## GEOPHYSICAL REPORT

on the
E-D 1 PROPERTY
Kamloops Mining Division British Columbia
North Lat. $51^{\circ} 22^{\prime}$
NTS $92 \mathrm{G} / 14 \mathrm{~W}$ and $92 \mathrm{P} / 8 \mathrm{E}$
. Prepared for.
368061 B.C. LTD. 810-175 2nd Avenue Kamloops, B.C. V2C 5Wl
. Prepared by.
QUES'T CANADA EXPLORATION SERVICES P.O. BOX 11569

840-650 West Georgia Street Vancouver, B.C.

TABLE OF CONTENTS ..... PAGE
INTRODUCTION ..... 1
SUMMARY ..... 1
LOCATION AND ACCESS ..... 3
PROPERTY AND OWNERSHIP ..... 4
HISTORY ..... 4
GENERAL GEOLOGY ..... 7
HLEM GENIE SURVEY ..... 9
DISCUSSION OF RESUL'TS ..... 9
CONCLUSIONS AND RECOMMENDATIONS ..... 11
REFERENCES ..... 13
STATEMENT OF QUALIFICATIONS ..... 14
COST BREAKDOWN ..... 16
ILLUSTRATIONS ..... PAGE
FIGURE 1 - LOCATION MAP ..... 2
FIGURE 2 - CLAIM MAP ..... 5
FIGURE 3 - REGIONAL GEOLOGY MAP (FROM D.C. MILLER,1989) ..... 8
-IN POCKET
FIGURE 4 - HLEM GENIE PROFILE MAP

## APPENDICES

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APPENDIX I - HLEM GENIE FIELD DATA
APPENDIX II - FIELD PROCEDURE & INSTRUMENT SPECIFICATIONS -
GENIE SE-88 HLEM SYSTEM.
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## INTRODUCTION

368061 B.C. Ltd. of Suite 810, 175 - 2nd Avenue, Kamloops, British Columbia holds an option to purchase $100 \%$ of the E-D 1 claim, located in the Kamloops Mining Division. This report, prepared at the request of the company, describes the Genie HLEM survey that was conducted on the property between June 23 rd and 30th, 1990.

SUMMARY

The E-D 1 claim consists of 20 units covering 500 hectares. It is located some 80 km north-northeast of Kamloops, in the Kamloops Mining Division, British Columbia. It is readily accessible by well maintained logging roads departing from Highway 16 at the town of Barriere.

The subject property is underlain mainly by Unit EBP of the Eagle Bay Assemblage and its contact with the Baldy Batholith. Unit EBP consists mainly of phyllite and slate with interbedded siltstone and sandstone with lesser carbonate, quartzite, chlorite-sericite-quartz schist and metavolcanic rocks. The Fennell Formation is in contact with Unit EBP near the western boundary of the claim along a steep easterly directed thrust fault.

The Enargite showing of Kam Creed Mines Ltd. lies about 600 m south of the E-D 1 claim and is located at the contact of Eagle Bay and Fennell rocks. Mineralization consists of galena, sphalerite, chalcopyrite and pyrite in quartz veins and lenses. Some high silver and moderate gold values are also present.


| E-D1 CLAIM |
| :---: |
| LOCATION MAP |

In 1985 Noranda Exploration Company Limited carried out an airborne magnetic and electromagnetic survey of a large area near Birk Creek which included the subject property. This work indicated a number of northwesterly trending conductors to be present on the E-D 1 property.

Previous geochemical surveys were carried out in the area of the E-D 1 claim by Craigmont Mines Limited in 1973. The target at this time was porphyry copper mineralization. North-south oriented lines were spaced 1000 ft . apart with samples at 200 ft . intervals along lines. Soil samples were analyzed for copper, molybdenum, lead and zinc. Some zinc anomalies were found, but not all were followed up.

In 1989, the company conducted a combine ground magnetometer and VLF-EM survey on the property. The results indicated a number of locations which warrant further exploration. The geophysical responses on the west side of the survey was interpreted to be representative of a lithologic contact between the Eagle Bay Assemblage and the Fennell Formation.

## LOCATION AND ACCESS

The property is located 80 km north-northeast of Kamloops, B.C. on NTS Map Sheets $82 \mathrm{M} / 5 \mathrm{~W}$ and $92 \mathrm{P} / 8 \mathrm{E}$. Road access to the property from Barriere, B.C. is gained by following the Barriere Lakes road eastward some 16 km to the junction of the North and East Barriere Lakes roads. From this point the North Barriere Lake road is followed for 8 km where the Birk Creek logging road turns off to the north. The Birk Creek road is then followed some 12 km to the point where a subsidiary road turns right. The legal corner post is located some 700 m south of this road (Figure 2). The geographical coordinates of the claim are 51022' N. Latitude and ll9059' W. Longitude.

PROPERTY AND OWNERSHIP

The property is comprised of one M.G.S. claim totalling 20 units. The claim is located in the Kamloops Mining Division and is owned by 356586 B.C. Ltd. of 810-175, 2nd Avenue, Kamloops, B.C. The operator is 368061 B.C. Ltd. which holds an option to acquire a $100 \%$ interest of the property. The following table summarizes the pertinent claim data:
CLAIM NAME
E-D 1
RECORD
4742
UNITS
EXPIRY DATE
Sept., 161990

## HISTORY

The area has been intermittently prospected and staked since the early 1900's. In 1924 the area immediately south of the property was staked and developed by trenches and an adit. Mineralization included galena, sphalerite, chalcopyrite and pyrite which is carried in quartz veins within metasedimentary rocks. Variable gold values and good silver values were reported. Two showings are described in the B.C. Minfile: 82M 064 and 065 which are referred to as the North Star north and south showings. The north showing is also known as the Ace or Enargite. In 1972, 4.5 tons of crude ore which contained 39.8 grams/tonne gold, 707.9 grams/tonne silver, $27.4 \%$ lead, $13.3 \%$ zinc and 0.25 \% copper was shipped from the north showing to the Trail smelter.

In 1984 Kam Creed Mines Ltd. completed 5 diamond drill holes totalling 1251 Ft. near the north Northstar showing. The best intersection was in hole one which was reported to cut $0.30 \mathrm{oz} . / \mathrm{t}$ gold from 331.2-333.0 Ft. in a pyritic, carbonaceous shale. This hole also intersected $0.16 \mathrm{oz./t}$ gold from $342-347 \mathrm{Ft}$. in a pale

green quartzite. Hole 3 intersected $0.06 \mathrm{oz./t}$ gold from 65-68 Ft. within pyritic shale.

In 1973 Craigmont Mines Ltd. carried out geochemical and ground geophysical surveys over a large area which included the present property. The surveys were carried out in search of porphyry copper mineralization along north-south lines spaced 1000 Ft. apart and along east-west lines spaced 3000 Ft. apart. Soil samples were taken along the lines at 200 Ft . intervals. Geochemical analysis was done for copper, molybdenum, lead and zinc. Several zinc anomalies were found, some of which were recently explored by Noranda Exploration Company Limited.

Noranda explored the adjoining B.C. claim with ground and airborne geophysics, geochemistry (2215 soil samples), 12 trenches and 14 diamond drill holes totalling 1036.9 m . The work was done between 1983 and 1987 and discovered pods of stratiform massive sulphides and stringer-type mineralization including silver, lead, zinc and minor barite.

In general, there has been considerable exploration activity in the region as a result of the discovery of the CC copper deposit in 1978 and the Rea-Samatosum silver-gold deposits in 1983-87.

In 1989, a ground magnetic survey and a VLF electromagnetic survey was conducted across the property. These surveys indicated a number of locations which warranted further exploration.

## GENERAL GEOLOGY

The property lies mainly within Unit EBP of the Eagle Bay Assemblage near its contact with the Baldy batholith to the north and the Fennell Formation to the west (Figure 3). The Eagle Bay Assemblage includes a structurally complex group of volcanic and sedimentary rocks which have been altered by generally low grade regional metamorphism to phyllites, schists, quartzites, marbles and metavolcanics. Various rock units strike mainly northwesterly and dip at various angles both eastward and westward. Rocks within the Eagle Bay range in age from Lower Cambrian? and/Older? to Mississippian.

From an economic point of view, the Eagle Bay rocks are of interest because they are host rocks for several mineral deposits including the Rea-Samatosum silver-gold deposit which is currently in production. Reserves for this deposit are quoted by Rea Gold Corporation as being 666,000 tons grading $32.08 \mathrm{oz} / \mathrm{t}$ silver, $0.052 \mathrm{oz} / \mathrm{t}$ gold, $3.5 \%$ zinc, $1.7 \%$ lead and $1.2 \%$ copper (undiluted).

The Fennell Formation may underlie the extreme western part of the property in fault contact with Eagle Bay rocks. Fennell rocks include several lithologies as indicated on Figure 3. The CC copper deposit occurs in mafic volcanic rocks within the Fennell and is reported to contain over $2,000,000$ tons grading $2 \%$ copper.

Both the Eagle Bay and Fennell units have been intruded by the Baldy batholith near the north boundary of the property. No significant mineral showings are known within this intrusion, however, several occur along its border.

EOCENE KAMLOOPS GROUP
eTs Mainly andesite and bosalt, minor sediments cretaceous
Kg Granite and granodiorite
devcnian to permian fennell formation
Basalt, rhyolite, volcaniclastics, gabbro, diorite, chert ond conglomerate
LOWER CAMBRIAN/OLDER TO MISSISSIPPIAN
eagle bay assemblage
MISSISSIPPIAN
EBP Mainly phyllite, slate, siltstone and sandstone; lesser carbonates, quartzite, schist and metavoleanics
DEVONIAN/MISSISSIPPIAN
EBF] Mainty phyllite and schist derived from intermediate voleanics
oevonian
EBA] Moinly phyllite derived from felsic to intermediate volcanics.
LOWER CAMBRIAN?/ OLDER?
EBO Mainly quartzite, sehist and phyllite
lower cambrian
EAG Mainly greenstone and ehlorito achist derived from mafle 0 intermediare volcanics; EBGT-Limestone and dolomite
$X_{\text {cc }}$ Mineral property
4 Thrust foult (approx.)
Normal foult (apprax.
Geological boundary

1


REGIONAL GEOLOGY

## HLEM GENIE SURVEY

A horizontal loop electromagnetic survey was completed across the western portion of the $E-D$ l claim to further delineate the VLF-EM conductors generated by the previous survey. The work was conducted between June 23 and 30 , 1990 and was performed by Flemming Thrane and Craig Johnson of Quest Canada Exploration Services Inc. using a Scintrex SE88 Genie. A total of 12 kilometres of surveying was completed across 15 lines, spaced on 200 metre centres, with readings taken at every 25 metres along the lines. Coil spacing was maintained at 100 metres during the course of the survey and data was gathered for 3 frequency pairs: 3037.5/112.5, 1012.5/112.5, and 337.5/112.5.

The data was presented to GeoSci Data Analysis Ltd., where Mr. Trent Pezzot, a geophysicist, analyzed and interpreted the data. The raw survey data accompanies this report as Appendix I. The survey data, in profile form, is presented in Figure 4. Conductive trends are also plotted on Figure 4 .

## DISCUSSION OF RESULTS

The HLEM Genie survey was conducted with the intention of further delineating and categorizing the VLF-EM conductors previously mapped. Four conductive trends have been identified in the Genie data and are labeled 1 through 4 on the profile map. All four anomalies correlate with previously defined VLF-EM strike length, trending either northerly or north-westerly. Conductive overburden has produce a positive bias in the Genie profiles, most notably in the higher frequency data. Otherwise, in the absence of the conductive trends mentioned above, the data is very regular, suggesting a fairly homogeneous half-space.

Accurate quantitative analysis of this type of data requires that information be gathered at different frequencies and different coil separations. Since these conditions have not been met, absolute dip, depth and conductance information for the anomalous trends can not be reliably calculated.

Conductors 1 \& 2

Conductor 1 strikes northwesterly from grid location l200N, l200W and arcs to the north, paralleling the western claim boundary to line 2400 N . The anomaly is open in both directions. Conductor 2 runs parallel to and immediately east of conductor 1 . These 2 zones appear to converge and diverge along their mapped lengths. The most definitive responses are observed on line 1200 N where the zones appear to be most widely separated. It is possible that the anomalies are tracking a zone composed of many conductive, probably sulphide, lenses too closely separated and near the surface to be individually resolved with a 100 metre separation.

The anomaly amplitude for both conductors is very high, suggesting a shallow target. The character of the response infers the targets are thin, plate-like bodies which dip steeply to the east. The anomalies are observed on all three frequencies recorded, suggesting good conductors.

Conductor 3

Conductor 3 appears as a linear feature extending from l400N, 575 E to 2200 N , l50W. Although it's amplitude is much lower than that associated with conductors 1 and 2, it still forms a significant response. The zone is dipping steeply to the east at its' southern limit (line 1400 N ) and appears to be rotating to a
more shallow easterly dip to the north. The effects of increasing overburden to the east produce a slight bias to the profile and enhance the appearance of an easterly dip. With the exception of line 2200 N , the anomalous response is only observed in the highest (3037/112) frequency data. This suggests the causative body is a relatively poor conductor. A rough estimate of depth, based on the response at line 1800 N is some 48 metres.

Conductor 4

Conductor 4 is a northwesterly striking feature, extending from 400 N , 330 W to $800 \mathrm{~N}, 375 \mathrm{~W}$. It has a similar amplitude to conductor 3 and exhibits a similar easterly dip. The trend follows the western edge of a conductive surface layer, most likely a change in the overburden composition or thickness. The anomalous responses are well defined on the high and middle frequency data and only weakly evident on the low frequency. This suggests a moderate conductivity. A rough estimate of depth, based on the response at line 600 N is some 35 metres.

## CONCLUSIONS AND RECOMMENDATIONS

The Genie HLEM survey has outlined 4 conductive targets. The responses observed suggest that the causative bodies are thin, plate-like features which extend for considerable strike length. The westermost conductors (1 \& 2) appear to be at or very near the surface and dip vertically or steeply to the east. It is possible that the two anomalies are actually one zone composed of many conductive sulphide lenses, too closely separated and near surface to be individually identified by a 100 metre coil separation. Conductors 3 and 4 are deeper and exhibit a more shallow easterly dip. These two trends most likely track lithological contacts or faults.

Considering the geological target as being polymetallic (sulphide) bodies in quartz veins and lenses, induced polarization could be an useful tool in detecting sulphide mineralization within the conductors. Once further delineation of the conductors have been accomplished, backhoe trenching should then be implemented to test the anomalies that are close to the surface.


## REFERENCE

Miller, D.C.,(1989): Report on the E-D l Claim, Kamloops Mining Division, For Wayne Tyner, D.C. Miller Geological Services.

Pezzot, E.T.,(1990): Interpretation of HLEM Genie data, E-D 1 Claim, For Quest Canada Exploration Services Inc., GeoSci DataAnalysis Ltd.

## STATEMENT OF QUALIFICATIONS

I, Paul P.L. Chung, of the City of Richmond, Province of British Columbia, DO HEREBY CERTIFY THAT:
(1) I am a Consulting Geologist with business address office at Suite 840 - 650 West Georgia Street, Vancouver, British Columbia, V6B 4N8; and President of Boa Services Ltd.
(2) I am a graduate in geology with a Bachelor of Science degree from the University of British Columbia, in 1981.
(3) I have practised my profession continuously since graduation.
(4) I am a Fellow of the Geological Association of Canada.
(5) I have conducted various mineral exploration programmes in B.C., Yukon, Manitoba, Ontario, Quebec, Nova Scotia, and Nevada.
(6) This report is based on data supplied to me by Quest Canada Exploration Services Inc.
(7) I have no direct, indirect, or contingent interest in the property nor do $I$ expect to receive any


Dated at Vancouver, British Columbia, this end day of August, 1990.

I, E. Trent Pezzot, of the City of Richmond, Province of British Columbia, hereby certify as follows:

- I am a principal of GeoSci Data Analysis Ltd., a company incorporated under the laws of the Province of British Columbia with a business address of 3740 Lockhart Road, Richmond, B.C. V7C 1M3.
- I graduated from the University of British Columbia in 1974 with a BS. degree in the combined honors Geology and Geophysics program.
- I have practiced my profession continuously from that date.
- I hold no interest, direct or indirect, in Quest Canada Exploration Services Ltd. or company 356586 BC Ltd., holder of the ED - 1 claim, or any of their affiliates, nor do $I$ expect to receive any.
- The geophysical interpretation is based upon information and data provided to me by Quest Canada Explorations Services Ltd.. I was not involved in the data aquisition, editing or reduction phases of this program.
- I consent to the use of this letter or the information contained within it, provided the context is not changed to alter the intended meaning, in or in connection with a Prospectus or in a Statement of Material Facts.

E. Trent Pezzot

BS. Geophysics/Geology
August 16, 1990

## COST BREAKDOWN

GENIE－HLEM Survey
12 kms ＠$\$ 250.00 / \mathrm{km}$ ..... $\$ 3,000.00$
Mobilization and demobilization
Wages
2 days＠$\$ 200.00 /$ day ..... 400.00
Truck
10 days＠$\$ 40.00 /$ day ..... 400.00
1395 kms ＠$\$ 0.35 / \mathrm{km}$ ..... 487.55
Room and Board
9 days $x 2$ men $x \$ 40 /$ day ..... 720.00
Report Costs
Geophysical interpretation
2 days at $\$ 275 /$ day ..... 550.00
Report writing
4 days at $\$ 300 /$ day ..... 1200.00
Drafting ..... 350.00
Photocopying，reproduction and binding ..... 75.00
TOTAL
\＄7，182．55 ＝ニニニーニー $=$＝

RespectefuIIy submitted



APPENDIX I

HLEM FIELD DATA

|  |  |  | Refere | Frequen | 112 Hz |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Station | Line | Station | \%Ratio | \%Ratio | \%Ratio |
|  |  |  | 337 Hz | 1012 Hz | 3037 Hz |

Line 200

|  | 0 | 200 | 0 | 2 | 6 | 14 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | -25 | 200 | -25 | 0 | 8 | 8 |
|  | -50 | 200 | -50 | 2 | 6 | 10 |
|  | -75 | 200 | -75 | 1 | 5 | 8 |
|  | -100 | 200 | -100 | 0 | 4 | 10 |
|  | -125 | 200 | -125 | 5 | 10 | 18 |
|  | -150 | 200 | -150 | 3 | 9 | 19 |
|  | -175 | 200 | -175 | 2 | 8 | 20 |
|  | -200 | 200 | -200 | 2 | 11 | 23 |
|  | -225 | 200 | -225 | 3 | 14 | 40 |
| Line 400 |  |  |  |  |  |  |
|  | 0 | 400 | 0 | 0 | 6 | 4 |
|  | -25 | 400 | -25 | 2 | 5 | 20 |
|  | -50 | 400 | -50 | 4 | 6 | 15 |
|  | -75 | 400 | -75 | 3 | 5 | 16 |
|  | -100 | 400 | -100 | 4 | 7 | 15 |
|  | -125 | 400 | -125 | 5 | 8 | 14 |
|  | -150 | 400 | -150 | 3 | 6 | 11 |
|  | -175 | 400 | -175 | 5 | 5 | 7 |
|  | -200 | 400 | -200 | -3 | 6 | 9 |
|  | -225 | 400 | -225 | -4 | 7 | 12 |
|  | -250 | 400 | -250 | 4 | . 10 | 25 |
|  | -275 | 400 | -275 | 6 | 15 | 30 |
|  | -300 | 400 | -300 | 3 | 5 | 12 |
|  | -325 | 400 | -325 | -4 | -8 | -12 |
|  | -350 | 400 | -350 | -3 | -2 | 0 |
|  | -375 | 400 | -375 | -2 | 3 | 6 |
|  | -400 | 400 | -400 | 1 | 3 | 5 |
|  | -425 | 400 | -425 | 1 | 1 | 5 |
|  | -450 | 400 | -450 | 2 | 2 | 10 |
| Line 600 : $0^{-400}$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  | 0 | 600 | 0 | 0 | 5 | 11 |
|  | -25 | 600 | -25 | 4 | 10 | 17 |
|  | -50 | 600 | -50 | 1 | 8 | 18 |
|  | -75 | 600 | -75 | 2 | 7 | 18 |
|  | -100 | 600 | -100 | 2 | 6 | 14 |
|  | -125 | 600 | -125 | 2 | 5 | 11 |
|  | -150 | 600 | -150 | 3 | 7 | 14 |
|  | -175 | 600 | -175 | 3 | 10 | 17 |
|  | -200 | 600 | -200 | 2 | 11 | 22 |
|  | -225 | 600 | -225 | 5 | 11 | 21 |
|  | -250 | 600 | -250 | 4 | 10 | 24 |
|  | -275 | 600 | -275 | 2 | 11 | 15 |
|  | -300 | 600 | -300 | 0 | 5 | 6 |
|  | -325 | 600 | -325 | -1 | -3 | -5 |
|  | -350 | 600 | -350 | -2 | -5 | -8 |
|  | -375 | 600 | -375 | 0 | -1 | -3 |
|  | -400 | 600 | -400 | 0 | 0 | 3 |
|  | -425 | 600 | -425 | 2 | 3 | 4 |
|  | -450 | 600 | -450 | 2 | 5 | 5 |
|  | - 175 | 6nn | -475 | ? | 3 | 5 |






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## APPENDIX II

## FIELD PROCEDURE \& INSTRUMENT SPECIFICATIONS GENIE SE-88 HLEM SYSTEM.

The Scintrex SE88 Genie EM system uses a portable transmitter consisting of two transmitting coils and power supply, and a receiver with signal detection electronics. The transmitter and receiver coils are normally maintained in the vertical axis coplanar mode, commonly referred to as the horizontal loop mode.

The transmitter simultaneously generates two alternating magnetic fields - one referred to as the "signal frequency" and the other as the "reference frequency". The resultant electromagnetic fields set up in the ground are detected by the receiver coil located at a fixed distance from the transmitter. The receiver measures the received "signal frequency" amplitude, $H$, and the received "reference frequency" amplitude, Hr . The value of (Hs/Hr) x 100 (referred to as "Ratio") is digitally displayed on the receiver.

The survey plotting point is considered to be at the mid-point of the transmitter-receiver separation (L).

The survey was conducted using $T x-R x$ separation of 100 m and three frequency pairs (3037.5/112.5, 1012.5/112.5, 337.5/112.5) were monitored and recorded. Readings were taken every 25 m . along the lines.

Receiving Element

Receiving Frequency Pairs

Transmitter-Receiver Separation

Maximum Transmitter-Receiver Separation

## Iron-cored coil

Five pairs.
112.5 Hz reference with one of $337.5,1012.5$ or 3037.5 Hz ; or 337.5 Hz reference with one of 1012.5 or 3037.5 Hz .

Primary selector: $6.26 \mathrm{~m}, 12.5$ $\mathrm{m}, 25 \mathrm{~m}, 50 \mathrm{~m}, 100 \mathrm{~m}, 200 \mathrm{~m}$, plus Multiplier: x 1, x 1.25, x 1.5 , x 1.75

200 m under most conditions. Greater separations may bo possible depending on atmospheric and power line noise.

Transmitting Element

Transmitting Frequency Pairs

Transmitting Moments

Relative Amplitude Stability

Iron-cored coil for each frequency

Five pairs.
112.5 Hz reference with one of $337.5,1012.5$ or 3037.5 Hz ; or 337.5 Hz reference with one of 1012.5 or 3037.5 Hz

150 A , at $112.5 \mathrm{~Hz}, 100 \mathrm{~A}$, at $337.5 \mathrm{~Hz}, 50 \mathrm{Am}$ at 1012.2 Hz 25 Am at 3037.5 Hz .

Better than $0.1 \%$

## FILE NO:

## GEOPHYSICAL REPORT

on the
ED 1 PROPERTY
Kamloops Mining Division
British Columbia
North Lat. 51022' West Long. 119059'
NTS 92G/14W and 92P/8E
.Prepared for.
368061 BC. LTD.
810-175 and Avenue
Kamloops, B.C. VAC 5W1
.Prepared by.
QUEST CANADA EXPLORATION SERVICES INC.
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Paul P.L. Chung, F.G.A.C. Consulting Geologist
TABLE OF CONTENTS ..... PAGE
INTRODUCTION ..... 1
SUMMARY ..... 1
LOCATION AND ACCESS ..... 3
PROPERTY AND OWNERSHIP ..... 4
HISTORY ..... 4
GENERAL GEOLOGY ..... 6
VLF-EM AND MAGNETOMETER SURVEYS ..... 8
DISCUSSION OF RESULTS ..... 9
RECOMMENDATIONS AND CONCLUSIONS ..... 10
REFERENCES ..... 12
STATEMENT OF QUALIFICATIONS ..... 13
COST BREAKDOWN ..... 15
ILLUSTRATIONS ..... PAGE
FIgURE 1 - LOCATION MAP ..... 2
FIGURE 2 - CLAIM MAP ..... 5
FIGURE 3 - REGIONAL GEOLOGY MAP (FROM D.C. MILLER,1989) ..... 7
FIGURE 4 - GEOPHYSICAL INTERPRETATION MAP
figure 5 - RESIDUAL MAGNETIC PROFILE MAP
figure 6 - RESIDUAL MAGNETIC CONTOUR MAP
figure 7 - VLF-EM PROFILE MAP: ANNAPOLIS TRANSMITTERIN-PHASE AND QUADRATURE ATTRIBUTES
FIGURE 8 - VLF-EM CONTOUR MAP: ANNAPOLIS TRANSMITTERFRASER FILTERED IN-PHASE ATTRIBUTES
FIGURE 9 - VLF-EM PROFILE MAP: SEATTLE TRANSMITTERIN-PHASE AND QUADRATURE ATTRIBUTESfigure 10 - VLF-EM CONTOUR MAP: SEATTLE TRANSMITTERFRASER FILTERED IN-PHASE ATTRIBUTES

## APPENDICES

APPENDIX I - VLE-EM UNEILTERED DATA
APPENDIX II - FIELD RESIDUAL MAGNETIC DATA
APPENDIX III - INSTRUMENT SPECIFICATIONS - IGS-2 SYSTEM

## INTRODUCTION

368061 B.C. Ltd. of Suite 810, 175-2nd Avenue, Kamloops, British Columbia holds an option to purchase $100 \%$ of the E-D 1 claim, located in the Kamloops Mining Division. This report, prepared at the request of the company, describes the VLF-EM and the magnetometer surveys that were conducted on the property between October 6th and 11th, 1989.

## SUMMARY

The E-D 1 claim consists of 20 units covering 500 hectares. It is located some 80 km north-northeast of Kamloops, in the Kamloops Mining Division, British Columbia. It is readily accessible by well maintained logging roads departing from Highway 16 at the town of Barriere.

The subject property is underlain mainly by Unit EBP of the Eagle Bay Assemblage and its contact with the Baldy Batholith. Unit EBP consists mainly of phyllite and slate with interbedded siltstone and sandstone with lesser carbonate, quartzite, chlorite-sericite-quartz schist and metavolcanic rocks. The Fennell Formation is in contact with Unit EBP near the western boundary of the claim along a steep easterly directed thrust fault.

The Enargite showing of Kam Creed Mines Ltd. lies about 600 m south of the E-D 1 claim and is located at the contact of Eagle Bay and Fennell rocks. Mineralization consists of galena, sphalerite, chalcopyrite and pyrite in quartz veins and lenses. Some high silver and moderate gold values are also present.


In 1985 Noranda Exploration Company Limited carried out an airborne magnetic and electromagnetic survey of a large area near Birk Creek which included the subject property. This work indicated a number of northwesterly trending conductors to be present on the E-D property.

Previous geochemical surveys were carried out in the area of the E-D 1 claim by Craigmont Mines Limited in 1973. The target at this time was porphyry copper mineralization. North-south oriented lines were spaced 1000 Ft . apart with samples at 200 Ft . intervals along lines. Soil samples were analyzed for copper, molybdenum, lead and zinc. Some zinc anomalies were found, but not all were followed up.

The ground magnetometer and VLF-EM surveys on the E-D 1 claim has indicated a number of locations which warrant further exploration. The geophysical responses on the west side of the survey may be representative of a lithologic contact between the Eagle Bay Assemblage and the Fennell Eormation. Sulphide mineralization in the area is commonly associated with such a lithological contact. Proposed work consists of geological mapping and a Horizontal Loop EM survey.

## LOCATION AND ACCESS

The property is located 80 km north-northeast of Kamloops, B.C. on NTS Map Sheets $82 \mathrm{M} / 5 \mathrm{~W}$ and $92 \mathrm{P} / 8 \mathrm{E}$. Road access to the property from Barriere, B.C. is gained by following the Barriere Lakes road eastward some 16 km to the junction of the North and East Barriere Lakes roads. From this point the North Barriere Lake road is followed for 8 km where the Birk Creek logging road turns off to the north. The Birk Creek road is then followed some 12 km to the point where a subsidiary road turns right. The legal corner post is located some 700 m south of this road (Figure 2). The geographical coordinates of the claimare 51022' N. Latitude and 119059' W. Longitude.

PROPERTY AND OWNERSHIP

The property is comprised of one M.G.S. claim totalling 20 units. The claim is located in the Kamloops Mining Division and is owned by 356586 B.C. Ltd. of 810-175, 2nd Avenue, Kamloops, B.C. The operator is 368061 B.C. Ltd. which and holds an option to acquire a 100\% interest of the property. The following table summarizes the pertinent claim data:

| CLAIM NAME | RECORD NO. | UNITS | EXPIRY DATE |
| :--- | :---: | :---: | :---: | :---: |
| E-D 1 | 4742 | 20 | Sept. . 161990 |

## HISTORY

The area has been intermittently prospected and staked since the early $1900^{\prime}$ s. In 1924 the area immediately south of the property was staked and developed by trenches and an adit. Mineralization included galena, sphalerite, chalcopyrite and pyrite which is carried in quartz veins within metasedimentary rocks. Variable gold values and good silver values were reported. Two showings are described in the B.C. Minfile: 82M 064 and 065 which are referred to as the North Star north and south showings. The north showing is also known as the Ace or Enargite. In 1972, 4.5 tons of crude ore which contained 39.8 grams/tonne gold, 707.9 grams/tonne silver, $27.4 \%$ lead, $13.3 \%$ zinc and $0.25 \%$ copper was shipped from the north showing to the Trail smelter.

In 1984 Kam Creed Mines Ltd. completed 5 diamond drill holes totalling 1251 Ft. near the north Northstar showing. The best intersection was in hole one which was reported to cut 0.30 oz ./t gold from 331.2-333.0 Ft. in a pyritic, carbonaceous shale. This hole also intersected $0.16 \mathrm{oz./t}$ gold from 342-347 Ft. in a pale

green quartzite. Hole 3 intersected $0.06 \mathrm{oz./t}$ gold from 65-68 Ft. within pyritic shale.

In 1973 Craigmont Mines Ltd. carried out geochemical and ground geophysical surveys over a large area which included the present property. The surveys were carried out in search of porphyry copper mineralization along north-south lines spaced 1000 Ft. apart and along east-west lines spaced 3000 Ft . apart. Soil samples were taken along the lines at 200 Ft . intervals. Geochemical analysis was done for copper, molybdenum, lead and zinc. Several zinc anomalies were found, some of which were recently explored by Noranda Exploration Company Limited.

Noranda explored the adjoining B.C. claim with ground and airborne geophysics, geochemistry (2215 soil samples), 12 trenches and 14 diamond drill holes totalling 1036.9 m . The work was done between 1983 and 1987 and discovered pods of stratiform massive sulphides and stringer-type mineralization including silver, lead, zinc and minor barite.

In general, there has been considerable exploration activity in the region as a result of the discovery of the cC copper deposit in 1978 and the Rea-Samatosum silver-gold deposits in 1983-87.

## GENERAL GEOLOGY

The property lies mainly within Unit EBP of the Eagle Bay Assemblage near its contact with the Baldy batholith to the north and the Fennell Formation to the west (Figure 3). The Eagle Bay Assemblage includes a structurally complex group of volcanic and sedimentary rocks which have been altered by generally low grade regional metamorphism to phyllites, schists, quartzites, marbles and metavolcanics. Various rock units strike mainly
EOCENE KAMLOOPS GROUP
eTs Mainly andesite and basalt, minor sediments

## cretaceous

Kg. Granite and granodiorite
devenian to permian fennell formation
F Basolt, rhyolite, volcaniclastics, gabbro, diorite, chert and conglomerate
LOWER CANBRIAN/OLDER TO MISSISSIPPIAN
eagle bay assemblage
MISSISSIPPIAN
EBP Mainly phyllite, slare, siltstone and sandstone; lesser corbonates, quartzite, schist and metavoleanics DEVONIAN/MISSISSIPPIAN
EBF] Mainly phyllite and schist derived from intermediate volcanics devonian
EBA Mainly phyllite derived from felsic to intermediate volcanics LOWER CAMBRIAN? I OLDER?
EBG Mainly quartzite, sehist and phyllite
LOWER CAMbrianMainiy greenstone and ehlorite schist derived from mafl to intermediate volcanics; EBGT-Limestone and dolomite

| $X$ ec | Mineral property |
| :--- | :--- |
| Thrust fault (approx.) |  |
| Geological boundary |  |


| E-D1 CLAIM |  |  |  |
| :---: | :---: | :---: | :---: |
| REGIONAL GEOLOGY MAP |  |  |  |
| To ecoompany a roport br |  | Report No: |  |
|  |  |  |  |
| Neming Pr \% | Kamioops | N.TS.: | 820/5 |
| Date: | 10/10/89 | Map No: | 3 |

northwesterly and dip at various angles both eastward and westward. Rocks within the Eagle Bay range in age from Lower Cambrian? and/Older? to Mississippian.

From an economic point of view, the Eagle Bay rocks are of interest because they are host rocks for several mineral deposits including the Rea-Samatosum silver-gold deposit which is currently in production. Reserves for this deposit are quoted by Rea Gold Corporation as being 666,000 tons grading $32.08 \mathrm{oz} / \mathrm{t}$ silver, 0.052 oz/t gold, $3.5 \%$ zinc, $1.7 \%$ lead and $1.2 \%$ copper (undiluted).

The Fennell Formation may underlie the extreme western part of the property in fault contact with Eagle Bay rocks. Fennell rocks include several lithologies as indicated on Figure 4. The CC copper deposit occurs in mafic volcanic rocks within the Fennell and is reported to contain over 2,000,000 tons grading $2 \%$ copper.

Both the Eagle Bay and Fennell units have been intruded by the Baldy batholith near the north boundary of the property. No significant mineral showings are known within this intrusion, however, several occur along its border.

## VLF-EM AND MAGNETOMETER SURVEYS

A total of 21.3 kms of VLF-EM and magnetometer survey were completed on the property employing two IGS-2 Digital Acquisition Systems each of which is capable of reading/recording total field magnetics and up to 3 VLF-EM stations. Specifications for the instruments accompanies this report as Appendix III. Readings were taken at 30 metre station intervals along north-east (050ㅇ) lines spaced every 200 metres. Mr. T. Balyntine and Mr. F. Thane, both experienced operators conducted the survey between October 6th and 11th, 1989. The geophysical data was interpreted by Mr. J.C. Murton, a Professional Geophysicist.

The magnetic readings were taken using a backpack mounted sensor with the operator facing north and corrected for diurnal variations using a base station magnetometer taking readings at 5 second intervals. The residual field data accompanies this report as Appendix II. The residual magnetic data presented in profile format and plan view contoured format can be seen in Figures 5 and 6.

The VLF readings were taken with the operator, in all cases, facing the station to ensure correct (ie: left to right across grid) cross-over direction. The VLF transmitter station in Seattle, Washington was used, as it most favourably couples with the orientation of the grid. In addition, readings utilizing the Annapolis transmitter station were taken to check for possible conductive cross structures. The raw survey data accompanies this report as Appendix $I$. The dip angle profiles and the Fraser filtered maps for both transmitter stations are presented in Figures 7 i- 10. Conductor axes and magnetic anomalies are plotted on Figure 4.

## DISCUSSION OF RESULTS

The magnetic response is complex. A survey magnetic maximum was observed on the west end of Line 2400 N . This high may be associated with Fennell Formation rocks. There is a series of roughly parallel bands of elevated and depressed magnetic readings each approximately 120 metres wide trending NNW and NW on the west side of the property. The magnetic expression of the Eagle Bay phyllite (EBP on Figure 3) should be depressed relative to the more mafic Fennell rocks. Based upon the magnetic response, a conclusive boundary between the Fennell and the Eagle Bay rocks can not be drawn until a study of the local geology has been performed.

The conductors induced by the Annapolis transmitter (figures 4, $7 \& 8$ ), trending predominantly northwest, correlate well with the results from the 1985 airborne EM and VLF-EM survey conducted by Noranda Exploration Company. The conductors induced by the Seattle transmitter (Figures 4, 9 \& 10) trend mainly north or north-northwest. A few seattle conductors in the southern portion of the E-D 1 claim are an exception; they trend northwest and are aligned with Annapolis conductors.

The VLF-EM conductors interpreted on Figure 4 are coincident or nearly coincident with the bands of local magnetic highs (Figures $4 \& 5$ ). Overall, the conductors observed are poor conductors; the quadrature response nearly mimics the in-phase response. Good conductors exhibit strong in-phase crossovers and the quadrature usually lags by up to 90 degrees or mirrors the in-phase response. The best conductors were the northwest trending conductors observed on the southwest corner of the property.

Predominantly, the observed magnetic and VLF-EM response reflects lithologic change and structural geology; outside of the drainages to the south, the geophysical responses recorded do not significantly reflect topography.

## CONCLUSIONS AND RECOMMENDATIONS

The ground geophysical magnetometer and VLF-EM survey on the E-D 1 claim has indicated a number of locations which warrant further exploration. The geological targets are polymetallic ores in quartz veins and lenses typical of the North Star north showing which is located 600 metres south. These sulphides are associated with the contact between the Eagle Bay Assemblage (low grade, regionally-metamorphosed sedimentary and volcanic rocks). The geophysical responses on the west side of the survey may be representative of such a lithologic contact and associated mineralization.

Good conductors, typical of the pods of stratiform massive sulphides and stringer-type mineralization discovered by Noranda on the adjacent $B C-1$ claim to the east, have not been conclusively observed in the inferred Eagle Bay phyllite side of the survey.

Further geophysical surveying is not recommended until geological mapping has been done and mapped lithologies correlated with observed geophysical anomalies. Contingent upon favourable results of surface mapping, a horizontal loop - EM survey should be conducted over areas of interest to confirm mineralization and determine the approximate depth and attitude of the mineralization.

Respectfully submitted,


## REFERENCE

Miller, D.C., (1989): Report on the E-D 1 Claim, Kamloops Mining Division, For Wayne Tyner, D.C. Miller Geological Services.

Murton, J.C.,(1989): Geophysical Report On The E-D 1 Claim, For Quest Canada Exploration Services Inc., J.C. Murton.

## STATEMENT OF QUALIFICATIONS

```
I, J.C. Murton, certify that:
```

(1) I am a geophysicist employed by Western Geophysical Aero Data Ltd. and White Geophysical Inc. in Richmond, BIC.
(2) I am a graduate of the University of British Columbia and earned a B. Sc. Degree in Geophysics in 1984.
(3) I am a Professional Geophysicist.
(4) I interpreted the geophysical data on the E-D 1 claim which was supplied to me by Quest Canada Exploration Services Inc.
(5) I have no direct or indirect interest in the property nor do $I$ expect to receive any.


## STATEMENT OF QUALIEICATIONS

I, Paul P.L. Chung, of the City of Richmond, Province of British Columbia, DO BEREBY CERTIFY THAT:
(1) I am a Consulting Geologist with business address office at Suite 840 - 650 West Georgia Street, Vancouver, British Columbia, V6B 4N8; and President of Boa Services Ltd.
(2) I am a graduate in geology with a Bachelor of Science degree from the University of British Columbia, in 1981 .
(3) 1 have practised my profession continuously since graduation.
(4) I am a Fellow of the Geological Association of Canada.
(5) I have conducted various mineral exploration programmes in B.C., Yukon, Manitoba, Ontario, Quebec, Nova Scotia, and Nevada.
(6) This report is based on data supplied to me by Quest Canada Exploration Services Inc.
(7) I have no direct, indirect, or contingent interest in the property nor do $I$ expect to receive any.


Dated at Vancouver, British Columbia, this $9 t h$ day of November, 1989.

## COST BREAKDOWN

Magnetometer and" 2 station VLF-EM survey$21.3 \mathrm{kms} @ \$ 170.00 / \mathrm{km}$$\$ 3621.00$
Mobilization and demobilization
Expenses ..... 96.72
Wages
2 days @ $\$ 200.00 /$ day ..... 400.00
Truck
7 days @ $\$ 35.00 /$ day ..... 245.00
982 kms @ $\$ 0.35 / \mathrm{km}$ ..... 343.70
Report Costs
Geophysical interpretation
1.5 days at $\$ 225 /$ day ..... 337.50
Report writing
4 days at $\$ 300 /$ day ..... 1200.00
Drafting ..... 342.50
Photocopying, reproduction and binding ..... 75.00
TOTAL ..... \$6661. 42
= = = = = = =
Respoctrualiviso
Paul


## APPENDIX I

## VLF-EM FIELD DATA

| Station | Line | Statian | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| line | 2400 |  |  |  |  |
| -570 | 2400 | -570 | 0 | -1 | 25 |
| $-540$ | 2400 | -540 | 6 | 2 | 30 |
| $-510$ | 2400 | $-510$ | -9 | $1 \epsilon$ | 17 |
| -480 | 2400 | -480 | $-21$ | 5 | $\epsilon$ |
| $-450$ | 2400 | -450 | -4 | 7 | 3 |
| $-420$ | 2400 | -420 | 0 | 5 | 11 |
| -390 | 2400 | -390 | $-6$ | 1 | 12 |
| -360 | 2400 | -360 | -2 | -1 | 8 |
| -330 | 2400 | -330 | 2 | -1 | 10 |
| -300 | 2400 | -300 | 3 | -1 | 21 |
| -270 | 2400 | -270 | -2 | 2 | 30 |
| $-240$ | 2400 | $-240$ | -E | 1 | 15 |
| -210 | 2400 | -210 | 5 | 1. | $1 \epsilon$ |
| -180 | 2400 | -180 | 5 | -4 | 17 |
| $-150$ | 2400 | $-150$ | 11 | 0 | 30 |
| $-120$ | 2400 | $-120$ | -4 | -2 | 27 |
| -90 | 2400 | -90 | 0 | 0 | 27 |
| -60 | 2400 | -60 | 0 | 0 | 28 |
| -30 | 2400 | -30 | 1 | 1. | 30 |
| 0 | 2400 | 0 | -5 | 1 | 28 |
| 30 | 2400 | 30 | -2 | 0 | 65 |
| 60 | 2400 | 60 | -2 | 1 | 74 |
| 90 | 2400 | 90 | -1 | 1 | 71 |
| 120 | 2400 | 120 | -3 | 1 | 80 |
| 150 | 2400 | 150 | -5 | 4 | 45 |
| 180 | 2400 | 180 | -17 | 2 | 39 |
| 210 | 2400 | 210 | $-13$ | 0 | 47 |
| 240 | 2400 | 240 | -14 | 0 | 49 |
| 270 | 2400 | 270 | -17 | 1 | 42 |
| 300 | 2400 | 300 | -27 | 0 | 22 |
| 330 | 2400 | 330 | -28 | 2 | 19 |
| 360 | 2400 | 360 | -30 | 2 | 15 |
| 390 | 2400 | 390 | -32 | 1 | 7 |
| 420 | 2400 | 420 | -30 | 0 | 97.9 |
| 450 | 2400 | 450 | -23 | 1 | $9 \mathrm{E.2}$ |
| 480 | 2400 | 480 | $-24$ | 3 | 97.3 |
| 510 | 2400 | 510 | -17 | 3 | 0 |
| 540 | 2400 | 540 | -14 | 0 | 79.2 |
| 570 | 2400 | 570 | -12 | -1 | 5 |
| 600 | 2400 | 600 | -15 | -8 | 92.6 |
| 630 | 2400 | ESO | -10 | -8 | 91.1 |
| EEO | 2400 | 660 | $-10$ | $-6$ | 94.2 |
| E90 | 2400 | $6 \pm 0$ | -9 | - $E$ | 92.8 |
| 720 | 2400 | 720 | $-10$ | -8 | 89.3 |
| 750 | 2400 | 750 | -9 | -9 | 87.3 |
| line | 2600 |  |  |  |  |
| -420 | 2600 | -420 | $-20$ | 8 | 6 |
| $-390$ | 2600 | -390 | $-13$ | 8 | 10 |
| $-360$ | 2600 | $-360$ | -10 | 1 | 11 |
| $-330$ | 2600 | -330 | $-10$ | 2 | 14 |
| -300 | 2600 | -300 | -7 | 2 | 15 |
| -270 | 2600 | -270 | -1 | 5 | 24 |
| $-240$ | 2600 | -240 | -9 | -2 | 13 |


| Station | Line | Statign | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $-210$ | 2600 | $-210$ | -Э | - | 13 |
| -180 | 2600 | $-180$ | -1 | $-2$ | 13 |
| -150 | 2600 | $-150$ | 0 | -1 | 17 |
| $-120$ | 2600 | $-120$ | $-2$ | -1 | 24 |
| -90 | 2600 | -90 | $-E$ | 0 | 17 |
| -60 | EGOO | -EO | - | 2 | 14 |
| -30 | 2600 | -30 | $-2$ | -1 | 14 |
| 0 | FEOO | 0 | 0 | - - | 13 |
| 30 | 2600 | 30 | -1 | $-3$ | 12 |
| 60 | 2600 | EO | -1 | 0 | 21 |
| 90 | 2600 | 90 | -9 | 2 | 17 |
| 120 | 2600 | 120 | $-2$ | 0 | 19 |
| 150 | 2600 | 150 | $-6$ | 1 | 15 |
| 180 | 2600 | 180 | $-2$ | 5 | 13 |
| 210 | 2600 | 210 | 0 | 5 | 15 |
| 240 | 2600 | 240 | -2 | 5 | 2 |
| 270 | 2600 | 270 | - | 4 | 13 |
| 300 | 2600 | 300 | $-5$ | $\underline{\square}$ | 19 |
| 330 | 2600 | 330 | -8 | 1 | 21 |
| 360 | 2600 | 360 | $-12$ | 4 | 25 |
| 390 | 2600 | 390 | -25 | 3 | 20 |
| 420 | 2600 | 420 | -33 | 5 | 5 |
| 450 | 2600 | 450 | -31 | 4 | 94.7 |
| 480 | 2600 | 480 | -29 | 4 | 92.3 |
| 510 | 2600 | 510 | $-28$ | 3 | 8Э.4 |
| 540 | 2600 | 540 | -28 | 2 | 82.8 |
| 570 | 2600 | 570 | -27 | 0 | 79.5 |
| EOO | 2600 | 600 | $-16$ | -5 | 79 |
| 630 | 2600 | E30 | $-10$ | $-E$ | 79.7 |
| EEO | 2600 | EEO | -5 | -7 | 77.4 |
| 690 | 2600 | 690 | 0 | $-6$ | 71.7 |
| line | 2800 |  |  |  |  |
| -240 | 2800 | $-240$ | 3 | 3 | 27 |
| $-210$ | 2800 | $-210$ | 0 | 0 | 27 |
| -180 | 2800 | $-180$ | 3 | -1 | 25 |
| $-150$ | 2800 | $-150$ | 6 | -1 | 25 |
| $-120$ | 2800 | $-120$ | $E$ | -1 | 31 |
| -90 | 2800 | -90 | 0 | $-3$ | 31 |
| $-60$ | 2800 | -EO | 0 | -1 | 30 |
| -30 | 2800 | $-30$ | $-4$ | -1 | 27 |
| 0 | 2800 | 0 | 0 | 0 | 28 |
| 30 | 2800 | 30 | $-6$ | 0 | 30 |
| 60 | -800 | 60 | -11 | $-2$ | 2 E |
| 90 | 2800 | 90 | -4 | 0 | 23 |
| 120 | 2800 | 10 | $-E$ | 0 | 27 |
| 150 | 2800 | 150 | $-6$ | 0 | 29 |
| 180 | 2800 | 180 | -1 | $-3$ | 21 |
| 210 | 2800 | 210 | 2 | $-2$ | 27 |
| 240 | 2800 | 240 | -1 | 0 | 36 |
| 270 | 2800 | 270 | $-8$ | $-4$ | 25 |
| 300 | 2800 | 300 | 0 | 0 | - 6 |
| 330 | 2800 | 330 | $-2$ | 2 | 31 |
| 360 | 2800 | 360 | -11 | 2 | 29 |
| 300 | 2800 | 390 | $-6$ | 5 | 27 |
| 420 | 2800 | 420 | -4 | $E$ | 36 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 450 | 2800 | 450 | -13 | 4 | 42 |
| 480 | 2800 | 480 | -21 | 5 | 39 |
| 510 | 2800 | 510 | -32 | 5 | 39 |
| 1ine | 3000 |  |  |  |  |
| --90 | 3000 | -90 | $-13$ | . 5 | 17 |
| -60 | 3000 | -60 | 2 | 0 | 38 |
| $\cdots$ | 3000 | -30 | -7 | $-E$ | 41 |
| 0 | 3000 | 0 | - | 0 | 46 |
| 30 | 3000 | 30 | -2 | 4 | 42 |
| 60 | 3000 | 60 | -17 | 0 | 46 |
| 90 | 3000 | 90 | -17 | 1 | 31 |
| 120 | 3000 | 120 | $-12$ | 2 | 27 |
| 150 | 3000 | 150 | - $E$ | 1 | 30 |
| 180 | 3000 | 180 | -10 | 0 | 37 |
| 210 | 3000 | 210 | $-13$ | $-2$ | 27 |
| line | 1800 |  |  |  |  |
| -1080 | 1800 | $-1080$ | 27 | $-10$ | 92.5 |
| -1050 | 1800 | -1050 | 13 | -11 | 19 |
| -1020 | 1800 | -1020 | 5 | -3 | 4 |
| -970 | 1800 | $-990$ | -13 | 10 | 7 |
| $-960$ | 1800 | $-960$ | - - | -2 | 96.7 |
| -930 | 1800 | $-930$ | -3 | -7 | 93.5 |
| $-900$ | 1800 | $-900$ | 3 | 4 | 93.6 |
| -870 | 1800 | -870 | 11 | 5 | 95.1 |
| -840 | 1800 | $-840$ | 10 | 1 | 0 |
| -810 | 1800 | -810 | -2 | 3 | 9 |
| $-780$ | 1800 | -780 | -15 | 2 | 4 |
| $-750$ | 1800 | -750 | $-12$ | 6 | 95.1 |
| $-720$ | 1800 | $-720$ | -3 | 5 | 97.6 |
| -690 | 1800 | $-690$ | -4 | 0 | 98.5 |
| -6EO | 1800 | -6EO | -1 | -1 | 95.9 |
| -630 | 1800 | --630 | -1 | -2 | 96.7 |
| --600 | 1800 | -600 | 0 | -1 | 75.8 |
| $-570$ | 1800 | -570 | 3 | 0 | 97 |
| $-540$ | 1800 | -540 | 2 | 0 | 97.5 |
| -510 | 1800 | -5.0 | $-6$ | 0 | 97.9 |
| $-480$ | 1800 | -480 | -3 | 0 | 94.3 |
| -450 | 1800 | $-450$ | 4 | $-2$ | 95.3 |
| -420 | 1800 | $-420$ | 7 | -4 | 92.2 |
| -390 | 1800 | -390 | 9 | -4 | 95.2 |
| --360 | 1800 | $-360$ | -3 | -E | 96.7 |
| -330 | 1800 | $-330$ | -8 | -4 | 95.8 |
| -300 | 1800 | -300 | $-10$ | 0 | 74.4 |
| -270 | 1800 | $-270$ | -8 | 3 | 90.3 |
| $-240$ | 1800 | -240 | -9 | 2 | 92.4 |
| $-210$ | 1800 | -210 | -8 | 2 | 84 |
| $-180$ | 1800 | -180 | -8 | 3 | 82.9 |
| -150 | 1800 | $-150$ | -4 | 3 | 85 |
| $-120$ | 1800 | $-120$ | $-2$ | 2 | 85.2 |
| --90 | 1800 | $-90$ | 0 | 2 | 85.2 |
| -60 | 1800 | -6O | 0 | 0 | 85.5 |
| --30 | 1800 | -30 | 0 | 1 | 83.6 |
| 0 | 1800 | 0 | $\epsilon$ | 4 | 74.75 |
| 30 | 1800 | 30 | 2 | 3 | 65 |
| 60 | 1800 | 60 | 5 | 3 | 63.6 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 90 | 1800 | 90 | 17 | 13 | 64.8 |
| 120 | 1800 | 120 | 7 | 8 | 73.3 |
| 150 | 1800 | 150 | -2 | 4 | 71 |
| 180 | 1800 | 180 | 0 | 3 | 67.5 |
| 210 | 1800 | 210 | 2 | 3 | 67.5 |
| 240 | 1800 | 240 | -1 | 2 | 69.1 |
| 270 | 1800 | 270 | 4 | 1 | 69.7 |
| 300 | 1800 | 300 | 5 | 0 | 70.2 |
| 330 | 1800 | 330 | 8 | 1 | 70.2 |
| 360 | 1800 | 360 | 10 | 2 | 69.2 |
| 390 | 1800 | 390 | 3 | 1 | 6E. 2 |
| 420 | 1800 | 420 | 2 | 0 | 65. 8 |
| 450 | 1800 | 450 | 7 | 3 | 64.8 |
| 480 | 1800 | 480 | 13 | 5 | 6E. 6 |
| 510 | 1800 | 510 | 16 | $\epsilon$ | 68. $\epsilon$ |
| 540 | 1800 | 540 | $1 \epsilon$ | $E$ | 70.3 |
| 570 | 1800 | 570 | $1 \epsilon$ | $\epsilon$ | 73.5 |
| 600 | 1800 | 600 | 14 | 5 | 78.8 |
| 630 | 1800 | 630 | 15 | 4 | 80.5 |
| 660 | 1800 | E60 | 13 | 2 | 83.5 |
| 690 | 1800 | 690 | 14 | 0 | 85.6 |
| line | 2000 |  |  |  |  |
| -930 | 2000 | -930 | 14 | $-5$ | 12 |
| $-900$ | 2000 | -900 | 0 | -3 | 19 |
| -970 | 2000 | -870 | -2 | -1 | $1 \epsilon$ |
| -840 | 2000 | -840 | $-6$ | $\epsilon$ | 12 |
| -810 | 2000 | -810 | -3 | 4 | 12 |
| -780 | 2000 | --780 | -9 | 1 | 10 |
| -750 | 2000 | $-750$ | -3 | $\epsilon$ | 0 |
| -720 | 2000 | -720 | 7 | 14 | $\epsilon$ |
| -690 | 2000 | -690 | $-10$ | 4 | 12 |
| -660 | 2000 | -6EO | -4 | 2 | 10 |
| -630 | 2000 | $\cdots 60$ | 0 | 3 | $\epsilon$ |
| -600 | 2000 | -600 | 7 | 2 | 13 |
| $-570$ | 2000 | - 570 | 3 | O | 17 |
| --540 | 2000 | $-540$ | -4 | 0 | 14 |
| -510 | 2000 | --510 | -3 | -1. | 12 |
| -480 | 2000 | -480 | 0 | 0 | 13 |
| -450 | 2000 | -450 | $-E$ | -1 | 10 |
| $-420$ | 2000 | $-420$ | $-2$ | -2 | $\epsilon$ |
| -390 | 2000 | $-390$ | -1 | -1 | 7 |
| -360 | 2000 | --360 | 0 | -3 | 4 |
| -330 | 2000 | -330 | $\bigcirc$ | -4 | 2 |
| -300 | 2000 | -300 | 7 | -3 | 7 |
| -270 | 2000 | $-270$ | -4 | -4 | 8 |
| -240 | 2000 | $-240$ | -5 | -1 | 3 |
| -210 | 2000 | $-210$ | -14 | $-2$ | 1 |
| -180 | 2000 | $-180$ | $-17$ | -4 | 99.7 |
| $-150$ | 2000 | $-150$ | $-10$ | -3 | 99.5 |
| -120 | 2000 | $-120$ | -6 | --3 | 98.5 |
| $-90$ | 2000 | -90 | -8 | -1 | 3 |
| -60 | 2000 | $-60$ | $-10$ | 0 | 96.4 |
| -30 | 2000 | -30 | $-12$ | 2 | 94.7 |
| 0 | 2000 | 0 | $-12$ | 2 | 92. 1 |
| 30 | 2000 | 30 | -7 | 2 | 86. 5 |


| Station | Line | Statign | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EO | 2000 | 60 | - 6 | 1 | 85.9 |
| 90 | 2000 | 90 | $-7$ | 1 | 81.7 |
| 120 | 2000 | 120 | 0 | 0 | 82.4 |
| 150 | 2000 | 150 | 0 | 0 | 81 |
| 180 | 2000 | 130 | 3 | 0 | 73.6 |
| 210 | 2000 | 210 | 0 | 0 | 78.1 |
| 240 | 2000 | 240 | 5 | 4 | 75.3 |
| 270 | 2000 | 270 | 8 | 3 | 75.9 |
| 300 | 2000 | 300 | 11 | 5 | 74.8 |
| 330 | 2000 | 330 | 11 | 2 | 77.1 |
| 360 | 2000 | 360 | 9 | 2 | 7E.5 |
| 390 | 2000 | 390 | 10 | 5 | 80. 2 |
| 420 | 2000 | 420 | 7 | 5 | 78.7 |
| 450 | 2000 | 450 | $\exists$ | 4 | 76.5 |
| 480 | 2000 | 480 | 11 | 5 | 74.4 |
| 510 | 2000 | 510 | 7 | 0 | 74.1 |
| 540 | 2000 | 540 | 8 | -1 | 73.4 |
| 570 | 2000 | 570 | 11 | 2 | 73.7 |
| 600 | 2000 | EOO | 12 | 4 | 72. |
| E30 | 2000 | ESO | 17 | 7 | 70.6 |
| EEO | 2000 | EGO | 15 | 4 | 7\%. こ |
| 690 | 2000 | E90 | 15 | $\underline{\square}$ | 74.1 |
| 720 | 2000 | 720 | 13 | 1 | 73. |
| line | 2200 |  |  |  |  |
| $-750$ | 2200 | -750 | -8 | 9 | 43 |
| $-720$ | 2200 | $-720$ | -11 | 7 | 28 |
| -690 | 2200 | -690 | -9 | 10 | 23 |
| $-E \in O$ | 2200 | $-660$ | 0 | 9 | -1 |
| -ESO | 2200 | -6З0 | $-3$ | 7 | 29 |
| -600 | 2200 | $-600$ | $-E$ | 5 | 25 |
| -570 | 200 | -570 | $-2$ | 3 | 24 |
| -540 | 2000 | $-540$ | 5 | 2 | 23 |
| -510 | 2200 | -510 | E | 1 | -7 |
| -480 | 2200 | -480 | 4 | 0 | 31 |
| $-450$ | 200 | $-450$ | 4 | 1 | 29 |
| -420 | 200 | $-420$ | 0 | 0 | 31 |
| $-390$ | 2200 | -390 | 5 | $\underline{2}$ | 29 |
| $-360$ | 200 | $-360$ | 1 | 1 | 30 |
| $-330$ | 220 | $-330$ | 1 | 1 | 28 |
| -300 | 2200 | -300 | $\because$ | 2 | 30 |
| $-270$ | 200 | $-270$ | $-5$ | 1 | 30 |
| $-240$ | 200 | $-240$ | $-3$ | 0 | 21 |
| $-210$ | 2200 | $-210$ | $-5$ | 0 | 18 |
| $-180$ | 200 | $-180$ | $-3$ | -1 | 24 |
| $-150$ | 2200 | $-150$ | $-E$ | $-3$ | 22 |
| $-120$ | 200 | $-120$ | $-4$ | 0 | 17 |
| -90 | 2200 | -90 | $-3$ | 0 | 23 |
| -60 | 2000 | $-60$ | -8 | 3 | 16 |
| $-30$ | 2200 | $-30$ | 0 | 0 | 20 |
| 0 | 2200 | 0 | $-12$ | 1 | 2 |
| 30 | 2200 | 30 | $-14$ | - | 11 |
| 60 | 2200 | EO | -9 | 1 | 10 |
| 90 | 2200 | 90 | $-23$ | $\underline{2}$ | 1 |
| 120 | 2000 | 120 | $-28$ | 1 | 95. 3 |
| 150 | 2200 | 150 | $-23$ | $-2$ | 80.8 |


| Statian | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 180 | 2200 | 180 | -32 | - 6 | 75 |
| 210 | 2200 | 210 | -26 | 0 | 71.9 |
| 240 | 2200 | 240 | $-41$ | $-16$ | 61.5 |
| 270 | 2200 | 270 | -30 | -4 | 63 |
| 300 | 2200 | 300 | -23 | -1 | E. |
| 330 | 2200 | 330 | -18 | 2 | 58.8 |
| 360 | 2200 | 360 | -9 | 4 | 60.1 |
| 390 | 2200 | 390 | -11 | 1 | E2. 1 |
| 420 | 2200 | 420 | -13 | 0 | 61.5 |
| 450 | 2200 | 450 | -9 | -1 | 63 |
| 480 | 2200 | 480 | -12 | -2 | E3.E |
| 510 | 2200 | 510 | -8 | $-3$ | 63.3 |
| 540 | 2200 | 540 | -4 | -4 | 61.7 |
| 570 | 2200 | 570 | 1 | -2 | E1.5 |
| 600 | 2200 | 600 | 5 | 2 | 62.3 |
| E30 | 2200 | E30 | -4 | $\epsilon$ | E1.4 |
| E60 | 2200 | E60 | 4 | 8 | 62.3 |
| - 690 | 2200 | 690 | 7 | 7 | 65.2 |
| 720 | 2200 | 720 | $\epsilon$ | 4 | E.5. 3 |
| 750 | 2200 | 750 | 10 | $-2$ | E3. 6 |
| line | 1200 |  |  |  |  |
| -1410 | 1200 | -1410 | 23 | -3 | 93.9 |
| -1380 | 1200 | -1380 | 27 | -5 | 0 |
| -1350 | 1200 | -1350 | 25 | -9 | 9 |
| -1320 | 1200 | -1320 | 13 | $-16$ | 13 |
| -1290 | 1200 | $-1290$ | 17 | -18 | 94.9 |
| $-1260$ | 1200 | -1260 | 28 | -15 | 79.8 |
| -1230 | 1200 | $-1230$ | 17 | -7 | 37 |
| -1200 | 1200 | -1200 | -4 | -1 | 37 |
| -1170 | 1200 | -1170 | -21 | 1 | 19 |
| -1140 | 1200 | -1140 | -8 | -4 | $\epsilon$ |
| -1110 | 1200 | -1110 | $-1 E$ | -2 | 97.6 |
| -1080 | 1200 | -1080 | -7 | $-E$ | 8 |
| -1050 | 1200 | -1050 | -14 | -11 | 1 |
| -1020 | 1200 | -1020 | -9 | -3 | 1 |
| -990 | 1200 | -990 | -14 | -3 | 4 |
| -960 | 1200 | -960 | -18 | -4 | 1 |
| -930 | 1200 | -930 | -9 | -5 | 93 |
| -900 | 1200 | -900 | $-15$ | -9 | 96.4 |
| -870 | 1200 | -870 | -12 | -4 | 95.3 |
| $-840$ | 1200 | $-840$ | -9 | -8 | 91.3 |
| -810 | 1200 | -810 | $-3$ | -7 | 92 |
| -780 | 1200 | -780 | 3 | -5 | 93.5 |
| -750 | 1200 | -750 | 13 | 1 | 94.5 |
| -720 | 1200 | -720 | 9 | $\epsilon$ | 5 |
| -690 | 1200 | -690 | $-10$ | 5 | 95. 6 |
| -660 | 1200 | -6EO | $-10$ | 5 | 95.4 |
| -630 | 1200 | -630 | -8 | $E$ | 95.2 |
| -600 | 1200 | -600 | $-\epsilon$ | 3 | 96 |
| -570 | 1200 | -570 | -11 | 0 | 88.7 |
| $-540$ | 1200 | -540 | -4 | 1 | 88 |
| -510 | 1200 | $-510$ | -8 | 0 | 89.9 |
| -480 | 1200 | -480 | $-12$ | 0 | 87.2 |
| -450 | 1200 | -450 | -5 | 0 | 88.5 |
| $-420$ | 1200 | $-420$ | -4 | 0 | 87 |


| Statign | Line | Station | In-Fhase | Qutad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -390 | 1200 | -3'Э0 | -1 | 0 | 8E.E |
| $-360$ | 1200 | -360 | 0 | $-1$ | 83.1 |
| $-330$ | 1200 | -330 | 1 | 0 | 88.4 |
| -300 | 1200 | -300 | 2 | 1 | 85.7 |
| $-270$ | 1200 | $-270$ | 4 | - | 8E. 8 |
| -240 | 1200 | -240 | $-3$ | -4 | 82.2 |
| $-210$ | 1200 | -210 | 8 | -1 | 80.2 |
| $-180$ | 1200 | -180 | 10 | 3 | 85.4 |
| $-150$ | 1200 | $-150$ | 3 | 2 | 83.7 |
| $-120$ | 1200 | $-120$ | 5 | 1 | 82. 6 |
| -90 | 1200 | -90 | 10 | $-2$ | 80.5 |
| -60 | 1200 | -60 | 1.1 | 0 | 80. 6 |
| $-30$ | 1200 | $-30$ | 13 | 3 | 84.3 |
| 0 | 1200 | 0 | 8 | 7 | 88.5 |
| 30 | 1200 | 30 | $\epsilon$ | 3 | 37 |
| 60 | 1200 | 60 | 15 | 0 | 38 |
| 90 | 1200 | 90 | 13 | 1 | 46 |
| 120 | 1200 | 120 | 1 | 3 | 50 |
| 150 | 1200 | 150 | 0 | $\varepsilon$ | 37 |
| 130 | 1200 | 180 | -. | 4 | 31 |
| 210 | 1200 | 210 | 9 | 5 | 25 |
| 240 | 1200 | 240 | 8 | 1 | 30 |
| 270 | 1200 | 270 | 5 | $-7$ | 18 |
| 300 | 1200 | 300 | 13 | -4 | 18 |
| 330 | 1200 | 330 | 25 | -3 | 20 |
| 360 | 1200 | 360 | 14 | 1 | 42 |
| 370 | 1200 | 370 | 3 | 0 | 32 |
| 420 | 1200 | 420 | 5 | 2 | 30 |
| 450 | 1200 | 450 | $E$ | 4 | 31 |
| 480 | 1200 | 480 | 8 | z | 27 |
| 510 | 1200 | 510 | 16 | 1 | 27 |
| 540 | 1200 | 540 | 15 | $-2$ | 25 |
| 570 | 1200 | 570 | 16 | 0 | 27 |
| EOO | 1200 | 600 | 18 | 5 | 32 |
| ESO | 1200 | 630 | 8 | 4 | 43 |
| EEO | 1200 | EEO | -5 | -1 | 34 |
| E90 | 1200 | 690 | -4 | -1 | 21 |
| 720 | 1200 | 720 | $\Sigma$ | 2 | 13 |
| 750 | 1200 | 750 | $E$ | 4 | 13 |
| 780 | 1200 | 780 | 7 | 3 | 9 |
| 810 | 1200 | 810 | 8 | 7 | 1 |
| 840 | 1200 | 840 | 12 | 5 | $\epsilon$ |
| 1 ine | 1400 |  |  |  |  |
| $-1410$ | 1400 | $-1410$ | 0 | 0 | 78.4 |
| $-1380$ | 1400 | -1380 | 5 | $-3$ | 81.2 |
| -1350 | 1400 | -1350 | 13 | - | 83.3 |
| $-1320$ | 1400 | -1320 | 14 | -2 | 82.1 |
| -1290 | 1400 | -1290 | 17 | $-E$ | 81.8 |
| $-1260$ | 1400 | -1260 | 20 | -8 | 83.2 |
| -1230 | 1400 | -1230 | 二E | -9 | 83 |
| $-1200$ | 1400 | -1200 | 34 | -4 | 86.1 |
| -1170 | 1400 | $-1170$ | 18 | -9 | 5 |
| $-1140$ | 1400 | -1140 | 9 | -4 | 4 |
| $-1110$ | 1400 | -1110 | -4 | 0 | 1 |
| $-1080$ | 1400 | -1080 | $-3$ | 1 | 94. 9 |


| Station | Line | Station | In－Fhase | Quad． | Fld．Str． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $-1050$ | 1400 | $-1050$ | －5 | 2 | Эこ．7 |
| $-1020$ | 1400 | $-1020$ | －8 | 11 | 93 |
| －990 | 1400 | －990 | $-1 E$ | 8 | 93.8 |
| － 960 | 1400 | －960 | －12 | 14 | 85.7 |
| －930 | 1400 | －930 | $-13$ | 10 | B2． 1 |
| －900 | 1400 | －900 | －11 | 8 | 84.3 |
| －870 | 1400 | －870 | －Э | 4 | 83.2 |
| $-840$ | 1400 | －840 | －9 | 3 | 84.7 |
| $-810$ | 1400 | －810 | －8 | 7 | 85 |
| －780 | 1400 | $-780$ | －9 | 6 | 86． 8 |
| $-750$ | 1400 | $-750$ | －7 | 0 | 78.4 |
| －720 | 1400 | $-720$ | 1 | 5 | 80.4 |
| －6＇50 | 1400 | －6G0 | －$E$ | $-3$ | 82.4 |
| －EEO | 1400 | $-6 \in O$ | －5 | －9 | 80.4 |
| －630 | 1400 | －ESO | 3 | $-E$ | 79 |
| －600 | 1400 | －600 | 7 | －4 | 81.7 |
| －570 | 1400 | $-570$ | 5 | －4 | 86．5 |
| $-540$ | 1400 | $-540$ | $-20$ | －4 | 87.9 |
| $-510$ | 1400 | $-510$ | －6 | 3 | 81 |
| $-480$ | 1400 | $-480$ | －3 | $\theta$ | 83.1 |
| $-450$ | 1400 | －450 | －8 | 7 | 87．2 |
| －420 | 1400 | $-420$ | $-5$ | 5 | 90．1 |
| －390 | 1400 | －390 | 2 | $\epsilon$ | 83.9 |
| －360 | 1400 | $-360$ | 5 | 5 | 77.3 |
| $-330$ | 1400 | －330 | 3 | 1 | 78.7 |
| －300 | 1400 | －900 | 7 | 1 | 73.1 |
| －270 | 1400 | －270 | 9 | 4 | 73．E |
| －240 | 1400 | －240 | 0 | 1 | 78.3 |
| $-210$ | 1400 | $-210$ | －4 | 1 | 77 |
| $-180$ | 1400 | $-180$ | $-4$ | 1 | 72． |
| $-150$ | 1400 | $-150$ | －1 | 0 | 68 |
| $-120$ | 1400 | $-120$ | 0 | 0 | $E \in . \epsilon$ |
| －90 | 1400 | －90 | 5 | 1 | ES． 7 |
| $-60$ | 1400 | －60 | 0 | 2 | 59.9 |
| $-30$ | 1400 | $-30$ | 8 | 1 | Eこ．3 |
| 0 | 1400 | 0 | 11 | 0 | E4．4 |
| 30 | 1400 | 30 | $E$ | 0 | EF． 1 |
| 60 | 1400 | EO | 11 | 1 | E4． 6 |
| 90 | 1400 | 90 | 18 | 5 | E8． 9 |
| 120 | 1400 | 120 | 17 | $\epsilon$ | 70.5 |
| 150 | 1400 | 150 | 19 | 4 | 71.8 |
| 180 | 1400 | 180 | 23 | 7 | フ玉．こ |
| 210 | 1400 | 210 | 20 | 7 | 76．E |
| 240 | 1400 | 240 | 22 | 10 | 86 |
| 270 | 1400 | 270 | 15 | 7 | 86． 8 |
| 300 | 1400 | 300 | 10 | 4 | 88.5 |
| 330 | 1400 | 330 | 13 | 9 | Эこ． |
| 360 | 1400 | 360 | 4 | 1 | 90.8 |
| 390 | 1400 | 390 | 3 | －1 | 86． 9 |
| 420 | 1400 | 420 | 9 | 0 | 84.9 |
| 450 | 1400 | 450 | 12 | 1 | 87.5 |
| 480 | 1400 | 490 | 6 | 1 | 90.8 |
| 510 | 1400 | 510 | 11 | 5 | 90.2 |
| 540 | 1400 | 540 | 11 | 9 | 93.8 |
| 570 | 1400 | 570 | 12 | $E$ | 93．E |


| Statiom | Line | Station | In－Fhase | Quad． | Fld．Str． |
| :---: | :---: | :---: | :---: | :---: | :---: |
| EOO | 1400 | 600 | 7 | $\because$ | 93.1 |
| E30 | 1400 | E30 | 12 | 7 | 94． 9 |
| EEO | 1400 | EEO | 15 | 5 | 93.6 |
| E90 | 1400 | 690 | 12 | $-3$ | 95． 4 |
| 720 | 1400 | 720 | 21 | 4 | 日Э．${ }^{\text {9 }}$ |
| 750 | 1400 | 750 | 16 | $\epsilon$ | 99.9 |
| 780 | 1400 | 780 | $E$ | 5 | $\varepsilon$ |
| 810 | 1400 | 810 | $E$ | 4 | 98 |
| 840 | 1400 | 840 | 10 | 1 | 93.9 |
| 870 | 1400 | 870 | 17 | 5 | 95.3 |
| 1 ine | 1600 |  |  |  |  |
| $-1200$ | 1600 | $-1200$ | 40 | $-12$ | 87.8 |
| $-1170$ | 1600 | $-1170$ | 41 | $-\epsilon$ | $E$ |
| $-1140$ | 1600 | $-1140$ | 1 | －1 | 37 |
| $-1110$ | 1600 | －1110 | $-2$ | 1 | 18 |
| $-1080$ | 1600 | $-1080$ | $-3$ | 0 | 9 |
| $-1050$ | 1600 | $-1050$ | $こ$ | 1 | 8 |
| $-1020$ | 1600 | $-1020$ | $\underline{\square}$ | 7 | 3 |
| －990 | 1600 | $-990$ | 14 | 7 | 0 |
| $-960$ | 1600 | －960 | $-20$ | 3 | 11 |
| －930 | 1600 | $-930$ | －20 | 7 | Ge． 1 |
| －900 | 1600 | －900 | $-10$ | 10 | 90.8 |
| －870 | 1600 | －870 | $-3$ | 11 | 89.9 |
| $-840$ | 1600 | －840 | $\epsilon$ | 10 | 94.7 |
| －810 | 1600 | －810 | 10 | 13 | 玉 |
| $-780$ | 1600 | －780 | $-5$ | 8 | 3 |
| $-750$ | 1600 | $-750$ | $-2$ | 7 | 8E． 3 |
| $-720$ | 1600 | －720 | $-10$ | $E$ | 94.4 |
| －690 | 1600 | －690 | －7 | 3 | 95.8 |
| $-6 \in O$ | 1600 | $-E \in O$ | －4 | 4 | 94.7 |
| $-630$ | 1600 | －630 | －1 | 1 | 97.8 |
| －600 | 1600 | －600 | 0 | 1 | 99.1 |
| $-570$ | 1600 | －570 | $-3$ | 1 | 94 |
| $-540$ | 1600 | －540 | 4 | 4 | 96． 1 |
| $-510$ | 1600 | －510 | $-15$ | －2 | ЭЄ． 8 |
| －－480 | 1600 | $-480$ | $-18$ | －3 | 95 |
| $-450$ | 1600 | $-450$ | $-10$ | $-2$ | G2．1 |
| $-420$ | 1600 | －420 | $-2$ | －1 | 91.1 |
| －390 | 1600 | $-390$ | $-7$ | $-2$ | 87 |
| $-360$ | 1600 | －360 | $-3$ | －1 | 84.5 |
| －330 | 1600 | －330 | 0 | $-1$ | 82． 6 |
| $-300$ | 1600 | －300 | 9 | 1 | 8E．E |
| $-270$ | 1600 | $-270$ | 5 | $-3$ | 87．1 |
| $-240$ | 1600 | －240 | 9 | $-2$ | 81 |
| $-210$ | 1600 | $-210$ | 10 | 0 | 87． 2 |
| $-180$ | 1600 | －180 | 9 | 0 | 88.5 |
| $-150$ | 1600 | $-150$ | 10 | 0 | 88.3 |
| $-120$ | 1600 | $-120$ | 4 | 4 | 92．8 |
| － 90 | 1600 | $-90$ | 1 | 4 | Э2．1 |
| －60 | 1600 | －EO | 2 | 0 | 89.5 |
| －30 | 1600 | $-30$ | 7 | 0 | 93 |
| 0 | 1600 | 0 | 1 | 1 | 94.9 |
| 30 | 1600 | 30 | 0 | 1 | 88.5 |
| EO | 1600 | EO | 5 | 0 | 86．3 |
| 90 | 1600 | 90 | 9 | $-2$ | 82．3 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 120 | 1600 | 120 | 3 | -- | 79.3 |
| 150 | 1600 | 150 | $\cdots$ | $-5$ | 79 |
| 180 | 1600 | 180 | 10 | 0 | 78.1 |
| 210 | 1600 | -10 | 11 | 3 | 78. 3 |
| 240 | 1600 | 240 | 12 | 4 | 79.7 |
| 270 | 1600 | 270 | 17 | 4 | 79.8 |
| 300 | 1600 | 300 | 18 | 7 | 76.7 |
| 330 | 1600 | 330 | 20 | $\epsilon$ | 84.8 |
| 360 | 1600 | 360 | 20 | 4 | 87.1 |
| 300 | 1600 | 390 | 17 | 2 | 8 E .3 |
| 420 | 1600 | 420 | 21 | 4 | 88. - |
| 450 | 1600 | 450 | 15 | 1 | 9' |
| 480 | 1600 | 480 | 10 | -4 | 89.1 |
| 510 | 1600 | 510 | 14 | $-3$ | 88.9 |
| 540 | 1600 | 540 | 13 | $-3$ | 89.4 |
| 570 | 1600 | 570 | 10 | $-4$ | 8E. 7 |
| EOO | 1600 | 600 | 12 | $-3$ | 84.5 |
| E30 | 1600 | 630 | $1 E$ | $-1$ | 84.5 |
| EEO | 1600 | EEO | $1 E$ | - | 85.3 |
| E90 | 1600 | 690 | 17 | 0 | 88.9 |
| 720 | 1600 | 720 | 14 | -1 | 90.1 |
| 750 | 1600 | 750 | 9 | $-3$ | 90. 3 |
| 780 | 1600 | 780 | 11 | $-3$ | 85.5 |
| 810 | 1600 | 810 | 13 | 3 | 90.5 |
| line | 800 |  |  |  |  |
| -990 | 800 | -990 | 3 | -1 | 102 |
| -960 | 800 | -960 | $-3$ | 0 | 87.8 |
| -930 | 800 | -930 | -9 | -4 | 97.6 |
| -900 | 800 | -900 | -3 | -1 | 92 |
| -870 | 800 | -870 | 0 | $-3$ | 98.8 |
| -840 | 800 | -840 | - - | -3 | 97.1 |
| -810 | 800 | -810 | -5 | -5 | 94.8 |
| -780 | 800 | $-780$ | -7 | -4 | 92.8 |
| -750 | 800 | -750 | -9 | -2 | 95.3 |
| -720 | 800 | -720 | $-16$ | 1 | 93 |
| -690 | 800 | -690 | -31 | -1. | 85. |
| -EEO | 800 | -660 | $-0$ | 1 | 92.8 |
| -630 | 800 | -630 | -20 | 0 | 89.4 |
| -600 | 800 | -600 | $-2$ | $-1$ | 87.1 |
| $-570$ | 800 | $-570$ | $-10$ | 0 | 87.7 |
| $-540$ | 800 | $-540$ | 0 | 0 | 85.1 |
| -510 | 800 | $-510$ | 0 | -1 | 84.4 |
| -480 | 800 | -480 | -7 | -4 | 97.3 |
| -450 | 800 | $-450$ | -9 | $-E$ | 87.4 |
| -420 | 800 | $-420$ | -9 | -7 | 84.6 |
| -390 | 800 | -390 | $-6$ | -5 | 85.8 |
| -360 | 800 | $-360$ | $-19$ | $-E$ | 86.7 |
| $-330$ | 800 | -330 | $-18$ | -7 | 82.E |
| -300 | 800 | -300 | $-3$ | -4 | Э6.4 |
| -270 | 800 | $-270$ | 0 | -4 | Э'. |
| -240 | 800 | -240 | $-2$ | $-5$ | 101 |
| -210 | 800 | -210 | -8 | -2 | 102 |
| $-180$ | 800 | $-180$ | -11 | $-2$ | 93.3 |
| -150 | 800 | $-150$ | $-13$ | -1 | 94.3 |
| $-120$ | 800 | $-120$ | -7 | 0 | 84.1 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -50 | 800 | -90 | 0 | 0 | 89.2 |
| -60 | 800 | -60 | -3 | -2 | 85.6 |
| -30 | 800 | $-30$ | 1 | 2 | 89.3 |
| O | 800 | 0 | -11 | 5 | 97.2 |
| 30 | 800 | 30 | 3 | 8 | 92.2 |
| 60 | 800 | 60 | 7 | 7 | 91.5 |
| 90 | 900 | 90 | 8 | 7 | 95.1 |
| 120 | 800 | 120 | 5 | 3 | 90.1 |
| 150 | 800 | 150 | 5 | 3 | 94 |
| 180 | 800 | 180 | 2 | 2 | 96. 1 |
| 210 | 800 | 210 | 1 | 2 | 95.6 |
| 240 | 800 | 240 | 5 | 3 | 91.9 |
| 270 | 800 | 270 | 3 | 3 | 96.1 |
| 300 | 800 | 300 | 2 | 3 | 97 |
| 330 | 800 | 330 | 0 | 5 | 99 |
| 360 | 800 | 360 | 2 | 4 | 3 |
| 390 | 800 | 390 | 7 | 1. | 4 |
| 420 | 800 | 420 | 10 | 0 | 0 |
| 450 | 800 | 450 | 8 | 5 | 3 |
| 480 | 800 | 480 | -4 | 5 | 9 |
| 510 | 800 | 510 | -11 | 0 | 1 |
| 540 | 800 | 540 | -4 | 3 | 0 |
| 570 | 800 | 570 | -5 | 0 | 3 |
| 600 | 800 | 600 | $-\epsilon$ | -2 | 1 |
| 630 | 800 | E30 | $-2$ | 0 | 78.8 |
| line | 600 |  |  |  |  |
| -720 | 600 | $-720$ | -8 | 1 | . 05 |
| -690 | 600 | -690 | $-15$ | 0 | . 06 |
| -660 | 600 | -660 | -24 | -1 | . 02 |
| -630 | 600 | -630 | -26 | $-2$ | . 04 |
| -600 | 600 | -600 | -13 | 0 | .07 |
| -570 | 600 | -570 | -5 | 1 | . 05 |
| $-540$ | 600 | -540 | 0 | 1 | . 115 |
| $-510$ | 600 | -510 | $E$ | 2 | . 1 |
| -480 | 600 | -480 | 5 | 1 | . 02 |
| $-450$ | 600 | -450 | 5 | 0 | . 05 |
| $-420$ | 600 | $-420$ | 3 | 1 | .09 |
| $-390$ | 600 | -390 | -1 | -1 | . 1 |
| -360 | 600 | -360 | -2 | -1 | . 06 |
| -330 | 600 | -330 | 0 | 0 | . 06 |
| -300 | 600 | -300 | -8 | -2 | . 06 |
| -270 | 600 | -270 | -7 | 2 | . 06 |
| -240 | 600 | -240 | 3 | 1 | . 06 |
| -210 | 600 | -210 | 2 | 1 | . 05 |
| -180 | EOO | -180 | 0 | 0 | . 11 |
| -150 | 600 | -150 | $-6$ | 1 | . 03 |
| $-120$ | 600 | $-120$ | -2 | 2 | . 04 |
| -90 | 600 | -90 | 3 | 1 | . 02 |
| -60 | EOO | -60 | 2 | 0 | . 05 |
| -30 | 600 | -30 | 3 | 0 | . 08 |
| 0 | 600 | 0 | 9 | -4 | 1 |
| 30 | EOO | 30 | 8 | 0 | 78.5 |
| 60 | 600 | 60 | 4 | 1 | 5 |
| 90 | 600 | 90 | 3 | 3 | 10 |
| 120 | 600 | 120 | 4 | 4 | 7 |


| Station | Line | Statign | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 150 | EOO | 150 | $\square$ | 1 | 9'ヨ |
| 180 | EOO | 180 | 1 | 0 | 2 |
| 210 | 600 | 210 | 0 | 0 | 99.4 |
| 240 | EOO | 240 | 1 | 1 | '78.8 |
| 270 | 600 | 270 | 0 | 3 | 1 |
| 300 | EOO | 300 | -1 | 0 | 98.1 |
| 330 | 600 | 330 | -2 | 4 | 0 |
| 360 | E00 | 360 | -1 | 5 | 94.7 |
| 30 | EOO | 390 | -1 | 5 | 9\%. 9 |
| 420 | 600 | 420 | $-1$ | 4 | 92.6 |
| line | 400 |  |  |  |  |
| -480 | 400 | $-480$ | $-10$ | $-3$ | 93.8 |
| $-450$ | 400 | $-450$ | 0 | 0 | 93. |
| -420 | 400 | -420 | - | - - | 1 |
| -390 | 400 | $-350$ | $-4$ | $-E$ | 97.4 |
| -360 | 400 | $-360$ | $-3$ | $-5$ | 93.3 |
| $-330$ | 400 | -330 | -1 | $-5$ | 93.1 |
| -300 | 400 | -300 | -1 | 3 | - |
| $-270$ | 400 | $-270$ | 0 | 3 | 4 |
| $-240$ | 400 | $-240$ | 1 | 0 | 95.7 |
| $-210$ | 400 | $-210$ | 13 | 0 | 97.7 |
| $-180$ | 400 | $-180$ | 15 | 4 | 10 |
| $-150$ | 400 | $-150$ | 0 | 12 | 1 |
| $-120$ | 400 | $-120$ | $-3$ | $\epsilon$ | 4 |
| -90 | 400 | -90 | 0 | 5 | 4 |
| -60 | 400 | -60 | 2 | 0 | 0 |
| $-30$ | 400 | $-30$ | 7 | 0 | 4 |
| 0 | 400 | 0 | 4 | -3 | 3 |
| 30 | 400 | 30 | 0 | $-E$ | 17 |
| 60 | 400 | EO | $-1 E$ | 1 | 13 |
| 90 | 400 | 90 | -7 | 3 | 10 |
| 120 | 400 | 120 | $-4$ | 0 | 10 |
| 150 | 400 | 150 | 3 | 0 | $\exists$ |
| 180 | 400 | 180 | 8 | 0 | 10 |
| 210 | 400 | 210 | 5 | $-2$ | 18 |
| 240 | 400 | 240 | 3 | $-3$ | 21 |
| 270 | 400 | 270 | -11 | $-2$ | 18 |
| 300 | 400 | 300 | -9 | 0 | 7 |
| 330 | 400 | 330 | $-4$ | $-3$ | 10 |
| line | 1000 |  |  |  |  |
| $-1230$ | 1000 | $-1230$ | 4 | -1 | 15 |
| $-1200$ | 1000 | $-1200$ | $-18$ | 0 | 15 |
| $-1170$ | 1000 | $-1170$ | -5 | 2 | 13 |
| $-1140$ | 1000 | $-1140$ | $-9$ | 0 | 14 |
| $-1110$ | 1000 | $-1110$ | -11 | $-2$ | 13 |
| -1080 | 1000 | $-1080$ | $-16$ | $-5$ | 13 |
| $-1050$ | 1000 | $-1050$ | -15 | 0 | 98.4 |
| $-1020$ | 1000 | $-1020$ | $-E$ | -7 | 1 |
| -990 | 1000 | -990 | $-14$ | -1 | 1 |
| -960 | 1000 | -960 | $-15$ | -1 | 78.2 |
| -930 | 1000 | -990 | $-17$ | $-5$ | ЭE.2 |
| -900 | 1000 | -900 | $-14$ | $-5$ | 98.6 |
| $-870$ | 1000 | -870 | -E | -4 | 0 |
| -840 | 1000 | $-840$ | -2 | $-3$ | 7 |
| $-810$ | 1000 | -810 | -2 | $-2$ | 8 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -730 | 1000 | $-730$ | 0 | -2 | 10 |
| -750 | 1000 | -750 | 14 | 1 | 11 |
| -720 | 1000 | -720 | 7 | 7 | 8 |
| $-690$ | 1000 | -690 | 0 | $\epsilon$ | 2 |
| -6EO | 1000 | - EEO | -3 | $z$ | 11 |
| -630 | 1000 | -630 | 2 | 1. | 11 |
| -600 | 1000 | -600 | 7.5 | 0 | 46.3 |
| $-570$ | 1000 | $-570$ | 5 | -2 | 7 |
| -540 | 1000 | -540 | 1 | -2 | 10 |
| $-510$ | 1000 | $-510$ | 5 | -2 | $E$ |
| -480 | 1000 | -480 | 7 | -1 | 12 |
| $-450$ | 1000 | $-450$ | 8 | 1 | 18 |
| $-420$ | 1000 | -420 | 0 | 0 | 22 |
| -390 | 1000 | -390 | -9 | 0 | 21 |
| -360 | 1000 | -360 | -5 | 4 | 18 |
| -330 | 1000 | -330 | 1 | $\epsilon$ | 13 |
| -300 | 1000 | -300 | - - | 3 | 15 |
| -270 | 1000 | $-270$ | -7 | 1 | 11 |
| $-240$ | 1000 | $-240$ | -7 | 0 | 1. |
| -210 | 1000 | $-210$ | $-6$ | 0 | $E$ |
| -130 | 1000 | -180 | 4 | 3 | 3 |
| -150 | 1000 | $-150$ | 9 | 3 | 7 |
| $-120$ | 1000 | $-120$ | 12 | 0 | 9 |
| -90 | 1000 | -90 | 10 | 0 | 16 |
| -60 | 1000 | -60 | 3 | -1 | 18 |
| $-30$ | 1000 | $-30$ | 0 | 1 | 15 |
| 0 | 1000 | 0 | -4 | 1 | 17 |
| 30 | 1000 | 30 | -1 | 2 | 12 |
| 60 | 1000 | 60 | 3 | 3 | 15 |
| 90 | 1000 | 90 | 4 | 3 | 17 |
| 120 | 1000 | 120 | 0 | 1 | 20 |
| 150 | 1000 | 150 | -2 | 0 | 14 |
| 190 | 1000 | 180 | 0 | 1 | 15 |
| 210 | 1000 | 210 | $\epsilon$ | 1 | 12 |
| 240 | 1000 | 240 | 11 | 0 | 20 |
| 270 | 1000 | 270 | 14 | -1. | 21 |
| 300 | 1000 | 300 | 2 | -3 | $\epsilon$ |
| 330 | 1000 | 330 | 9 | 0 | 9 |
| 360 | 1000 | 360 | 3 | -1 | 13 |
| 390 | 1000 | 390 | 4 | -2 | 11 |
| 420 | 1000 | 420 | 10 | 0 | 11 |
| 450 | 1000 | 450 | 11 | 1 | 12 |
| 480 | 1000 | 480 | 12 | 2 | 12 |
| 510 | 1000 | 510 | 10 | 2 | 17 |
| 540 | 1000 | 540 | 4 | 1 | 17 |
| 570 | 1000 | 570 | -4 | -3 | 15 |
| 600 | 1000 | 600 | 0 | 0 | 13 |
| E3O | 1000 | E30 | 1 | 0 | 5 |
| 660 | 1000 | EEO | 0 | -1 | 7 |
| 690 | 1000 | 690 | 2 | 0 | $\epsilon$ |
| 720 | 1000 | 720 | 1 | $-2$ | 8 |
| 750 | 1000 | 750 | 4 | 0 | 8 |
| 780 | 1000 | 780 | 5 | -1 | 11 |
| 810 | 1000 | 810 | 6 | $-2$ | 8 |
| line | 200 |  |  |  |  |


| Station | In-Fhase |
| :---: | :---: |
| -240 | 4 |
| -210 | 8 |
| -180 | 6 |
| -150 | 1 |
| -120 | 1 |
| -90 | - |
| -60 | 0 |
| -30 | -9 |
| 0 | -18 |
| 30 | -13 |
| 60 | -3 |
| 90 | 13 |
| 120 | 15 |
| 150 | 11 |


| Quad. | Fld. Str. |
| :---: | :---: |
| 3 | 93.2 |
| 4 | 99.6 |
| 2 | 4 |
| 0 | 1 |
| -2 | 1 |
| -3 | 0 |
| -2 | 8 |
| -4 | 6 |
| -13 | 91.7 |
| -13 | 84.5 |
| -9 | 82.8 |
| 0 | 82.9 |
| 2 | 89.7 |
| 2 | 90.6 |

Station line $-570$ $-540$ $-510$ $-480$ $-450$ $-420$ $-390$ -360
-330 -300
-270 $-240$

$$
\begin{aligned}
& -210 \\
& -190
\end{aligned}
$$

$$
\begin{aligned}
& -150 \\
& -150
\end{aligned}
$$

$$
-120
$$

$$
\begin{aligned}
& -90 \\
& -60
\end{aligned}
$$

$$
-30
$$

$$
\begin{array}{r}
0 \\
30
\end{array}
$$

$$
\begin{aligned}
& 30 \\
& 60
\end{aligned}
$$

$$
\begin{array}{r}
90 \\
120
\end{array}
$$

$$
150
$$

## 180



 330 360 390 420 450
480 510 540 570 600 630 660 690 720 750 line

$$
\begin{aligned}
& -420 \\
& -390 \\
& -360 \\
& -300 \\
& -300 \\
& -270
\end{aligned}
$$

| Line | Station | In-Fhas |
| :---: | :---: | :---: |
| 2400 |  |  |
| 2400 | $-570$ | 18 |
| 2400 | -540 | 27 |
| 2400 | -510 | 15 |
| 2400 | -480 | 4 |
| 2400 | $-450$ | 17 |
| 2400 | -420 | 22 |
| 2400 | -390 | 18 |
| 2400 | -360 | 19 |
| 2400 | -330 | 22 |
| 2400 | -300 | 21 |
| 2400 | $-270$ | 20 |
| 2400 | -240 | $\epsilon$ |
| 2400 | $-210$ | 10 |
| 2400 | -180 | 23 |
| 2400 | $-150$ | 26 |
| 2400 | $-120$ | 16 |
| 2400 | -90 | 21 |
| 2400 | $-60$ | 18 |
| 2400 | -30 | 24 |
| 2400 | 0 | 20 |
| 2400 | 30 | 20 |
| 2400 | 60 | 19 |
| 2400 | 90 | 18 |
| 2400 | 120 | 19 |
| 2400 | 150 | 20 |
| 2400 | 180 | 16 |
| 2400 | 210 | 14 |
| 2400 | 240 | 12 |
| 2400 | 270 | 8 |
| 2400 | 300 | 8 |
| 2400 | 330 | 7 |
| 2400 | 360 | 8 |
| 2400 | 350 | 7 |
| 2400 | 420 | 11 |
| 2400 | 450 | 12 |
| 2400 | 480 | 14 |
| 2400 | 510 | 14 |
| 2400 | 540 | 16 |
| 2400 | 570 | 15 |
| 2400 | EOO | 14 |
| 2400 | 630 | 16 |
| 2400 | $6 \in 0$ | 16 |
| 2400 | 690 | 18 |
| 2400 | 720 | 5 |
| 2400 | 750 | -3 |
| 2600 |  |  |
| 2600 | -420 | 18 |
| 2600 | -390 | 23 |
| 2600 | $-360$ | 14 |
| 2600 | -330 | 21 |
| 2600 | -300 | 32 |
| 2600 | -270 | 39 |



| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 420 | 2800 | 420 | 15 | 3 | 7.53 |
| 450 | 2800 | 450 | 10 | 0 | 7.59 |
| 430 | 2800 | 480 | 9 | 3 | 7.66 |
| 510 | 2800 | 510 | 3 | 1 | 7.29 |
| 1 i пe | 3000 |  |  |  |  |
| -90 | 3000 | -90 | 27 | -8 | E.925 |
| -60 | 3000 | -EO | 25 | -8 | 6.32 |
| $-30$ | 3000 | -30 | 34 | -8 | E.02 |
| 0 | 3000 | 0 | 26 | -8 | E.28 |
| 30 | 3000 | 30 | 32 | 0 | E. 81 |
| 60 | 3000 | 60 | 13 | 0 | 7.23 |
| 90 | 3000 | 90 | 20 | 3 | E. 7 |
| 120 | 3000 | 120 | 22 | 1 | 6.75 |
| 150 | 3000 | 150 | 27 | 3 | 6.74 |
| 180 | 3000 | 180 | 21 | 0 | 6.79 |
| 210 | 3000 | 210 | 21 | -2 | 6.53 |
| line | 1800 |  |  |  |  |
| -1080 | 1800 | $-1080$ | $5 E$ | $-15$ | 3.9e |
| -1050 | 1800 | -1050 | 37 | $-15$ | E. 17 |
| -1020 | 1800 | -1020 | 24 | -3 | 6.12 |
| -990 | 1800 | -990 | 7 | 1 | E. 75 |
| -960 | 1800 | -960 | 8 | 3 | 5.17 |
| -930 | 1800 | -930 | 10 | 3 | 4.82 |
| -900 | 1800 | -900 | 19 | 0 | 4.95 |
| -870 | 1800 | -870 | 21 | -1 | 5.21 |
| -840 | 1800 | -840 | 12 | 0 | 5.35 |
| -810 | 1800 | -810 | 10 | 4 | 5.04 |
| -780 | 1800 | -780 | $E$ | 3 | 4.89 |
| -750 | 1800 | -750 | 23 | 7 | 4.99 |
| -720 | 1800 | -720 | 14 | 4 | 5.48 |
| -690 | 1800 | -690 | 7 | 2 | 5.32 |
| -EEO | 1800 | -EEO | 5 | 1 | 5.26 |
| -630 | 1800 | -630 | 7 | 0 | 5.07 |
| -600 | 1800 | -600 | 8 | 2 | 5.09 |
| -570 | 1800 | $-570$ | 13 | 4 | 4.96 |
| -540 | 1800 | -5540 | 10 | 2 | 5.16 |
| $-510$ | 1300 | $-510$ | 11 | 3 | 5.15 |
| -480 | 1800 | -480 | 9 | 2 | 5.1 |
| $-450$ | 1800 | -450 | $\epsilon$ | 0 | 4.89 |
| -420 | 1800 | -420 | 14 | 0 | 4.52 |
| -390 | 1300 | $-390$ | 17 | -1 | 4.8 |
| -360 | 1800 | -360 | 14 | -1 | 4.96 |
| -330 | 1800 | -330 | 13 | 0 | 5.05 |
| -300 | 1800 | -300 | 9 | -1 | 4.96 |
| -270 | 1800 | -270 | 15 | 0 | 4.97 |
| -240 | 1800 | -240 | 20 | -1 | 5.02 |
| -210 | 1800 | -210 | 16 | $-6$ | 5.37 |
| -180 | 1800 | -180 | 17 | -5 | 5.14 |
| -150 | 1800 | -150 | 16 | -5 | 5.67 |
| -120 | 1800 | -120 | 11 | -4 | 5.49 |
| -90 | 1800 | -90 | 12 | -3 | 5.62 |
| -60 | 1800 | -60 | 9 | -1 | 5.46 |
| -30 | 1800 | -30 | 13 | 0 | 5.57 |
| 0 | 1800 | 0 | 18 | 1 | 5.24 |
| 30 | 1800 | 30 | 13 | 0 | $E$ |


| Statian | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $E 0$ | 1800 | EO | 14 | 0 | 5.79 |
| 50 | 1800 | 90 | 25 | 0 | 5.77 |
| 120 | 1800 | 120 | 15 | -1 | E. $\mathrm{F}^{\prime}$ |
| 150 | 1800 | 150 | 17 | 1 | E. 24 |
| 180 | 1800 | 130 | 17 | $\cdots$ | E. 33 |
| 210 | 1800 | 210 | 20 | 4 | E. 18 |
| 240 | 1800 | 240 | 21 | 5 | E. 17 |
| 270 | 1800 | 270 | 14 | 3 | E. $5 \in$ |
| 300 | 1800 | 300 | 13 | 3 | E. 58 |
| 330 | 1800 | 330 | 15 | 1 | E.19 |
| 360 | 1800 | 360 | 17 | 0 | E.OE |
| 390 | 1800 | 390 | 20 | $\underline{2}$ | E. $3 \in$ |
| 420 | 1800 | 420 | 20 | 1. | 5.92 |
| 450 | 1800 | 450 | 14 | 1 | E.54 |
| 480 | 1800 | 480 | 11 | 0 | E.2. |
| 510 | 1800 | 510 | 14 | $\underline{\square}$ | E. 26 |
| 540 | 1800 | 540 | 16 | 1 | E. 18 |
| 570 | 1800 | 570 | 16 | 玉 | 6.35 |
| 600 | 1800 | EOO | 18 | 1 | E. 11 |
| 630 | 1800 | ESO | 20 | 1 | 5.87 |
| EEO | 1800 | EGO | 18 | 0 | E.1こ |
| EOO | 1800 | EOO | 20 | -1. | 6.05 |
| line | 2000 |  |  |  |  |
| -930 | 2000 | -930 | 20 | 8 | 4.98 |
| -900 | 2000 | -900 | 23 | 3 | 5.27 |
| -870 | 2000 | -870 | 11 | -1 | 4.85 |
| -840 | 2000 | -840 | 13 | 1 | 4.73 |
| -810 | 2000 | -810 | $\epsilon$ | 1 | 5.68 |
| -780 | 2000 | -780 | $E$ | 1 | 5.74 |
| $-750$ | 2000 | $-750$ | 13 | 1. | 5.15 |
| -720 | 2000 | $-720$ | 18 | $E$ | 5.65 |
| -690 | 2000 | -690 | $\epsilon$ | F | 5.55 |
| -660 | 2000 | -6EO | 9 | 2 | 5.53 |
| -630 | 2000 | -E30 | $E$ | 0 | 5.4 |
| -600 | 2000 | -600 | 11 | 0 | 5.2 |
| $-570$ | 2000 | -570 | 19 | 0 | 4.92 |
| $-540$ | 2000 | -540 | 18 | 1 | 5.11 |
| -510 | 2000 | -510 | 18 | 4 | 5.49 |
| $-480$ | 2000 | -480 | 15 | 3 | 5.57 |
| -450 | 2000 | -450 | 14 | 1 | 5.26 |
| $-420$ | 2000 | $-420$ | 23 | 1 | 5.21 |
| -390 | 2000 | -390 | 19 | - | 5.39 |
| -360 | 2000 | -360 | 20 | $-E$ | 5.31 |
| $-330$ | 2000 | $-330$ | 28 | -3 | 5.52 |
| -300 | 2000 | -300 | 21 | $-3$ | 5.93 |
| -270 | 2000 | -270 | 13 | -1 | 5.82 |
| $-240$ | 2000 | -240 | 15 | 0 | 5.68 |
| $-210$ | 2000 | -210 | 15 | 0 | 5.6 |
| $-180$ | 2000 | $-180$ | 13 | 0 | 5.67 |
| $-150$ | 2000 | $-150$ | 11 | 0 | 5.8 |
| $-120$ | 2000 | $-120$ | 11 | 0 | 5.68 |
| -90 | 2000 | -90 | 12 | -1 | 5.86 |
| -EO | 2000 | -EO | 10 | 0 | 5.94 |
| $-30$ | 2000 | $-30$ | 9 | 0 | 5.89 |
| 0 | 2000 | O | 8 | 0 | 5.8 |


| Statign | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 30 | 2000 | 30 | 14 | 1 | 5.52 |
| 60 | 2000 | EO | 16 | $\underline{2}$ | 5.68 |
| 90 | 2000 | 90 | 1玉 | 0 | 5.76 |
| 120 | 2000 | 120 | 14 | 0 | 5.71 |
| 150 | 2000 | 150 | 7 | 1 | 5.78 |
| 180 | 2000 | 130 | 11 | 5 | 5.77 |
| 210 | 2000 | 210 | 8 | 4 | 5.88 |
| 240 | 2000 | 240 | $E$ | 1 | 5.7\% |
| 270 | 2000 | 270 | 5 | 0 | 5. 5. |
| 300 | 2000 | 300 | $E$ | 0 | 5.79 |
| 330 | 2000 | 390 | 12 | 1 | 5.47 |
| 360 | 2000 | 360 | 7 | 1 | 5.74 |
| 390 | 2000 | 390 | $\epsilon$ | 0 | 5.9 |
| 420 | 2000 | 420 | 4 | -1 | 5.81 |
| 450 | 2000 | 450 | 5 | -1 | 5.65 |
| 480 | 2000 | 480 | $E$ | $-3$ | 5.47 |
| 510 | 2000 | 510 | 12 | -1 | 5.24 |
| 540 | 2000 | 540 | 19 | 4 | 5.15 |
| E70 | 2000 | 570 | 17 | 3 | 5.71 |
| EOO | 2000 | 600 | 9 | 0 | 6.08 |
| $\epsilon \bigcirc 0$ | 2000 | E 30 | 1. | - - | 5.35 |
| EGO | 2000 | E6O | 11 | 0 | 5.27 |
| EGO | 2000 | 690 | 14 | 0 | 5.03 |
| 720 | 2000 | 720 | 14 | 0 | 5.42 |
| 1 ine | 2200 |  |  |  |  |
| $-750$ | 2200 | $-750$ | $\epsilon$ | 3 | 5.03 |
| $-720$ | 2900 | $-720$ | 12 | 3 | 4.85 |
| -690 | 2200 | -630 | 10 | 2 | 5.2E |
| -EGO | 2000 | -EEO | 14 | -1 | 5.24 |
| -630 | 2200 | -630 | 14 | $-3$ | 5.18 |
| -600 | 2200 | -600 | 19 | 0 | 5.45 |
| $-570$ | 2000 | -570 | 17 | 0 | 5.65 |
| $-540$ | 2000 | -540 | 18 | 0 | 5.43 |
| -510 | 2200 | $-510$ | 24 | -1 | 4.35 |
| $-480$ | 2 EOO | $-480$ | 23 | $-3$ | 5.17 |
| $-450$ | 2 OO | $-450$ | 23 | -1 | 5.62 |
| $-420$ | 2200 | -420 | $1 \epsilon$ | $-4$ | 5.53 |
| -300 | 2200 | -390 | $2 \epsilon$ | $-E$ | 4.94 |
| $-360$ | 2200 | $-360$ | 23 | -9 | 5. $6 \in$ |
| -330 | 2200 | -330 | 2- | -8 | 5.39 |
| -300 | 2200 | -300 | 25 | $-6$ | 5.52 |
| $-270$ | 2200 | $-270$ | 23 | -8 | 5.ES |
| $-240$ | 2200 | -240 | 20 | - - | 5.E7 |
| $-210$ | 2200 | $-210$ | 17 | -4 | 5.19 |
| $-180$ | 2200 | $-180$ | 13 | -3 | 5.6 |
| $-150$ | 2200 | $-150$ | 8 | -3 | 5.26 |
| $-120$ | 2200 | $-120$ | 8 | 0 | 5.1E |
| $-90$ | 2200 | -90 | 13 | -2 | 5.36 |
| -60 | 200 | $-60$ | 17 | $-3$ | 5.35 |
| -30 | 2200 | -30 | 22 | -3 | 5.63 |
| 0 | 2200 | 0 | 14 | -2 | 5.65 |
| 30 | 2200 | 30 | 13 | -1 | 4.67 |
| EO | 2200 | 60 | $1 E$ | 0 | 5.93 |
| 90 | 2200 | 90 | 5 | 0 | 5.11 |
| 120 | 290 | 120 | 10 | $-1$ | 5.52 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 150 | 2200 | 150 | 11 | 0 | 5.4 |
| 180 | 2200 | 180 | 16 | $E$ | 5.45 |
| 210 | -200 | 210 | 19 | 8 | 5.67 |
| 240 | 200 | 240 | -5 | 1 | E. 04 |
| 270 | 200 | 270 | 0 | $\epsilon$ | 5.48 |
| 300 | 2200 | 300 | 4 | 5 | 5. $2 \in$ |
| 330 | 2000 | 330 | 12 | 5 | 5.14 |
| 360 | 2200 | 360 | 14 | 3 | 5.14 |
| 390 | 2200 | 390 | 13 | - | 5.25 |
| 420 | 2200 | 420 | 13 | 3 | 5.24 |
| 450 | 2000 | 450 | 16 | 4 | 5.34 |
| 480 | 2200 | 480 | 17 | - | 5.14 |
| 510 | 2200 | 510 | 17 | 0 | 5. |
| 540 | 200 | 540 | 16 | 0 | 5.38 |
| 570 | 2200 | 570 | 17 | 0 | 5.11 |
| 600 | 2200 | EOO | 19 | -1 | 5.45 |
| E30 | 2200 | E3O | $\exists$ | 玉 | 5.57 |
| EEO | 2200 | 6EO | 9 | 0 | E.EG |
| 690 | 2200 | 690 | 7 | $-2$ | 5.53 |
| 720 | 2-00 | 720 | 11 | 1 | E.49 |
| 750 | 2200 | 750 | 9 | 0 | 5.49 |
| line | 1200 |  |  |  |  |
| $-1410$ | 1200 | $-1410$ | $E$ | -15 | 5.3 |
| -1380 | 1200 | -1380 | 9 | $-15$ | 5.56 |
| $-1350$ | 1200 | -1350 | 24 | -14 | 5.77 |
| $-1320$ | 1200 | -1320 | 2 | $-12$ | 7.59 |
| $-1290$ | 1200 | -1290 | $-19$ | $-17$ | 5.98 |
| $-1260$ | 1200 | -12E0 | -8 | -14 | 5.19 |
| $-1230$ | 1200 | $-1230$ | 7 | $-3$ | E.7玉 |
| -1200 | 1200 | -1200 | $-14$ | 8 | E. 71 |
| -1170 | 1200 | $-1170$ | $-19$ | 1 | 5.52 |
| $-1140$ | 1200 | $-1140$ | $-15$ | 1 | E. 62 |
| -1110 | 1200 | $-1110$ | $-15$ | 8 | 5.07 |
| -1080 | 1200 | $-1080$ | $-18$ | 3 | 5. 25 |
| $-1050$ | 1200 | $-1050$ | $-20$ | 7 | 5.53 |
| $-1020$ | 1200 | $-1020$ | $-13$ | 9 | 4.95 |
| -990 | 1200 | -990 | -20 | 8 | 4.43 |
| -960 | 1200 | -9E0 | $-1 E$ | 7 | 4.71 |
| -930 | 1200 | -930 | $-18$ | 11 | 4.05 |
| -900 | 1200 | -900 | $-18$ | 7 | 4.01 |
| -870 | 1200 | -870 | -9 | 8 | 3.97 |
| $-840$ | 1200 | $-840$ | -4 | 3 | 3.7 |
| -810 | 1200 | -810 | 3 | 2 | 3.85 |
| $-780$ | 1200 | $-780$ | 11 | 1 | 3.74 |
| $-750$ | 1200 | $-750$ | 31 | 4 | 3.77 |
| -720 | 1200 | -720 | 28 | 4 | 4.4 |
| -600 | 1200 | -E90 | 24 | 4 | 4.3 |
| -660 | 1200 | -6EO | -6 | 3 | 4.38 |
| -630 | 1200 | -630 | 39 | 4 | 4.54 |
| -600 | 1200 | -600 | 19 | 0 | E.03 |
| $-570$ | 1200 | $-570$ | 5 | 0 | 5.61 |
| $-540$ | 1200 | $-540$ | -1 | 0 | 5.48 |
| $-510$ | 1200 | $-510$ | -1 | 1 | 4.89 |
| -480 | 1200 | $-480$ | -1 | 1 | 4.58 |
| $-45$ | 1200 | -450 | 19 | 7 | 4.32 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -420 | 1200 | -420 | 24 | 5 | 4.95 |
| -390 | 1200 | -390 | 21 | 3 | 5.25 |
| -360 | 1200 | $-360$ | 19 | 1 | 5.4 |
| -330 | 1200 | -330 | 19 | 2 | 5.57 |
| -300 | 1200 | -300 | 20 | 3 | 5.42 |
| -270 | 1200 | -270 | 12 | 0 | 5.71 |
| -240 | 1200 | -240 | 13 | -1 | 5.71 |
| $-210$ | 1200 | -210 | 17 | -2 | 4.98 |
| -180 | 1200 | -180 | 18 | $-2$ | 5.3 |
| -150 | 1200 | -150 | 20 | -1 | 5.45 |
| $-120$ | 1200 | $-120$ | 23 | 0 | 5.75 |
| -90 | 1200 | -90 | 16 | -3 | 5.59 |
| -60 | 1200 | -60 | 24 | -1 | 5.3 |
| -30 | 1200 | $-30$ | 18 | -1 | 5.77 |
| 0 | 1200 | O | 21 | 0 | 5.61 |
| 30 | 1200 | 30 | 31 | 0 | 2.72 |
| 60 | 1200 | 60 | 29 | 4 | 1.86 |
| 90 | 1200 | 90 | 27 | 5 | 1.98 |
| 120 | 1200 | 120 | 27 | 12 | 1.83 |
| 150 | 1200 | 150 | 23 | 11 | 1.83 |
| 180 | 1200 | 180 | 17 | $\epsilon$ | 1.7 |
| 210 | 1200 | 210 | 21 | 3 | 1.8 |
| 240 | 1200 | 240 | 23 | 1 | 1. 65 |
| 270 | 1200 | 270 | 25 | 4 | 1.45 |
| 300 | 1200 | 300 | 32 | 2 | 1.11 |
| 330 | 1200 | 330 | 30 | 1 | 1.35 |
| 360 | 1200 | 360 | 22 | 0 | 1.55 |
| 390 | 1200 | 390 | 28 | 5 | 1.42 |
| 420 | 1200 | 420 | 32 | 6 | 1.4 |
| 450 | 1200 | 450 | 24 | $E$ | 1.65 |
| 480 | 1200 | 480 | 33 | 10 | 1.49 |
| 510 | 1200 | 510 | 27 | $E$ | 1.69 |
| 540 | 1200 | 540 | 23 | 7 | 1.78 |
| 570 | 1200 | 570 | 21 | 8 | 1.73 |
| 600 | 1200 | E00 | 24 | 7 | 1.85 |
| 630 | 1200 | 630 | 21 | 7 | 2 |
| 660 | 1200 | 6EO | 21 | 1 | 2.13 |
| 690 | 1200 | 690 | 20 | -1 | 2.09 |
| 720 | 1200 | 720 | 31 | 0 | 2 |
| 750 | 1200 | 750 | 27 | 0 | 2.17 |
| 780 | 1200 | 780 | 31 | $-2$ | 2.6 |
| 810 | 1200 | 810 | 35 | 1 | 2.71 |
| 840 | 1200 | 840 | 34 | -2 | 3.08 |
| line | 1400 |  |  |  |  |
| $-1410$ | 1400 | -1410 | -5 | -4 | 4.48 |
| $-1380$ | 1400 | -1380 | -4 | $-6$ | 5.01 |
| $-1350$ | 1400 | -1350 | -3 | -7 | 5.07 |
| -1320 | 1400 | -1320 | 0 | - | 4.93 |
| -1290 | 1400 | -1290 | -1 | -9 | 5.13 |
| -1260 | 1400 | -1260 | 0 | $-15$ | 4.73 |
| -1230 | 1400 | -1230 | 9 | -17 | 4.74 |
| -1200 | 1400 | -1200 | 22 | -17 | 4.66 |
| $-1170$ | 1400 | -1170 | 15 | -22 | 5.1 |
| -1140 | 1400 | -1140 | 0 | $-10$ | 6.34 |
| -1110 | 1400 | $-1110$ | $-27$ | 2 | 5.37 |


| Station | Line | Statign | In-Fhas | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -1080 | 1400 | -1080 | $-15$ | 1 | 4.72 |
| -1050 | 1400 | -1050 | -18 | $\varepsilon$ | 3.79 |
| -1020 | 1400 | -1020 | $-15$ | 8 | 4.47 |
| -990 | 1400 | -950 | $-13$ | 7 | 3.87 |
| -960 | 1400 | -960 | -3 | 9 | 3.77 |
| -930 | 1400 | -930 | 0 | 4 | 3.71 |
| -900 | 1400 | -900 | -2 | 2 | 3.6 |
| -870 | 1400 | -870 | 4 | -2 | 3.43 |
| $-840$ | 1400 | $-840$ | 12 | -3 | 3.01 |
| -810 | 1400 | -810 | 36 | 9 | 2.84 |
| -780 | 1400 | -780 | 36 | 9 | 3.89 |
| -750 | 1400 | -750 | 28 | 9 | 4.16 |
| $-720$ | 1400 | -720 | 23 | 7 | 4.7 |
| $-690$ | 1400 | -690 | 7 | 2 | 4.79 |
| $-660$ | 1400 | -6EO | 3 | $-4$ | 4.5 |
| -630 | 1400 | -630 | 13 | -2 | 4.19 |
| -600 | 1400 | -600 | 17 | -3 | 4.41 |
| $-570$ | 1400 | -570 | 9 | -4 | 4.74 |
| -540 | 1400 | -540 | 9 | 0 | 4.02 |
| $-510$ | 1400 | $-510$ | 25 | 3 | 4.12 |
| $-480$ | 1400 | -480 | 2 | 0 | 4.47 |
| $-450$ | 1400 | $-450$ | $1 E$ | -3 | 5.12 |
| -420 | 1400 | -420 | 26 | -3 | 4.4 |
| -390 | 1400 | -390 | 19 | -3 | 5.05 |
| $-360$ | 1400 | -360 | 3 | 1 | 5.03 |
| -330 | 1400 | -330 | 4 | 0 | 5 |
| -300 | 1400 | -300 | $\epsilon$ | 0 | 4.65 |
| -270 | 1400 | -270 | 17 | -1 | 4.3 |
| -240 | 1400 | -240 | 15 | -2 | 4.77 |
| -210 | 1400 | -210 | 15 | -1 | 4.88 |
| -180 | 1400 | -180 | 13 | 1 | 4.84 |
| $-150$ | 1400 | $-150$ | 14 | 3 | 4.77 |
| $-120$ | 1400 | $-120$ | 14 | 2 | 4.31 |
| -90 | 1400 | -90 | 15 | 4 | 4.69 |
| -60 | 1400 | -60 | 13 | 7 | 4.5 |
| $-30$ | 1400 | -30 | 16 | 7 | 4.67 |
| 0 | 1400 | O | 13 | 3 | 4.64 |
| 30 | 1400 | 30 | 11 | 3 | 4.5 |
| 60 | 1400 | EO | 17 | 1 | 4.49 |
| 90 | 1400 | 90 | 21 | 1 | 4.57 |
| 120 | 1400 | 120 | 21 | 1 | $4.6 \epsilon$ |
| 150 | 1400 | 150 | 20 | 0 | 4.73 |
| 180 | 1400 | 180 | 21 | 2 | 4.67 |
| 210 | 1400 | 210 | 8 | $\epsilon$ | 4.41 |
| 240 | 1400 | 240 | 8 | 4 | 4.57 |
| 270 | 1400 | 270 | 10 | 2 | 4.54 |
| 300 | 1400 | 300 | 11 | 0 | 4.02 |
| 330 | 1400 | 330 | 20 | 2 | 4.08 |
| 360 | 1400 | 360 | 22 | 2 | 3.94 |
| 390 | 1400 | 390 | 23 | 1 | 3.95 |
| 420 | 1400 | 420 | 26 | 1 | 4.05 |
| 450 | 1400 | 450 | 25 | 0 | 4.09 |
| 480 | 1400 | 480 | 26 | 0 | 4.11 |
| 510 | 1400 | 510 | 30 | 2 | 3.87 |
| 540 | 1400 | 540 | 23 | 3 | 6.07 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 570 | 1400 | 570 | 22 | 0 | 3.89 |
| 600 | 1400 | 600 | 24 | 2 | 3.3 |
| E 30 | 1400 | EכO | 24 | 0 | 3.79 |
| E60 | 1400 | EGO | 20 | 0 | 4 |
| 690 | 1400 | 690 | 9 | $-13$ | 3.64 |
| 720 | 1400 | 720 | 19 | -5 | 3.59 |
| 750 | 1400 | 750 | 23 | -1 | 3.73 |
| 780 | 1400 | 780 | 23 | 0 | 3.69 |
| 810 | 1400 | 810 | 29 | 3 | 3.48 |
| 840 | 1400 | 840 | 9 | -3 | 3.85 |
| 870 | 1400 | 870 | 18 | 1 | 3.57 |
| line | 1600 |  |  |  |  |
| $-1200$ | 1600 | -1200 | 14 | -14 | 4.68 |
| -1170 | 1600 | -1170 | 19 | -10 | 4.95 |
| $-1140$ | 1600 | -1140 | $-12$ | -1 | 5.48 |
| -1110 | 1600 | -1110 | -5 | 0 | 5.25 |
| -1080 | 1600 | -1080 | $-23$ | 5 | 4.33 |
| -1050 | 1600 | -1050 | -4 | 2 | 4.69 |
| -1020 | 1600 | -1020 | -3 | $\epsilon$ | 4.37 |
| -990 | 1600 | -990 | -2 | 1 | 4.54 |
| -960 | 1600 | -960 | $-10$ | -3 | 4.11 |
| -930 | 1600 | -930 | -2 | $-3$ | 3.72 |
| -900 | 1600 | -900 | 18 | 3 | 3.56 |
| -870 | 1600 | -870 | 32 | 8 | 4 |
| -840 | 1600 | -840 | 29 | 5 | 4.82 |
| -810 | 1600 | -810 | 20 | 2 | 5.21 |
| -780 | 1600 | -780 | 13 | 0 | 5.29 |
| -750 | 1600 | -750 | 18 | -1 | 5.1 |
| -720 | 1600 | -720 | 7 | -4 | 5.22 |
| -690 | 1600 | $-690$ | 7 | -9 | 4.92 |
| -6EO | 1600 | -6EO | 20 | -3 | 4.95 |
| -630 | 1600 | -630 | 13 | -4 | 5.57 |
| -600 | 1600 | -600 | 14 | -3 | 5.56 |
| $-570$ | 1600 | -570 | 8 | -2 | 5.47 |
| -540 | 1600 | $-540$ | 14 | -1 | 5.5 |
| -510 | 1600 | $-510$ | 7 | 0 | 5.54 |
| $-480$ | 1600 | $-480$ | 9 | 1 | 5.52 |
| $-450$ | 1600 | -450 | 10 | 2 | 5.42 |
| $-420$ | 1600 | $-420$ | 10 | 1 | 5.98 |
| -390 | 1600 | -390 | 0 | 1 | 5.72 |
| -360 | 1600 | $-360$ | 4 | 5 | 5.32 |
| $-330$ | 1600 | -330 | 15 | 9 | 5.16 |
| -300 | 1600 | -300 | 12 | 5 | 5.4E |
| -270 | 1600 | -270 | 7 | 0 | 5.47 |
| -240 | 1600 | -240 | 16 | $E$ | 4.95 |
| -210 | 1600 | -210 | 17 | 2 | 5.51 |
| $-180$ | 1600 | -180 | 15 | 1 | 5. 61 |
| $-150$ | 1600 | $-150$ | 13 | 1 | 5.52 |
| -120 | 1600 | $-120$ | 13 | 1 | 5.66 |
| -90 | 1600 | -90 | 14 | -2 | 5.69 |
| -60 | 1600 | -60 | 16 | -2 | 5.9 |
| -30 | 1600 | -30 | 16 | 0 | 6.01 |
| 0 | 1600 | 0 | 9 | 0 | 6.12 |
| 30 | 1600 | 30 | 4 | 0 | 5.92 |
| EO | 1600 | 60 | 11 | 0 | 5.75 |


| Station | Line | Statiam | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 90 | 1600 | 90 | 16 | 1 | 5. E E |
| 120 | 1600 | 120 | $1-$ | - | 5.72 |
| 150 | 1600 | 150 | 13 | $こ$ | $5.6 \epsilon$ |
| 130 | 1600 | 180 | 13 | 0 | 5.84 |
| -10 | 1600 | 210 | $1 E$ | 1 | 5. $\in \in$ |
| 240 | 1600 | 240 | 14 | $\because$ | 5.77 |
| 270 | 1600 | 270 | 10 | 4 | 5.56 |
| 300 | 1600 | 300 | 10 | 3 | 5.38 |
| 330 | 1600 | 330 | 17 | 2 | 5.63 |
| כEO | 1600 | 360 | - | 4 | 5.74 |
| 390 | 1600 | 390 | 2 | 3 | 5.84 |
| 420 | 1600 | 420 | 23 | 4 | E.12 |
| 450 | 1600 | 450 | 17 | 3 | E. 17 |
| 480 | 1600 | 480 | 14 | 0 | E.0G |
| 510 | 1600 | 510 | 17 | 4 | E.OL |
| 540 | 1600 | 540 | 17 | $\epsilon$ | E. 11 |
| 570 | 1600 | 570 | 9 | 2 | E.13 |
| 600 | 1600 | EOO | 10 | 1 | 5.85 |
| E30 | 1600 | 630 | 15 | 2 | 5.E |
| EEO | 1600 | EEO | 21 | 0 | 5.69 |
| 6O0 | $1 \in 00$ | 690 | 24 | $-2$ | 5.84 |
| 720 | 1600 | 720 | 28 | 2 | 5.72 |
| 750 | 1600 | 750 | 23 | $-2$ | E. 15 |
| 780 | 1600 | 780 | 25 | 1 | E. 34 |
| 810 | 1600 | 810 | 18 | 4 | E.EZ |
| 1 ine | 800 |  |  |  |  |
| $-1020$ | 800 | $-1020$ | $-65$ | 0 | 4.3 |
| -990 | 800 | -990 | -49 | -1 | 3.79 |
| -960 | 800 | -9EO | -54 | $-2$ | 4.39 |
| -930 | 800 | -930 | -54 | -7 | 4.27 |
| -900 | 800 | -900 | -53 | $-4$ | 2.92 |
| -870 | 800 | -870 | -60 | -10 | 3.13 |
| -840 | 800 | $-840$ | $-36$ | 1 | 3.7 |
| -810 | 800 | -810 | $-42$ | 1 | 3.44 |
| $-780$ | 800 | $-780$ | -47 | 1 | 2.63 |
| $-750$ | 800 | $-750$ | $-23$ | 1 | 3.55 |
| -720 | 800 | $-720$ | $-E$ | 6 | 3.1 |
| -690 | 800 | -690 | $-6$ | 10 | 3.34 |
| $-660$ | 800 | -EEO | -3 | 8 | 3.27 |
| -630 | 800 | -630 | 5 | $\epsilon$ | 3.86 |
| -600 | 800 | -E00 | 10 | 7 | 3.43 |
| $-570$ | 800 | -570 | 9 | 5 | 3.92 |
| $-540$ | 800 | $-540$ | 2 | 0 | 3.87 |
| -510 | 800 | -510 | 3 | 0 | 4.29 |
| -480 | 800 | -480 | $-13$ | -2 | 3.98 |
| $-450$ | 800 | $-450$ | $-25$ | -5 | 3.61 |
| $-420$ | 800 | -420 | -17 | -2 | 3.96 |
| -390 | 800 | $-390$ | $-12$ | -1 | 4.02 |
| -360 | 800 | $-360$ | 0 | $E$ | 3.84 |
| $-330$ | 800 | $-330$ | 4 | 3 | 4.14 |
| -300 | 800 | -300 | 9 | 4 | 3. 96 |
| $-270$ | 800 | -270 | 15 | 2 | 4.16 |
| $-240$ | 800 | $-240$ | 8 | 0 | 4.13 |
| $-210$ | 800 | $-210$ | 10 | 1 | 4.71 |
| $-180$ | 800 | $-180$ | 14 | 0 | 4.75 |


| Statian | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -150 | 300 | -150 | 14 | 0 | 4.38 |
| $-120$ | 800 | $-120$ | 2 | -4 | 3.76 |
| -90 | 800 | -90 | 12 | -5 | 4.13 |
| -EO | 800 | -60 | 7 | -4 | 3.62 |
| -30 | 300 | -30 | 14 | -1 | 5.87 |
| 0 | 800 | 0 | 5 | -3 | 3.28 |
| 30 | 800 | 30 | 27 | 0 | 3.9 |
| EO | 800 | EO | 30 | -2 | 3.58 |
| 90 | 800 | 90 | 2e | -2 | 3.85 |
| 120 | 800 | 120 | 30 | 0 | 3.82 |
| 150 | 800 | 150 | 33 | -1 | 3.97 |
| 180 | 800 | 180 | 27 | -3 | 4.26 |
| 210 | 800 | 210 | 24 | -3 | 4.24 |
| 240 | 800 | 240 | 26 | -3 | 4.29 |
| 270 | 800 | 270 | 24 | -4 | 4.04 |
| 300 | 800 | 300 | 2 | $-2$ | 4.45 |
| 330 | 800 | 330 | 18 | 0 | 4.64 |
| 360 | 800 | 360 | 25 | -1 | 4.53 |
| 390 | 800 | 390 | 2¢ | -1 | 4.71 |
| 420 | 800 | 420 | 24 | 0 | 4.85 |
| 450 | 800 | 450 | 25 | $z$ | 4.65 |
| 480 | 800 | 480 | 21 | $\epsilon$ | 4.82 |
| 510 | 800 | 510 | 20 | 7 | 4.91 |
| 540 | 800 | 540 | 24 | 9 | 4.89 |
| 570 | 800 | 570 | 22 | 9 | 4.69 |
| 600 | 800 | 600 | 19 | 7 | 4.75 |
| 630 | 800 | 630 | 22 | 8 | 4.58 |
| line | 1000 |  |  |  |  |
| $-1230$ | 1000 | $-1230$ | -21 | $E$ | 6.04 |
| -1200 | 1000 | -1200 | -43 | 7 | 5.37 |
| -1170 | 1000 | $-1170$ | -26 | 7 | 5.47 |
| $-1140$ | 1000 | -1140 | -21 | 1 | 4.93 |
| -1110 | 1000 | -1110 | -18 | -1 | 5.57 |
| -1080 | 1000 | -1080 | $-36$ | 7 | 4.99 |
| -1050 | 1000 | -1050 | -26 | 12 | 4.5 |
| -1020 | 1000 | -1020 | -2e | 2 | 4.32 |
| -990 | 1000 | -990 | -23 | $E$ | 3.8 |
| -560 | 1000 | -960 | -19 | 4 | 3.4 |
| -930 | 1000 | -930 | $-19$ | $E$ | 3.9 |
| -900 | 1000 | -900 | $-12$ | 12 | 3.53 |
| -870 | 1000 | -970 | $-17$ | 11 | 2.85 |
| -840 | 1000 | -840 | $-19$ | 5 | 3.34 |
| -810 | 1000 | -810 | -11 | 5 | 3.35 |
| -780 | 1000 | -780 | 2 | 4 | 3.31 |
| -750 | 1000 | -750 | 14 | -1 | 2.97 |
| -720 | 1000 | -720 | 22 | 7 | 3.53 |
| -690 | 1000 | -690 | 29 | 9 | 3.44 |
| $-660$ | 1000 | -660 | 24 | $\epsilon$ | 4.69 |
| -630 | 1000 | -630 | 12 | 0 | 4.35 |
| -600 | 1000 | -600 | 21 | 0 | 4.09 |
| $-570$ | 1000 | -570 | 25 | 1 | 4.36 |
| $-540$ | 1000 | -540 | 18 | 5 | 5.45 |
| -510 | 1000 | -510 | 0 | 3 | 4.92 |
| $-480$ | 1000 | $-480$ | -2 | 1 | 5.04 |
| $-450$ | 1000 | -450 | 2 | 0 | 4.71 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| -420 | 1000 | -420 | ' 9 | 0 | 4.1 |
| -390 | 1000 | -390 | 12 | 0 | 4.3 |
| -360 | 1000 | $-360$ | 28 | 3 | 4.52 |
| -330 | 1000 | -330 | 27 | 0 | 4.57 |
| -300 | 1000 | -300 | 31 | 0 | 4.61 |
| -270 | 1000 | -270 | 33 | 0 | 4.47 |
| -240 | 1000 | -240 | 32 | 1 | 5.27 |
| $-210$ | 1000 | $-210$ | 26 | -2 | 5.3 |
| -130 | 1000 | -180 | 23 | -3 | 5.22 |
| -150 | 1000 | $-150$ | 22 | -2 | 5.19 |
| $-120$ | 1000 | $-120$ | 22 | -4 | 4.52 |
| -90 | 1000 | -90 | 24 | -3 | 5.1 |
| -60 | 1000 | -60 | 18 | -5 | 5.33 |
| -30 | 1000 | $-30$ | 25 | 0 | 5 |
| 0 | 1000 | 0 | 23 | 0 | 4.87 |
| 30 | 1000 | 30 | 30 | $-2$ | 5.19 |
| 60 | 1000 | 60 | 32 | 0 | 5.47 |
| 90 | 1000 | 90 | 20 | 0 | E. 14 |
| 120 | 1000 | 120 | 20 | 2 | 5.24 |
| 150 | 1000 | 150 | 26 | 2 | 5.5 |
| 180 | 1000 | 180 | 27 | 0 | 5.52 |
| 210 | 1000 | 210 | 28 | -1 | 5.74 |
| 240 | 1000 | 240 | 28 | -3 | 5.23 |
| 270 | 1000 | 270 | 36 | 2 | 4.83 |
| 300 | 1000 | 300 | 22 | 5 | 5.06 |
| 330 | 1000 | 330 | 9 | $\epsilon$ | 5.26 |
| 360 | 1000 | 360 | 12 | 4 | 5.3 |
| 390 | 1000 | 390 | 21 | 4 | 5.11 |
| 420 | 1000 | 420 | 25 | 3 | 5.31 |
| 450 | 1000 | 450 | 20 | 4 | 5.47 |
| 480 | 1000 | 480 | 18 | 7 | 5.24 |
| 510 | 1000 | 510 | 26 | 10 | 4.97 |
| 540 | 1000 | 540 | 30 | 11 | 5.2 |
| 570 | 1000 | 570 | 22 | 7 | 4.9 |
| 600 | 1000 | 600 | 18 | 9 | 5.56 |
| 630 | 1000 | 630 | 24 | 9 | 4.12 |
| 660 | 1000 | 6EO | $1 \epsilon$ | 2 | 5.38 |
| 690 | 1000 | 690 | 21 | 4 | 4.86 |
| 720 | 1000 | 720 | 21 | 3 | 5.04 |
| 750 | 1000 | 750 | 24 | 2 | 5.1 |
| 780 | 1000 | 780 | 24 | 0 | 5.03 |
| 810 | 1000 | 810 | 27 | 0 | 4.96 |
| line | 200 |  |  |  |  |
| $-240$ | 200 | -240 | 43 | 4 | 4.07 |
| -210 | 200 | -210 | 35 | 2 | 4.69 |
| $-180$ | 200 | -180 | 37 | 2 | 4 |
| $-150$ | 200 | -150 | 44 | 4 | 4.2 |
| $-120$ | 200 | -120 | 39 | 4 | 5.53 |
| $-90$ | 200 | -90 | 33 | $E$ | 5.58 |
| -60 | 200 | -60 | 27 | 4 | 5.85 |
| $-30$ | 200 | -30 | 28 | $\epsilon$ | 5.86 |
| 0 | 200 | 0 | 29 | 9 | 5.9 |
| 30 | 200 | 30 | 28 | 10 | 5.88 |
| EO | 200 | EO | 29 | 8 | 5.55 |
| 90 | 200 | 90 | 25 | 7 | 5.78 |


| Station | Line | Statign | In-Frasse | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 120 | 200 | 120 | 23 | 5 | 5.97 |
| 150 | 200 | 150 | 22 | 5 | 5.9 |
| 1ine | 400 |  |  |  |  |
| -480 | 400 | -480 | 27 | $E$ | 4.41 |
| $-450$ | 400 | -450 | 22 | 2 | 4.75 |
| $-420$ | 400 | -420 | 17 | 1 | 4.81 |
| $-390$ | 400 | -390 | 5 | 0 | 5.54 |
| $-360$ | 400 | $-3 \in 0$ | -1 | -2 | 4.5 |
| $-330$ | 400 | -330 | 0 | -1 | 4.46 |
| -300 | 400 | -300 | 27 | 1 | 3.99 |
| -270 | 400 | -270 | 37 | $-2$ | 4.54 |
| -240 | 400 | -240 | 40 | 1 | 5.03 |
| -210 | 400 | -210 | 39 | 0 | 4.92 |
| -180 | 400 | -180 | $3 \in$ | -1 | 5.5 |
| -150 | 400 | -150 | 41 | 0 | 5.02 |
| $-120$ | 400 | $-120$ | 45 | 1 | 5.52 |
| -90 | 400 | -90 | 43 | 2 | 5.65 |
| -60 | 400 | -60 | 30 | 1 | 5.69 |
| -30 | 400 | -30 | 27 | -1 | 5.52 |
| 0 | 400 | 0 | 33 | 0 | 5.26 |
| 30 | 400 | 30 | 2e | 0 | E. 5.1 |
| 60 | 400 | EO | $\ni$ | $\epsilon$ | 6.69 |
| 90 | 400 | 90 | 11 | $\epsilon$ | 5.8E |
| 120 | 400 | 120 | 15 | 2 | 5.22 |
| 150 | 400 | 150 | 21 | $\Sigma$ | 5.9 |
| 180 | 400 | 180 | 21 | 1 | 5.8 |
| 210 | 400 | 210 | 13 | 0 | E. 1.4 |
| 240 | 400 | 240 | 20 | 2 | 6.14 |
| 270 | 400 | 270 | 16 | 5 | 6.48 |
| 300 | 400 | 300 | 13 | $\epsilon$ | 6.39 |
| 330 | 400 | 330 | 18 | 4 | 6.08 |
| line | 600 |  |  |  |  |
| -720 | E00 | -720 | -23 | 2 | 3.91 |
| -690 | E00 | -690 | -18 | 3 | 3.78 |
| -6EO | 600 | -EEO | $-20$ | 4 | 3.15 |
| -630 | 600 | -630 | $-14$ | 2 | 3.63 |
| -600 | 600 | -600 | -7 | -1 | 3.12 |
| -570 | 600 | -570 | 10 | 1 | 2.83 |
| $-540$ | 600 | -540 | 19 | 1.5 | 3.245 |
| -510 | 600 | $-510$ | 23 | 3 | 3.52 |
| -480 | E00 | -480 | 17 | 2 | 4.7 |
| $-450$ | 600 | $-450$ | 10 | 3 | 4.68 |
| -420 | 600 | $-420$ | $E$ | 0 | 4.75 |
| $-390$ | 600 | -390 | 11 | 0 | 4.1 |
| $-360$ | 600 | -360 | -8 | -5 | 4.34 |
| -330 | 600 | -330 | -17 | -4 | 3.5E |
| -300 | 600 | -300 | 13 | 5 | 3.84 |
| -270 | 600 | -270 | 17 | 4 | 4.19 |
| -240 | 600 | -240 | 26 | 1 | 3.71 |
| -210 | 600 | -210 | 29 | 2 | 4.26 |
| $-180$ | 600 | -180 | 27 | 3 | 4.32 |
| -150 | 600 | -150 | 23 | 1 | 4.77 |
| $-120$ | EOO | $-120$ | 25 | -1 | 4.67 |
| -90 | 600 | -90 | 27 | 4 | 4.7 |
| $-60$ | 600 | -EO | 26 | 5 | 4.33 |


| Station | Line | Station | In-Fhase | Quad. | Fld. Str. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $-30$ | 600 | -30 | 27 | 5 | 3.77 |
| 0 | E00 | 0 | 21 | 3 | 5.52 |
| 30 | 600 | 30 | 22 | 3 | 5.82 |
| 60 | EOO | EO | 25 | 2 | 6.13 |
| 90 | EOO | 90 | 15 | 1 | 5.83 |
| 120 | 600 | 120 | 21 | 1 | 5.74 |
| 150 | 600 | 150 | 34 | 0 | 5.15 |
| 180 | 600 | 180 | 32 | -2 | 5.83 |
| 210 | EOO | 210 | 32 | -2 | 6.04 |
| 240 | 600 | 240 | 33 | -1 | E. $3 \in$ |
| 270 | 600 | 270 | 28 | -1 | 5.94 |
| 300 | 600 | 300 | 33 | 0 | 6.15 |
| 330 | E00 | 330 | 14 | 0 | 6.87 |
| 360 | 600 | 360 | 23 | 0 | 5.37 |
| 390 | 600 | 390 | 31 | $-2$ | 6. 15 |
| 420 | 600 | 420 | 32 | $-2$ | E. 35 |



APPENDIX II

FIELD MAGNETIC DATA

| Station | Line | Statign | Morr．Mag | Ees．Mag |
| :---: | :---: | :---: | :---: | :---: |
| line | 2400 |  |  |  |
| $-570$ | 2400 | $-570$ | 58078.6 | 479 |
| $-540$ | 2400 | $-540$ | 58345.5 | 746 |
| －510 | 2400 | $-510$ | 57976.9 | 377 |
| $-480$ | 2400 | －480 | 57891.5 | 2－2 |
| $-450$ | 2400 | $-450$ | 57785.1 | 185 |
| $-420$ | 2400 | $-420$ | 57706.4 | 106 |
| $-390$ | 2400 | －390 | 57806 | 206 |
| $-360$ | 2400 | －360 | 57886． 1 | 286 |
| $-330$ | 2400 | －330 | 57829.4 | 229 |
| －300 | 2400 | $-300$ | 57652 | 52 |
| $-270$ | 2400 | $-270$ | 57684.6 | 85 |
| $-240$ | 2400 | －240 | 57753.5 | 154 |
| $-210$ | 2400 | －210 | 57E5E． S $^{\text {S }}$ | 57 |
| $-180$ | 2400 | $-180$ | 5760 | 9 |
| $-150$ | 2400 | $-150$ | 575624 | $-38$ |
| $-120$ | 2400 | $-120$ | 57631．6 | 32 |
| －90 | 2400 | $-90$ | 57678.6 | 79 |
| $-60$ | 2400 | $-60$ | 57657.4 | 57 |
| －30 | 2400 | $-30$ | 57701.8 | 102 |
| 0 | 2400 | 0 | 57654.5 | 55 |
| 30 | 2400 | 30 | 57644.9 | 45 |
| 60 | 2400 | 60 | 57E42． 1 | 42 |
| 90 | 2400 | 90 | 5フEこE． | $\Sigma \epsilon$ |
| 120 | 2400 | 120 | 57595.8 | －4 |
| 150 | 2400 | 150 | 57647 | 47 |
| 180 | 2400 | 180 | 57638.2 | 38 |
| 210 | 2400 | －10 | 57E57．4 | 57 |
| 240 | 2400 | 240 | 57ヒこ4．7 | 25 |
| 270 | 2400 | 270 | 57595.9 | －4 |
| 300 | 2400 | 300 | 57529.7 | $-70$ |
| 330 | 2400 | 330 | 57554.6 | $-45$ |
| 360 | 2400 | 360 | 57579.5 | －21 |
| 390 | 2400 | 390 | 576こ0．4 | 20 |
| 420 | 2400 | 420 | 57598.7 | －1 |
| 450 | 2400 | 450 | 57601．4 | 1 |
| 480 | 2400 | 480 | 57593.2 | $-7$ |
| 510 | 2400 | 510 | 57691 | 31 |
| 540 | 2400 | 540 | 57640.1 | 40 |
| 570 | 2400 | 570 | 57655.1 | 55 |
| EOO | 2400 | 600 | 57619 | 19 |
| ESO | 2400 | ESO | $576 こ 7.2$ | 27 |
| EEO | 2400 | 660 | 57671.5 | 72 |
| EGO | 2400 | E90 | 57648.7 | 49 |
| 720 | 2400 | 720 | 57686.6 | 87 |
| 750 | 2400 | 750 | S7EЗE． 7 | 37 |
| line | 2600 |  |  |  |
| $-420$ | 2600 | $-420$ | 57624 | 24 |
| $-390$ | 2600 | －390 | 576こ7．${ }^{\text {c }}$ | 28 |
| －360 | 2600 | －360 | 57821.4 | ご |
| －330 | 2600 | －330 | 57721 | 121 |
| －300 | 2600 | －300 | 57770.9 | 171 |
| －270 | 2600 | $-270$ | 57567.5 | $-33$ |
| $-240$ | 2600 | －240 | 576E1．4 | 61 |
| －210 | 2600 | $-210$ | 57632.3 | 32 |


| St $2 t i 0 n$ | Line |
| :---: | :---: |
|  |  |
| -180 | 2600 |
| -150 | 2600 |
| -120 | 2600 |
| -90 | 2600 |
| -60 | 2600 |
| -30 | 2600 |
| 0 | 2600 |
| 30 | 2600 |
| 60 | 2600 |
| 90 | 2600 |
| 120 | 2600 |
| 150 | 2600 |
| 180 | 2600 |
| 210 | 2600 |
| 240 | 2600 |
| 270 | 2600 |
| 300 | 2600 |
| 330 | 2600 |
| 360 | 2600 |
| 390 | 2600 |
| 420 | 2600 |
| 450 | 2600 |
| 480 | 2600 |
| 510 | 2600 |
| 540 | 2600 |
| 570 | 2600 |
| 600 | 2600 |
| 630 | 2600 |
| 660 | 2600 |
| 690 | 2600 |
| $1 i n e$ | 2800 |
| -240 | 2800 |
| -210 | 2800 |
| -180 | 2800 |
| -150 | 2800 |
| -120 | 2800 |
| -90 | 2800 |
| -60 | 2800 |
| -30 | 2800 |
| 0 | 2800 |
| 20 | 2800 |
| 60 | 2800 |
| 90 | 2800 |
| 120 | 2800 |
| 150 | 2800 |
| 180 | 2800 |
| 210 | 2800 |
| 240 | 2800 |
| 270 | 2800 |
| 300 | 2800 |
| 330 | 2800 |
| 360 | 2800 |
| 390 | 2800 |
| 450 | 2800 |
|  | 280 |
|  |  |


| Station | Gorr. Mag | Ees. Mad |
| :---: | :---: | :---: |
| $-130$ | 57706.4 | 106 |
| $-150$ | $576 こ .7$ | 23 |
| -120 | 57601 | 1 |
| -90 | 57630.E | 31 |
| -60 | 57758.1 | 158 |
| -30 | 57648.6 | 49 |
| 0 | 57639. 9 | 40 |
| 30 | 57653.9 | 54 |
| 60 | 57725.7 | 126 |
| 90 | 57645.7 | 46 |
| 120 | 57E67.7 | 68 |
| 150 | 57576.5 | -24 |
| 180 | 57706.8 | 107 |
| 210 | 57679.9 | 80 |
| 240 | 57600 | 0 |
| 270 | 57575 | -25 |
| 300 | 57864.9 | 265 |
| 330 | 57647.2 | 47 |
| 360 | 57643.7 | 44 |
| 390 | 57714.1 | 114 |
| 420 | 57595. 4 | -5 |
| 450 | 57634 | 34 |
| 480 | 57631.8 | 32 |
| 510 | 57653.9 | 54 |
| 540 | 57623.8 | 24 |
| 570 | 57667.2 | 67 |
| E00 | 57633.4 | 33 |
| E30 | 57EEE.2 | $6 \epsilon$ |
| EEO | 57628.5 | 29 |
| 690 | 57644.2 | 44 |
| -240 | 57689 | 89 |
| -210 | 57731.5 | 132 |
| -180 | 57645.6 | 46 |
| -150 | 57941.4 | 341 |
| $-120$ | 57537.3 | -63 |
| -90 | 57617.2 | 17 |
| -60 | 57625.1 | 25 |
| $-30$ | 57694.5 | 95 |
| 0 | 57EEG. 6 | 70 |
| 30 | 5765E.E | 57 |
| EO | 57578.8 | -21 |
| 90 | 57592.5 | -8 |
| 120 | 57602.3 | 2 |
| 150 | 57571.7 | -28 |
| 180 | 57544.6 | -55 |
| 210 | 57601.3 | 1 |
| 240 | 57781.9 | 182 |
| 270 | 57607.7 | 8 |
| 300 | 57634.3 | 34 |
| 330 | 57595 | -5 |
| 360 | 57667.7 | E8 |
| 390 | 57700.6 | 101 |
| 420 | 57679.5 | 80 |
| 450 | 57661.3 | $E 2$ |


| Statian | Line |
| :---: | :---: |
| 480 | 2800 |
| 510 | 2800 |
| line | 3000 |
| $-90$ | 3000 |
| -60 | 3000 |
| $-30$ | 3000 |
| 0 | 3000 |
| 30 | 3000 |
| EO | 3000 |
| 90 | 3000 |
| 120 | 3000 |
| 150 | 3000 |
| 180 | 3000 |
| 210 | 3000 |
| line | 1800 |
| $-1080$ | 1800 |
| -1050 | 1800 |
| $-1020$ | 1800 |
| -990 | 1800 |
| -960 | 1800 |
| $-930$ | 1800 |
| -900 | 1800 |
| -870 | 1800 |
| -840 | 1800 |
| -810 | 1800 |
| -780 | 1800 |
| $-750$ | 1800 |
| -720 | 1800 |
| -690 | 1800 |
| -EEO | 1800 |
| -630 | 1800 |
| -600 | 1800 |
| $-570$ | 1800 |
| $-540$ | 1800 |
| $-510$ | 1800 |
| -480 | 1800 |
| $-450$ | 1800 |
| -420 | 1800 |
| $-390$ | 1800 |
| -360 | 1800 |
| -330 | 1800 |
| -300 | 1800 |
| $-270$ | 1800 |
| $-240$ | 1800 |
| -210 | 1800 |
| -180 | 1800 |
| $-150$ | 1800 |
| $-120$ | 1800 |
| -90 | 1800 |
| -60 | 1800 |
| $-30$ | 1800 |
| 0 | 1800 |
| 30 | 1800 |
| 60 | 1800 |
| 90 | 1800 |

## Station

Girr. Mag
Fees. Maq

| 480 | 576e日. 3 | $E \square$ |
| :---: | :---: | :---: |
| 510 | STEE4. | ES |
| $-90$ | 57862.8 | 263 |
| -EO | 57608.3 | 8 |
| $-30$ | 57606. 6 | 7 |
| 0 | 57658.5 | 59 |
| 30 | 57596 | -4 |
| 60 | 57690.2 | 90 |
| 90 | 57792.8 | 193 |
| 120 | 57632. 8 | 33 |
| 150 | 576 ${ }^{\text {¢ }}$. 3 | 91. |
| 180 | 57588.4 | $-1=$ |
| 210 | 57632.5 | 33 |
| $-1080$ | 57635 | 35 |
| $-1050$ | 57573.7 | $-26$ |
| $-1020$ | 57621.8 | 2 |
| -990 | 57616.4 | 16 |
| -960 | 57632.9 | 33 |
| $-930$ | 57659.7 | 54 |
| -900 | 57671.3 | 71 |
| -870 | 57716.1 | 116 |
| $-840$ | 57797.5 | 198 |
| -810 | 57902.1 | 302 |
| -780 | 57868 | 268 |
| -750 | 57827.6 | 228 |
| $-720$ | 57741 | 141 |
| -690 | 57704.6 | 105 |
| -6EO | 57896.9 | 297 |
| -630 | 57629.7 | 50 |
| -600 | 57731.7 | 132 |
| $-570$ | 57939.9 | 340 |
| $-540$ | 57710.1 | 110 |
| -510 | 57637.4 | 37 |
| -480 | 57717.5 | 118 |
| $-450$ | 57746.4 | $1+6$ |
| $-420$ | STE4E.2 | 46 |
| -390 | 57670.6 | 71 |
| $-360$ | 57674.9 | 75 |
| $-330$ | 57701.2 | 101 |
| $-300$ | 57686.6 | 87 |
| $-270$ | 57648.1 | 48 |
| $-240$ | 57631 | 31 |
| $-210$ | 57597.4 | -3 |
| -180 | 57600.5 | 1 |
| -150 | 57543.9 | $-56$ |
| $-120$ | 57592.7 | $-7$ |
| $-90$ | 57604 | 4 |
| -60 | 57594.6 | $-5$ |
| $-30$ | 57614.3 | 15 |
| 0 | 57587.4 | $-13$ |
| 30 | 57614 | 14 |
| 60 | 57485.5 | $-115$ |
| 90 | 57600.3 | 0 |


| Statian | Line | Statign | Egrr. Mag | Ees. Mag |
| :---: | :---: | :---: | :---: | :---: |
| 120 | 1800 | 120 | 57529.3 | -71 |
| 150 | 1800 | 150 | 57672.2 | 72 |
| 180 | 1800 | 180 | 57695 | 95 |
| 210 | 1800 | 210 | 57664.4 | 64 |
| 240 | 1800 | 240 | 57613.9 | 14 |
| -70 | 1800 | 270 | 57750.3 | 150 |
| 300 | 1800 | 300 | 57684 | 84 |
| 330 | 1800 | 330 | 57568.7 | -31 |
| 360 | 1800 | 360 | 57567 | -33 |
| 390 | 1800 | 390 | 57606 | $E$ |
| 420 | 1800 | 420 | 57777.5 | 178 |
| 450 | 1800 | 450 | 57715.9 | 116 |
| 480 | 1800 | 480 | 57588.2 | -12 |
| 510 | 1800 | 510 | 57619.6 | 20 |
| 540 | 1800 | 540 | 57Eこ8.1 | 28 |
| 570 | 1800 | 570 | 57625.5 | 26 |
| EOO | 1800 | 600 | 57652. 9 | 53 |
| ESO | 1800 | 630 | 57637.5 | 38 |
| E6O | 1800 | EEO | 57640.1 | 40 |
| 690 | 1800 | 690 | 57639.6 | 40 |
| line | 2000 |  |  |  |
| $-930$ | 2000 | -930 | 5762 | 28 |
| -900 | 2000 | -900 | 5765 | 59 |
| -870 | 2000 | -870 | 57641.8 | 42 |
| $-840$ | 2000 | -840 | 57776.3 | 176 |
| -810 | 2000 | -810 | 57851.8 | 252 |
| $-780$ | 2000 | $-780$ | 57907.7 | 308 |
| -750 | 2000 | $-750$ | 57746.1 | 146 |
| $-720$ | 2000 | $-720$ | 57678.2 | 78 |
| -690 | 2000 | -690 | 57820.7 | 221 |
| -EEO | 2000 | -6EO | 57913.9 | 314 |
| -630 | 2000 | -630 | 58013.3 | 419 |
| -EOO | 2000 | -600 | 57761.1 | 161 |
| $-570$ | 2000 | -570 | 57693.1 | 93 |
| $-540$ | 2000 | $-540$ | 57667.5 | E8 |
| -510 | 2000 | -510 | 57798.9 | 197 |
| -480 | 2000 | $-480$ | 57924.9 | 325 |
| $-450$ | 2000 | $-450$ | 5792.3 | 322 |
| $-420$ | 2000 | -420 | 57971.7 | 372 |
| -390 | 2000 | $-390$ | 57727.3 | 128 |
| -360 | 2000 | $-360$ | 57739.4 | 139 |
| -330 | 2000 | -330 | 57747.2 | 147 |
| -300 | 2000 | -300 | 57759.9 | 160 |
| $-270$ | 2000 | $-270$ | 57745.5 | 146 |
| -240 | 2000 | -240 | 57702.7 | 103 |
| -210 | 2000 | $-210$ | 57689.7 | 90 |
| $-180$ | 2000 | $-180$ | 57624.8 | 25 |
| $-150$ | 2000 | $-150$ | 57585.6 | -14 |
| $-120$ | 2000 | $-120$ | 57603.4 | 3 |
| $-90$ | 2000 | -90 | 57624.4 | 24 |
| $-60$ | 2000 | -60 | 57647.4 | 47 |
| -30 | 2000 | -30 | 57630.6 | 31 |
| 0 | 2000 | 0 | 57636.3 | 36 |
| 30 | 2000 | 30 | 57643.7 | 44 |
| 60 | 2000 | EO | 57639.2 | 39 |


| Station | Line | Statian | Gorr. Mag | Ees. Mag |
| :---: | :---: | :---: | :---: | :---: |
| 210 | 2200 | 210 | 57591.1 | -9 |
| 240 | 2200 | 240 | 574E9.6 | $-130$ |
| 270 | 2200 | 270 | 57488.3 | $-112$ |
| 300 | 2200 | 300 | 57539.7 | -60 |
| 330 | 2200 | 330 | 57544.3 | -56 |
| 360 | 2200 | 360 | 5755 | $-45$ |
| 390 | 2200 | 300 | 57584.8 | $-15$ |
| 420 | 2200 | 420 | 57598.2 | $-12$ |
| 450 | 2200 | 450 | 57621.7 | 22 |
| 480 | 2200 | 480 | 57600.9 | 1 |
| 510 | 2200 | 510 | 57630.6 | 31 |
| 540 | 2200 | 540 | 57604.1 | 4 |
| 570 | 2 O 0 | 570 | 57591.1 | -9 |
| 600 | 2200 | 600 | 57E21.2 | 21 |
| ESO | 2200 | E30 | 57602.4 | 2 |
| EGO | 2200 | EGO | 57596.8 | $-3$ |
| 690 | 2200 | E90 | 57600.3 | 0 |
| 720 | 2000 | 720 | 57646 | 46 |
| 750 | 2200 | 750 | 57631.3 | 31 |
| 1ine | 1200 |  |  |  |
| $-1410$ | 1200 | $-1410$ | 57663 | 63 |
| -1380 | 1200 | $-1380$ | 57658.5 | 59 |
| $-1350$ | 1200 | -1350 | 57677.1 | 77 |
| $-1320$ | 1200 | $-1300$ | 57678.6 | 75 |
| -1290 | 1200 | -1290 | 57687.2 | 87 |
| $-1260$ | 1200 | -1260 | 57691.5 | 92 |
| -1230 | 1200 | -1230 | 57684.6 | 85 |
| $-1200$ | 1200 | -1200 | 57711.9 | 112 |
| -1170 | 1200 | -1170 | 57723.9 | 124 |
| $-1140$ | 1200 | $-1140$ | 57726. 3 | 126 |
| -1110 | 1200 | -1110 | 57757.8 | 158 |
| -1080 | 1200 | -1080 | 57774.3 | 174 |
| $-1050$ | 1200 | $-1050$ | 57783.2 | 183 |
| $-1020$ | 1200 | $-1020$ | 57763. 9 | 164 |
| -990 | 1200 | $-990$ | 57726.7 | 127 |
| -960 | 1200 | - 960 | 57694.7 | 95 |
| -930 | 1200 | -930 | 576ここ.8 | 93 |
| -900 | 1200 | -900 | 57705.1 | 105 |
| -870 | 1200 | -870 | 57694.4 | 94 |
| -840 | 1200 | -840 | 57706.3 | 106 |
| -810 | 1200 | -810 | 57718.9 | 119 |
| $-780$ | 1200 | -780 | 57712.5 | 113 |
| $-750$ | 1200 | $-750$ | 57703.4 | 103 |
| $-720$ | 1200 | -720 | 57713.9 | 114 |
| -E90 | 1200 | -690 | 57746.1 | 146 |
| -EEO | 1200 | -EEO | 57759.5 | 160 |
| -E30 | 1200 | -630 | 57840.3 | 240 |
| -600 | 1200 | -600 | 57985 | 385 |
| -570 | 1200 | $-570$ | 57895.3 | 295 |
| $-540$ | 1200 | $-540$ | 57885.1 | 285 |
| -510 | 1200 | -510 | 57798.1 | 198 |
| $-480$ | 1200 | -480 | 57768 | 168 |
| $-450$ | 1200 | -450 | 57797.9 | 198 |
| $-420$ | 1200 | -420 | 57798.7 | 199 |
| -300 | 1200 | $-390$ | 57735.7 | 136 |


| Station | Line | Station | Bigr. Mag | Fies: Maq |
| :---: | :---: | :---: | :---: | :---: |
| $-360$ | 1200 | $-360$ | 5776e.2 | $16 E$ |
| $-330$ | 1200 | -330 | 57701.2 | 101 |
| -300 | 1200 | -300 | 57760.2 | 160 |
| $-270$ | 1200 | $-270$ | 57730.3 | 130 |
| $-240$ | 1200 | $-240$ | 576Є4.3 | E4 |
| $-210$ | 1200 | $-210$ | 57EこE. 1 | $2 E$ |
| $-180$ | 1200 | -180 | 57586 | -14 |
| $-150$ | 1200 | $-150$ | 57612.3 | 12 |
| $-120$ | 1200 | $-120$ | 57613.5 | 14 |
| $-50$ | 1200 | -90 | 57633.3 | 33 |
| -60 | 1200 | -60 | 57642.4 | 42 |
| $-30$ | 1200 | -30 | 5760E. 2 | $E$ |
| 0 | 1200 | 0 | 57609.4 | 9 |
| 30 | 1200 | 30 | 57566.1 | -34 |
| EO | 1200 | 60 | 57554.3 | $-4 E$ |
| 90 | 1200 | 90 | 57559.5 | -41 |
| 120 | 1200 | 120 | 57602. 1 | 2 |
| 150 | 1200 | 150 | 5763.1 | 39 |
| 180 | 1200 | 180 | 57277.1 | $-323$ |
| 210 | 1200 | 210 | 57593.3 | -7 |
| 240 | 1200 | 240 | 57578.2 | -2 |
| 270 | 1200 | 270 | 57585.9 | $-14$ |
| 300 | 1200 | 300 | 57600. 5 | 1 |
| 330 | 1200 | 330 | 57576.6 | $-23$ |
| 360 | 1200 | 360 | 57638.6 | 39 |
| 390 | 1200 | 390 | 57573.1 | -27 |
| 420 | 1200 | 420 | 57596.9 | $-3$ |
| 450 | 1200 | 450 | S7E18.7 | 19 |
| 480 | 1200 | 480 | 578.10 .1 | 210 |
| 510 | 1200 | 510 | 57416 | $-184$ |
| 540 | 1200 | 540 | 57634 | 34 |
| 570 | 1200 | 570 | 57644.5 | 45 |
| 600 | 1200 | 600 | STEGE. 7 | $E 7$ |
| ESO | 1200 | 630 | 57701.7 | 102 |
| EEO | 1200 | EEO | 57642.6 | 43 |
| EOO | 1200 | 690 | 576293 | $2 ゙ 5$ |
| 720 | 1200 | 720 | 57649.9 | 50 |
| 750 | 1200 | 750 | 57638.2 | 38 |
| 780 | 1200 | 780 | 57649.1 | 49 |
| 810 | 1200 | 810 | 57763.9 | 164 |
| 840 | 1200 | 840 | 57465.3 | $-135$ |
| line | 1400 |  |  |  |
| -1410 | 1400 | $-1410$ | 57652.7 | 53 |
| -1380 | 1400 | $-1380$ | 57662.6 | E3 |
| $-1350$ | 1400 | $-1350$ | 57622.1 | 22 |
| $-1320$ | 1400 | -1320 | 57627.6 | 28 |
| $-1290$ | 1400 | -1290 | 57644.4 | 44 |
| $-1260$ | 1400 | $-1260$ | 57660.8 | E1 |
| $-1230$ | 1400 | $-1230$ | 57633.7 | 34 |
| $-1200$ | 1400 | $-1200$ | 57653.5 | 54 |
| $-1170$ | 1400 | $-1170$ | 57662.2 | 62 |
| $-1140$ | 1400 | $-1140$ | 57EES.6 | $\epsilon \in$ |
| $-1110$ | 1400 | -1110 | 57661 | E1 |
| $-1080$ | 1400 | $-1080$ | 57681.7 | $8 \div$ |
| $-1050$ | 1400 | $-1050$ | 57701.9 | 102 |


| Station | Line | Station | Sorr．Mag | Fee．Mag |
| :---: | :---: | :---: | :---: | :---: |
| $-1020$ | 1400 | $-1020$ | 57763.4 | 163 |
| －990 | 1400 | －990 | 57828 | 228 |
| －960 | 1400 | －960 | 577724 | 172 |
| －930 | 1400 | －930 | 57785.2 | 185 |
| －900 | 1400 | －900 | 57743.5 | 144 |
| －870 | 1400 | －870 | $577 \div 6.3$ | $1 こ 7$ |
| －840 | 1400 | $-840$ | 57712.2 | 112 |
| －810 | 1400 | －810 | 57677.8 | 98 |
| －780 | 1400 | －780 | 57775.2 | 175 |
| $-750$ | 1400 | $-750$ | 57791.2 | 191 |
| －720 | 1400 | －720 | 57756． 7 | 157 |
| －690 | 1400 | －690 | 57712.4 | 112 |
| －EEO | 1400 | $-E 60$ | 57722.2 | $12 \%$ |
| －630 | 1400 | －690 | 57743.5 | 144 |
| －600 | 1400 | －600 | 57798.7 | 195 |
| $-570$ | 1400 | $-570$ | 57764.4 | 164 |
| $-540$ | 1400 | $-540$ | 57698 | 98 |
| －510 | 1400 | $-510$ | 57798.5 | 159 |
| －480 | 1400 | －480 | 57879 | 273 |
| $-450$ | 1400 | $-450$ | 57748.4 | 148 |
| $-420$ | 1400 | －420 | 57767.8 | 168 |
| $-390$ | 1400 | －300 | 57711.2 | 111 |
| $-360$ | 1400 | －360 | 57723．2 | 123 |
| $-330$ | 1400 | －330 | 57700.3 | 100 |
| $-300$ | 1400 | －300 | 57634.1 | 34 |
| －270 | 1400 | －270 | 57599.7 | 0 |
| －240 | 1400 | －240 | 57542.3 | －58 |
| $-210$ | 1400 | －210 | 57537.4 | $-63$ |
| －180 | 1400 | $-180$ | 57609．6 | 10 |
| $-150$ | 1400 | $-150$ | 57591.4 | －9 |
| $-120$ | 1400 | －120 | 57576．7 | －23 |
| $-90$ | 1400 | －90 | 57596.5 | －64 |
| $-60$ | 1400 | －60 | 57541.7 | $-58$ |
| －30 | 1400 | $-30$ | 57603.4 | 3 |
| 0 | 1400 | － 0 | 575ここ．2 | －78 |
| 30 | 1400 | 30 | 57601.2 | 1 |
| 60 | 1400 | 60 | 57600.6 | 1 |
| 90 | 1400 | 90 | 57584 | $-16$ |
| 120 | 1400 | 120 | 57596． 6 | $-3$ |
| 150 | 1400 | 150 | 57603.1 | 3 |
| 180 | 1400 | 180 | 57575.1 | $-25$ |
| 210 | 1400 | 210 | 57568 | $-32$ |
| 240 | 1400 | 240 | 57745.7 | 146 |
| 270 | 1400 | 270 | 57662 | $E=$ |
| 300 | 1400 | 300 | 57735.2 | 135 |
| 330 | 1400 | 330 | 57797 | 197 |
| 360 | 1400 | 360 | 57630.4 | 30 |
| 390 | 1400 | 390 | 57E68． 9 | $6 \cdot$ |
| 420 | 1400 | 420 | 57614.3 | 14 |
| 450 | 1400 | 450 | 57699.7 | 100 |
| 480 | 1400 | 480 | 57627.1 | 97 |
| 510 | 1400 | 510 | 5762 | 2 V |
| 540 | 1400 | 540 | 57595.2 | －5 |
| 570 | 1400 | 570 | 57652． 6 | 53 |
| 600 | 1400 | 600 | 57374.1 | $-26$ |


| Station | Line | Station | Gorr: Maq | Ees. Maq |
| :---: | :---: | :---: | :---: | :---: |
| E30 | 1400 | ESO | 5765. 1 | 52 |
| E60 | 1400 | EEO | 57652. 4 | 52 |
| E90 | 1400 | E90 | 57620.3 | 20 |
| 720 | 1400 | 720 | 57462.1 | $-138$ |
| 750 | 1400 | 750 | 57563.5 | -37 |
| 780 | 1400 | 790 | 57694.2 | 94 |
| 810 | 1400 | 810 | 58147.7 | 548 |
| 840 | 1400 | 8.40 | 56417.7 | -1182 |
| 870 | 1400 | 870 | 57518.9 | -81 |
| line | 1600 |  |  |  |
| -1200 | 1600 | $-1200$ | 57629.5 | 30 |
| $-1170$ | 1600 | -1170 | 57645.2 | 45 |
| -1140 | 1600 | -1140 | 57632.8 | 33 |
| -11.10 | 1600 | -1110 | 57653. 4 | 53 |
| -1080 | 1600 | -1080 | 57658.4 | 58 |
| -1050 | 1600 | -1050 | 5766E. ${ }^{\text {F }}$ | 67 |
| -1020 | 1600 | -1020 | 57719.7 | 120 |
| -990 | 1600 | -990 | 57843.6 | 244 |
| -960 | 1600 | -960 | 57882.9 | 283 |
| -930 | 1600 | -930 | 57768.6 | 169 |
| -900 | 1600 | -900 | 57819.2 | 219 |
| -870 | 1600 | -870 | 57777.4 | 177 |
| -840 | 1600 | -840 | 57754.1 | 154 |
| -810 | 1600 | -810 | 57749.4 | 149 |
| -780 | 1600 | -780 | 57870.7 | 271 |
| -750 | 1600 | -750 | 57882.3 | 282 |
| -720 | 1600 | -720 | 57671.6 | 72 |
| -690 | 1600 | -690 | 57650 | 50 |
| -660 | 1600 | -6E0 | 57629 | 29 |
| -630 | 1600 | -630 | 57637.1 | 37 |
| -600 | 1600 | -600 | 57783.8 | 184 |
| -570 | 1600 | -570 | 57731.4 | 13.1 |
| -540 | 1600 | -540 | 57705 | 105 |
| $-510$ | 1600 | -510 | 576Э8.1 | 98 |
| -480 | 1600 | -480 | 57658.6 | 59 |
| $-450$ | 1600 | $-450$ | 57659.8 | 60 |
| -420 | 1600 | -420 | 57E65.6 | $6 \epsilon$ |
| -350 | 1600 | $-390$ | 57627.5 | 23 |
| -360 | 1600 | -360 | 57580.9 | -19 |
| -330 | 1600 | -330 | 57592.4 | -8 |
| -300 | 1600 | -300 | 57626.8 | 27 |
| -270 | 1600 | -270 | 57657.5 | 58 |
| -240 | 1600 | -240 | 57596.1 | -4 |
| -210 | 1600 | -210 | 57651.5 | 52 |
| -180 | 1600 | -180 | 57617.4 | 17 |
| -150 | 1600 | -150 | 57605 | 5 |
| $-120$ | 1600 | $-120$ | 57633.5 | 34 |
| -90 | 1600 | -90 | 57584.2 | $-1 \epsilon$ |
| -60 | 1600 | -60 | 57591.6 | -8 |
| -30 | 1600 | $-30$ | 57605.6 | $\epsilon$ |
| 0 | 1600 | 0 | 57654.2 | 54 |
| 30 | 1600 | 30 | 57689.4 | 89 |
| EO | 1600 | EO | 57655.3 | 55 |
| 90 | 1600 | 90 | 57711.4 | 111 |
| 120 | 1600 | 120 | 57E29.1 | 29 |


| Statiom | Line | Station | Egrr．Mag | Fies．Man |
| :---: | :---: | :---: | :---: | :---: |
| 150 | 1600 | 150 | 5760.3 | $\epsilon$ |
| 180 | 1600 | 180 | 57545.5 | －55 |
| 210 | 1600 | －10 | 57577．2 | －20 |
| 240 | 1600 | 240 | 57579．2 | －－1 |
| 270 | 1600 | 270 | 57634.7 | 35 |
| 300 | 1600 | 300 | 57581.6 | －18 |
| 330 | 1600 | 330 | 57587.5 | $-13$ |
| 360 | 1600 | 360 | 57565． | －34 |
| 390 | 1600 | 390 | 57569． | －30 |
| 420 | 1600 | 420 | 57594.6 | －5 |
| 450 | 1600 | 450 | STEE1．7 | $\epsilon 2$ |
| 480 | 1600 | 480 | 57544.7 | －55 |
| 510 | 1600 | 510 | 57600.5 | 1 |
| 540 | 1600 | 540 | 57612.9 | 13 |
| 570 | 1600 | 570 | 57636.7 | 37 |
| 600 | 1600 | EOO | 57592.6 | $-7$ |
| E30 | 1600 | 630 | 57592.7 | －7 |
| EGO | 1600 | EEO | 57617.1 | 17 |
| 690 | 1600 | 690 | 57667.4 | 67 |
| 720 | 1． 600 | 720 | S781E．1 | $こ 16$ |
| 750 | 1600 | 750 | 57543.1 | $-57$ |
| 780 | 1600 | 780 | 57EE1．1 | $E 1$ |
| 810 | 1600 | 810 | 57811.6 | 玉12 |
| 1 ine | 800 |  |  |  |
| －990 | 800 | －990 | 57721.5 | 122 |
| －960 | 800 | －960 | 57725.1 | 125 |
| －930 | 800 | －930 | 57722.6 | 123 |
| －900 | 800 | －900 | 57758．9 | 159 |
| －870 | 800 | －870 | 57759.7 | 160 |
| －840 | 800 | $-840$ | 57763.7 | 164 |
| －810 | 800 | －810 | 57786.4 | 186 |
| $-780$ | 800 | $-780$ | 57767.4 | 167 |
| $-750$ | 800 | $-750$ | 57773.4 | 173 |
| －720 | 800 | $-720$ | 57742.8 | 143 |
| －690 | 800 | －690 | 57746.1 | 146 |
| －EEO | 800 | －6EO | 57753 | 153 |
| － 630 | 800 | －630 | 57822.1 | 22 |
| －600 | 800 | －600 | 57759.1 | 159 |
| $-570$ | 800 | $-570$ | 57804.7 | 205 |
| －540 | 800 | $-540$ | 57845.2 | 245 |
| $-510$ | 800 | $-510$ | 57847.6 | 248 |
| $-480$ | 800 | －480 | 57879.6 | 290 |
| －450 | 800 | $-450$ | 57790.1 | 190 |
| $-420$ | 800 | －420 | 57731 | 131 |
| －390 | 800 | －390 | 57803.8 | 204 |
| －360 | 800 | $-360$ | 57917.9 | 318 |
| －330 | 800 | －330 | 57812.3 | 玉12 |
| －300 | 800 | －300 | 57780 | 180 |
| －270 | 800 | －270 | 57741.2 | 141 |
| $-240$ | 800 | －240 | 57717.6 | 118 |
| $-210$ | 800 | －210 | 57698.4 | 98 |
| $-180$ | 800 | $-180$ | 57704 | 104 |
| $-150$ | 800 | $-150$ | 57713.3 | 113 |
| $-120$ | 800 | $-120$ | 57712.1 | $11 \%$ |
| $-90$ | 800 | －90 | 57738.9 | 139 |

Station

| -60 | 800 |
| ---: | ---: |
| -30 | 800 |
| 0 | 800 |
| 30 | 800 |
| 60 | 800 |
| 90 | 800 |
| 120 | 800 |
| 150 | 800 |
| 180 | 800 |
| 210 | 800 |
| 240 | 800 |
| 270 | 800 |
| 300 | 800 |
| 330 | 800 |
| 360 | 800 |
| 300 | 800 |
| 420 | 800 |
| 450 | 800 |
| 480 | 800 |
| 510 | 800 |
| 540 | 800 |
| 570 | 800 |
| 600 | 800 |
| 630 | 800 |
| $1 i n e$ | 1000 |
| -1230 | 1000 |
| -1200 | 1000 |
| -1170 | 1000 |
| -1140 | 1000 |
| -1110 | 1000 |
| -1080 | 1000 |
| -1050 | 1000 |
| -1020 | 1000 |
| -990 | 1000 |
| -960 | 1000 |
| -930 | 1000 |
| -900 | 1000 |
| -870 | 1000 |
| -840 | 1000 |
| -810 | 1000 |
| -780 | 1000 |
| -750 | 1000 |
| -720 | 1000 |
| -600 | 1000 |
| -660 | 1000 |
| -630 | 1000 |
| -600 | 1000 |
| -570 | 1000 |
| -540 | 1000 |
| -510 | 1000 |
| -480 | 1000 |
| -450 | 1000 |
| -420 | 1000 |
| -390 | 1000 |
| -360 | 1000 |
|  |  |

Station Gorr. Mag Ees. Mag

| -60 | 57731.7 | 132 |
| ---: | ---: | ---: |
| -30 | 5773 | 132 |
| 0 | 57787.3 | 187 |
| 30 | 57715.1 | 115 |
| 60 | 57729 | 129 |
| 90 | 57693.7 | 94 |
| 120 | 57704.7 | 105 |
| 150 | 57659.7 | 60 |
| 180 | 57589.5 | -11 |
| 210 | 57567.1 | -33 |
| 240 | 57554 | -46 |
| 270 | 57633.7 | 34 |
| 300 | 57637.2 | 37 |
| 330 | 57756.6 | 157 |
| 360 | 57605.6 | 6 |
| 390 | 57661.6 | 62 |
| 420 | 57648.5 | 49 |
| 450 | 57672.3 | 72 |
| 480 | 57663.7 | 64 |
| 510 | 576.49 | 49 |
| 540 | 57721.5 | 129 |
| 570 | 57631 | 31 |
| 600 | 57600 | 0 |
| 630 | 57660.2 | 60 |

## 95

104
115
110
123
136
155
143
120 97
107
110
99
95
111
206
112
182
219
189
147
114
168
247
238
203
145
100
100
118

| Station | Line | Station | Sorr. Mag | Fies. Mag |
| :---: | :---: | :---: | :---: | :---: |
| $-330$ | 1000 | $-330$ | 57699.1 | 95 |
| -300 | 1000 | -300 | 57746.2 | 146 |
| -270 | 1000 | $-270$ | 57768.3 | $1 \in 8$ |
| $-240$ | 1000 | $-240$ | 57728.6 | $12 \exists$ |
| $-210$ | 1000 | $-210$ | 57694.5 | 95 |
| -180 | 1000 | $-180$ | 57688.3 | 88 |
| $-150$ | 1000 | $-150$ | 57737.8 | 138 |
| $-120$ | 1000 | $-120$ | 57714.6 | 115 |
| -90 | 1000 | -90 | 57685.5 | 86 |
| $-60$ | 1000 | $-60$ | 57753.8 | 154 |
| $-30$ | 1000 | -30 | 57723.7 | 124 |
| 0 | 1000 | 0 | 57670.6 | 71 |
| 30 | 1000 | 30 | 57673.9 | 74 |
| EO | 1000 | EO | 57633.6 | 34 |
| 90 | 1000 | 90 | 57635.8 | 36 |
| 120 | 1000 | 120 | 576E'.5 | 76 |
| 150 | 1000 | 150 | 57635.6 | 36 |
| 180 | 1000 | 180 | 57594.2 | $-\epsilon$ |
| 210 | 1000 | 210 | 57646.4 | 46 |
|  | 1000 | 240 | 57731.8 | $13 \%$ |
| 270 | 1000 | 270 | 57512.2 | -88 |
| 300 | 1000 | 300 | 57646.5 | 47 |
| 330 | 1000 | 330 | 57702.3 | 102 |
| 360 | 1000 | 360 | 57712.2 | 112 |
| 390 | 1000 | 390 | 57717.6 | 118 |
| 420 | 1000 | 420 | 57658.8 | 59 |
| 450 | 1000 | 450 | 576E1.1 | E1 |
| 480 | 1000 | 480 | 57648.1 | 48 |
| 510 | 1000 | 510 | 57633.3 | 33 |
| 540 | 1000 | 540 | 57644.1 | 44 |
| 570 | 1000 | 570 | 57723.7 | 124 |
| 600 | 1000 | EOO | 58201.1 | EO1 |
| 630 | 1000 | 630 | 57698.6 | 99 |
| EEO | 1000 | EGO | 57695.1 | 95 |
| 690 | 1000 | 690 | 57709.7 | 110 |
| 720 | 1000 | 720 | 57791.9 | $19 \%$ |
| 750 | 1000 | 750 | 57701.9 | 102 |
| 780 | 1000 | 780 | 57693.1 | 93 |
| 810 | 1000 | 810 | 57717.6 | 118 |
| line | 200 |  |  |  |
| $-240$ | 200 | $-240$ | 57740.5 | 141 |
| $-210$ | 200 | - 210 | 57713.1 | 113 |
| -180 | 200 | $-180$ | 57740.2 | 140 |
| $-150$ | 200 | -150 | 57756.7 | 157 |
| $-120$ | 200 | $-120$ | 57748.3 | 148 |
| -90 | 200 | -90 | 57736 | 136 |
| $-60$ | 200 | $-60$ | 57747.3 | 147 |
| -30 | 200 | $-30$ | 57700.7 | 101 |
| 0 | 200 | 0 | 57651.2 | 51 |
| 30 | 200 | 30 | 57630. 9 | 31 |
| EO | 200 | EO | 576こ5.9 | - 6 |
| 90 | 200 | 90 | 57571.4 | $-29$ |
| 120 | 200 | 120 | 57633.6 | 34 |
| 150 | 200 | 150 | 57637.3 | 37 |
| 1ine | 400 |  |  |  |

Statiom
-480
-450
-420
-300
-360
-330
-300
-270
-240
-210
-180
-150
-120
-90
-60
-30
0
30
60
90
120
150
180
210
240
270
300
330

1ine
$-72$
$-6$
$-630$
$-600$
$-570$
$-540$
-510
-480
-480
-450

## $-420$

$-300$
$-360$
-330
-300
$-270$
$-240$
$-210$
$-180$
$-150$
$-120$
$-90$
$-60$
$-30$

Station

| 400 | -480 |
| :--- | ---: |
| 400 | -450 |
| 400 | -40 |
| 400 | -300 |
| 400 | -360 |
| 400 | -300 |
| 400 | -300 |
| 400 | -270 |
| 400 | -240 |
| 400 | -210 |
| 400 | -180 |
| 400 | -150 |
| 400 | -120 |
| 400 | -90 |
| 400 | -60 |
| 400 | -30 |
| 400 | 30 |
| 400 | 60 |
| 400 | 50 |
| 400 | 120 |
| 400 | 150 |
| 400 | 180 |
| 400 | 20 |
| 400 | 240 |
| 400 | 270 |
| 400 | 300 |
| 400 | 330 |
| 400 |  |

$57777.1 \quad 177$
$57819.1 \quad 219$
$57906.5 \quad 307$
57888.4288
57780.4180
$57916 \quad 216$
$57657.4 \quad 57$
5フモヒヨ． 1 6Э
57690．$\quad ~ Э 1$
$57735.5 \quad 136$
57719．6 120
57733.2133
$57747.3 \quad 147$
57760.2160
$57726.8 \quad 127$
$57729.8 \quad 130$
57EEO．6 EI
$57633.5 \quad 34$
5765ヒ． 1 56
$57641.8 \quad 42$
$57719.5 \quad 1=0$
57629．8 30
$57577.8 \quad-2$
$57609.8 \quad 10$
57639.139
$57613.6 \quad 14$
57636.3 36
57607.98
$57805.5 \quad 206$
$57799 \quad 199$
$57760.8 \quad 161$
57771.7172
$57797 \quad 197$
57747.4147
$57758.25 \quad 158$
$57865 \quad 265$
57889.1 289

268
202
155
196

## 20

171
147
262
236
210
175
151
192
193
153 54 56

| Station | Line | Station | Gorr. Mag | Ees. Mag |
| :---: | :---: | :---: | :---: | :---: |
| EO | 600 | 60 | 576E8. 1 | 68 |
| 90 | 600 | 90 | 57696 | ' 9 |
| 120 | 600 | 120 | 57696.1 | 96 |
| 150 | 600 | 150 | 57694.4 | 94 |
| 180 | 600 | 180 | 57511.1 | -89 |
| 210 | 600 | 210 | 57624.3 | 24 |
| 240 | 600 | 240 | 57567.7 | -32 |
| 270 | 600 | 270 | 57602.4 | 2 |
| 300 | EOO | 300 | 57609.1 | 9 |
| 330 | 600 | 330 | 57678.5 | 79 |
| 360 | 600 | 360 | 57602.7 | 3 |
| 390 | 600 | 390 | 57668.3 | 68 |
| 420 | EOO | 420 | 57615.7 | $1 \epsilon$ |



APPENDIX III

## General Information

The IGS-2 Integrated Geophysical System is a portable microprocessor-based instrument which allows more than one type of survey measurement to be performed by a single operator during a survey.

The IGS-2 is a modular system which can easily be configured to suit different and changing survey requirements. Reconfiguring the system is easy and offers both operational flexibility and minimal redundancy with a minimum number of spare consoles and/or modules.

When conflgured with any of the avallable sensor options, the IGS-2 System Control Console becomes a method-specific instrument according to the sensor option(s) utilized. In addition, the IGS-2 Console is an electronic notebook into which geophysical, geological or other data may be manually entered and digitally stored.

Data is stored in the IGS-2 in an expandable, solid state memory and can be output in the fleld by connecting the instrument to a printer, tape recorder, modem or microcomputer.

The 32 character digital display uses full words in most cases, ensuring clear communication. Both present and previous data are displayed simultaneously, allowing comparisons to be made at a glance during a survey.
The IGS-2 records header information, data values, station number, line number, grid number and the time of each observation in its internal memory. Data are first sorted by grid number, then in order of increasing line number and, within each line, by increasing station number. In this way, the data are organized logically regardless of the sequence in which they were taken. Ancillary data can also be manually entered and recorded at a given station, along with the survey parameters.

SPECIFICATIONS
Magnetometry specifications
Total Field Operating Range
20,000 to $100,000 \mathrm{nT}$ (1 nT = 1 gamma).

Gradient Tolerance For Total Field: $\quad+5000 \mathrm{nT} / \mathrm{m}$.

| Total Fleld Absolute Accuracy | ```+1 nT at 50,000 nT +2 nT over total fleld operating and temperature range.``` |
| :---: | :---: |
| Resolution | 0.1 nT . |
| Tuning | Fully solld-state. Manual or automatic mode is keyboard selectable. |
| Reading Time | 2 seconds. For portable readings this is the time taken from the push of a button to the display of the measured value. |
| Continuous Cycle Times | ```Keyboard selectable in 1 second increments upwards from 2 seconds to }99 seconds.``` |
| Operating Temperature Time | -40 C to +50 C provided optional Display Heater $1 s$ used below - 20 C . |

Sensor options
Portable Total Field Sensor Option
Includes sensor, staff, two 2 m cables and backpack sensor harness. Weight of sensor, cable and staff is 1.9 kg .

VLE Specifications

Frequency Tuning
Automatic digital tuning. Can be tuned to any frequency in the range 15.0 to 29.0 kHz with a bandwidth of 150 Hz . Up to three frequencies can be chosen by keyboard entry for sequential measurements.

Field Strength Range

Signal Filtering

Fields as low as $100 \mathrm{~mA} / \mathrm{m}$ can be received. In practice, background noise may require fields up to 5-10 times this level. Maximum received field is a $2 \mathrm{~mA} /$ metre. These values are specified for 20 kHz . For any other frequency, calculate the above limits by multiplying by the station frequency in kHz and dividing by 20.

Narrow bandpass, low pass and sharp cut-off high pass filters.

Measuring Time
0.5 seconds sample interval. As many as $2.0+$ E16 samples can be stacked to improve measurement accuracy.

VLF-Magnetic Field Components Measured

1) Horizontal amplitude,
2) Vertical in-phase component, and 3) Vertical quadrature components. Vertical components are displayed as a percentage of horizontal component and are related in phase to the horizontal components. Their range is +120\%; reading resolution 1\%.

Two air-cored coils in a backpack mounted housing with an electronic level for automatic tilt compensation. The error in the vertical in-phase component is less than 1\% for tilts up to +15.









