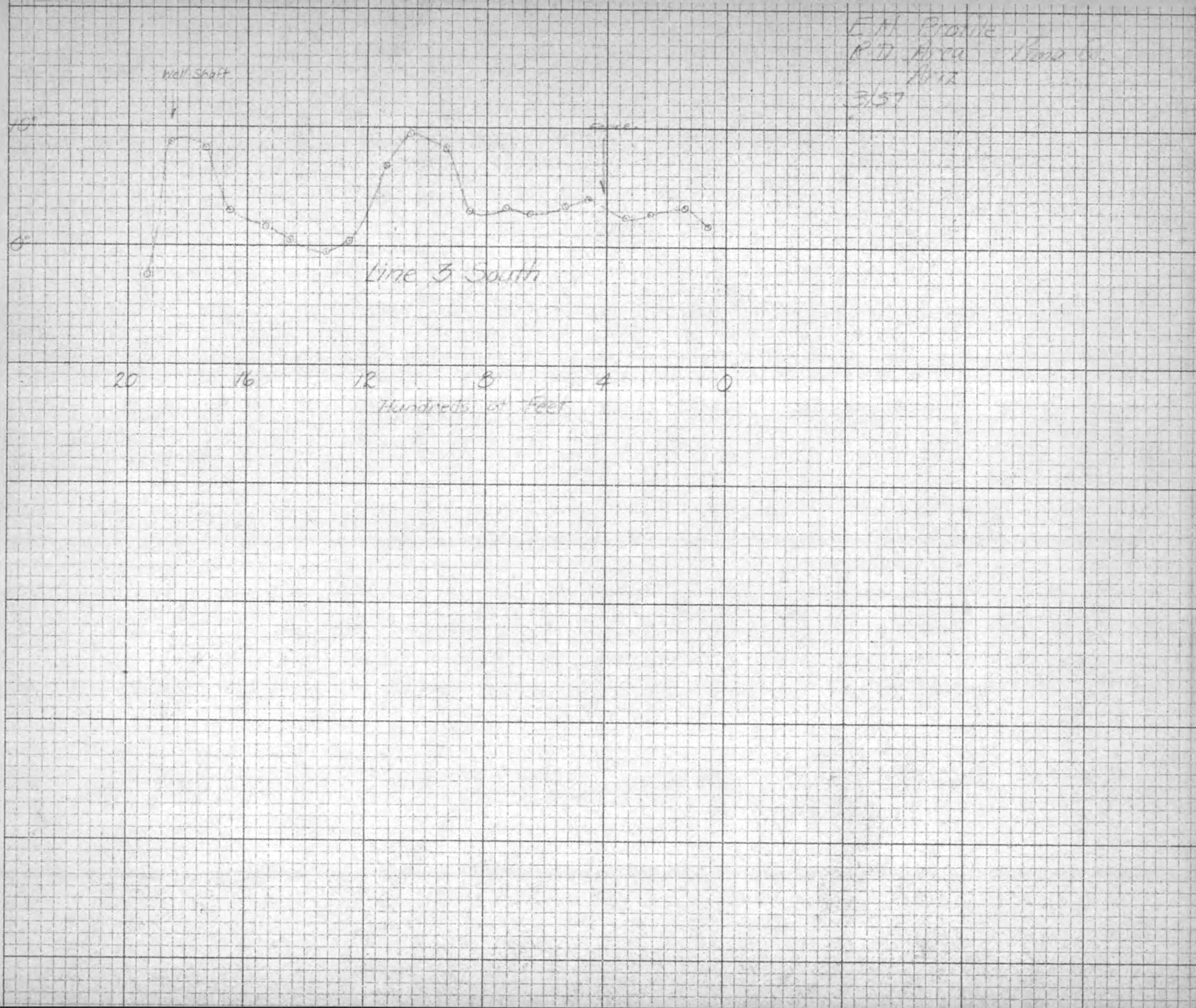


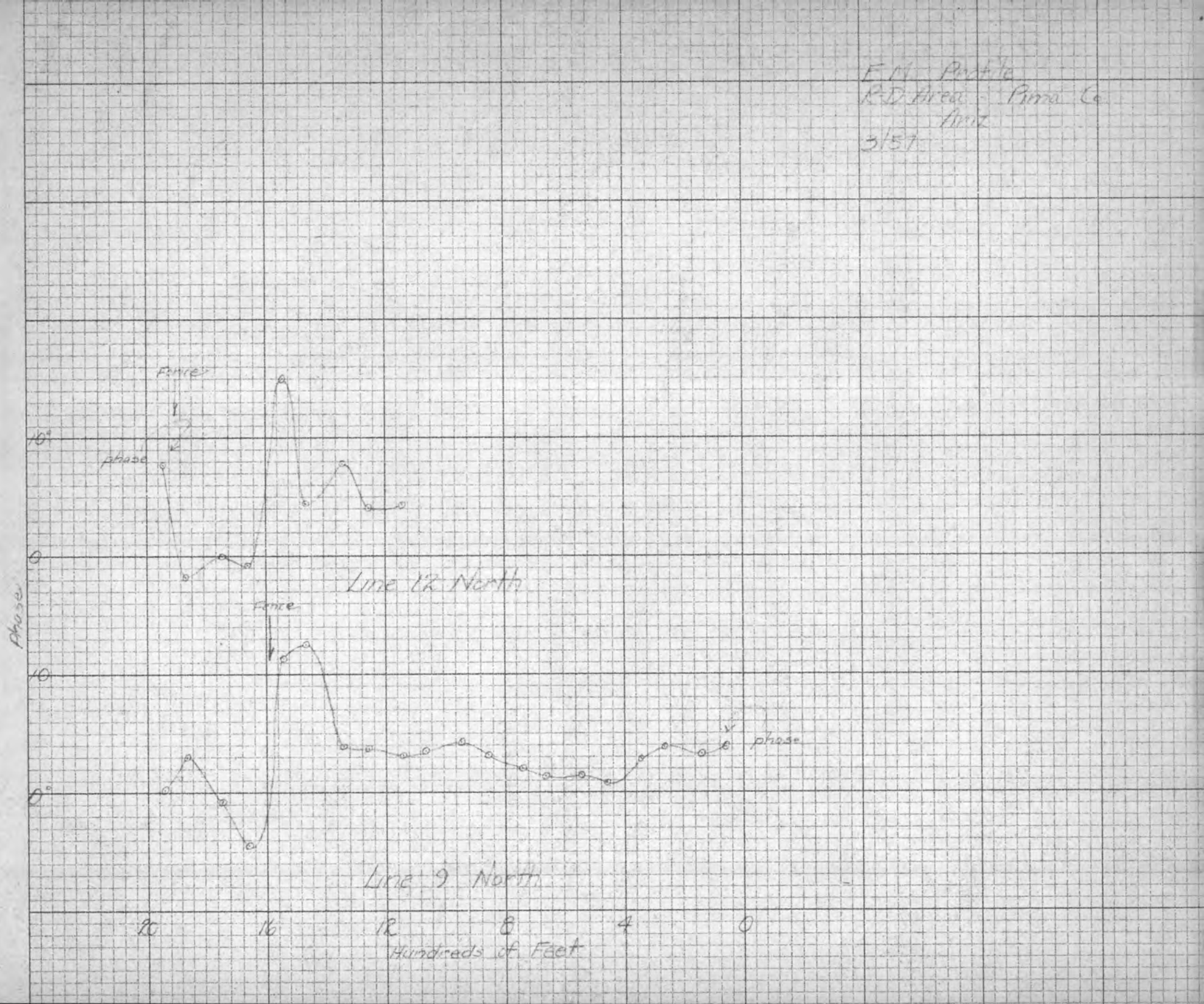
10°
Phase
0°
+ phase
Line 12 South
20
16
12
8
4
0
Hundreds of Feet
F.M. Profile
K-D Area Pima Co.
Ariz.
3/57

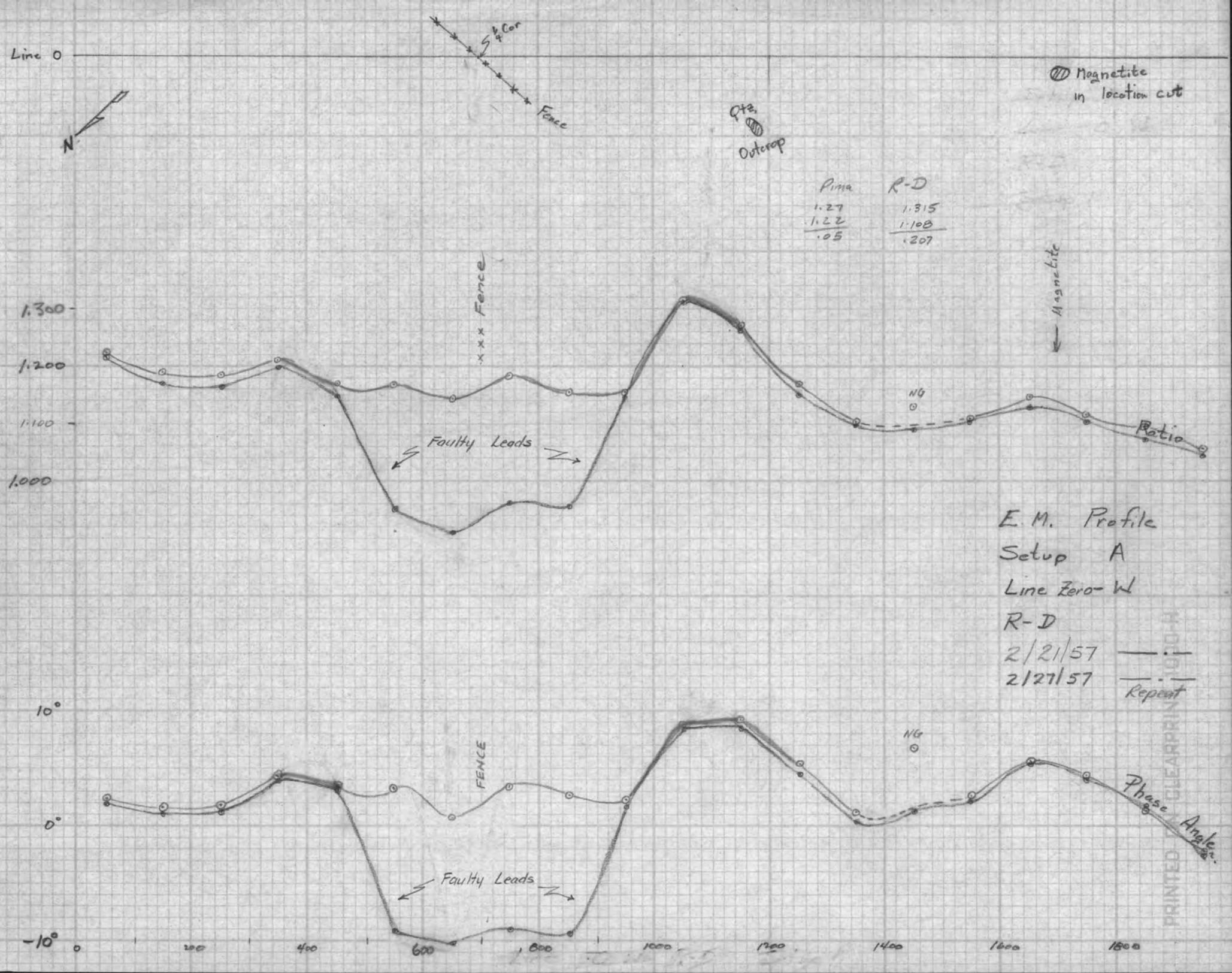


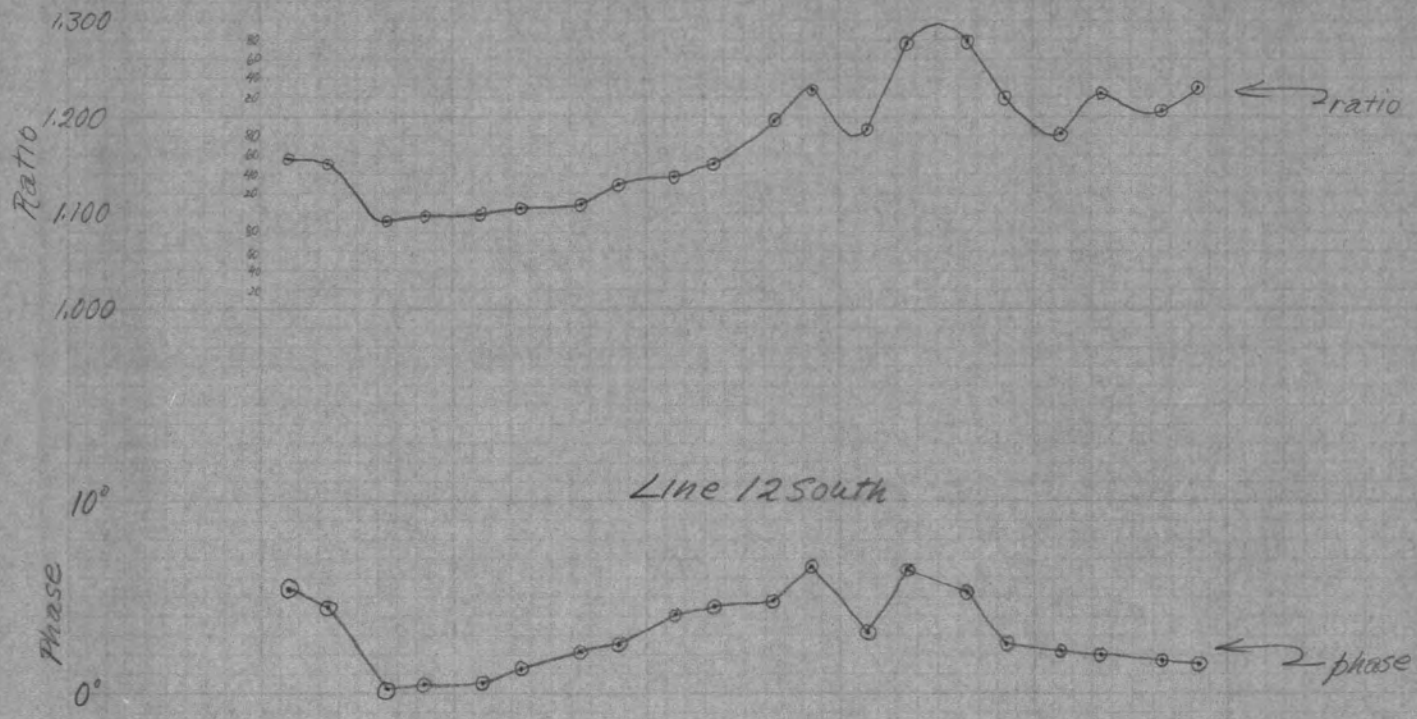

E.M. Phase & Ratio Profile
R-D Area - Pima Co.
Arizona

3157


Well Shaft
16°
8°
Line 3 South
20
16
12
8
4
0
Hundreds of Feet


E.M. Profile
R-D Area - Pima Co
Ariz
3/57
Fence
phase
10°
0
Line 12 North
Fence
10
0°
phase
Line 9 North
20
16
12
8
4
0
Hundreds of Feet
Phase

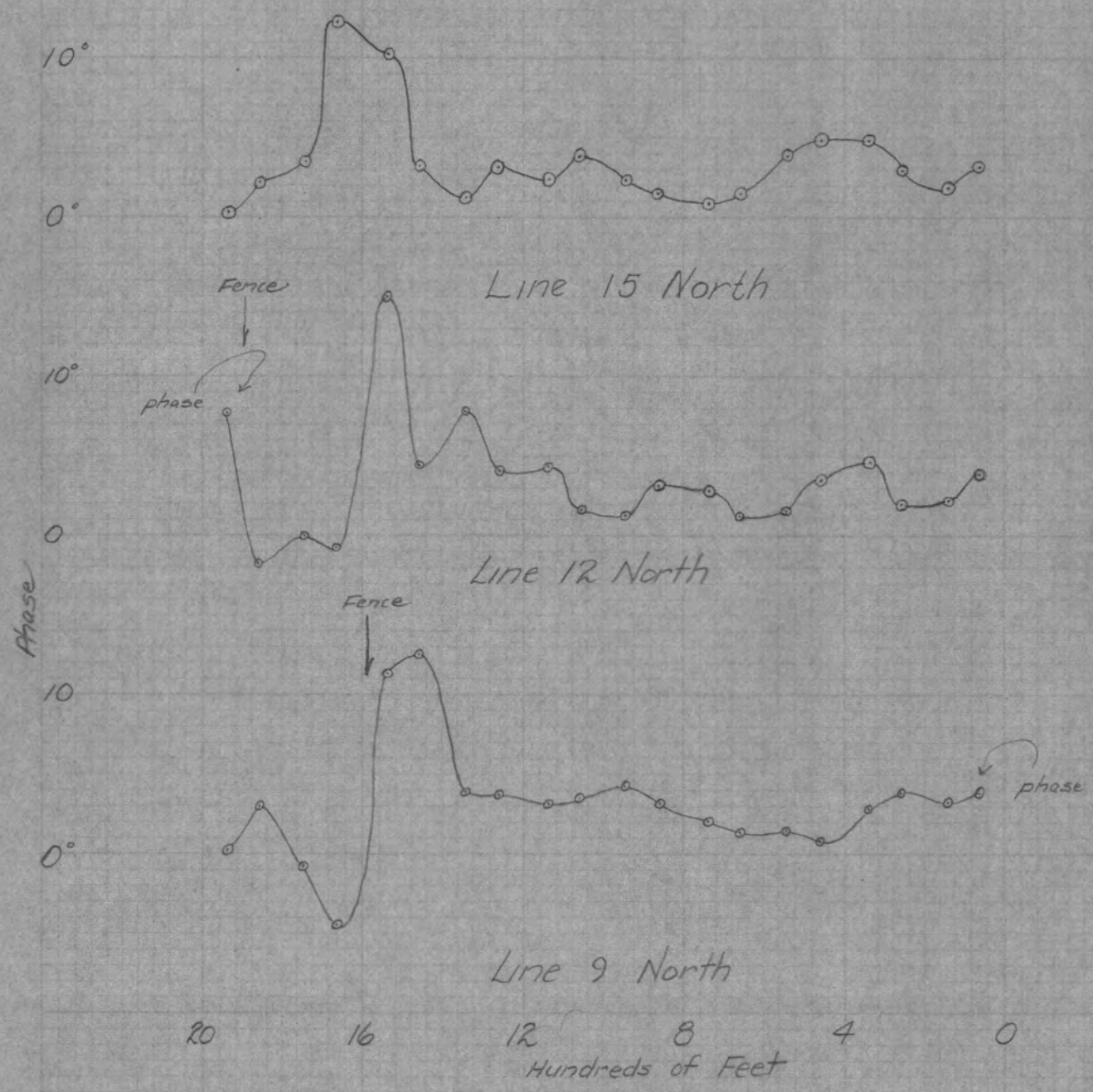

Line 0
¼ Cor
Fence
N
Magnetite in location cut
Qtz.
Outcrop
Pima
1.27
1.22
.05
R-D
1.315
1.108
.207
Magnetite
1.300
1.200
1.100
1.000
Fence
Faulty Leads
NG
Ratio
E. M. Profile
Setup A
Line Zero - W
R-D
2/21/57
2/27/57
Repeat
10°
0°
-10°
FENCE
Faulty Leads
NG
Phase Angle
0
200
400
600
800
1000
1200
1400
1600
1800



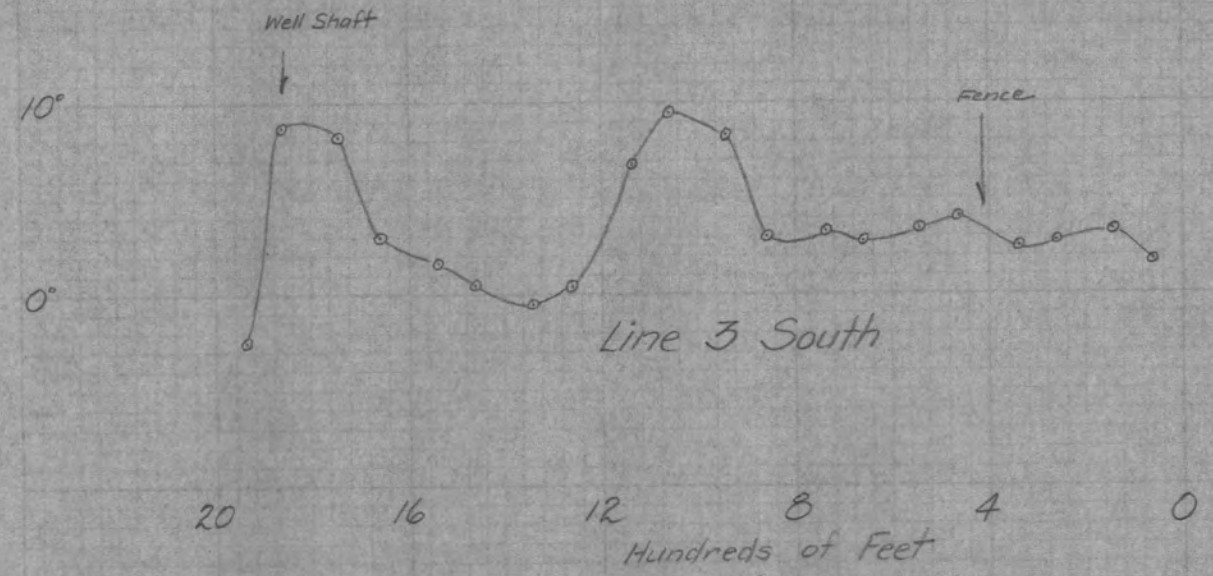

E.M. Phase & Ratio Profile
R-D Area - Pima Co., Ariz
3/5/57

S45° W.

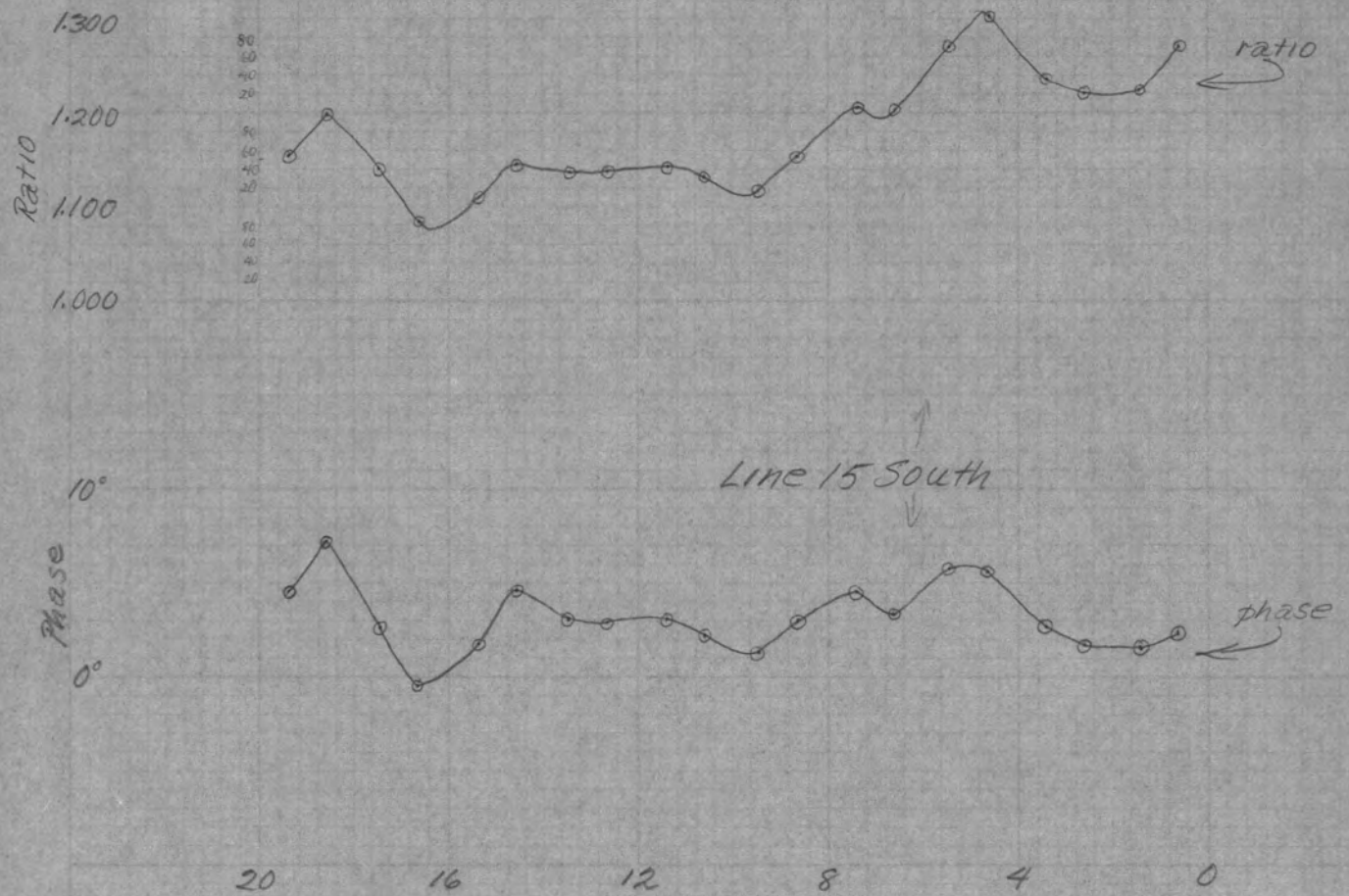
E.M. Profile
R-D Area - Pima Co.
Ariz.
3/57



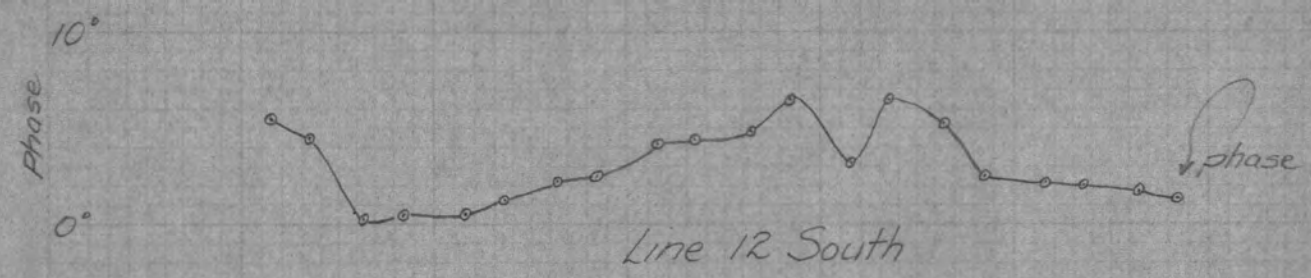
E.M. Profile
R-D Area Pima Co.
Ariz.
3/57

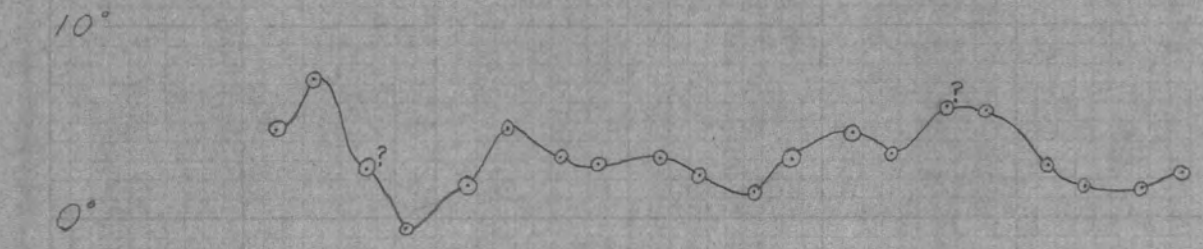



S 45° W




EM Phase & Ratio Profile
R-D Area - Pima Co., Ariz
3/11/57




Line 15 South

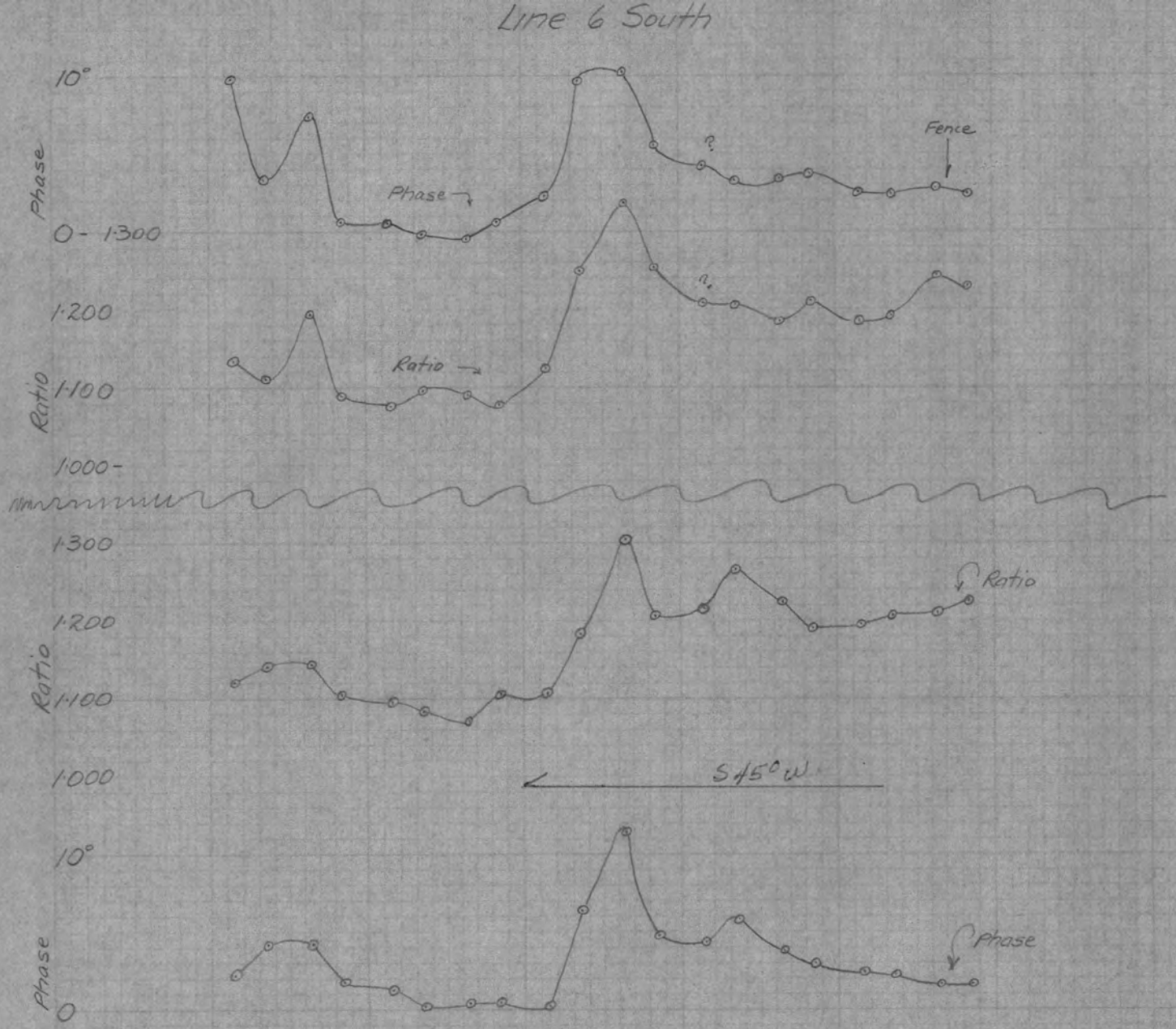
10°

S45°W

20 16 12 8 4 0

Hundreds of Feet

E.M. Profile
R-D Area Pima Co.
Ariz.
3/57

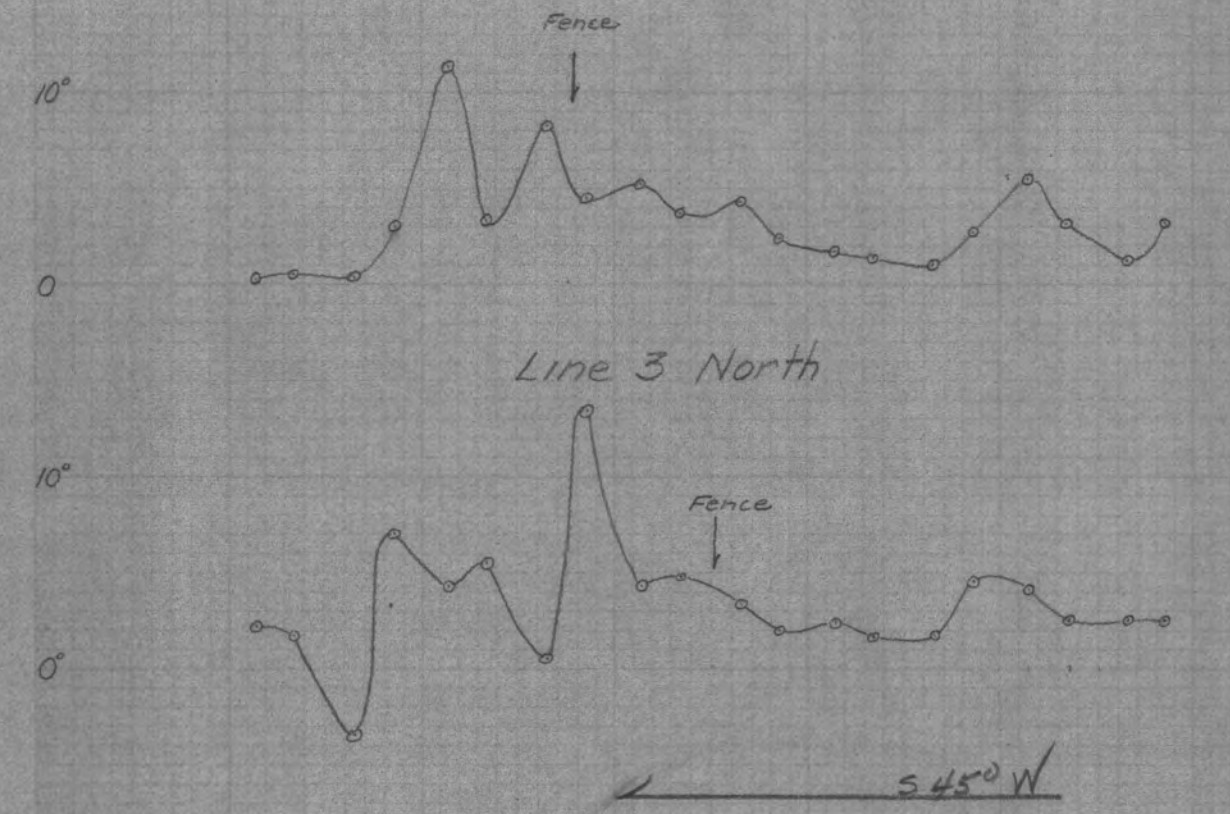



3/57

E.M. Phase & Ratio Profile
R-D Area - Pima Co.
Arizona

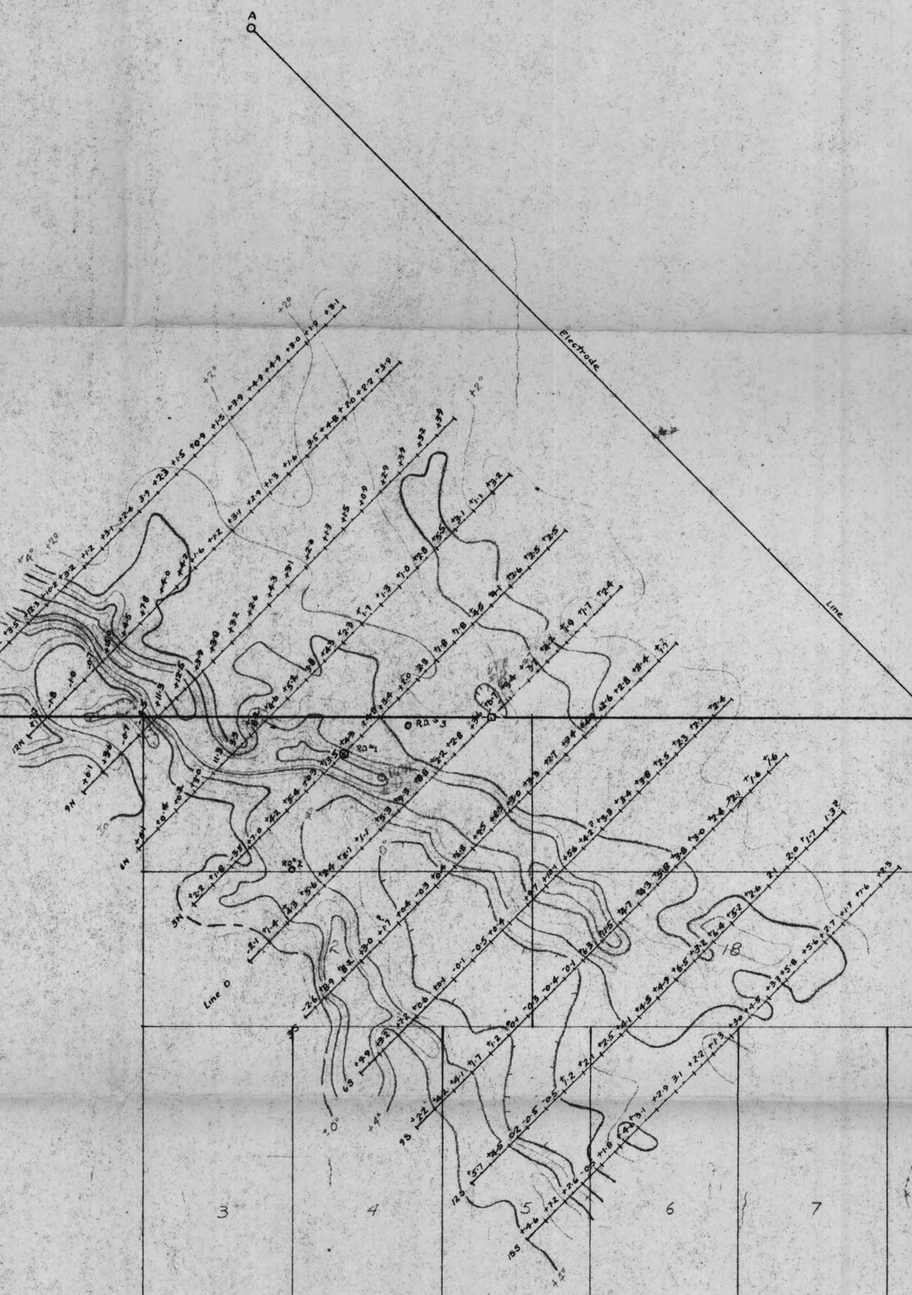
Arizona
2/27/57
Field Crew

# Electromagnetic Profile
# Phase Angle
# R-D Area - Pima Co.
# Arizona
# 2/27/57
# Clark, Waite, Jones & Heinrichs



27

26



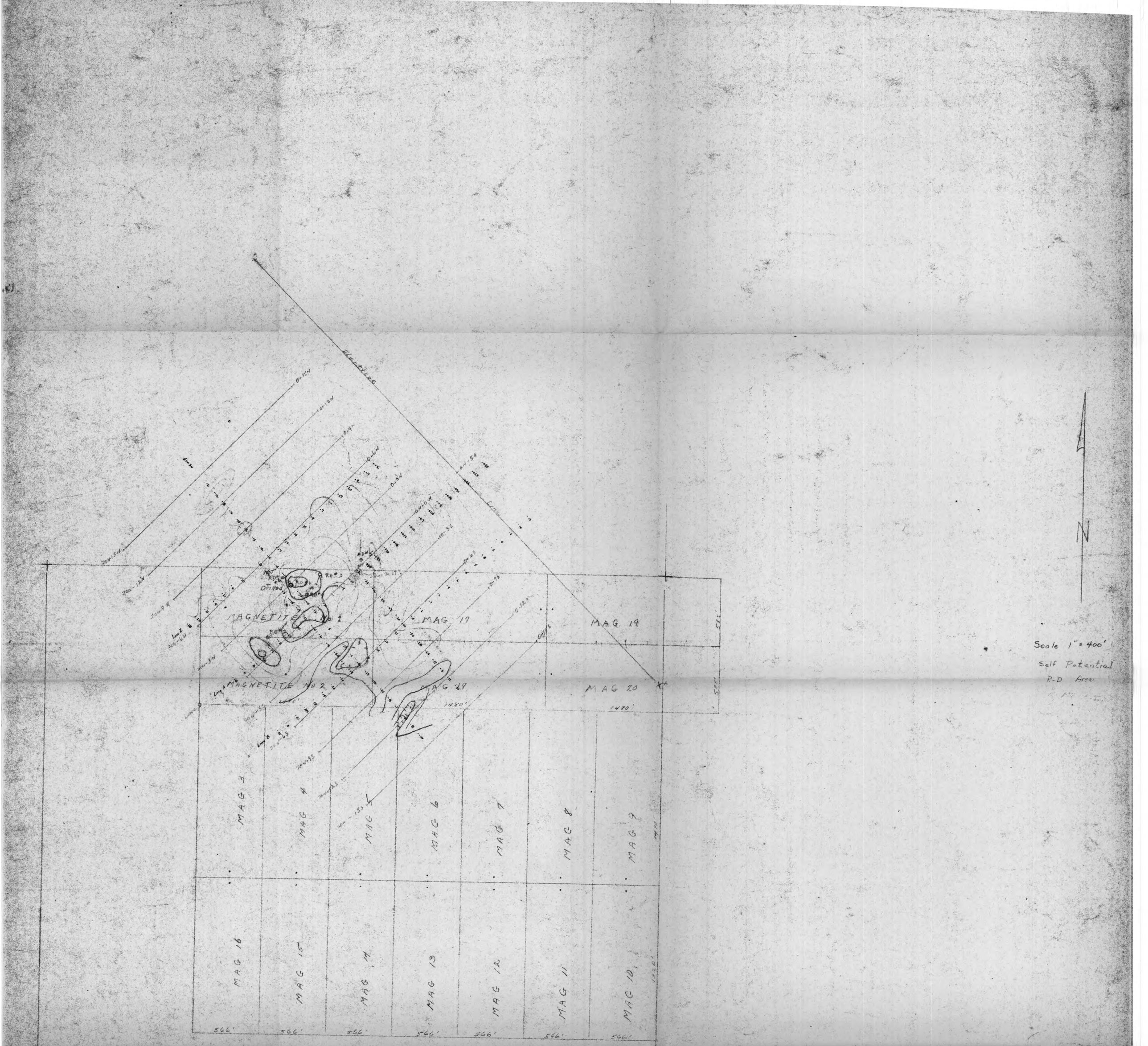

T
14
S

34

35

R10E

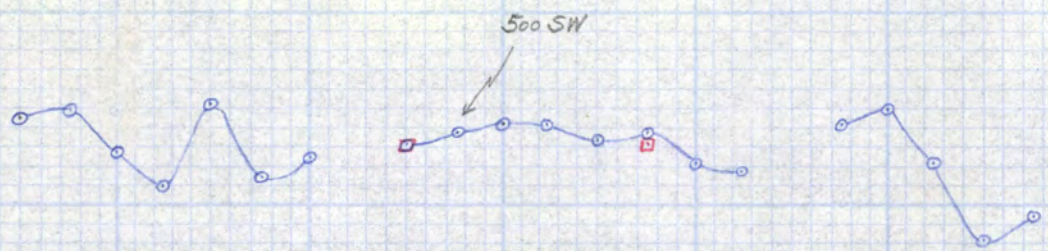
Leakage
EM Phase


MAGNETITE No 1
MAGNETITE No 2
MAG 19
MAG 19
MAG 20
MAG 3
MAG 4
MAG 5
MAG 6
MAG 7
MAG 8
MAG 9
MAG 16
MAG 15
MAG 14
MAG 13
MAG 12
MAG 11
MAG 10
1480'
1320'
566'
N
Scale 1" = 400'
Self Potential
R-D Area

Rodange
S.P.

Line Z S.P. Profile

R-D Area
Scale Hor. 1" = 400'
Vert. 1" = 40 M/v
adjusted ——— 1/15/57




+40

0

-40

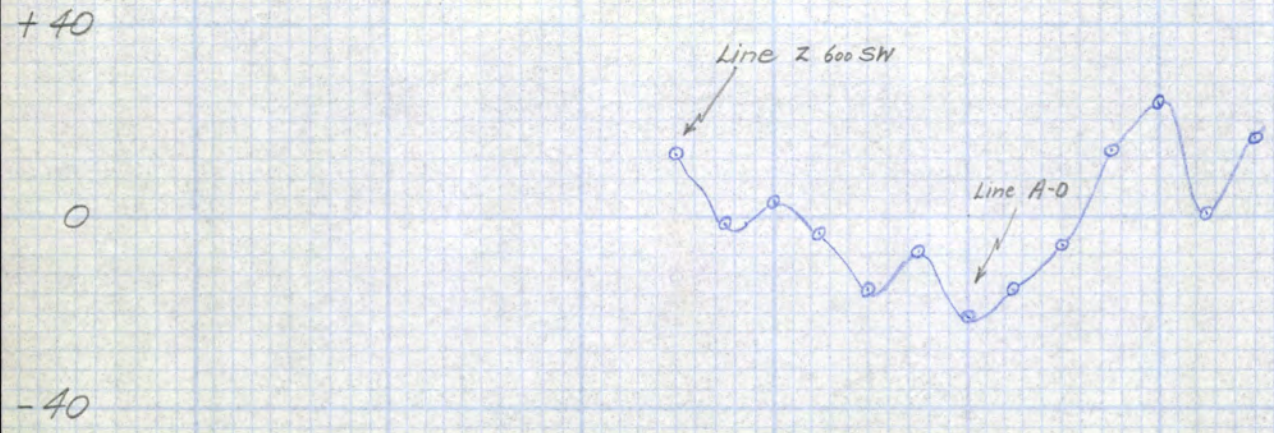
16 SW 12 8 4 0 4 8 12 16 NE

PRINTED ON DIAPRINT 1000-H

Line 600 SW

R-D Area
Scale Hor. 1" = 400'
Vert. 1" = 40 M/V

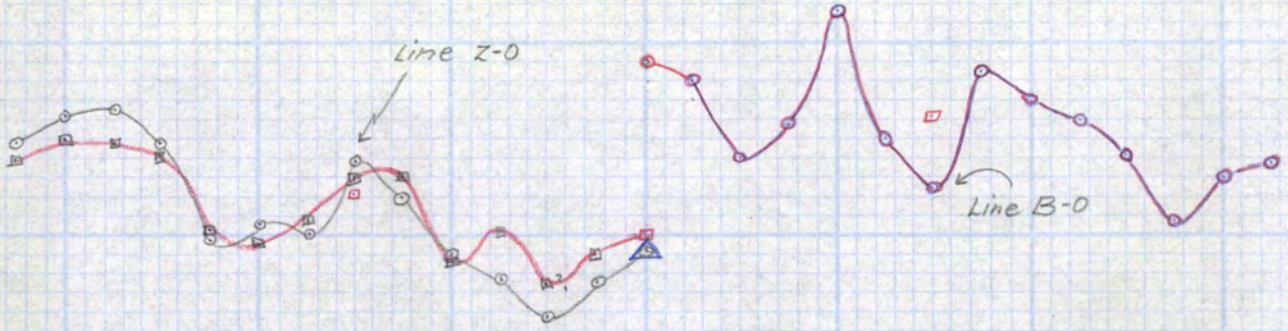
adjusted —— 1/14/57




16 NW 12 8 4 0 4 8 12 16 SE

PRINTED ON CLEARPRINT 1000-H

Line 0 S.P. Profile
1/25/57
R-D Area
Scale Hor. 1" = 400'
Vert. 1" = 40 M/V
Not adjusted
adjusted
1/4/57
1/14/57




+40
0
-40

16 NW 12 8 4 0 4 8 12 16 SE

PRINTED ON CLEARPRINT 1000-H

Line A S.P. Profile
1/14/57
R-D Area
Scale Hor. 1" = 400'
Vert. 1" = 40 M/V

Repeat readings x
Repeat lines — 1/25/57
Not adjusted — 1/4/57
adjusted — 1/14/57
— 1/14/57 without water
— 1/14/57 Soaked water

Line Z

+40
0
-40

Dozer cut Magnetite

40
0
40

No Water
adjusted
26 MV

16 SW 12 8 4SW 0 4 NE 8 12 16 NE

PRINTED ON CLEARPRINT 1000-H

Line "B" S.P. Profile
1/25/57
R-D Area
Scale Hor. 1"=400'
Vert. 1"=40M/v
Repeat — 1/5/57
Not adjusted
adjusted — 1/4/57
1/5/57
□ Closed loop 1/15/57

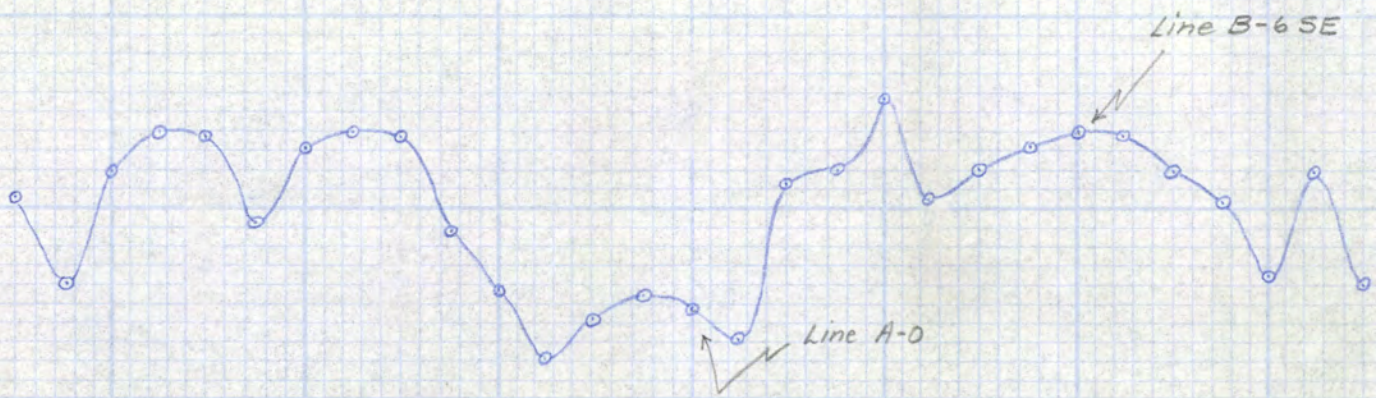
+40
0
-40

16 S NW 12 8 4 0 4 8 12 16 N SE

PRINTED ON CLEARPRINT 1000-H

Line 500 SW

R-D AREA
Scale Hor. 1" = 400'
Vert. 1" = 40 M/r
adjusted ——— 11/15/57




16 NW 12 8 4 0 4 8 12 16 SE

PRINTED ON CLEARPRINT 1000-H

R.D.

Self Potential

PROPERTY OF

_____

_____

_____

# LEFAX

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X1751

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BOS
5-8-57
SP

TR. MK. REG. U.S. PAT. OFF.

# BASE STA

LINE ZERO 1500

0 VOLTS CALIBRATION

+ POT AT BASE

| STA | $V \times 10^{-3}$ | STA | $V \times 10^{-3}$ |
|---|---|---|---|
| 1400 | −10 | 1600 | +2 |
| 1300 | +4 | 1700 | +3 |
| 1200 | −12 | 1800 | +12 |
| 1100 | +2 | 1900 | +19 |
| 1000 | +14 | 2000 | +19 |
| 900 | +6 | | |

## LINE 1S

| STA | $V \times 10^{-3}$ | STA | $V \times 10^{-3}$ |
|---|---|---|---|
| 1400 | +12 | 1500 | +27 |
| 1300 | +20 | 1600 | +24 |
| 1200 | +5 | 1700 | +12 |
| 1100 | +20 | 1800 | +49 |
| 1000 | +8 | 1900 | +36 |
| 900 | +26 | 2000 | +25 |

## LINE ZERO REPT

| STA | |
|---|---|
| 1400 | +7 |
| 1300 | +13 |
| 1200 | −3 |

0 POT $+10 \times 10^{-3}$

5-9-57

## LINE ZERO REPT

| | |
|---|---|
| 1400 | −4 |
| 1300 | +5 |
| 1200 | −5 |

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BASE STA
1500 LINE 0

ROS KRUGE
5-9-57
SP

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LINE 2S

| STA | $V \times 10^{+3}$ | STA | $V \times 10$ |
|---|---|---|---|
| 1500 | +9 | 1500 | +10 |
| 1600 | +16 | 1400 | +14 |
| 1700 | +12 | 1300 | +24 |
| 1800 | +37 | 1200 | +12 |
| 1900 | +23 | 1100 | +16 |
| 2000 | +25 | 1000 | +22 |
| | | 900 | +21 |

New pots 0 pot zero
1500 line 2S = +14

LINE 3S

| STA | $V \times 10^{+3}$ | STA | $V \times 10^{3}$ |
|---|---|---|---|
| 1500 | +31 | 1500 | +29 |
| 1600 | +23 | 1400 | +44 |
| 1700 | +35 | 1300 | +47 |
| 1800 | +39 | 1200 | +32 |
| 1900 | +47 | 1100 | +37 |
| 2000 | +33 | 1000 | +42 |
| | | 900 | +23 |
| | | 1500 | +33 |

(NEW POTS 0 pot diff )

LINE 4S

| STA | $V \times 10^{3}$ | STA | $V \times 10^{3}$ |
|---|---|---|---|
| 1500 | +32 | 1500 | +30 |
| 1600 | +17 | 1400 | +36 |
| 1700 | +23 | 1300 | +27 |
| 1800 | +51 | 1200 | +23 |
| 1900 | +25 | 1100 | +20 |
| 2000 | +21 | 1000 | +37 |
| | | 900 | +43 |

LEFAX, PHILADELPHIA 7, PA., MADE IN U.S.A.

LINE 5S NEW POT

| STA | V x $10^2$ |
|---|---|
| 1500 | +26 |
| 1600 | +19 |
| 1700 | +23 |
| 1800 | +30 |
| 1900 | +28 |
| 2000 | +21 |

| STA | V x $10^3$ |
|---|---|
| 1500 | +20 |
| 1400 | +25 |
| 1300 | +34 |
| 1200 | +38 |
| 1100 | +26 |
| 1000 | +34 |
| 900 | +23 |
| 1500 | +21 |

BASE STA
LINE 0 1500W
BASE POT TO +

R.D
MAY 28
SP

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| LINE | 5N |
|---|---|
| STA | ΔV |
| 1500W | +21 |
| 1600 | +24 |
| 1700 W | +19 |
| 1800 | +8 |
| 1900 | +16 |
| 2000 | +22 |
| 1500 | +19 |

(SAME POTS AS 4N)

| STA | ΔV |
|---|---|
| 1500W | +26 |
| 1900 | +19 |
| 1300 | +23 |
| 1200 | +34 |
| 1100 | +38 |
| 1000 | +20 |
| 1500W | +22 |

MAYBE 14?

| LINE | 1500W |
|---|---|
| 5N | +22 |
| 4N | +16 |
| 3N | +25 |
| 2N | +2 |
| 1N | +10 |
| 0 | +6 |

↓ Correction for

ΔV 1500W-0 To 1000-0 = +18
ΔV 1000W-0 To 1500W-0 = −11
ΔV 1000W-0 To 500W-0 = +12
ΔV 500W-0 To 1000W-0 = +3

#7

LEFAX, PHILADELPHIA 7, PA., MADE IN U.S.A.

BASE STA
LINE ZERO 1500W
POSITIVE TERM
AT BASE

R-D
MAY 28
SP

TR. MK. REG. U.S. PAT. OFF.

~~ZERO FOR 1½ BOTH SIDES~~

| LINE ZERO | | 15=+2 | |
|---|---|---|---|
| STA | ΔV | STA | ΔV |
| 1600W | +12 | 1400 | -2 |
| 1700 | +15 | 1300 | +14 |
| 1800 | +17 | 1200 | +15 |
| 1900 | +32 | 1100 | +12 |
| 2000 | +14 | 1000 | +23 |
| 1500 | +5 | 1500 | +5 |

| LINE IN | | | |
|---|---|---|---|
| STA | ΔV | STA | ΔV |
| 1500 | +14 | 1500 | +13 |
| 1600 | +13 | 1400 | +15 |
| 1700 | -6 | 1300 | +18 |
| 1800 | +17 | 1200 | +39 |
| 1900 | +23 | 1100 | +12 |
| 2000 | +15 | 1000 | +21 |
| 1500 | +10 | 1500 | +14 |

NEW ZERO OF POTS

| | |
|---|---|
| 1500 | +7 |
| 1500 | +7 |

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LINE 2N

| STA | ΔV | STA | ΔV |
|---|---|---|---|
| 1500N | +9 | 15W | +12 |
| 1600 | +22 | 1400 | +32 |
| 1700 | +28 | 1300 | +32 |
| 1800 | +44 | 1200 | +24 |
| 1900 | +38 | 1100 | +32 |
| 2000 | +21 | 1000 | +14 |
| 1500 | +14 | 1500 | +12 |

LINE 3N

| STA | ΔV | STA | ΔV |
|---|---|---|---|
| 1500 | +36 | 1500 | +37 |
| 1600 | +24 | 1400 | +37 |
| 1700 | +30 | 1300 | +29 |
| 1800 | +28 | 1200 | +12 |
| 1900 | +24 | 1100 | +35 |
| 2000 | +32 | 1000 | +44 |
| 1500 | +39 | 1500 | +39 |

NEW POTS AFTER DINNER

~~1500 +21~~ ~~1500 +21~~

LINE 4N

| | | | |
|---|---|---|---|
| 1500 | +21 | 1500 | +23 |
| 1600 | +26 | 1400 | +37 |
| 1700 | +11 | 1300 | +18 |
| 1800 | +1 | 1200 | +28 |
| 1900 | +2 | 1100 | +30 |
| 2000 | +12 | 1000 | +18 |
| 1500 | +15 | 1500 | +16 |

BASE STA
500W Line 0
Base pot to + term.

RD
May 28, 57
SP

TR. MK. REG. U.S. PAT. OFF.

Calibration of Pots $+3 + 3 \times 10^3$
for both

Line zero

| STA | ΔV | STA | ΔV |
|---|---|---|---|
| 500W | +1 | 500 | -2 |
| 600 | +18 | 400 | +18 |
| 700 | +18 | 300 | +3.5 |
| 800 | +18 | 200 | |
| 900 | +9 | 100 | 5 |
| 1000 | +4 | 0 | 0 |
| | | 500 | -2 |

Line 1N

| | 2W | | 1W |
|---|---|---|---|
| 500 | +7 | 500 | +6 |
| 600 | +16 | 400 | +17 |
| 700 | +26 | 300 | +8 |
| 800 | +30 | 200 | +1 |
| 900 | +23 | 100 | ~~+13~~ +6 |
| 1000 | +13.5 | 0 | +5 |
| 500 | +8 | 500 | +6 |

Line 2N

| | |
|---|---|
| 500 | 500 |
| 600 | 400 |
| 700 | 300 |
| 800 | 200 |
| 900 | 100 |
| 1000 | 0 |
| 500 | 500 |

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LEFAX, PHILADELPHIA 7, PA., MADE IN U.S.A.

Base Sta
Line Zero 500 W

RD
May 29
SP

TR. MK. REG. U.S. PAT. OFF.

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Line 0

| Sta | AV | Sta | AV |
|---|---|---|---|
| 500W | 0 | 500W | 0 |
| 600 | +11 | 400 | +8 |
| 700 | +14 | 300 | +21 |
| 800 | +21 | 200 | +12 |
| 900 | +20 | 100 | +15 |
| 1000 | +15 | 0 | +17 |
| 500W | 0 | 500 | 0 |

Line 1N

| | | | |
|---|---|---|---|
| 500W | +7 | 500W | +5 |
| 400W | +8 | 600 | +16 |
| 300 | +22 | 700 | +24 |
| 200 | +12 | 800 | +31 |
| 100 | +15 | 900 | +18 |
| 0 | +15 | 1000 | +21 |
| 500 | +9 | 500 | +8 |

Line 2N

| | | | |
|---|---|---|---|
| 500W | +12 | 500W | +10 |
| 400 | +27 | 600 | +18 |
| 300 | +23 | 700 | +20 |
| 200 | +29 | 800 | +41 |
| 100 | +28 | 900 | +22 |
| 0 | +26 | 1000 | +10 |
| 500W | +15 | 500W | +10 |

LEFAX, PHILADELPHIA 7, PA., MADE IN U.S.A.

Line 3N

| Sta | ΔV | Sta | ΔV |
|---|---|---|---|
| 500W | +25 | 500 | +23 |
| 400 | +18 | 600 | +25 |
| 300 | +17 | 700 | +33 |
| 200 | +26 | 800 | +16 |
| 100 | +25 | 900 | +23 |
| 0 | +41 | 1000 | +26 |
| 500W | +22 | 500W | +20 |

Line 4N

| Sta | ΔV | Sta | ΔV |
|---|---|---|---|
| 500W | +18 | 500W | +18 |
| 400 | +16 | 600 | +20 |
| 300 | +25 | 700 | +26 |
| 200 | +21 | 800 | +27 |
| 100 | +19 | 900 | +23 |
| 0 | +24 | 1000 | +24 |
| 500W | +22 | 500W | +10 |

Line 5N

| | | | |
|---|---|---|---|
| 500W | +20 | 500W | +12 |
| 400 | +30 | 600 | +18 |
| 300 | +29 | 700 | +15 |
| 200 | +24 | 800 | +25 |
| 100 | +39 | 900 | +25 |
| 0 | +33 | 1000 | +31 |
| 500W | +21 | 500W | +10 |
| | | Spike 500W | +2 |

BASE STA
Line Zero 500W

R-D
May 29, 57
SP

TR. MK. REG. U.S. PAT. OFF.

Line 500 W

| Sta | ΔV |
|---|---|
| 5N | +21 |
| 4N | +19 |
| 3N | +25 |
| 2N | +18 |
| 1N | +19 |
| 0 | +6 |

Same reading as ☆

Base sta new pots after lunch
ΔV = 0

Line 1S

| Sta | ΔV | Sta | ΔV |
|---|---|---|---|
| 500W | +6 | 500W | +12 |
| 400 | +13 | 600 | +17 |
| 300 | +20 | 700 | +18 |
| 200 | +29 | 800 | +24 |
| 100 | +40 | 900 | +40 |
| 0 | +30 | 1000 | +20 |
| 500W | +6 | 500W | +10 |

Line 2S

| | | | |
|---|---|---|---|
| 500W | +26 | 500W | +30 |
| 400 | +22 | 600W | -2 |
| 300 | +31 | 700W | +12 |
| 200 | +36 | 800 | +15 |
| 100 | +31 | 900 | +21 |
| 0 | +18 | 1000 | +26 |
| 500W | +26 | 500W | +22 |

ORIGINAL COPR. 1910 BY J. C. PARKER
LEFAX, PHILADELPHIA 7, PA., MADE IN U.S.A.

Line 3S

| STA | ΔV |
|---|---|
| 500W | +40 |
| 400 | +24 |
| 300 | +32 |
| 200 | +29 |
| 100 | +28 |
| 0 | +35 |
| 500W | +38 |

| Sta | ΔV |
|---|---|
| 500W | +41 |
| 600 | +34 |
| 700 | +53 |
| 800 | +48 |
| 900 | +41 |
| 1000 | +43 |
| 500W | +41 |

Line 4S

| | |
|---|---|
| 500W | +35 |
| 400 | +36 |
| 300 | +45 |
| 200 | +28 |
| 100 | +27 |
| 0 | +38 |
| 500W | +27 |

| | |
|---|---|
| 500W | +42 |
| 600 | +40 |
| 700 | +40 |
| 800 | +34 |
| 900 | +29 |
| 1000 | +28 |
| 500W | +35 |

Line 5S

| | |
|---|---|
| 500W | +26 |
| 400 | +65 |
| 300 | +46 |
| 200 | +31 |
| 100 | +27 |
| 0 | +22 |
| 500 | +18 |

| | |
|---|---|
| 500W | +31 |
| 600W | +44 |
| 700W | +36 |
| 800W | +30 |
| 900 | +36 |
| 1000 | +49 |
| 500W | +18 |

Line 500W

| | |
|---|---|
| 5N | +19 |
| 4N | +34 |
| 3N | +42 |
| 2N | +26 |

| | |
|---|---|
| 1N | +9 |
| 0 | +9 |

# PRELIMINARY REPORT ON
# MAGNETITE AND BADGER CLAIM GROUPS
# ROSKRUGE DISTRICT, PIMA COUNTY, ARIZONA

This report summarizes the observations and conclusions resulting from two short reconniassance examinations of the claims submitted by Allen Rugg and partners, Elmer (Ben) Bell, and Ernest Hicks. These three partners are the original locators of the Magnetite Group (2 claims) and the Badger Group (5 claims). See enclosed U. S. G. S. Topo sheet for the approximate location of these two claim groups. The area along the east edge of this sheet is located 20 miles west of Tucson.

The two claims of the Magnetite Group cover part of a magnetic high anomoly which trends S25 E. A larger magnetic anomoly, (+1200 gammas), occurs just north of the Magnetite claims on the Papago Indian Reservation. (See enclosed sketch map with magnetic contours). These claims are staked on a shallow, alluvium covered pediment, and bedrock exposures are very limited.

Two exposures exhibit weak ore mineralization and are shown on the enclosed sketch map. The copper stained outcrop on the Magnetite #2 claim consists of dense, hard, highly metamorphosed limestone containing abundant garnet, some magnetite and other skarn minerals. Similar material occurs as scattered float in the surrounding alluvium. The observed magnetic highs may be related to zones of this mineralization.

A narrow strip of metamorphosed limestone and shales (?) is exposed along the west margin of these claims. These sediments are bordered on the west by a grey felsitic rock and covered to the east by alluvium. Where observed the sediments contain abundant epidote and other skarn minerals. The age of the sediments is not known, but they have similar characteristics to Paleozoic sediments in other parts of Arizona.

The outcrop shown on the Magnetite #1 claim consists of limonite stained quartz with scattered vugs containing oxidized minerals and some residual pyrite. An assay of this material reported 0.01 oz. Au, 0.8 oz. Ag, 0.10% Cu, and 0.2% Pb. From the distribution of quartz float nearby it appears that such material may occur in an alluvium-covered zone fifty feet wide trending S 25 E.

The only ore mineralization observed on the Badger Group of Claims was a narrow quartz vein with a one-inch seam of oxidized copper ore along its footwall margin. A sample of the copper mineralization is reported to assay 9.9% cu and 56 oz. Ag. The vein strikes N 62 E and dips 65 N. About 18 inches of altered, bleached wall rock borders the vein on both sides. The surrounding country rock is a grey felsite which has not been definitely classified. The production potential of this vein appears to be extremely limited. However, it may be a significant indication of other more important ore mineralization nearby. This would be especially true should the felsite in which it occurs prove to be a thin cover of igneous rock overlying a favorable sedimentary section. This possibility is suggested by the westward dip of the metamorphosed sediments

outcropping a short distance to the east.

Another mineral occurrence, whose location is shown by the red line in sec. 4, T 15S, R 10 E, on the Topo sheet, was examined. Here an inclined shaft, 40 feet deep, has been sunk along the hanging wall of a quartz vein approximately 50 feet wide. A representative grab sample of the dump assayed 0.9% Pb. Scattered wulfenite, vanadinite (?) and pyromorphite occurred in the dump material. A wide band of altered, bleached porphyritic rock forms the footwall of the quartz vein. Although not on the ground submitted for our consideration, this occurrence furnishes information relative to general mineralization in the area.

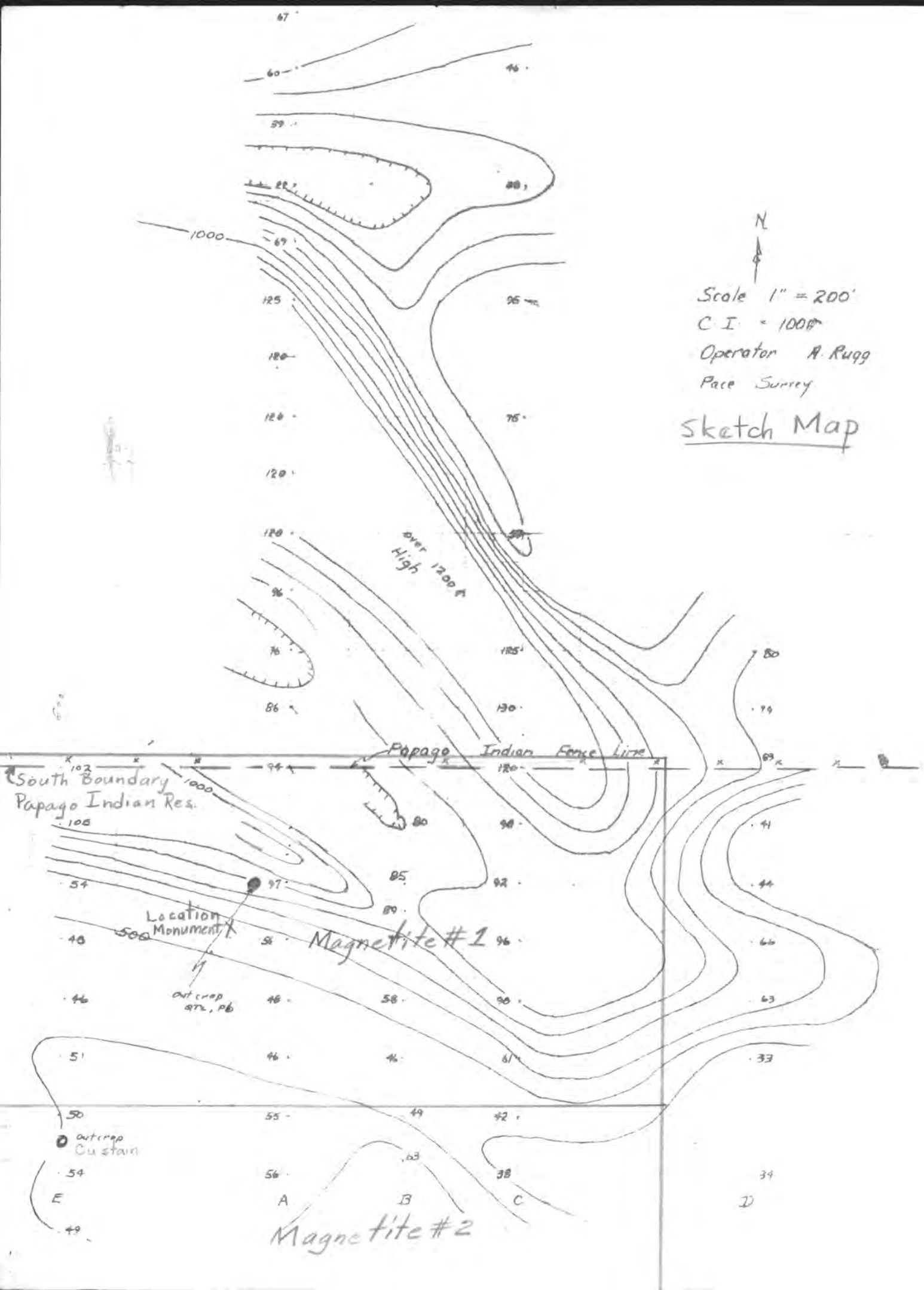
It is felt that the metamorphosed sediments containing the outcropping ore indications observed on Magnetite claim #1 may be a favorable host rock for ore deposition. Furthermore, these sediments may occupy a much larger area beneath the adjacent alluvium and igneous rocks than the few scattered outcrops would indicate.

Should the ground be available on favorable terms it is recommended that further work be undertaken to locate and outline the alluvium-covered contact metamorphic zone or zones present. When delineated such zones should be explored for possible ore concentrations by appropiate geophysical and subsurface exploration methods.

Respectfully submitted,

Norman Eastmoore, Jr.

Norman Eastmoore, Jr.


N
Scale 1" = 200'
C I = 100ft
Operator A. Rugg
Pace Surrey
Sketch Map
over High 1200 ft
Papago Indian Fence Line
South Boundary Papago Indian Res.
1000
500
Location Monument
Magnetite #1
outcrop qtz, pb
outcrop Cu stain
Magnetite #2
A
B
C
D
E

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

WAR DEPARTMENT

ARIZONA
(PIMA COUNTY)

# COCORAQUE BUTTE QUADRANGLE
15-MINUTE SERIES

South Boundary Papago Indian Reservation

Roadside Mine 15 miles westof map and 1500 feet North of Hwy 86.

1½ MI.

Topography by P. C. Erickson and J. G. Collins
Surveyed in 1940–1941

ROAD CLASSIFICATION
1947

Dependable hard-surface heavy-duty road
Secondary hard-surface all weather road
Dry weather roads
Loose-surface graded
Unsurfaced, graded
Dirt road
U. S. Route
State Route
More than two lanes indicated along road with tick at point of change 3 LANE 4 LANE

TRUE NORTH
MAGNETIC NORTH
APPROXIMATE MEAN DECLINATION, 1941

SCALE 1:62500

Contour interval 25 feet
Datum is mean sea level

Polyconic projection. 1927 North American datum
5000 yard grid based on U. S. zone system, F
10000 foot grid based on Arizona (Central) rectangular coordinate system

COCORAQUE BUTTE, ARIZ.
Edition of 1943
reprinted 1948
N3200—W11115/15

# THE TOPOGRAPHIC MAPS OF THE UNITED STATES

The United States Geological Survey is making a series of standard topographic maps to cover the United States. This work has been in progress since 1882, and the published maps cover more than 47 percent of the country, exclusive of outlying possessions.

The maps are published on sheets that measure about 16½ by 20 inches. Under the general plan adopted the country is divided into quadrangles bounded by parallels of latitude and meridians of longitude. These quadrangles are mapped on different scales, the scale selected for each map being that which is best adapted to general use in the development of the country, and consequently, though the standard maps are of nearly uniform size, the areas that they represent are of different sizes. On the lower margin of each map are printed graphic scales showing distances in feet, meters, miles, and kilometers. In addition, the scale of the map is shown by a fraction expressing a fixed ratio between linear measurements on the map and corresponding distances on the ground. For example, the scale $\frac{1}{62,500}$ means that 1 unit on the map (such as 1 inch, 1 foot, or 1 meter) represents 62,500 of the same units on the earth's surface.

Although some areas are surveyed and some maps are compiled and published on special scales for special purposes, the standard topographic surveys and the resulting maps have for many years been of three types, differentiated as follows:

1. Surveys of areas in which there are problems of great public importance—relating, for example, to mineral development, irrigation, or reclamation of swamp areas—are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{31,680}$ (1 inch = one-half mile) or $\frac{1}{24,000}$ (1 inch = 2,000 feet), with a contour interval of 1 to 100 feet, according to the relief of the particular area mapped.

2. Surveys of areas in which there are problems of average public importance, such as most of the basin of the Mississippi and its tributaries, are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{62,500}$ (1 inch = nearly 1 mile), with a contour interval of 10 to 100 feet.

3. Surveys of areas in which the problems are of minor public importance, such as much of the mountain or desert region of Arizona or New Mexico, and the high mountain area of the northwest, are made with sufficient detail to be used in the publication of maps on a scale of $\frac{1}{125,000}$ (1 inch = nearly 2 miles) or $\frac{1}{250,000}$ (1 inch = nearly 4 miles), with a contour interval of 20 to 250 feet.

The aerial camera is now being used in mapping. From the information recorded on the photographs, planimetric maps, which show only drainage and culture, have been made for some areas in the United States. By the use of stereoscopic plotting apparatus, aerial photographs are utilized also in the making of the regular topographic maps, which show relief as well as drainage and culture.

A topographic survey of Alaska has been in progress since 1898, and nearly 44 percent of its area has now been mapped. About 15 percent of the Territory has been covered by maps on a scale of $\frac{1}{500,000}$ (1 inch = nearly 8 miles). For most of the remainder of the area surveyed the maps published are on a scale of $\frac{1}{250,000}$ (1 inch = nearly 4 miles). For some areas of particular economic importance, covering about 4,300 square miles, the maps published are on a scale of $\frac{1}{62,500}$ (1 inch = nearly 1 mile) or larger. In addition to the area covered by topographic maps, about 11,300 square miles of southeastern Alaska has been covered by planimetric maps on scales of $\frac{1}{125,000}$ and $\frac{1}{250,000}$.

The Hawaiian Islands have been surveyed, and the resulting maps are published on a scale of $\frac{1}{62,500}$.

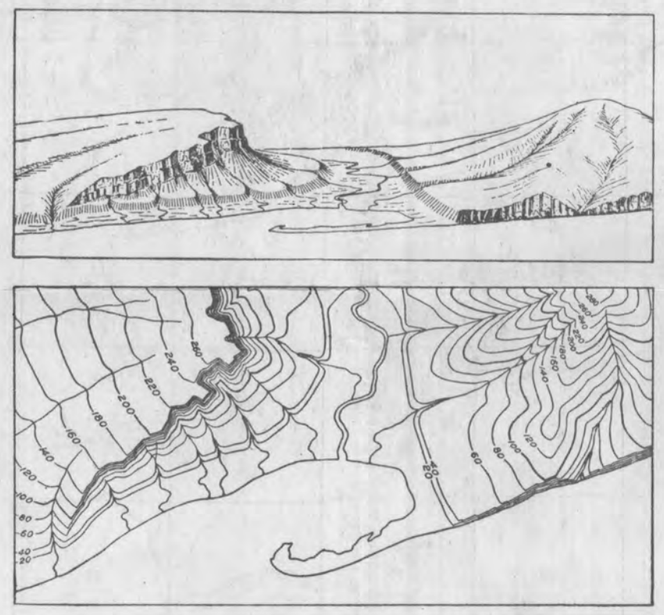
A survey of Puerto Rico is now in progress. The scale of the published maps is $\frac{1}{20,000}$.

The features shown on topographic maps may be arranged in three groups—(1) water, including seas, lakes, rivers, canals, swamps, and other bodies of water; (2) relief, including mountains, hills, valleys, and other features of the land surface; (3) culture (works of man), such as towns, cities, roads, railroads, and boundaries. The symbols used to represent these features are shown and explained below. Variations appear on some earlier maps, and additional features are represented on some special maps.

All the water features are represented in blue, the smaller streams and canals by single blue lines and the larger streams by double lines. The larger streams, lakes, and the sea are accentuated by blue water lining or blue tint. Intermittent streams—those whose beds are dry for a large part of the year—are shown by lines of blue dots and dashes.

Relief is shown by contour lines in brown, which on a few maps are supplemented by shading showing the effect of light thrown from the northwest across the area represented, for the purpose of giving the appearance of relief and thus aiding in the interpretation of the contour lines. A contour line represents an imaginary line on the ground (a contour) every part of which is at the same altitude above sea level. Such a line could be drawn at any altitude, but in practice only the contours at certain regular intervals of altitude are shown. The datum or zero of altitude of the Geological Survey maps is mean sea level. The 20-foot contour would be the shore line if the sea should rise 20 feet above mean sea level. Contour lines show the shape of the hills, mountains, and valleys, as well as their altitude. Successive contour lines that are far apart on the map indicate a gentle slope, lines that are close together indicate a steep slope, and lines that run together indicate a cliff.

The manner in which contour lines express altitude, form, and grade is shown in the figure below.



The sketch represents a river valley that lies between two hills. In the foreground is the sea, with a bay that is partly enclosed by a hooked sand bar. On each side of the valley is a terrace into which small streams have cut narrow gullies. The hill on the right has a rounded summit and gently sloping spurs separated by ravines. The spurs are truncated at their lower ends by a sea cliff. The hill at the left terminates abruptly at the valley in a steep scarp, from which it slopes gradually away and forms an inclined tableland that is traversed by a few shallow gullies. On the map each of these features is represented, directly beneath its position in the sketch, by contour lines.

The contour interval, or the vertical distance in feet between one contour and the next, is stated at the bottom of each map. This interval differs according to the topography of the area mapped: in a flat country it may be as small as 1 foot; in a mountainous region it may be as great as 250 feet. In order that the contours may be read more easily certain contour lines, every fourth or fifth, are made heavier than the others and are accompanied by figures showing altitude. The heights of many points—such as road intersections, summits, surfaces of lakes, and benchmarks—are also given on the map in figures, which show altitudes to the nearest foot only. More precise figures for the altitudes of benchmarks are given in the Geological Survey's bulletins on spirit leveling. The geodetic coordinates of triangulation and transit-traverse stations are also published in bulletins.

Lettering and the works of man are shown in black. Boundaries, such as those of a State, county, city, land grant, township, or reservation, are shown by continuous or broken lines of different kinds and weights. Public roads suitable for motor travel the greater part of the year are shown by solid double lines; poor public roads and private roads by dashed double lines; trails by dashed single lines. Additional public road classification if available is shown by red overprint.

Each quadrangle is designated by the name of a city, town, or prominent natural feature within it, and on the margins of the map are printed the names of adjoining quadrangles of which maps have been published. More than 4,100 quadrangles in the United States have been surveyed, and maps of them similar to the one on the other side of this sheet have been published.

Geologic maps of some of the areas shown on the topographic maps have been published in the form of folios. Each folio includes maps showing the topography, geology, underground structure, and mineral deposits of the area mapped, and several pages of descriptive text. The text explains the maps and describes the topographic and geologic features of the country and its mineral products. Two hundred twenty-five folios have been published.

Index maps of each State and of Alaska and Hawaii showing the areas covered by topographic maps and geologic folios published by the United States Geological Survey may be obtained free. Copies of the standard topographic maps may be obtained for 10 cents each; some special maps are sold at different prices. A discount of 40 percent is allowed on an order amounting to $5 or more at the retail price. The discount is allowed on an order for maps alone, either of one kind or in any assortment, or for maps together with geologic folios. The geologic folios are sold for 25 cents or more each, the price depending on the size of the folio. A circular describing the folios will be sent on request.

Applications for maps or folios should be accompanied by cash, draft, or money order (not postage stamps) and should be addressed to

THE DIRECTOR,
*United States Geological Survey,*
*Washington, D. C.*

November 1937.

**NOTE:—Effective on and after October 1, 1946, the price of standard topographic quadrangle maps will be 20 cents each, with a discount of 20 percent on orders amounting to $10 or more at the retail rate.**

## STANDARD SYMBOLS

### CULTURE
*(printed in black)*

City or village
Roads and buildings
Ruins
Cliff dwelling
Good Public road
Poor Public or private road
Trail
Railroads
Electric railroad
Tunnel
Power-transmission line
Wharves
Breakwater and jetties
Bridge
Drawbridges
Ferry *(point upstream)*
Ford
Dam
Dam with lock
Canal lock *(point upstream)*
U.S. township and section lines and recovered corners
State line
County line
Civil Township or district line
Reservation line
Land grant line
City, village, or borough line
Small park or cemetery line
Triangulation point or transit-traverse station
U.S. mineral monument
Boundary monument
Bench mark *(supplementary bench mark shown by cross and black figures without lettering)*
Cemeteries
Church, School *(distinguished on recent maps)*
Coke ovens
Tanks and oil reservoirs
Oil and gas wells
Mine or quarry
Prospect
Shaft
Mine tunnel
Mine tunnel *(showing direction)*
Lighthouse or beacon
Coast Guard station

### RELIEF
*(printed in brown)*

Elevation above mean sea level *(in black on recent maps)*
Contours *(Contours showing depth of water printed in blue)*
Depression contours
Levee
Wash
Cliffs *(or shown by contours)*
Mine dumps
Tailings or mining debris
Sand and sand dunes

### WATER
*(printed in blue)*

Streams
Falls and rapids
Intermittent streams and ditches
Canals or ditches
Aqueducts or waterpipes
Aqueduct tunnels
Lake or pond
Unsurveyed stream and abandoned canal
Intermittent lake
Glacier *(Or shown by contours printed in blue)*
Spring Well
Marsh
Submerged marsh

### WOODS
*(when shown, printed in green)*

File

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

August 30, 1956

Mr. Walter E. Heinrichs, Jr
Minerals Exploration Company
Tucson, Arizona

Dear Walt:

Magnetite and Badger Claims, Roskruge Dist.

I have read with much interest Norm's preliminary report on these claims. Before negotiations go too far I would like to take up a few points with you.

1 - Surface evidences of mineralization are quite meager, less than in many areas that we have py-passed. Obviously the attractive feature is the mag anomoly. But the anomoly on the Papago Indian Reservation, directly to the north is larger, probably more attractive. Is that one available for lease? If so should we not concentrate on that one? At any rate we should have it under lease before starting work on the Magnetite Claims.

2 - If a minable deposit exists here the chances are that it will be an underground operation. We are now negotiating on the basis of a graduated royalty payment with a maximum of 11% on ore above $10 per ton, net smelter. Such ore at best will be a break even proposition as it was at Pima, where no royalty had to be paid. The point here is that the sliding scale royalty clause as proposed is academic. We would pay the maximum royalty at all times because we couldn't mine ore which yielded less than $10 per ton, smelter. Can we get a sliding scale giving us a break on lower grade ore?

3 - We must complete all additional geophysical work (including E. M.) and exploratory drilling on both groups of claims, otherwise pay $30,000 for the privilege of spending more money. A year may not be enough, especially if we must divide personel and equipment among several prospects. Can you get this cash payment converted into performance expense? Bonus money, except where competitive bidding demands it, can be, and percentagewise, usually is a 100% loss. Could you offer to double up on annual work requirements and eliminate or substantially reduce the bonus?

4 - From the above you can see that I still have some doubts about the merits of this prospect. The anomoly is based on a little over one mile of pace survey, including the anomoly on the Indian land. I would like your own appraisal, Walt, of this anomoly and what you think it means.

Norm and Sherm have kept me informed of progress during your absence. I received today the proposed Mineral Lease and Option on Tom Adams land. Would like to discuss it with you.

Sincerely,

M.G.Edwards

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

September 18, 1956

Dr. M. Guy Edwards
2154 N. Villa Heights Road
Pasadena 8, California

Dear Guy:

Enclosed are five copies of the option agreement with Rugg, et al. Their part has been executed and is ready for our signature and notarization if agreeable. Also of course, the date should be inserted on page one. If the agreement is OK and we decide to go ahead, one copy can be kept for the Los Angeles files. The other executed copies should be returned to me for local files and distribution to the other parties. Vic Verity has looked over the agreement.

My feeling is that this is agood option. Effectively, we have twelve months for nothing and eighteen months for $3,000 spent on the ground before committing ourselves to a minimum yearly $15,000 payment thereafter, should we decide to continue retaining our interest. Also the "take out" price of $180,000 is better than average any more.

As to my feeling regarding the merits of the prospect, you have our preliminary report submitted by Norm Eastmoore with which I concur. Putting it a different way, I feel it is our type of prospect and an area which we could hit, advantageously, both hard and fast. I would estimate a necessary expendature of approximately $7500 to disprove the area or obtain results which would warrent recommending further work. At present, the potential is anybody's guess, and a continuing investment should be based on favorable results as we go along.

Apparent geological advantages are the strong magnetite association with oxidized copper mineralization and strong skarn type development. Topographic relief is not very great. Fifty-fifty possibility of concealed favorable Paleozoic and/or Cretaceous section dipping into or under volcanics and intrusives(?) to the west. If this should be the case there may also be the vague possibility of concealed disseminated intrusive under the alluvium near by to the east. Relatively shallow alluvium cov er over much of the area, may have effectively prevented earlier successful prospecting.

Most unfavorable factor is the lack of prior production in the area. Nearest production of any consequence came

immediately east across the valley in the Tucson Mountains from the old Gould and Mile Wide properties. This is the same area where we briefly did some work for United. It has since been taken up by Banner, however, to date they have done very little except try to negotiate with the county for additional mineral rights in the adjoining prior established Tucson Mountain Parks Recreational area. This situation is one reason we became discouraged in the work for United.. Leads on Indian or State land would require leasing. In the case of the Indians, the royalty would probably be 10% negotiated or plus-bonus if let on bid basis. Initiation of this would follow staking of open ground.

If agreeable, we plan to go right ahead and complete staking claims in the area. Once the property situation was under control, we would then be in a position to trench sample and possibly cover the more accessible parts with S.P. and mobile-magnotometer, etc., favorable leads could then be followed either directly or by drilling. If not agreeable let me know ritht away and I will hold up any further effort pending further decision. My plan would be to have Norm working on this project.

Sincerely yours,

Walt

Walter E. Heinrichs, Jr.
Exploration Manager

WEH/nnp

Enclosure: 5

Aug 25, 1956

Dr. M. Guy Edwards
2154 N. Villa Heights Road
Pasadena 8, California

Dear Dr. Edwards:

The following is a summary of the work done from the Tucson office during the week of Aug 20-25.

During this period about 8900 feet of self potential traverses have been run and some additional geological work has been done on the Johnson-Dragoon Project. Although the evaluation of the data obtained from this work has not been completed yet, it appears that no very significant self potential anomolies have been located. This work will continue and possibly additional magnetic work will be done in the coming week. Sherman Comstock has completed a tentative agreement with Tom Adams on his three sections which will be typed and forwarded for your consideration on Aug 27.

I have been negotiating with Allen Rugg and his partners trying to arrive at an agreement with them which might allow Minerals Exploration Co. to lease their claims in the Roskruge District. (I sent a preliminary report on these claims to you on Aug 20).

The essential features of their deal boils down to the following terms. They will grant Minerals an exploration option for one year without any payment. At the end of a year to continue the lease Minerals would pay $30,000 to the three owners,($10,000 to each owner). From then on all payments would be royalties out of production. Royalty to be based on a sliding scale with a maximum of 11% on ore above $10 per ton, net smelter returns. When $150,000 royalty has been paid owners will deed over all their rights to Minerals. Work requirements as follows: first year $1000, second year $2000, third year $4000, fourth year $8000. Minerals would be responsible for all assessment work. Minerals to have right to buy out owners at any time by paying them 85% of balance due on royalties. I will forward the completed set of terms for your consideration upon successful negotiation of a favorable assignment clause, possibly with in a week.

We now have a telephone in the Benson office. The number is Juniper 6-2842 and is listed under Heinrichs Exploration Co. and Minerals Exploration Co. Some of us are available at this phone on week day evenings should you need to call.

Sincerely,

Norman Eastmoore, Jr.

Norman Eastmoore, Jr.

cc: Mr. W. E. Heinrichs
Mr. Sherman Comstock

Pasadena, California

January 31, 1957

Mr. Walter E. Heinrichs, Jr.
Minerals Exploration Company
P. O. Box 5671
Tucson, Arizona

Re: Electro-magmetic Equipment

Dear Walt:

Referring to your correspondence relative to the purchase of certain items of electro-magnetic equipment from the United Geophysical Company, this is to advise that Mr. Rubel has given his approval of this purchaseas outlined in your letter to Griswold of January 25, 1967.

I understand that Mr. Lister has also advised Griswold of United's approval of the sale.

Accordingly it will be in order for you to complete the transaction and take possession of the equipment.

Our present plans are for an early electric survey of the Roskruge prospect. I hope that some preliminary results can be obtained before my next trip to Tucson. Am glad to hear that Hole NO. 2 at Johnson-Dragoon is showing some chalcopyrite.

D Sincerely,

M. G. Edwards

# Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA


January 25, 1957

Mr. W. T. Griswold
United Geophysical Corporation
2624 North First Avenue
Tucson, Arizona

Dear Bill:

Confirming our conversation in your office this week, I am recommending the following offer to purchase certain items of United's equipment located at your office, subject to the approval of Mr. A. C. Rubel, and Mr. C. C. Lister.

1. 1 dual set of useable operating condition 2 E.M. coils together with bridge, amplifier and carrying box, 2 units so as to have one necessary spare for usual malfunctions experienced in normal efficient operation at $2500.00 per unit.---------- $5000.00
2. One used, poor to fair condition, E.M. transformer control box for above.---------- 100.00
3. Two well used, but useable condition, E. M. gasoline generators for above, 1500± watts, 400 cycles, at $100.00 each.---------- 200.00
4. 5000 feet of used, but useable wire, #8, 10 or 12 size, stranded, w/wo connectors, some splices and only fair insulation rated 600 V.±. ---------- 100.00
5. One student built, well used but useable S.P. potentiometer in Halliburton aluminum case with jumper.---------- 100.00
6. One home made used but useable resistivity commutator box-hand powered.---------- 50.00

Total $5550.00

If you anticipate any delay or difficulty in a decision please let me know right away in order that we can make other arrangements as soon as possible. Anything that you can do to help expedite matters would be appreciated and if we can help you, please let us know.

Sincerely,

Walter E. Heinrichs, Jr.
Exploration Manager

cc: Mr. Rubel
Mr. Lister
Mr. Edwards

WEH/np

FORM 402 ME-T 12-55 500

# Minerals Exploration Company

P. O. BOX 5671

TUCSON, ARIZONA


January 3, 1957

Dr. M. Guy Edwards
2154 N. Villa Heights Road
Pasadena 8, California

Dear Guy:

Sorry you had to become involved as a result of my recent letter to Cy requesting information as to the status of negotiations with the MoMag, but I appreciate very much the information you sent along in your letter of December 26th. As per your request, I am returning herewith your original copies of United's correspondence and also a copy of Griswold's letter agreement referred in your letter as item 5.

As you suggested, I have made extra copies of all of this material and will forward same to Cy for his information and files.

It would now seem that the initial drilling progress on hole No. 1 at Johnson was unusually favorable as we seem to have now levelled off at a consistently slower and more difficult rate. Hole No. 2 is presently at 464 feet in very massive dense brown garnet containing minor stringers of copper, oxide and iron mineralization. In one instance an almost completely altered large crystal of Chalcopyrite was noted. All of this is encouraging as is the occurrence of large caverns, vugs and water courses, however, these have required constant cementing and make progress very tedious. Everything seems to indicate the desirability of continuing on as best we can.

We have completed the primary MoMag reconnaissance at Roskruge. Results show considerable high magnitude of anomalism which partly, at least, is due to volcanics. However, some is definitely not. In one case a rather tremendous anomalism almost two miles long occurs under an alluvial cover. This looks almost big enough to be of possible iron ore significance except that it appears to be quite deep. We have just about completed a reconnaissance surface geology map of the area to overlay with the magnetic results for further interpretation. We finally received a heavy rain last night which provides our first opportunity to try some worth-while self potential profiles, which will be done immediately. The only additional direct information we have obtained from surface work is the uncovering of a zone of Magnetite approximately 8 feet wide containing some Chalcopyrite, Pyrite and minor Galena. This will bear further investigation in the course of our work.

Will be looking forward to your possible visit later in the month. In the meantime, our best wishes to both you and Lucia for the New Year.

Regards,

Walt.

WEH:mm

Walter E. Heinrichs, Jr.

Enc.

UNITED GEOPHYSICAL CORPORATION

2824 NORTH FIRST AVENUE
TUCSON, ARIZONA
PHONE [illegible]

December 17, 1956

Walter E. Heinrichs
Minerals Exploration Company
P O Box 5671
Tucson, Arizona

RECEIVED DEC 19 1956
MINERALS EXPLORATION CO.
P. O. BOX 5671
TUCSON, ARIZONA

Dear Walt:

At your request, and under the authority granted in a letter from Mr. C.C. Lister dated November 30, 1956, we are turning over the MoMag to you for operation on your own projects.

Every effort will be made to obtain transfer of vehicle title for you as soon as possible. The Gulf license may take longer, and until it is cleared we request that you keep a record of time and place of operation, broken down by 8 hour normal shifts. These records are required for royalty payments under United's Gulf contract.

We understand that as of this date Minerals Exploration will assume responsibility for all losses from fire, theft, accident, and liability not already covered by United's insurance.

Also delivered to you today, was one new Waterman Industial Pocket Scope which will be billed to you separately.

If the above conditions meet with your approval, would you kindly sign the enclosed extra copy of this letter and return it to United's Tucson office.

DELIVERED DEC 20 1956

Sincerely yours,

MINERALS EXPLORATION

Walter E. Heinrichs
Manager of Exploration

UNITED GEOPHYSICAL CORPORATION

William T. Griswold
Supervisor, Mining Dept.

cc:
C.C.Lister
F.B.Coker

December 19, 1956

RECEIVED JAN 2 1957

Patent Division
Union Oil Research Center
Box 218
Brea, California

Attention: Mr. Ross Garafalo
Patent Counsel

Gentlemen:

I received a telephone call today from Milton Lee requesting information relating to the terms and conditions of the Surface Magnetrometric Surveying Agreement between Gulf and United.

We were able to quickly establish the similarity between the basic terms in the United Agreement and the Gulf draft recently received at Union. However, in order to assure a thorough comparison, I offered to transmit a conformed copy of the United-Gulf Agreement to Mr. Lee and it is enclosed herewith.

It will be appreciated if the agreement is returned after you have obtained the necessary information. I hope your negotiation proceeds smoothly.

Sincerely yours,

ORIGINAL SIGNED BY
FRANK B. COKER

Frank B. Coker
Patent Division

FBC:lhl
cc: C. C. Lister
L. A. Pielemeier
encl.
bcc: T. C. Lawlor

RECEIVED JAN 2 1957

November 30, 1956

Mr. O. F. Ritzmann
Gulf Research and Development Co.
P. O. Drawer 2038
Pittsburgh 30, Pennsylvania

Dear Mr. Ritzmann:

Thank you for the prompt reply to my letter regarding magnetometer sales and licenses. We would like to accept your offer of an arrangement allowing the proposed transfer of the present MoMag equipment to Union. It would be appreciated if you would make such arrangements at your earliest convenience. Perhaps a simple letter release will be sufficient.

Regarding the licensing matter, United prefers to retain the present license for future operations. We are asking Union to contact Mr. Cooke directly and request a separate license to operate under Gulf's patent rights.

Thanking you again for such prompt action, I remain

Yours very truly,

ORIGINAL SIGNED BY
FRANK B. COKER

Frank B. Coker
Patent Division

FBC:lhl
cc: C.F.Lister (2)
A.A.Pielemeier

bcc: R.G.Sohlberg
P.A.Peterson
R.C.Lawlor

GULF OIL CORPORATION
GULF REFINING COMPANY
GULF RESEARCH & DEVELOPMENT COMPANY

HORACE B. COOKE
PATENT COUNSEL
GORDON A. KESSLER
ASSISTANT PATENT COUNSEL
GORDON M. ATHERHOLT
O. F. RITZMANN
MEYER NEISHLOSS
WARREN H. CANNON
PAUL L. TILLSON
WILLIAM H. DEITCH
DEANE E. KEITH
WILLIAM T. FRENCH
JOSEPH J. CARDUCCI
NORMAN O. CHASE
ROBERT E. BREIDENTHAL
FRED S. VALLES

PATENT DEPARTMENT
THE GULF COMPANIES
GULF BUILDING
PITTSBURGH 30, PA.

November 14, 1956

copy to RCL.

RECEIVED JAN 2 1957

Mr. Frank Coker
United Geophysical Corporation
P. O. Box M
1200 South Marengo Avenue
Pasadena 15, California

Dear Mr. Coker:

It was good to hear from you again and I was sorry not to see you at the SEG Meeting in New Orleans. Mr. Lister gave me a little advance warning of the proposed Mo-Mag transfer to Union. Gulf has no objection to making some arrangement whereby the proposed transfer can be effected.

We would prefer not to grant licensing rights to anyone under our magnetometer patents, but would rather consider either giving you permission to assign your license to Union (or Minerals Exploration Company) or granting a separate license to Union, together with permission in either case for United to sell them the necessary equipment.

Does United want to continue its license or do you propose to sell Union all of your Mo-Mag equipment? Also, if Union is to obtain a separate license from Gulf, we feel that they should ask us for it directly (address request to Mr. H. B. Cooke).

Mr. Elton Palmer reports that you have a wonderful plant and I hope you profited by his visit.

With kind personal regards.

Very truly yours,

O. F. Ritzmann.

O. F. Ritzmann

OFR:rmd

RECEIVED JAN 2 1957

November 8, 1956

Mr. C. F. Kitzmann
Gulf Research and Development Co.
P. O. Drawer 2038
Pittsburgh 30, Pennsylvania

Dear Fred:

It's unfortunate that we are so busy that we seldom have an opportunity to communicate with one another. Hence, I welcome this opportunity to write you regarding a new phase of operations presently developing under our Agreement re Surface Magnetometric Surveying.

Briefly, the opportunity has arisen for United to sell one of its Automatic Surface Magnetometer vehicles to Minerals Exploration Company, a wholly-owned subsidiary of Union Oil Company of California. However, before concluding any such sale, it is necessary for United to request suitable modifications of its present license agreement with Gulf Development Company. We are hoping that Gulf will be willing to make such arrangements, particularly in view of the prospects of increasing the total royalty income under the Magnetometric Surveying patents.

Perhaps the simplest way to approach this matter is to modify the present Agreement to incorporate the following:

1. Give United the right to grant sub-licenses under the primary agreement, it being understood that Gulf will continue to receive royalties for the use of Instruments by United or any of its sub-licensees.

2. Grant United permission to sell or otherwise transfer possession of Instruments to bona fide sub-licensees.

If these steps are carried out, United and Gulf will both profit. United will be able to solve the present sales requirement, while at the same time Gulf will receive royalties for operation of Instruments by both United and its prospective sub-licensees.

Please advise us of your attitude on the above suggestions at your earliest convenience. I believe it will be possible to modify the present agreement with minimum effort and we are anxious to cooperate in any way to speed-up the final arrangements.

As a passing comment, I thought you would like to know the present status of United's pending patent applications on inventions made during the development of the United magnetometer. Six, nine and eleven claims have been allowed, respectively, in three applications and the progress is good on the remaining two. Of course, when the patents are issued, Gulf will gain a license to operate thereunder. We will keep you informed of the progress in these cases as they are issued.

With warmest personal regards, I remain

Yours very truly,

ORIGINAL SIGNED BY
FRANK B. COKER

Frank B. Coker
Patent Division

FBC:lhl

bcc: E. A. Pielemeier
R. A. Peterson
R. C. Lawlor

# Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA


27 October 1956

Dr. M. G. Edwards
2154 North Villa Heights Road
Pasadena 8, California

Dear Guy:

Thanks for your note of the 25th. I am glad you had the opportunity to initiate the discussions with Tobe Lister regarding possible purchase of the Mo-Mag and other GP gear of United's. Will be anxious to hear what Ed Pielemeier may add to the situation and hope you may be able to talk to him before you get away.

$19,000.00 is a good price for the Mo-Mag, but $6.000.00 plus 20% is a little high for the EM gear, but would depend, somewhat, on what all is included in this price. I don't quite understand why the plus 20% quotation, and also why he wants to build new equipment. They have most of the basic equipment for five sets now. What is needed for a complete unit is two coils, 2 tripods, 1 bridge and amplifier, one generator and control transformer with meters etc., and about 5000' of wire and electrodes. Because of the tempermental nature of the generators, bridge and amplifier, it is advisable to have one spare each in order to keep things going efficiently.

I will talk to Bill right away and let you know what results. Let me know if you get any more details.

J-D. hole #1 went from granite!, into massive marble at about 380'. We have cored to 394'as of yesterday. The material is mineralized with contact stress minerals and magnetite stringers and looks encouraging, with minor oxide copper.

Received report from Cy on Callahan's Tomichi Colorado lead-zinc property. Have briefly examined this area last summer. Will send my opinion after reading the report.

WEH/w
cc: Mr. A. C. Rubel.

Regards,

Walter E. Heinrichs, Jr.

FORM 401 ME-T 12-55 500

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

28 March 1957

Dr. M. Guy Edwards
c/o Mr. Walter Mulbry
New Smyrna Beach, Florida

Dear Guy;

Glad you got away okay on your trip and hope you enjoyed your stay at the Cave Creek Ranch at Portal, Arizona. Norm mentioned you might get a chance to make a quick perusal of the east front of the Chiricahua Mountains. I am wondering if your reaction to the possibilities was the same as ours.

You will be interested that we have gotten lined out on the drilling at Roskruge after encountering a little delay. This was occasioned by the fact that all the contractors are extremely busy at the moment and this was to be initially a fairly small job. The people going to do the work are the Metler Brothers, a local family organization with a good reputation including good recommendations from Jim Hoagland and Ted Dodge. They will get started this coming Monday, 1 April 1957. We have been busy continuing mobile magnetometer reconnaissance, etc. in the Northern Santa Rita Mountains and correlation problems with the geology and land situation there. In addition, we are looking into other project possibilities in areas of prior interest which have been discussed previously. One of these, around the panhandle of New Mexico, I think might have some good mobile magnetometer applications.

I have gone over Norm's Idaho prospect with interest. On paper, it looks good and I feel definitely warrants a preliminary reconnaissance examination as soon as weather permits. I think the area would be accessible by the latter part of April and would probably take about a week's time, all told, to cover. Depending on the results of such a trip, we would be in a position to determine if this be a suitable project possibility for Minerals Exploration or not, and make recommendations accordingly.

Hope you and Lucia are enjoying your trip. Let us hear from you when you get a chance.

With best regards,

Sincerely,
Walter E. Heinrichs Jr.
Walter E. Heinrichs Jr.

FORM 401 ME-T 12-55 500

WEH/pr
cc: Mr. A. C. Rubel, President

by P.R.

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

13 June 1957

Guy: Hope you & Lucia got settled ok & that your hurried departure & trip to Rosa were ok. W.

Mr. A. C. Rubel, President
Union Oil Company of California
Union Oil Building
Los Angeles 17, California

Re: Minerals Exploration Progress

Dear Cy:

Hole #4 at Roskruge has been in heavy pyritic mineralization from 80' to present depth of 175'. Material is highly altered and fractured volcanics, siltstone, limestone and secondary quartz in heavy gouge. Undoubtedly, the zone is a mineralized fault or fault-fissure, and is more than enough to explain all favorable results to date except the magnetic anomalism.

Marginal galena occurs throughout this 100' section. Highest assay, so far, ran 1.4% Pb. Lime content has been increasing with depth. As long as drilling continues good, we will continue the hole till we get out of the mineralization in order to check the footwall contact, which should be within the next 100'.

Our contractor finally got another drill on the job and it is at 75' in Hole #5 in hard massive diorite or diabase. The rock is fresh and contains much magnetite, a little disseminated pyrite and mineralized fractures. It is the first in place material we have found which could explain our magnetic anomalies - if it continues to about 200'.

Both drills have been averaging about 20' per shift, which is relatively excellent progress. Results within the next two weeks should tell the story.

We are now concentrating our effort in the Courtland-Gleeson area. This includes locating claims, obtaining options, and initiating preliminary detail geophysics over one area of known production, as well as the unexplored ground. This work will require several weeks before much of the results can be evaluated.

Sincerely,

Walt.

Walter E. Heinrichs, Jr.
Exploration Manager

WEH/pr
cc: Dr. M. G. Edwards

FORM 402 ME-T 12-55 500

June 18, 1957

Mr. Walter E. Heinrichs, Jr.
Minerals Exploration Company
P.O. Box 5671
Tucson, Arizona

Dear Walt:

This will acknowledge copy of your letter of June 13, addressed to Cy Rubel. It now looks as though Hole #5 at Roskruge has solved the source of the magnetite which gave at least some of the anomoly. The mineralization in Hole #4 is encouraging but as it seems to be confined pretty much to a fault fissure, the volume of workable ore may be small even though you encounter some good values

I have just re-read Norm's report on the Cash Creek prospect in Idaho. It sounds encouraging. I went over it with Norm in some detail on my way east but would like to discuss it again before field work starts.

I plan to arrive in Tucson Tuesdat morning, June 25. Please make reservation for a room at the Pioneer Hotel.

Regards to all.

Sincerely

M. G. Edwards

# Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA

6 March 1957

Dr. M. G. Edwards
2154 N. Villa Heights Road
Pasadena 8, California

Dear Guy;

We have decided, temporarily at least, to shut down our drill program at the Johnson-Dragoon Project pending your visit next week. Portadrill Hole #8 encountered bedrock at 363 feet. The material is unmineralized dolomitic limestone. Diamond drill hole #4 (same as portadrill hole #7) encountered soft, sandy garnetite bedrock at 338 feet. This continued to 486 feet where it finally became hard enough to obtain core recovery. The core shows a well altered and brecciated limestone, probably lower abrigo. This contained some oxide mineralization and is highly broken and fractured with some schistose lenses showing vertical banding. The latter is indicative of vertical dip in this area only 225 feet west of drill hole #1, but could be only schist foliation. If the dip is vertical it would be extremely difficult to explore for a narrow mineralized zone without angle drilling and that is impractical with the depth of alluvium we have to contend with. I would like to discuss this problem with you and see if you have any different ideas. It would appear to me that we are at a stage where we should take a pretty careful look at our hole card. It may be in order to give some preliminary consideration to the possibility of seeing if Coronado Copper and Zinc would be interested in sharing any further risk with us in the area as I think the odds against us alone may rapidly increase from here on out.

Geophysical results at Roskruge continue to be definitely encouraging. Most of the preliminary EM survey and some preliminary hand magnetometer work will be completed this week. At present we have correlation between magnetic and electrical results with associated limestone, garnet, magnetite and copper mineralization in float with bedrock less than 200 feet deep and possibily as shallow as 50 feet. If all continues favorable I think we should be able to start some preliminary direct exploration this month as I indicated to Cy during his last recent visit to Pima.

6 March 1957

Regarding new project areas, results to date of preliminary Mobile Magnetometer work at Courtland-Gleeson and north east Santa Rita Mountains areas have not warranted making any land plays but do indicate the desirability for additional coverage which will be undertaken as soon as possible. We would also like to go over this and several pending project possibilities with you.

We have made arrangements for your reservation at the Biltmore Motel and will expect to hear from you either Sunday night or will contact you Monday morning.

With best regards,

Sincerely,

Walter E. Heinrichs Jr.
Exploration Manager

WEH/pr

cc: Mr. A. C. Rubel, President
Union Oil Company of California

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

February 18, 1957

Dr. M. Guy Edwards
2154 N. Villa Heights Road
Pasadena 8, California

Dear Guy:

Have delayed replying to your letter of 13 February until we could confirm reservations for you at the Biltmore. This has been done, however, they did ask to be informed, if possible, the time of your arrival as it makes some difference in the type of accomodations they would be able to give you. This extra rigamarole is occasioned by the fact that the date just barely overlaps Tucson's major tourist event "The Fiesta de los Vaqueros", better known as the local rodeo. In any event they assured us that they would have a place for you.

Norm and I spent part of last week on a short examination trip in the east Chiricahua Mountains area and the Grace prospect near Portal. We had a very pleasant visit with the Moller's, in fact, stayed in one of their pleasant cottages overnight. They are hoping to possibly hear from you and that you might have time to stop by should you be going east as you mentioned to them during our previous business.

This area has definite possibilities but will require a considerable amount of ground work in order to proceed. The specific prospect itself does not appear too favorable.

The Dragoon drilling is continuing at an accelerated pace. Actually Hole #5 had granite bedrock so that #6 is the same as your #5. I agree with you that if this hole does not show any more encouragement this section will be pretty well explored with negative results. We are in the process now of going over data in anticipation of this to pick a new location in an entirely different part of the anomalous area.

Electromagnetic work is under way at Roskruge and we should have some preliminary results by the time you get here. Mo-Mag reconnaissance at Santa Rita and Cortland are still being compiled so we have no specific results to report as yet except to say that the equipment seems to be lined out pretty well and functioning satisfactorily, with Al Clark getting pretty well indoctrinated into its operation and maintenance.

Regarding a copy of the original application for a state lease on the Beta, Gamma and Delta claims on Pima, I am doubtful now that we ever retained a copy of this in our files. To the best of my recollection, and after going over everything with Bob, I think these forms were very scarce at the time and that we did not have

# Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA



Feb. 18, 1957

sufficient copies to retain a duplicate for our own filing purposes.

Received your copy of letter and personal data from Harry Callaway. We can discuss this more during your visit.

Sincerely yours,

Walter E. Heinrichs Jr.
Exploration Manager

WEH/pr

Business Transacted at Special Meeting of Board
of Directors of MINERALS EXPLORATION COMPANY
Held September 21, 1956.

The Minutes of Special Meeting of Board of Directors held August 7, 1956 were ratified and approved.

The acts of the Officers were approved in having paid the sum of $6,000 to Rex Baker, et al. as consideration for their having executed an Instrument under date of August 20, 1956 which (a) terminates the Letter Agreement of January 17, 1956 whereby Baker, et al. granted this corporation the right to conduct minerals exploration operations on approximately 170,000 acres (Trinchera Ranch) in Costilla County, COLORADO, and (b) releases this corporation from any further obligations thereunder and from any claims or demands arising with respect thereto. (The $6,000 payment represents a compromise settlement of the difference between the $25,500 spent by this corporation on exploration, and its $37,500 obligation under the Agreement.)

The Officers were authorized to enter into an Agreement with Allen M. Rugg, Jr., et al., whereby Minerals acquires exploration rights on lands presently owned (140 acres of mining claims) or which may be later acquired by Rugg, et al., within nine sections in T14 & 15S, R10E, Pima County, ARIZONA, for period of 12½ years subject to termination by Minerals on 30 days' written notice. Under the terms of the Agreement Minerals (a) is obligated to commence exploration work within 30 days and during the first year to expend a minimum of $3,000, (b) agrees to pay Rugg, et al. a royalty of 7½% of net smelter returns on ores produced from claims now held or subsequently acquired by Rugg, et al. within the stated area, except that on ores produced from Indian, State or private lands acquired under lease by Minerals the royalty payable to Rugg, et al. shall be equivalent to 10% of the total royalty payable to lessors under subject leases, (c) acquires an option to purchase all or Rugg, et al.'s claims, rights or interests within the stated area for $153,000 cash if purchased within 18 months, or $180,000 thereafter payable in minimum annual installments of $15,000 but with right of discontinuing such payments in event of early termination of the Agreement, -and with any royalty payments to be applied against the purchase price.

The Officers were authorized to execute a Special Power of Attorney appointing Walter E. Heinrichs, Jr. (Exploration Manager) as Attorney-in- Fact of this corporation for the sole purpose of executing on its behalf a Letter Agreement whereby Lizzie E. Adams grants Minerals permission to conduct mineral exploration work on 2,240 acres, in which she has surface rights only except for 60 acres, in Sections 4-7, T16E, R23E, Cochise County, ARIZONA, - in consideration of which Minerals will pay Mrs. Adams $100 per month for period of not to exceed six months, with payments to cease if operations are suspended.

The Officers were authorized to execute a Power of Attorney appointing Walter E. Heinrichs, Jr. (Exploration Manager) as Attorney-in-Fact of this corporation for the purpose of executing on its behalf any and all instruments pertaining to the acquisition of lands, or mineral interests therein, mining claims or mining locations thereon and the operation of such properties and interests, in the States of ARIZONA, CALIFORNIA, COLORADO, NEW MEXICO, NEVADA and UTAH, -such instruments to include but not be limited to mineral or mining leases, together with assignments and quitclaims thereof.

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

20 May 1957

Mr. A. C. Rubel, President
Union Oil Company of California
Union Oil Building
Los Angeles 17, California

Dear Cy:

Work at Roskruge appears to have written off much of the area of original interest. Except for technical pyrite discovery, results have been disappointing. With a short term, open-ended contract, we have had only one drill on the job so far. This makes progress slower than desired. The magnetite zones remain to be checked by one or two more shallow holes. If these results are negative, this area will be abandoned.

The prospect in Idaho is still snowbound and examination is postponed pending spring thaw.

Preliminary MoMag reconnaissance has been completed in the following districts:

| | |
|---|---|
| No. Santa Rita Mts., Ariz. | Little Hatchet Mts., New Mexico |
| Courtland-Gleeson, Ariz. | Lordsburg, New Mexico |
| Apache Hills, New Mexico | Red Hill, New Mexico |

Results are still being avaluated, however, several anomalous areas definitely warrant further detail and are being followed up. Additional geophysics and/or drilling is or will be used as indicated.

Past production from these districts varies from large to small. In every case, the possibility of favorable geophysical application, under relatively shallow alluvial cover, exists, and in most cases, a magnetic-ore relationship to one degree or another is indicated. In comparison with the Pima example, the only remaining factor is direct proof of quickly recognizable geophysical-ore correlation over a known deposit in each area prior to initiating any extended detail project.

As I see it, this latter factor is very important, if not essential, and should be a prerequisite included wherever feasible in appraisal of these, or any other, districts.

In most past projects, we have been at a disadvantage in this respect because known significant deposits did not exist where

FORM 402 ME-T 12-55 500

Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA



20 May 1957

quick check tests could be made. I believe you will agree that except where pure wildcatting is justified by circumstances and results, the interpretation advantage of relatively working from known to unknown is obvious.

Last week is the first time since purchase from United that the MoMag operated continuously for one week with only minor malfunction. I feel we may finally have the equipment back in decent, proper operating condition for efficient use. Progress otherwise is satisfactory and I look for encouraging results in the not too distant future.

With best regards,

Sincerely,

Walter E. Heinrichs Jr.
Exploration Manager

WEH/pr

cc: Mr. M. C. Edwards

EAGLE-A
Agawam Onion Skin
100% COTTON CONTENT
U S A

# Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA

1 May 1957

Mr. A. C. Rubel, President
Union Oil Company of California
Union Oil Building
Los Angeles 17, California

Re: Minerals Exploration Company Progress

Dear Cy:

Drilling at Roskruge penetrated about 17' ± of fairly heavy pyrite about 100' below the surface. Variable grade mineralization has been continuous from about 90' to below 140'. Base metal content appears weak. Have seen some galena, chalcopyrite and suggestion of possible precious metal values, but actual results will have to await assay returns later this week.

This development is encouraging from the point of mineralization intensity in the area along a zone of considerable length, but disappointing in lack of apparent economic mineral content at this particular spot. Possibility of economic mineral zones, laterally related to the pyrite occurrence, will be checked by additional drilling.

We have finally located and retained, on Grover's payroll, a young, but experienced, mining geophysicist. This will substantially speed up the phase between examination and drilling.

Work is continuing in the Northern Santa Rita Mountains, Courtland-Gleeson, and Hachita, New Mexico areas, but nothing yet warranting digging or drilling.

Next week, I plan to look at a favorable prospect in Idaho, near Challis. If so, I may be gone from Tucson about ten days.

Sincerely,

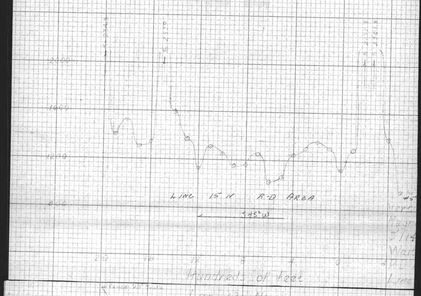
Walter E. Heinrichs Jr.
Exploration Manager

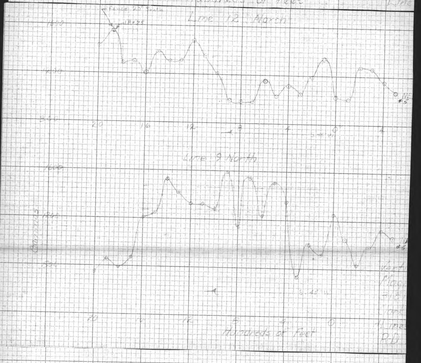
WEH/pr

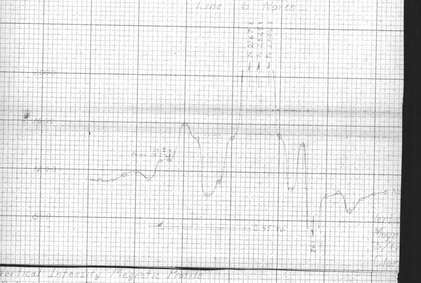
cc: Mr. M. G. Edwards

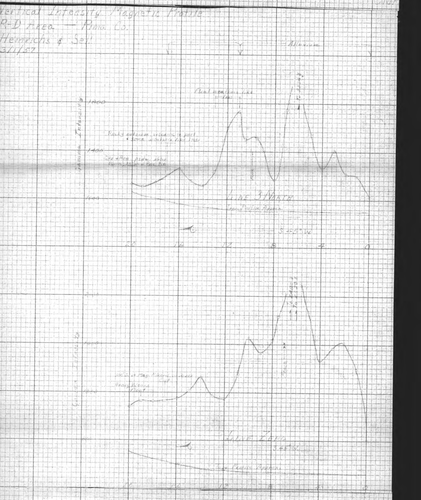
FORM 402 ME-T 12-55 500

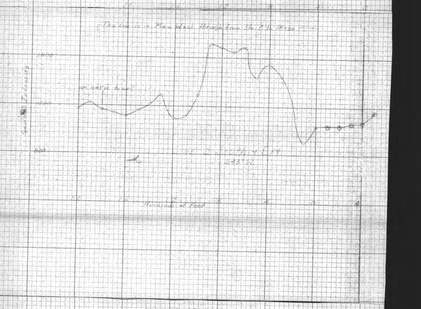
Vertical Intensity
R-D Area
3/59

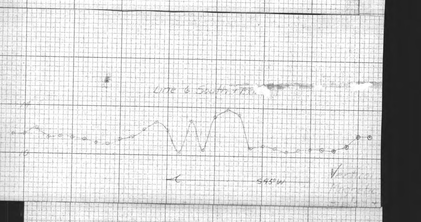


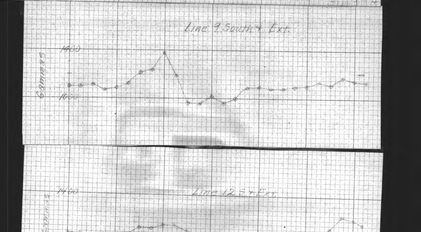



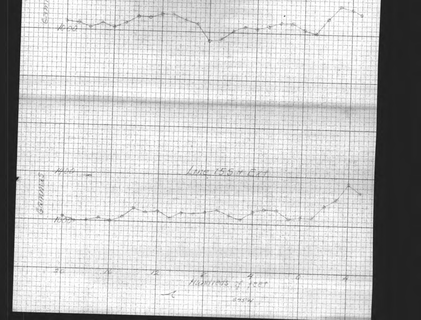



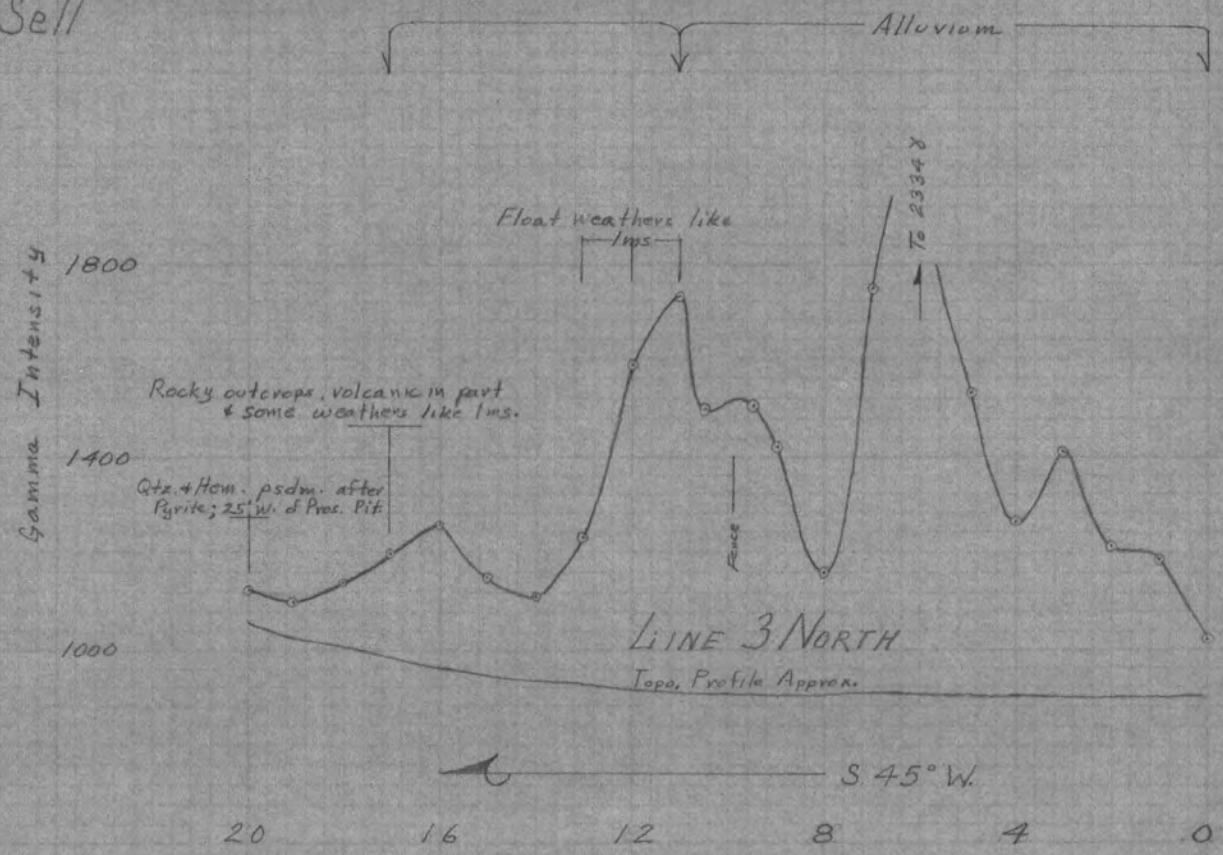



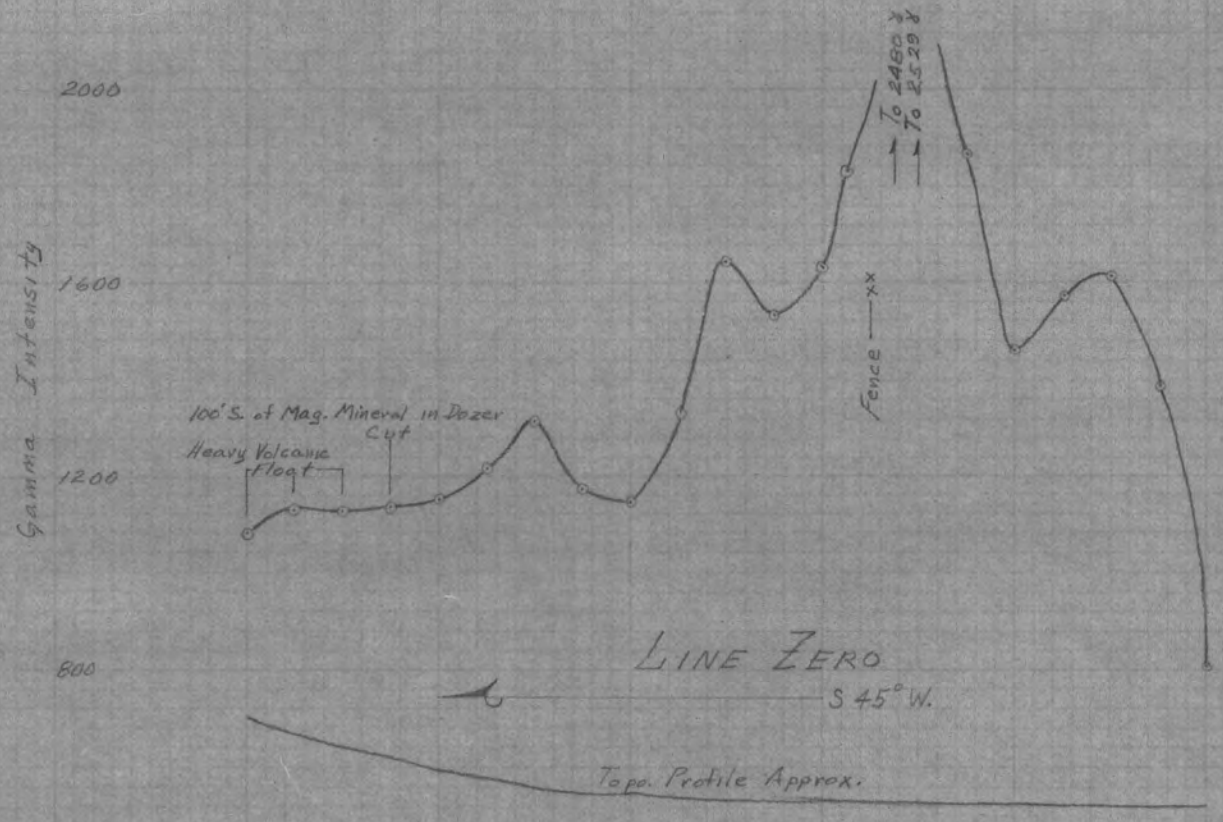



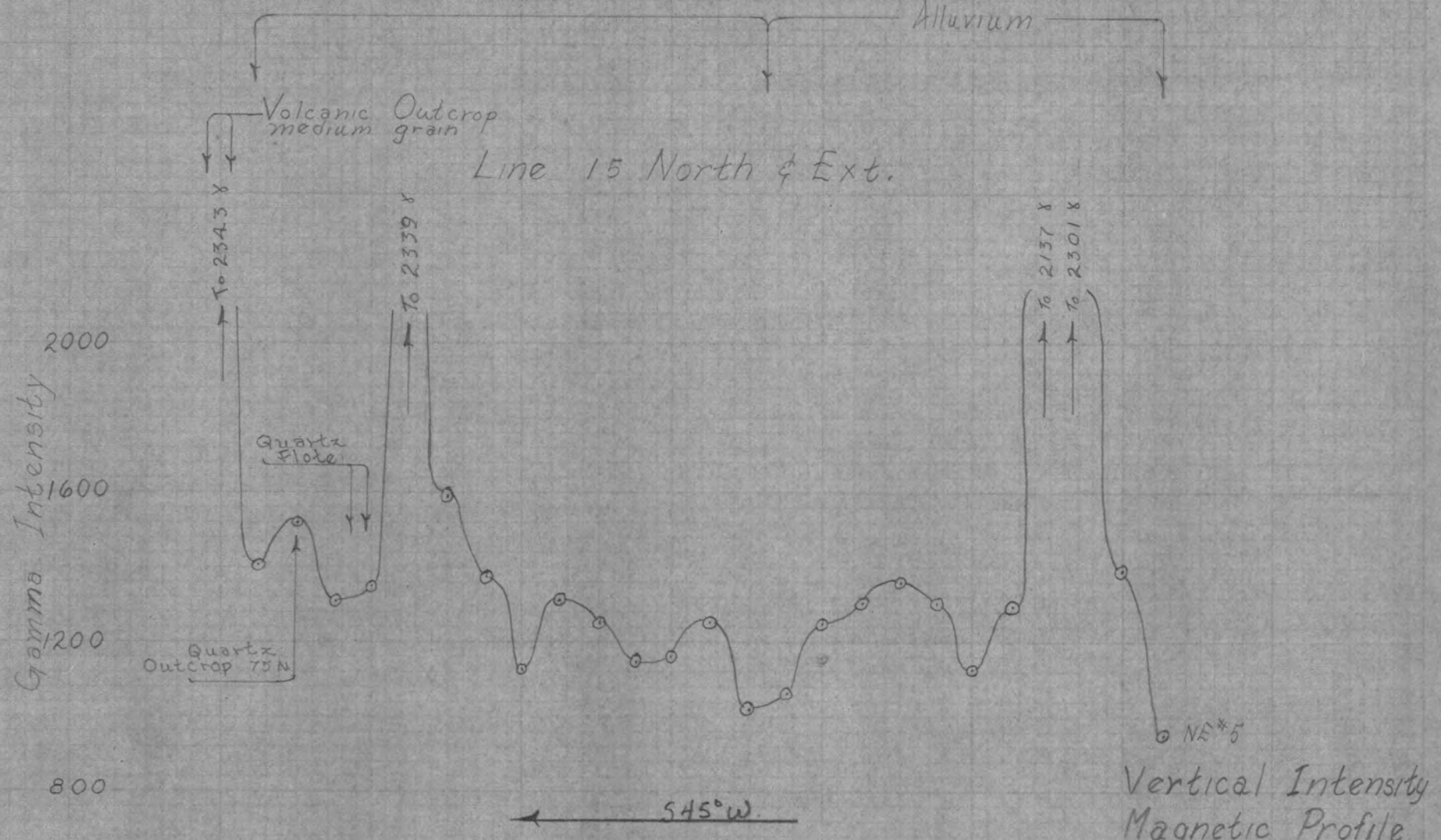



# Vertical Intensity Magnetic Profile
# R-D Area — Pima Co.
Heinrichs & Sell
3/1/57






Vertical Intensity
Magnetic Profile
3/14/57
Waite & Jones
4 R-D Area - Pima Co.
Line 15 N.

VERTICAL INTENSITY
MAGNETIC PROFILE
5/28/52
HEINRICH & JONES.
R-D AREA - LIMA Co.
LINE 4-N.

KEUFFEL & ESSER CO.
NEW YORK

Line 2N

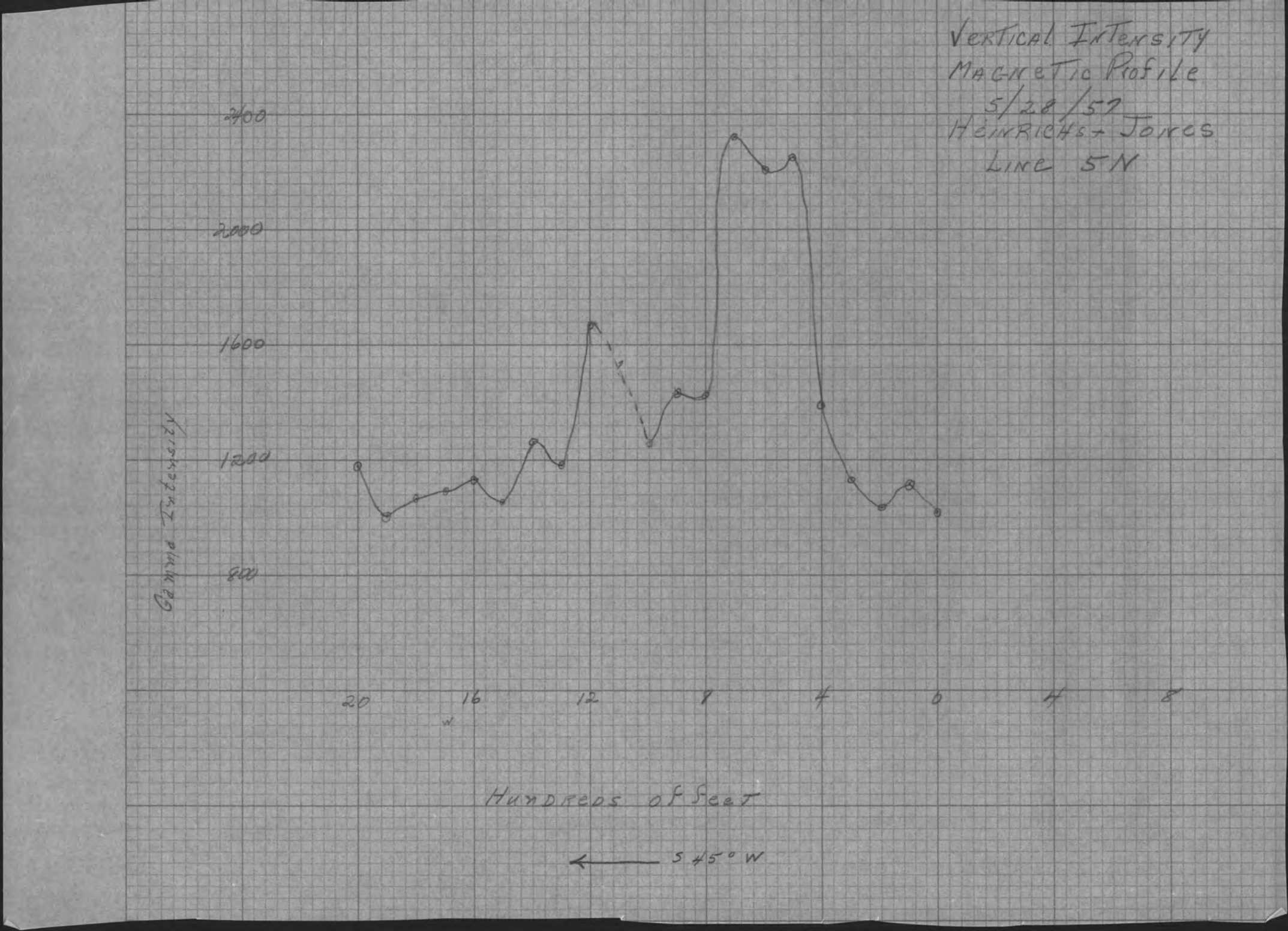
VERTICAL INTENSITY
MAGNETIC PROFILE
5/28/57
HUNRICHS + JONES.
R-D AREA
LINE 2N.

GAMMAS

20 16 12 8 4 0 4 8 12

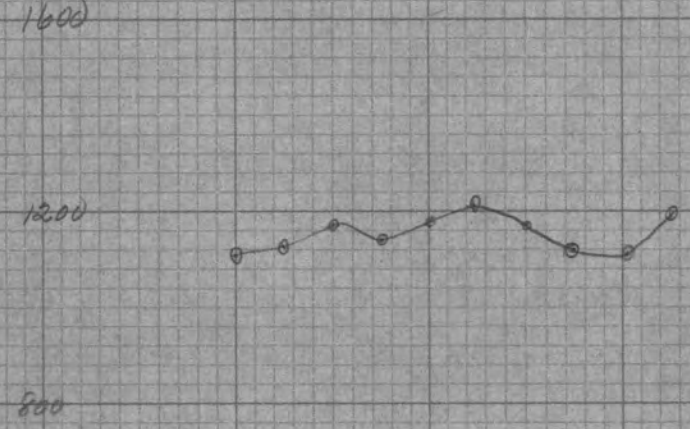
HUNDREDS of feet

← S 45° W

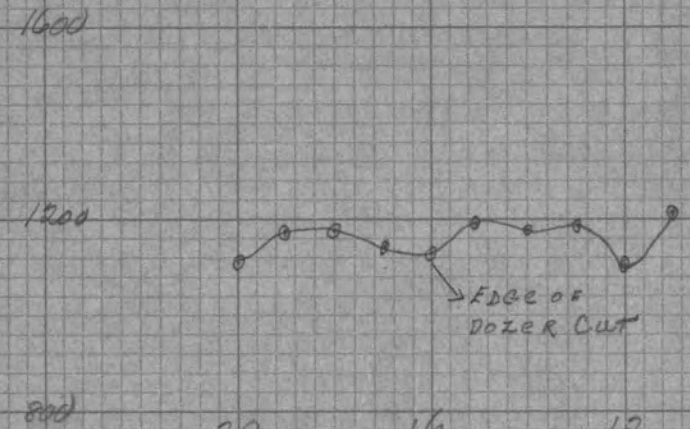

VERTICAL INTENSITY
MAGNETIC PROFILE
5/28/57
HEINRICHS + JONES
LINE 5N
2400
2000
1600
1200
800
KILOGAUSS PLOTTED
20
16
12
8
4
0
4
8
W
HUNDREDS of FEET
S 45° W

Vertical Intensity
Magnetic Profile
5/28/57
Heinrichs + Jones
Lines 1-S + 2-S

Line 1 S




Line 2 S




20 16 12 8 4 0

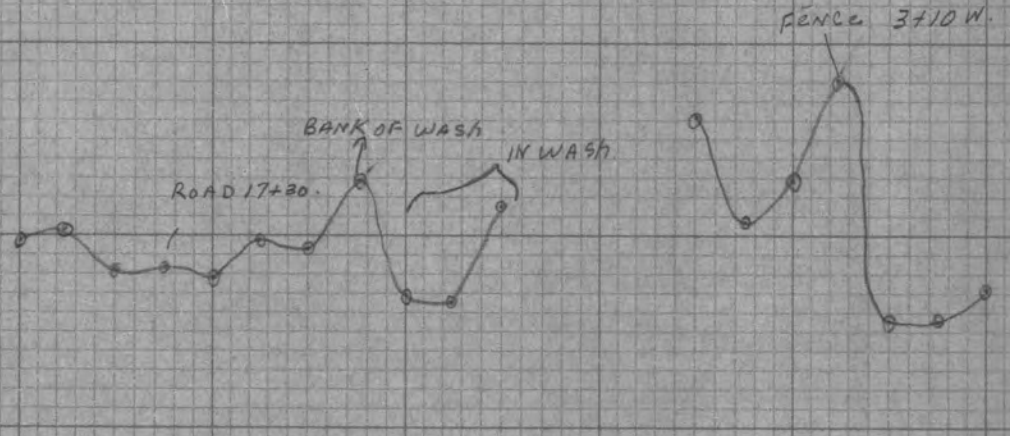
Hundreds of feet

S 45° W

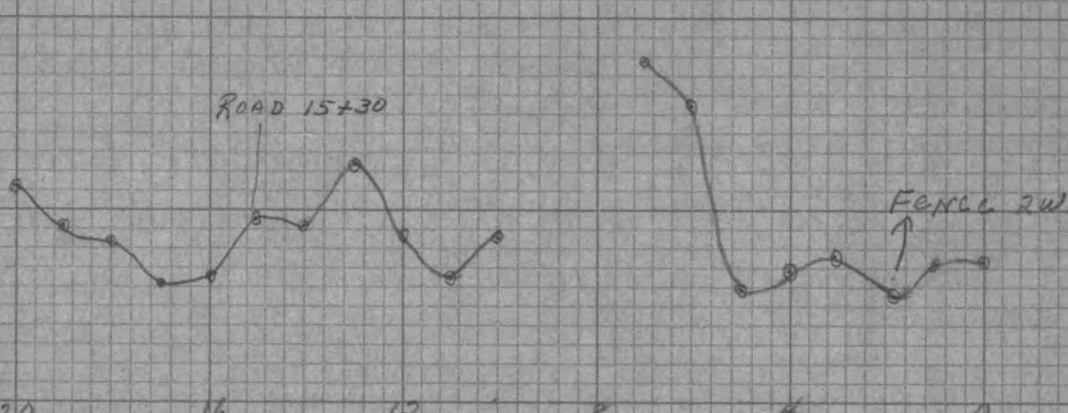
TRADE STANDARD MARK
REG. U.S. PAT. OFF.
CROSS SECTION 10 X 10
100% RAG PAPER
MADE IN U.S.A.

Vertical Intensity
Magnetic Profile
5/28/57
Heinrichs + Jones.
Lines 4-S + 5-S.

## Line 4 S

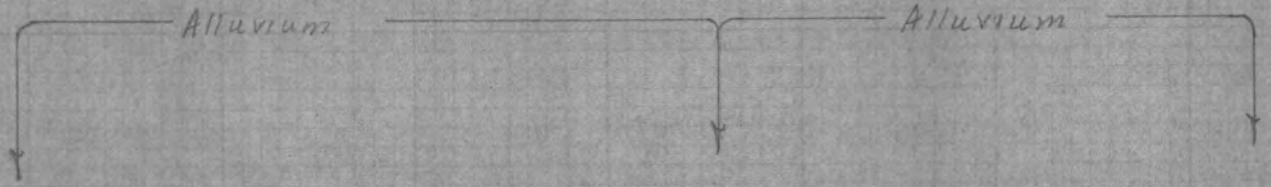



## Line 5 S

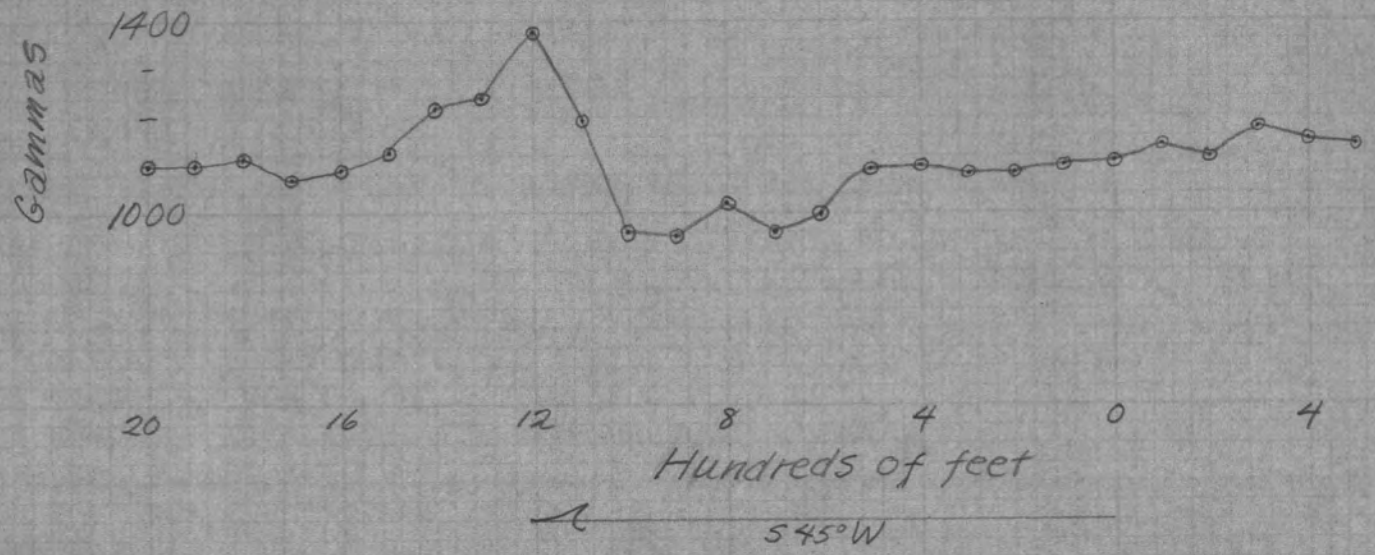



Hundreds of Feet

← 5+50 W

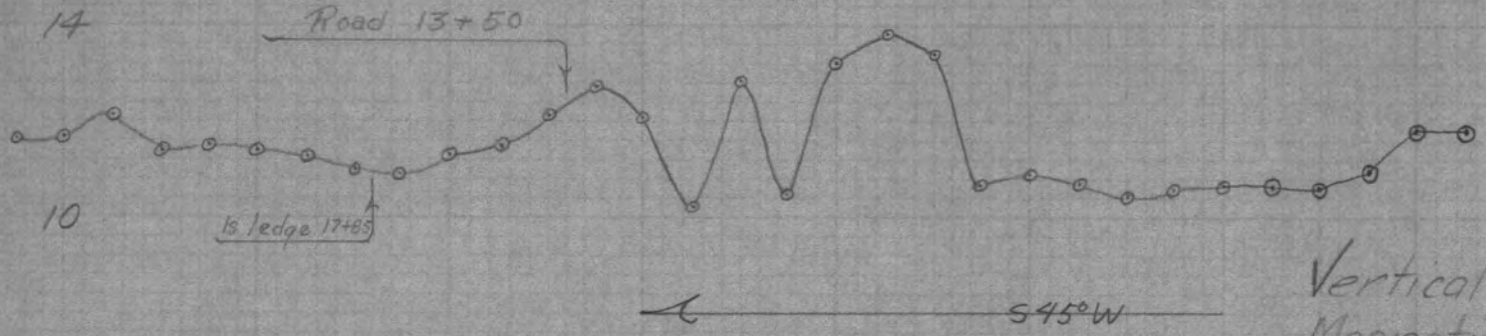



Line 9 South + Ext.



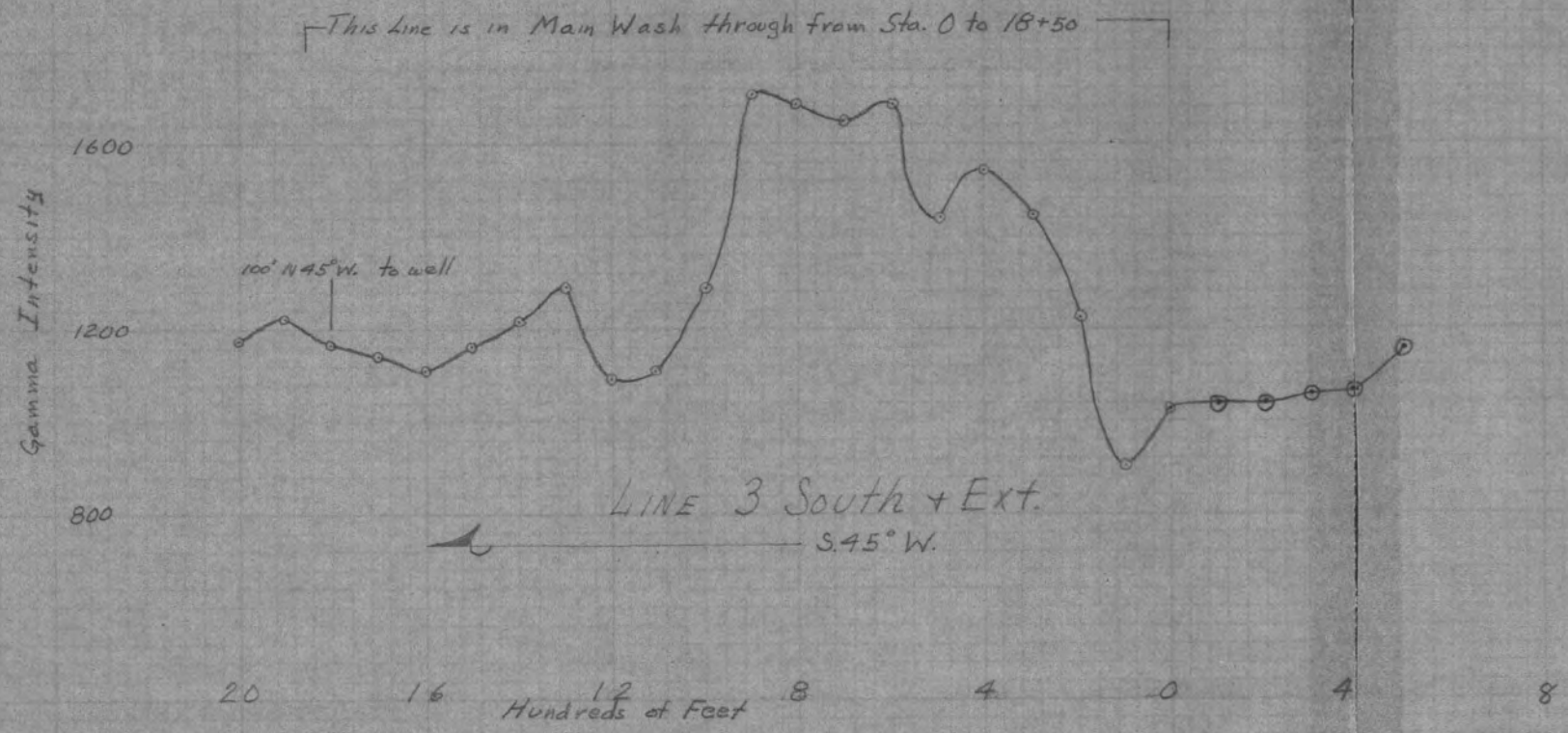

Vertical Intensity
Magnetic Profile
3/14+15/57
Waite + Jones
R-D Area - Pima Co.
Arizona

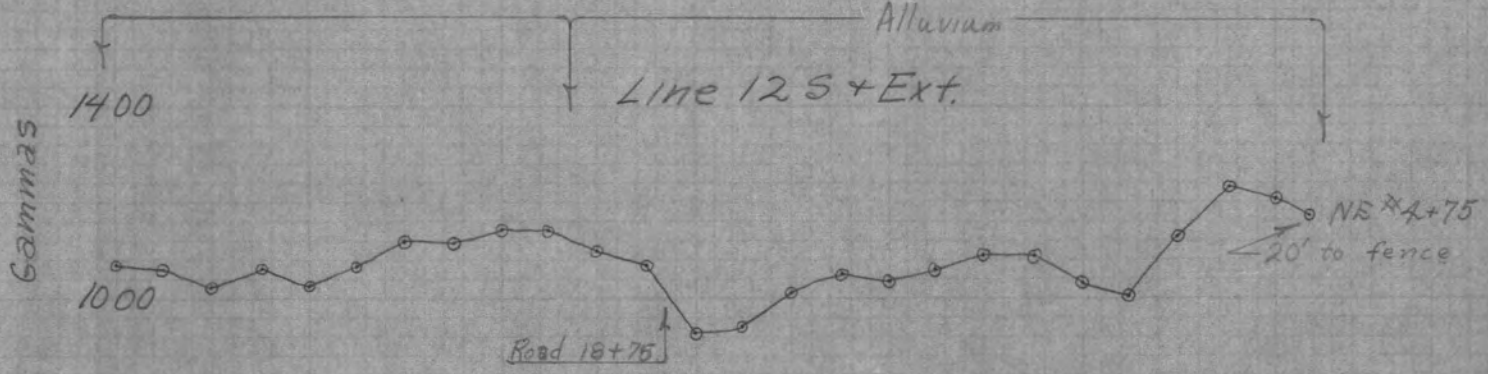
Line 6 South + Ext.

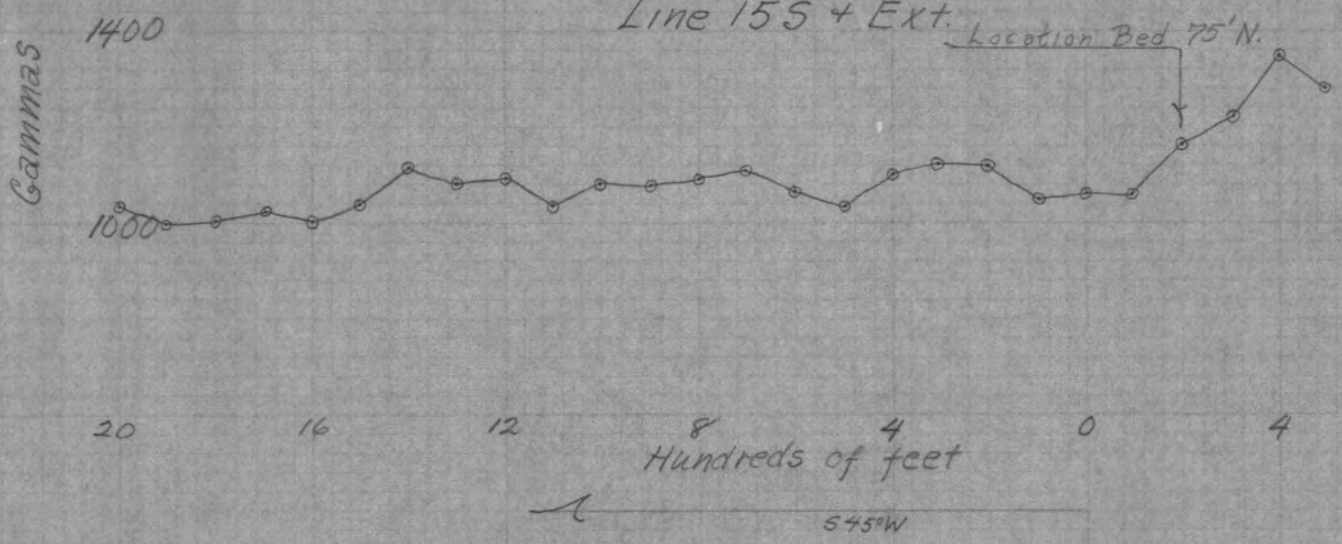



Vertical Intensity
Magnetic Profile
3/8/57 + 3/14/57
Clark, Waite, Jones
R-D Area - Pima Co.
Arizona

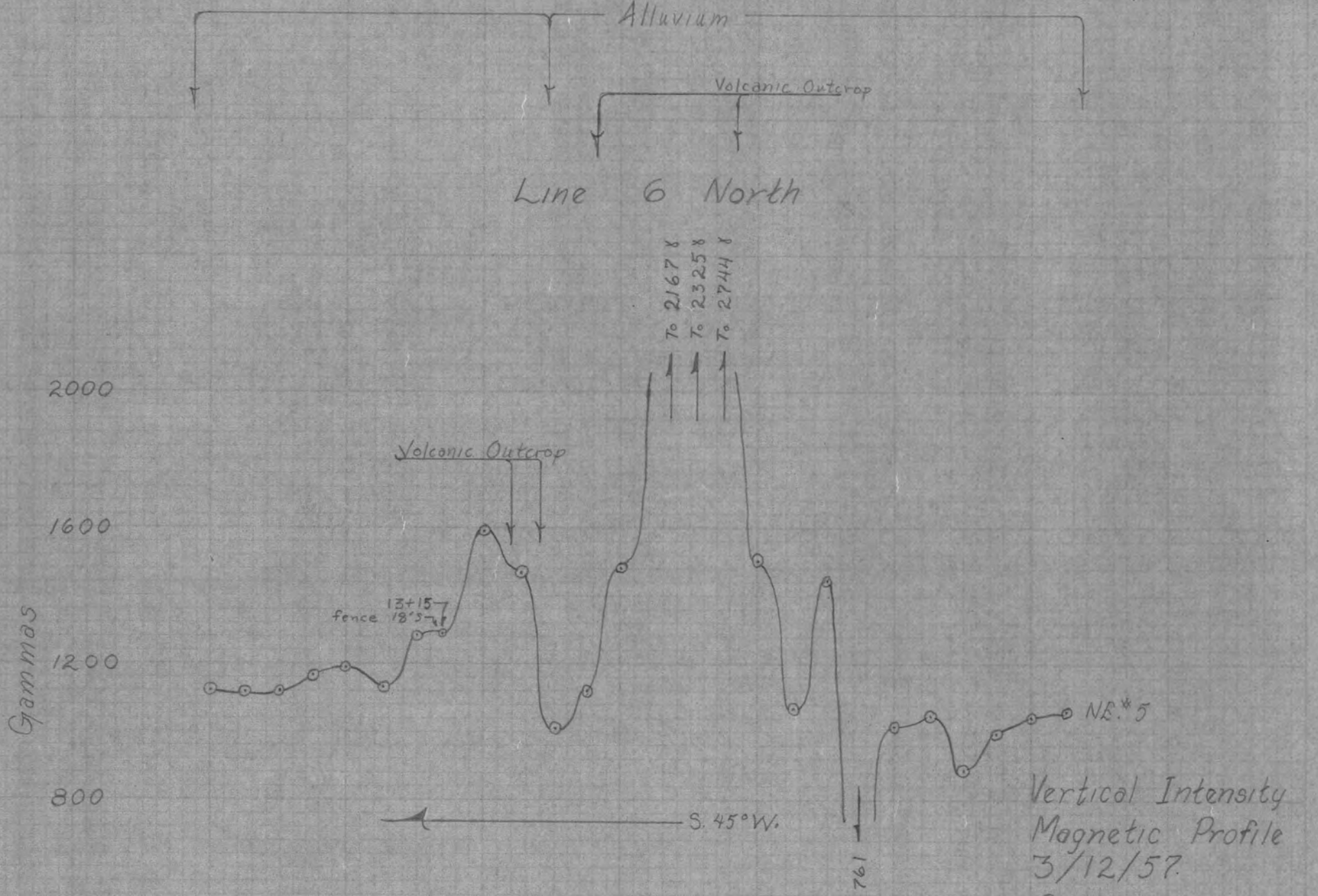
Vertical Intensity Magnetic Profile
R-D Area — Pima Co.
Heinrichs & Sell, Clark + Waite
3/1/57 + 3/12/57

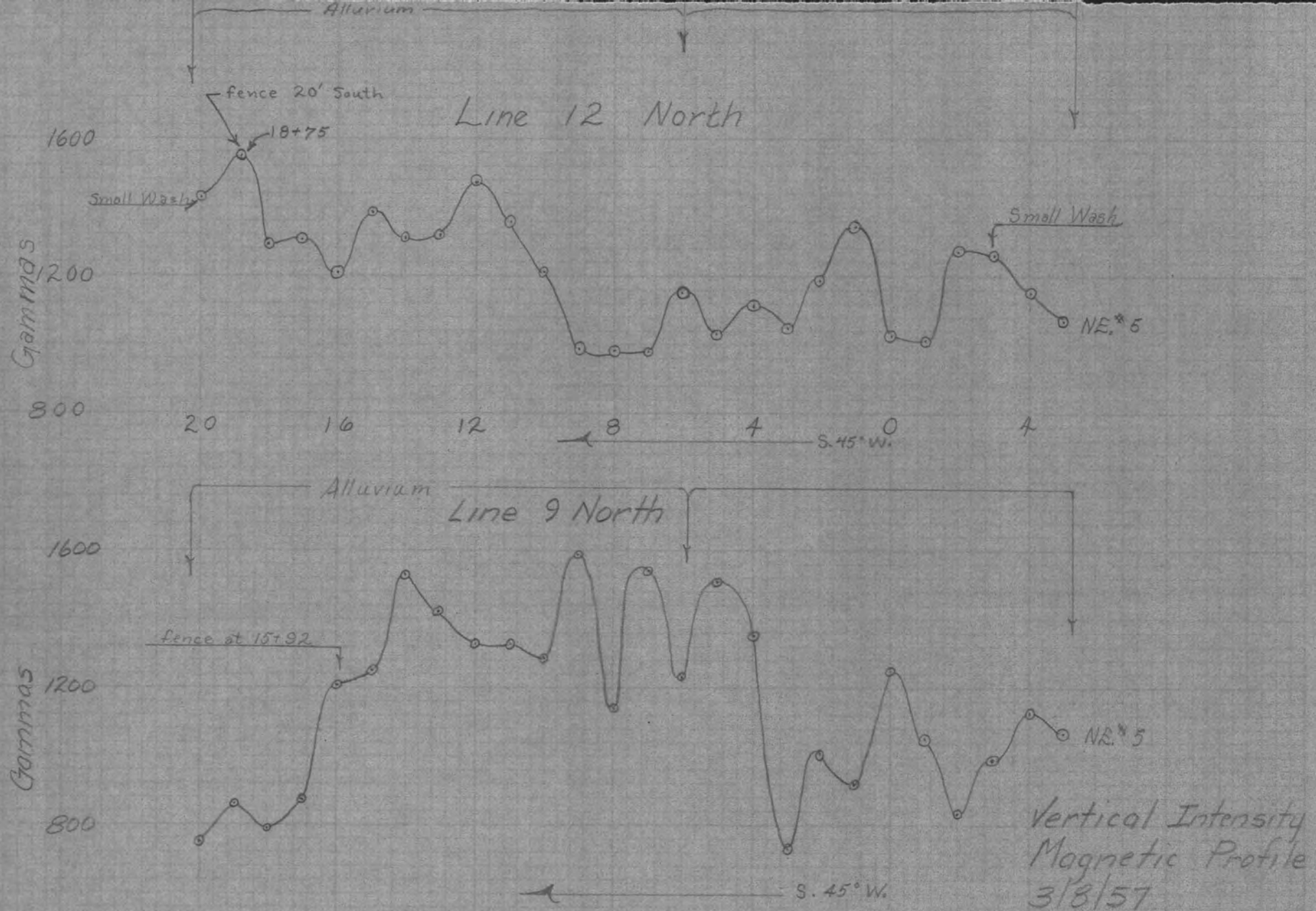





Vertical Intensity
Magnetic Profile
3/15/57
Waite + Jones
R-D Area - Pima Co.
Arizona

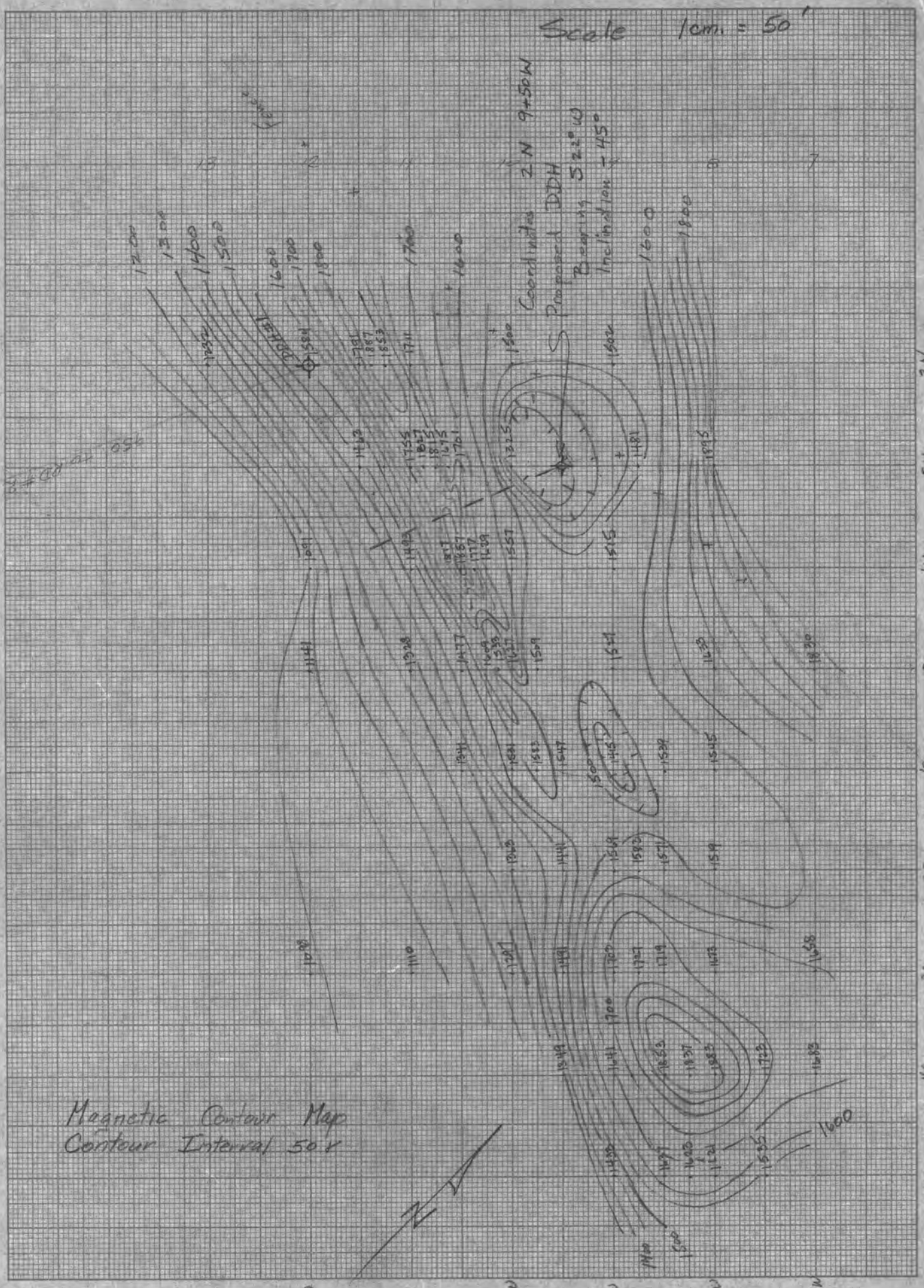

Alluvium
Volcanic Outcrop
Line 6 North
To 2167 γ
To 2325 γ
To 2744 γ
2000
1600
1200
800
Gammas
Volcanic Outcrop
13+15
fence 18°S
N.E. * 5
S. 45° W.
761
20
16
12
8
4
0
4
Hundreds of Feet
Vertical Intensity
Magnetic Profile
3/12/57
Clark, Waite, Jones
Line 6 N.
R-D Area ~ Pima Co.




Vertical Intensity Magnetic Profile
3/8/57
Clark, Waite, Jones
4 Lines 9 & 12 N.
R-D Area - Pima Co.

R-D Area

Scale 1cm = 50'

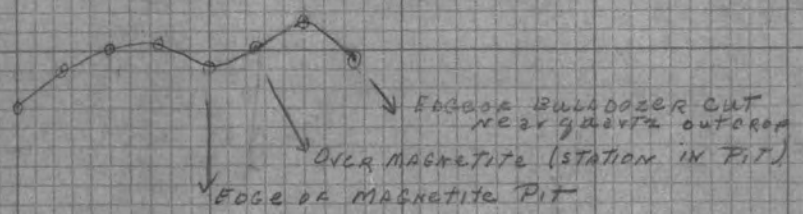



KEUFFEL & ESSER CO.
359-14
Millimeters, 5 mm. lines accented, cm. lines heavy.
MADE IN U.S.A.

# VERTICAL INTENSITY MAGNETIC PROFILE

5/27/57 Waite + Jones
R-D AREA - PIMA Co.

LINE 1-N. W




GAMMA INTENSITY

1600.
1200
800

20 16 12 8. 4 0 4 8.

HUNDREDS OF FEET

← S45°W

KEUFFEL & ESSER CO.
NEW YORK

Note all N. to E. Readings that are minus the actual reading
N. to W.

# MAGNETOMETER DATA SHEET

EM Line Zero is used
comp. reading is
then averaged & used

AREA R-D LOCATION Mag Claim Group LINE 0

OPERATORS E.G.H. & J.S. BASE DATUM +1000 INST. NO. 178 SCALE VALUE 10.58 DATE 3/11/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 0-0-W | 22 | -Under U.1 | | | | | | | |
| Base" | 11: 24.0 24.5 | Minus (12.3) (14.1) | | | | | | | |
| " | 26.0 26 | 13.1 12.7 | (17.1) | | | | | | |
| " | :27 | 12.9 12.3 | (17.4) | | | | | | |
| " | :27.5 | 13.0 12.8 | (17.1) | (17.1 Avg. | | -0.9 | (18.0) | 811 | ✓ |
| " | :28 | 13.3 12.9 | (16.9) | | | | | | |
| " | :32 | 12.9 13.3 | (16.9) | | | | | | |
| 0-1W | :36 | Zero 38.0 38.1 | 38.1 | | | -0.8 | 37.3 | 1392 | ✓ |
| 2W | :38 | Zero 58.7 58.6 | 58.7 | | | -0.8 | 57.9 | 1608 | ✓ |
| 3W | :40 | Z 55.1 54.2 | 54.7 | | | -0.8 | 53.9 | 1566 | ✓ Note S = Small magnet (constant @ 43cm. 117o) |
| 4W | :42 | Z 43.6 43.6 | 43.6 | | | -0.8 | 43.8 | 1460 | ✓ |
| 5W | :44 | Plus 83.9 83.3 | 83.6 | | | -0.8 | 82.8 | 1869 | ✓ |
| 6W | :50 | Z 34.9 34.9 | 34.9 | S Mag. N up. 43cm | +117o | -0.7 | 34.2 ± 2 | 2529 | ✓ |
| 6+50W | 11: 54 | Z 30.3 30.1 | 30.2 | S. mag N up. 43cm | +1170 | -0.7 | 29.5 | 2480 | ✓ |
| 7W | | | | | | | | | Fence Line; 1/4 Corner of Sec. 27/34 |
| 7+50W | 12:00 | P 79.9 79.4 | 79.7 | | | -0.7 | 79.0 | 1830 | ✓ |
| 8W | :02 | P 60.9 61.0 | 61.0 | | | -0.7 | 60.3 | 1633 | ✓ |
| 9W | :04 | Z 51.1 50.5 | 50.8 | | | -0.6 | 50.2 | 1527 | ✓ |
| 10W | :05 | P 42.3 41.5 | 41.9 | | | -0.6 | 41.3 | 1644 | ✓ Comp. by [illegible] Checked by Pat |
| 11W. | :07 | Z 31.7 31.8 | 31.8 | | | -0.6 | 31.2 | 1328 | ✓ |
| 12W | :09 | Z 14.0 14.0 | 14.0 | | | -0.6 | 13.4 | 1141 | ✓ |
| 13W | :12 | Z 17.2 17.1 | 17.2 | | | -0.6 | 16.6 | 1174 | ✓ |
| 14W | :14 | Z 30.8 30.8 | 30.8 | | | -0.6 | 30.2 | 1317 | ✓ |
| 15W | :17 | Z 20.9 20.4 | 20.7 | | | -0.6 | 20.1 | 1211 | ✓ |
| 16W | :19 | Z 14.1 14.0 | 14.1 | | | -0.5 | 13.6 | 1143 | ✓ |
| 17W. | :20 | Z 12.8 12.7 | 12.8 | | | -0.5 | 12.3 | 1129 | ✓ South (100') of Dozer cut in Magnetite. |
| 18W | :23 | Z 12.3 12.3 | 12.3 | | | -0.5 | 11.8 | 1124 | ✓ Heavy Volcanic float from Here thru 20W. |
| 19W | :25 | Z 12.9 13.1 | 13.0 | | | -0.5 | 12.5 | 1131 | ✓ |
| 0-20W. | :26 | Z 8.2 8.0 | 8.1 | | | -0.5 | 7.6 | 1080 | ✓ |
| 0-0-W | :37 | M 12.2 12.3 | (17.7) | | | | | | |
| " | :38 | M 12.2 12.5 | (17.6) | (17.6 Avg. | | | | | |
| " | :39 | M 12.2 12.5 | (17.6) | | | | | | |

# MAGNETOMETER DATA SHEET

EM

AREA R-D. LOCATION Mag. Claim Group LINE 3 NORTH.

OPERATORS E.G.H. & J.S. BASE DATUM +1000 INST. NO. 178 SCALE VALUE 10.58 DATE 3-1-57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base 0-0-W | 1:36 | Minus 12.0 12.0 | 18.0 | | | | | | |
| " | :37 | M 12.2 11.7 | 18.0 | 18.0 | | 0 | | | |
| " | :38 | M 12.1 11.9 | 18.0 | | | 0 | | | |
| 3N-0W | :41 | zero 3.3 2.9 | 3.1 | | | 0 | 3.1 | 1033 ✓ | |
| 1W | :44 | Z 18.8 18.3 | 18.6 | | | 0 | 18.6 | 1195 ✓ | |
| 2W | :50 | Z 20.8 20.8 | 20.8 | | | 0 | 20.8 | 1218 ✓ | |
| 3W | :52 | Z 39.8 39.3 | 39.6 | | | 0 | 39.6 | 1416 ✓ | |
| 4W | :53 | Z 24.8 24.7 | 24.8 | | | 0 | 24.8 | 1260 ✓ | |
| 5W | :55 | Z 51.0 50.9 | 51.0 | | | 0 | 51.0 | 1536 ✓ | |
| 6W | 1:57 | Z 15.8 15.3 | 15.6 | 5 Mag Nup 43cm | +1.70 | 0 | 15.6 7"2" | 2334 ✓ | |
| ~~7W~~ | ~~2:00~~ | Plus 72.1 ~~70.5~~ | | | | 0 | | | |
| 7W | 2:02 | Plus 72.1 71.2 | 71.7 | | | 0 | 71.7 | 1753 ✓ | |
| 8W | :04 | Z 15.2 15.1 | 15.1 | | | 0 | 15.1 | 1159 ✓ | |
| 9W | :06 | Z 40.3 39.9 | 40.1 | | | 0 | 40.1 | 1421 ✓ | |
| ~~9+50W~~ | ~~:08~~ | Z ~~48.1~~ 47.2 | ~~47.1~~ | | | 0 | | | |
| 9+50W | :08 | Z 47.9 47.6 | 47.8 | | | 0 | 47.8 | 1502 ✓ | |
| 9+85W | | | | | | | | | Fence Line |
| ~~10+50W~~ | ~~:13~~ | Z ~~48.8~~ 46.9 | | | | 0 | | | |
| 10+50W | :15 | Z 47.9 47.3 | 47.6 | | | 0 | 47.6 | 1500 ✓ | |
| 11W | :17 | P 70.1 69.9 | 70.0 | | | 0 | 70.0 | 1735 ✓ | Float found which Weathers Like Lms |
| ~~12W~~ | ~~:19~~ | Z ~~54.1~~ 55.1 | | | | 0 | | | |
| 12W | :21 | Z 55.9 55.2 | 55.6 | | | 0 | 55.6 | 1584 ✓ | " " " " " " |
| 13W | :23 | Z 22.3 21.9 | 22.1 | | | 0 | 22.1 | 1232 ✓ | " " " " " " |
| 14W | :27 | Z 9.9 9.9 | 9.9 | | | 0 | 9.9 | 1104 ✓ | |
| 15W | :29 | Z 13.8 13.7 | 13.8 | | | 0 | 13.8 | 1145 ✓ | |
| 16W | :30 | Z 23.9 23.8 | 23.9 | | | 0 | 23.9 | 1251 ✓ | |
| 17W | :33 | Z 18.2 18.1 | 18.2 | | | 0 | 18.2 | 1191 ✓ | In Small Creek Bed ; Rocky Outcrops, in part Weathers Like Lms. |
| 18W | :35 | Z 12.3 12.3 | 12.3 | | | 0 | 12.3 | 1129 ✓ | Rocky Outcrops. |
| 19W | :37 | Z 9.9 9.3 | 9.6 | | | 0 | 9.6 | 1101 ✓ | " " |
| 3N-20W | 2:39 | Z 11.5 11.7 | 11.6 | | | 0 | 11.6 | 1122 ✓ | " " Station Located 25' W of Pros. Pit with Qtz & Hematite Pseudomorphs after Pyrite. |
| Base 0-0-W | 2:55 | Minus 11.9 12.1 | 18.0 | 18.0 | | | | | |
| " | :56 | M 11.9 12.2 | 17.9 | 18.0 Avg. | | | | | |
| " | 2:57 | M 11.9 12.3 | 17.9 | | | | | | |

Computed by [illegible]
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA R-D. LOCATION MAG. Claim Group. LINE EM 3 South

OPERATORS E.G.H. & J.S. BASE DATUM +1000 INST. NO. 178 SCALE VALUE 10.5 & DATE 3/1/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base 0-0-W | 2:57 | M (11.9) (12.2) | (17.9) | (18.0) Avg. | | | | | see Sheet on "3 North" for foll Base Data at this time |
| 3S-0W | 3:00 | E 2.9 3.1 | 3.0 | | | -0.1 | 2.9 | 1030 | Sta. Loc. in Main Wash. |
| 1W | 03 | M 21.5 21.9 | (8.1) | | | -0.1 | (8.2) | 914 | " " " " " |
| 2W | 05 | E 21.3 21.3 | 21.3 | | | -0.2 | 21.1 | 1222 | Dry Main Wash Located 25' South of station. |
| 3W | 07 | E 43.5 43.2 | 43.4 | | | -0.2 | 43.2 | 1454 | " " " " 30' " " " |
| 4W | 09 | E 52.1 52.0 | 52.1 | | | -0.2 | 51.9 | 1545 | Sta. Located in Middle of Dry Main Wash. 25' W. to Fence Line. |
| 5W | 12 | E 42.2 42.5 | 42.4 | | | -0.3 | 42.1 | 1442 | " " " " " " |
| 6W | 15 | P 66.3 65.5 | 65.9 | | | -0.3 | 65.6 | 1689 | " " ON N bank of Dry Main Wash at Bend. |
| 7W | 18 | P 63.1 63.1 | 63.1 | | | -0.4 | 62.7 | 1658 | " " " " " " Tributary Wash. |
| 8W | 21 | P 67.0 67.0 | 67.0 | | | -0.4 | 66.6 | 1699 | " " " N side of Large Wash. (25' N of & Wash). |
| 9W | 23 | P 68.1 67.7 | 67.9 | | | -0.5 | 67.4 | 1708 | |
| 10W | 25 | E 28.8 28.8 | 28.8 | | | -0.5 | 28.3 | 1297 | Sta. Loc. at junction of Small Creek with Main Wash System, N side. |
| 11W. | 27 | E 11.0 11.1 | 11.1 | | | -0.6 | 10.5 | 1110 | |
| 12W. | 31 | E 10.0 9.9 | 10.0 | | | -0.7 | 9.3 | 1098 | |
| 13W | 33 | E 28.7 28.6 | 28.7 | | | -0.7 | 28.0 | 1294 | |
| 14W | 35 | E 20.7 20.7 | 20.7 | | | -0.7 | 20.0 | 1210 | |
| 15W | 37 | E 16.3 16.4 | 16.4 | | | -0.8 | 15.6 | 1164 | Sta. Loc. 30' N of & of Wash. |
| 16W. | 39 | E 11.2 11.3 | 11.3 | | | -0.8 | 10.5 | 1110 | " " 20' N. " " " |
| 17W | 43 | E 14.9 14.0 | 14.5 | | | -0.9 | 13.6 | 1143 | " " on N side of Wash. Rock outcrop in Wash (S. side). |
| 18W | 48 | E 17.1 17.2 | 17.2 | | | -1.0 | 16.2 | 1170 | " " " S " " " " " " " " " " Near Road Xing. |
| 19W | 52 | E 22.1 22.1 | 22.1 | | | -1.0 | 22.1 | 1232 | Sta. Loc. 20's of Top of Bank of Wash. [100' N45°W to Well.] |
| 20W | 3:54 | E 17.2 17.5 | 17.4 | | | -1.1 | 16.3 | 1171 | Sta. Loc. 50's of & of Wash. |
| Base 0-0W | 4:07 | Minus (13.0) (13.8) | (16.6) | | | | | | |
| " | | M (12.9) (13.3) | (16.9) | (16.7) Avg | | | | | |
| " | | M (12.9) (13.7) | (16.7) | | | | | | |
| " | 4:09 | M (12.9) (13.6) | (16.7) | | | | | | |

Computed by [illegible]
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA R-D LOCATION Sect. 27 LINE 9 North

OPERATORS Clark + Waite + Jones BASE DATUM +1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/8/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base | 10:27 | ~~17.0~~ ~~15.4~~ | ~~16.1~~ | | | | | | |
| 10·0 | ~~28~~ | ~~15.3~~ ~~16.6~~ | ~~16.5~~ | | | | | | |
| " | 30 | 15.5 15.2 | 15.4 | | | | | | |
| " | 31 | 15.6 15.0 | 15.7 | 15.2 ✓ | | | | | |
| " | 32 | 15.2 13.0 | 15.1 | | | | | | |
| " | 33 | 15.2 15.0 | 15.1 | | | | | | |
| | | | | | | | | | |
| 9N OW | 10:47 | 26.7 25.3 | 26.0 | ? | | -3.0 | 23.0 | ~~1242~~ | Volcanic alluvium ? |
| " | 49 | 26.4 25.6 | 26.0 | | | -3.0 | 23.0 | ~~1242~~ | |
| " | 50 | 26.6 26.0 | 26.3 | | | -3.0 | 23.3 | ~~1245~~ | |
| " | 52 | 26.1 25.5 | 25.8 | | | -3.0 | 22.8 | ~~1239~~ | |
| " | 58 | 26.7 26.6? | 26.7 | | | -3.0 | 23.7 | ~~1249~~ | |
| " | 59 | 26.7 25.6 | 26.2 | ? | | -3.1 | 23.1 | ~~1243~~ | ? |
| " | 11:00 | 26.7 25.6 | 26.2 | | | -3.1 | 23.1 | ~~1243~~ | |
| " | 02 | 26.6 26.7 | 26.7 | | | -3.1 | 23.6 | ~~1248~~ | |
| " | 03 | 26.7 26.5 | 26.6 | | | -3.1 ✓ | +23.5 ✓ | 1247 | ✓ Comp. E.G.H. Checked J.W.W. |
| | | | | | | | | | |
| 1W | 11:10 | 4.6 4.2 | 4.4 | | | -3.2 ✓ | -7.6 ✓ | 920 | ✓ " |
| 2W | 14 | 3.7 4.2 | 4.0 | | | -3.2 ✓ | +0.8 ✓ | 1008 | ✓ " |
| 3W | 17 | 22.3 20.3 | 21.3 | ? | | -3.2 | -24.5 | ~~743~~ | ? " |
| " | 19 | 22.8 21.2 | 22.0 | ? | | -3.2 | -25.2 | ~~735~~ | ? |
| " | 20 | 23.3 21.2 | 22.3 | ? | | -3.2 | -25.5 | ~~732~~ | ? |
| " | 21 | 22.0 22.0 | 22.0 | | | -3.2 | -25.2 | ~~735~~ | |
| " | 22 | 22.0 22.0 | 22.0 | | | -3.2 ✓ | -25.2 ✓ | 735 | ✓ |
| 4W | 27 | 37.6 36.7 | 37.2 | ? | | -3.3 | +33.9 | ~~1356~~ | ? " |
| " | 28 | 37.4 36.8 | 37.1 51.3 | | | -3.3 ✓ | 33.8 ✓ | 1355 | ✓ |
| 3W | 40 | +52.8 +49.9 | +51.4 | ? | | -3.4 | 47.9 | ~~1503~~ | ? " |
| " | 41 | +51.6 +48.0 | +49.8 | ? | | -3.4 | 46.4 | ~~1487~~ | ? |
| " | 43 | +53.5 +51.0 | +52.3 | ? | | -3.4 | 48.9 | ~~1513~~ | ? |
| " | 47 | +53.0 +51.5 | +52.3 | ? | | -3.4 | 48.9 | ~~1513~~ | ? |
| " | 49 | +52.6 +52.5 | +52.6 | | | -3.5 ✓ | 49.1 ✓ | 1516 | ✓ |
| 6W | 53 | 25.9 26.3 | 26.1 | | | -3.5 ✓ | 22.6 ✓ | 1237 | ✓ " |
| | | | | | | | | | |
| Base | 12:05 | 14.6 14.2 | 14.4 | | | | | | |
| " | 07 | 14.7 14.2 | 14.5 | 14.4 ✓ | | | | | |
| " | 68 | 14.7 14.0 | 14.4 | | | | | | |

# MAGNETOMETER DATA SHEET

AREA RD LOCATION Sect 27 LINE 9 North + 6 South

OPERATORS Clark, Waite, + Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/8/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base | 12:51 | (14.2) (14.8) | (14.5) | | | | | | |
| " | :52 | 14.1 (14.7) | 14.4 | (14.3) ✓ | | | | | • |
| " | :53 | (14.7) 13.9 | 14.0 | | | | | | |
| | | | | | | | | | |
| 9N 7W | 1:05 | +56.1 +55.5 | +55.8 | | | -3.7 ✓ | 52.1 ✓ | 1547 | ✓ Volcanic Alluvium |
| 8W | :10 | 16.8 16.7 | 16.8 | | | -3.7 ✓ | 13.1 ✓ | 1138 | ✓ " " |
| 9W | :13 | 58.8 59.2 | 59.0 | | | -3.7 ✓ | 55.3 ✓ | 1581 | ✓ " " |
| 10W | :16 | 30.5 31.0 | 30.8 | | | -3.7 ✓ | 27.1 ✓ | 1285 | ✓ " " |
| 11W | :20 | 34.4 34.3 | 34.4 | | | -3.7 ✓ | 30.7 ✓ | 1322 | ✓ " " |
| 12W | :23 | 34.1 34.6 | 34.4 | | | -3.6 ✓ | 30.8 ✓ | 1323 | ✓ " " |
| 13W | :25 | 43.7 43.7 | 43.7 | | | -3.6 ✓ | 40.1 ✓ | 1421 | ✓ " " |
| 14W | :26 | 54.2 54.5 | 54.4 | | | -3.6 ✓ | 50.8 ✓ | 1533 | ✓ " " |
| 15W | :30 | 26.7 27.3 | 27.0 | | | -3.6 ✓ | 23.4 ✓ | 1246 | ✓ " " |
| 16W | :33 | 22.8 23.3 | 23.1 | | | -3.6 ✓ | +19.5 ✓ | 1205 | ✓ fence at 15.92 — |
| 17W | :36 | 9.0 (8.0) | (8.5) | | | -3.6 ✓ | -12.1 ✓ | 873 | ✓ Volcanic Alluvium |
| 18W | :41 | (13.3) (14.2) | (13.8) = (16.2) | | | -3.6 ✓ | -19.8 | | |
| " | :41 | (12.3) (14.1) | (14.0) = (16) | | | -3.6 ✓ | | | |
| " | :42 | (13.8) (14.7) | (14.3) = (15.7) | | | -3.5 ✓ | -19.2 | | minus readings from here on are direct as read |
| " | :43 | (14.0) (14.2) | (14.1) = (15.9) | | | -3.5 ✓ | -19.4 ✓ | 796 ✓ | from scale, ∴ must be subtracted from 30. |
| 19W | :46 | (20.2) 19.7 | (30.0) 10.0 | | | -3.5 ✓ | -13.5 ✓ | 858 ✓ | previously today readings written down already |
| 20W | :48 | (12.3) (12.2) | (12.3) = (11.7) | | | -3.5 ✓ | -21.2 ✓ | 777 ✓ | subtracted from 30. |
| | | | | | | | | | |
| Base | 2:05 | (15.8) (15.0) | (15.4) (14.6) | | | | | | |
| " | :06 | (13.0) (15.4) | (15.0) (14.4) | (14.5) ✓ | | | | | Comp E.G.H. |
| " | :07 | (15.8) (15.4) | (15.6) (14.7) | | | | | | Checked J.W.W |
| | | | | | | | | | |
| 6S 0W | 2:22 | 10.3 10.2 | 10.3 | | | -3.6 ✓ | +6.7 ✓ | 1070 ✓ | Volcanic Alluvium |
| 1W | :26 | 10.0 9.9 | 10.0 | | | -3.6 ✓ | 6.4 ✓ | 1067 ✓ | |
| 2W | :29 | 7.8 7.4 | 7.6 | | | -3.6 ✓ | 4.0 ✓ | 1042 ✓ | |
| 3W | :31 | 10.8 10.5 | 10.7 | | | -3.6 ✓ | 7.1 ✓ | 1075 ✓ | |
| 4W | :33 | 12.4 12.0 | 12.2 | | | -3.7 ✓ | 8.5 ✓ | 1089 ✓ | |
| 5W | :35 | 10.6 10.2 | 10.4 | | | -3.7 ✓ | 6.7 ✓ | 1070 ✓ | |
| 6W | :38 | 36.0 35.7 | 35.9 | | | -3.7 ✓ | 32.2 ✓ | 1338 ✓ | |
| 7W | :40 | 40.3 41.0 | 40.7 | | | -3.8 ✓ | | | |
| " | 42 | 40.4 40.3 | 40.4 | | | -3.8 ✓ | 36.6 ✓ | 1384 ✓ | |
| 8W | 44 | 34.4 34.2 | 34.3 | | | -3.8 ✓ | 30.5 ✓ | 1320 ✓ | |

# MAGNETOMETER DATA SHEET

AREA RD LOCATION Sect. 27 LINE 6 South

OPERATORS Clark, Waite, Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/8/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, SHAFTS, BUILDINGS, POWER LINES, CORNERS,) |
|---|---|---|---|---|---|---|---|---|---|
| 6S 9W | 2:47 | 7.7 7.7 | 7.7 | | | -3.8 | ~~3.7~~ 4.1 | 1047 | Volcanic Alluvium |
| 10W | :48 | 31.2 31.3 | 31.3 | | | -3.8 | 27.5 | 1289 | " " |
| 11W | :51 | 6.7 6.3 | 6.5 | | | -3.9 | 2.6 | 1027 | " " |
| 12W | :53 | 23.4 23.1 | 23.3 | | | -3.9 | 19.4 | 1204 | " " |
| 13W | 3:00 | 30.7 30.5 | 30.6 | | | -4.0 | 26.6 | 1279 | " " 13+50± road |
| 14W | :03 | 24.7 24.0 | 24.4 | | | -4.0 | 20.4 | 1214 | " " |
| 15W | :06 | 19.2 18.7 | 19.0 | | | -4.1 | 14.9 | 1156 | " " |
| 16W | :08 | 16.6 16.3 | 16.5 | | | -4.1 | 12.4 | 1130 | " " |
| 17W | :11 | 12.3 12.7 | 12.5 | | | -4.1 | 8.4 | 1088 | " " 17+85 ls. ledge |
| 18W | :13 | 14.5 14.2 | 14.4 | | | -4.2 | 10.2 | 1107 | " " |
| 19W | :17 | 13.7 16.1 | 15.9 | | | -4.2 | 11.7 | 1123 | " " |
| 20W | :20 | 17.7 17.7 | 17.7 | | | -4.3 | 13.4 | 1141 | " " |
| 21W | :22 | 19.1 18.7 | 18.9 | | | -4.3 | 14.6 | 1153 | " " extension EM Line 6 South |
| 22W | :24 | 17.1 17.1 | 17.1 | | | -4.4 | 12.8 | 1135 | " " |
| 23W | :27 | 24.9 24.4 | 24.7 | | | -4.4 | 20.3 | 1213 | " " |
| 24W | :30 | 19.8 19.8 | 19.8 | | | -4.5 | 15.3 | 1161 | |
| 25W | :33 | 20.0 19.8 | 19.9 | | | -4.5 | 15.4 | 1162 | Comp. E.G.H. Checked J.W.W. |
| | | | | | | | | | |
| Base | 3:55 | (18.9) (19.0) | (19.0) | | | | | | |
| | 57 | (16.5) (17.2) | (16.9)=(13.1) | | | | | | |
| | 59 | (17.0) (17.0) | (17.0)=(13.0) | (13.0) | | | | | |
| | 4:00 | (17.1) (17.0) | (17.1)=(12.9) | | | | | | |

Phase Ave. Ratio Ratio Ave.

# MAGNETOMETER DATA SHEET

AREA RD LOCATION SEC # 27 LINE 6A N.E.

OPERATORS WAITE & CLARK. BASE DATUM 1000 INST. NO. 178 SCALE VALUE 10.5 DATE 3/12/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| BASE ① | 10:50 | 14.2 / 13.8 | | | | | | | Volcanic Alluvium |
| " | 10:51 | 14.7 / 13.8 | | | | | | | |
| " | 10:53 | 14.3 / 13.7 | 14.0 = | | | | | | |
| " | 10:54 | 14.3 / 13.5 | -16 | | | -2.0 | +18.0 | 811 | ✓ |
| | 10:56 | 14.2 / 13.7 | | | | | | | |
| Line ONE. #1 | 11:06 | 3.7 / 2.8 | | | | | | | " " |
| #1 | 11:08 | 3.2 / 2.8 | 3.0 | | | -1.8 | +1.2 | 1013 | ✓ " " |
| #2 | 11:13 | 10.6 / 9.9 | 10.3 | | | -1.7 | 8.6 | 1090 | ✓ " " |
| #3 | 11:17 | 29.3 / 28.7 | 1.0 | | | -1.6 | -2.6 | 973 | ✓ " " |
| #4 | 11:22 | 11.7 / 11.2 | 11.4 | | | -1.6 | +9.8 | 1103 | ✓ " " |
| #5 | 11:25 | 0.9 / 0.8 | 0.9 | | | -1.6 | 0.7 | 993 | ✓ " " |
| | | | | | | | | | |
| Base | 11:32 | 14.0 / 13.0 | | | | | | | " " |
| " | 11:35 | 14.2 / 13.0 | 13.5 = | | | | | | Wide Spread ? |
| " | 11:36 | 13.7 / 13.0 | -16.5 | | | -1.5 | 18.0 | 811 | ✓ |
| " | 11:38 | 14.2 / 12.8 | | | | | | | |
| | | | | | | | | | |
| 3 N | 11:45 | 4.8 / 4.3 | 4.5 | | | -1.5 | 3.0 | 1032 | ✓ " " |
| NE #1 | 11:51 | 15.5 / 14.7 | 15.1 | | | -1.5 | 16.6 | 826 | ✓ " " |
| #1 | 11:52 | 14.3 / 15.5 | 14.9 | | | -1.5 | 16.4 | 828 | ✓ " " |
| #2 | 12:01 | 18.1 / 18.4 | 11.7 | | | -1.5 | 13.2 | 861 | ✓ " " |
| #3 | 12:06 | 26.5 / 26.5 | 3.5 | | | -1.6 | 5.1 | 946 | ✓ " " |
| #4 | 12:12 | 28.8 / 28.8 | 1.2 | | | -1.6 | 2.8 | 971 | ✓ " " |
| #5 | 12:15 | 0.3 / 0.6 | 0.5 | | | -1.6 | 1.1 | 988 | ✓ " " |
| | | | | | | | | | |
| Base | 12:21 | 14.1 / 13.3 | | | | | | | " " |
| | 12:23 | 13.8 / 13.2 | 13.6 16.4 | | | -1.6 | 18.0 | 811 | ✓ |
| | 12:24 | 13.9 / 13.5 | | | | | | | |

Computed Pat
Checked E.G.H.
J.W.W

Note

Values in this column are the read values final figure is from 3e if the values are minus
E.G.H.

# MAGNETOMETER DATA SHEET

AREA B.D. LOCATION LINE 6N.

OPERATORS WAITE - JONES BASE DATUM 1000 INST. NO. 178 SCALE VALUE 10.5 DATE 3/12/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) CULTURE |
|---|---|---|---|---|---|---|---|---|---|
| Base | 1:05 | (13.7) (13.7) | | | | | | | Volcanic Alluvium |
| " | 1:06 | 13.7 (13.8) | (13.7) (16.3) | | | -1.7 | (18.0) | 811 | ✓ |
| " | 1:07 | 13.9 (13.9) | | | | | | | |
| 6 N-0 | 1:15 | 3.9/3.7 | 3.8 | | | -1.7 | 2.1 | 1022 | ✓ " " |
| NE #1 | 1:19 | 6.5/6.0 | 6.3 | | | -1.8 | 4.5 | 1047 | ✓ " " Comp. Pat |
| #2 | 1:22 | 21.6 20.7 | (8.8) | 8.9 | | -1.8 | (10.7) | 888. | ✓ " " Checked E.G.H. |
| #2 | 1:24 | 21.9 (20.8) | (8.9) | | | | | | J.W.W. |
| #3 | 1:27 | 1.7/1.2 | 1.5 | | | -1.8 | (03) | 997 | ✓ " " |
| #4 | 1:31 | 5.9/5.6 | 5.8 | | | -1.8 | 4.0 | 1042 | ✓ " " |
| #5 | 1:35 | 8.1/7.7 | 7.9 | | | -1.9 | 6.0 | 1063 | ✓ " " |
| SW #1 | 1:46 | (9.5) (8.9) | (20.8) | | | -2.0 | (22.8) | 761 | ✓ " " |
| #2 | 1:50 | 45.1/44.2 | 44.7 | 144.7 | | -2.0 | 42.7 | 1448 | ✓ Wide Spread " |
| #2 | 1:52 | 45.7/44.1 | 44.6 | | | | | | " " |
| #3 | 1:56 | 9.3/8.8 | 9.1 | | | -2.1 | 7.0 | 1074 | ✓ " " |
| #4 | 2:01 | 50.8/50.0 | 50.4 | | | -2.1 | 48.3 | 1507 | ✓ " " |
| #5 | 2:36 | 57.8/56.7 | 57.2 | | +11708 | -~~2.0~~ 2.5 | 54.6 | 2744 | ✓ S.M. - N.U. Reading 43 Volcanic Alluvium |
| #6 | 2:31 | 17.6/17.0 | 17.3 | | +11708 | -2.5 | 14.8 | 2325 | ✓ S.M. - N.U. Reading 43 Volcanic Outcrop |
| #7 | 2:21 | 2.4/1.8 | 2.1 | 57.6 | +11708 | | | | " " " " " " |
| #7 | 2:24 | 2.4/1.8 | 2.1 | | +11708 | -2.4 | (03) | 2167 | ✓ S.M. - N.U. Reading 43 |
| #5 | 2:39 | 57.7/56.8 | ~~57.7~~ | | +11708 | | | | " " " " Volcanic Alluvium |
| #5 | 2:41 | 58.0/56.7 | 57.4 | | +11708 | | | | " " " " " " |
| #8 | 2:52 | 49.5/48.9 | 49.2 | | | -2.6 | 46.6 | 1489 | ✓ Volcanic Outcrop |
| Base | 3:14 | (14.7) (14.8) | (15.3) | | | | | | " " |
| " | 3:15 | (14.7) (14.7) | | | | -2.7 | (18.0) | 811 | ✓ |
| #9 | 3:24 | 33.9/33.1 | 33.5 | 33.5 | | | | | " " |
| #9 | 3:26 | 32.9/33.8 | 33.4 | | | -2.7 | 30.8 | 1323 | ✓ " " |
| #10 | 3:33 | 3.9/3.8 | 3.9 | | | -2.7 | 1.2 | 1013 | ✓ " " " (S.M. - N.U. Reading 43) |
| #11 | 3:40 | 47.9/47.1 | 47.5 | | | -2.7 | 44.8 | 1470 | ✓ Volcanic Outcrop |
| #12 | 3:44 | 59.1/59.1 | 59.1 | | | -2.7 | 56.4 | 1592 | ✓ |
| #13+15 | 3:49 | 30.3/30.0 | 30.1 | | | -2.7 | 27.4 | 1288. | ✓ 18' South of fence - Volcanic Alluvium |
| #14 | 3:53 | 29.2/29.8 | 29.5 | | | -2.6 | 26.9 | 1282 | ✓ " " |

# MAGNETOMETER DATA SHEET

AREA R D LOCATION LINE 6 N

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. 178 SCALE VALUE 10.5 DATE 3/12/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / REMARKS / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| ✱15 | 3:58 | 15.7 / 15.5 | 15.6 | | | -2.6 | 13.0 | 1137 | ✓ Volcanic Alluvium |
| ✱16 | 4:02 | 20.8 / 20.5 | 20.7 | | | -2.6 | 18.1 | 1190 | ✓ " " |
| ✱17 | 4:06 | 18.6 / 18.5 | 18.6 | | | -2.6 | 16.0 | 1168 | ✓ Felsitic outcrop |
| ✱18 | 4:11 | 14.2 / 13.9 | 14.1 | | | -2.6 | 11.5 | 1121 | ✓ " " |
| ✱19 | 4:16 | 13.9 / 13.9 | 13.9 | | | -2.5 | 11.4 | 1120 | ✓ " " |
| ✱20 | 4:21 | 15.0 / 14.6 | 14.8 | | | -2.5 | 12.3 | 1129 | ✓ " " |
| | | | | | | | | | |
| Base | 4:39 | (14.8) (15.0) | | | | | | | Volcanic Alluvium |
| " | 4:40 | (13.7) (15.0) | | | | | | | |
| " | 4:42 | (14.7) (14.6) | | | | | | | Bad Readings due to ? |
| " | 4:46 | (15.3) (14.9) | | | | | | | |
| " | 4:49 | (14.2) (14.1) | | | | | | | |
| " | 4:50 | (14.2) (14.1) | 14.2 | | | | | | Comp. Pat |
| " | 4:51 | (14.2) (14.2) | (14.3) | | | | | | Checked E.G.H. |
| " | 4:53 | (14.3) (14.3) | (15.7) | | | -2.3 | (18.0) | 811 | ✓ J.W.W |
| " | 4:54 | (14.3) (14.4) | 15.8 | | | | | | |
| " | 4:55 | (14.3) (14.5) | | | | | | | |

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 12 N

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/13/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / REMARKS / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base ① | | | | | | | | | |
| 12 N | 11:36 | 4.8 / 4.4 | | | | | | | 12 N – Sub Station Volcanic Alluvium |
| " 38 | 11:38 | 4.9 / 4.8 | 4.8 | | | -2.0 | 2.8 | 1029 | ✓ |
| " | 11:39 | 4.9 / 4.8 | | | | | | | |
| " | 11:40 | 4.9 / 4.7 | | | | | | | |
| NE. *1 | 11:43 | 3.4 / 3.3 | 3.4 | | | -2.0 1.9 | 1.4 1.5 | 1016 | ✓ " " |
| *2 | 11:48 | 27.3 / 27.3 | 27.5 | | | -1.9 | 25.6 | 1279 | ✓ " " |
| *3 | 11:54 | 26.0 / 25.5 | 25.8 | | | -1.7 | 23.1 | 1253 | ✓ Small Wash " " |
| *4 | 11:59 | 17.0 / 16.6 | 16.8 | | | -1.6 | 14.9 15.2 | 1160 | ✓ " " |
| *5 ~~12:01~~ | ~~8.9 / 6.6~~ | ~~7.8~~ | | | | | | | Tripod orientation " " |
| *5 | 12:06 | 8.7 / 8.5 | 8.6 | | | -1.8 1.6 | 6.8 7.0 | 1074 | ✓ " " |
| Base ② | | | | | | | | | |
| 12 N | 12:18 | 4.3 / 4.1 | | | | | | | Sub. Base Station " " |
| " | 12:19 | 4.3 / 4.1 | 4.2 | | | -1.6 | 2.6 | (1027) | ✓ |
| " 21 | 12:21 | 4.7 / 4.0 | | | | | | | |
| " | 12:22 | 4.3 / 4.1 | | | | | | 1029 Avg | |
| Base ③ | | | | | | | | | |
| 12 N | 1:00 | 4.7 / 4.3 | | | | | | | " " " " " |
| " 02 | 1:02 | 4.7 / 4.2 | 4.5 | | | -1.6 | 2.9 | (1030) | ✓ |
| " | 1:03 | 4.6 / 4.1 | | | | | | | |
| S.W. *1 | 1:08 | 35.1 / 34.9 | 35.0 | | | -1.8 1.6 | 33.2 33.4 | ~~1140~~ | 1349 ✓ Comp. Pat |
| *2 | 1:10 | 20.7 / 20.4 | 20.6 | | | ~~-1.6~~ 1.8 | 18.8 | ~~1200~~ | 1197 ✓ Checked E.G.H. J.W.W. " " |
| *3 | 1:14 | 6.3 / 6.0 | 6.2 | | | ~~-1.7~~ 1.8 | 4.84 | 1046 | ✓ " " |
| *4 | 1:18 | 13.0 / 12.7 | 12.9 | | | ~~-1.7~~ 1.8 | 11.21 | 1119 | ✓ " " |
| *5 | 1:20 | (29.7) (29.3) | (0.5) | | | -1.8 1.9 | 2.34 | 1025 | ✓ " " |
| *6 | 1:23 | 16.8 / 16.5 | 16.7 | | | -1.8 1.9 | 14.8 | 1155 | ✓ " " |
| *7 | 1:27 | 0.7 / 0.1 | 0.4 | | | ~~-1.8~~ 2.0 | (14) (11.6) | 985 | ✓ " " |
| *8 | 1:30 | 0.9 / 0.4 | 0.6 | | | ~~-1.9~~ 2.0 | (13) (11.9) | 986 | ✓ " " |
| *9 | 1:35 | 0.9 / 0.8 | 0.9 | | | ~~-2.0~~ 2.0 | (11) | 988 | ✓ " " |
| *10 | 1:39 | 21.9 / 21.7 | 21.8 | | | ~~-2.0~~ 2.1 | 19.7 | 1207 | ✓ " " |
| *11 | 1:44 | 36.8 / 36.5 | 36.7 | | | -2.1 2.1 | 34.6 | 1363 | ✓ " " |
| *12 | ~~1:48~~ | ~~47.9 / 46.8~~ | ~~47.4~~ | | | ~~-2.2~~ | ~~45.2~~ | ~~1496~~ | ✓ " " |
| *12 | 1:50 | 48.0 / 47.8 | 47.9 | | | -2.2 | 45.7 | 1480 | ✓ " " |
| *13 | 1:54 | 32.7 / 32.5 | 32.3 | | | -2.2 | 30.1 | 1316 | ✓ " " |
| *14 | 1:58 | 31.9 / 31.0 | 31.2 | | | -2.3 | 28.9 | 1803 | ✓ " " |
| *15 | 2:02 | 39.3 / 39.2 | 39.2 | | | ~~-2.4~~ 2.5 | 36.8 | 1987 | ✓ " " |

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 9 N

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/13/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / REMARKS / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base | 10:17 | 15.8 / 15.8 | | | | | | | Volcanic Alluvium |
| " | 10:19 | 15.2 / 15.8 | | | | | | | |
| " | 10:21 | 15.3 / 15.7 | 15.5 | | | | | | |
| " | 10:23 | 15.3 / 15.7 | 14.5 | | | -3.5 | -18.0 | 811 | ✓ |
| 9 N | 10:31 | 27.5 / 26.3 | | | | | | | " " Comp. Pat |
| " | 10:32 | 26.8 / 25.6 | | | | | | | Checked E.G.H. |
| " | 10:34 | 26.3 / 26.1 | 26.6 | | | -3.2 | 23.4 | 1246 | ✓ J.W.W. |
| " | 10:35 | 26.5 / 26.7 | | | | | | | |
| NE 1 | 10:44 | 9.1 / 8.9 | 9.0 | | | -2.9 | 6.1 | 1065 | ✓ " " |
| 2 | 10:49 | 12.2 / 12.2 | 12.2 | | | -3.3 | 15.0 | 843 | ✓ " " |
| 3 | 10:54 | 2.0 / 1.8 | 1.9 | | | -3.1 | -9.0 | 992 | ✓ " " |
| 4 | 10:57 | 14.9 / 14.6 | 14.8 | | | -2.7 | 12.1 | 1127 | ✓ " " |
| 5 | 11:01 | 10.1 / 9.9 | 10.0 | | | -2.6 | 7.4 | 1078 | ✓ " " |
| Base | 11:18 | 14.6 / 14.0 | | | | | | | " " |
| " | 11:20 | 14.6 / 13.9 | | | | | | | |
| " | 11:22 | 14.8 / 13.9 | 14.2 | | | | | | |
| " | 11:25 | 14.2 / 13.9 | 15.8 | | | -2.2 | -18.0 | 811 | ✓ |
| " | 11:27 | 14.3 / 13.7 | | | | | | | |

# MAGNETOMETER DATA SHEET

AREA: RD LOCATION: LINE: 12N

OPERATORS: Waite & Jones BASE DATUM: 1000 INST. NO.: Sharpe 178 SCALE VALUE: 10.5 DATE: 3/13/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS | CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|---|
| * 16 | 2:05 | 22.2 / 21.8 | 22.0 | | | 2.3 ~~2.4~~ | 19.7 | 1207 | ✓ | Volcanic Alluvium |
| * 17 | 2:08 | 31.7 / 31.3 | 31.5 | | | 2.3 ~~2.5~~ | 29.2 | 1307 | ✓ | " " |
| * 18 | 2:12 | 30.8 / 30.4 | 30.6 | | | 2.4 ~~2.5~~ | 28.2 | 1296 | ✓ | " " |
| * 18+75 | 2:17 | 56.7 / 56.3 | 56.5 | | | 2.4 ~~2.6~~ | 54.1 | 1568 | ✓ | Station 19 at fence, fence at 20' S. of Sta. 18+75 |
| * 20 | 2:25 | 43.5 / 42.6 | 43.0 | | | 2.3 ~~2.7~~ | ~~40.6~~ | ~~1426~~ | ✓ | Small Wash Volcanic Alluvium |
| * 20 | 2:27 | 43.6 / 42.8 | 43.2 | | | 2.3 ~~2.7~~ | ~~40.7~~ | ~~1427~~ | ✓ 1426 ✓ | |
| * 20 | 2:29 | 43.3 / 42.7 | 43.0 | | | 2.3 2.7 | 40.5 | 1425 | ✓ ✓ | |
| (1) | | | | | | | | | | |
| Q-12N Base (1) | 2:41 | 4.8 / 4.8 | 4.87 | | | | | | | " " |
| " 4 | 2:42 | 4.8 / 4.5 | | | | 2.5 2.9 | 2.2 ~~1.9~~ | 1023 | ✓ | " " |
| " | 2:43 | 4.8 / 4.7 | | | | | | | | " " |

Computed by ?
Checked by J.W.W. + E.G.H

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 15 N

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/13/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) | CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|---|
| 15 N | 3:00 | 14.9 / 14.5 | 14.7 | | | -2.6 | 12.8 | 1127 | Volcanic Alluvium | |
| ~~NE #1~~ | ~~3:04~~ | ~~31.1 / 30.0~~ | ~~30.6~~ | | | | | | bad " Reversals | |
| ~~#1~~ | ~~3:05~~ | ~~31.3 / 30.2~~ | ~~30.8~~ | | | | | | " " | |
| #1 | 3:07 | 30.7 / 30.4 | 30.6 | | | -2.6 | 28.6 | 1294 | " " | |
| #2 | 3:26 | 29.7 / 29.4 | 0.4 | | +1170 | -2.7 | 3.5 | 2137 | S.M. N.U. Reading 43 Volcanic Alluvium | |
| #3 | 3:32 | 15.3 / 15.0 | 15.2 | | +1178 | -2.7 | 12.5 | 2361 | " " " " | " " |
| #4 | 3:38 | 41.2 / 40.2 | 40.7 | | | -2.8 | 37.9 | 1398 | bad reversal | " " |
| #5 | 3:41 | 28.3 / 28.4 | 1.6 | | | -2.8 | 4.4 | 954 | " | " " |
| SW #1 | 3:47 | 31.7 / 31.2 | 31.5 | | | -2.8 | 28.7 | 1361 | " | " " |
| ~~#2~~ | ~~3:50~~ | ~~37.2 / 36.9~~ | ~~37.3~~ | | | | | | bubbles off | " " |
| ~~#2~~ | ~~3:53~~ | ~~38.0 / 37.1~~ | ~~37.6~~ | | | | | | | " " |
| #2 | 3:55 | 37.1 / 37.0 | 37.1 | | | -2.8 | 34.3 | 1360 | " | " " |
| #3 | 3:59 | 31.7 / 32.1 | 31.9 | | | -2.8 | 29.1 | 1308 | " | " " |
| #4 | 4:01 | 25.7 / 25.8 | 25.8 | | | -2.8 | 23.0 | 1242 | " | " " |
| ~~#5~~ | ~~4:03~~ | ~~8.7 / 9.1~~ | ~~8.9~~ | | | - | | | bubbles off | " " |
| #5 | 4:06 | 9.4 / 9.3 | 9.4 | | | ~~-2.8~~ | ~~6.6~~ | ~~1069~~ | other page | " " |
| Base ② | | | | | | | | | | |
| 12 N. | 4:15 | 5.0 / 4.6 | 4.8 | | | -2.9 | 1.9 | 1026 | 12 N - Sub. Base Station | " " |
| " 16 | 4:16 | 4.9 / 4.4 | | | | | | | | |
| " | 4:18 | 4.8 / 4.8 | | | | | | | | |
| Base ① | | | | | | | | | | |
| ON Base | 4:37 | 15.8 / 15.2 | | | | | | | | " " |
| " | ~~4:38~~ | ~~14.0 / 16.8~~ | | | | | | | Bubbles moved | |
| " | 4:40 | 15.8 / 15.2 | 15.4 | | | | | | | |
| " | 4:42 | 15.8 / 15.2 | 14.6 | | | -2.9 | 17.5 | ~~811~~ | | |
| " | 4:46 | 15.7 / 15.1 | | | | | | | | |

Computed by ?
Checked by J.W.W.

# MAGNETOMETER DATA SHEET

AREA R.D LOCATION LINE 15 N

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/14/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / REMARKS / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base (1) | 10:15 | (14.8) (14.2) | | | | | | | Volcanic Alluvium |
| " | :17 | (15.0) (14.0) | | | | | | | |
| " | :19 | (15.2) (14.4) | (14.6) | | | -2.6 | (-18.0) | 811 | |
| " | :22 | (14.5) (14.6) | (15.4) | | | | | | |
| " | :23 | (14.6) (14.5) | | | | | | | |
| 15N-SW¼ | :31 | 8.7/8.0 | 8.4 | | | ~~-2.4~~ | ~~+6.0~~ | ~~877~~ 1063 | " " |
| " | :33 | 8.6/8.5 | 8.6 | | | -2.~~4~~3 | +6.~~8~~3 | ~~1065~~ 1066 | |
| SW. #6 | :35 | 4.7/4.3 | 4.5 | | | -2.3 | +2.2 | ~~1023~~ 1023 | " " |
| #7 | :39 | 25.9/26.0 | 26.0 | | | -2.2 | 23.8 | ~~1250~~ 1250 | " " |
| #8 | :44 | 17.8/17.2 | 17.4 | | | -2.~~8~~1 | 15.~~8~~3 | ~~+60~~ 1161 | " " |
| #9 | :46 | 16.3/16.3 | 16.3 | | | -2.1 | 14.2 | ~~+48~~ 1149 | " " |
| #10 | :49 | 26.9/26.5 | 26.7 | | | -2.0 | 24.7 | 1259 | " " |
| #11 | :53 | 31.8/32.0 | 31.9 | | | -2.0 | 29.9 | 1314 | " " |
| #12 | :55 | 14.7/14.5 | 14.6 | | | ~~-1.9~~ -2.0 | 12.6 | 1138 | " " |
| #13 | 11:01 | 38.1/37.6 | 37.9 | | | -1.9 | 36.0 | 1378 | " " |
| #14 | :05 | 57.7/58.5 | 58.1 | | | -1.8 | 56.~~8~~3 | ~~+58~~9 1591 | " " |
| " | :06 | 58.0/58.8 | 58.4 | | | ~~-1.8~~ | ~~56.6~~ | ~~1594~~ | " " |
| #15 | :11 | 17.7/17.8 | 17.8 | 5 mag N up 43 CM | +1170 | -1.7 | 16.1 | 2389 | (S.M. - N.U. - Reading 43) |
| #16 | ~~:15~~ | ~~25.7/24.7~~ | ~~35.2~~ | | | | | | Compass off |
| " | :17 | 35.3/35.1 | 35.2 | | | -1.6 | 33.6 | 1353 | Quartz Float 16+15 |
| #17 | :21 | 31.3/30.9 | 31.1 | | | -1.5 | 29.6 | 1311 | |
| #18 | :25 | 51.3/51.0 | 51.1 | | | -1.5 | 49.6 | 1521 | Quartz Outcrop 75' N. |
| #19 | :30 | 40.3/40.9 | 40.8 | | | -1.4 | 39.4 | 1414 | |
| #20 | :36 | 18.4/17.9 | 17.9 | 5 mag N up 43 | +1170 | -1.4 | 16.5 | 2343 | Station on Volcanic Outcrop, Medium grain — (S.M. - N.U. - Reading 43) |
| Base (1) | :59 | (13.3) (13.0) | | | | | | 811 | |
| " | 12:00 | (13.2) (12.8) | (13.0) | | | -1.0 | (-18.0) | | |
| " | :02 | (13.0) (13.0) | (17.0) | | | | | | |
| Base (1) | :55 | (13.2) (13.2) | | | | | | | |
| " | :56 | (13.0) (12.9) | (13.0) | | | -1.0 | (-18.0) | 811 | |
| " | :57 | (13.2) (12.9) | (17.0) | | | | | | |
| " | :59 | (12.9) (13.0) | | | | | | | |

Comp. By DBT
Checked RWB

# MAGNETOMETER DATA SHEET

AREA: RD LOCATION: LINE: 3 & 6 S

OPERATORS: Waite & Jones BASE DATUM: 1000 INST. NO: Sharpe 178 SCALE VALUE: 10.5 DATE: 3/14/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS | CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|---|
| Line 6 S (2) | 1:08 | 6.6 / 6.6 | | | | | | | 6S - sub. Base Station | Volcanic Alluvium |
| " | :09 | 6.5 / 6.7 | 6.6 | | | -1.1 | 5.5 | 1058 | | |
| " | :10 | 6.6 / 6.4 | | | | | | | | |
| 6S-NE #1 | :16 | 7.7 / 7.1 | 7.4 | | | ~~-1.2~~ 1.1 | 6.3 | 1065 | | " " |
| #2 | :20 | 6.8 / 6.8 | 6.8 | | | -1.2 | 5.6 | 1059 | | " " |
| #3 | :24 | 10.3 / 10.1 | 10.2 | | | -1.2 | 9.0 | 1095 | | " " |
| #4 | :28 | 18.3 / 18.2 | 18.3 | | | -1.3 | 17.0 | 1179 | | " " |
| #5 | :32 | 18.7 / 18.1 | 18.4 | | | -1.3 | 17.1 | 1180 | NE #5 on Electrod Road | " " |
| " | :34 | 18.5 / 18.3 | 18.4 | | | ~~-1.3~~ | ~~17.1~~ | ~~1180~~ | | |
| 3S-NE #1 | :42 | 5.5 / 5.5 | 5.5 | | | -1.4 | 4.1 | 1043 | Creek Bed Copper Stain Flote — 1+35' NE | " " |
| #2 | :46 | 5.7 / 5.3 | 5.5 | | | -1.5 | 4.0 | 1042 | | " " |
| #3 | :54 | 7.2 / 6.9 | 7.1 | | | ~~-1.6~~ 1.5 | 5.6 | 1059 | | " " |
| #4 | :58 | 8.3 / 8.3 | 8.3 | | | -1.6 | 6.7 | ~~1069~~ | 1070 | " " |
| #5 | 2:02 | 17.1 / 16.9 | 17.0 | | | -1.6 | 15.4 | 1162 | NE #5 on Electrod Road | " " |
| SUB Base (2) | 2:06 | 37.3 / 37.2 | | | | ~~-1.8~~ 1.7 | ~~[illegible]~~ 5.5 | 1058 | | " " |
| " | :08 | 7.2 / 7.2 | 7.2 | | | | | | | |
| " | :10 | 6.9 / 7.3 | | | | | | | | |

checked RWJ

# MAGNETOMETER DATA SHEET

AREA R D LOCATION LINE 9 S

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharp 178 SCALE VALUE 10.5 DATE 3/14/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / REMARKS / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 9 S | 2:15 | 12.9 / 12.1 | 12.1 | | | -17.8 | 10.4 | 11.09 | Volcanic Alluvium |
| NE* 1 | :20 | 15.5 / 15.3 | 15.4 | | | -18 | 13.6 | ~~1142~~ | 1143 |
| * 2 | :30 | 12.7 / 13.1 | 12.9 | | | -20. | 11.0 | ~~1114~~ | 1116 |
| * 3 | :33 | 18.9 / 18.6 | 18.8 | | | -20. | 16.9 | ~~1176~~ | 1177 |
| * 4 | :36 | 16.5 / 16.7 | 16.6 | | | -21. | 14.6 | ~~1153~~ | 1153 |
| * 5 | :41 | 15.8 / 15.9 | 15.8 | | | -22. | 13.7 | 1143 | |
| SW* 1 | ~~:47~~ | ~~11.7 / 10.8~~ | ~~11.3~~ | | | | | | bubbles off. |
| 4 | ~~:50~~ | ~~10.8 / 11.1~~ | ~~11.0~~ | | | | | | " " |
| " | :52 | 11.3 / 11.2 | 11.3 | | | -23. | 9.1 | 1096 | 1096 |
| * 2 | :55 | 9.9 / 9.8 | 9.9 | | | -24. | 7.7 | ~~1099~~ | 1081 Flag Marked 3W |
| * 3 | :59 | 9.9 / 10.5 | 10.0 | | | -24 | 7.7 | 1084 | bubbles off. |
| " | 3:00 | 9.7 / 10.3 | 10.0 | | | ~~-24~~ | ~~7.6~~ | ~~1080~~ | |
| * 4 | :06 | 12.5 / 12.3 | 12.4 | | | -24 | 9.0 | ~~1104~~ | 1095 |
| * 5 | ~~:09~~ | ~~10.3 / 11.3~~ | ~~10.8~~ | | | | | | " " |
| " | :11 | 11.1 / 11.1 | 11.1 | | - | -25 | 8.8 | ~~1090~~ | 1093 |
| * 6 | :14 | 3.8 / 3.4 | 3.6 | | | -26 | 1.6 | 1012 | |
| 6S-Sub. Base (2) | :26 | 8.3 / 8.2 | 8.2 | | | -27 | 5.5 | 1058 | |
| " | :28 | 7.8 / 8.3 | | | | | | | |
| " | :30 | 8.0 / 8.3 | | | | | | | |
| Base (1) | :36 | (15.2) / (15.2) | (14.9) | | | -2.9 | (-18.0) | 811 | |
| " | :38 | (14.8) / (15.0) | | | | | | | |
| " | :40 | (14.9) / (14.9) | (15.1) | | | | | | |
| " | :42 | (14.7) / (15.3) | | | | | | | |

Checked Kuhj
Comp. By Pat

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 9 S

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/15/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS (GEOLOGY: MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES. / CULTURE: SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base ① | 9:59 | (13.8) (12.6) | 13.3 | | | | | | bubbles off Volcanic Alluvium |
| " | 10:00 | (13.3) (12.3) | | | | | | | |
| " | :01 | (13.0) (12.7) | (17.1) ✓ | ✓ | | -0.9 | (18.0) ✓ | 811 | ✓ |
| " | :03 | (13.1) (12.8) | | | | | | | |
| Base ② | | | | | | | | | |
| 9S-SW-6 | 10:19 | 0.2 / 0.1 | | | | | | | Station 6 S.W. - Sub. Base. " " |
| " | :21 | 0.2 / 0.3 | 0.5 ✓ | | | -0.9 ✓ | (0.4) ✓ | 996 | ✓ |
| " | :23 | 0.3 / 0.3 | | | | | | | |
| ✓ SW #7 | :28 | (28.1) (27.1) | (2.9) ✓ | | | -0.9 ✓ | (3.8) ✓ | 960 | ✓✓ |
| #8 | :30 | 2.1 / 2.2 | 2.2 ✓ | | | -0.9 ✓ | 1.3 ✓ | ~~994~~ 1014 | Take Reads 9+00W " " |
| #9 | :32 | (26.2) (26.2) | (3.6) ✓ | | | -0.9 ✓ | (4.5) ✓ | 953 | ✓✓ " " |
| #10 | :37 | (27.3) (26.8) | (3.0) ✓ | | | -0.9 ✓ | (3.9) ✓ | 959 | ✓✓ " " |
| #11 | :41 | 19.3 / 19.0 | 19.1 ✓ | | | -0.9 ✓ | 18.2 ✓ | ~~1171~~ | 1191 Take Reads 12+00W " " |
| #12 | :45 | 36.9 / 36.3 | 36.6 ✓ | | | -0.9 ✓ | 35.7 ✓ | ~~1355~~ | 1375 ✓ " " |
| #13 | :50 | 23.7 / 23.5 | 23.6 ✓ | | | -0.9 ✓ | 22.7 ✓ | ~~1218~~ | 1238 ✓ " " |
| #14 | :54 | 21.3 / 21.1 | 21.2 ✓ | | | -0.9 ✓ | 20.3 ✓ | ~~1193~~ | 1213 ✓ Take Reads 15+00 (All stakes on 9S base line off) " " |
| #15 | :59 | 12.2 / 12.2 | 12.2 ✓ | | | -0.9 ✓ | 11.8 ✓ | ~~1104~~ | 1124 ✓ " " |
| #16 | 11:03 | 8.9 / 9.0 | 9.0 ✓ | | | -0.9 ✓ | 8.1 ✓ | ~~1065~~ | 1085 ✓ " " |
| #17 | :06 | 7.7 / 7.7 | 7.7 ✓ | | | -0.9 ✓ | 6.8 ✓ | ~~1051~~ | 1071 ✓ Take off " " |
| #18 | :10 | 11.8 / 11.8 | 11.8 ✓ | | | -0.9 ✓ | 10.9 ✓ | ~~1095~~ | 1114 ✓ " " |
| #19 | :14 | 10.2 / 10.4 | 10.6 ✓ | | | -1.0 ✓ | 9.6 ✓ | ~~1081~~ | 1101 ✓ " " |
| #20 | :17 | 10.0 / 10.2 | 10.1 ✓ | | | -1.0 ✓ | 9.1 ✓ | ~~1076~~ | 1096 ✓ " " |
| | | | | | | | | | |
| Sub Base ③ | :29 | 0.2 / 0.4 | 0.3 | | | | | | |
| " | :30 | 0.4 / 0.7 | 0.6 ✓ | | | -1.0 ✓ | (0.5) ✓ | 995 | ✓ |
| " | :31 | 0.3 / 0.7 | | | | | | | |

Computed by R.W.J.
Checked by J.W.W.

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 12 S

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/15/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 12S | 11:42 | 3.8 / 3.8 | | | | | | | 12S — 2nd Sub. Base Station Volcanic Alluvium |
| " | :44 | 3.9 / 3.9 | 3.8 | | | -1.0 | 2.8 | +009 | 1029 |
| " | :46 | 3.7 / 3.9 | | | | | | | |
| 12S-NE*1 | :53 | 1.5 / 1.1 | 1.3 | | | -1.0 | 0.3 | 983 | 1003 |
| *2 | :59 | 13.6 / 13.3 | 13.5 | | | -1.0 | 12.5 | +111 | 1131 |
| *3 | 12:01 | 23.0 / 22.8 | 22.9 | | | -1.1 | 21.8 | +209 | 1229 |
| *4 | :04 | 20.6 / 20.7 | 20.7 | | | -1.1 | 19.6 | +186 | 1206 |
| *4+75 | :08 | 17.6 / 17.6 | 17.6 | | | -1.1 | 16.5 | +153 | 1175E (*5 at fence) *4+75 - 20' from fence |
| | | | | | | | | | |
| 12S | 1:00 | 4.0 / 4.2 | | | | | | | Sub. Base |
| " | 1:01 | 3.8 / 4.2 | 4.0 | | | -1.2 | 2.8 | +009 | 1029 |
| " | :03 | 3.9 / 4.1 | | | | | | | |
| SW*1 | :07 | 9.3 / 9.3 | 9.3 | | | -1.2 | 8.1 | +065 | 1085 |
| *2 | :10 | 9.6 / 9.7 | 9.6 | | | -1.2 | 8.4 | +068 | 1088 |
| *3 | :14 | 6.9 / 6.8 | 6.9 | | | -1.2 | 5.7 | +040 | 1060 |
| *4 | :16 | 4.5 / 4.4 | 4.6 | | | -1.1 | 3.5 | +017 | 1037 |
| *5 | :20 | 6.1 / 5.7 | 5.9 | | | -1.1 | 4.8 | +030 | 1050 |
| *6 | :29 | 2.1 / 2.0 | 2.1 | | | -1.0 | 1.1 | 992 | 1012 |
| *7 | :31 | (25.3) / (25.1) | (4.7) | | | -1.0 | (5.7) | 940 | ✓ ✓ |
| *8 | :34 | (24.1) / (29.9) | (6.0) | | | -1.0 | (7.0) | 907 | 927 +175 Road |
| *9 | :37 | 7.3 / 7.6 | 7.5 | | | -1.0 | 6.5 | +048 | 1068 |
| *10 | :39 | 10.2 / 9.8 | 10.0 | | | -1.0 | 9.0 | +075 | 1095 |
| *11 | :42 | 14.2 / 13.8 | 14.0 | | | -1.0 | 13.0 | +117 | 1137 |
| *12 | :46 | 14.3 / 13.9 | 14.0 | | | -1.0 | 13.0 | +117 | 1137 |
| *13 | :50 | 11.9 / 11.7 | 11.8 | | | -0.9 | 10.9 | +095 | 1114 |
| *14 | :55 | 12.4 / 12.0 | 12.2 | | | -0.9 | 11.3 | +099 | 1119 |
| *15 | :59 | 7.4 / 7.2 | 7.3 | | | -0.9 | 6.4 | +047 | 1067 |
| *16 | 2:03 | 3.4 / 3.1 | 3.3 | | | -0.9 | 2.4 | +005 | 1025 |
| *17 | :06 | 7.2 / 6.9 | 7.1 | | | -0.9 | 6.2 | +045 | 1065 |
| *18 | 09 | 2.8 / 3.0 | 2.9 | | | -0.9 | 2.0 | +001 | 1021 |
| *19 | :12 | 6.1 / 6.3 | 6.2 | | | -0.8 | 5.4 | +037 | 1057 |
| *20 | :14 | 7.2 / 7.2 | 7.2 | | | -0.8 | 6.4 | +047 | 1067 |
| 12S | :29 | 3.4 / 3.6 | | | | | | | Sub. Back. |
| " | :30 | 3.7 / 3.5 | 3.6 | | | -0.8 | 2.8 | +009 | 1029 |
| " | :31 | 3.7 / 3.6 | | | | | | | |

Computed by RWJ.
Checked by J.W.W.

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 15 S

OPERATORS Waite & Jones BASE DATUM 1000 INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/15/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Off-15S | 2:35 | 6.7 / 7.0 | 6.9 | | | -0.8 | 6.1v | ~~1044~~ | 1064v Volcanic Alluvium |
| SW #1 | :37 | 5.7 / 5.4 | 5.6 | | | -0.8 | 4.8v | ~~1030~~ | 1050v " " |
| #2 | :40 | 12.2 / 11.9 | 12.1 | | | -0.8 | 11.3v | ~~1099~~ | 1119v " " |
| #3 | :43 | 12.7 / 12.3 | 12.5 | | | -0.8 | 11.7v | ~~1103~~ | 1123v " " |
| #4 | :46 | 10.3 / 10.4 | 10.4 | | | -0.8 | 9.6v | ~~1081~~ | 1101v " " |
| #5 | :51 | 4.2 / 4.1 | 4.2 | | | -0.8 | 3.4v | ~~1016~~ | 1036v " " |
| #6 | :54 | 6.9 / 6.9 | 6.9 | | | -0.8 | 6.1v | ~~1044~~ | 1064v " " |
| #7 | :58 | 11.6 / 11.3 | 11.5 | | | -0.8 | 10.7v | ~~1092~~ | 1112v " " |
| #8 | 3:00 | 9.7 / 9.3 | 9.5 | | | -0.8 | 8.7v | ~~1071~~ | 1091v " " |
| #9 | :04 | 8.9 / 8.4 | 8.2 | | | -0.8 | 7.4v | ~~1257~~ | 1078v " " |
| #10 | :07 | 8.3 / 8.7 | 8.5 | | | -0.8 | 7.7v | ~~1260~~ | 1081v " " |
| #11 | :09 | 4.1 / 4.3 | 4.2 | | | -0.8 | 3.4v | ~~1016~~ | 1036v " " |
| #12 | :12 | 9.3 / 9.5 | 9.4 | | | -0.8 | 8.6v | ~~1270~~ | 1090v " " |
| #13 | :16 | 8.7 / 9.8 | 8.6 | | | -0.8 | 7.8v | ~~1261~~ | 1082v " " |
| #14 | :18 | 11.6 / 11.8 | 11.7 | | | -0.8 | 10.9v | ~~1294~~ | 1114v " " |
| #15 | :20 | 4.8 / 4.5 | 4.7 | | | -0.8 | 3.9v | ~~1021~~ | 1041v " " |
| #16 | :23 | 1.2 / 1.2 | 1.2 | | | -0.8 | 0.4v | ~~1184~~ | 1004v " " |
| #17 | :25 | 3.3 / 3.3 | 3.3 | | | -0.8 | 2.5v | ~~1206~~ | 1026v " " |
| #18 | :28 | 1.3 / 1.4 | 1.4 | | | -0.8 | 0.6v | ~~1186~~ | 1006v " " |
| #19 | :30 | 0.3 / 0.6 | 0.5 | | | -0.8 | (0.3)v | ~~977~~ | 997v " " |
| #20 | :31 | 4.2 / 4.2 | 4.2 | | | -0.8 | 3.4v | ~~1016~~ | 1036v " " |
| NE #1 | :44 | 6.3 / 6.2 | 6.3 | | | -0.8 | 5.5v | ~~1237~~ | 1058v " " |
| #2 | :46 | 16.6 / 16.6 | 16.6 | | | -0.8 | 15.8v | ~~1345~~ | 1166v Location Bed 75° N. " " |
| #3 | :51 | 21.8 / 21.7 | 21.8 | | | -0.8 | 21.0v | ~~1400~~ | 1221v " " |
| #4 | :54 | 33.9 / 33.9 | 33.9 | | | -0.8 | 33.1v | ~~1527~~ | 1348 " " |
| #5 | :56 | 27.3 / 27.5 | 27.4 | | | -0.8 | 26.6v | ~~1459~~ | 1279 " " |
| | | | | | | | | | |
| 12 S | 4:01 | 3.3 / 4.2 | } 3.7 | | | | | | 2nd Sub. Base " " |
| " | :02 | 2.3 / 4.0 | | | | -0.7 | 3.0v | ~~1211~~ | 1032 |
| " | :03 | 3.2 / 3.8 | | | | | | | |
| " | :05 | 3.7 / 3.9 | | | | | | | |
| | | | | | | | | | |
| Base | :15 | (12.3) (12.3) | | | | | | | Base Pt. " " |
| " | :16 | (12.6) (12.5) | (17.5) | | | -0.7 | (18.2)v | ~~789~~ | " " |
| " | :17 | (12.6) (12.3) | | | | | | | " " |
| " | | | | | | | | | " " |

Computed by R.W.J.
Checked by J.W.W.

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 2 North

OPERATORS Heinrichs, Waite, Jones BASE DATUM INST. NO. S 178 SCALE VALUE 10.5 DATE 5/24/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) / CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 2N 0+00 | 3:40 | 24.2 24.8 | 5.5 | — | | +1.5 | -4.0 | 958 | |
| HOON | :43 | 22.0 22.2 | 7.8 | — | | +1.4 | -6.4 | 933 | |
| 2+00W | :45 | 13.1 13.6 | 13.4 | — | | +1.4 | 14.8 | 1155 | |
| 3+00W | :48 | 28.5 28.7 | 28.6 | — | | +1.3 | 29.9 | 1314 | |
| 4+00 | :49 | 20.1 20.1 | 20.1 | — | | +1.3 | 21.4 | 1225 | |
| 5+00 | :51 | 49.0 49.5 | 49.3 | — | | +1.3 | 50.6 | 1531 | |
| 6+00 | :55 | 18.8 18.9 | 18.9 | SMALL MAG N-UP 43CM. | +1170 | +1.2 | 20.1 | 2381 | |
| 5+50 | :58 | 29.5 28.7 | 28.2.0 | " | +1170 | +1.1 | -0.9 | 2161 | |
| 7+00 | 4:01 | 1.1 1.1 | 1.1 | " | +1170 | +1.0 | 2.1 | 2192 | |
| 8+00 | :06 | 84.9 84.0 | 84.5 | — | | +0.9 | 85.4 | 1897 | See Al Rugg's 1895 |
| RR | :09 | 84.9 84.2 | 84.6 | — | | +0.9 | 85.5 | 1898 | |
| | | | | | | | | | |
| Base | :13 | 11.1 11.3 | (18.7) | | | | | | |
| " | :14 | 11.6 11.2 | | | | | | | |
| " | :15 | 11.4 11.2 | | | | | | | |
| | | | | | | | | | |
| 3N-9+00 | :22 | 37.1 37.2 | 37.2 | — | — | +0.4 | 37.6 | 1395 | Tie-in to Al Rugg's Work 1508 |
| " | :24 | 37.2 37.1 | 37.2 | — | — | | | | " |

Computed E.G.H.P.
Checked By Pat

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 1 South

OPERATORS Heinrichs, Waite, Jones BASE DATUM +1000 INST. NO. S-178 SCALE VALUE 10·5 DATE 5/24/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS | CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|---|
| Base | 11:10 | (10.3) (9.8) | (10.1) | | | | | | | |
| " | 11:11 | (10.3) (9.8) | (10.1) | | | | | | | |
| " | 11:12 | 10.3 (9.8) | (10.1) | | | | | | | |
| " | :13 | (10.2) (9.7) | (10.0) | | | | | | | |
| 15,5+85W | :27 | 5.9 5.8 | 5.9 | Small mag. N up 43cm. | +1170 | +2·2 | 8·1 | 2255 | 15' N fence | Alluvium |
| 5+50W | :31 | (26.1) (25.9) | (26.0) = (4.0) | " | +1170 | +2·3 | -1·7 | 2152 | | " |
| 5+67W | :34 | 3.9 3.3 | 3.6 | " | +1170 | +2·4 | 6·0 | 2233 | | " |
| 5+25W | :38 | (8.9) (9.0) | (9.0) = (21.0) | " | +1170 | +2·4 | -18·6 | 1975 | | " |
| 5+00W | :41 | (5.0) (5.8) | (5.4) = (21.6) | " | +1170 | +2·5 | -22·1 | 1938 | | " |
| 4+50W | :44 | 52.2 51.5 | 51.9 | | | +2·5 | 54·4 | 1571 | | " |
| 4+75W | :46 | 31.1 30.6 | 30.9 | | | +2·5 | 33·4 | 1351 | | " |
| 4+25W | :49 | 50.0 49.9 | 50.0 | | | +2·6 | 52·6 | 1552 | | " |
| 4+00W | :50 | 52.1 52.0 | 52.1 | | | +2·6 | 54·7 | 1574 | | " |
| 3+00W | :55 | +82.2 +81.9 | = 82.1 | | | +2·7 | 84·8 | 1890 | | " |
| 3+50W | :58 | 86.2 +87.0 | 86.6 | | | +2·7 | 89·3 | 1938 | | |
| 3+75W | 12:02 | 56.9 56.4 | 56.7 | | | +2·8 | 59·5 | 1625 | | |
| 3+62W | :04 | +70.1+69.8 | = 70.0 | | | +2·8 | 72·8 | 1764 | | |
| 2+00W | :08 | +69.8+69.2 | +69.5=69.5 | | | +2·9 | 72·4 | 1760 | | |
| 1+00W | :11 | 7.1 6.8 | 7.0 | | | +2·9 | 9·9 | 1104 | | |
| 1+50W | :15 | 36.3 36.2 | 36.3 | | | +2·9 | 39·2 | 1412 | | |
| 0+00 | :17 | 0.7 0.8 | 0.8 | | | +3·0 | 3·8 | 1040 | | |
| | | | | | | | | | Comp. by E.G.H. | |
| Base | 12:20 | (9.1) (8.9) | (9.0) | | | | | | Checked " PAT | |
| " | " | (9.1) (8.9) | (9.0) (21.0) | | | | | | | |
| " | 12:21 | (9.1) (8.9) | (9.0) | | | | | | | |
| Base | 12:56 | (9.0) (8.9) | (9.0) | | | | | | | |
| " | :57 | (9.0) (8.9) | (9.0) (21.0) | | | | | | | |
| " | :58 | (9.0) (8.9) | (9.0) | | | | | | | |
| 15 +00E | 1:03 | (27.8) (27.7) | (27.8) (2.2) | | | +3·0 | 0·8 | 1008 | | |
| 2+00E | :06 | (23.9) (23.4) | (23.7) (6.1) | | | +3·0 | -3·1 | 967 | | |
| 15 +00W | 1:59 | 78.1 77.2 | 77.7 | | | +2·9 | 80·6 | 1846 | | |
| " | 2:01 | 78.5 77.1 | 77.8 | | | +2·9 | 80·7 | 1847 | | |
| 6+50W | 1:03 | 88.3 87.5 | 87.9 | | | +2·9 | 90·8 | 1953 | 15,6+25W \| 2:08 \| 0.1 \| 0.1 \| 0.1 \| +1170 Small mag N up 43cm. \| +2·8 \| 2·9 \| 2200± | |

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 2 South

OPERATORS Heinrichs, Waite, Jones BASE DATUM INST. NO. Sharpe 178 SCALE VALUE 10.5 DATE 3/24/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS | CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|---|
| 2S, 0+00 | 1:10 | 9.2 9.1 | 9.2 | — | | +3.0 | 12.2 | 1128 | | Alluvium |
| 1+00W | 1:14 | (18.1) (18.1) | (11.9) | — | | +3.0 | -8.9 | 907 | | " |
| 2+00W | :16 | 16.5 16.0 | 16.3 | — | | +3.0 | 19.3 | 1203 | | " |
| 1+50W | :22 | (5.1) (4.9) | (25.0) | — | | +3.0 | -22.0 | 769 | | " |
| 3+00 | :25 | 60.2 59.9 | 60.1 | — | | +3.0 | 63.1 | 1663 | | " |
| 2+50 | :29 | 40.3 40.0 | 40.2 | — | | +3.0 | 43.2 | 1454 | | " |
| 2+25 | :32 | 30.2 30.1 | 30.2 | — | | +3.0 | 33.2 | 1349 | | " |
| 4+00 | :35 | 50.1 49.8 | 50.0 | — | | +3.0 | 53.0 | 1557 | | " |
| 5+00 | :39 | 59.9 59.4 | 59.7 | — | | +3.0 | 62.7 | 1658 | 10'N fence | " |
| 6+00 | :44 | 83.6 83.9 | 83.8 | — | | +3.0 | 86.8 | 1911 | | " |
| 7+00 | :46 | 63.1 63.0 | 63.1 | — | | +2.9 | 66.0 | 1693 | | " |
| 8+00 | :50 | 52.3 52.2 | 52.3 | — | | +2.9 | 55.2 | 1580 | See AL RUGG'S MAP | " |

Computed by E.G.H.
Checked by PAT

# MAGNETOMETER DATA SHEET

AREA RD LOCATION LINE 1 North

OPERATORS Heinrichs, Waite, Jones BASE DATUM INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/24/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 1N 8700W | 2:21 | 48.8 48.1 | 48.5 | — | | +2.8 | 51.3 | 1539 | 10' S fence |
| 9+00W | 2:27 | 47.5 46.0 | 47.8 | — | | +2.7 | 50.5 | 1530 | |
| 10+00W | 2:35 | 51.4 51.2 | 51.3 | — | | +2.6 | 53.9 | 1566 | |
| 11+00 | 2:37 | 43.0 43.1 | 43.1 | — | | +2.6 | 47.7 | 1501 | |
| | | | | | | | | | |
| Base | 2:44 | (9.5) (9.0) | | | | | | | |
| " | :45 | (9.1) (9.1) | (20.6) | | | +2.6 | -18 | | |
| " | " | (9.1) (9.1) | | | | | | | |
| | | | | | | | | | |
| 1N 7400W | 2:56 | 26.1 26.1 | 26.1 | Small mag N up 43cm | +1170 | +2.4 | 28.5 | 2469 | |
| 7+00W | 3:00 | 76.1 77.1 | 77.6 | — | | +2.3 | 79.9 | 1639 | |
| 6+00W | :03 | 68.4 67.7 | 68.1 | Small mag N up 43cm | +1170 | +2.2 | 70.3 | 2908 | |
| 5+00W | :08 | 73.1 75.1 | 73.1 | — | | +2.2 | 77.3 | 1812 | |
| 4+00W | :11 | 43.1 43.0 | 43.1 | — | | +2.1 | 45.2 | 1475 | |
| 3+00W | :13 | 51.1 51.1 | 51.1 | — | | +2.0 | 53.1 | 1558 | |
| 2+00W | :15 | 43.2 43.7 | 43.5 | — | | +1.9 | 45.4 | 1477 | |
| 1+00W | :17 | 5.1 5.7 | 5.4 | — | | +1.9 | 7.3 | 1077 | |
| 0+00 | :26 | 7.1 6.9 | 7.0 | — | | +1.8 | 8.8 | 1092 | |

Comp. E.G.H.
Checked by [illegible]

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION RD LINE # 4 N

OPERATORS Waite, Jones BASE DATUM +1000 INST. NO. S 178 SCALE VALUE 10.5 DATE 5/27/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) REMARKS CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base | 10:49 | 11.2 / 10.9 | (18.8) | | — | | | | |
| " | :51 | 11.3 / 11.2 | (11.2) | | — | +08 | -18.0 | 811 | |
| Base | 3:06 | 14.3 / 14.9 | | | — | | | | |
| " | :08 | 15.2 / 15.0 | (14.9) | 15.1 | — | -3.1 | -18.0 | 811 | |
| " | :09 | 15.3 / 15.2 | (15.1) | | — | | | | |
| " | :10 | 15.3 / 15.4 | | | — | | | | |
| (#0) Line 4N | :17 | 27.9 / 27.7 | 27.8 | | — | -3.1 | 24.7 | 1259 | |
| # 1 | :20 | 33.4 / 33.3 | 33.4 | | — | -3.1 | 30.3 | 1318 | |
| # 2 | :23 | 48.3 / 48.3 | 48.3 | | — | -3.1 | 45.2 | 1475 | |
| # 3 | :25 | 30.2 / 30.4 | 30.3 | | — | -3.1 | 27.2 | 1286 | |
| # 4 | :28 | 39.8 / 39.9 | 39.9 | | — | -3.1 | 36.8 | 1386 | |
| # 5 | :31 | 74.5 / 74.8 | 74.7 | (6.9) | — | -3.1 | 71.6 | 1752 | |
| # 6 | :41 | 36.5 / 37.3 | (36.9) | +1170 | S.M. N up 4304 | -3.1 | ~~(40.0)~~ | ~~1750~~ | ? +3.8 (2310 8) ? 2210? |
| # 7 | :46 | 69.3 / 70.4 | 69.8 | | — | -3.1 | 66.7 | 1700 | |
| # 8 | :50 | 45.3 / 45.3 | 45.3 | | — | -3.1 | 42.2 | 1443 | |
| # 9 | :54 | 43.7 / 43.8 | 43.8 | | — | -3.1 | 40.7 | 1427 | Compiled by Pat |
| # 10 | ~~:59~~ | ~~36.6 / 37.3~~ | ~~37.0~~ | | — | | | | bubbles off Checked by E.G.H. |
| " | 4:00 | 37.2 / 37.6 | 37.4 | | — | -3.1 | 34.3 | 1360 | |
| Base | :07 | 14.9 / 15.1 | (14.9) | | — | -3.1 | -18.0 | 811 | |
| " | :09 | 15.2 / 15.2 | (15.1) | | — | | | | |
| " | | 15.2 / 15.2 | | | — | | | | |

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 5 S.

OPERATORS Heinrichs, Jones BASE DATUM +1000 INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base | 10:42 | (14.9) (14.9) | | — | | | | | |
| " | :43 | (14.9) (14.8) | (14.8) | — | | -2.8. | -11.0 | 811 ✓ | Base is Line 0 at Base line 7@7 |
| " | :44 | (14.9) (14.7) | 15.2 | — | | | | | |
| | | | | | | | | | |
| 5S-0 | :48 | 7.9 7.8 | 7.9 | — | | -2.5 | 5.4 | 1057 ✓ | ✓ |
| *1W | :50 | 6.9 6.7 | 6.8 | — | | -2.4 | 4.4 | 1046 ✓ | ✓ |
| *1+75W | :53 | 4.2 4.2 | 4.2 | — | | -2.3 | 1.9 | 1020 ✓ | Fence at 5S-2W |
| *3W | :56 | 11.8 11.3 | 11.6 | — | | -2.2 | 9.4 | 1099 ✓ | ~ ✓ |
| 4W | :59 | 9.7 9.3 | 9.5 | — | | -2.0 | 7.5 | 1079 ✓ | ✓ |
| 5W | 11:00 | 5.9 5.4 | 5.7 | — | | -2.0 | 3.7 | 1039 ✓ | ✓ |
| 6W | :02 | 41.8 41.6 | 41.7 | — | | -2.0 | 39.7 | 1417 ✓ | |
| 7W | :04 | 51.1 50.9 | 51.0 | — | | -1.9 | 49.1 | 1516 ✓ | ✓ |
| | | | | | | | | | |
| 5S-10W | 4:32 | 15.8 16.1 | 16.0 | — | | -2.6 | 13.4 | 1141 ✓ | ✓ |
| 11W | :35 | 7.9 8.8 | 8.4 | — | | -2.8 | 5.6 | 1059 ✓ | ✓ |
| 12W | :37 | 17.1 17.4 | 17.3 | — | | -2.8 | 14.5 | 1152 ✓ | ✓ |
| 13W | :38 | 30.9 31.2 | 31.1 | — | | -2.9 | 28.2 | 1296 ✓ | ✓ |
| 14W | :41 | 19.0 19.1 | 19.1 | — | | -3.0 | 16.1 | 1169 ✓ | ✓ |
| 15W | :43 | 20.5 20.7 | 20.6 | — | | -3.0 | 17.6 | 1185 ✓ | Rd. 15+30 ✓ |
| 16W | :45 | 9.9 9.9 | 9.9 | — | | -3.1 | 6.8 | 1071 ✓ | ✓ |
| 17W | :47 | 9.0 9.1 | 9.1 | — | | -3.2 | 5.9 | 1062 ✓ | ✓ Comp by E.G.H. |
| 18W | :49 | 16.1 16.7 | 16.4 | — | | -3.3 | 13.1 | 1138 ✓ | ✓ Checked by Pat |
| 19W | :51 | 19.3 19.3 | 19.3 | — | | -3.3 | 16.0 | 1168 ✓ | ✓ |
| 20W | :52 | 27.1 27.5 | 27.3 | — | | -3.4 | 23.9 | 1251 ✓ | ✓ |

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 4 S.

OPERATORS Heinrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. / N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 4S-6W | 11:08 | 44.1 / 43.8 | 44.0 | — | | -1.6 | 42.4 | 1445 | |
| 5W | :10 | 22.3 / 22.0 | 22.2 | — | | -1.5 | 20.7 | 1217 | |
| 4W | :12 | 31.4 / 31.1 | 31.3 | — | | -1.4 | 29.9 | 1314 | |
| 3W | :14 | 51.0 / 50.9 | 51.0 | — | | -1.3 | 49.7 | 1522 | fence at 4S-3+10W |
| 2W | :17 | (28.5) (28.5) | (28.5) | (+5) | | -1.1 | 2.6 | 1027 | |
| 1W | :20 | 4.0 / 3.4 | 3.7 | — | | -1.0 | 2.7 | 1028 | ✓ |
| 4S-0 | :22 | 9.0 / 8.5 | 8.8 | — | | -0.9 | 7.9 | 1083 | ✓ |
| | | | | | | | | | |
| 4S-20N | 4:54 | 21.3 / 21.7 | 21.5 | — | | -3.4 | 18.1 | 1190 | |
| 19W | :56 | 23.1 / 23.1 | 23.1 | — | | -3.5 | 19.6 | 1206 | |
| 18W | :58 | 15.5 / 15.9 | 15.7 | — | | -3.6 | 12.1 | 1127 | |
| 17W | :59 | 16.1 / 16.8 | 16.5 | — | | -3.6 | 12.9 | 1135 | Rd. 17+30 |
| 16W | 5:00 | 14.8 / 14.8 | 14.8 | — | | -3.7 | 11.1 | 1117 | ✓ |
| 15W | :02 | 22.1 / 22.3 | 22.2 | — | | -3.7 | 18.5 | 1194 | ✓ |
| 14W | :04 | 20.2 / 20.1 | 20.2 | — | | -3.8 | 16.4 | 1172 | ✓ |
| 13W | :07 | 34.1 / 34.1 | 34.1 | — | | -3.9 | 30.2 | 1317 | Bank of Wash |
| 12W | :08 | 10.9 / 11.8 | 11.4 | — | | -3.9 | 7.5 | 1079 | In wash |
| 11W | :09 | 10.1 / 10.9 | 10.5 | — | | -4.0 | 6.5 | 1068 | " " |
| 10W | :11 | 29.2 / 29.0 | 29.1 | — | | -4.0 | 25.1 | 1264 | " " |
| | | | | | | | | | |
| Sub base | :16 | 64.2 / 63.8 | | — | | | | | |
| " | :17 | 64.4 / 63.9 | 64.1 | — | | -4.1 | 60.0 | 1630 | Line 2-8W Comp by E.G.H. Checked: Pat |
| " | : | 64.4 / 63.9 | | — | | | | | |

(3)

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 5 N.

OPERATORS Hemrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 1015 DATE 3/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 5N-0 | 11:28 | 28.8 29.1 | 28.7 | 43 | | -0.6 | 1.9 | 1020 | ✓ ✓ |
| * 1W | :30 | 20.0 19.8 | 19.9 | 40.1 | | -0.6 | 10.7 | 1112 | ✓ |
| * 2W | :32 | 4.5 3.9 | 4.2 | — | | -0.5 | 3.7 | 1039 | ✓ ? ✓ |
| * 3W | :34 | 13.6 13.1 | 13.4 | — | | -0.4 | 13.0 | 1137 | ✓ ✓ |
| * 4W | :36 | 38.7 38.1 | 38.4 | — | | -0.4 | 38.0 | 1399 | ✓ ✓ |
| * 5W | :40 | 8.8 8.1 | 8.5 | S.M. N-UP 43 C.M. | +1170 | -0.3 | 8.2 | 2256 | ✓ ✓ |
| * 6W | :42 | 4.2 4.1 | 4.2 | S.M. N-UP 43 C.M. | +1170 | -0.2 | 4.0 | 2212 | ✓ ✓ |
| * 7W | :44 | 15.0 14.8 | 14.9 | S.M. N-UP 43 C.M. | +1170 | -0.1 | 14.8 | 2325 | ✓ ✓ |
| * 8W | :46 | 40.3 40.1 | 40.2 | — | | -0.1 | 40.1 | 1421 | ✓ ✓ |
| * 9W | :49 | 41.8 41.9 | 41.9 | — | | -0.1 | 41.8 | 1439 | ✓ ✓ |
| * 10W | :50 | 25.0 24.9 | 25.0 | — | | -0.1 | 24.9 | 1261 | ✓ ✓ |
| * 11W | :52 | 47.8 47.9 | 47.9 | — | | -0.1 | 47.8 | 1502 | ✓ ✓ |
| | | | | | | | | | |
| Base | 12:00 | 12.0 12.0 | | — | | | | | Line Z @ Z |
| " | :01 | 12.0 11.9 | 12.0 | — | | | | | |
| " | :02 | 12.1 12.0 | 18.0 | — | | -6- | -14.0 | 811 | |
| | | | | | | | | | |
| " | 12:20 | 13.8 13.8 | 16.2 | | | | | | |
| " | 12:21 | 14.1 14.0 | 15.9 | 16.0 | | -2.0 | 18.0 | 811 | |
| " | 12:22 | 14.1 14.1 | 15.9 | — | | | | | |
| | | | | | | | | | |
| Sub. base | :29 | 68.9 62.2 | | | | | | | Sub. base Located line 0-8 W. |
| " | :30 | 62.1 62.7 | 62.3 | — | | -2.3 | 60.0 | 1630 | |
| " | :31 | 62.2 62.7 | | — | | | | | |
| | | | | | | | | | |
| 5N-11W | 1:23 | 53.8 53.1 | 53.5 | — | | -0.2 | 53.3 | 1560 | ✓ |
| 12W | :32 | 62.2 62.9 | | | | +0.6 | | | |
| " | :33 | 64.8 63.1 | 63.5 | — | | +0.7 | 64.2 | 1674 | ✓ ✓ |
| " | :34 | 63.9 63.1 | | — | | | | | |
| 13W | :36 | 17.1 17.3 | 17.2 | — | | +0.8 | 18.0 | 1189 | ✓ ✓ |
| 14W | :38 | 23.9 24.1 | 24.0 | — | | +1.0 | 25.0 | 1263 | ✓ ✓ |
| 15W | :41 | 4.5 4.2 | 4.4 | — | | +1.1 | 5.5 | 1058 | ✓ ✓ |
| 16W | :44 | 11.1 11.8 | 11.5 | — | | +1.2 | 12.7 | 1133 | ✓ ✓ |
| 17W | ~~:48~~ | 6.7 7.9 | | — | | | | | |
| " | :49 | 7.9 7.9 | 7.9 | — | | +1.4 | 9.3 | 1098 | ✓ ✓ |
| | | | | | | | | | |

Comp by F.G.H.
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 4 N.

OPERATORS Heinrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 4N-11W | 12:52 | 45.8 45.9 | 45.9 | — | | -2.2 | 43.7 | 1459 | fence 10+85 W |
| * 12W | :55 | 12.1 12.1 | 12.1 | S.M. N-UP 47 S.M. | +1170 | -2.1 | 10.0 | 2275 | → |
| * 13W | :59 | 27.8 27.7 | 27.8 | — | | -1.9 | 25.9 | 1272 | " |
| 14W | 1:01 | 11.7 11.8 | 11.8 | — | | -1.8 | 10.0 | 1105 | " |
| 15W | :04 | 9.8 10.5 | 10.2 | — | | -1.6 | 8.6 | 1090 | " |
| 16W | :08 | 2.5 2.0 | 2.8 | — | | -1.3 | 1.5 | 1016 | " |
| 17W | :10 | 22.6 22.6 | 22.6 | — | | -1.2 | 21.4 | 1225 | " |
| 18W | :13 | 11.6 11.7 | 11.7 | — | | -1.0 | 10.7 | 1112 | " |
| 19W | :15 | 11.8 11.9 | 11.9 | — | | -0.9 | 11.0 | 1116 | " |
| 20W | :17 | 0.8 0.2 | 0.5 | — | | -0.7 | -0.2 | 998 | |

Comp. by E.G.H.
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 5 N. cont.

OPERATORS Heinrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 5N-18W | 1:51 | 5.2 5.9 | 5.6 | — | | +1.5 | 7.1 | 1075 ✓ | ✓ |
| 19W | :54 | 28.5 28.9 | 28.7 | 1.3 | | +1.6 | +0.3 | 1003 ✓ | — |
| 20W | :57 | 16.1 16.2 | 16.2 | — | | +1.7 | 17.9 | 1188 ✓ | ✓ |
| | | | | | | | | | |
| Sub | 2:08 | 57.6 58.0 | 57.8 | | | | | | |
| Base | 2:10 | 58.2 57.9 | 58.1 | 58.1 ✓ | | +1.9 | 60.0 | 1630 | |
| | 2:11 | 58.9 58.0 | 58.5 | | | | | | |

Comp. by E.G.H.
Checked by Pat

(6)

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 2 N.

OPERATORS Heinrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 2N-12W | 2:24 | 29.5 30.2 | 29.9 | — | | +1.6 | 31.5 | 1331 | — |
| 13W | :26 | 8.1 8.6 | 8.4 | — | | +1.5 | 9.9 | 1104 | — |
| 14W | :28 | 10.9 10.9 | 10.9 | — | | +1.4 | 12.3 | 1129 | — |
| 15W | :32 | 13.1 13.0 | 13.1 | — | | +1.4 | 14.5 | 1152 | — |
| 16W | :34 | 17.0 17.1 | 17.1 | — | | +1.3 | 18.4 | 1193 | — |
| 17W | :36 | 24.8 25.1 | 25.0 | — | | +1.2 | 26.2 | 1275 | — |
| 18W | :39 | 10.2 10.8 | 10.5 | — | | +1.1 | 11.6 | 1122 | — |
| 19W | :41 | 9.1 9.7 | 9.4 | — | | +1.1 | 10.5 | 1110 | — |
| 20W | :43 | 9.2 9.8 | 9.5 | — | | +1.0 | 10.5 | 1110 | — |

Comp by E.G.H.
Checked by P.S.

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 1 N.

OPERATORS Heinrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 1N-20W | 2:46 | 7.1 7.9 | 7.5 | — | | +0.8 | 8.3 | 1087 | |
| 19W | :49 | 14.2 14.6 | 14.4 | — | | +0.7 | 15.1 | 1159 | |
| 18W | :51 | 18.3 19.9 | 18.6 | — | | +0.6 | 19.2 | 1202 | |
| 17W | :53 | 19.8 20.0 | 19.9 | — | | +0.6 | 20.5 | 1215 | Over Magnitite (Station in Pit) |
| 16W | :56 | 15.0 15.8 | 15.4 | — | | +0.5 | 15.9 | 1167 | Edge of Magnitite Pit. |
| 15W | :58 | 19.1 19.2 | 19.2 | — | | +0.3 | 19.5 | 1205 | |
| 14W | 3:00 | 24.9 24.9 | 24.9 | — | | +0.3 | 25.2 | 1265 | |
| 13W | :02 | 17.1 17.1 | 17.1 | — | | +0.2 | 17.3 | 1182 | Edge of bulldozer Cut near qtz. outcrop |
| | | | | | | | | | |
| Sub base | :08 | 60.9 59.9 | 59.1 | — | | | | | |
| " | :09 | 60.9 59.9 | | — | | | | | |
| " | :10 | 59.3 58.9 | | — | | | | | |
| " | :12 | 60.1 59.8 | 60.1 | — | | | | | |
| " | :13 | 60.2 60.0 | 60.0 | — | | -0- | 60.0 | 1630 | |

Comp. by E.G.H.
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 1 S

OPERATORS Heinrichs / Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/37

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 1S-11W | 3 :23 | 19.1 19.1 | 19.1 | — | | -0.4 | 18.7 | 1196 | — |
| 11+95 | :25 | 11.2 11.2 | 11.2 | — | | -0.5 | 10.7 | 1112 | — |
| 13W | :28 | 12.8 12.7 | 12.8 | — | | -0.6 | 12.2 | 1128 | — |
| 14W | :31 | 16.9 17.0 | 17.0 | — | | -0.7 | 16.3 | 1171 | — |
| 15W | :33 | 20.0 19.9 | 20.0 | — | | -0.7 | 19.3 | 1203 | — |
| 16W | :35 | 17.8 18.1 | 18.0 | — | | -0.8 | 17.2 | 1181 | — |
| 17W | :38 | 14.9 14.6 | 14.8 | — | | -0.9 | 13.9 | 1146 | — |
| 18W | :40 | 17.3 17.8 | 17.6 | — | | -0.9 | 16.7 | 1175 | — |
| 19W | :42 | 13.1 12.7 | 12.9 | — | | -1.0 | 11.9 | 1125 | — |
| 20W | :45 | 10.8 11.1 | 10.8 | — | | -1.1 | 9.7 | 1102 | — |

Comp. by E.G.H.
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 2 S.

OPERATORS Heinrichs, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/28/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 95-20W | 3:48 | 11.9, 12.6 | 12.3 | — | | -1.2 | 11.1 | 1117 | |
| 19W | :50 | 18.4, 18.7 | 18.6 | — | | -1.2 | 17.4 | 1183 | |
| 18W | :55 | 18.6, 18.2 | 18.4 | — | | -1.4 | 17.0 | 1179 | |
| 17W | :56 | 15.1, 15.7 | 15.4 | — | | -1.4 | 14.0 | 1147 | |
| 16W | :59 | 14.2, 14.8 | 14.5 | — | | -1.5 | 13.0 | 1137 | Edge of dozer Cut |
| 15W | 4:01 | 19.6, 20.0 | 19.8 | — | | -1.5 | 18.3 | 1192 | |
| 14W | :03 | 18.1, 18.7 | 18.4 | — | | -1.6 | 16.8 | 1176 | |
| 13W | :05 | 19.9, 19.9 | 19.9 | — | | -1.7 | 18.2 | 1191 | |
| 12W | :08 | 11.8, 12.1 | 12.0 | — | | -1.9 | 10.1 | 1106 | |
| 11W | :10 | 21.6, 21.8 | 21.7 | — | | -1.9 | 19.8 | 1208 | |
| | | | | | | | | | |
| Sub base | :13 | 61.9, 61.7 | | — | | | | | |
| " | :14 | 62.0, 61.8 | 61.9 | — | | -19 | 600 | 1630 | |
| " | :15 | 62.0, 61.9 | | — | | | | | |

Comp. by E.G.H.
Checked by Pat

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 7 N.

OPERATORS Waite, Jones BASE DATUM +10008 INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/30/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| Base | 10:51 | (40.2) (40.0) | | — | | | | | Line 0 at base line |
| " | ~~:52~~ | (40.7) (40.0) | | — | | | | | |
| " | ~~:53~~ | (41.2) (41.7) | | — | | | | | |
| " | ~~:59~~ | (41.9) (42.3) | | — | | | | | |
| " | 11:00 | (42.1) (42.8) | | — | | | | | Warming up. |
| " | ~~:01~~ | (43.1) (43.4) | | — | | | | | |
| " | ~~:10~~ | (47.2) (47.5) | | — | | | | | |
| " | :11 | (14.3) (14.7) | ✓ | — | | | | | |
| " | :12 | (14.6) (14.9) | (15.3) | — | | | | | |
| " | :14 | (14.3) (14.9) | | — | | | | | |
| | | | | | | | | | |
| 7N-0W | :24 | 5.6 5.7 | 5.7 | — | | -2.8 | 2.9 | 1030 | |
| 1 W | :26 | (8.7) (8.7) | ~~8.7~~ (21.3) | | | -2.8 | (24.1) | 747 | |
| 2 W | :30 | ~~6.3 7.0~~ | ~~7.1~~ | | | | | | bubbles off |
| " | :31 | 9.7 9.9 | 9.8 | — | | -2.9 | 6.9 | 1072 | |
| 3 W | :34 | 1.7 1.7 | 1.7 | — | | -2.9 | (1.2) | 987 | Stations 3–11, stakes placed one station off (Stake #3 placed on station #4 |
| 4 W | :37 | 40.0 40.4 | 40.2 | — | | -2.9 | 37.3 | 1392 | |
| 5 W | :42 | 35.3 35.7 | 35.5 | S.M. N. UP 43 O.M. | +1170 | -3.0 | 32.5 | ~~1341~~ → 2511 | |
| 6 W | :46 | 4.5 4.6 | 4.6 | " | +1170 | -3.0 | 1.6 | ~~1017~~ → 2187 | |
| 7 W | :50 | 51.2 50.9 | 51.1 | — | | -3.0 | 48.1 | 1505 | |
| 8 W | :53 | 5.2 5.4 | 5.3 | — | | -3.0 | 2.3 | 1024 | Comp. by J.W.W |
| 9 W | :56 | 49.2 50.0 | 49.6 | — | | -3.1 | 46.5 | 1488 | Checked by D.J. |
| 10 W | :59 | 8.6 8.8 | 8.7 | — | | -3.1 | 5.6 | 1059 | Double checked E.G.H. |
| 11 W | 12:01 | 36.9 37.1 | 37.0 | — | | -3.1 | 33.9 | 1356 | |
| | | | | | | | | | |
| Base | :08 | (14.9) (15.2) | | — | | | | | |
| " | :09 | (15.1) (15.2) | (15.1) | — | | | | | |
| " | :10 | (15.2) (15.2) | (14.9) | — | | | | | |

# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE 8 N

OPERATORS Waite, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/30/37

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 8N-0 | 12:32 | 6.0 6.2 | 6.1 | — | | -3.2 | 2.9 | 1030 | |
| 1W | :36 | (19.3) (19.8) | 10.4 | — | | -3.2 | (13.6) | 857 | |
| 2 | :41 | 1.0 1.3 | 1.2 | — | | -3.2 | (2.0) | 979 | |
| 3 | :44 | (20.7) (20.9) | 9.3 | — | | -3.2 | (12.5) | 869 | |
| 4 | :46 | 39.8 40.0 | 39.9 | — | | -3.1 | 36.8 | 1386 | |
| 5 | :49 | 21.7 21.7 | 21.7 | 3M.N.UP 43 C.M. | +1170 | -3.1 | 18.6 | ~~1195~~ 2365 | |
| 6 | :52 | 67.4 67.8 | 67.6 | — | | -3.1 | 64.5 | 1677 | |
| 7 | :55 | 66.2 66.7 | 66.5 | — | | -3.1 | 63.4 | 1666 | |
| 8 | :59 | 15.4 15.4 | 15.4 | — | | -3.1 | 12.3 | 1129 | |
| 9 | 1:02 | 32.7 23.3 | 23.0 | — | | -3.1 | 19.9 | 1209 | |
| 10 | :04 | 1.6 1.8 | 1.7 | — | | -3.1 | (1.4) | 985 | |
| Base | :14 | (14.7) (15.2) | 15.0 | ✓ — | | | | | |
| " | :15 | (15.0) (15.2) | | — | | | | | |
| " | :16 | (14.9) (15.0) | | — | | | | | |

Comp. by D.J.
Checked by J.W.W.
double E.G.H.

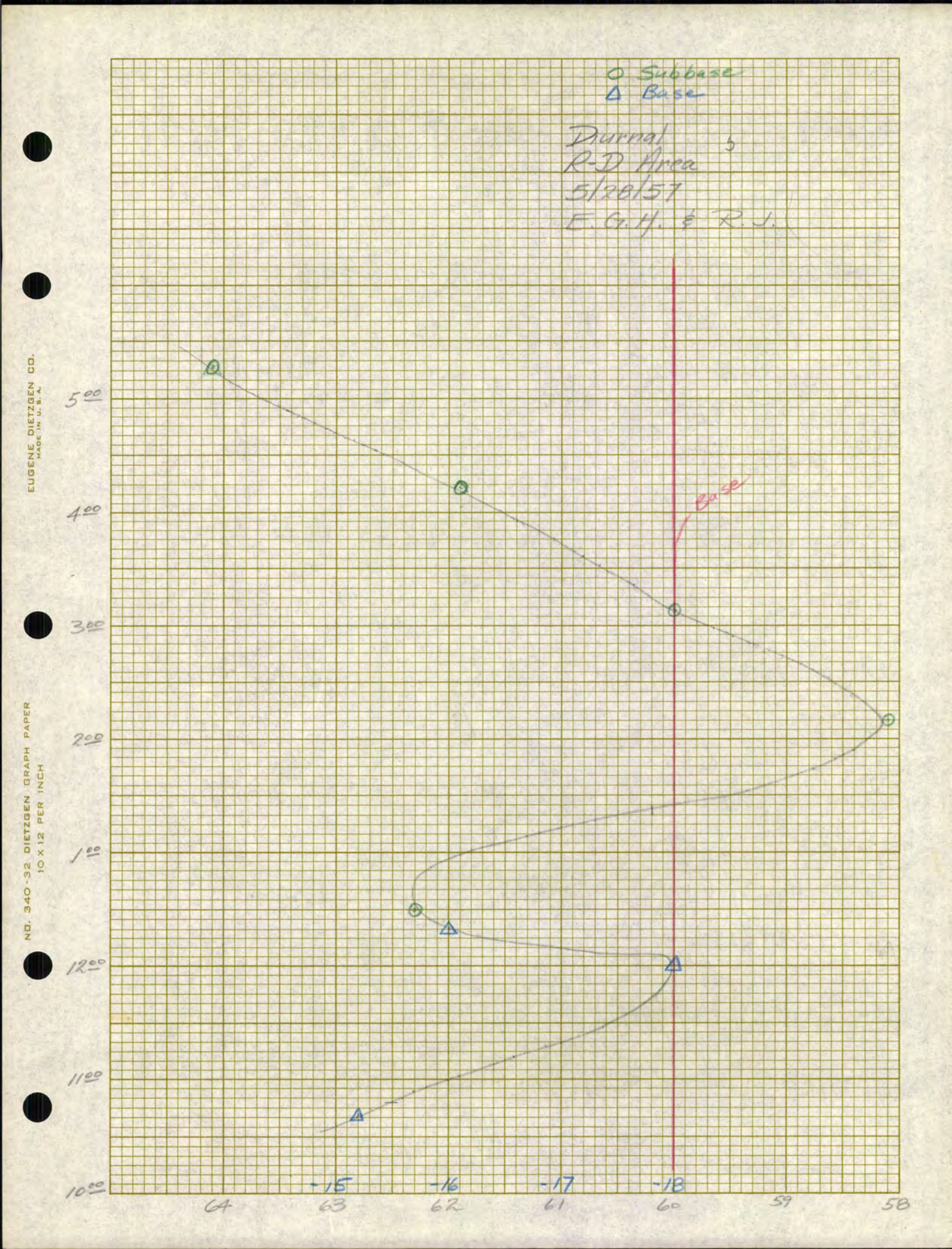
# MAGNETOMETER DATA SHEET

AREA _____ LOCATION R.D. LINE Re Read's / 0-6W, 3N-9W, 2S-8W

OPERATORS Waite, Jones BASE DATUM _____ INST. NO. S. 178 SCALE VALUE 10.5 DATE 5/30/57

| STATION | TIME | N. TO E. N. TO W. | AVERAGE READING S.D. (1) | AUX. MAGNET & POSITION | AUX. MAG. CORR. S.D. (2) | DIURNAL PLUS BASE CORR. S.D. (3) | (1) PLUS (2) PLUS (3) S.D. | INTENSITY GAMMA | REMARKS: GEOLOGY (MINERALIZATION, RIDGES, VALLEYS, BLUFFS, FORMATIONS, STREAMS, DIPS, STRIKES.) CULTURE (SURVEY MONUMENTS, BRIDGES, PIPE LINES, CULVERTS, ROADS, FENCES, PITS, CORNERS, SHAFTS, BUILDINGS, POWER LINES.) |
|---|---|---|---|---|---|---|---|---|---|
| 0-6W | 1:24 | 36.8 37.1 | 37.0 | SM. N-UP 43 C.M. | +1170 | -2.8 | 34.2 | 1359 → 2529 | |
| 3N-9W | :30 | 40.7 40.6 | 40.7 | — | | -2.6 | 38.1 | 1400 | |
| 2S-8W | :36 | 58.9 ~~60.0~~ | ~~59.5~~ | — | | | | | } Bad Readings |
| " | :37 | ~~58.4 59.4~~ | ~~58.9~~ | — | | | | | |
| " | :39 | 59.6 59.8 | 59.7 | — | | -2.1 | 57.6 | 1605 | |
| Base | :46 | (12.9) (13.4) | 30 | | | | | | |
| " | :47 | (13.2) (13.5) | (13.3) | | | | | | |
| " | :48 | (13.1) (13.4) | (16.7) | | | | | | |

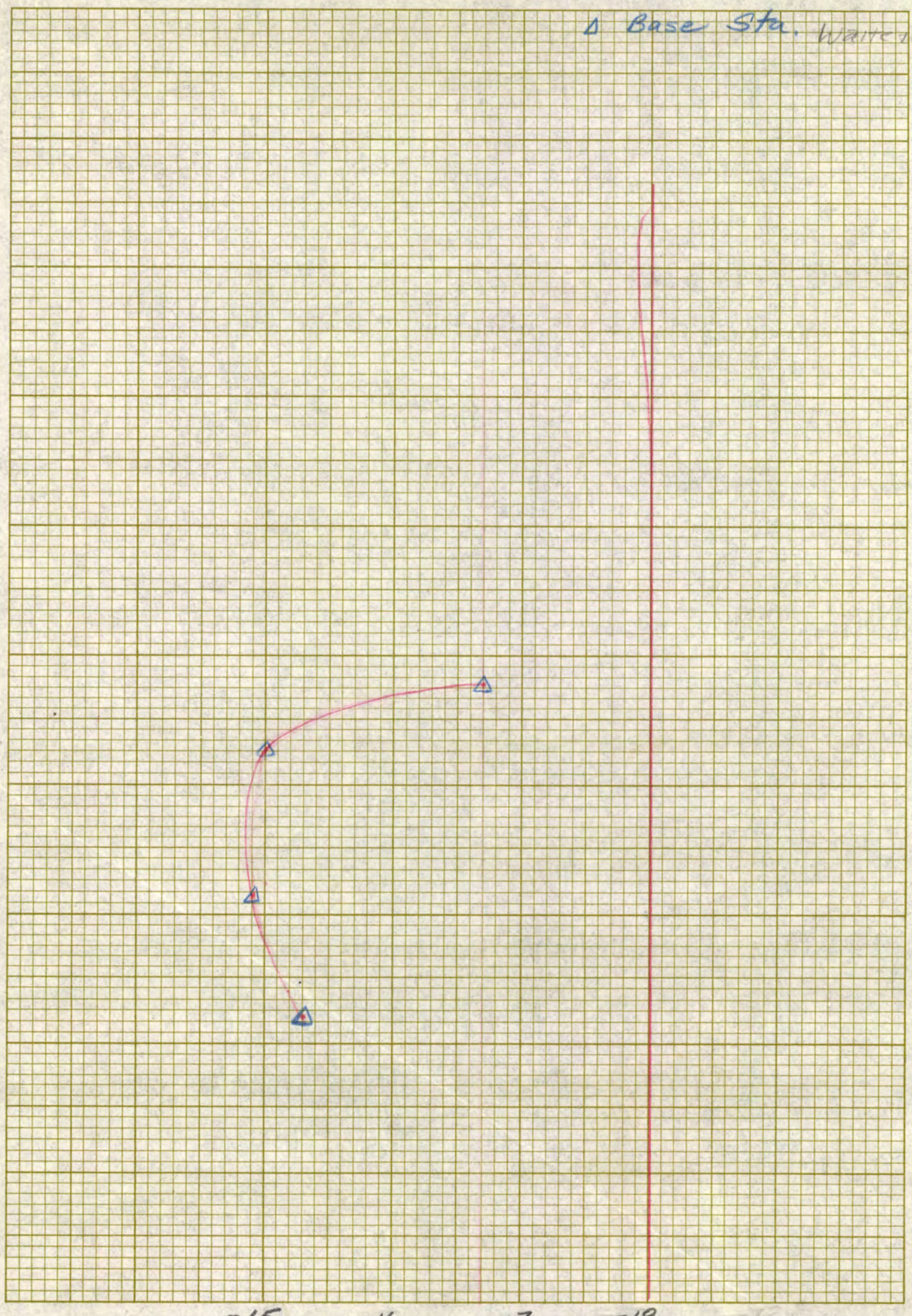
Computed by D.J.
Checked by J.W.W.
E.G.H.




EUGENE DIETZGEN CO.
MADE IN U.S.A.
NO. 340-32 DIETZGEN GRAPH PAPER
10 X 12 PER INCH

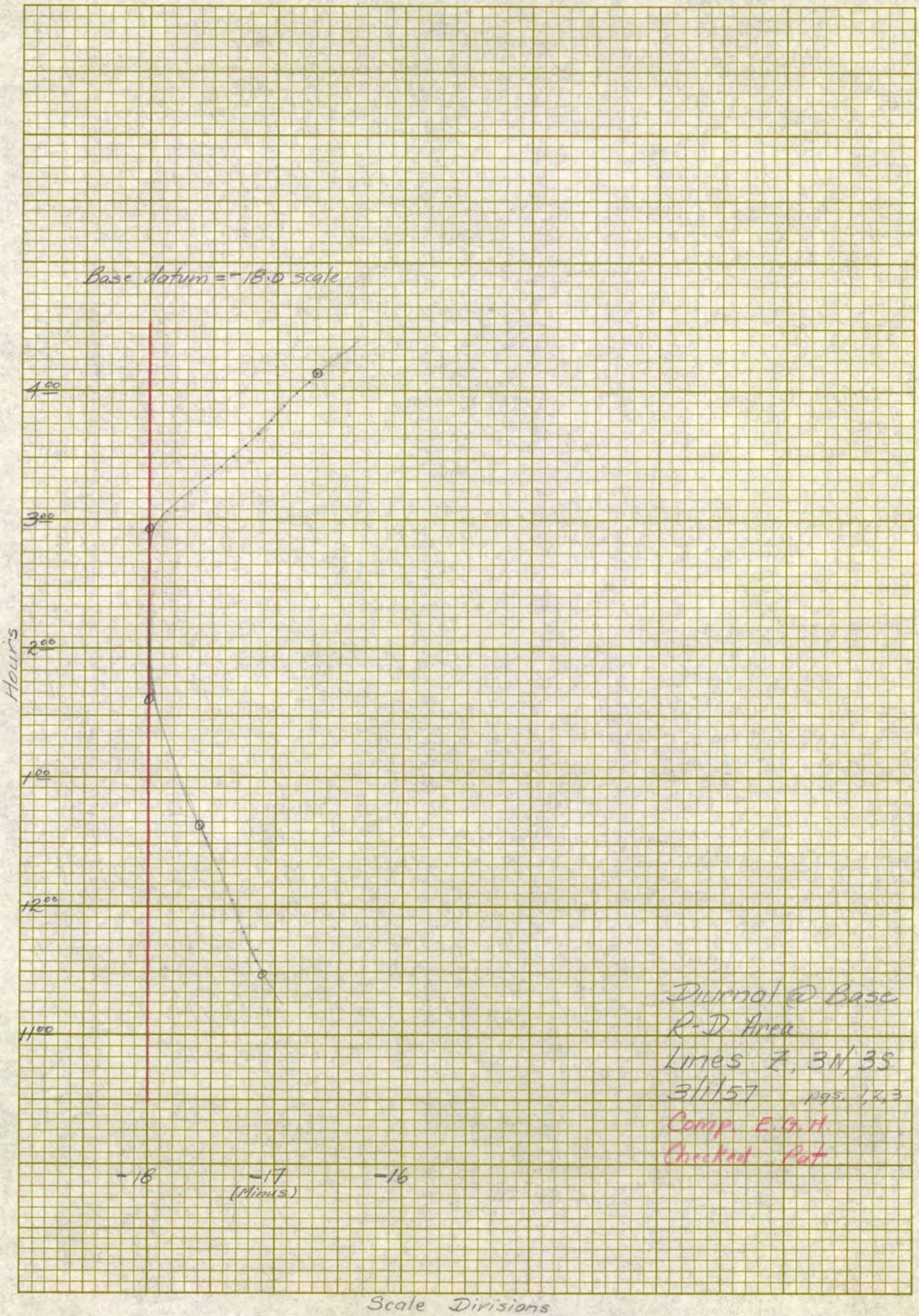
R-D 3/30/57 Lines 7+8 North 0-10, +

Δ Base Sta. Walter Jones

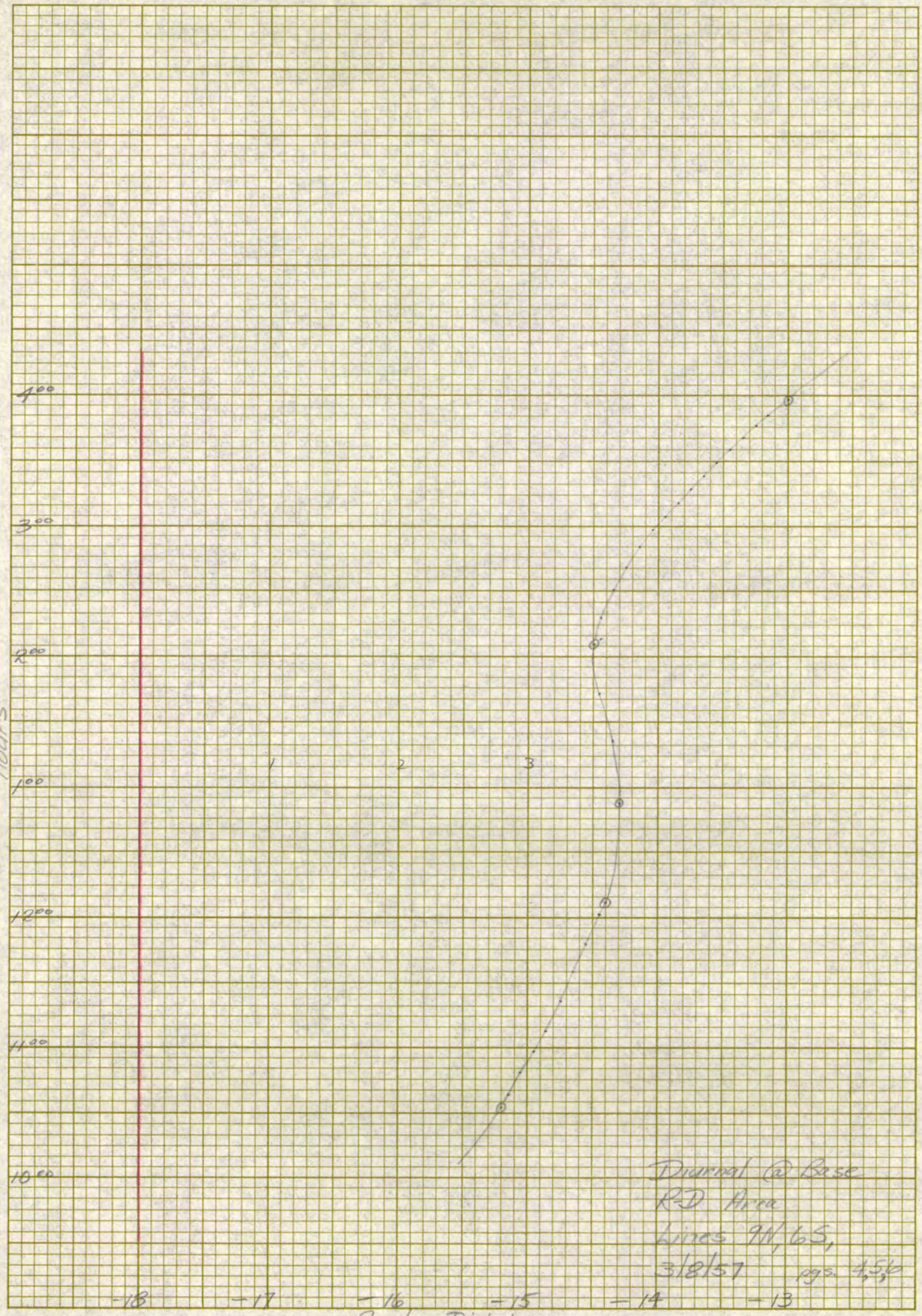



EUGENE DIETZGEN CO.
MADE IN U. S. A.

NO. 340-32 DIETZGEN GRAPH PAPER
10 X 12 PER INCH

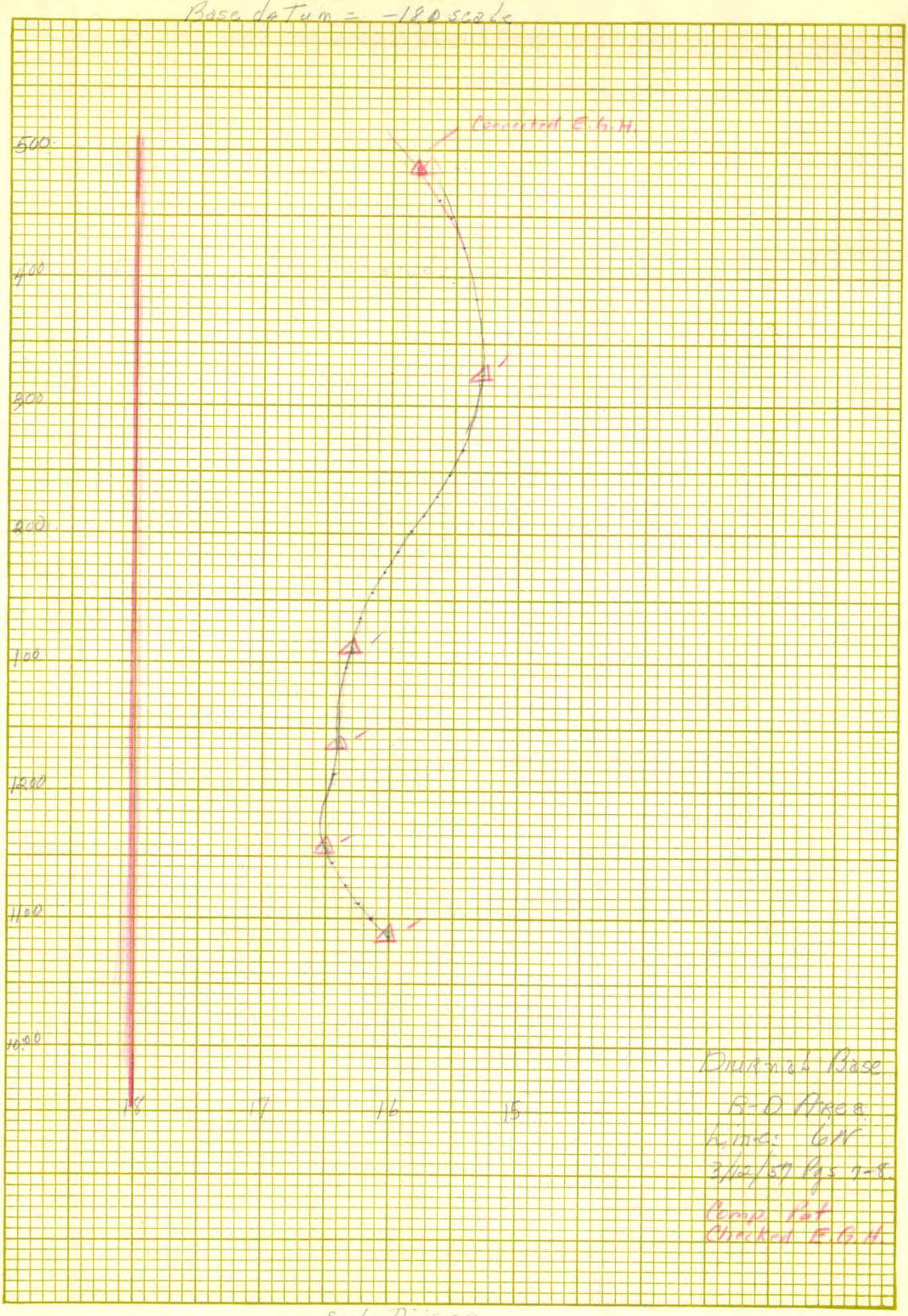



EUGENE DIETZGEN CO.
MADE IN U.S.A.
NO. 340-32 DIETZGEN GRAPH PAPER
10 X 12 PER INCH

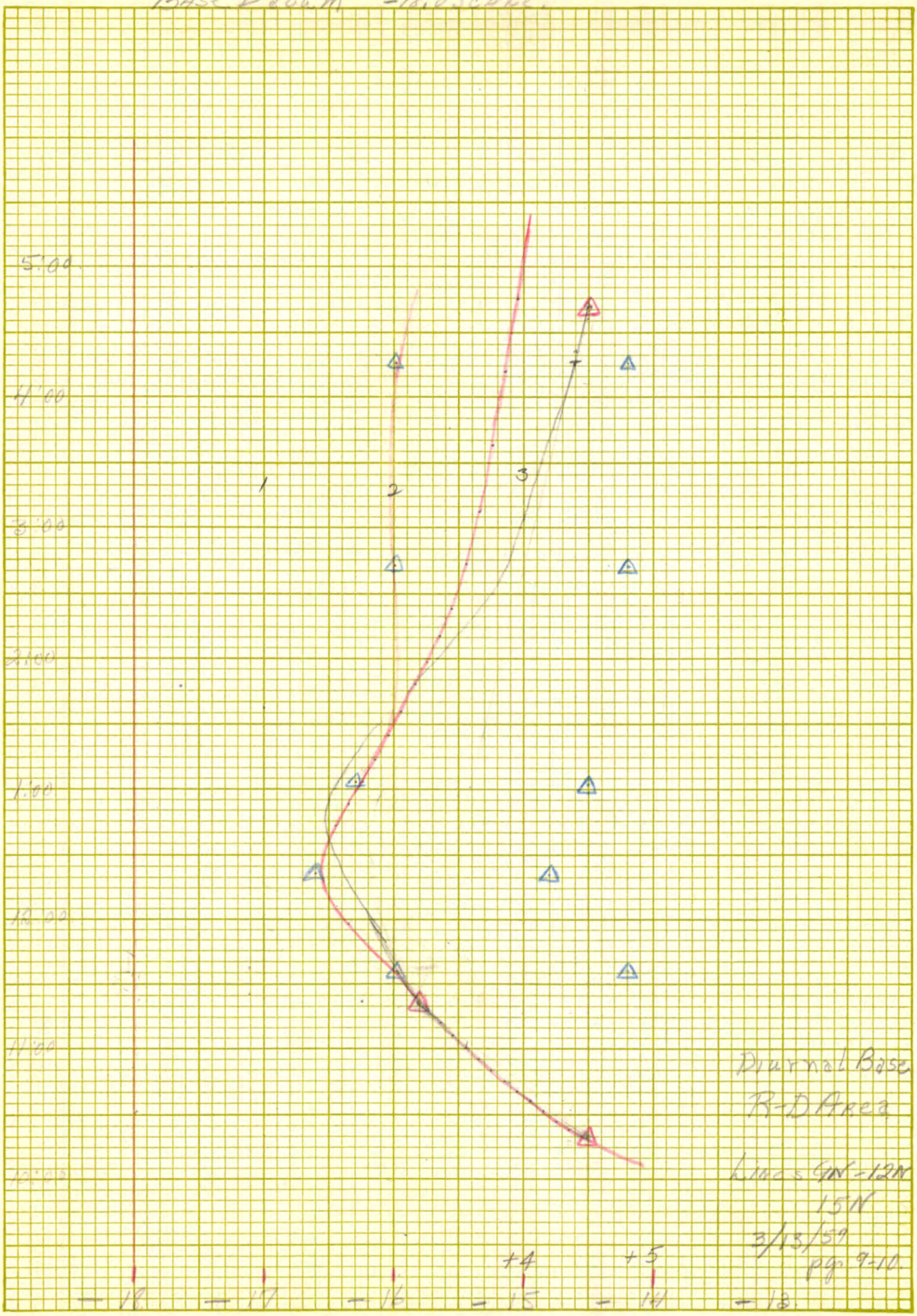



EUGENE DIETZGEN CO.
MADE IN U.S.A.
NO. 340-32 DIETZGEN GRAPH PAPER
10 X 12 PER INCH

Base datum = -180 scale

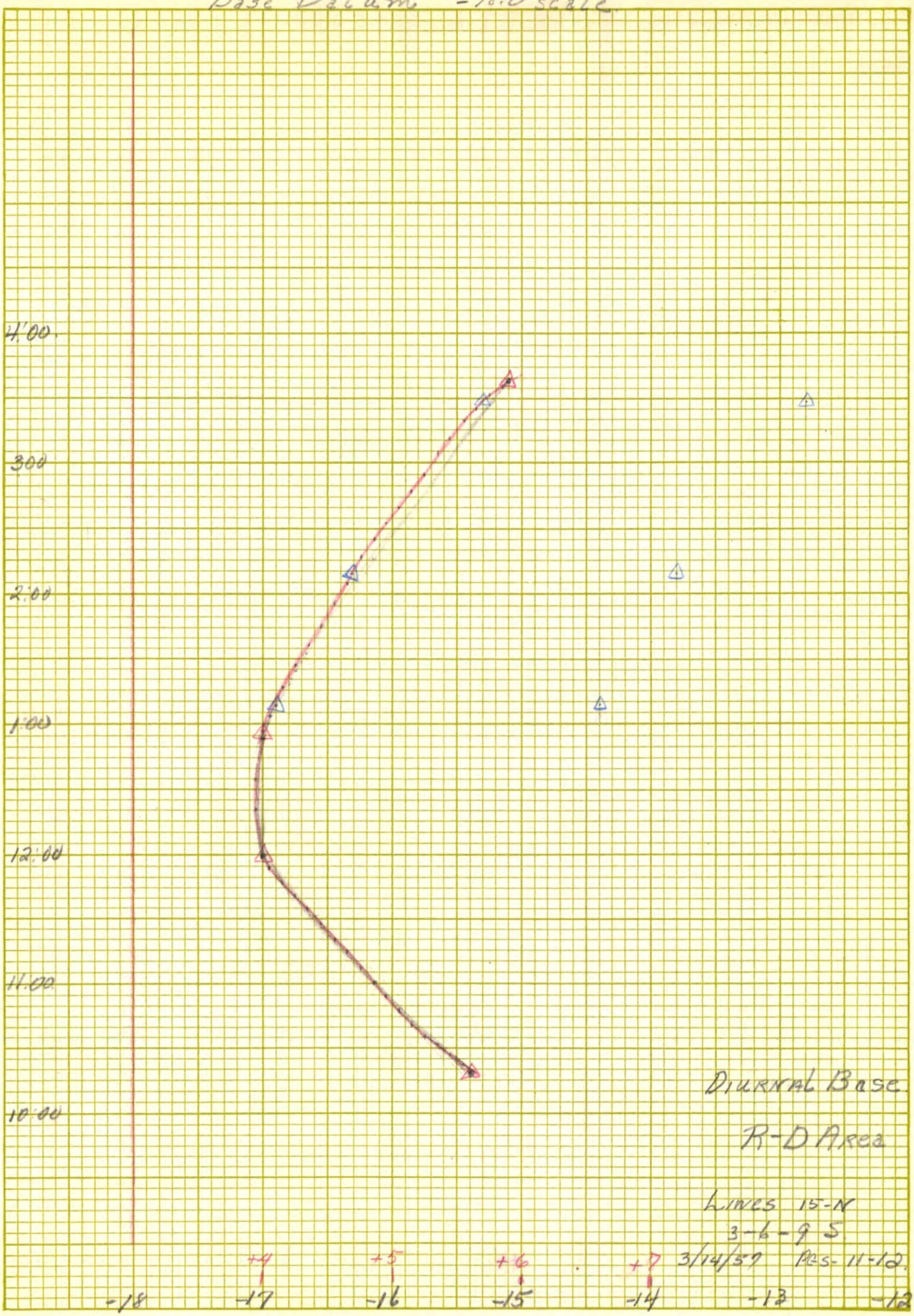



358-20 KEUFFEL & ESSER CO.
10 X 12 to the inch.
MADE IN U.S.A.




358-20 KEUFFEL & ESSER CO.
10 X 12 to the inch.
MADE IN U. S. A.

Base Datum -18.0 scale.




Diurnal Base.

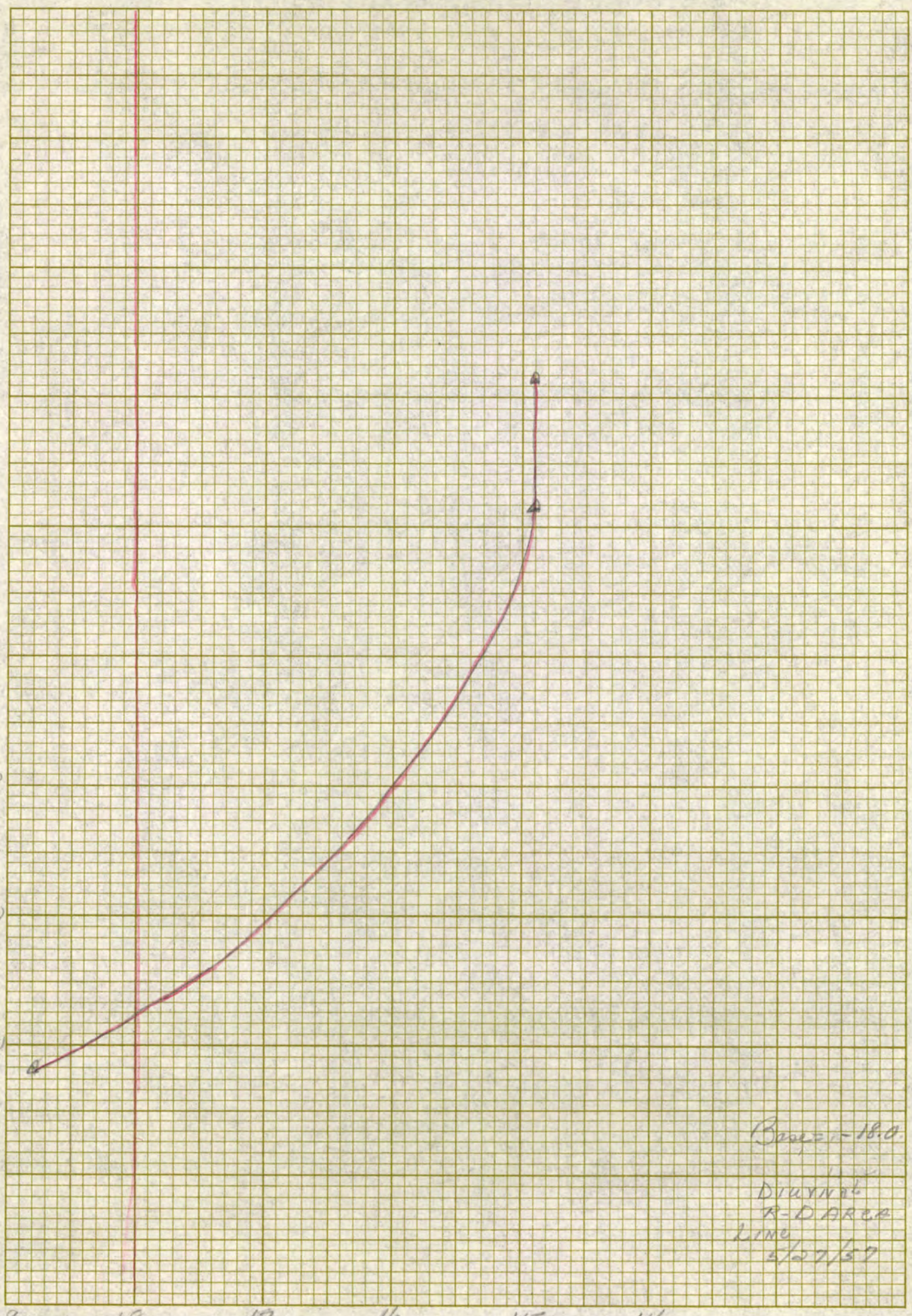
R-D Area

Lines 15-N

3-6-9-5

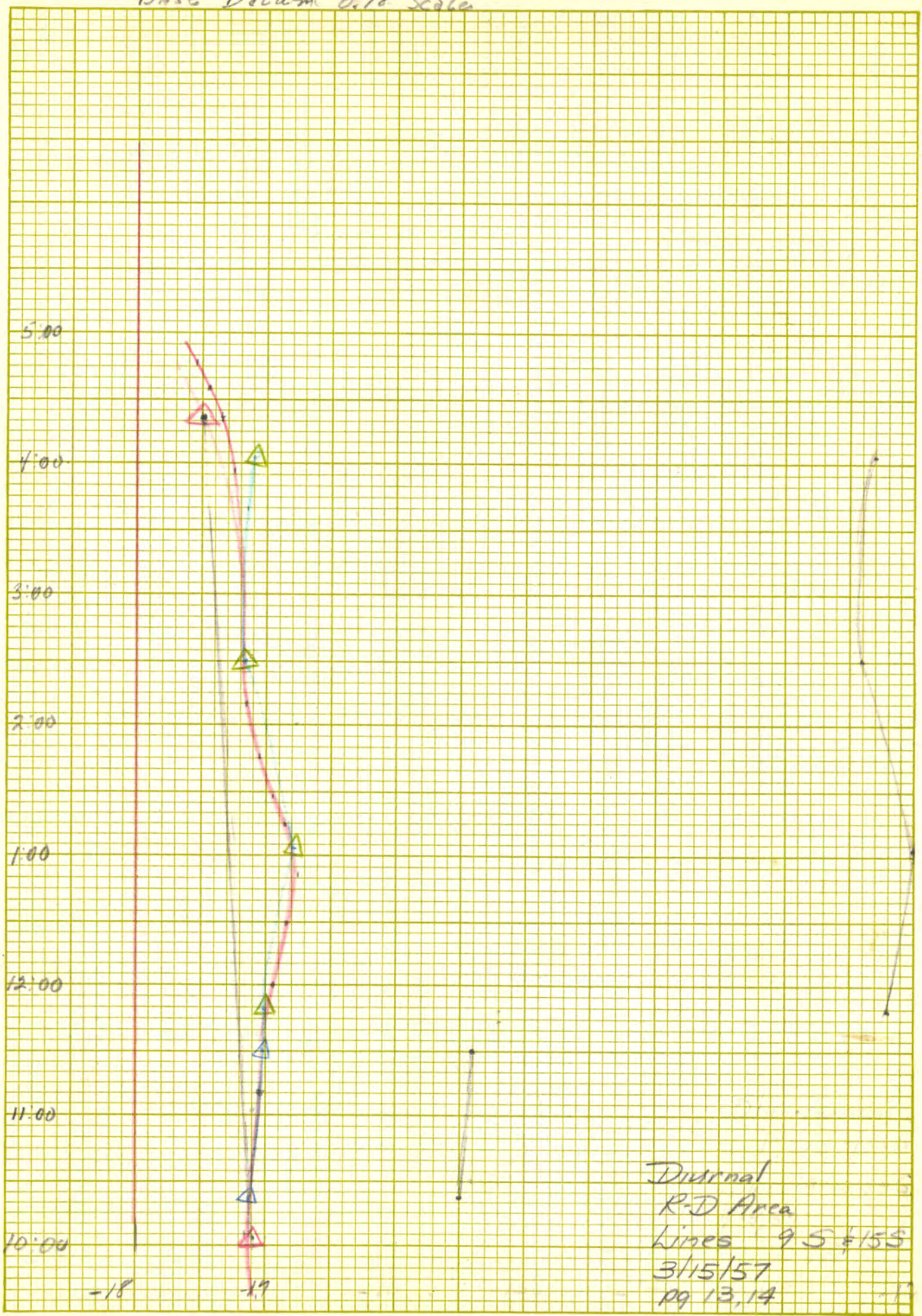
3/14/39 Res. 11-12.

358-20 KEUFFEL & ESSER CO. 10 × 12 to the inch. MADE IN U. S. A.




EUGENE DIETZGEN CO.
MADE IN U.S.A.
NO. 340-32 DIETZGEN GRAPH PAPER
10 X 12 PER INCH

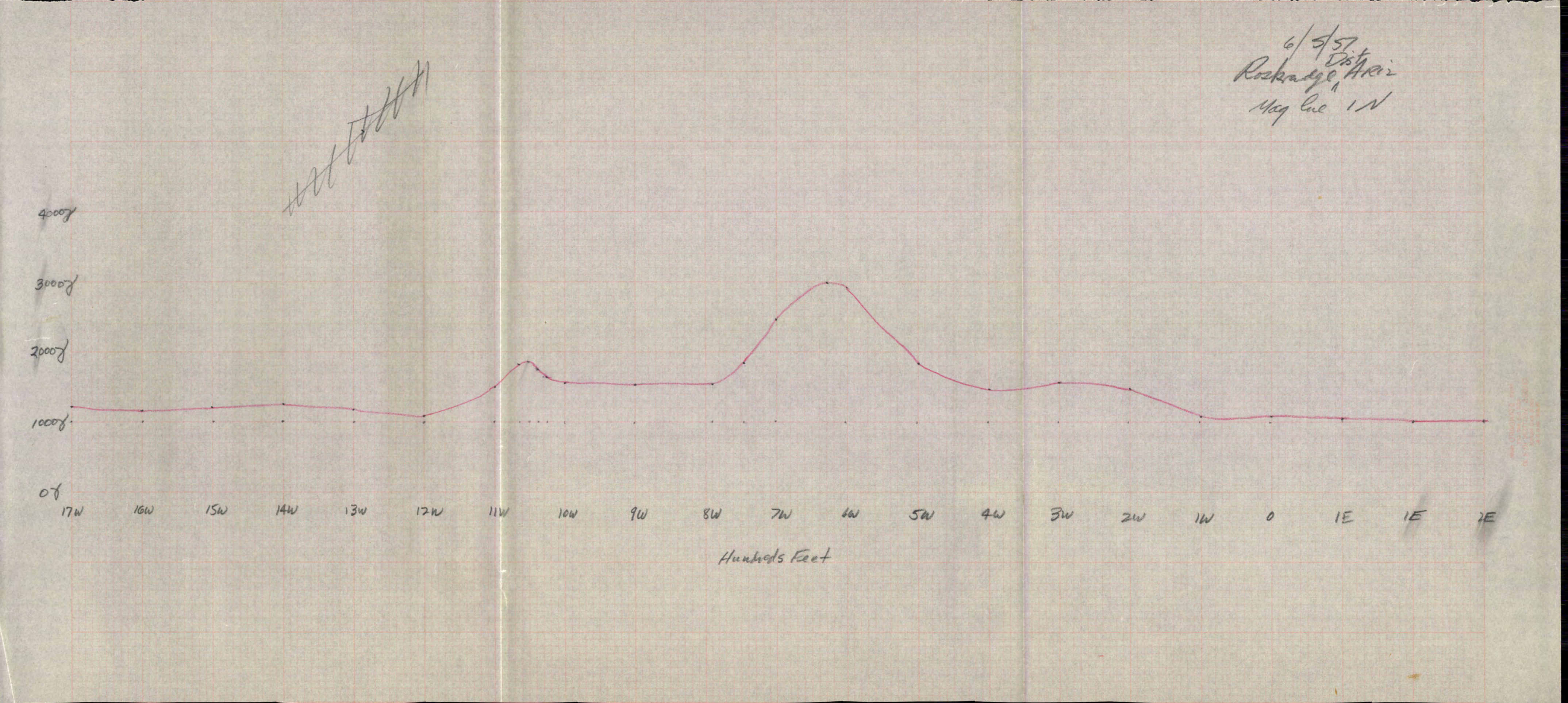
Base Datum 0.18 scale




Diurnal
R-D Area
Lines 9 S & 15 S
3/15/57
pg 13, 14

358-20 KEUFFEL & ESSER CO.
10 X 12 to the inch.
MADE IN U.S.A.

EUGENE DIETZGEN CO.
MADE IN U.S.A.
NO. 340-32 DIETZGEN GRAPH PAPER
10 X 12 PER INCH


6/5/57
Roskrudge Dist Ariz
Mag line 1N
4000γ
3000γ
2000γ
1000γ
0γ
17W
16W
15W
14W
13W
12W
11W
10W
9W
8W
7W
6W
5W
4W
3W
2W
1W
0
1E
1E
2E
Hundreds Feet

Marked 62- lead .9 % ← Representative grab; Dump

Sample 63- " .2 % } Repre. channels - footwall zone of vein structure.

" copper .09 }

Last chance #1 Jacobs

Roskruge Area.

2:00 P.M.

Assay results on

Samples Taken day I

Visited Roskruge Area.

M.E.E.

Make copies for
Walt's Files

Company Mexco

Location Last chance #1 Date 8/15/56

Description:

3, 5' channels from 2 southernmost pits on vein. From "reddish bleached ftwall gouge representing approx. the bottom 10 ft. of footwall, from felsite 5 ft, into vein qtz breccia."
Assay for Pb, Cu

Assay Results

Pb - - - - 0.20%

Cu - - - - 0.09%

Sample No. 63

Company Min. "X"

Location Last Chance Claim #1

Date 8/15/56

Description:

Grab from dump @ shaft, Representative of coarse & fine material all over dump.

Assay for Pb,

Results

Pb. Assay - 0.9 %

Sample No. 62

**Company** Min. "X"

**Location** Last Chance #1 Claim **Date** 8/6/56
3/4 mi. SW Al Rugg, Ben Bell, Ernest Hicks.

**Description:**

Grab sample from dump showing vuggy qtz. W/wulfenite & pyromorphite?

Assay for Au, Ag, Cu., Pb, V.

| Metal | ~~Results~~ | Results |
|---|---|---|
| Au | ~~0.01 oz.~~ | 0.005 oz. |
| Ag | | ~~0.0~~ 0.50z. |
| Cu | | 0.23% |
| Pb | | 8.8% |
| $V_2O_5$ | | 0.11% |

**Sample No. 247**

**Company** Min. "X"

**Location** Last Chance #1 Claim **Date** 8/6/56
Staked by Pete N. Burrnell

**Description:** about 3/4 mi. SW Al Ruggs, Ben Bell's & Hicks

Altered intrusive rx, from footwall of massive qtz. vein. Sample taken from out 20 feet W of end of road.

Assay for Cu, Pb, Au, Ag, V.

| | | | |
|---|---|---|---|
| Au | 0.005 oz. | Pb | 0.2% |
| Ag | 0.6 oz | $V_2O_5$ | 0.02% |
| Cu | 0.21% | | |

Sample taken to check for Cu in alteration zone.

**Sample No. 246**

**Company** Min. "X"

**Location** Al Rugg, Ben Bell & Ernest Hicks Claims **Date** 8/6/56

**Description:**

Vuggy qtz. w/ limonite stains.
Some Pb. ox.? Represents 6 feet
width on large qtz outcrop 50 feet
W of A600 and 25' S of Sample
# 244. Run for Au, Ag, Cu, Pb.

Au 0.01 oz. Pb 0.2%
Ag 0.8 oz.
Cu 0.06 %

Al Rugg took this sample.

**Sample No. 245**

**Company** Min. "X".

**Location** ; Al Rugg's, Ben Bell & Ernest Hicks Claims **Date** 8/6/56

**Description:**

Vuggy qtz. w/ blk manganese stain & dull earthy yel. ochre (Pb. ox.?). Represents 4' width on large E-W qtz. zone which falls on E-W Mag. anomoly, 50' W of A 600.

Run for Au, Ag, Cu, Pb

Au 0.01 oz. Pb 0.3 %

Ag 0.8 oz.

Cu 0.14 %

**Sample No. 244**

**Company** MINERALS EXPLORATION COMPANY

**Location** Papago Indian Reservation **Date** 4/16/57

**Description:** North of Bell-Hicks-Rugg claims E-Rosy Ridge.

Contact(?) Metamorphosed gray med. & coarse grained ls. w/ green garnet & epidote, some dolomite xls & some barite(?) rosettes. Some suggestion of possible Pb. carbonate mineralization which is the reason for having the sample assayed for Pb.

This material was taken from a trench which Ben Bell dug on ls. outcrop(?) about 700' S.W. of N end of electrode line point, 4/15/57

Assay for %Pb: 0.1%

**Sample No. 621**

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE

## REGISTERED ASSAYERS

Phone 2-0813

DUPLICATE

Certificate No. 53108 Tucson, Arizona, April 25th, 1957

Sample Submitted by Mr. Minerals Exploration Co.

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | ..... Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| | | | $ | | | | |
| 152303 | 621 | ~ | ~ | ~ | ~ | 0 1/10 | |
| 304 | 622 | ~ | ~ | ~ | 0 51/100 | ~ | |

* Gold Figured $35.00 per oz. Troy

Charges $ 3.00

Very respectfully,

Ben A. Jacobs

PAID MAY 6 19

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE

Phone 2-0913

## REGISTERED ASSAYERS

Certificate No. 52460 Tucson, Arizona, Aug 11th, 1956

Sample Submitted by Mr. Minerals Exploration Co Box 3671

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | $U_3O_8$ Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| 150 153 | 244 | 0.01 | $0.35 | 0 8/10 | 0 14/100 | 0 3/10 | — |
| 54 | | 0.01 | 0.35 | 0 8/10 | 0 06/100 | 0 2/10 | — |
| 55 | 245 | 0.005 | 0.17 | 0 6/10 | 0 21/100 | 0 3/10 | 0.02 |
| 56 | 246 | 0.005 | 0.17 | 0 5/10 | 0 23/100 | 8 8/10 | 0.11 |
| | 247 | | | | | | |

* Gold Figured $35.00 per oz. Troy

Charges $ 26.00

Very respectfully,

Bert P Jacobs

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE

Phone 2-0813

## REGISTERED ASSAYERS

Certificate No. 52474 Tucson, Arizona, Aug 21st, 1956

Sample Submitted by Mr. Minerals Exploration Co

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| | | | $ | | | | |
| 150 200 | #62 | | | | | 0 9/10 | |
| 201 | 63 | | | | 0 09/100 | 0 3/10 | |

* Gold Figured $35.00 per oz. Troy

Charges $ 4.00

Very respectfully,

Ben D Jacobs

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE

## REGISTERED ASSAYERS

Phone 2-0813

DUPLICATE

Certificate No. 52460 Tucson, Arizona, Aug 11th, 1956

Sample Submitted by Mr. Minerals Exploration Co Box 5671

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | $U_3O_8$ Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| 150 153 | 244 | 0 .01 | $ 0 35 | 0 8/10 | 0 14/100 | 0 3/10 | ~~ |
| 54 | | 0 .01 | 0 35 | 0 8/10 | 0 06/100 | 0 2/10 | ~~ |
| | 245 | | | | | | |
| 55 | | 0 .005 | 0 17 | 0 6/10 | 0 21/100 | 0 2/10 | 0 .02 |
| | 246 | | | | | | |
| 56 | 247 | 0 .005 | 0 17 | 0 5/10 | 0 23/100 | 8 8/10 | 0 .11 |

* Gold Figured $35.00 per oz. Troy

Charges $ 26.00

Very respectfully,

Bert D Jacobs

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE

## REGISTERED ASSAYERS

PHONE Main 2-0813

RECEIVED JUN 17 1957

Certificate No. 53166 Tucson, Arizona, June 14th, 1957

Sample Submitted by Mr. Minerals Exploration

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | Zinc Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| 152558 | 638 } C-G | | $ | | 0.03 | | |
| 59 | 639 | 0.01 | 0.35 | 0 3/10 | 0.03 | 1 4/10 | 0 5/10 |
| 60 | 640 } R-D | Trace | | 0 1/10 | 0.07 | 0 2/10 | 0 2/10 |
| 66 | 641 | 0.005 | 0.17 | 0 1/10 | 0.02 | 0 1/10 | 0 2/10 |

PAID 8 1957

606

* Gold Figured $35.00 per oz. Troy

Charges $ 18.75

Very respectfully,

Ben P. Jacobs

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE
## REGISTERED ASSAYERS

Phone 2-0813

RECEIVED JUN 17 1957

Certificate No. 53166 Tucson, Arizona, June 14th, 1957

Sample Submitted by Mr. Minerals Exploration

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * $ | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | Zinc Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| 32358 | 638 | | | | 0.03 | | |
| 59 | 639 | 0.01 | 0.35 | 0 3/10 | 0.03 | 1 4/10 | 0 3/10 |
| 60 | 640 | Trace | | 0 1/10 | 0.07 | 0 2/10 | 0 2/10 |
| 66 | 641 | 0.005 | 0.17 | 0 1/10 | 0.02 | 0 1/10 | 0 2/10 |

PAID JUL 8 1957

PAID

PAID

606

* Gold Figured $35.00 per oz. Troy

Charges $ 18.75

Very respectfully,

Ben D. Jacobs

Company **MINERALS EXPLORATION COMPANY**

Location R.D. Proj. Date 4/29/57

Description: D.D.H. 1
Interval 109 - 112'
Vol. aphanite porphyry. w/ diss. py.

| Assay for | Au oz | Ag oz | Cu | Pb | Zn |
|---|---|---|---|---|---|
| | 0.005 | 0.3 | 0.03 | 0.2 | 0.1 |

**Sample No. 623**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date 4/29/57

Description: D. D. H. 1

Interval: 112'-115' (core)

Pyritized, silicified, altered volcanics.

| Assay for: | Au | Ag | Cu | Pb | Zn |
|---|---|---|---|---|---|
| | oz | oz | % | % | % |
| | tr | 0.2 | 0.02 | 0.1 | 0.1 |

**Sample No. 624**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date 4/29/57

Description: D. D. H. 1
Interval 115 - 120 (core)

Badly broken silicified & pyritized w/some altered volcanic frags.

| Assay for | Au oz | Ag oz | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|
| | tr. | 0.2 | 0.03 | 0.1 | tr |

**Sample No. 625**

Company **MINERALS EXPLORATION COMPANY**

Location R.D, Proj. Date 4/29/57

Description: D.D.H. 1

Interval: 120'- 126', (Core)

Quartz w/finely divided py.

| Assay for | Au oz. | Ag oz. | Cu % | Pb % | Zn % |
|---|---|---|---|---|---|
| | 0.005 | 0.3 | 0.18 | 0.2 | 0.1 |

**Sample No. 626**

**Company** MINERALS EXPLORATION COMPANY

**Location** R. D. Proj. **Date** 4/29/51

**Description:** D. D. H. 1

Core Interval : 130-135 (Core)

Broken silicified & pyritized shaly gouge.

| Assay for | Au, oz | Ag, oz | Cu, % | Pb % | Zn % |
|---|---|---|---|---|---|
| | 0.005 | 0.2 | 0.04 | 0.1 | 0.1 |

**Sample No. 627**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date 4/29/57

Description: D. D. H. 1
Sludge Interval 109-112

Assay for, Au Ag, Cu, Pb, Zn.
tr. 0.2 0.05 0.2 0.1

**Sample No. 628**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date 4/29/57

Description: D. D. H. 1

Sludge Interval 112-117

Assay for Au, Ag, Cu, Pb, Zn

tr. 0.3 0.03 0.1 0.2

**Sample No. 629**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date 4/29/51

Description: D. D. H. 1

Sludge interval 117'-120'

Assay for Au, Ag, Cu, Pb., Zn

0.005 0.3 0.12 0.2 0.1

**Sample No. 630**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date 4/29/57

Description: D. D. H. 1
Sludge Interval 129'-132'

Assay for Au, Ag Cu, Pb, Zn.
tr. 0.2 0.04 0.1 tr

**Sample No. 631**

Company **MINERALS EXPLORATION COMPANY**

Location R. D. Proj. Date

Description: D.D.H 1

Sludge Interval 132-135

Assay for Au, Ag, Cu, Pb, Zn.
tr 0.2 0.05 0.1 0.1

**Sample No. 632**

39 So. Main St.
P. O. Box 1662

# JACOBS ASSAY OFFICE
## REGISTERED ASSAYERS

Phone 2-0813

Certificate No. 53114 Tucson, Arizona, May 4th, 1937

Sample Submitted by Mr. Minerals Exploration Co

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * $ | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | ZINC Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| 52332 | 623 | 0005 | 017 | 03 | 003 | 02 | 01 |
| 33 | 24 | Trace | | 02 | 002 | 01 | 01 |
| 34 | 25 | Trace | | 02 | 003 | 01 | Trace |
| 35 | 26 | 0005 | 017 | 03 | 018 | 02 | 01 |
| 36 | 27 | 0005 | 017 | 02 | 004 | 01 | 01 |
| 37 | 28 | Trace | | 02 | 005 | 02 | 01 |
| 38 | 29 | Trace | | 03 | 003 | 01 | 02 |
| 39 | 30 | 0005 | 017 | 03 | 012 | 02 | 01 |
| 40 | 31 | Trace | | 02 | 004 | 01 | Trace |
| 41 | 32 | Trace | | 02 | 005 | 01 | 01 |

* Gold Figured $35.00 per oz. Troy

Charges $ 5.50

Very respectfully,

Ben D. Jacobs

PAID MAY 6 1957

30 So. Main St.
P. O. Box 1889

# JACOBS ASSAY OFFICE

## REGISTERED ASSAYERS

Phone 2-0813

DUPLICATE

Certificate No. 53114 Tucson, Arizona, May 4" 195?

Sample Submitted by Mr. Minerals Exploration Co

| SERIAL | SAMPLE MARKED | GOLD Ozs. per ton ore | GOLD Value per ton ore * | SILVER Ozs. per ton ore | COPPER Per cent Wet Assay | LEAD Per cent Wet Assay | Zinc Per cent Wet Assay |
|---|---|---|---|---|---|---|---|
| | | | $ | | | | |
| 152332 | 623 | 0005 | 017 | 03 | 003 | 02 | 01 |
| 33 | 24 | Trace | | 02 | 002 | 01 | 01 |
| 34 | 25 | Trace | | 02 | 003 | 01 | Trace |
| 35 | 26 | 0005 | 017 | 03 | 018 | 02 | 01 |
| 36 | 27 | 0005 | 017 | 02 | 004 | 01 | 01 |
| 37 | 28 | Trace | | 02 | 005 | 02 | 01 |
| 38 | 29 | Trace | | 03 | 003 | 01 | 02 |
| 39 | 30 | 0005 | 017 | 03 | 012 | 02 | 01 |
| 40 | 31 | Trace | | 02 | 004 | 01 | Trace |
| 41 | 32 | Trace | | 02 | 005 | 01 | 01 |

#1

* Gold Figured $35.00 per oz. Troy

Charges $ 5-7.50

Very respectfully,

Dew & Jacobs

PAID MAY 6 1957

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

Jacobs Assay Service 5-3-57

R.D.

| | oz./ton Au | oz./ton Ag | % Cu |
|---|---|---|---|
| #623 | .005 | .3 | .03 |
| #624 | Trace | .2 | .02 |
| #625 | Trace | .2 | .03 |
| #626 | .005 | .3 | .18 |
| #627 | .005 | .2 | .04 |
| #628 | Trace | .2 | .05 |
| #629 | Trace | .3 | .03 |
| #630 | .005 | .3 | .12 |
| #631 | Trace | .2 | .04 |
| #632 | Trace | .2 | .05 |

EAGLE-A
Agawam Onion Skin
100% COTTON CONTENT
U.S.A.

# Minerals Exploration Company

P.O. BOX 5671
TUCSON, ARIZONA

18 December 1957

Rossi-Rudge District Project (Abandoned) MEH

Mr. Allen M. Rugg, Jr.
5202 East 16th Street
Tucson, Arizona

REGISTERED MAIL
Return receipt requested

Dear Mr. Rugg:

You are hereby advised that in accordance with the provisions of the "Mineral Lease and Option" executed 24 September 1956, between Allen M. Rugg, Jr., Eleanor P. Rugg, Ernest J. Hicks and Elmer M. Bell, as lessors, and Minerals Exploration Company, as lessee, you, as the person designated in the agreement to receive notices, are hereby notified that Minerals Exploration Company has elected to terminate the said Mineral Lease and Option, effective today.

Information has already been furnished to you concerning results of our exploration work on the property. Will you kindly sign and return to us the enclosed two copies of this letter, either to serve as a receipt from the lessors acknowledging delivery to them of all the data specified in Clause VIII which lessee was required to furnish to lessors.

Very truly yours,

MINERALS EXPLORATION COMPANY

By W E Heinrichs Jr.
Walter E. Heinrichs, Jr.
Manager and Attorney-in-fact

Allen M. Rugg, Jr.
Allen M. Rugg, Jr.

12/23/57
Date
WEH/pr
Enc: 2
cc: 4 enclosed (1-Elmer Bell, 1-Ernest Hicks)

This copy mailed to U/O Land Dept Attn Mr. Bob Taylor for Los Angeles files 1/11/60 MEH.

1957-1958

RECEIVED DEC 24 1957

20 January 1958

U. S. Department of the Interior
Office of Indian Affairs Field Service
Papago Indian Agency
Sells, Arizona

Re: Realty 331

Attn: Mr. Harry W. Gilmore, Supt.

Gentlemen:

We acknowledge, with thanks, your letter of 17 January 1958, and your notification of acceptance of our request for cancellation of our prospecting permit dated 1 May 1957 covering a portion of the Garcia strip area.

Your promptness and thoroughness in this matter is appreciated, and should the opportunity ever present itself in the future, we will look forward to doing business with you again.

Very truly yours,

Walter E. Heinrichs, Jr.
Manager

WEH/pr

bcc: Mr. Victor H. Verity
Mr. Earl W. Cairns
Mr. Allen M. Rugg, Jr.
Roskruge File

9 January 1958

U. S. Department of the Interior
Bureau of Indian Affairs
Navajo Indian Agency
Gallup, Arizona

Attn: Mr. Harry W. Gilmore, Supt.

Gentlemen:

This letter will serve as notice of our desire to terminate our Prospecting Permit, dated 1 May 1957, as of January 31, 1958.

In accordance with Clause 2 and Clause 10 of the permit, we are herewith enclosing two copies of our report of the results of work done, and our check number 785 in the amount of $1.00. In addition, we have also included one copy each of a composite map showing approximate, rough reconnaissance geology and geophysical results, and the log of the only hole drilled on the permit area.

This letter will also certify that we have conformed to the stipulations of Clause 3 of the permit.

Your acknowledgement of the receipt of this letter, and the attached data, and that we have properly complied with and completed the terms of the permit, and that we are hereby released from any further obligations, will be appreciated.

Very truly yours,
[redacted] EXPLORATION COMPANY

By: Walter H. Heinrichs, Jr.
Manager & Attorney in Fact

WHH/pr
Enclosures
cc: 1 enclosed
bcc: Mr. Victor H. Verity
Mr. Earl W. Cairns

R-O File

Sunday 18 November 1956 10:00 A.M.

Met Mr. Jones (Dept. Interior, Papago Indian Agency, Sells).
With Papago Dist. Council (Schuk Toak Dist.)
at Santa Rosa Ranch School House, first road N. (right) on Reservation after crossing boundary on road from Tucson, 7-8 miles North of San Vicenti or 17 miles N.E. of Sells. Phone line follows road North.

Meet with Tribal District Council, Papago Indian, Santa Rosa School House.
Angelo McGill in charge of meeting. (Interpreter)

Schuk Toak District: S 1/2 T 14S. R 10 E,
Tribe to lease or issue Prospect Permit 1/2 Township at a time.

Mr. Jones of Indian Agency present to present our application to council.

Only District can grant lease.
District gets 1/2 rental and Tribe gets other half.

According to Code, two ways minerals can be done.
1. Tribe set up area and five permits to prospect and then lease on a advertising basis, high bidder gets lease.
2. Before issue, prospect permit put area up for bid and give highest bidder permit (exclusive) which allows prospector to be sure of obtaining lease on ar a interested in.

Tribe has tried both ways.
1. Exclusive prospect permit. Four presently but only two have cleared Washington, D.C.
2. Next proposal, Sif Oidak, opened whole District to prospecting to anyone who would pay $100.00 per prospect permit. Lease application later when something found.

Now Jones presents Minerals Exploration Company Application for Schuk Toak District.
Mark Manuel usually signs and writes leases for Tribal Council.
Area as described by Jones:

Garcia Strip from where big wash croses Garcia strip to top of Roskrige Mts.

Company now owns land south of strip and looks like minerals may run on to reservation and they want permit to prospect to see if they do.

Strip, 3 miles N-S, and 6 miles E-W. Want 1/2 Township 18 square miles ±.

Since we have land just south of Reservation and know what is there, we naturally do not want to wait so Jones suggestion to council (to avoid delay) that they open area for prospect (or on exclusive prospect permits) and issue prospect permi s to any one that desires to prospect. Then if ore found on reservation, can apply for lease and present lease application to Washington.

Tribe can open area to non-exclusive prospecting without Washington approval.

Jones says:
Reason he suggests this method is that three other districts have decided to do this.
Sif Oidak District formed 33 prospect districts. (?)

District Council to pass resolution to do this and Tribe Council OK. Then grant prospect permit for one year ($100.00)

Jones put in plug for Minerals Exploration, mentioned Walts part in Pima discovery and that three fellows with Minerals would be doing work, and they looked like honest people.
Jones has suggested that extra $100.00 to go direct to District, might expedite passing and O.K. prospect permit applecation

Introduced Walt to Council and he to speak.
Walt emphasized need to get started and Walt has offered to give District "bonus" (this at Jones suggestion) to District of $100.00, amount of prospect permit.

Jones threw open meeting to questions from members.

Federal regulation requires $1 00.00 bond to be posted to pay for any damages (surface, etc.).
Bond in favor of U. S. Government.
Jones is under $50,000.00 bond. Bonded by four bonding contracts.

Francisco spoke.

Jones pointed out to Council that no one had right to use any land for any purpose without permission from council.

Another old Indian spoke. (Pablo Francisco)
District Chairman talking about same thing as first Francisco talked about. That delegates must speak up.

Tribe Council meets next Dec. 7.
Jones to draw up resolution, present it to Angelo Tuesday and District delegate take it to Tribal Council for Tribe Council approval.
District chairman and secretary must sign resolution to show Council really passed the resolution.

Agency cannot do anything until council approves and resolution gives their authority. Then Jones to draw up necessary permit papers to be issued (and take care of bond arrangements, etc.)

| | | | |
|---|---|---|---|
| Jones | N'Archco | ) | Ranching in area of |
| | | ) | Interest Forman. (?) |
| Ramon | Al Veraz | ) | |

Cost Legal F...

November 8, 1956

Mr. Earl W. Cairns, Assistant Secretary
Union Oil Company of California
Union Oil Building
Los Angeles 17, California

Dear Earl:

Enclosed is the original copy of Letter of Intent, dated 10 October 1956 executed and signed by Rugg, Hicks, Bell, et al, and signed on behalf of Minerals Exploration Company by N. O. Edwards, Vice President.

This is in reference to, and becomes a part of, the Minerals Lease and Option Agreement between Minerals Exploration Company and Rugg, et al, dated 24 September 1956 concernign mining property located in the Roskruge Mining District, Pima County, Arizona.

This is by way of acknowledgment and in accordance with your enclosure of letter dated 10 October 1956.

Sincerely yours,

Walter B. Heinrichs, Jr.
Exploration Manager

WBH/np

encl: one

[illegible] 21, 1956

Messers Rugg, Hicks and Bell
c/o Allen M. Rugg, Jr.
5202 East 16th. Street
Tucson, Arizona

Gentlemen:

Enclosed please find eighteen Location Notices on the Mag group Nos. 3 to 20 as recorded and certified by the Pima County, Arizona, Recorders office.

These eighteen claims are contiguous with your Hematite No. 1 and No. 2 claims, and together they cover the whole of Federal land in Section 34 and a slight overlap into Section 35, all in Township 14 South, Range 10 East.

For your information, all pits and statutory posting [illegible] been completed on all 20 claims according to our agreement.

Very truly yours,

Walter S. Heinrichs, Jr.
Exploration Manager

wsh/mm

enclosure

cc: Mr. Hicks
Mr. Bell

R.D. Corres File

UNION OIL COMPANY OF CALIFORNIA
UNION OIL BUILDING
LOS ANGELES 17, CALIFORNIA

R. F. NIVEN
SECRETARY
E. W. CAIRNS
ASSISTANT SECRETARY

RECEIVED OCT 11 1956

October 10, 1956

READ AND INITAL
Norm N.E.E.
Walt.
Gror
file

Minerals Exploration Company
P. O. Box 5671
Tucson, Arizona

Attention: M. G. Edwards or Walter E. Heinrichs, Jr.

Gentlemen:

In accordance with our recent telephone conversation, I am enclosing the original and five copies of a letter dated October 10, 1956, with reference to Lease and Option Agreement dated September 24, 1956, particularly paragraphs IV and V thereof.

The letter, prepared for signature by M. G. Edwards, should be executed by the four lessors, and the original should be returned to me for filing with our copy of the Lease and Option Agreement.

Yours very truly,

Earl Cairns

Assistant Secretary

EWC:jc
Enclosures

Trix for minutes of last Board Meeting Mexico.

UNION OIL COMPANY OF CALIFORNIA
UNION OIL BUILDING
LOS ANGELES 17, CALIFORNIA

L. A. GIBBONS
VICE PRESIDENT AND GENERAL COUNSEL

RECEIVED SEP 25 1956

September 24, 1956

Mr. Walter E. Heinrichs, Jr.
Minerals Exploration Company
Box 5671
Tucson, Arizona

Dear Mr. Heinrichs:

Enclosed are four executed copies of a Mineral Lease and Option agreement between Minerals Exploration Company, Allen M. Rugg, Jr., et al.

One of these copies is for your records and the other three are for delivery to the other three parties, e.g., the Ruggs, Mr. Hicks and Mr. Bell.

I have retained one copy for our files here.

Very truly yours,

George C. Bond

GEORGE C. BOND
Attorney

GCB/mc

Enclosures

# Minerals Exploration Company

P.O. BOX 5671

TUCSON, ARIZONA

F. R.D.

18 December 1957

Mr. Allen M. Rugg, Jr.
5202 East 16th Street
Tucson, Arizona

REGISTERED MAIL
Return receipt requested

Dear Mr. Rugg:

You are hereby advised that in accordance with the provisions of the "Mineral Lease and Option" executed 24 September 1956, between Allen M. Rugg, Jr., Eleanor F. Rugg, Ernest J. Hicks and Elmer M. Bell, as lessors, and Minerals Exploration Company, as lessee, you, as the person designated in the agreement to receive notices, are hereby notified that Minerals Exploration Company has elected to terminate the said Mineral Lease and Option, effective today.

Information has already been furnished to you concerning results of our exploration work on the property. Will you kindly sign and return to us the enclosed two copies of this letter, either to serve as a receipt from the lessors acknowledging delivery to them of all the data specified in Clause VIII which lessee was required to furnish to lessors.

Very truly yours,

MINERALS EXPLORATION COMPANY

By W. H. Heinrichs Jr.
Walter H. Heinrichs, Jr.
Manager and Attorney-in-fact

Allen M. Rugg, Jr.
Allen M. Rugg, Jr.

12/23/57
Date

WHH/pr
Enc: 2
cc: 4 enclosed (1-Elmer Bell, 1-Ernest Hicks)

RECEIVED DEC 24 1957

FORM 402 ME-T 8-57 1M

MINERALS EXPLORATION COMPANY

617 West Seventh Street
Los Angeles 17, California

October 10, 1956

Allen M. Rugg, Jr.
Eleanor P. Rugg
Ernest J. Hicks
Elmer M. Bell
Tucson, Arizona

Gentlemen:

Reference is made to the Mineral Lease and Option agreement between yourselves and this Company dated September 24, 1956.

It is our understanding, notwithstanding the expressed terms and conditions of said agreement, that in the event this Company, as "Lessee," elects at any time to purchase your rights, as provided in paragraph IV thereof, and commences payment of the purchase price in annual installments, as provided in paragraph V thereof, we may discontinue such payments and surrender such rights without any liability to pay you the unpaid balance of the purchase price.

If this is also your understanding of our agreement, please indicate your agreement on the enclosed copy of this letter.

MINERALS EXPLORATION COMPANY

By: W. J. Edwards
Vice President

OCB:jc
Enclosure

We hereby agree to the interpretation set forth herein.

Allen M. Rugg, Jr.
Allen M. Rugg, Jr.

Eleanor P. Rugg
Eleanor P. Rugg

Ernest J. Hicks
Ernest J. Hicks

Elmer M. Bell
Elmer M. Bell

MINERALS EXPLORATION COMPANY

617 West Seventh Street
Los Angeles 17, California

October 10, 1956

Allen M. Rugg, Jr.
Eleanor P. Rugg
Ernest J. Hicks
Elmer M. Bell
Tucson, Arizona

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MINERALS EXPLORATION COMPANY

By: W. H. Edwards
Vice President

GCB:jc
Enclosure

We hereby agree to the interpretation set forth herein.

Allen M. Rugg, Jr.
Allen M. Rugg, Jr.

Eleanor P. Rugg
Eleanor P. Rugg

Ernest J. Hicks
Ernest J. Hicks

Elmer M. Bell
Elmer M. Bell

Following have recieved executed copies of this agreement.

1.) L.A. Office.
2) Al Rugg.
3) Elmer (Ben) Bell
4) Ernest Hicks
5) Tucson Office.

(6) Vic Verity, (Tucson) has exact but not "official" executed copy.

MINERAL LEASE AND OPTION

I

This Mineral Lease and Option is made this 24th day of September, 1956 by and between Allen M. Rugg, Jr., and his wife Eleanor P. Rugg, of 5202 East 16th St., Tucson, Arizona, and Ernest J. Hicks, (wife divorced), residing at 1251 W. Silver Lake Road, Tucson, Arizona, and Mr. Elmer M. Bell, (wife deceased), of Tucson, Arizona, respectively, all citizens of U.S.A., as undivided one-third interest partners in this agreement, hereinafter designated as Lessor; and Minerals Exploration Company, a California Corporation authorized to do business in the State of Arizona, hereinafter designated as Lessee.

II

Lessor for and in the consideration of Ten (10) dollars, receipt for which is hereby acknowledged, and other valuable considerations, do hereby grant unto the Lessee the exclusive right to enter on to and to explore, drill, sample, test and survey in any manner deemed necessary or desirable, the following described property situated in or near the Roskruge Mining District Pima County, Arizona:

Description of Property

any and all purchased or leased lands or Federal mining claims included within the boundaries of sections 26, 27, 28, 33, 34,35, T 14 S, R 10 E, and sections 2, 3, and 4, T 15 S, R 10 E, G. and S.R.B. and M.,which are now or become at any time during the life of this agreement, owned or controlled by Lessee or Lessor, or Lessee's or Lessor's agents or representatives

III

The term of this Mineral Lease and Option shall be for twelve and one-half years (12½ yrs.) from date of execution, unless sooner terminated under any of the provisions herein contained, or renewed or extended by common agreement of the parties hereto.

IV

Lessee may elect to purchase at anytime during the life of this Mineral Lease and Option agreement, in which case the purchase price for all of the Lessors rights of any nature in the above mentioned or described area of nine (9) sections shall be one hundred eighty thousand ($180,000.00) dollars. When this amount is fully paid, Lessor agrees to execute and deliver to Lessee a good and sufficient deed conveying title to Lessee free and clear of all liens and encumbrances.

V

On or before the end of the 18 month period following the signing of this agreement, the Lessee may elect to purchase all of the above mineral claims located by either party for one hundred fifty three thousand ($153,000.00) dollars cash.

Payments may be made on the purchase price either as above provided, or at any time following the date of this agreement at the rate of 85% of the unpaid balance at the time of payment, such payment to be considered as payment in full for the purchase price, or as individual payments as follows; a minimum payment of fifteen thousand ($15,000.00) dollars by or on the first day following the end of eighteen (18) months from the date of this agreement and on or by the first day following the end of each year thereafter until the total amount of the purchase price of one hundred eighty thousand ($180,000.00) dollars is paid or the equivalent proportional share remaining in the event either Lessor is bought out prior on a separate agreement with Lessee.

VI

During the term of this agreement, Lessee is granted the right to mine and dispose of any and all ores, minerals or concentrates, owned by Lessee or Lessors, within the area of this agreement, but shall pay to Lessor a royalty on all such ores, of seven and one-half (7½)% of the net smelter and/or mill returns less direct transportation and/or trucking charges from mine or mill to railhead, mill, smelter, buying station or points of sale. However, the Lessees

shall pay to the Lessors a royalty of ten (10) % of the total royalty paid by lease agreement to private third party interest, or to the State of Arizona, or Papago Indian Tribes for all ores, minerals or concentrates mined under lease by Lessee on State or Indian lands, or private lands within the area of this agreement. All such amounts of royalty payments paid to Lessors shall apply on, and be deducted from the purchase price and/or payments as stipulated and scheduled in above clauses IV and V. In the event that royalty payments exceed the annual installments of rent to be paid, the annual rental is hereby increased by said amount.

VII

If the lessee shall be delayed at any time in keeping or performing any agreement on his part to be kept or performed according to the terms and provisions hereof by strikes, lockouts, fire, lack of market, unusual delay in transportation, orders of the Government or any duly constituted instrumentality thereof, unavoidable casualties, or any causes beyond the control of the Lessee, such delay shall not be deemed a breach of this agreement or a default on the part of the Lessee constituting a cause for forfeiture; provided that during any such periods the Lessee continues to pay the taxes or perform the assessment requirements as herein stipulated and to pay ten (10)% of the minimum payments, rental or royalty as herein provided.

VIII

Lessee shall keep accurate accounts showing the amount and character of work done and the net returns from the sale of production, and such records, as well as the Lessee's operations on the property, shall be open to inspection of Lessor's representatives at all reasonable times. Lessee agrees to furnish Lessors with copies of all factual data obtained by Lessee in the event that this agreement is terminated prior to final purchase by Lessees.

All claims located by Lessee within the limits of this agreement as specified in clausesII and III hereof, shall be in the name of Lessors, and all claims ~~hereafter~~ staked prior to the date of this agreement by Lessors within the limits of this agreement as specified in clauses II and III hereof, shall be completed by Lessees in the name of the Lessors, and Lessee agrees to perform all of the location work thereon.

A.M.R.
E.M.B
E.F.D

IX

Lessee agrees to commence work on the said premises within thirty (30) days after the execution of this Lease and Option and thereafter shall diligently prosecute the work. During the first year, Lessee agrees to have expended a minimum of three thousand ($3,000.00) dollars worth of work on the property. All work shall be conducted in a thorough, prudent and workmanlike manner and in accordance with the applicable state and federal laws. This is also expressly meant to include no unnecessary damage to fields, forests, fences, water holes and other existing permanent surface improvements.

X

Lessee shall indemnify and save harmless Lessor against all claims, demands, liabilities, suits, and judgments whatsoever arising out of property damage to owner's of surface rights and personal injury or death of any Lessee employee engaged in working on said premises, as well as any claims for labor, materials, supplies or other charges arising out of Lessee's operations.

XI

This agreement may be terminated by Lessee upon Thirty (30) days written notice of such termination to Lessor and Lessee shall have the right to remove any and all machinery, equipment and supplies from the herein described property provided Lessee shall not be in default as to any of the Lease and Option terms.

XII

If Lessee fails to make payments as herein specified, or shall fail to perform, carry out or comply with any term, condition, promise or covenant of this agreement, then this agreement may be terminated after Thirty (30) days following the receipt by Lessee of written notice by registered mail, specifying said default or defaults, provided, however, Lessee shall have failed to remedy such default or defaults within the Thirty (30) day period, otherwise this agreement shall remain in full force and effect. Upon termination of this agreement, other than by purchase, whether by lapse of time, or otherwise, Lessee shall peaceably and promptly surrender and deliver up said property to Lessor.

XIII

Lessor's exclusive and lawful ownership of herein said acquired property and, that same is free and clear and will be kept free and clear of all liens and encumbrances during the term of this agreement, is hereby warranted. Annual assessment work if required, will only be at Lessee's expense when this agreement is in effect and only when it is in effect during the last Six (6) months of the assessment year involved in that work. Lessee agrees to pay all taxes and assessments which may be levied against said premises on account of the production of ore, or Lessee's personal property under this agreement.

XIV

For the purpose of receiving notices, the parties hereto specify the following mailing addresses:

| For Lessor | For Lessee: |
|---|---|
| Mr. Allen M. Rugg, Jr. | Minerals Exploration Company |
| 5202 East 16th. Street | Union Oil Building |
| Tucson, Arizona | Los Angeles 17, California |
| | and |
| | Minerals Exploration Company |
| | P.O.Box 5671 - Tucson, Arizona |

XV

Terms of this Mineral Lease and Option shall be binding upon and inure to the benefit of the heirs, administrators, executors, successors and assigns of the parties hereto.

| Lessor | Lessee |
|---|---|
| | MINERALS EXPLORATION COMPANY |
| Allen M. Rugg, Jr. | |
| Eleanor P. Rugg | M. G. Edwards |
| | Vice President |
| Ernest J. Hicks | |
| Elmer M. Bell | N. Torres |
| | Assistant Secretary |

STATE OF )
) SS.
COUNTY OF )

Before me ~~Edward~~ William E. Edmonston, a notary public in and for the County of Pima, State of Arizona, on this day personally appeared Ernest J. Hicks and Elmer M. Bell known to me to be the persons whose names are subscribed to the foregoing instrument as the above individuals.

Given under my hand and seal of office this 14th day of September, 1956;

William E. Edmonston
Notary Public

My commission expires:
Aug. 31, 1956

STATE OF )
) SS.
COUNTY OF )

Before me P. D. Johnson, a notary public in and for the County of Pima, State of Arizona, on this day personally appeared Allen W. Rugg, Jr. and Eleanor P. Rugg known to me to be the persons whose names are subscribed to the foregoing instrument as the above individuals.

Given under my hand and seal of office this 15th day of September, 1956;

P. D. Johnson
Notary Public

My commission expires:

May 23, 1959

STATE OF CALIFORNIA )
) ss.
COUNTY OF LOS ANGELES )

On this 24th day of September, 1956, before me, a Notary Public in and for said County and State, personally appeared M. G. EDWARDS, known to me to be a Vice President, and E. W. CAIRNS, known to me to be an Assistant Secretary of MINERALS EXPLORATION COMPANY, the corporation that executed the within instrument, known to me to be the persons who executed the within instrument, on behalf of the corporation herein named, and acknowledged to me that such corporation executed the within instrument pursuant to its by-laws or a resolution of its Board of Directors.

WITNESS my hand and official seal.

George C. Bond
Notary Public in and for said County and State.

(SEAL)

My Commission Expires May 31, 1958

Tucson Arizona
3 August 1956

Agreement

We the undersigned, individually and as agents in behalf of Minerals Exploration Company, a California Corporation, do hereby agree that for and in the consideration of the disclosure of mineral discovery located in the following described area situated in the County of Pima, State of Arizona, not to divulge the said location to any other or third party interests or to undertake, or cause to be undertaken, any claimstaking or any otherwise activity in any way adverse or contrary to the primary interests of the other undersigned parties, as optioners or owners, without express written permission to the contrary. This agreement to be in force and effect for the period of 12 months from the 'ite first above written.

II Description of area -: T 14S, R 10E Sections 33 & 34
III Owners: A. M. Ruiz Elmer M. Bell Ernest J. Hicks
IV Optionees - [illegible] Jr. Norman Eastmore Jr.