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GEOLOGICAL SURVEY

Preliminary report on Audio-Magnetotelluric Survey on São Miguel Island, Azores, Portugal

by

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This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

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INTRODUCTION

The Laboratorio de Geociencias e Technologia (LGT), an agency of the Azorean Regional Government, has an ongoing program for the exploration and development of geothermal resources on the various islands in the Azores group. To assist in that program the Agency For International Development (AID) of the United States Department of State funded the U.S. Geological Survey to carry out limited geological, geochemical, and geophysical surveys on the Island of São Miguel. This report presents the preliminary results of 64 audio-magnetotelluric (AMT) soundings obtained in September 1982. These results will be integrated with the geological and geochemical data, after they become available, in a final report.

São Miguel island is dominated by three major late Quaternary silicic volcanic centers (Figure 1) in which calderas have developed. All three centers, Sete Cidades, Agua de Pau and Furnas, have erupted explosively numerous times during the past 5000 years and all at least once since the island was settled in the fifteenth century (Booth and others, 1978). Exploration and development of the geothermal potential on São Miguel have been concentrated at lower elevations on the north side of Agua de Pau (Meidav, 1981) through various groups contracted by the LGT. To complement this work the USGS began geological and geochemical studies in 1980 with the geological work focusing on the Furnas and Sete Cidades volcanic centers. Electrical investigations were made in September 1982 on the Sete Cidades and Furnas centers to supplement the geological studies.

Within the Furnas caldera are numerous fumaroles and hot springs which account for most of the surface thermal manifestations on São Miguel. These manifestations comprise a major tourist attraction that may not be available for geothermal development because of the potential for adverse effects on the natural phenomena. But whether Furnas is developed or not, understanding of its geological and geophysical characteristics provides a reference against which information from Sete Cidades and Agua de Pau may be evaluated.

DESCRIPTION OF THE METHOD

Magnetotellurics (MT) is an electromagnetic sounding method in which variations in earth resistivity as a function of depth are measured (Keller and Frischknecht, 1966). These soundings are obtained by measuring the earth's surface electromagnetic fields at different frequencies. Because lower frequencies penetrate further into the earth before they are absorbed relative to higher frequencies, measurement of the electromagnetic fields over a broad frequency range gives information on resistivity variations with depth. If these measurements are made in the audio-frequency range then the technique is called audio-magnetotellurics (AMT). This method is discussed in detail by Strangway and others (1973) and application and details of the USGS AMT system are given by Hoover and others (1976, 1978) and Hoover and Long (1976).

The AMT method has important advantages over galvanic resistivity techniques because near surface resistive layers are not a problem since artificial current sources are not used, and long lengths of wire are not required for deep exploration. These advantages, especially the latter, were important on São Miguel because of rugged topography of high relief in many parts of the island. In the AMT survey 25-meter-long electric dipoles were used to measure the electric field.

The depth of exploration is a function of both frequency (f) and resistivity (ρ) and is approximated by the skin depth δ of the electromagnetic waves. The skin depth is the depth at which the fields have decreased to 37% (1/e) of their surface value and is given by,

$$\delta = 503\sqrt{\frac{\rho}{f}} \text{ meters}$$

where ρ is in ohm-meters and f in Hertz.

A more accurate estimate of depth of exploration can be obtained directly from the sounding graph (see figure 2). In the graph the ordinate and abscissa give, respectively, apparent resistivity and frequency. Diagonal lines are also shown which give the loci of sounding curves should a perfect conductor be encountered at the specified depth. These lines are given by

$$D = \sqrt{\frac{\rho}{w\mu_o}} = 355\sqrt{\frac{\rho}{f}} \text{ meters}$$

and run at 34 degrees to the abscissa for the particular scales chosen. This gives a more practical estimate of depth of exploration, particularly if a well defined descending branch is seen on a sounding curve. For example if the surface material had a uniform 100 ohm-meter resistivity to a depth of 300 meters, and then a thick 1 ohm-meter layer was encountered, the sounding curve would aproximately lie on the 100 ohm-meter line to a frequency of 140 Hz and descend along the 300 m line to 1 ohm meter. A very resistive layer would cause the curve to rise at 34 degrees for these particular graph scales, along a line of constant conductance. The basis for this relationship is given by Bostick (1977). Figure 2 may be used for estimating depths from the sounding curves given in appendix 2.

As in any sounding technique it should be remembered that the earth is being sampled laterally as well as vertically below the measuring station. Thus in geologically complex areas simple one-dimensional model interpretations give, at best, only a crude average approximation of the geoelectric section.

Signal sources for AMT may be either artifical or natural. The USGS equipment has been designed for use with natural sources and these were used in this survey. The principal source of natural electromagnetic energy in the audio-frequencies is electrical discharge during lightning storms. Typically signal strength is low except when generated by local storms, and thus data quality may be poor, especially in parts of the frequency spectrum where energy is more strongly attenuated. These limitations are discussed more fully in relation to natural source AMT exploration by Hoover and others (1978). During our field measurements lightning storms in the Azores group were not common. As a result signals in the 1. to 4 KiloHertz range were very weak or below system noise levels. This is illustrated on the sounding curves by the lack of data points in this range and increased scatter in the data near this range. Signals at 4.5 Hz, which is below the first Schumann resonance (Galejs 1964) at about 7.5 Hz, also were generally very weak during the field season. Care should thus be used in interpretation of the sounding curves at 4.5 Hz.

Three sources of man-generated electromagnetic signals were noted during the survey; these caused minor problems in data acquisition. These sources were power lines, portable electric fences, and a (presumed) very-low frequency (VLF) radio transmitter. Nearby power lines and electric fences contribute noise to the data because these sources are too close to give plane waves required in the computation of apparent resistivity. We minimized this problem by selecting sites as distant as possible from such sources. In general 200 meters from power lines proved to be an acceptable operating distance, and in some cases electric fences were turned off during data acquisition. Problems with the VLF station were only encountered on one weekend. The signals were strong enough to block the AMT receiver at all frequencies so that soundings were not possible during the limited time the station was operating.

AMT DATA

Preliminary processing of the AMT data at 7.5 and 26 Hz was done routinely during the field season to assist in selecting subsequent field stations. Complete computer data reduction was accomplished in Denver Colorado using unpublished programs provided by C. Long. Tabulated data for all the soundings is presented in appendix 1 and accompanying sounding graphs are shown in appendix 2.

At each station location two scalar AMT soundings were made for orthogonal orientations of the electric and magnetic field sensors. The directions noted on the data sheets, northwest-southeast or northeast-southwest, refer to the orientation of the electric field dipole. These directions were chosen to be parallel or perpendicular to the major geological structures so that in many cases the soundings would represent transverse magnetic (TM) or transverse electric (TE) mode resistivities. The difference in TM and TE mode resistivities near lateral electrical boundaries caused by a changing geologic environment is apparent on some of the soundings.

Plate 1 shows the locations of the soundings on Sete Cidades, labeled SC1 through SC38, and plate 2 gives the locations of soundings for Furnas, numbers F1 through F25. Sounding F14 about 5 km east of the village of Furnas is at the origin of modified Schlumberger soundings 5 and 6 obtained by Geonomics (Geonomics 1977). No location map is shown for sounding Fogo 1 which was made at the meteorological station on the south side of Lagoa do Fogo.

PRELIMINARY INTERPRETATION

Three or four distinct electrical units may be distinguished. Typically, a surficial layer a few 10's of meters thick is of intermediate resistivity (10-200 ohm meters) and is underlain by a higher resistivity unit which varies from about 100 to 1000 ohm-meters. These units appear to be associated with rocks above the water table. Below the highest resistivity unit more conductive rock is indicated on all the soundings. Most soundings, however, do not sample deeply enough to define a bottom to this conductive unit. On some soundings the conductive zone shows two distinct layers, one in the range of 50-200 ohm-meters and another, less than 10 ohm-meters; other soundings indicate a more gradual decrease in resistivity with depth.

This general form of the sounding curves is quite similar to results reported by Anderson and others (1982) on Terceira and by Geonomics (1977) on São Miguel. An example of this general form is seen in figure 3 which shows Geonomics soundings 5, 6.1, and 6.2. The curves show combined modified Schlumberger and equatorial soundings obtained for expansions in different directions, but starting from the same origin. Differences are attributed to lateral heterogeneity in the area. We made an AMT sounding approximately at the origin of the Schlumberger soundings for comparison purposes. The AMT data were inverted to produce a one-dimensional model using a method presented by Bostick (1977) and then the equivalent Schlumberger sounding computed. This curve is also shown in figure 3. The agreement between the curves is quite good considering differences in the way that the two methods average lateral resistivity changes, and the complexity of the geology.

Furnas area

Apparent resistivity maps (plates 3 and 4) were prepared for each sounding orientation (NW-SE and NE-SW) at a frequency of 7.5 Hz. This is the lowest frequency at which signal strengths are adequate to give good data quality while also measuring a large volume of rock. It is thus an appropriate frequency to use for identifying regional resistivity trends.

The lowest observed resistivities are at the fumarole area by Lagoa das Furnas. At this site resistivities are about 10 ohm-meters in the near surface and drop to about 1.5 ohm-meters at a depth of 50 meters. These low values are clearly associated with altered and hot rock at the site, and apparently are of local significance only.

Within the caldera low resistivities were also observed on stations F-5, F-10, and F-15. Known thermal manifestations occur in the vicinity of stations F-10 and F-15, but are not known near station F-5 on the south end of Lagoa das Furnas. At station 5 the soundings show that resistivities decrease gradually to about 15 ohm-meters at depths near sea level and remain constant at greater depths. Stations 10 and 15 also show a conductive zone of less than 10 ohm-meters beginning near sea level. The maps show that generally the eastern part of the caldera is more conductive than other parts. Outside the caldera deep conductive units were seen on soundings around the southern and eastern margins. Soundings 11 and 12, near Agrião, are only several hundred meters from the coast and would be influenced by the presence of conductive ocean water and probably by sea water invasion of underlying units. However the resistivities of units above sea level, particularly on sounding 11 are rather low suggesting that thermal waters may be present.

Aeromagnetic data provided by LGT show magnetic lows associated with the Furnas and Sete Cidades calderas but interestingly none associated with Agua de Pau. Magnetic lows associated with near surface thermal manifestations and electrically conductive zones have been clearly defined in the Long Valley and Medicine Lake, California, calderas (Stanley 1976, Fraser 1983). Where they are attributed in part to alteration of magnetic minerals by hydrothermal solutions. The magnetic map in the Furnas area has been redrawn to 1:50,000 scale for comparison with the electrical data and is shown in plate 5. It is interesting to observe that a magnetic low is centered on the eastern part of the caldera in the vicinity of soundings F-10 and F-15.

Sete Cidades area

Surface thermal manifestation associated with the Sete Cidades volcano are represented only by two sea-level hot springs outside the caldera at Mosteiros and Ponta de Ferraria. These hot springs are near stations SC-16 and SC-8 respectively. As at Furnas, 7.5 Hz scalar apparent resistivity maps were prepared for both sounding directions and are shown on plates 6 and 7. Most of the sites within the caldera yield intermediate resistivities, 50 to 100 ohm-meters. Two soundings, however, SC-4 and SC-11, showed low resistivities, which, by analogy with Furnas, may be suggestive of a hydrothermal system within the depth of exploration. The effect of lateral resistivity changes are evident in both these soundings. Both soundings, however, suggest that the conductive body is several hundred meters below sea level, when evaluated in terms of a one-dimensional model.

Outside the caldera the northwest flank of Sete Cidades shows fairly conductive values similar to the eastern part of Furnas caldera. Stations SC-8 and SC-15 are located on the coastline and low values of these stations reflect, at least in part, the adjacent conductive sea and probably sea water invasion into adjacent rock formations. Neither set of soundings, however, shows any significant lateral effects as might have been expected adjacent to the coast. It is not clear to what extent these two stations reflect the presence of sea water, sea-water-invaded rocks, or a possible hydrothermal convection systems.

The most promising area on Sete Cidades appears to be along the Mosteiros graben, figure 1. The graben is about 1 km across and trends northwest from the caldera rim to the village of Mosteiros. Northwest trending structures would be expected to be better defined by the NE-SW oriented AMT map (Plate 6) and this appears to be the case. On this map a northwest trending low resistivity lobe extends from Ponta da Ferraria to station 11 just inside the caldera. The presence of the two known hot springs along these two northwest trending structures and the low resistivities suggests that they may define structures along which thermal waters are flowing from an upwelling zone near the caldera wall, to the sea.

The computed geoelectric section across the northwest flank of Sete Cidades is shown in figure 4. This cross-sections is based on one-dimensional inversion of the sounding curves and thus does not consider lateral effects. At each station, using the data in appendix 2, a smooth curve of the logarithmic average between the two sounding curves was used as the basis for inversion. Each curve was also constrained to not rise or fall more than allowed for a one-dimensional earth structures; 34 degrees on the scale of the sounding graphs.

The cross-section (figure 4) shows a layer of low resistivity material at about sea level within the Mosteiros graben. Also within the graben the resistivities rise below the conductive zone. This is shown best on sounding SC-36 which is about centered within the graben. Outside of the graben, the soundings show that quite conductive rock is present also but at greater depth. Because the frequencies used did not extend low enough, this deep conductive material is not well defined.

Aeromagnetic data for Sete Cidades are shown in plate 8. A magnetic low is seen associated with the caldera proper but restricted to the southern part of the caldera near Lagoa Verde. AMT station 4 is within the magnetic low and was one of two sites within the caldera which showed relatively low resistivities. Magnetic highs on the margins of the volcano appear to be associated with basalts comprising part of the edifice.

Agua de Pau

Only one sounding (fogo 1) was taken on Agua de Pau. The lower frequency part of the sounding is flat at about 200 ohm-meters. This implies that a thick section of conductive rocks is not present at the site within approximately the upper 2 km of section.

CONCLUSIONS AND RECOMMENDATIONS

We consider natural source AMT surveys to be reconnaissance in nature, serving to obtain regional information at less effort and cost than controlled source techniques. Such AMT surveys are used to identify target areas for more detailed study. In the geological setting of São Miguel the AMT soundings probably do not probe deep enough to identify magma, if any is present, however, they can identify areas in which convective hydrothermal solutions are active and/or have altered and mineralized rock. The method thus serves to identify, indirectly, permeable parts of the volcano.

We tentatively conclude that three areas have been identified in which further geothermal exploration is desirable. On the eastern and southern edge of Furnas additional regional geoelectric exploration followed by more detail is recommended to better define the extent of the conductive anomalies discovered by the AMT survey. If an upwelling zone of thermal water can be identified at sufficient distance from the tourist area, then production of thermal water may be acceptable in this area.

On Sete Cidades the Mosteiros graben is a promising target area. Detailed exploration of the graben directed towards selection of a drilling site is recommended. Additionally on Sete Cidades, the poorly defined northwest trend at Ponta da Ferraria needs better definition in order to assess its significance. We suggest additional regional and detailed work in this area as well.

Deeper probing geoelectric methods are also strongly recommended in order to obtain data at depths corresponding to the inferred magma chamber. Problems with access and topography impose significant constraints on what can be accomplished in a practical manner. In this environment MT soundings are probably the most efficient means of obtaining this data.

Geophysical characterizations also would not be complete without better gravity and seismic data. The needs for such data will be addressed in a summary report.

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Appendix 1

Tabulated AMT data for São Miguel Island, Azores. Data obtained during September 1982. At each station two independent scalar soundings are presented. The computer printout lists a north-south(NS) or east-west(EW) orientation for each scaler sounding. For this survey the north-south labeled orientation was in a northeast-southwest direction and the east-west labeled orientation was northwest-southeast.

The tabulation gives the station number, orientation, and number of frequencies observed, followed by a line showing frequency, apparent resistivity, the number of individual events used to calculate the apparent resistivity, and the standard error.

Station identification is SC for Sete Cidades, F, for Furnas, and Fogo for Agua de Pau.

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC1 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	9.13	4	3.48
7.5	17.73	8	3.76
14.0	16.68	7	1.86
27.0	39.17	7	3.63
45.0	75.14	10	8.76
75.0	45.06	9	3.56
140.0	105.76	10	5.51
270.0	228.89	10	11.84
450.0	292.35	6	50.77
750.0	136.16	6	42.96
1400.0	81.84	1	0.00
4500.0	243.71	10	25.44
7500.0	1310.40	9	277.68
14000.0	296.18	5	10.01
27000.0	102.27	5	8.57

STATION ID_SC1 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	103.37	4	10.42
7.5	**160.00**	**11**	**10.96**
14.0	194.93	10	9.88
27.0	153.91	9	20.33
45.0	146.47	10	9.81
75.0	103.69	10	11.76
140.0	99.19	10	7.27
270.0	121.83	10	13.65
450.0	285.24	1	0.00
750.0	136.88	4	17.43
7500.0	399.49	10	26.47
14000.0	179.77	5	16.35
27000.0	35.18	5	2.09

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC2 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	55.80	5	5.38
7.5	36.72	9	4.16
14.0	47.62	10	4.14
27.0	74.29	10	2.68
45.0	113.10	7	10.18
75.0	95.38	8	5.99
140.0	195.66	6	14.53
270.0	438.52	10	31.22
450.0	1044.90	3	98 57
750.0	462.90	5	55.33
1400.0	195.70	2	48.77
4500.0	792.01	10	50.87
7500.0	1286.10	10	65.56
14000.0	567.71	5	23.22
27000.0	97.21	6	3.09

STATION ID_SC2 EW NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	38.76	3	4.64
7.5	52.93	9	3.97
14.0	62.13	10	2.45
27.0	63.77	10	3.01
45.0	80.25	10	6.42
75.0	106.85	10	8.25
140.0	98.29	10	9.81
270.0	201.06	10	17.09
450.0	451.19	8	47.42
750.0	543.82	4	97.36
1400.0	534.65	2	106.57
4500.0	518.87	10	47.57
7500.0	860.42	7	53.43
14000.0	558.32	5	18.92
27000.0	108.60	5	1.90

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC3 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	63.06	4	5.60
7.5	65.80	10	6.03
14.0	95.75	9	3.08
27.0	95.45	10	5.17
45.0	131.23	10	8.98
75.0	95.36	10	4.56
140.0	229.79	10	7.10
270.0	312.62	10	16.72
450.0	447.56	11	32.28
750.0	654.80	5	132.58
4500.0	501.92	11	72.50
7500.0	1093.30	10	94.64
14000.0	850.94	5	36.95
27000.0	164.78	5	24.90

STATION ID_SC3 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	48.65	2	7.26
7.5	88.82	7	10.56
14.0	139.50	10	10.62
27.0	121.25	10	4.42
45.0	121.04	10	6.88
75.0	183.15	10	12.78
140.0	231.43	10	20.18
270.0	372.03	10	32.70
450.0	332.91	7	54.20
750.0	792.60	6	139.82
4500.0	448.73	10	30.45
7500.0	1528.80	8	183.35
14000.0	584.25	5	38.24
27000.0	95.02	5	3.21

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC4 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	3.13	2	.02
7.5	12.65	9	2.07
14.0	34.40	5	3.14
27.0	48.72	10	2.82
45.0	41.78	10	2.74
75.0	33.25	10	2.28
140.0	78.84	10	6.42
270.0	50.37	3	16.36
750.0	79.21	4	8.88
1400.0	20.61	1	0.00
4500.0	170.34	6	20.79
7500.0	419.75	7	25.97
14000.0	387.65	6	15.71
27000.0	674.66	5	25.41

STATION ID_SC4 EW NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	5.35	3	2.69
7.5	12.46	4	.99
14.0	78.06	8	11.40
27.0	121.87	6	12.59
45.0	214.93	7	25.70
75.0	264.88	8	22.55
140.0	339.70	10	24.48
270.0	218.64	1	0.00
450.0	520.37	1	0.00
750.0	691.94	5	31.61
1400.0	930.33	1	0.00
4500.0	638.16	5	45.49
7500.0	3325.30	10	149.17
14000.0	1017.20	5	74.60
27000.0	477.73	2	71.16

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC5 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	76.38	10	6.28
7.5	67.74	11	5.27
14.0	89.09	10	4.10
27.0	113.13	10	4.26
45.0	106.29	10	3.95
75.0	66.86	10	4.22
140.0	168.71	10	10.81
270.0	182.87	10	11.82
450.0	42.68	8	2.87
750.0	128.70	7	19.82
1400.0	465.38	1	0.00
4500.0	186.52	7	8.90
7500.0	269.12	10	10.57
14000.0	280.35	5	7.14
27000.0	86.94	5	9.69

STATION ID SC5 EW NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	78.34	6	13.03
7.5	99.41	10	8.61
14.0	114.10	10	8.79
27.0	96.54	10	4.81
45.0	109.98	10	5.78
75.0	117.48	10	10.47
140.0	173.20	10	8.77
270.0	162.55	8	19.27
450.0	305.88	8	16.67
750.0	322.99	3	15.84
1400.0	133.02	1	0.00
4500.0	140.64	7	11.23
7500.0	286.55	10	38.73
14000.0	203.06	10	6.39
27000.0	268.24	7	16.92

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC6 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	26.49	3	4.36
7.5	45.23	8	4.75
14.0	69.64	10	6.90
27.0	82.86	10	3.91
45.0	116.33	10	10.54
75.0	82.55	9	4.70
140.0	169.76	10	14.32
270.0	172.44	10	11.49
450.0	201.08	10	16.69
750.0	238.82	8	19.63
1400.0	319.35	1	0.00
4500.0	2199.40	4	169.43
7500.0	249.95	10	6.36
14000.0	229.11	5	3.39
27000.0	65.38	5	2.79

STATION ID SC6 EW NO FREQ= 16

FREQ	AP-RES	N OBS	STD ERR
4.5	63.17	7	8.36
7.5	99.84	10	5.69
14.0	95.35	9	4.80
27.0	132.83	10	3.89
45.0	164.37	10	2.30
75.0	179.40	10	11.85
140.0	194.51	10	10.08
270.0	163.19	10	10.93
450.0	287.34	8	26.68
750.0	233.31	8	15.03
1400.0	626.71	1	0.00
2700.0	297.76	2	41.34
4500.0	109.11	3	31.42
7500.0	225.10	8	11.14
14000.0	119.21	5	3.56
27000.0	27.82	5	1.96

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC7 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	76.37	7	10.16
7.5	102.19	10	6.61
14.0	140.90	10	4.49
27.0	189.14	10	10.41
45.0	233.56	10	18.82
75.0	131.77	10	9.37
140.0	262.26	8	29.06
270.0	269.94	8	25.87
450.0	241.92	10	25.19
750.0	378.02	5	34.02
4500.0	393.01	5	33.03
7500.0	788.19	10	33.05
14000.0	512.57	10	5.74
27000.0	112.88	4	4.06

STATION ID_SC7 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	71.61	10	8.33
7.5	102.99	10	4.64
14.0	151.59	10	8.38
27.0	175.95	10	3.09
45.0	173.69	10	8.33
75.0	178.92	10	9.96
140.0	220.98	10	13.83
270.0	911.38	10	48.88
450.0	446.72	10	25.27
750.0	374.21	7	48.09
4500.0	208.38	3	2.08
7500.0	383.47	10	14.22
14000.0	194.14	10	2.53
27000.0	68.15	5	3.23

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC8 NS NO FREQ= 16

FREQ	AP-RES	N OBS	STD ERR
4.5	4.68	3	1.29
7.5	6.04	9	.28
14.0	7.30	10	.48
27.0	7.80	10	.62
45.0	10.19	9	.87
75.0	9.70	10	.77
140.0	23.88	10	1.80
270.0	36.54	10	4.04
450.0	67.02	6	9.04
750.0	36.23	2	4.18
1400.0	493.66	1	0.00
2700.0	516.77	1	0.00
4500.0	244.61	4	26.57
7500.0	775.09	10	20.86
14000.0	687.87	5	48.35
27000.0	281.48	1	0.00

STATION ID_SC8 EW NO FREQ= 11

FREQ	AP-RES	N OBS	STD ERR
4.5	5.91	5	.71
7.5	6.25	9	.74
14.0	8.95	8	.74
27.0	24.39	7	1.83
45.0	10.14	9	1.19
75.0	11.84	8	.75
140.0	27.34	9	1.81
270.0	37.32	8	4.36
450.0	126.54	4	9.02
750.0	311.16	5	60.35
4500.0	207.01	1	0.00

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC9 NS NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	76.45	2	12.33
7.5	33.68	9	5.02
14.0	46.70	10	1.79
27.0	55.76	9	1.10
45.0	85.71	6	7.06
75.0	49.80	10	5.31
140.0	117.69	10	7.60
270.0	142.18	10	9.98
4500.0	581.53	10	34.97
7500.0	454.38	9	34.70
14000.0	496.38	6	21.35
27000.0	72.00	1	0.00

STATION ID SC9 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	131.84	5	34.80
7.5	101.66	10	10.38
14.0	104.08	10	7.52
27.0	105.81	10	7.77
45.0	114.49	10	8.60
75.0	100.54	10	4.17
140.0	149.33	10	6.70
270.0	151.97	10	7.25
750.0	239.74	1	0.00
4500.0	266.60	2	22.80
7500.0	560.71	10	38.48
14000.0	151.39	6	7.26
27000.0	63.24	3	4.93

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC10 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	51.95	6	10.63
7.5	60.39	10	7.09
14.0	98.32	10	5.77
27.0	122.16	10	5.77
45.0	76.33	8	10.93
75.0	103.66	10	6.69
140.0	140.11	7	15.76
270.0	146.62	9	13.38
450.0	199.92	2	4.40
750.0	177.88	3	4.62
4500.0	109.58	10	18.55
7500.0	141.21	10	8.78
14000.0	158.12	7	3.82
27000.0	34.38	3	7.06

STATION ID SC10 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	108.41	3	5.16
7.5	106.27	10	12.39
14.0	158.95	10	5.44
27.0	146.22	10	6.87
45.0	144.98	10	15.36
75.0	171.43	10	10.90
140.0	235.91	10	17.03
270.0	173.17	8	9.63
450.0	159.57	2	38.34
750.0	234.09	7	11.29
4500.0	66.59	10	5.57
7500.0	382.08	5	47.02
14000.0	185.18	5	35.05

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC11 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	5.16	2	.72
7.5	23.32	7	5.97
14.0	32.54	10	2.51
27.0	65.84	10	6.77
45.0	80.92	10	6.16
75.0	77.87	10	3.84
140.0	125.95	10	9.13
270.0	175.86	10	10.31
450.0	290.82	1	0.00
750.0	122.74	1	0.00
4500.0	93.78	8	7.29
7500.0	196.57	10	12.25
14000.0	287.50	7	7.46
27000.0	86.53	5	5.05

STATION ID SC11 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	1.14	6	.09
7.5	5.34	7	.78
14.0	11.95	6	4.83
27.0	41.94	7	4.11
45.0	32.91	10	5.02
75.0	73.93	8	8.65
140.0	86.25	7	10.15
270.0	26.47	2	.78
450.0	251.05	2	41.54
4500.0	62.50	4	5.65
7500.0	72.49	10	7.94
14000.0	20.04	7	.50
27000.0	45.65	5	2.95

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC12 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	162.93	4	38.95
7.5	58.41	12	5.72
14.0	65.71	7	8.02
27.0	69.07	10	6.34
45.0	98.63	10	11.09
75.0	89.51	10	4.17
140.0	105.99	10	4.40
270.0	110.31	10	12.37
450.0	263.76	7	16.21
4500.0	30.16	2	6.34
7500.0	76.45	11	11.08
14000.0	114.55	7	2.89
27000.0	24.91	5	1.52

STATION ID SC12 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	209.81	7	44.12
7.5	107.33	11	8.34
14.0	123.84	10	5.29
27.0	88.47	11	7.86
45.0	146.93	10	9.96
75.0	149.44	10	10.89
140.0	218.52	10	16.57
270.0	140.21	10	15.60
450.0	142.04	6	21.94
4500.0	48.41	2	19.01
7500.0	93.82	10	11.37
14000.0	207.78	8	8.97
27000.0	136.79	5	12.85

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC13 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	12.14	4	4.15
7.5	26.91	10	2.26
14.0	53.37	9	3.98
27.0	49.81	8	3.17
45.0	56.16	11	4.58
75.0	42.40	10	2.74
140.0	84.07	10	5.23
270.0	67.26	10	8.73
450.0	52.37	3	29.15
4500.0	116.26	4	17.63
7500.0	143.90	11	9.44
14000.0	114.39	7	2.38
27000.0	18.97	5	3.38

STATION ID_SC13 EW NO FREQ= 11

FREQ	AP-RES	N OBS	STD ERR
4.5	75.73	7	8.53
7.5	100.07	10	11.26
14.0	138.59	10	7.37
27.0	186.43	10	33.39
45.0	244.98	11	22.21
75.0	252.95	9	25.82
140.0	358.55	10	19.52
270.0	284.80	10	29.92
7500.0	181.16	7	24.13
14000.0	301.62	9	7.00
27000.0	47.38	6	1.51

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC14 NS NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	43.18	5	3.51
7.5	26.93	9	3.19
14.0	46.82	10	2.86
27.0	57.39	10	4.03
45.0	53.57	10	3.74
75.0	63.56	10	2.28
140.0	69.17	10	4.72
270.0	110.69	10	8.05
450.0	208.13	7	12.39
7500.0	538.15	5	105.34
14000.0	342.88	5	11.60
27000.0	67.16	5	3.62

STATION ID_SC14 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	49.46	3	28.72
7.5	25.05	10	2.15
14.0	34.18	10	1.60
27.0	37.93	10	1.45
45.0	49.80	10	3.53
75.0	47.87	10	3.22
140.0	64.61	9	2.61
270.0	73.14	9	6.49
450.0	120.20	5	17.27
4500.0	212.05	5	55.25
7500.0	482.96	5	33.73
14000.0	431.81	5	9.71
27000.0	219.72	5	25.19

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC15 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	3.13	7	.60
7.5	2.15	9	.48
14.0	4.21	7	.43
27.0	3.55	10	.26
45.0	1.49	2	.09
75.0	3.31	7	.16
140.0	6.89	10	.49
270.0	12.03	9	2.38
450.0	8.50	3	.23
4500.0	25.30	10	1.89
7500.0	96.10	10	6.67
14000.0	105.59	8	5.51
27000.0	36.83	5	3.12

STATION ID_SC15 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	8.51	2	1.49
7.5	4.29	5	.57
27.0	4.17	10	.41
45.0	4.91	10	.48
75.0	4.36	10	.40
140.0	6.16	10	.31
270.0	9.85	10	1.51
450.0	5.71	2	.53
750.0	18.78	4	2.80
4500.0	24.61	8	1.18
7500.0	91.30	8	6.97
14000.0	108.29	7	1.98
27000.0	41.98	5	3.12

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC16 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	11.94	10	1.91
7.5	7.90	10	.40
14.0	7.42	11	.57
27.0	7.52	10	.45
45.0	10.03	10	.64
75.0	6.06	10	.24
140.0	13.92	10	.68
270.0	17.96	10	1.33
450.0	16.30	5	3.49
750.0	19.56	3	4.07
4500.0	56.22	3	23.92
7500.0	93.63	9	10.20
14000.0	166.15	7	2.24
27000.0	61.59	5	4.88

STATION ID_SC16 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	13.85	8	3.03
7.5	4.33	10	.59
14.0	5.88	10	.58
27.0	6.02	10	.76
45.0	4.48	9	.22
75.0	5.41	10	.36
140.0	9.32	10	.38
270.0	11.07	10	.45
450.0	56.03	4	6.28
750.0	17.42	1	0.00
4500.0	17.39	3	1.42
7500.0	80.69	7	9.25
14000.0	123.48	7	2.59
27000.0	45.51	5	5.07

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC17 NS NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	6.66	3	.18
7.5	6.21	10	.83
14.0	10.83	10	.89
27.0	15.53	10	.77
45.0	19.99	10	1.65
75.0	21.79	8	1.80
140.0	49.25	10	4.54
270.0	59.04	10	3.17
4500.0	51.10	2	2.09
7500.0	87.32	10	6.78
14000.0	115.25	8	5.64
27000.0	26.19	5	1.89

STATION ID_SC17 EW NO FREQ= 11

FREQ	AP-RES	N OBS	STD ERR
4.5	33.32	7	2.02
7.5	37.02	10	2.36
14.0	56.84	10	4.90
27.0	70.01	10	1.74
45.0	118.53	10	7.16
75.0	128.63	10	5.29
140.0	190.68	10	8.90
270.0	244.27	10	18.23
450.0	876.37	6	116.65
14000.0	149.01	7	7.49
27000.0	41.30	5	1.32

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC18 NS NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	105.33	6	11.92
7.5	108.34	11	11.62
14.0	130.58	9	14.30
27.0	182.24	10	22.41
45.0	633.65	5	70.22
75.0	609.55	10	45.80
140.0	734.82	10	31.39
270.0	566.74	9	48.15
4500.0	267.27	10	19.60
7500.0	567.62	10	33.89
14000.0	348.09	7	8.15
27000.0	236.34	5	17.95

STATION ID_SC18 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	185.31	3	46.95
7.5	151.61	10	14.09
14.0	120.43	9	16.87
27.0	232.21	13	30.03
45.0	492.94	9	96.95
75.0	679.75	10	113.11
140.0	688.27	11	79.52
270.0	619.82	10	47.39
4500.0	259.09	10	36.13
7500.0	649.30	10	80.63
14000.0	418.08	8	11.12
27000.0	413.73	5	37.42

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC19 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	19.51	4	4.46
7.5	13.74	10	6.29
14.0	7.55	10	1.14
27.0	15.82	9	2.22
45.0	20.77	7	5.61
75.0	20.69	8	7.14
140.0	76.00	10	15.09
270.0	73.87	10	22.12
450.0	33.42	1	0.00
750.0	30.14	3	11.14
4500.0	36.80	10	4.81
7500.0	103.57	10	9.29
14000.0	89.93	6	7.44
27000.0	15.83	6	3.43

STATION ID_SC19 EW NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	74.25	8	8.69
7.5	106.91	11	9.90
14.0	138.75	10	14.15
27.0	181.10	10	9.58
45.0	245.52	10	17.24
75.0	269.65	10	16.41
140.0	431.98	10	34.14
270.0	463.88	10	55.41
450.0	1005.70	5	161.39
750.0	947.12	5	153.61
2700.0	236.46	1	0.00
4500.0	259.43	10	17.50
7500.0	496.33	10	24.44
14000.0	229.37	8	8.18
27000.0	41.30	6	3.80

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC20 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	31.68	6	3.30
7.5	18.57	10	2.01
14.0	19.88	10	1.79
27.0	31.26	10	1.18
45.0	42.92	10	2.38
75.0	35.66	9	1.99
140.0	77.45	10	5.64
270.0	134.96	10	14.66
450.0	176.80	5	46.41
750.0	201.12	5	34.25
1400.0	177.54	2	11.00
4500.0	66.55	3	2.53
7500.0	178.90	10	6.53
14000.0	206.37	7	16.60
27000.0	47.10	4	1.94

STATION ID_SC20 EW NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	45.96	4	9.78
7.5	30.93	11	2.73
14.0	30.10	10	2.70
27.0	49.78	10	2.75
45.0	64.12	10	3.99
75.0	87.79	10	5.30
140.0	143.21	10	7.64
270.0	162.18	10	14.29
450.0	275.75	9	33.81
750.0	385.79	4	31.65
1400.0	280.36	2	27.84
4500.0	85.21	6	9.08
7500.0	164.85	10	7.18
14000.0	400.01	8	54.19
27000.0	46.12	5	3.21

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC21 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	16.78	5	6.60
7.5	42.56	10	7.63
14.0	43.40	10	5.45
27.0	57.60	10	2.91
45.0	71.62	12	7.25
75.0	63.52	10	5.51
140.0	180.81	13	12.46
270.0	233.96	10	17.39
450.0	261.69	2	36.91
750.0	493.97	4	92.70
1400.0	228.26	1	0.00
4500.0	160.55	4	27.62
7500.0	155.28	10	17.03
14000.0	199.67	10	4.49
27000.0	59.28	7	3.87

STATION ID_SC21 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	11.20	4	1.22
7.5	15.87	10	2.79
14.0	19.86	10	4.08
27.0	25.30	10	2.14
45.0	34.49	9	2.75
75.0	37.06	10	2.59
140.0	82.09	10	6.12
270.0	97.23	11	5.18
450.0	159.33	3	23.35
750.0	383.83	5	42.19
4500.0	123.54	3	8.73
7500.0	125.73	10	8.79
14000.0	157.93	8	8.02
27000.0	72.61	5	9.81

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC22 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	10.70	2	2.19
7.5	8.95	9	.95
14.0	9.84	13	1.98
27.0	11.44	10	.48
45.0	20.16	10	.97
75.0	17.09	11	.94
140.0	44.93	7	2.22
270.0	55.09	10	3.66
450.0	67.32	2	29.29
750.0	40.20	2	12.63
4500.0	72.87	7	3.35
7500.0	78.14	10	3.81
14000.0	90.98	8	2.10
27000.0	33.83	6	3.10

STATION ID_SC22 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	25.07	5	4.96
7.5	15.38	11	1.95
14.0	27.40	10	2.23
27.0	40.49	10	2.19
45.0	57.69	10	3.87
75.0	88.33	10	4.89
140.0	125.13	10	6.83
270.0	139.87	10	9.48
450.0	273.31	1	0.00
750.0	251.51	2	11.54
4500.0	140.09	5	10.71
7500.0	156.41	10	7.71
14000.0	212.97	6	13.92
27000.0	85.95	6	2.48

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC23 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	313.30	6	58.41
7.5	193.52	12	23.72
14.0	210.09	12	47.54
27.0	160.12	10	9.55
45.0	335.71	8	14.86
75.0	172.74	10	16.13
140.0	307.35	11	19.99
270.0	432.67	10	38.07
450.0	440.73	4	32.63
750.0	732.35	4	124.34
4500.0	194.82	10	7.90
7500.0	280.24	8	16.61
14000.0	465.98	6	37.21

STATION ID_SC23 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	185.32	4	25.30
7.5	127.45	10	11.73
14.0	160.64	13	9.75
27.0	161.93	10	11.92
45.0	209.97	10	11.56
75.0	192.23	8	14.99
140.0	91.82	10	6.39
270.0	406.81	10	35.88
450.0	475.85	5	64.11
750.0	763.37	1	0.00
4500.0	95.85	9	6.46
7500.0	128.70	6	18.33
14000.0	129.06	10	1.52
27000.0	52.72	5	9.63

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC24 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	9.59	7	2.10
7.5	9.04	14	.92
14.0	13.45	10	1.19
27.0	13.78	10	1.11
45.0	23.60	10	3.77
75.0	15.78	10	1.69
140.0	46.88	10	3.88
270.0	67.05	10	4.92
450.0	75.87	8	9.52
750.0	116.48	4	13.99
4500.0	89.17	10	10.10
7500.0	250.62	10	13.91
14000.0	396.40	8	12.42
27000.0	96.35	6	1.87

STATION ID_SC24 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	7.41	4	2.21
7.5	36.00	10	3.87
14.0	46.84	10	3.94
27.0	52.24	10	4.03
45.0	84.35	10	6.55
75.0	73.92	11	5.68
140.0	145.27	10	15.96
270.0	227.14	10	14.90
450.0	538.19	7	30.28
750.0	295.02	5	29.84
4500.0	73.80	6	6.55
7500.0	497.31	10	42.26
14000.0	195.05	7	9.09
27000.0	101.39	7	4.22

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC25 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	14.24	4	2.57
7.5	69.51	9	3.49
14.0	127.84	11	6.64
27.0	155.91	10	11.24
45.0	221.60	11	13.51
75.0	199.27	10	6.09
140.0	334.45	10	16.24
270.0	466.89	10	19.64
450.0	542.29	10	40.23
750.0	565.99	7	40.82
4500.0	266.86	10	25.20
7500.0	520.12	10	24.28
14000.0	405.57	8	12.21
27000.0	125.52	7	13.82

STATION ID_SC25 EW NO FREQ= 1

FREQ	AP-RES	N OBS	STD ERR
4.5	6.47	6	1.17
7.5	29.00	14	4.21
14.0	67.38	10	2.75
27.0	88.62	10	4.02
45.0	125.35	10	5.97
75.0	152.35	10	12.74
140.0	220.16	10	12.54
270.0	239.75	10	9.77
450.0	341.75	8	57.81
750.0	364.26	3	30.67
4500.0	235.47	3	41.26
7500.0	357.89	9	14.13
14000.0	232.51	10	9.64
27000.0	177.29	6	23.17

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC26 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	320.83	9	62.87
7.5	416.11	10	36.78
14.0	673.51	10	38.00
27.0	747.65	10	54.45
45.0	1029.50	10	47.44
75.0	965.38	9	72.98
140.0	1604.00	10	142.81
270.0	2396.00	10	135.16
450.0	3416.50	10	260.14
750.0	3343.00	2	85.69
4500.0	1992.30	15	108.32
7500.0	2812.80	10	118.64
14000.0	660.92	8	10.88
27000.0	85.37	7	7.14

STATION ID_SC26 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	16.31	4	2.39
7.5	33.00	10	6.01
14.0	48.43	10	7.75
27.0	38.91	11	3.36
45.0	51.04	12	5.09
75.0	35.74	7	6.12
140.0	80.42	10	11.18
270.0	104.87	10	14.44
450.0	110.27	2	18.05
750.0	175.99	2	5.10
4500.0	361.73	10	81.87
7500.0	445.16	9	11.48
14000.0	116.35	8	10.11
27000.0	30.53	7	1.87

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC27 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	64.29	4	26.84
7.5	57.10	10	7.03
14.0	81.83	10	5.88
27.0	121.52	10	7.32
45.0	211.97	10	13.04
75.0	163.33	10	12.26
140.0	300.51	10	17.92
270.0	479.20	10	37.91
450.0	732.98	3	124.35
750.0	272.42	5	148.81
4500.0	157.05	5	35.31
7500.0	290.93	12	28.19
14000.0	392.33	7	12.42
27000.0	70.11	6	7.75

STATION ID_SC27 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	33.08	3	5.27
7.5	47.38	9	2.03
14.0	66.04	10	2.90
27.0	81.68	10	4.34
45.0	102.05	11	9.62
75.0	132.98	10	11.21
140.0	267.26	10	23.62
270.0	341.14	11	28.58
450.0	587.68	5	83.15
750.0	814.72	3	49.21
7500.0	415.01	10	46.60
14000.0	159.04	8	5.36
27000.0	39.93	6	6.16

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC28 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	55.72	4	16.63
7.5	49.99	11	2.51
14.0	70.40	10	3.91
27.0	100.36	9	8.12
45.0	131.22	10	14.18
75.0	121.88	10	9.89
140.0	263.25	10	19.22
270.0	260.69	11	25.43
750.0	243.37	5	24.38
4500.0	191.10	10	28.79
7500.0	335.89	9	12.80
14000.0	238.46	8	11.86
27000.0	46.43	6	2.22

STATION ID_SC28 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	46.77	5	4.60
7.5	50.93	10	4.82
14.0	75.96	13	11.22
27.0	118.62	10	12.64
45.0	166.73	9	27.36
75.0	153.08	10	15.33
140.0	246.42	10	23.34
270.0	210.34	10	15.07
450.0	432.10	1	0.00
750.0	676.52	4	34.13
4500.0	133.39	10	6.50
7500.0	302.48	10	11.14
14000.0	137.43	8	5.87
27000.0	31.29	5	2.56

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC29 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	19.01	4	3.44
7.5	20.16	9	2.93
14.0	52.35	10	3.38
27.0	51.95	10	2.91
45.0	81.07	10	7.61
75.0	88.74	10	4.00
140.0	249.89	11	16.98
270.0	268.11	10	14.65
450.0	860.33	4	86.94
750.0	1277.20	7	127.62
7500.0	270.86	10	20.72
14000.0	750.92	10	32.48
27000.0	236.45	8	18.79

STATION ID_SC29 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	33.00	4	10.40
7.5	15.41	10	1.83
14.0	31.53	10	4.46
27.0	40.33	10	2.81
45.0	70.38	10	8.18
75.0	83.02	10	6.80
140.0	146.75	10	8.53
270.0	190.88	12	18.02
450.0	1299.90	2	107.90
750.0	940.70	3	110.89
7500.0	143.75	5	20.37
14000.0	323.39	7	18.38
27000.0	106.60	6	7.23

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC30 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	6.62	5	2.50
7.5	4.43	10	.35
14.0	5.39	12	.35
27.0	12.82	12	1.00
45.0	34.29	11	3.82
75.0	19.02	10	1.77
140.0	42.42	10	1.73
270.0	55.61	10	3.50
450.0	56.13	10	3.65
750.0	101.65	10	1.89
4500.0	44.06	10	4.23
7500.0	186.88	10	10.19
14000.0	97.73	10	1.38
27000.0	13.82	7	1.30

STATION ID_SC30 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	43.21	7	13.83
7.5	14.13	10	1.01
14.0	21.38	10	1.68
27.0	31.76	10	3.73
45.0	58.92	11	6.47
75.0	86.92	8	10.76
140.0	86.92	11	5.86
270.0	85.10	10	4.42
450.0	198.01	9	8.67
750.0	316.50	7	76.01
4500.0	36.94	5	2.54
7500.0	133.15	10	11.16
14000.0	55.62	6	3.84
27000.0	28.87	9	3.25

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC31 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	18.38	10	2.54
7.5	61.63	8	6.48
14.0	72.76	10	9.22
27.0	112.97	13	6.82
45.0	147.73	10	7.35
75.0	146.50	9	6.19
140.0	322.41	10	33.55
270.0	456.48	10	30.38
450.0	668.37	10	59.91
750.0	589.84	8	41.32
4500.0	165.10	9	16.29
7500.0	265.16	10	10.04
14000.0	331.77	8	14.64
27000.0	412.40	7	61.18

STATION ID_SC31 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	45.60	8	8.10
7.5	71.83	10	4.55
14.0	114.51	10	5.68
27.0	137.95	10	13.97
45.0	236.05	11	18.53
75.0	361.68	11	22.46
140.0	515.55	10	65.24
270.0	827.08	6	72.74
450.0	1307.90	6	288.03
750.0	1503.80	6	211.97
4500.0	165.01	6	14.48
7500.0	1534.80	10	143.45
14000.0	254.25	8	28.86
27000.0	438.02	7	87.74

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC32 NS NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	42.93	3	7.07
7.5	22.17	10	1.71
14.0	31.97	10	2.66
27.0	57.37	10	5.76
45.0	80.12	9	8.52
75.0	56.65	10	5.11
140.0	147.27	10	7.32
270.0	207.59	9	7.93
4500.0	183.35	6	26.65
7500.0	663.93	11	84.35
14000.0	107.20	8	3.28
27000.0	26.02	6	2.55

STATION ID_SC32 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	66.47	5	6.05
7.5	21.49	8	3.32
14.0	21.01	9	1.52
27.0	45.23	11	7.97
45.0	42.04	6	5.35
75.0	39.45	10	2.45
140.0	82.81	8	9.53
270.0	102.96	5	20.11
450.0	290.75	2	48.50
4500.0	431.45	4	56.24
7500.0	357.64	10	37.01
14000.0	76.64	8	4.41
27000.0	16.72	6	1.23

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC33 NS NO FREQ= 11

FREQ	AP-RES	N OBS	STD ERR
4.5	22.33	7	5.03
7.5	20.88	10	1.53
14.0	23.35	10	2.47
27.0	52.96	11	3.88
45.0	101.06	10	5.69
75.0	84.39	10	5.39
140.0	185.38	10	15.36
270.0	251.32	10	19.55
7500.0	690.70	10	25.66
14000.0	283.75	9	26.71
27000.0	46.79	8	5.25

STATION ID SC33 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	6.41	8	1.64
7.5	13.18	11	1.86
14.0	62.21	12	5.68
27.0	50.65	11	5.83
45.0	82.31	7	7.96
75.0	149.72	10	12.93
140.0	191.48	10	13.11
270.0	231.91	11	18.69
750.0	884.13	1	0.00
4500.0	354.88	6	39.85
4500.0	403.22	10	27.34
7500.0	640.20	10	39.31
14000.0	281.15	8	11.28
27000.0	13.48	6	1.22

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID SC34 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	4.24	6	.69
7.5	16.71	8	1.55
14.0	25.17	10	1.48
27.0	37.60	10	3.55
45.0	64.47	12	7.65
75.0	68.42	10	4.67
140.0	90.04	10	5.74
270.0	137.96	9	12.91
450.0	268.79	2	39.75
750.0	367.68	2	78.19
4500.0	183.35	4	10.99
7500.0	247.51	11	19.38
14000.0	137.00	7	9.64
27000.0	29.66	6	2.27

STATION ID SC34 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	12.22	6	1.67
7.5	13.94	10	1.35
14.0	24.37	10	1.39
27.0	41.28	10	3.74
45.0	47.68	10	4.19
75.0	109.18	11	9.33
140.0	95.71	10	9.31
270.0	62.15	10	8.82
450.0	207.24	4	11.83
750.0	137.82	3	10.64
4500.0	71.92	3	4.65
7500.0	160.10	9	10.55
14000.0	259.73	7	32.97
27000.0	66.33	5	6.17

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC35 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	21.97	5	3.44
7.5	4.33	10	.71
14.0	5.39	10	.33
27.0	8.69	10	.59
45.0	10.49	10	.67
75.0	13.64	10	.90
140.0	26.86	11	2.20
270.0	32.65	9	2.32
450.0	132.50	3	11.76
750.0	108.04	2	2.17
7500.0	201.62	10	7.08
14000.0	161.77	7	8.86
27000.0	64.74	6	6.45

STATION ID_SC35 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	6.02	3	1.34
7.5	12.27	10	2.28
14.0	17.72	10	1.67
27.0	31.88	10	2.88
45.0	47.09	10	3.45
75.0	96.41	10	4.58
140.0	98.66	10	4.34
270.0	83.98	10	10.14
450.0	137.02	6	8.07
750.0	167.54	4	10.19
4500.0	51.99	3	5.99
7500.0	165.48	10	11.13
14000.0	51.29	8	2.94
27000.0	15.67	7	1.64

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC36 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	14.63	1	0.00
7.5	8.54	9	1.15
14.0	8.10	9	.74
27.0	14.18	10	1.16
45.0	19.08	8	1.59
75.0	29.29	9	2.54
140.0	43.08	10	1.72
270.0	60.41	12	6.08
4500.0	171.01	5	14.26
7500.0	172.89	10	7.64
14000.0	224.36	10	7.26
27000.0	75.08	6	6.49

STATION ID_SC36 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	**41.80**	**2**	**1.62**
7.5	**17.65**	**7**	**2.31**
14.0	10.32	10	1.24
27.0	28.13	11	2.05
45.0	32.25	10	2.66
75.0	81.04	12	13.20
140.0	81.22	10	5.70
270.0	96.66	10	11.57
450.0	170.20	1	0.00
750.0	247.21	1	0.00
4500.0	69.31	4	22.29
7500.0	90.86	9	10.71
14000.0	99.28	7	5.15
27000.0	33.94	6	3.35

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC37 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	100.02	6	11.14
7.5	82.65	5	8.78
14.0	126.92	6	12.34
27.0	190.41	6	24.76
45.0	310.92	6	27.77
75.0	293.82	6	13.19
140.0	758.07	5	31.71
270.0	934.41	6	76.77
450.0	1085.60	5	181.86
750.0	1491.90	2	7.52
4500.0	707.35	5	54.18
7500.0	1197.00	5	91.75
14000.0	1681.20	5	218.29
27000.0	322.76	10	28.50

STATION ID_SC37 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	23.57	7	3.51
7.5	3.08	10	.47
14.0	3.46	7	.37
27.0	**4.53**	**9**	**.47**
45.0	**6.01**	**9**	**.48**
75.0	6.46	10	.30
140.0	8.21	10	1.06
270.0	7.43	9	.80
450.0	10.92	6	1.12
750.0	12.95	5	3.61
4500.0	13.67	10	2.00
7500.0	14.84	10	1.72
14000.0	66.99	8	5.31
27000.0	8.54	7	1.70

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_SC38 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	14.07	8	3.33
7.5	20.50	10	2.13
14.0	21.66	10	1.85
27.0	27.51	10	1.09
45.0	49.14	9	3.34
75.0	25.43	10	1.51
140.0	76.04	10	7.03
270.0	69.61	10	5.58
450.0	196.99	9	14.50
750.0	233.64	6	14.77
4500.0	164.48	10	10.66
7500.0	341.38	11	17.39
14000.0	473.09	10	15.38
27000.0	102.33	5	17.53

STATION ID_SC38 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	65.59	11	9.78
7.5	104.62	10	11.68
14.0	176.05	10	12.05
27.0	214.35	10	11.54
45.0	295.66	10	25.33
75.0	310.25	11	23.11
140.0	489.08	10	14.54
270.0	430.64	10	34.23
450.0	1009.10	10	94.46
750.0	1253.10	7	101.48
4500.0	253.91	8	27.33
7500.0	425.83	11	22.53
14000.0	655.30	9	45.96
27000.0	153.64	8	20.66

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F1 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	1.56	5	.21
7.5	.65	10	.05
14.0	.64	10	.05
27.0	.98	10	.10
45.0	1.73	10	.10
75.0	1.36	10	.08
140.0	2.85	10	.11
270.0	4.23	10	.16
450.0	7.60	6	.89
750.0	11.87	2	1.66
4500.0	6.13	10	.34
7500.0	10.41	10	.48
14000.0	6.81	10	.20
27000.0	1.70	6	.12

STATION ID_F1 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	1.52	5	.24
7.5	2.30	10	.47
14.0	1.68	10	.15
27.0	1.65	10	.14
45.0	1.85	10	.23
75.0	1.74	10	.16
140.0	2.79	10	.19
270.0	3.21	10	.14
450.0	7.27	1	0.00
750.0	7.94	1	0.00
4500.0	6.24	10	.51
7500.0	6.39	10	.27
14000.0	4.46	10	.33
27000.0	2.71	6	.34

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F2 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	154.86	7	16.21
7.5	102.72	10	15.61
14.0	117.96	8	6.67
27.0	117.89	10	8.38
45.0	111.57	10	6.72
75.0	87.21	10	5.43
140.0	183.12	10	13.95
270.0	173.21	10	17.85
450.0	167.47	4	43.26
750.0	216.33	2	82.78
4500.0	317.08	9	24.32
7500.0	193.54	10	13.22
14000.0	231.43	5	11.15
27000.0	96.79	5	16.31

STATION ID_F2 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	66.50	7	9.18
7.5	74.69	10	8.89
14.0	89.78	10	4.91
27.0	89.11	10	4.62
45.0	91.41	11	9.77
75.0	96.86	10	4.77
140.0	134.47	8	8.37
270.0	146.54	10	17.90
450.0	176.63	2	68.88
4500.0	32.47	5	2.85
7500.0	31.79	5	1.90
14000.0	57.85	5	2.85

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F3 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	60.40	4	8.14
7.5	102.33	13	20.53
14.0	158.77	9	14.03
27.0	293.88	10	45.72
45.0	361.84	10	46.59
75.0	316.21	10	42.10
140.0	891.44	10	96.19
270.0	1323.00	10	125.93
450.0	1485.40	7	153.40
750.0	2155.60	10	119.99
4500.0	246.82	4	25.55
7500.0	227.20	10	12.32
14000.0	250.00	8	11.20
27000.0	75.83	7	9.85

STATION ID_F3 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	43.76	3	1.21
7.5	37.77	9	6.50
14.0	54.99	12	4.42
27.0	45.33	9	3.23
45.0	69.88	11	5.43
75.0	50.34	10	4.24
140.0	91.74	11	16.96
270.0	76.27	5	9.46
450.0	110.81	7	12.08
750.0	78.36	11	4.94
4500.0	83.73	4	10.07
7500.0	110.94	10	13.67
14000.0	46.03	8	1.70
27000.0	35.55	7	3.41

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F4 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	37.66	11	7.36
7.5	25.98	10	1.65
14.0	40.89	10	3.19
27.0	43.37	10	1.60
45.0	59.35	12	2.46
75.0	61.24	10	5.22
140.0	103.12	10	4.66
270.0	102.03	10	4.40
450.0	177.01	9	17.41
750.0	126.57	5	22.15
4500.0	104.18	10	4.98
7500.0	178.44	11	11.85
14000.0	90.34	6	2.30
27000.0	33.66	7	3.31

STATION ID_F4 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	16.52	6	3.94
7.5	43.61	8	5.46
14.0	43.95	10	5.52
27.0	59.67	11	4.17
45.0	87.40	8	7.51
75.0	103.76	10	9.97
140.0	165.72	10	7.27
270.0	126.09	10	9.71
450.0	138.26	7	22.30
750.0	145.38	3	24.79
4500.0	47.49	7	1.69
7500.0	162.43	10	17.41
14000.0	111.74	7	1.27
27000.0	50.47	6	5.56

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F5 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	19.86	6	3.81
7.5	14.93	10	2.51
14.0	18.42	10	1.52
27.0	19.07	10	1.74
45.0	25.62	9	2.91
75.0	25.82	10	1.20
140.0	54.37	10	4.60
270.0	65.47	10	5.69
450.0	71.97	8	5.07
750.0	116.85	4	18.27
4500.0	152.64	9	6.27
7500.0	187.49	10	6.81
14000.0	88.96	8	2.31
27000.0	25.49	7	1.02

STATION ID_F5 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	14.50	2	4.62
7.5	12.44	10	1.06
14.0	14.00	10	.77
27.0	9.49	11	1.72
45.0	24.52	10	2.79
75.0	25.73	10	1.58
140.0	39.30	10	1.71
270.0	38.93	10	4.20
450.0	100.01	10	10.15
750.0	63.90	4	14.72
4500.0	50.74	10	4.08
7500.0	199.13	8	45.16
14000.0	66.97	6	12.62
27000.0	66.13	5	5.30

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F6 NS NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	42.08	4	11.34
7.5	33.58	5	8.32
14.0	43.01	12	4.58
27.0	39.93	10	2.45
45.0	51.18	10	4.42
75.0	38.76	10	1.11
140.0	76.40	10	5.88
270.0	91.39	10	5.40
4500.0	167.17	8	9.91
7500.0	241.31	10	6.03
14000.0	105.33	7	4.40
27000.0	18.69	5	1.24

STATION ID_F6 EW NO FREQ= 11

FREQ	AP-RES	N OBS	STD ERR
4.5	214.84	4	24.41
7.5	61.78	11	6.73
14.0	57.89	9	6.19
27.0	76.66	10	3.78
45.0	67.30	10	5.49
75.0	62.05	10	3.23
140.0	98.95	10	7.28
270.0	130.71	10	12.43
7500.0	202.24	10	16.00
14000.0	252.66	10	22.79
27000.0	38.88	6	2.71

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F7 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	15.92	4	4.12
7.5	21.34	10	2.43
14.0	23.96	10	2.65
27.0	21.68	12	2.01
45.0	34.96	12	2.51
75.0	23.53	12	2.13
140.0	36.94	12	3.13
270.0	58.91	10	3.23
450.0	142.45	4	11.87
750.0	102.61	2	34.34
4500.0	176.08	10	6.58
4500.0	174.79	6	10.11
7500.0	668.77	10	44.47
14000.0	1113.60	8	38.04
27000.0	396.58	6	64.50

STATION ID_F7 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	22.07	4	3.05
7.5	19.07	9	2.66
14.0	28.19	10	4.55
27.0	18.81	10	1.48
45.0	30.95	10	5.03
75.0	21.73	10	2.26
140.0	35.42	11	2.66
270.0	40.12	10	3.05
450.0	123.21	2	58.03
750.0	84.93	2	5.17
4500.0	97.55	10	7.27
7500.0	580.65	10	38.50
14000.0	158.25	8	9.21
27000.0	113.56	6	12.94

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F8 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
7.5	232.21	6	42.79
14.0	78.09	10	11.21
27.0	52.15	8	5.19
45.0	96.29	2	54.24
75.0	55.06	11	3.73
140.0	112.35	10	5.13
270.0	210.61	11	14.47
450.0	495.78	7	45.12
750.0	181.99	3	28.87
4500.0	1651.70	11	102.05
7500.0	2107.70	5	283.27
14000.0	475.00	8	9.00
27000.0	193.66	6	38.30

STATION ID_F8 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
7.5	103.90	7	15.01
14.0	44.59	7	4.76
27.0	54.70	10	12.77
45.0	66.81	3	9.91
75.0	79.19	11	11.63
140.0	182.92	11	28.49
270.0	234.90	10	18.73
450.0	510.15	1	0.00
750.0	131.71	2	24.97
4500.0	1946.40	7	68.91
7500.0	2670.30	11	167.56
14000.0	883.45	10	47.89

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F9 NS NO FREQ= 15

FREQ	AP-RES	N OBS	STD ERR
4.5	24.56	6	1.86
7.5	14.47	6	1.11
14.0	19.38	6	1.08
27.0	27.02	6	1.03
45.0	35.62	6	1.53
75.0	26.32	6	2.38
140.0	47.01	6	3.14
270.0	61.99	6	1.50
450.0	159.39	6	36.22
750.0	133.80	6	9.95
2700.0	125.57	1	0.00
4500.0	123.62	6	11.70
7500.0	450.13	6	33.98
14000.0	357.10	6	8.96
27000.0	92.14	5	6.70

STATION ID_F9 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	27.78	6	1.39
7.5	20.50	6	3.32
14.0	21.50	6	3.16
27.0	15.05	6	1.29
45.0	19.11	6	.96
75.0	19.70	6	1.73
140.0	36.56	6	2.12
270.0	35.19	6	2.59
450.0	121.53	1	0.00
750.0	77.85	6	2.11
1400.0	121.78	1	0.00
4500.0	37.77	6	3.89
7500.0	145.66	6	9.22
14000.0	98.70	6	4.32

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F10 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	9.37	6	2.31
7.5	6.93	10	.40
14.0	8.38	10	.43
27.0	7.77	10	.46
45.0	11.46	9	.46
75.0	7.96	10	.39
140.0	18.14	10	1.15
270.0	22.94	10	1.90
450.0	71.74	3	15.00
4500.0	42.55	9	3.39
7500.0	47.01	10	2.59
14000.0	57.71	8	3.03
27000.0	18.23	6	1.44

STATION ID_F10 EW NO FREQ= 11

FREQ	AP-RES	N OBS	STD ERR
4.5	13.64	7	4.93
7.5	9.27	9	.58
14.0	8.67	10	.50
27.0	7.32	10	.61
45.0	10.41	10	.63
75.0	10.79	10	.90
140.0	13.62	10	.94
270.0	16.37	10	1.18
4500.0	11.02	7	1.66
7500.0	16.66	10	1.48
27000.0	18.28	5	.95

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F11 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	6.54	4	1.37
7.5	2.02	9	.37
14.0	1.81	11	.23
27.0	5.86	7	.78
45.0	4.11	7	.85
75.0	4.67	8	.45
140.0	12.19	7	3.73
270.0	10.69	10	1.67
450.0	18.55	6	4.13
4500.0	10.68	5	1.84
7500.0	37.15	9	2.98
14000.0	88.85	8	6.93
27000.0	27.21	5	3.76

STATION ID_F11 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	54.32	4	15.51
7.5	34.13	10	2.54
14.0	10.47	10	.41
27.0	10.26	11	1.74
45.0	13.63	10	.80
75.0	17.12	10	1.94
140.0	30.88	10	3.69
270.0	33.18	10	3.17
4500.0	22.86	3	1.81
7500.0	52.06	10	1.96
14000.0	101.20	8	5.72
27000.0	29.18	5	2.73

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F12 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	9.78	4	3.79
7.5	6.56	10	.92
14.0	9.64	10	1.03
27.0	12.76	11	1.16
45.0	12.95	10	.75
75.0	15.14	10	1.28
140.0	39.29	10	3.14
270.0	54.32	10	3.22
450.0	75.54	3	4.60
750.0	112.80	2	15.53
4500.0	108.42	4	27.17
7500.0	491.02	10	33.11
14000.0	397.54	8	11.76
27000.0	90.54	7	10.93

STATION ID_F12 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	14.41	5	2.69
7.5	18.68	10	2.48
14.0	16.60	10	1.19
27.0	21.34	10	1.44
45.0	27.14	11	1.93
75.0	37.31	10	2.59
140.0	67.46	10	4.17
270.0	55.78	10	2.89
450.0	94.88	4	17.05
750.0	144.05	6	21.70
4500.0	32.61	3	3.26
7500.0	244.37	8	34.55
14000.0	152.22	10	5.00
27000.0	37.53	7	2.66

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F13 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	11.95	6	2.81
7.5	22.51	10	1.66
14.0	25.06	10	1.84
27.0	31.41	10	1.49
45.0	37.33	10	2.56
75.0	31.55	10	1.80
140.0	56.16	10	2.45
270.0	61.91	8	3.96
450.0	97.29	2	9.15
750.0	149.93	3	34.78
4500.0	112.04	10	8.23
7500.0	211.73	10	5.59
14000.0	211.68	8	16.41
27000.0	60.19	6	2.98

STATION ID_F13 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	2.34	4	.48
7.5	4.39	8	.37
14.0	4.06	10	.33
27.0	5.09	10	.41
45.0	6.78	11	.69
75.0	8.32	11	.53
140.0	11.98	8	.65
270.0	13.71	11	1.89
450.0	30.57	2	2.70
750.0	92.69	3	5.43
4500.0	52.39	8	8.24
7500.0	29.72	8	2.14
14000.0	29.48	10	1.63
27000.0	9.90	5	.69

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F14 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	123.05	3	17.56
7.5	127.14	10	10.33
14.0	174.90	10	11.41
27.0	126.99	10	9.91
45.0	280.52	10	22.12
75.0	201.53	10	16.37
140.0	289.54	10	21.79
270.0	373.51	10	21.34
450.0	223.92	7	48.46
750.0	548.43	6	57.25
4500.0	465.10	10	37.52
7500.0	905.27	10	42.12
14000.0	504.55	10	9.08
27000.0	87.88	6	12.45

STATION ID_F14 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	136.01	7	18.85
7.5	160.73	10	9.45
14.0	204.58	10	6.43
27.0	170.78	8	26.42
45.0	271.73	11	11.00
75.0	321.52	10	16.16
140.0	391.28	10	18.56
270.0	381.92	10	36.82
450.0	744.54	4	120.28
750.0	482.40	2	155.70
4500.0	364.74	10	23.17
7500.0	786.93	10	47.95
14000.0	599.08	8	28.98
27000.0	377.22	6	51.81

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F15 NS NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	19.19	4	3.68
7.5	16.58	12	4.40
14.0	9.86	11	1.29
27.0	11.69	9	1.40
45.0	17.24	10	1.72
75.0	11.67	11	.76
140.0	30.63	10	2.48
270.0	42.31	10	4.17
750.0	74.86	3	10.80
4500.0	142.94	10	22.23
7500.0	360.42	10	21.50
14000.0	273.87	10	9.71
27000.0	40.00	7	1.10

STATION ID_F15 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	62.17	5	5.29
7.5	19.88	8	6.98
14.0	7.91	10	1.44
27.0	7.10	10	.45
45.0	7.15	12	1.01
75.0	9.10	10	.76
140.0	16.95	10	1.09
270.0	30.43	10	2.94
450.0	44.21	2	12.22
750.0	90.02	2	15.50
4500.0	554.82	1	0.00
7500.0	383.90	10	27.39
14000.0	151.00	10	2.18
27000.0	32.80	9	2.33

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F16 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	54.05	3	7.63
7.5	22.90	9	2.81
14.0	14.87	12	.91
27.0	13.12	10	.51
45.0	13.20	10	1.21
75.0	8.42	10	.40
140.0	14.66	10	.87
270.0	30.09	9	1.93
450.0	108.74	3	11.27
750.0	36.12	7	2.96
4500.0	50.95	10	4.35
7500.0	54.84	10	5.84
14000.0	36.34	10	.91
27000.0	20.10	7	1.42

STATION ID_F16 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	152.26	5	40.40
7.5	54.17	10	5.17
14.0	36.96	10	3.43
27.0	33.52	10	3.30
45.0	31.99	5	4.62
75.0	33.93	10	3.55
140.0	37.96	10	1.09
270.0	35.60	10	3.86
450.0	78.62	3	11.37
750.0	78.10	7	8.19
4500.0	37.17	6	3.71
7500.0	7.46	9	1.05
14000.0	37.96	10	1.61
27000.0	25.56	8	3.84

UTPUT FROM PRINT

ROJECT=AZORES

TATION ID_F17 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	8.16	9	1.05
7.5	5.72	10	.33
14.0	6.54	11	.59
27.0	6.06	10	.17
45.0	7.09	10	.37
75.0	5.07	10	.16
140.0	8.29	10	.68
270.0	9.27	10	.49
450.0	17.50	9	1.38
750.0	13.30	5	2.33
4500.0	9.81	7	.66
7500.0	16.68	10	1.04
4000.0	26.65	9	.44
7000.0	19.24	7	1.49

TATION ID_F17 EW NO FREQ= 12

FREQ	AP-RES	N OBS	STD ERR
4.5	7.68	8	2.77
7.5	9.17	10	.60
14.0	8.64	10	.56
27.0	7.29	10	.41
45.0	7.27	10	.37
75.0	7.00	10	.35
140.0	7.77	10	.30
270.0	9.03	10	.76
450.0	10.71	4	2.07
7500.0	57.88	10	6.16
4000.0	22.67	10	1.05
7000.0	22.55	6	3.14

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F18 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	3.08	6	.62
7.5	6.90	9	.85
14.0	10.26	10	1.36
27.0	14.06	10	1.01
45.0	20.08	10	1.31
75.0	16.34	10	1.19
140.0	44.33	10	2.46
270.0	56.45	10	4.91
450.0	100.71	9	8.38
750.0	122.14	5	14.43
4500.0	206.54	9	19.59
7500.0	553.22	10	31.02
14000.0	1501.10	5	131.68
27000.0	124.46	7	27.41

STATION ID_F18 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	39.63	7	4.56
7.5	42.64	10	4.21
14.0	54.20	10	3.42
27.0	61.00	10	3.52
45.0	89.92	10	5.27
75.0	112.26	10	7.29
140.0	174.60	10	10.75
270.0	214.60	9	22.50
450.0	335.68	6	57.87
750.0	269.12	1	0.00
4500.0	330.58	6	35.06
7500.0	858.61	9	47.43
14000.0	1813.10	8	145.55
27000.0	314.76	6	57.14

JTPUT FROM PRINT

ROJECT=AZORES

TATION ID_F19 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	32.81	3	8.63
7.5	34.06	10	3.43
14.0	38.43	10	3.65
27.0	45.98	9	4.30
45.0	51.57	4	5.00
75.0	32.89	10	4.61
140.0	145.25	10	3.99
270.0	156.36	10	8.74
450.0	243.72	2	34.69
750.0	319.91	5	18.63
4500.0	198.74	6	16.50
7500.0	224.21	10	8.55
4000.0	260.45	8	6.49
7000.0	60.32	7	3.95

TATION ID_F19 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	23.36	6	7.69
7.5	24.30	10	3.29
14.0	29.71	10	2.70
27.0	34.63	10	1.39
45.0	42.21	9	3.66
75.0	54.42	9	5.70
140.0	103.65	10	8.87
270.0	113.57	10	11.97
450.0	459.65	5	16.38
750.0	229.72	6	18.98
4500.0	93.02	5	13.36
7500.0	71.92	10	7.78
4000.0	87.69	7	7.36
7000.0	55.49	7	7.61

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F20 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	65.88	4	23.89
7.5	53.03	10	7.03
14.0	69.23	10	4.29
27.0	96.37	11	9.65
45.0	120.94	10	10.61
75.0	78.60	11	7.90
140.0	177.14	10	15.74
270.0	181.43	10	7.68
450.0	169.09	3	11.82
750.0	82.71	3	25.45
4500.0	350.80	10	32.38
7500.0	600.28	10	11.63
14000.0	154.75	7	3.56
27000.0	33.23	6	2.79

STATION ID_F20 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	97.16	6	87.62
7.5	22.33	6	2.32
14.0	24.96	10	3.87
27.0	29.64	9	2.71
45.0	39.64	10	2.86
75.0	39.38	10	2.16
140.0	75.72	10	5.58
270.0	69.49	10	6.36
750.0	134.32	5	9.83
4500.0	62.76	5	11.05
7500.0	138.84	3	11.93
14000.0	76.08	6	4.23
27000.0	27.29	6	2.63

UTPUT FROM PRINT

ROJECT=AZORES

TATION ID_F21 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	16.03	4	1.60
7.5	24.68	10	2.87
14.0	53.98	10	9.84
27.0	52.04	10	6.80
45.0	54.88	10	8.38
75.0	49.21	11	10.78
140.0	107.10	6	24.43
270.0	164.01	7	39.29
450.0	160.83	4	20.22
750.0	268.19	3	32.24
4500.0	642.50	3	33.34
7500.0	530.65	9	68.06
4000.0	253.95	6	9.17
7000.0	6.13	5	.32

TATION ID_F21 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	818.07	4	29.21
7.5	916.92	7	281.04
14.0	542.62	9	137.28
27.0	771.20	10	68.84
45.0	1129.50	10	113.57
75.0	810.04	10	117.58
140.0	1336.00	10	151.93
270.0	1253.00	11	199.06
450.0	2824.50	11	443.88
750.0	3114.50	4	560.34
4500.0	13380.00	4	3893.60
4000.0	8932.30	7	380.04
7000.0	392.61	6	22.36

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F22 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	20.51	5	3.10
7.5	19.54	10	4.24
14.0	26.78	10	3.99
27.0	80.70	13	6.79
45.0	77.48	8	6.48
75.0	75.55	10	8.31
140.0	117.13	8	25.20
270.0	173.61	7	37.22
450.0	223.14	5	31.85
750.0	181.52	3	45.41
4500.0	85.86	7	17.67
7500.0	289.42	10	19.77
14000.0	304.26	8	17.20
27000.0	110.91	7	14.66

STATION ID_F22 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	3.82	3	.32
7.5	3.76	9	.60
14.0	5.68	10	.67
27.0	18.06	8	3.92
45.0	8.24	11	.72
75.0	12.73	7	1.19
140.0	16.75	10	2.47
270.0	21.54	10	1.15
450.0	48.68	7	2.73
750.0	34.81	6	2.26
4500.0	38.58	1	0.00
7500.0	78.67	10	4.85
14000.0	41.02	9	1.18
27000.0	22.10	7	.91

UTPUT FROM PRINT

ROJECT=AZORES

TATION ID_F23 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	56.85	6	11.41
7.5	22.80	11	3.14
14.0	34.93	10	3.80
27.0	35.53	10	2.70
45.0	62.82	10	7.35
75.0	57.03	10	4.87
140.0	102.99	10	9.00
270.0	82.56	10	5.55
450.0	286.76	3	23.97
750.0	229.30	1	0.00
4500.0	239.68	6	16.42
7500.0	807.51	10	19.79
4000.0	1452.00	8	56.65
7000.0	246.62	6	16.69

TATION ID_F23 EW NO FREQ= 13

FREQ	AP-RES	N OBS	STD ERR
4.5	18.28	4	5.06
7.5	22.74	10	4.67
14.0	26.76	10	2.62
27.0	28.85	10	3.93
45.0	36.49	10	3.65
75.0	30.90	10	4.13
140.0	25.00	10	2.85
270.0	27.96	5	.97
450.0	124.94	2	55.81
4500.0	50.29	4	2.85
7500.0	305.54	10	21.11
4000.0	134.98	8	8.37
7000.0	115.18	7	18.61

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_F24 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	75.01	3	22.37
7.5	90.59	10	9.42
14.0	154.25	10	20.62
27.0	119.92	10	8.10
45.0	193.99	9	9.04
75.0	88.75	10	5.70
140.0	155.20	10	6.85
270.0	169.79	10	16.89
450.0	428.26	3	72.51
750.0	197.49	1	0.00
4500.0	169.83	5	12.75
7500.0	328.63	10	16.95
14000.0	275.81	8	9.33
27000.0	77.20	6	5.56

STATION ID_F24 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	198.58	3	49.84
7.5	105.39	10	10.85
14.0	122.13	10	12.31
27.0	116.79	10	7.07
45.0	132.89	10	12.32
75.0	118.74	10	8.48
140.0	187.22	10	26.18
270.0	178.70	10	12.20
450.0	214.27	2	22.49
750.0	360.13	1	0.00
4500.0	31.55	4	3.59
7500.0	238.99	10	39.46
14000.0	137.63	8	3.26
27000.0	58.30	7	4.29

UTPUT FROM PRINT

ROJECT=AZORES

TATION ID_F25 NS NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	34.14	5	8.08
7.5	93.71	10	11.78
14.0	139.94	10	7.60
27.0	140.82	10	4.28
45.0	130.37	10	9.45
75.0	98.71	10	6.86
140.0	44.75	10	4.24
270.0	145.87	10	18.80
450.0	79.59	4	18.77
750.0	119.45	1	0.00
4500.0	71.51	7	6.80
7500.0	193.83	10	6.85
4000.0	242.91	8	9.17
7000.0	71.40	8	8.20

TATION ID_F25 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	40.75	10	5.51
7.5	98.12	9	8.86
14.0	133.67	10	9.15
27.0	123.21	10	7.41
45.0	85.19	10	6.60
75.0	125.96	10	9.63
140.0	110.51	11	5.35
270.0	142.45	10	13.00
450.0	109.25	5	11.90
750.0	67.43	2	15.88
4500.0	38.68	6	3.53
7500.0	157.13	10	11.54
4000.0	76.41	9	3.94
7000.0	55.28	7	5.66

OUTPUT FROM PRINT

PROJECT=AZORES

STATION ID_FOGO1 NS NO FREQ= 14

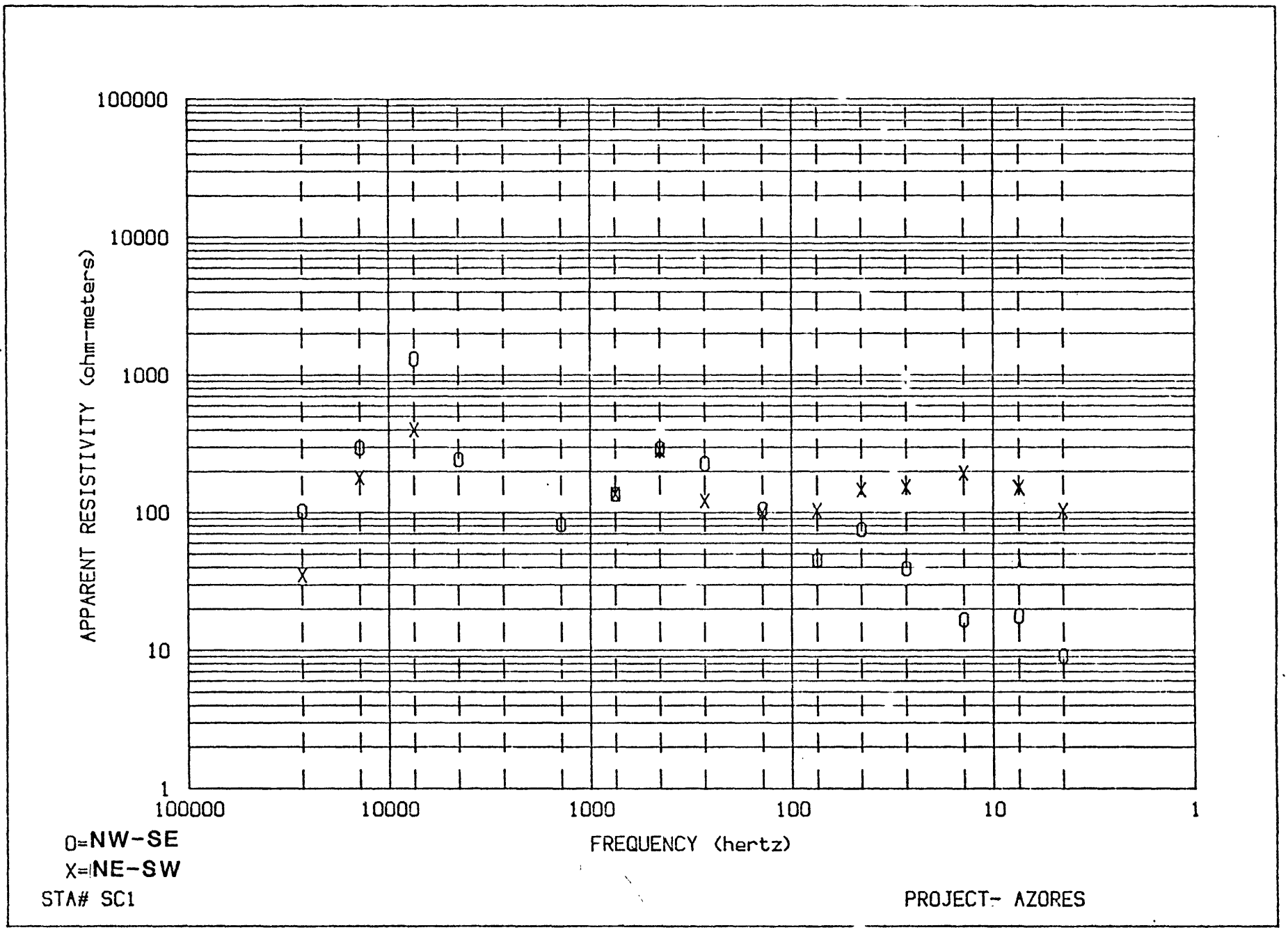
FREQ	AP-RES	N OBS	STD ERR
4.5	177.74	3	32.11
7.5	143.07	10	12.00
14.0	176.06	10	12.43
27.0	169.11	10	11.08
45.0	203.34	10	12.96
75.0	131.71	10	12.54
140.0	206.13	10	8.13
270.0	234.54	10	11.97
450.0	360.63	6	75.81
750.0	318.83	2	53.47
4500.0	401.05	9	20.67
7500.0	722.99	10	35.76
14000.0	524.23	6	30.00
27000.0	123.90	5	5.48

STATION ID_FOGO1 EW NO FREQ= 14

FREQ	AP-RES	N OBS	STD ERR
4.5	272.51	4	20.08
7.5	263.00	5	82.50
14.0	181.00	9	11.39
27.0	182.00	10	11.83
45.0	173.08	10	22.18
75.0	189.80	10	12.22
140.0	287.64	10	25.53
270.0	234.13	10	12.04
450.0	372.69	5	36.77
750.0	289.56	1	0.00
4500.0	430.75	4	137.53
7500.0	879.85	9	33.69
14000.0	682.02	10	23.12
27000.0	163.40	5	5.25

Appendix 2

Plots of AMT sounding data given in appendix 1. Each plot shows apparent resistivity versus frequency for the two scalar soundings at each location. The 0 is for a NW-SE orientation of the telluric dipole and X for a NE-SW orientation. The frequency scale has been plotted in reverse order so as to show increasing depth to the right for easier comparison with galvanic sounding methods.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FREQUENCY (hertz)
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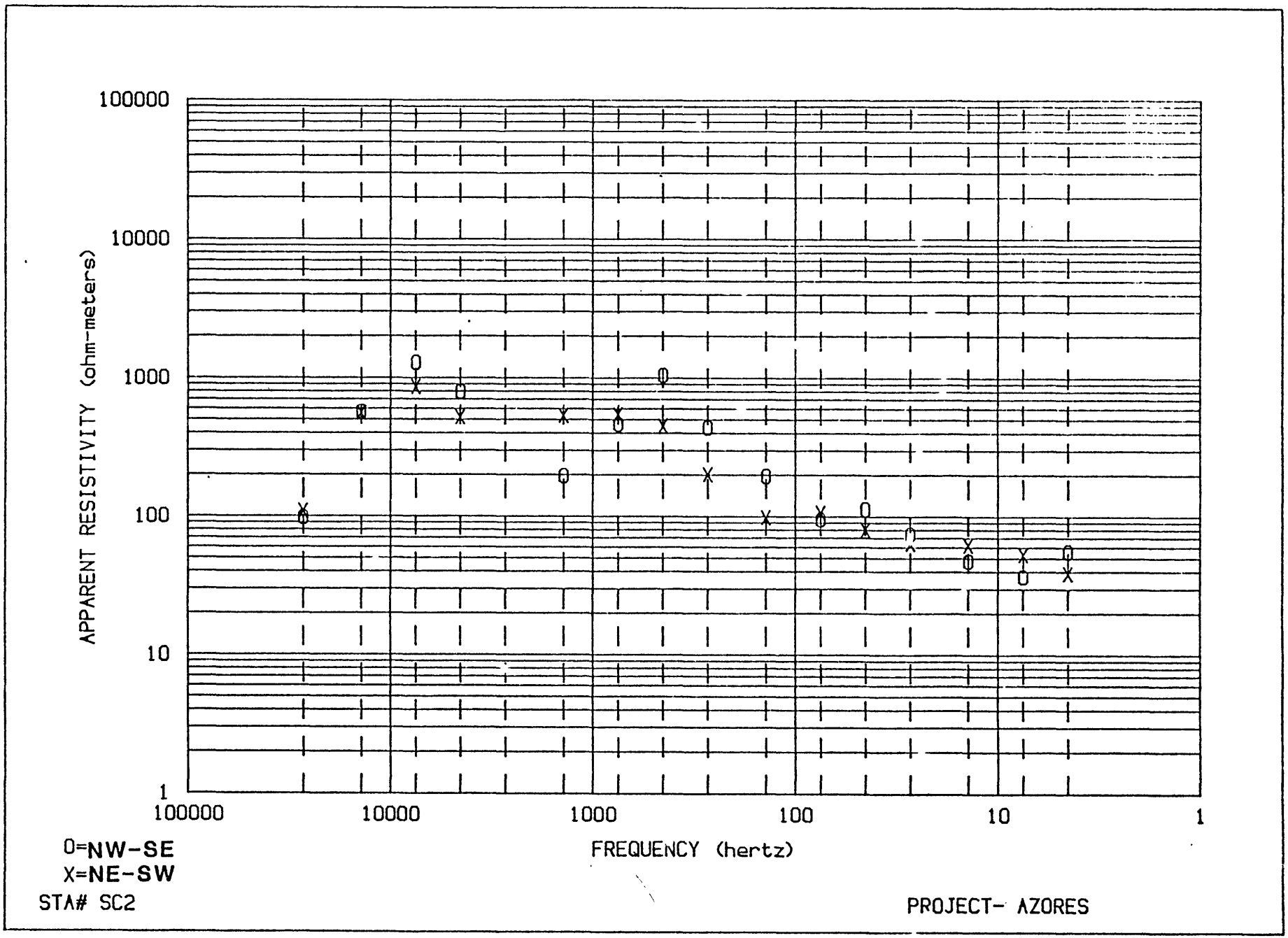
X=NE-SW
STA# SC1
PROJECT- AZORES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FREQUENCY (hertz)
O=NW-SE
X=NE-SW
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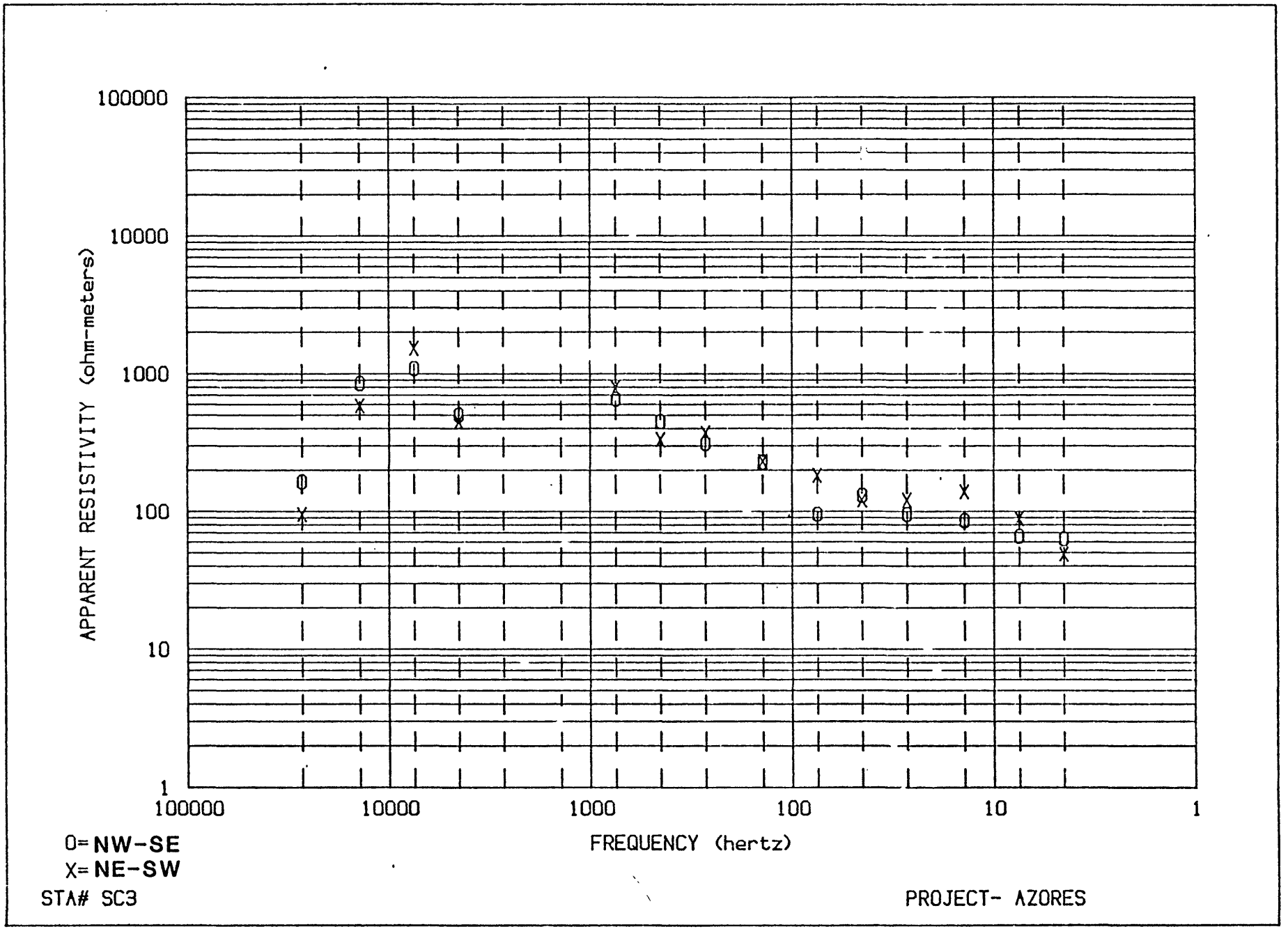
PROJECT- AZORES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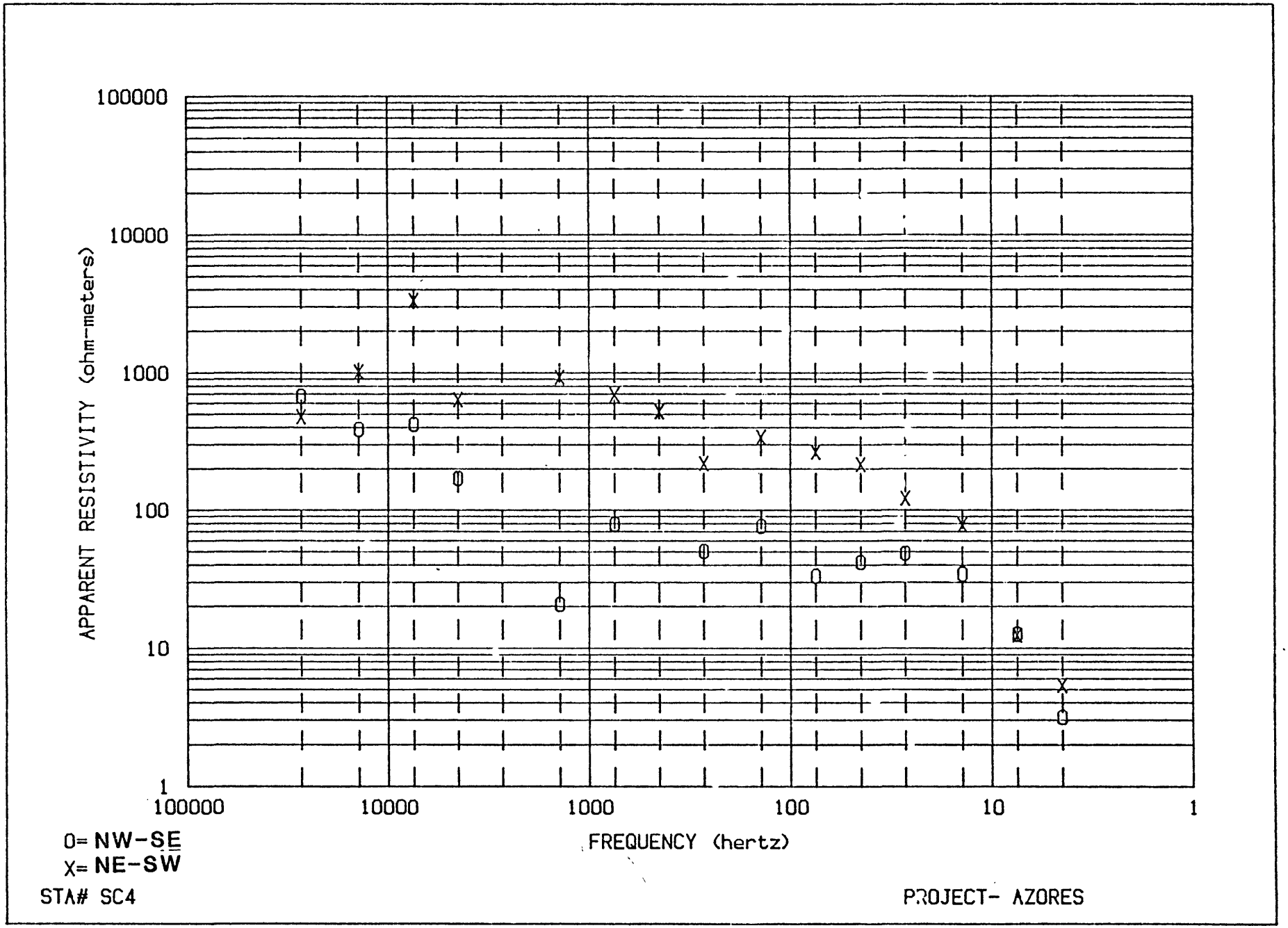
FREQUENCY (hertz)
O= NW-SE
X= NE-SW
STA# SC3
PROJECT- AZORES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10
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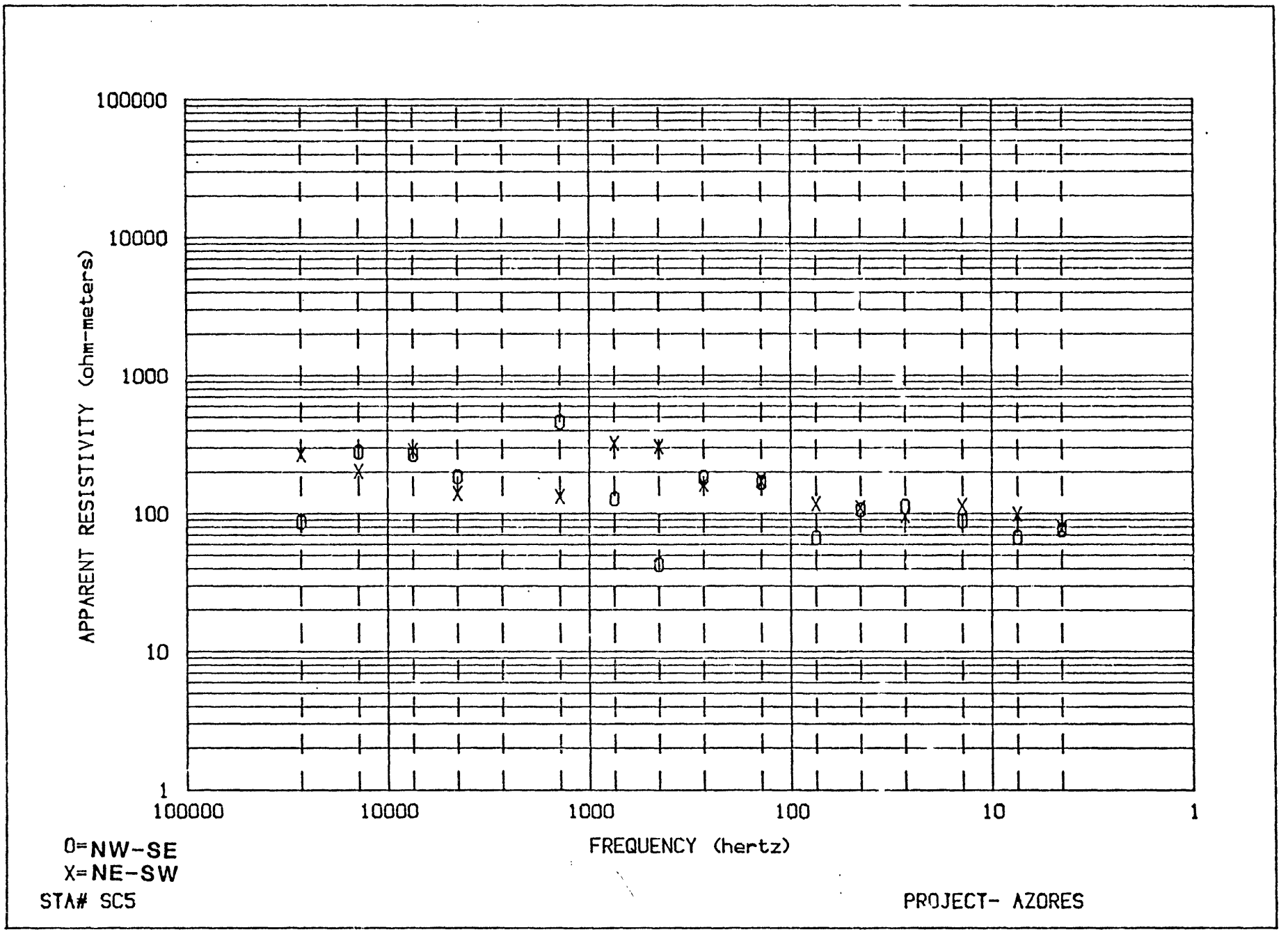
FREQUENCY (hertz)
O= NW-SE
X= NE-SW
STA# SC4
PROJECT- AZORES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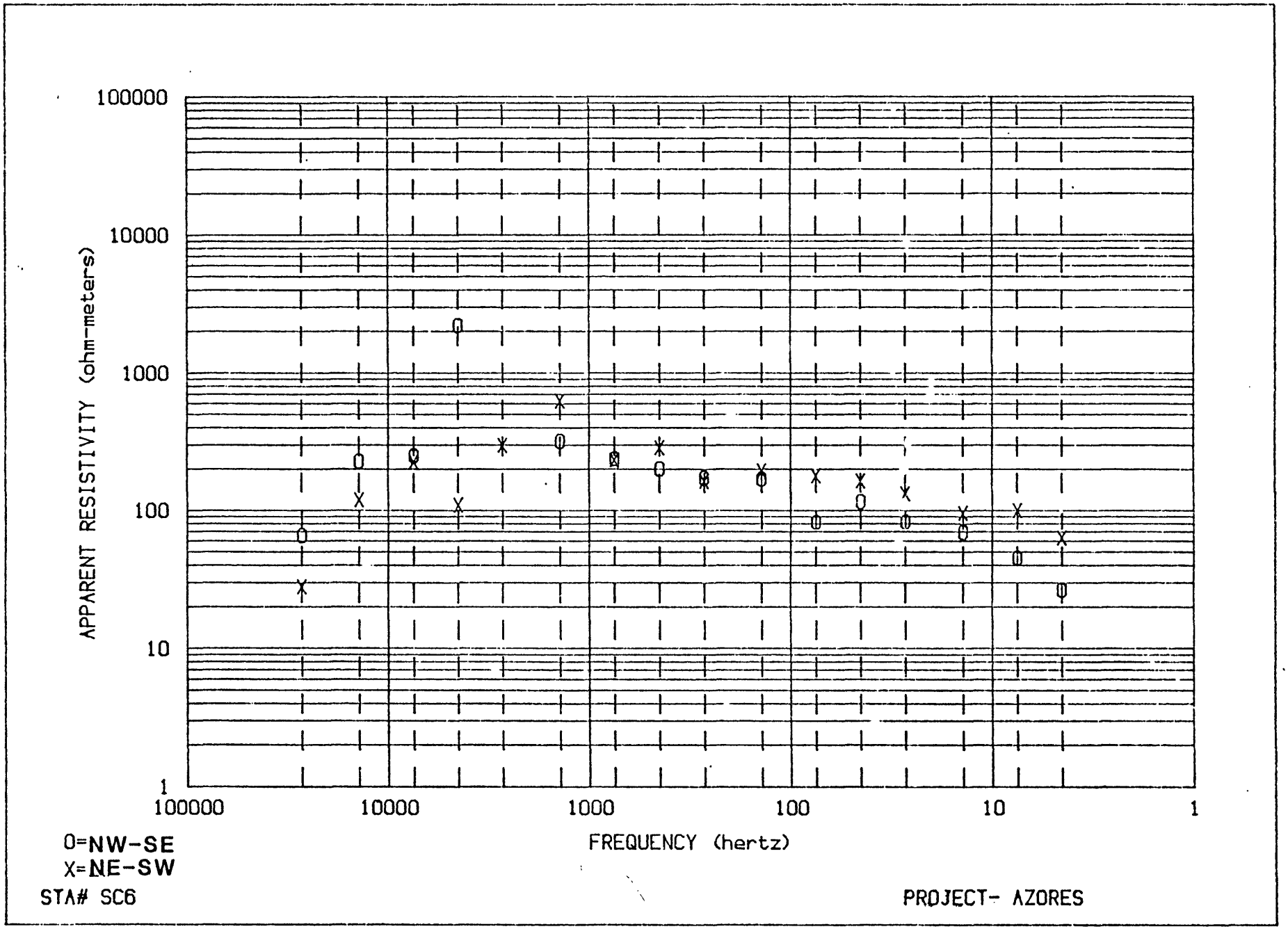
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC5
PROJECT- AZORES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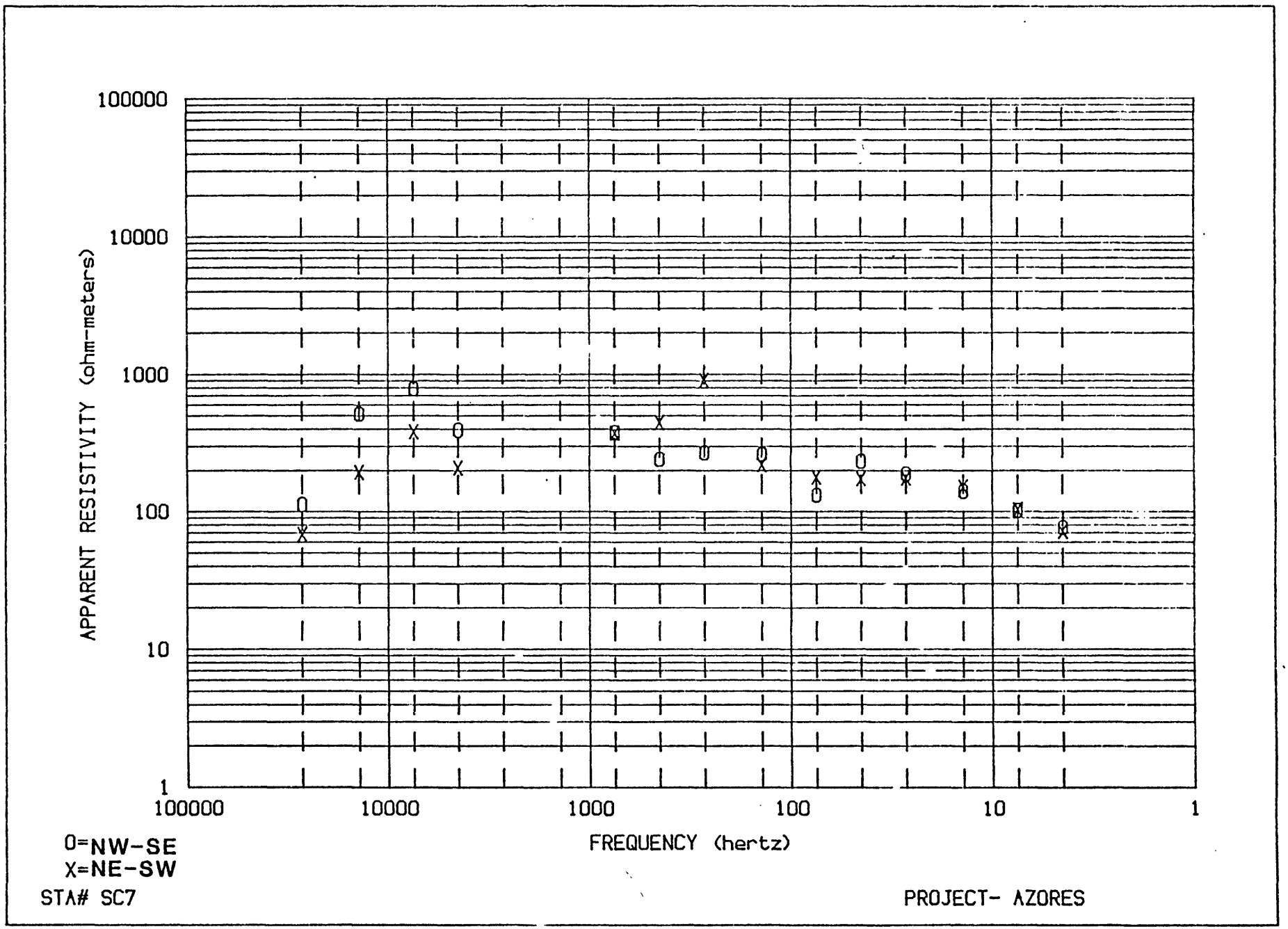
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC6
PROJECT- AZORES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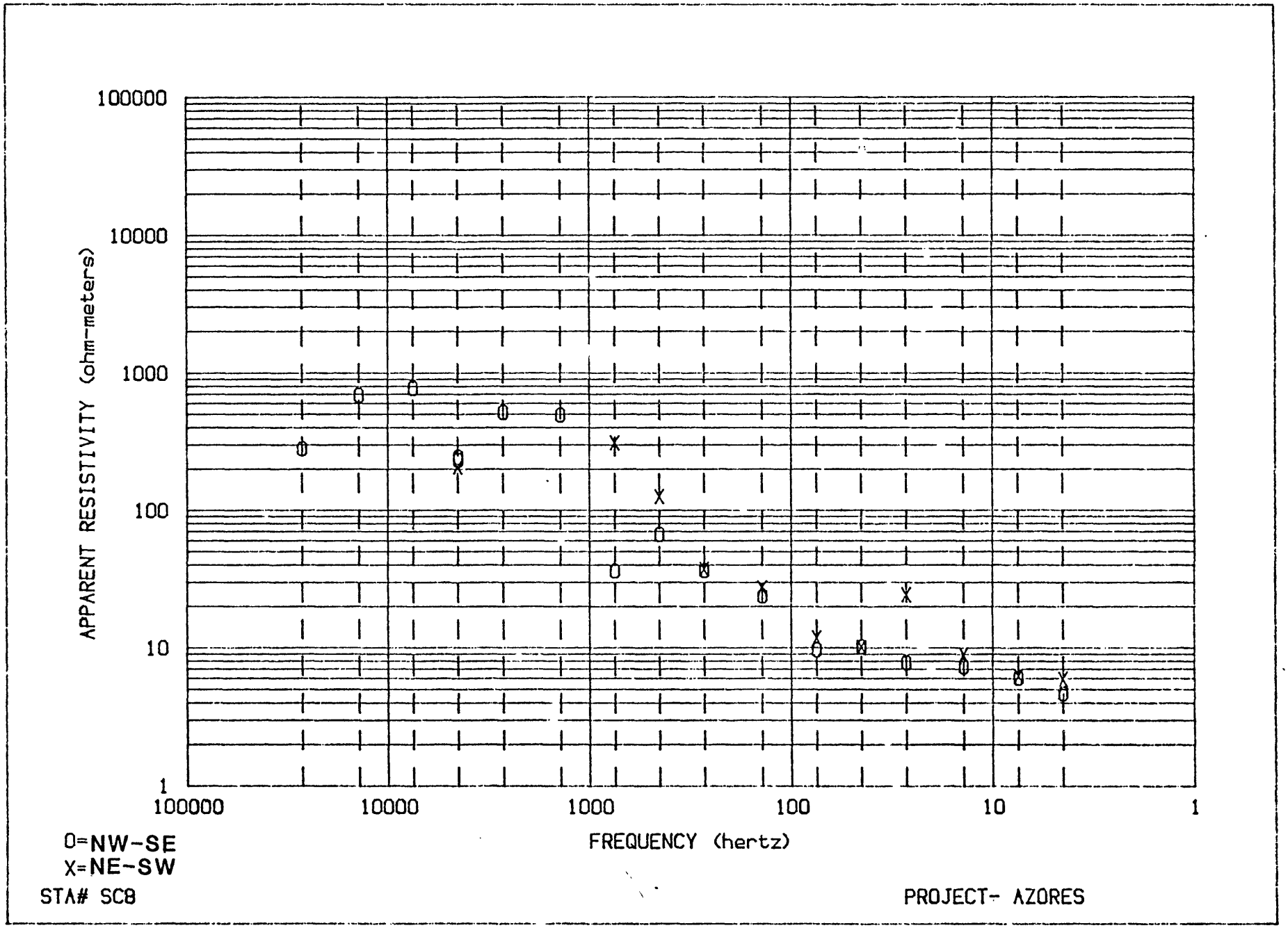
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC7
PROJECT- AZORES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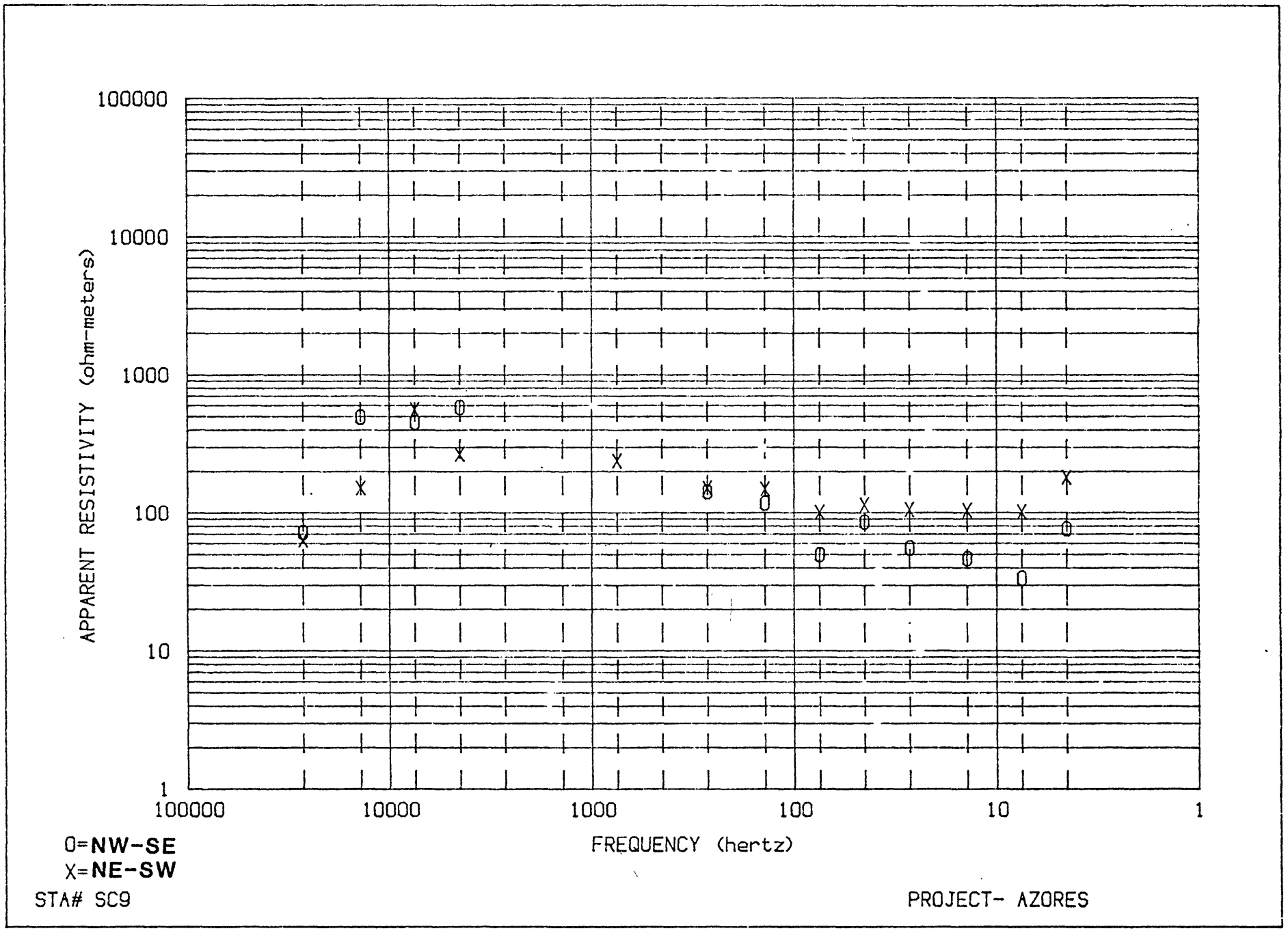
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC8
PROJECT- AZORES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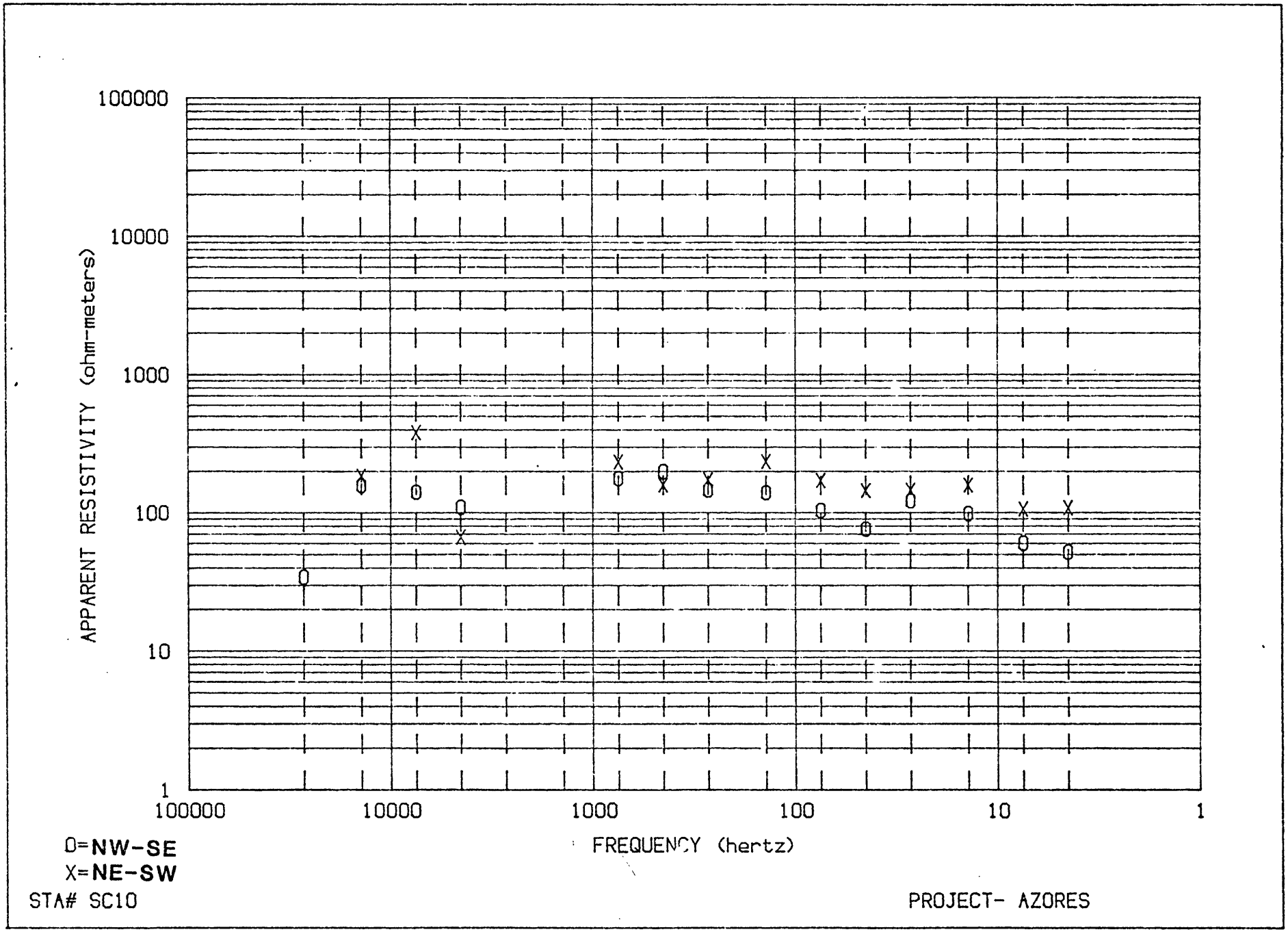
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC9
PROJECT- AZORES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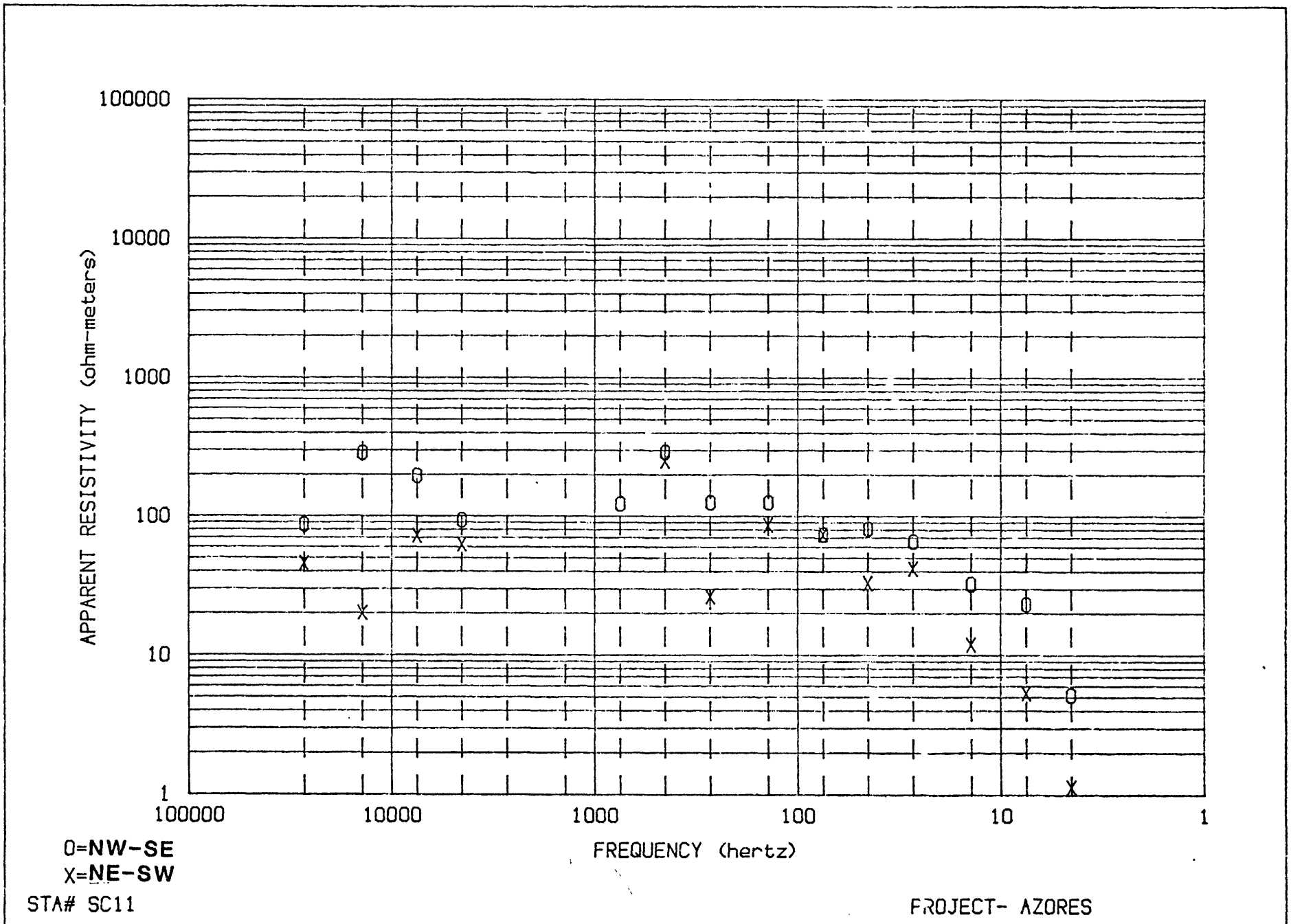
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC10
PROJECT- AZORES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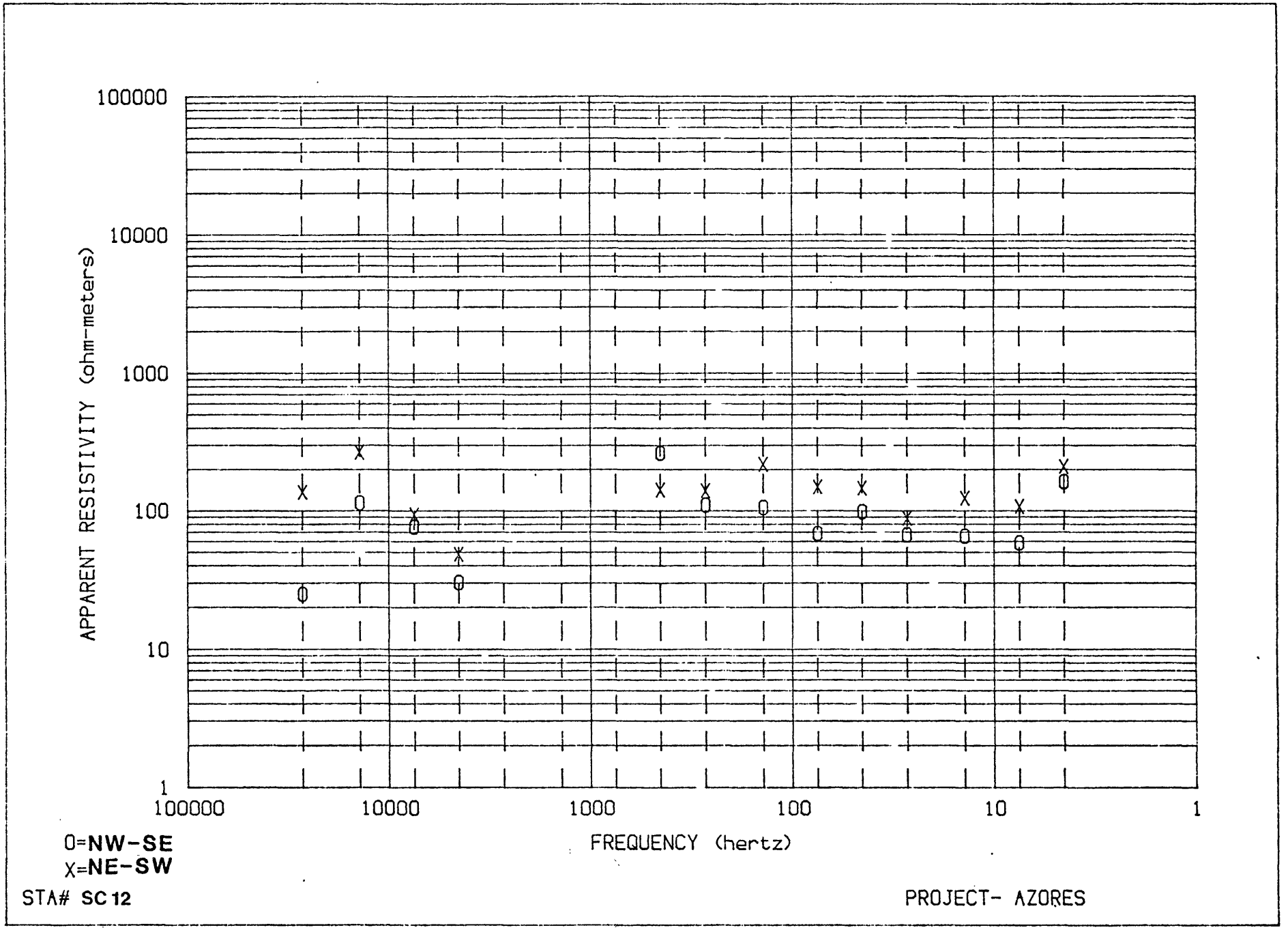
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC11
PROJECT- AZORES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FREQUENCY (hertz)
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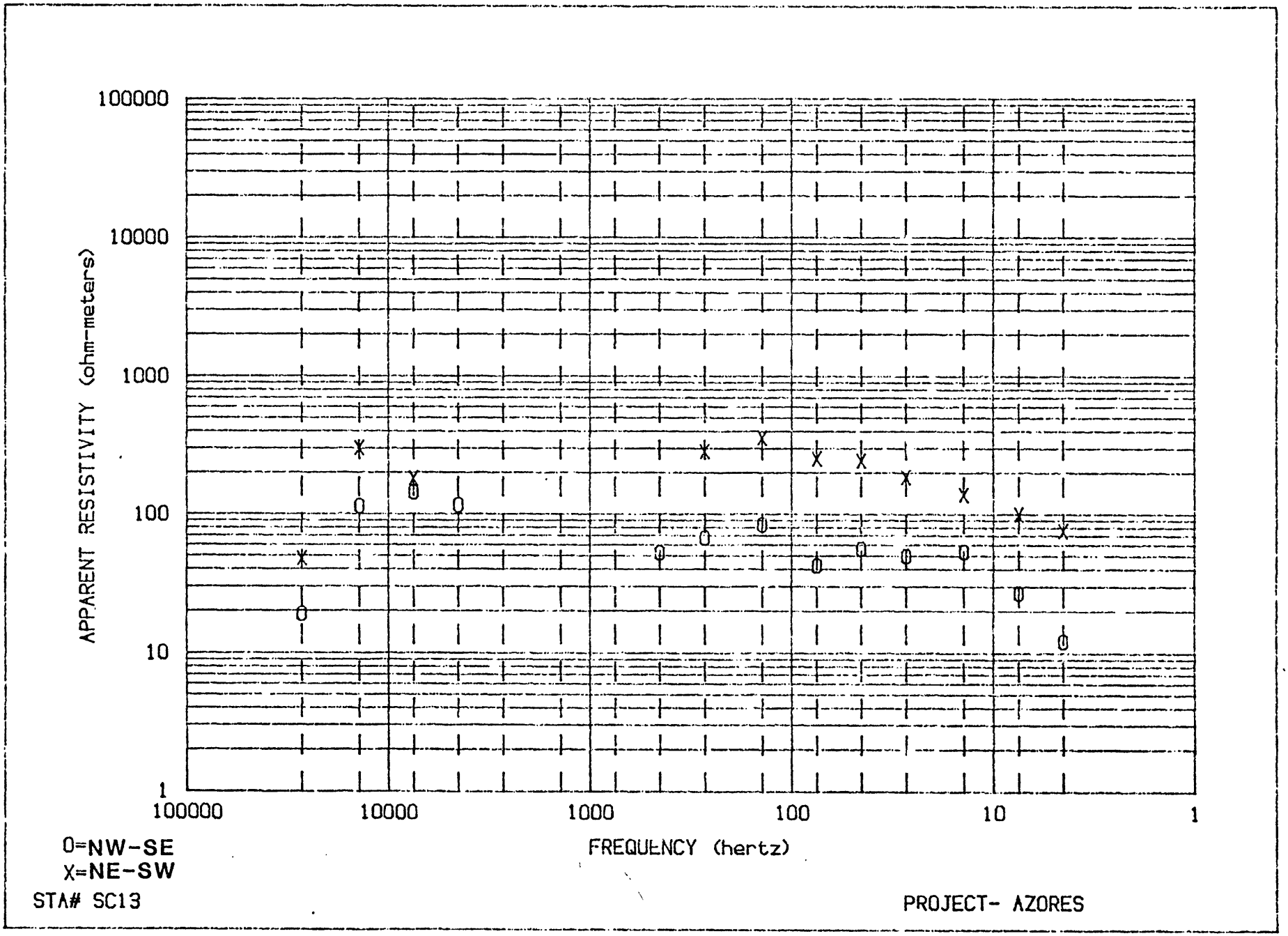
X=NE-SW
STA# SC 12
PROJECT- AZORES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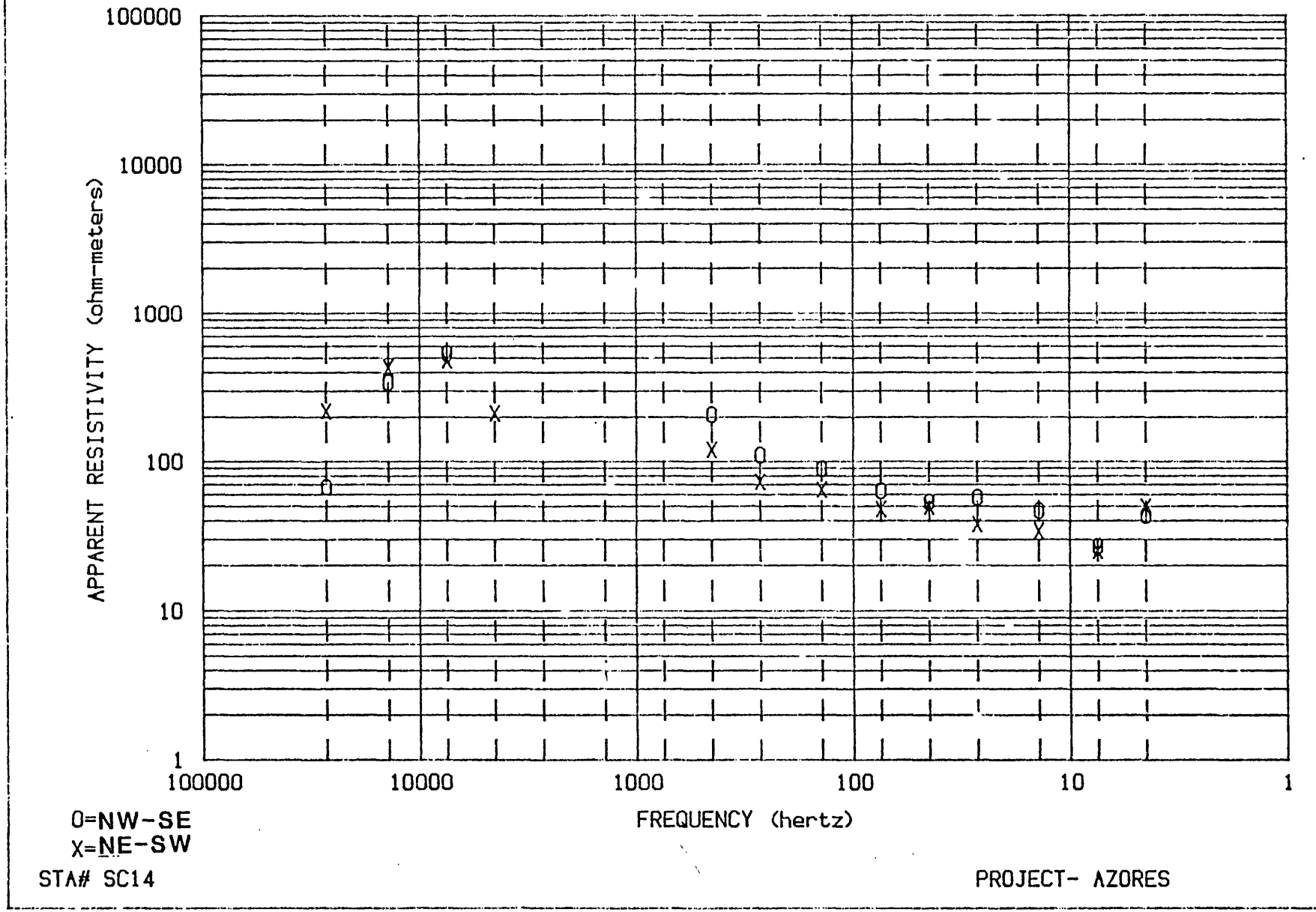
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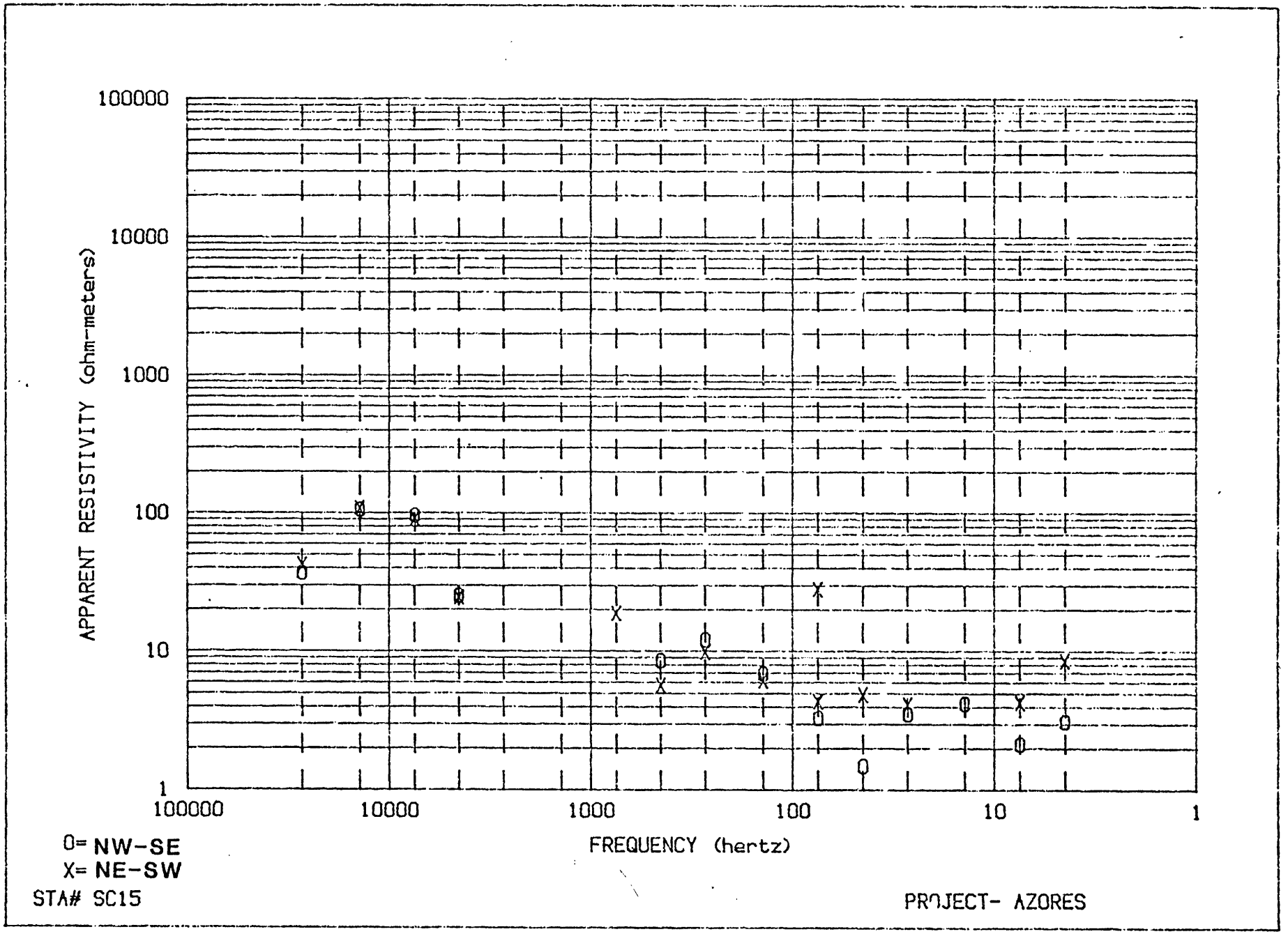
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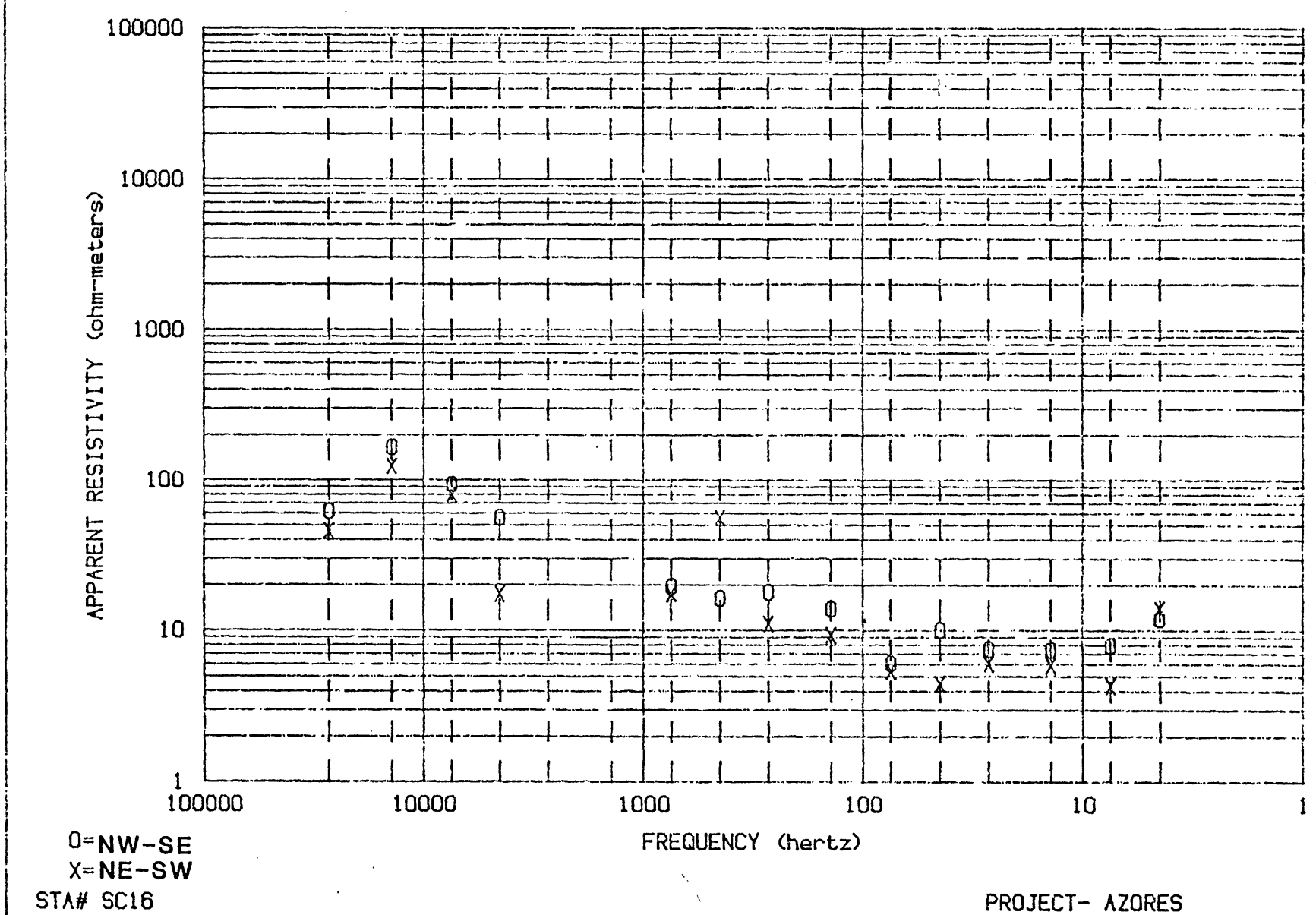
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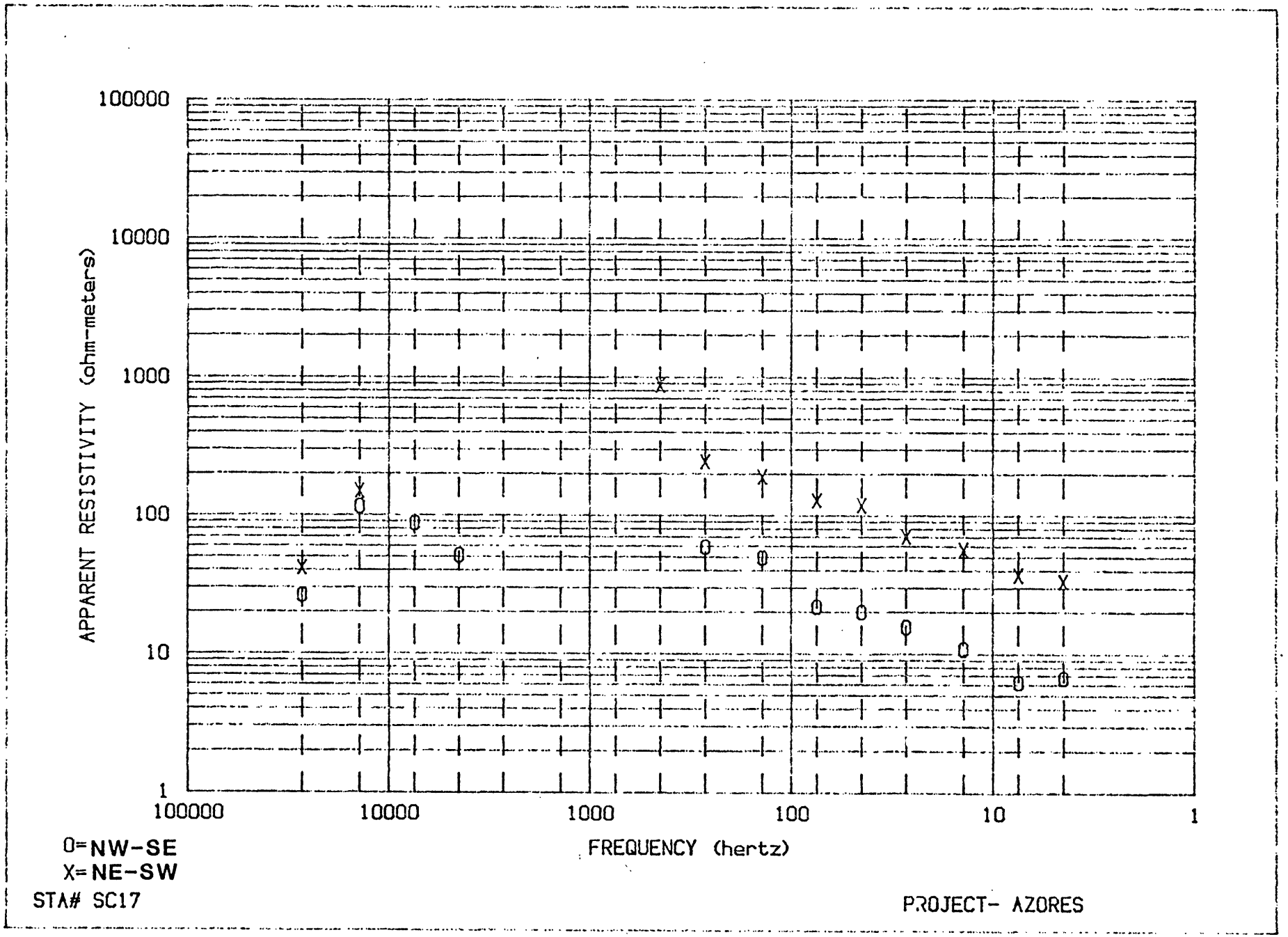
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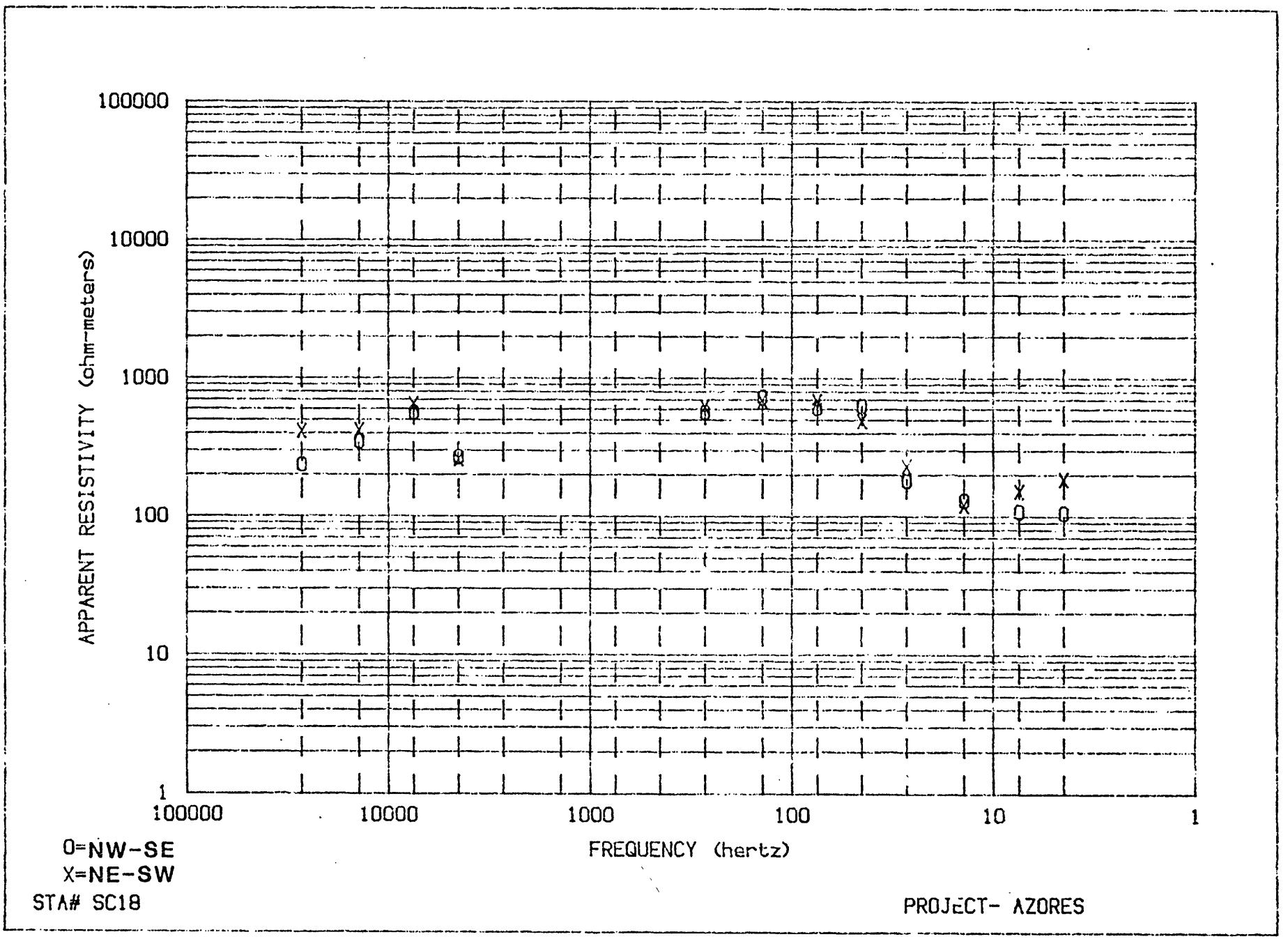
PROJECT- AZORES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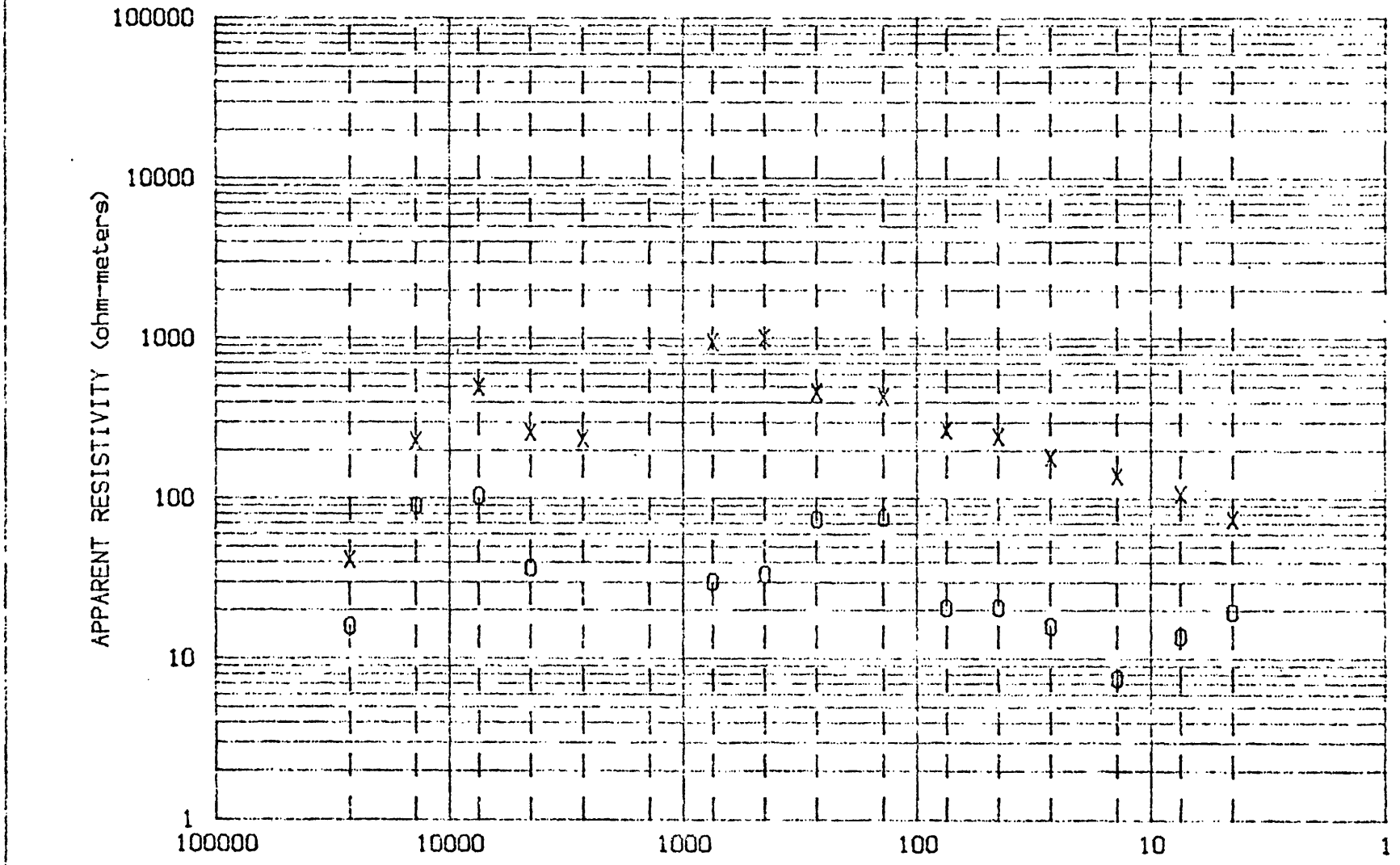
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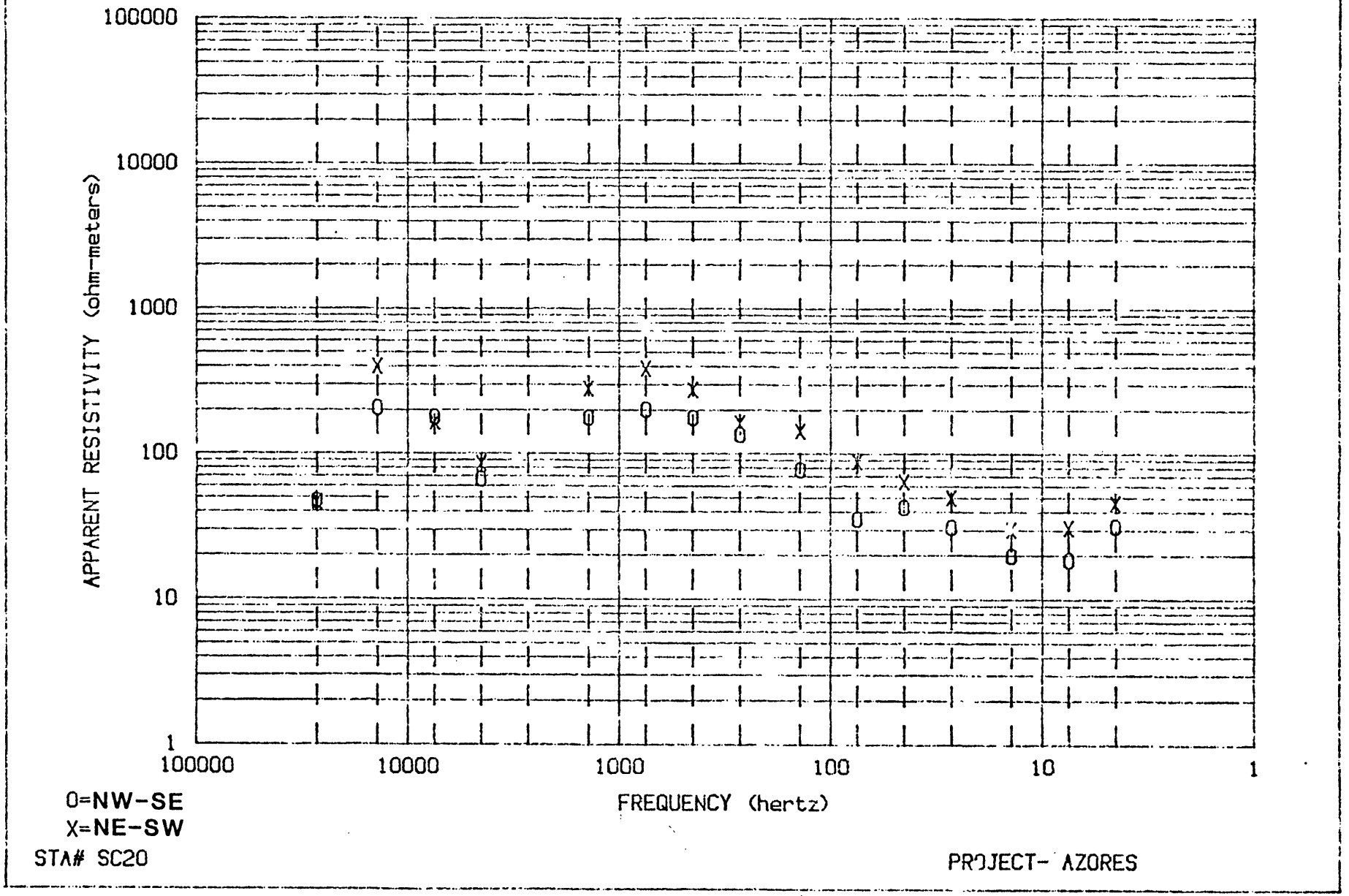
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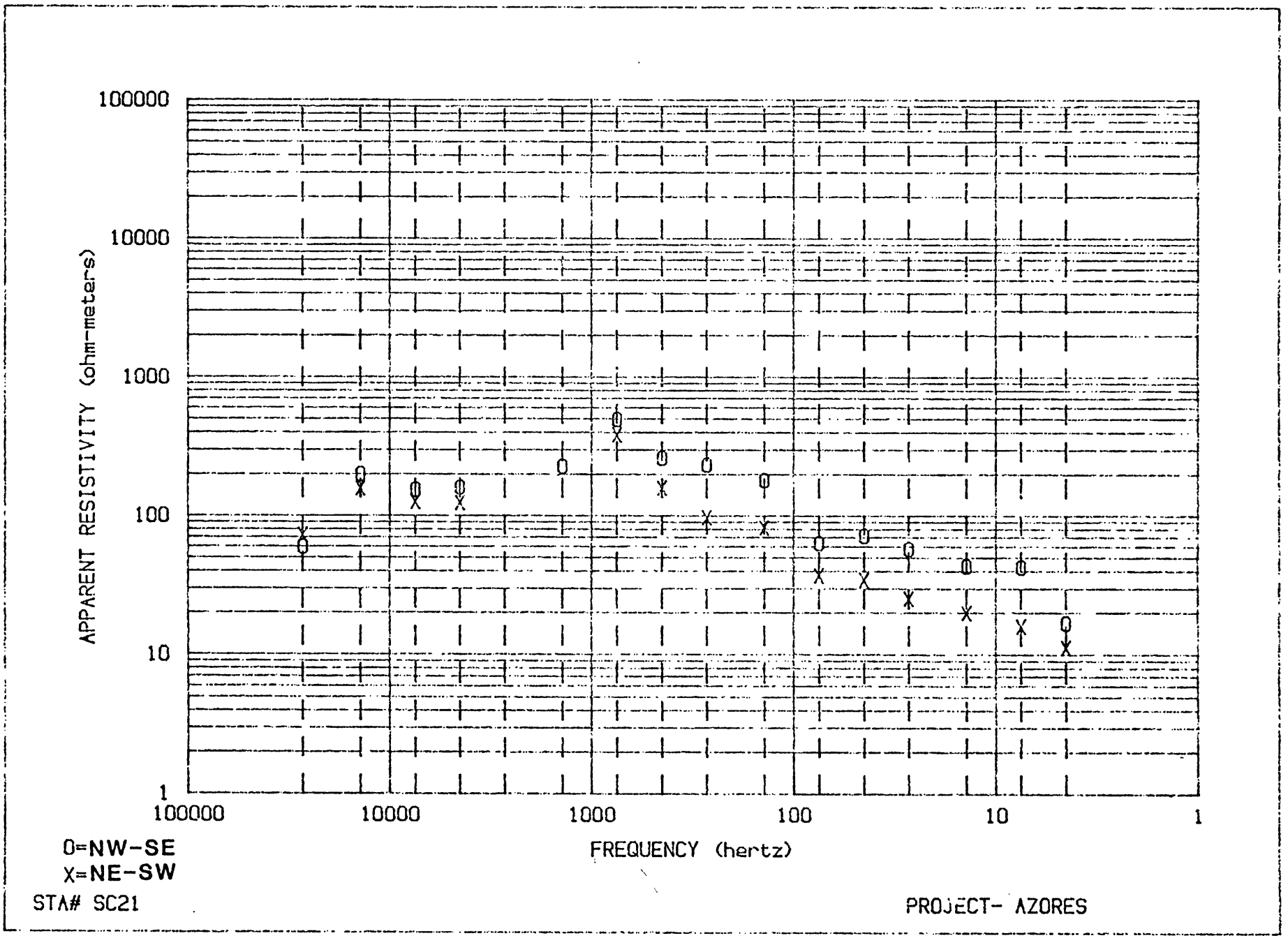
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC20
PROJECT- AZORES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10000
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APPARENT RESISTIVITY (ohm-meters)
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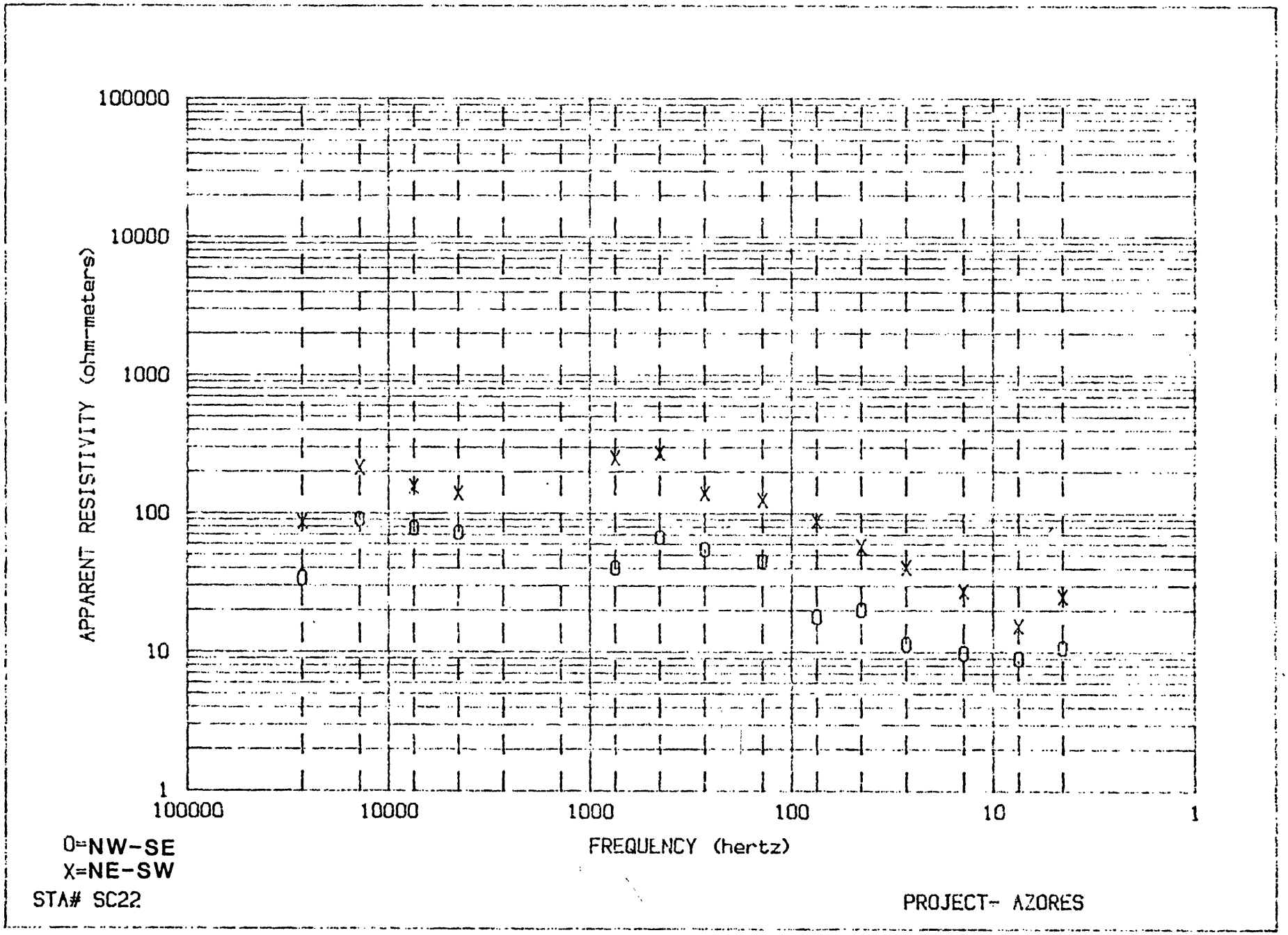
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC21
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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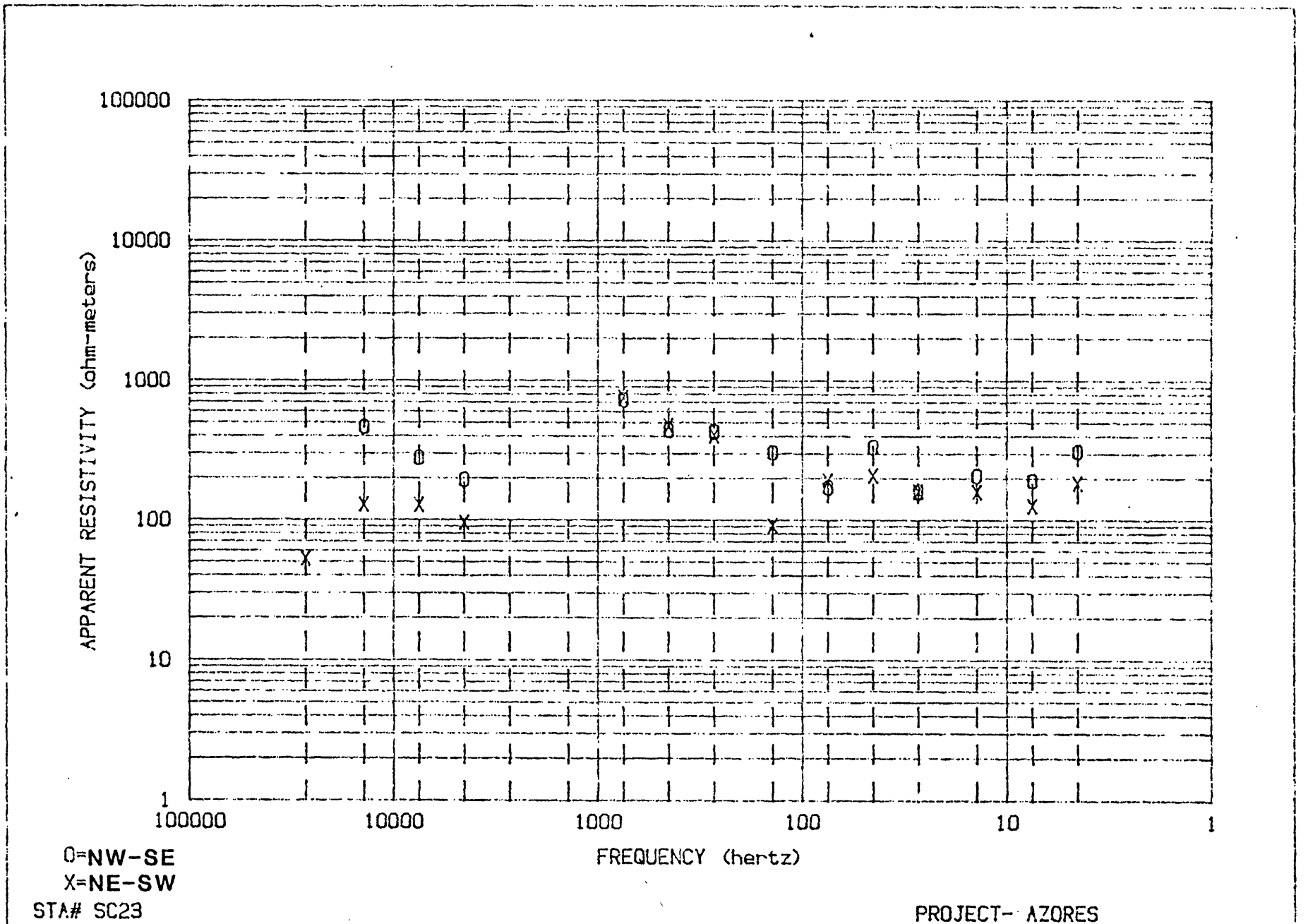
10
1
FREQUENCY (hertz)
0=NW-SE
X=NE-SW
STA# SC22
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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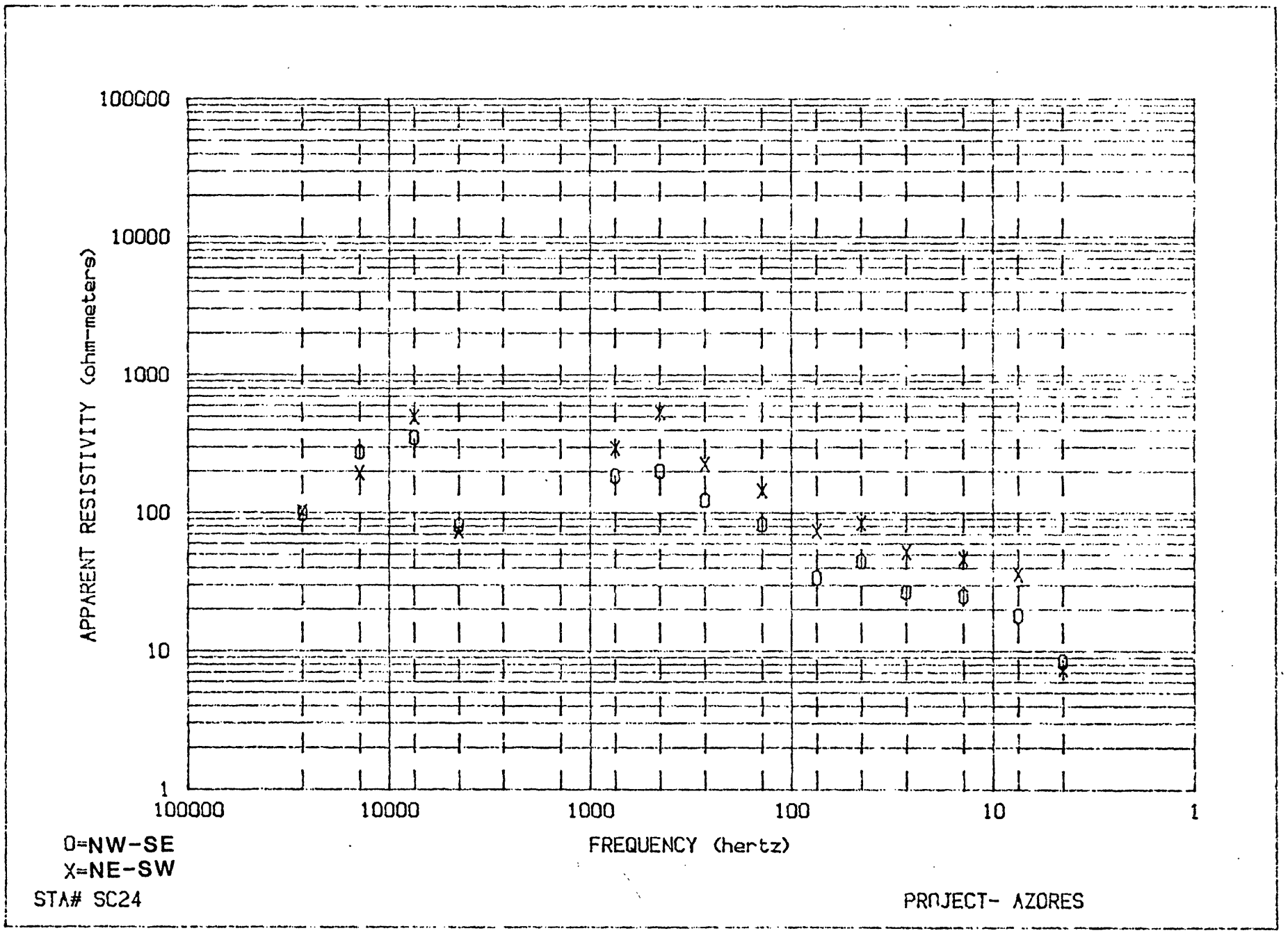
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC23
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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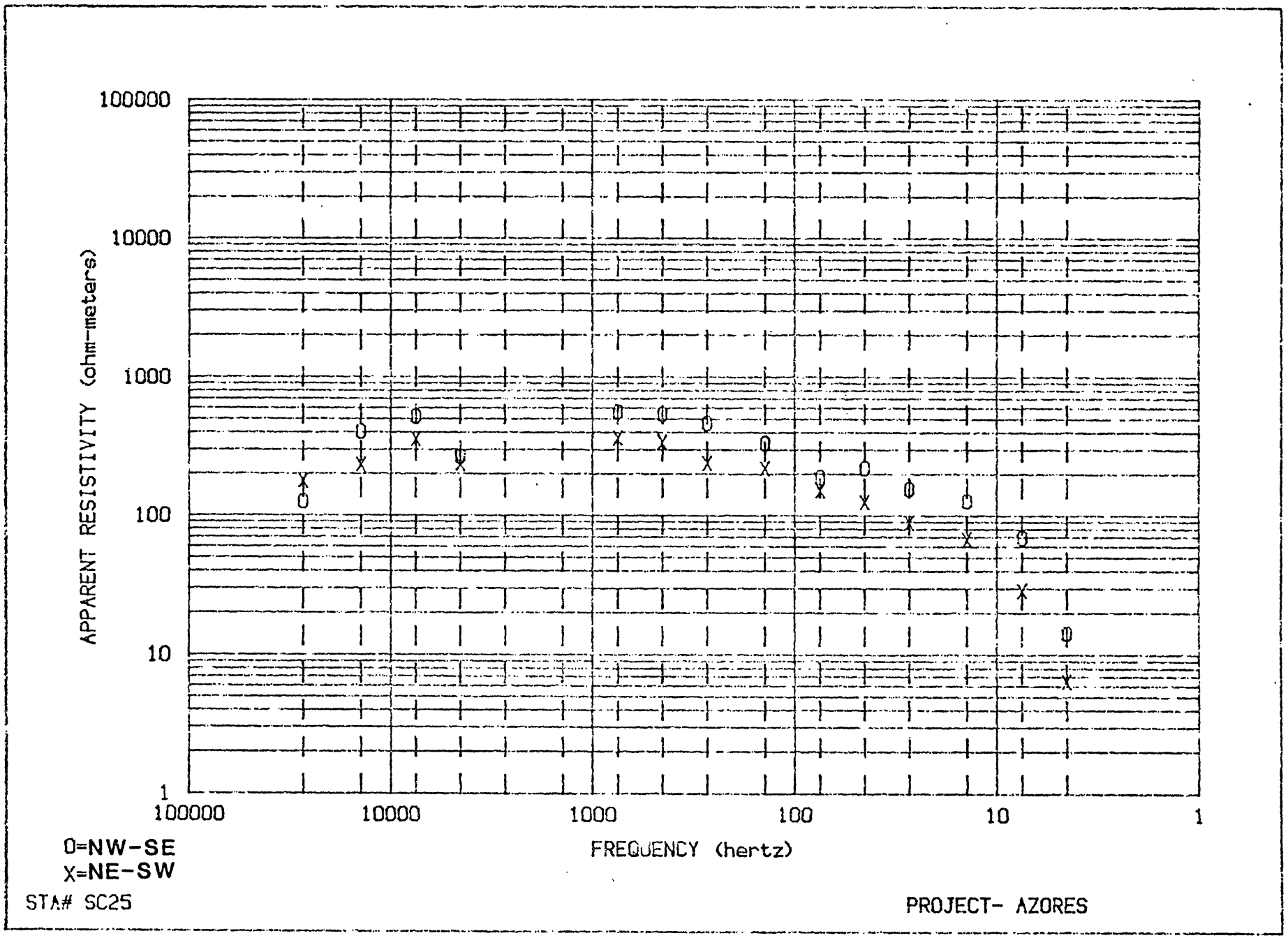
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC24
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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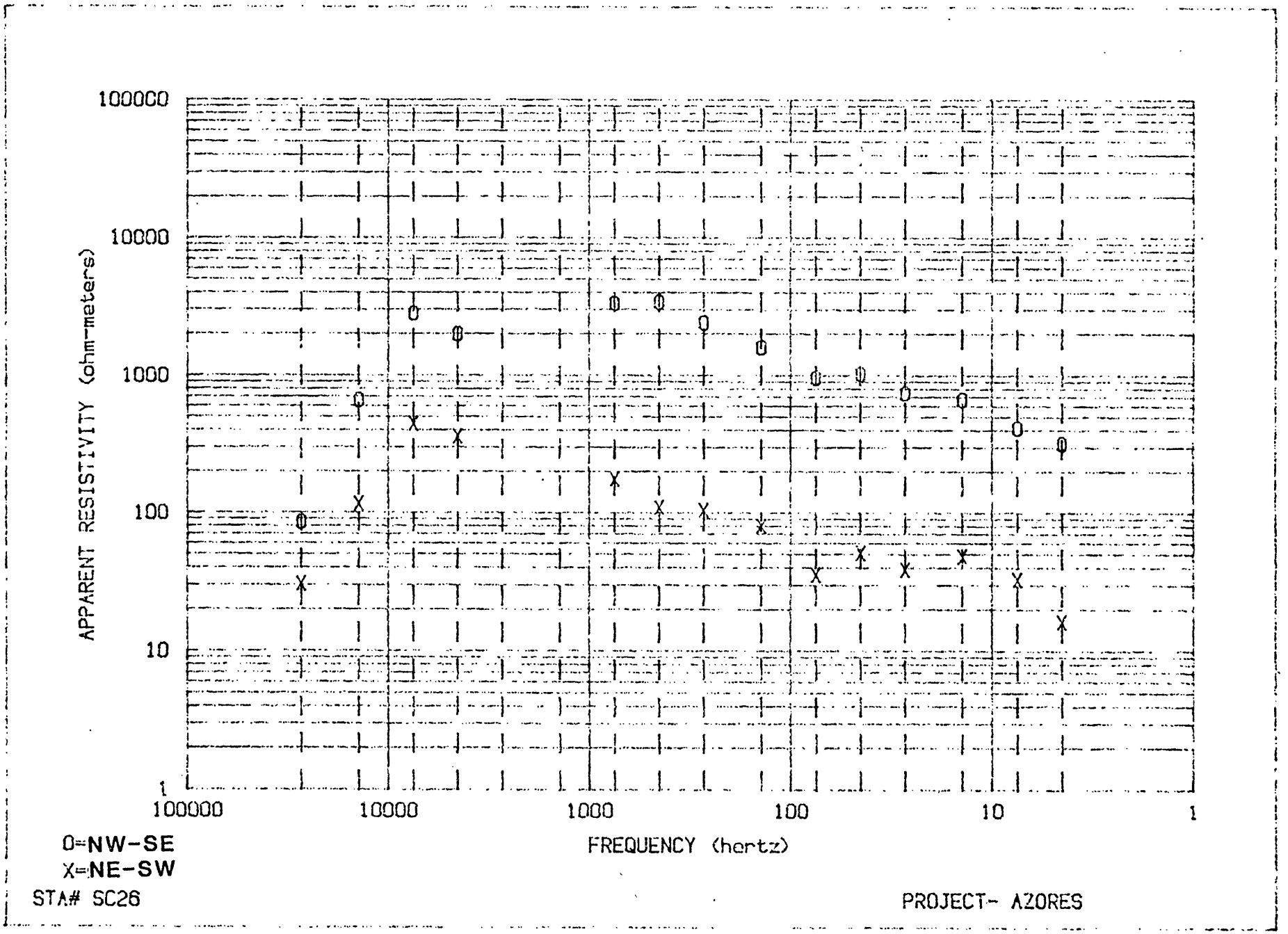
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC25
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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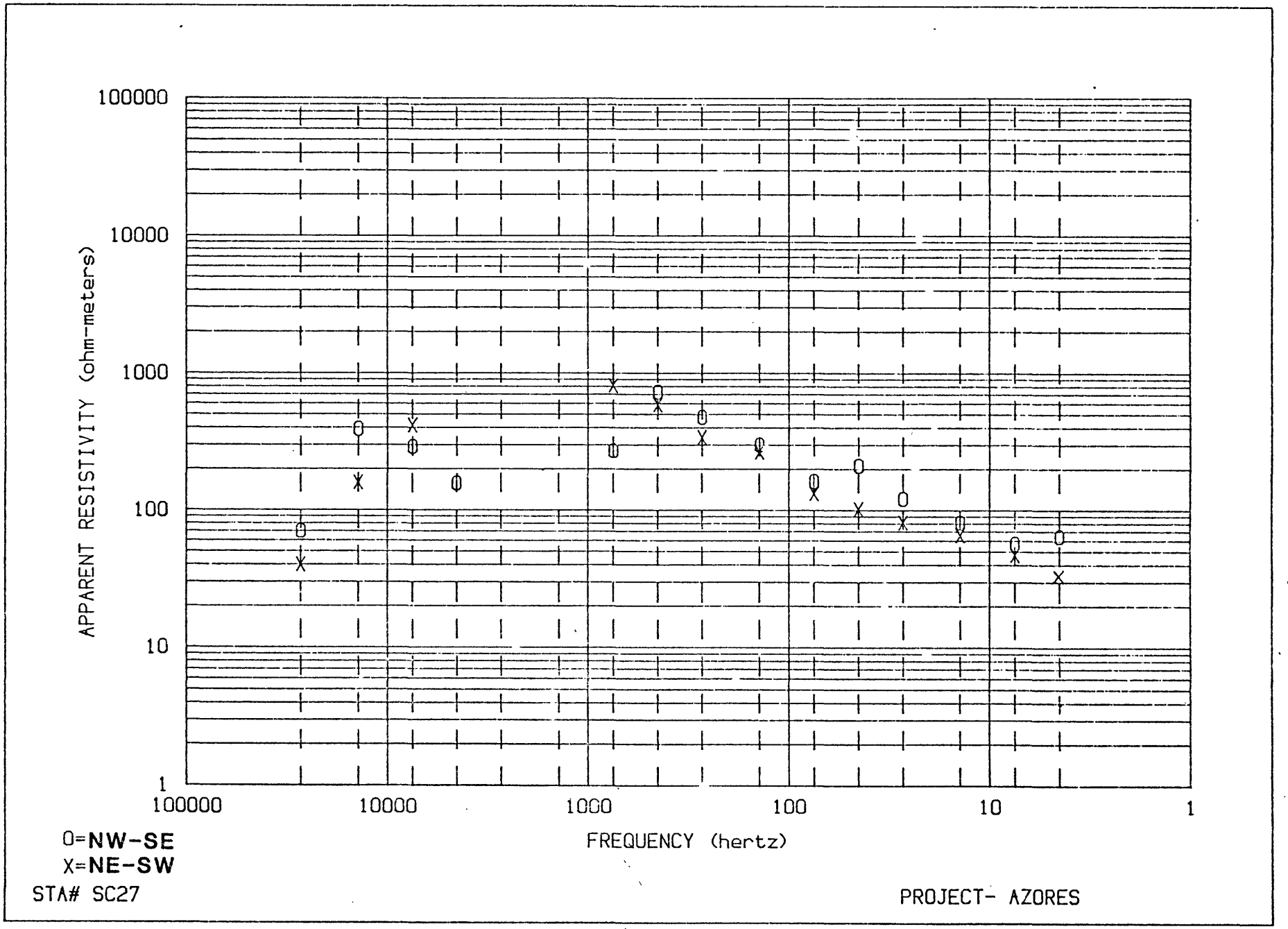
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC26
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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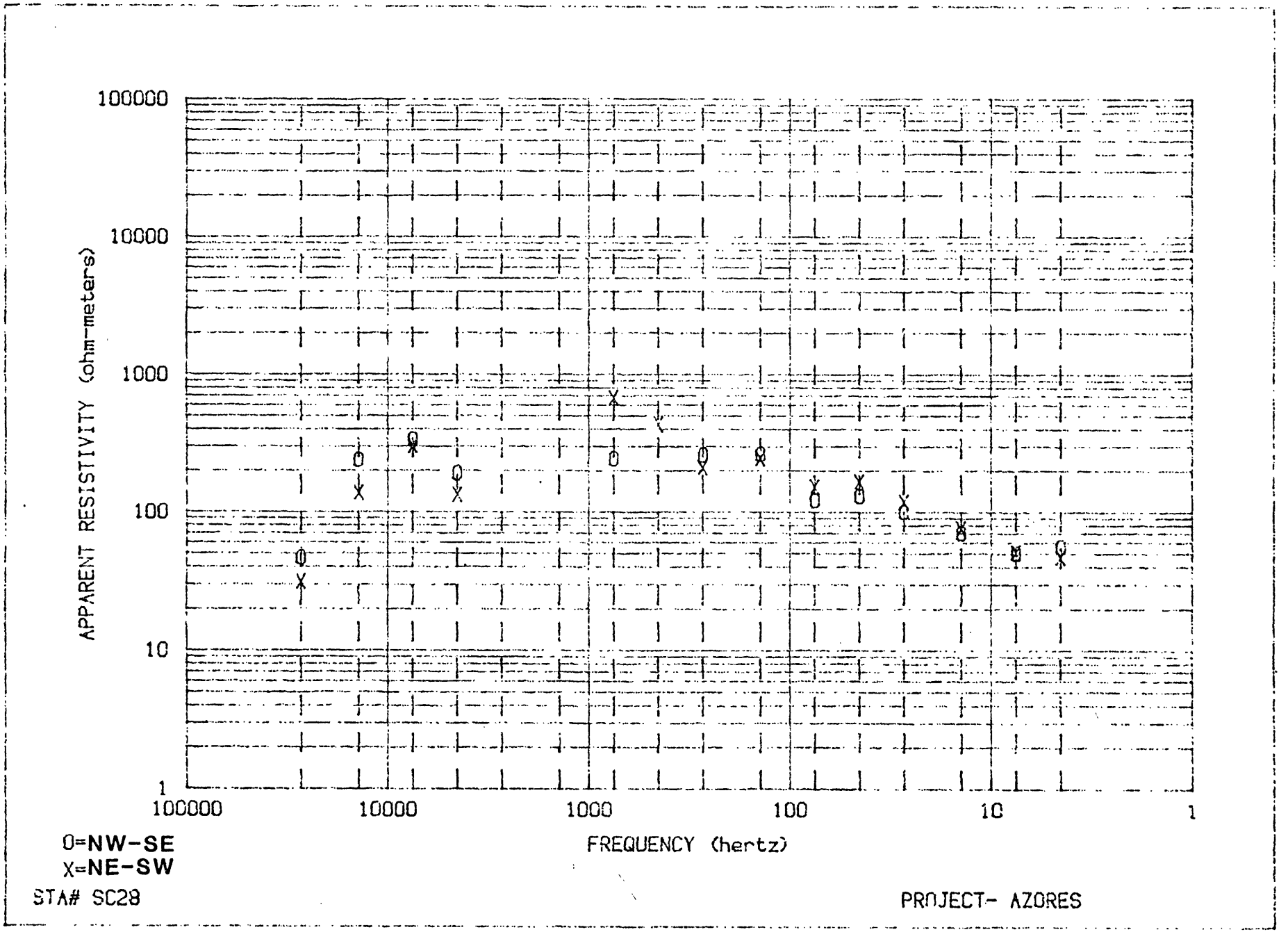
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC27
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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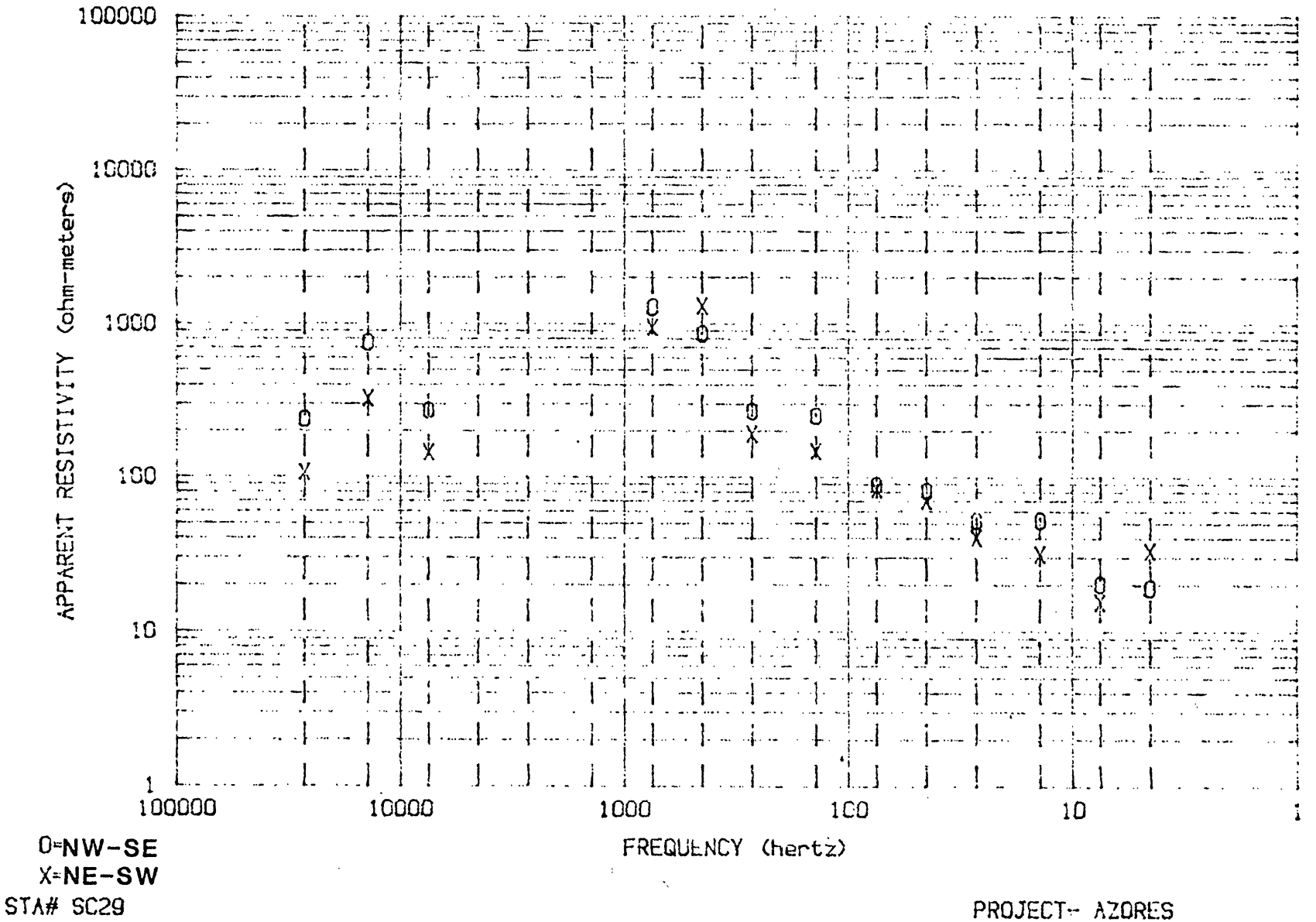
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC28
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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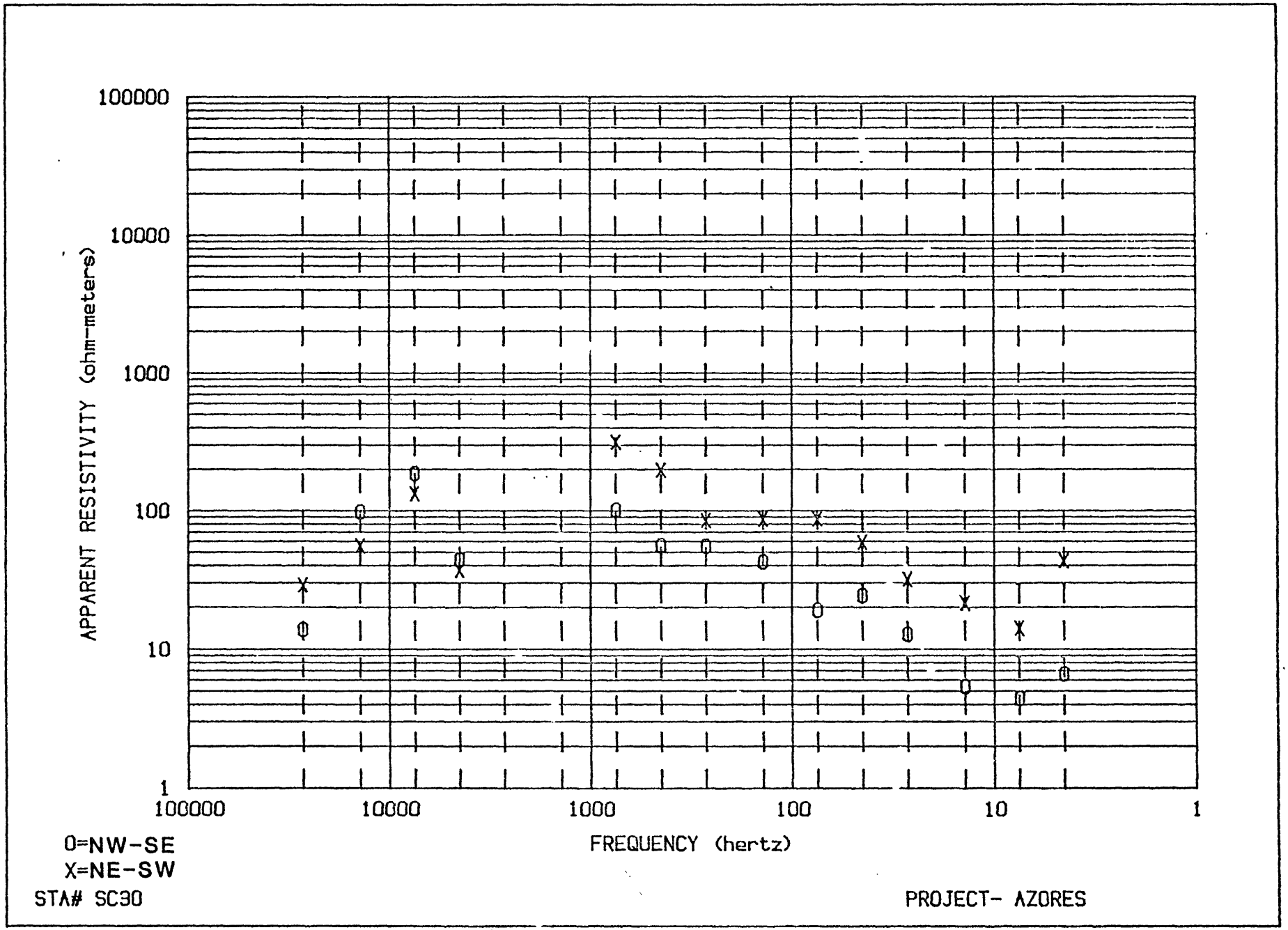
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC29
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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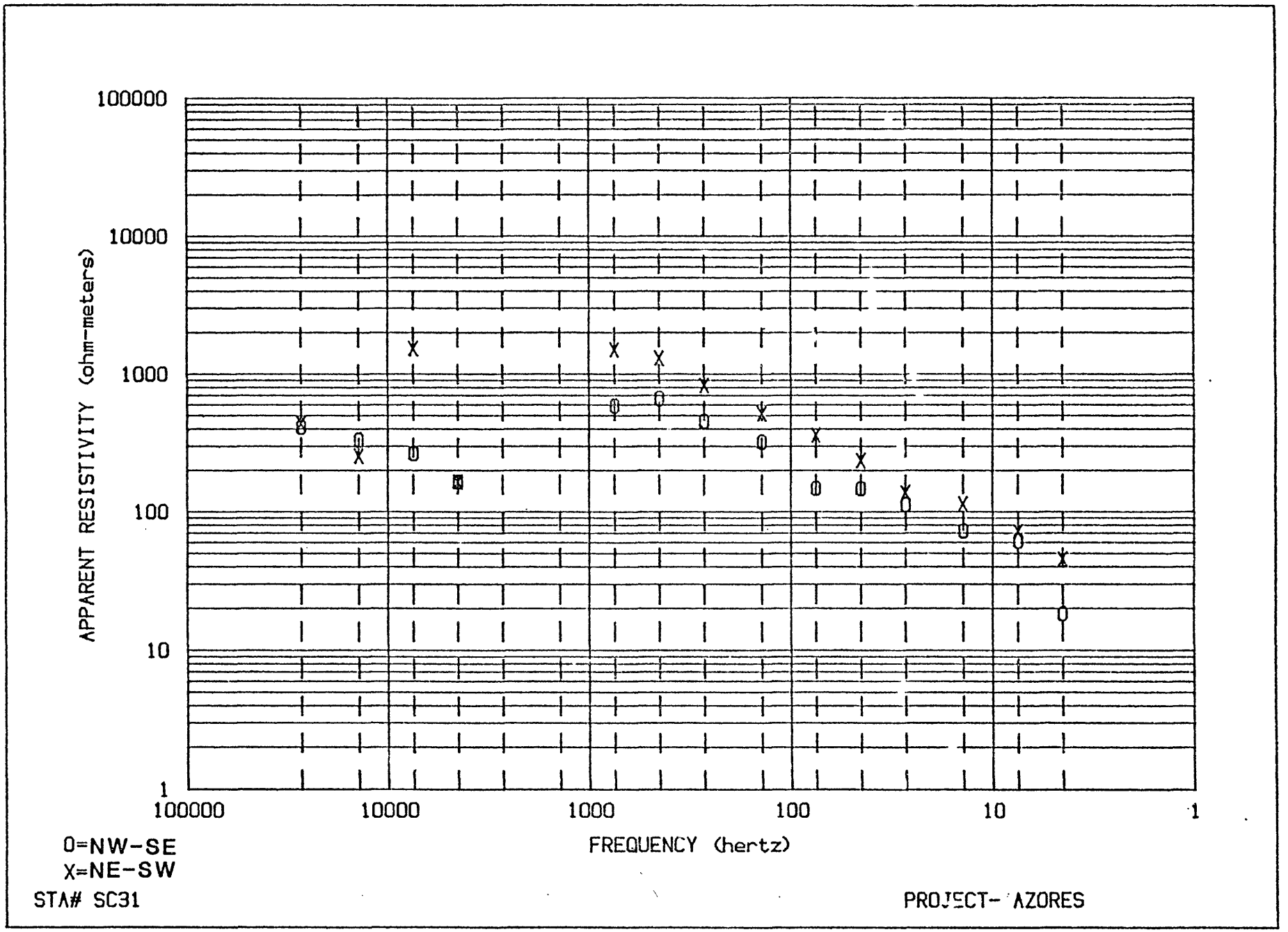
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC30
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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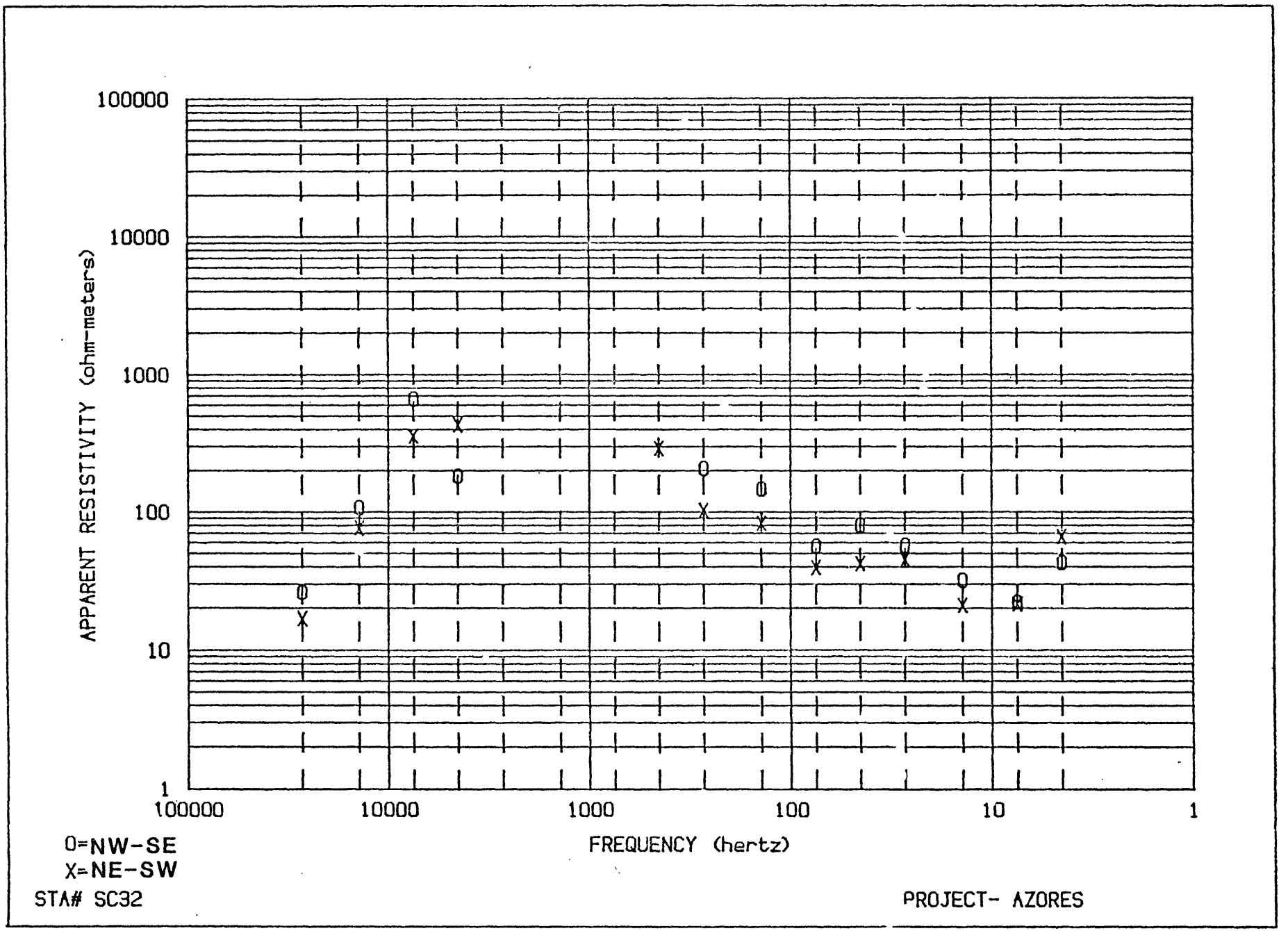
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC31
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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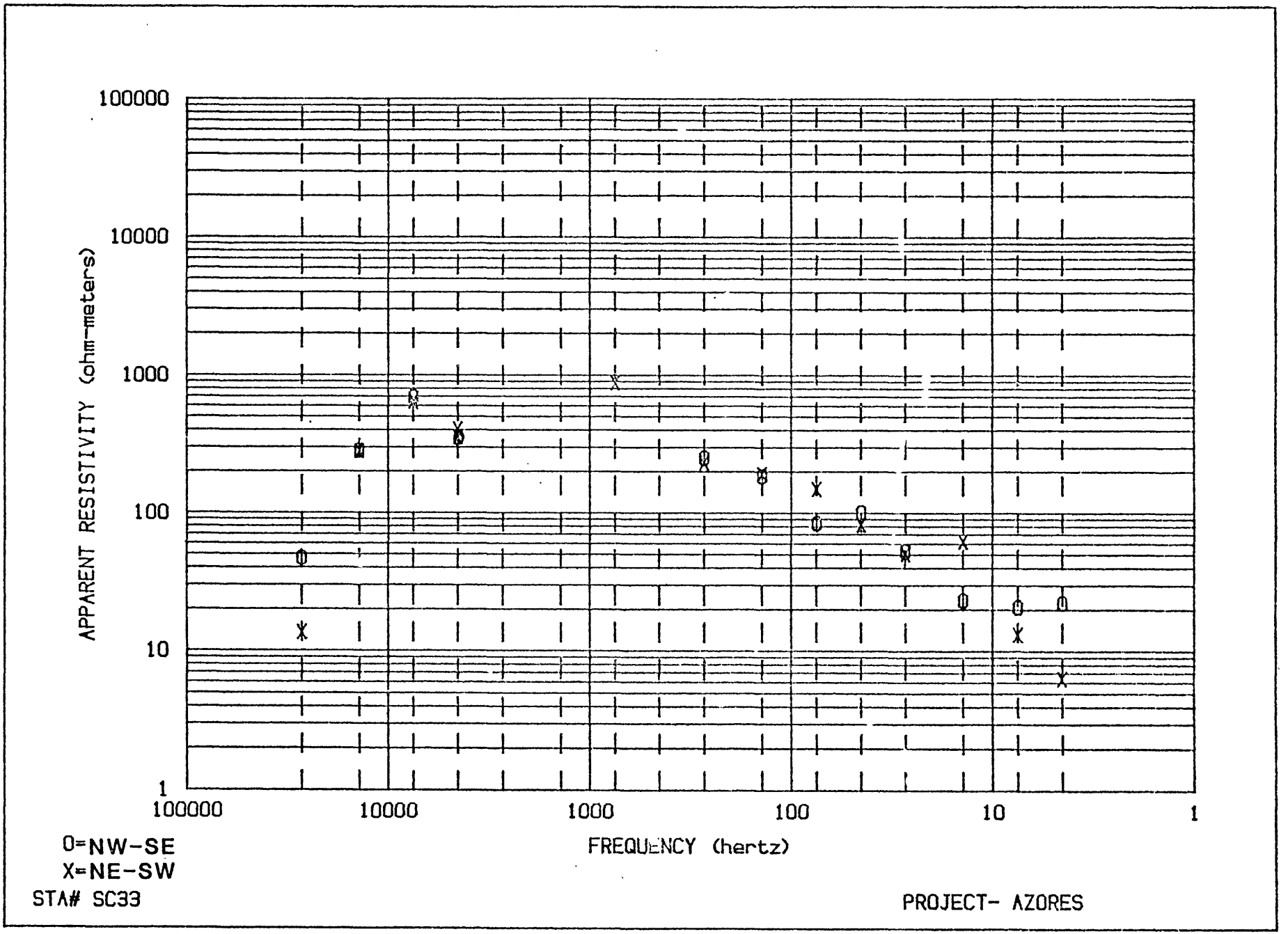
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC32
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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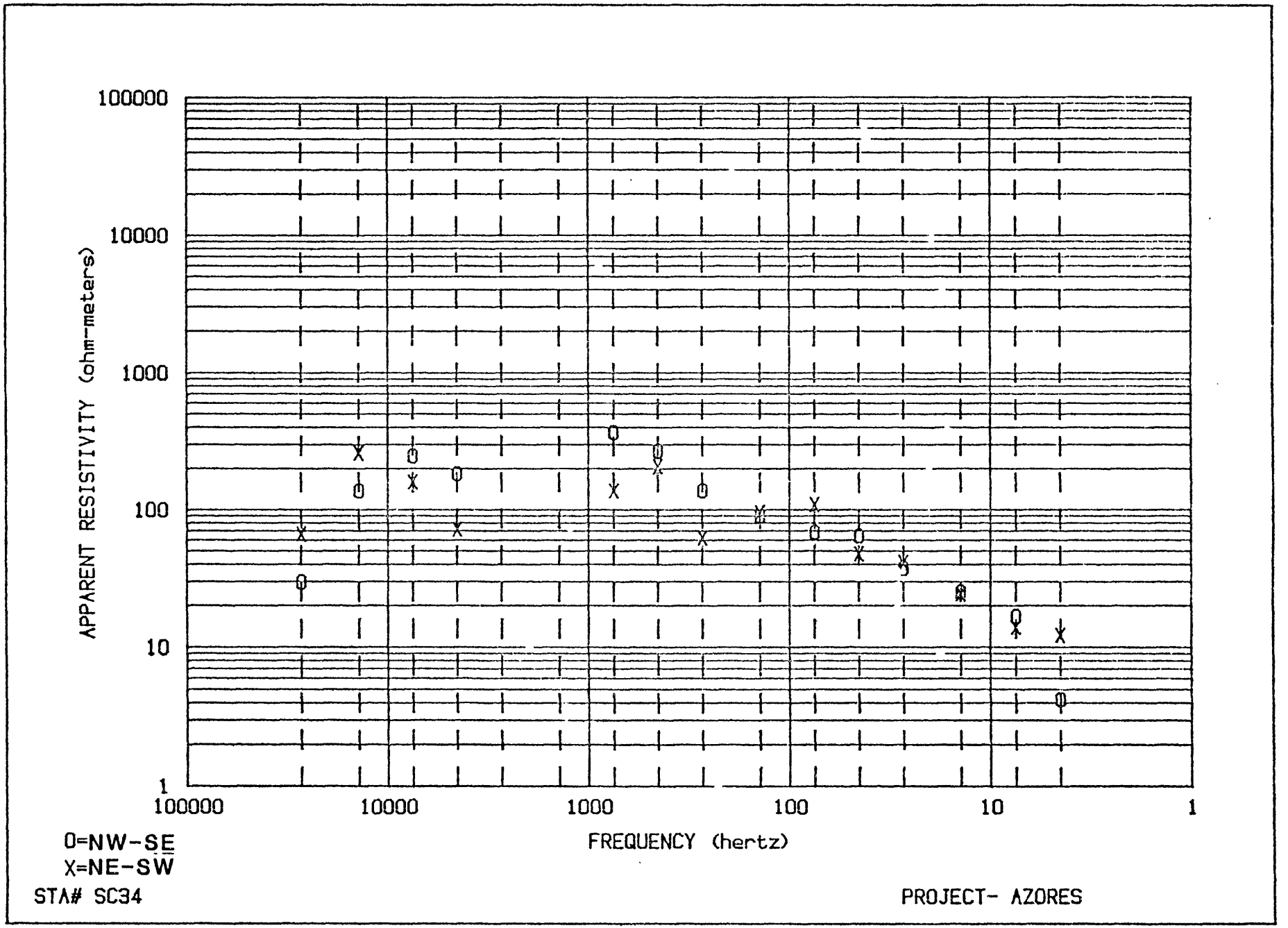
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC33
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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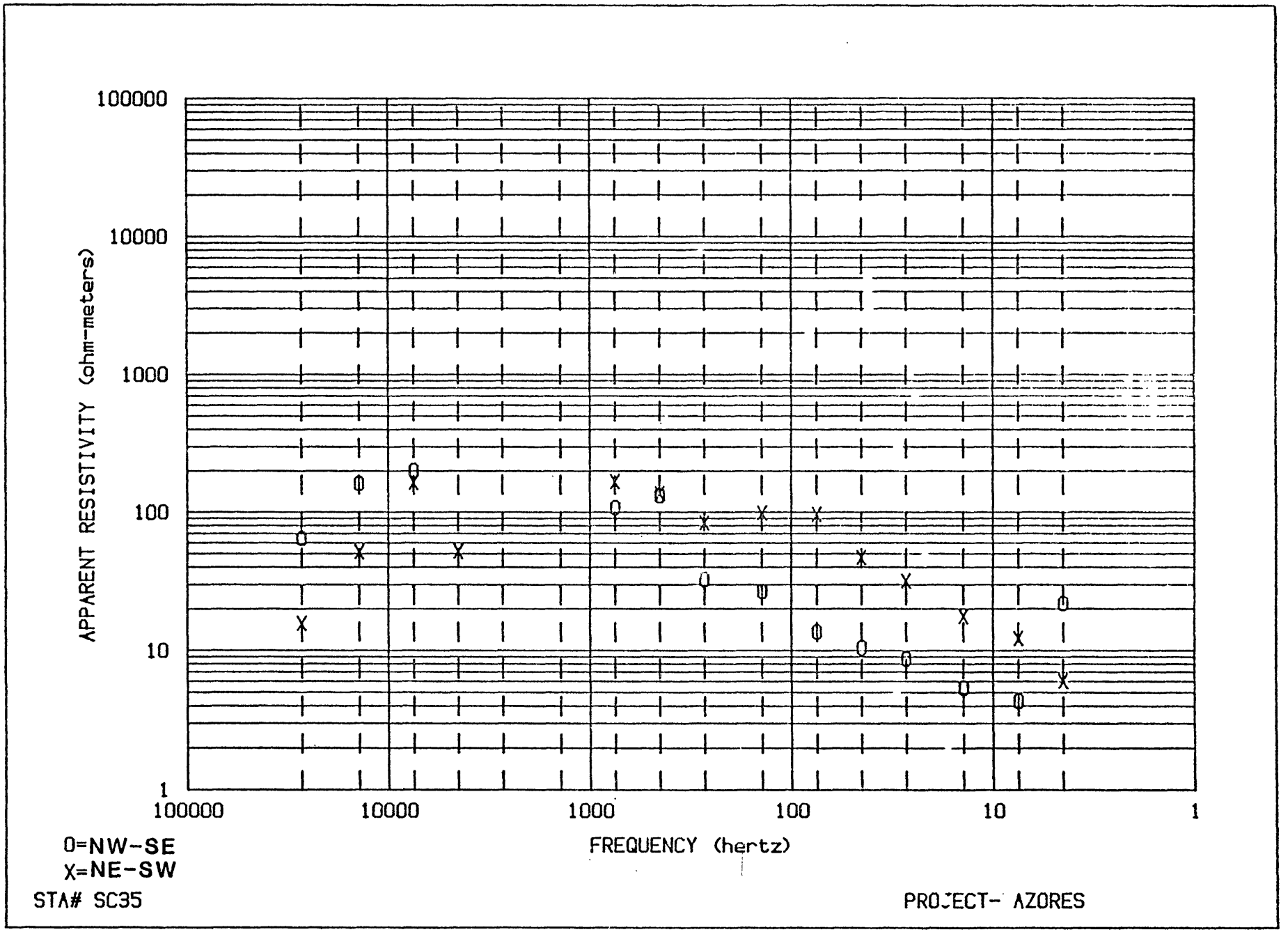
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC34
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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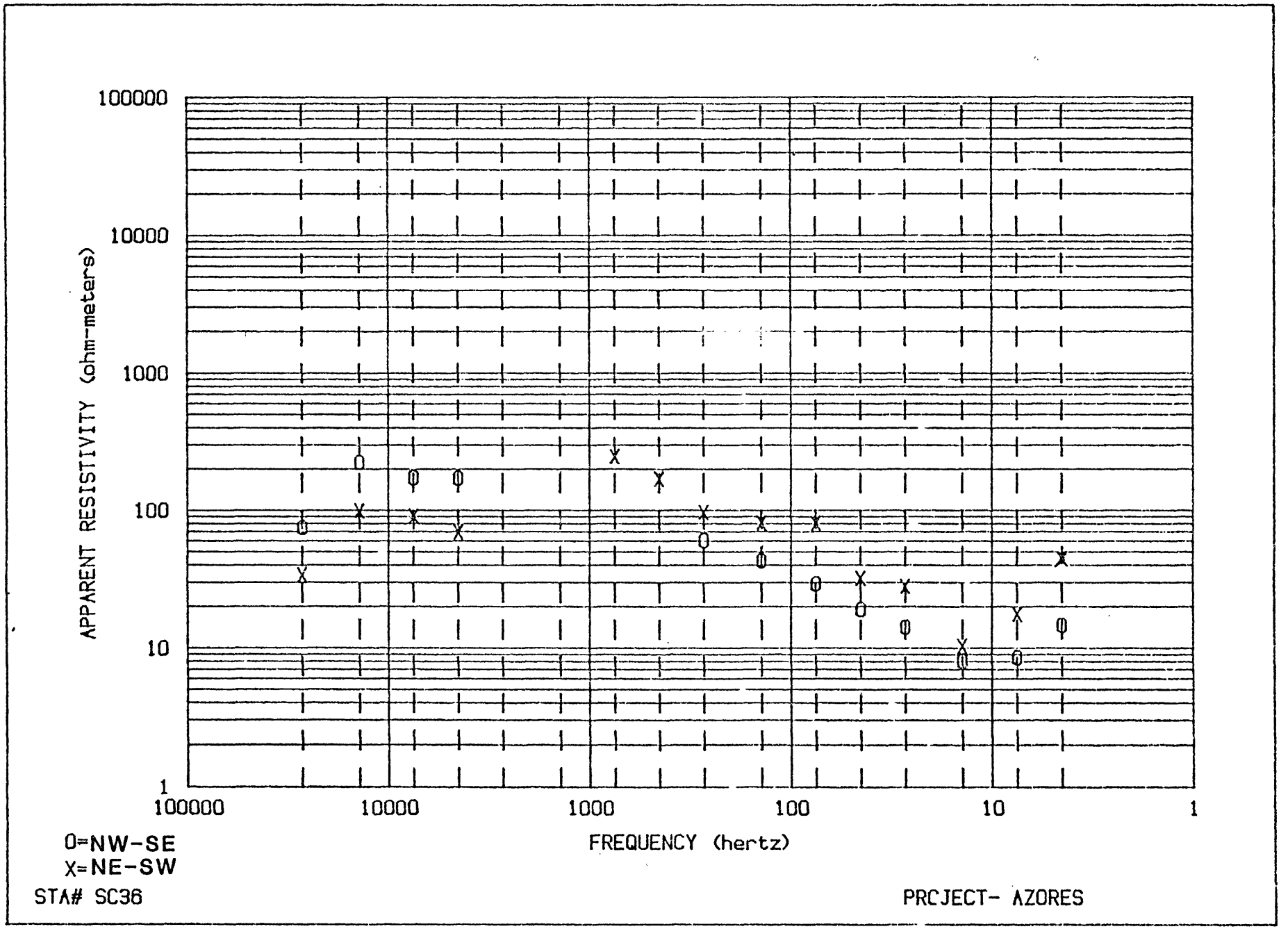
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC35
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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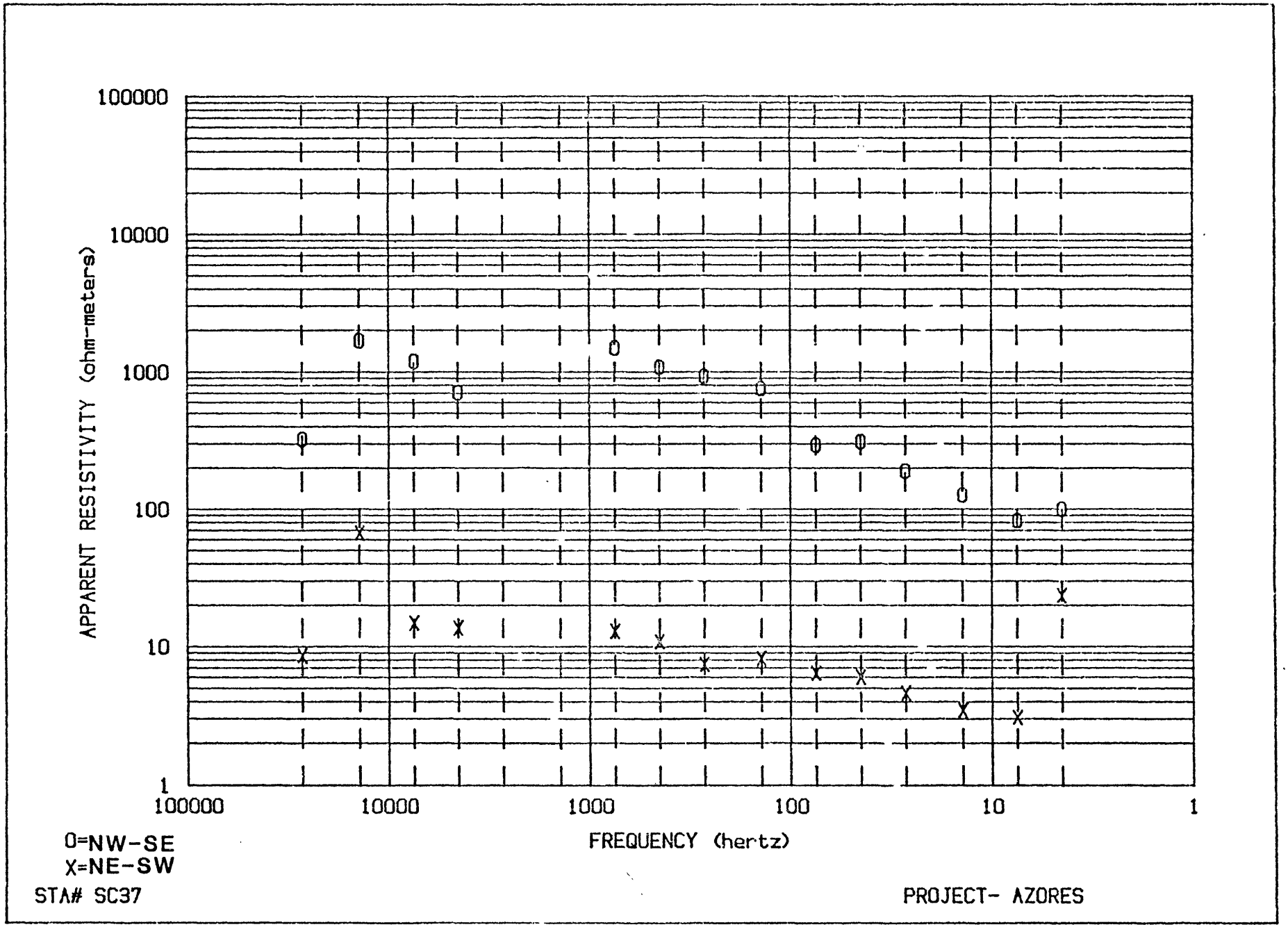
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC36
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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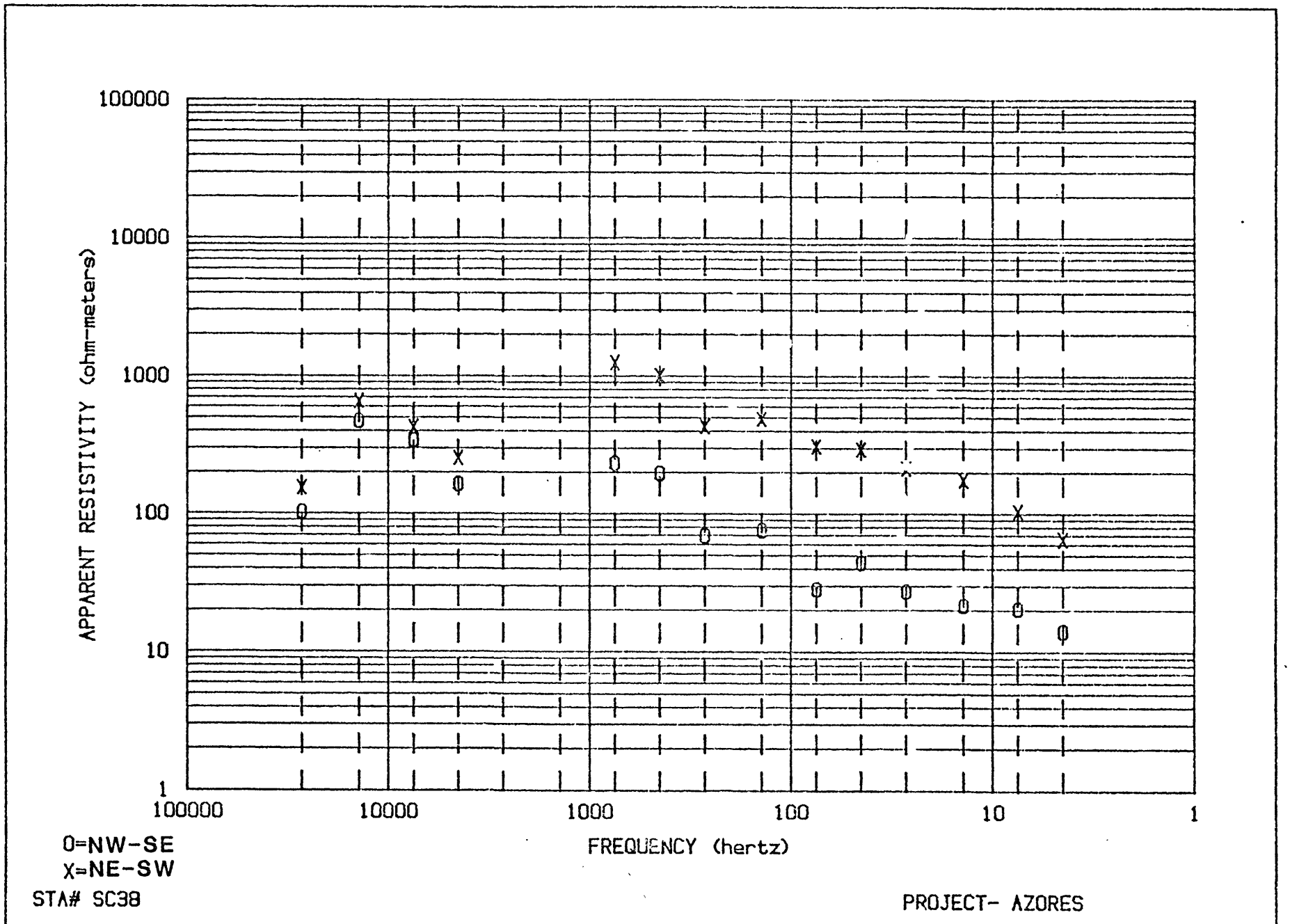
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC37
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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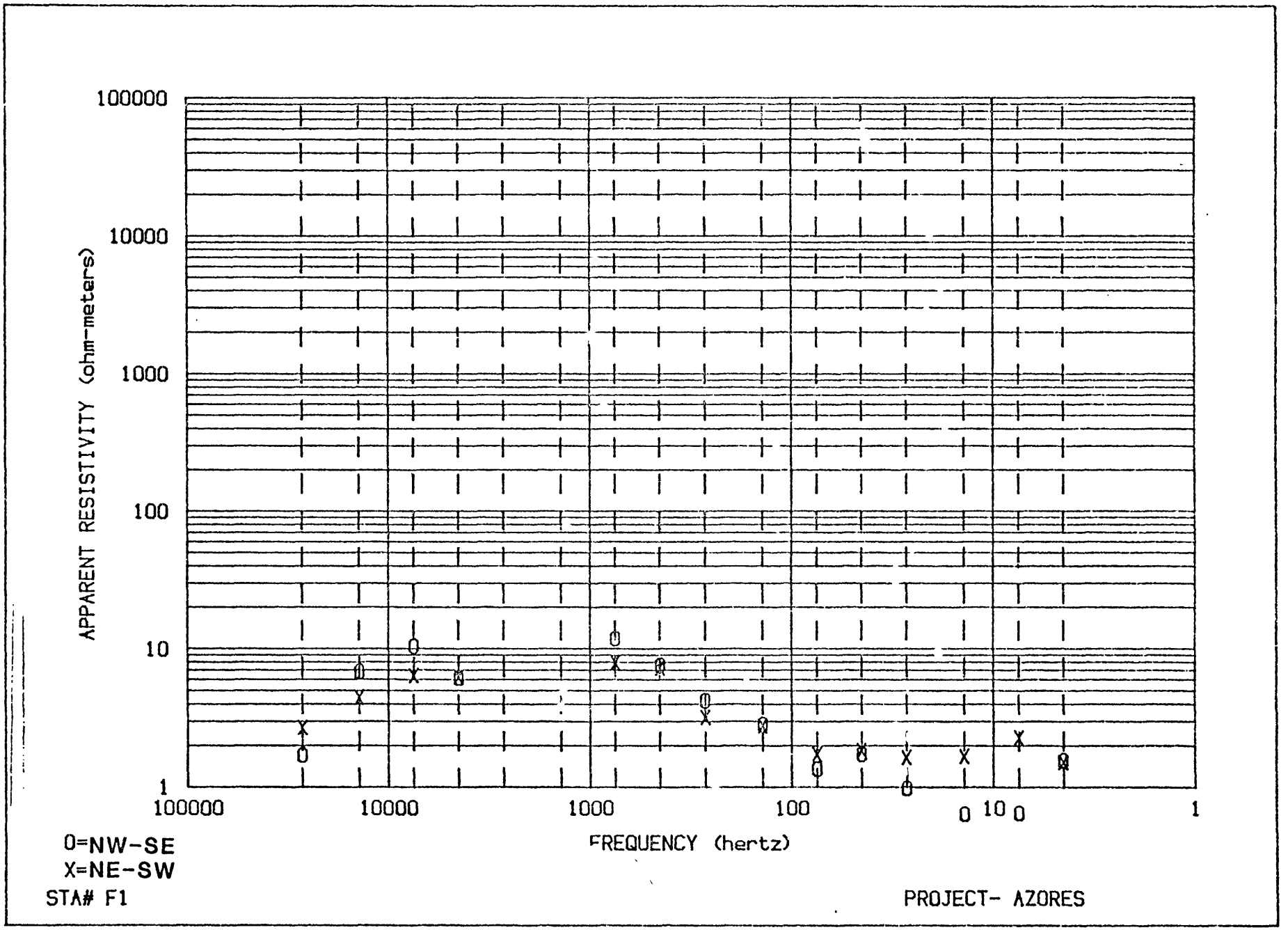
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# SC38
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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10000
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100
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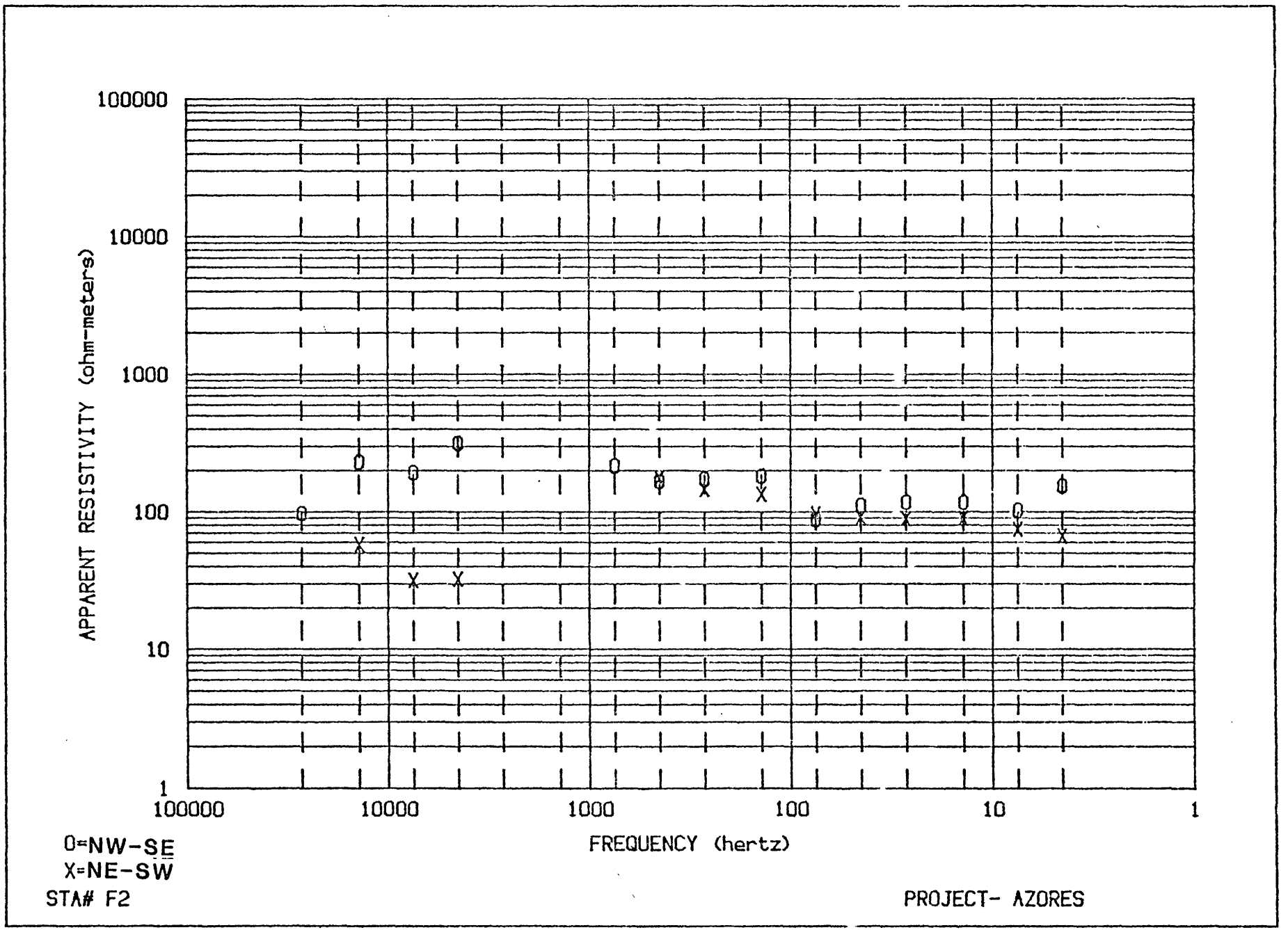
1
FREQUENCY (hertz)
0=NW-SE
X=NE-SW
STA# F1
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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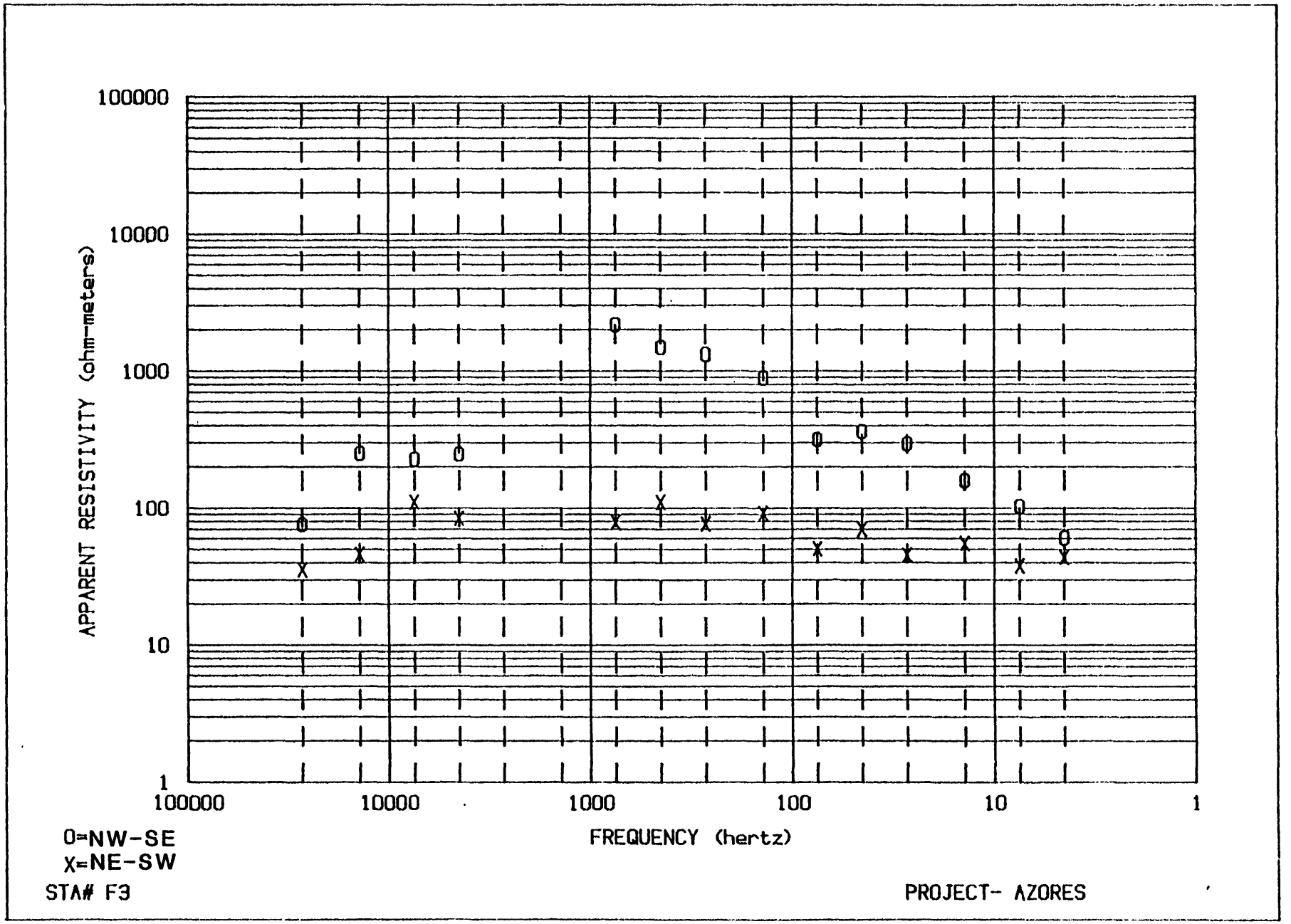
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F2
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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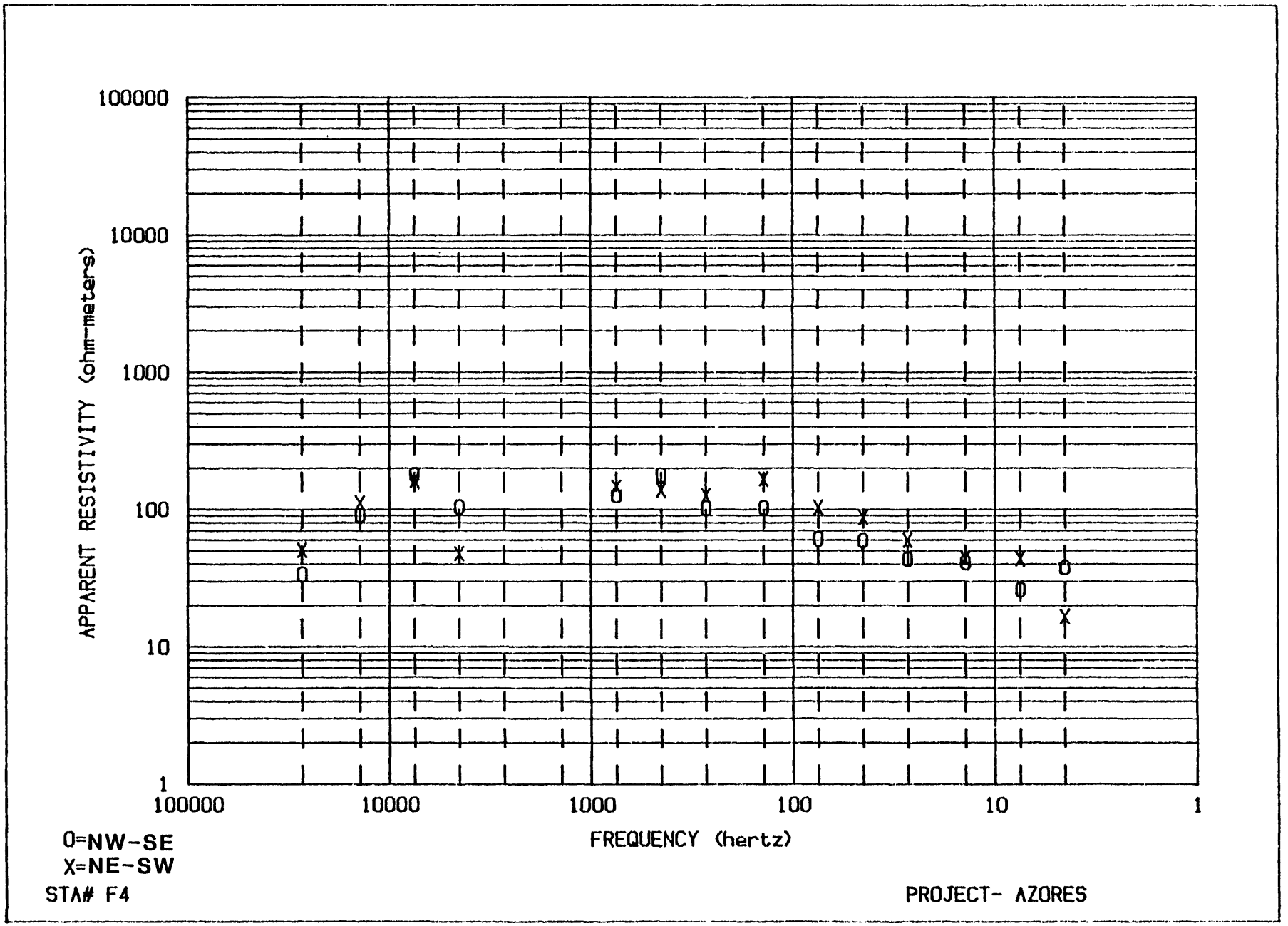
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F3
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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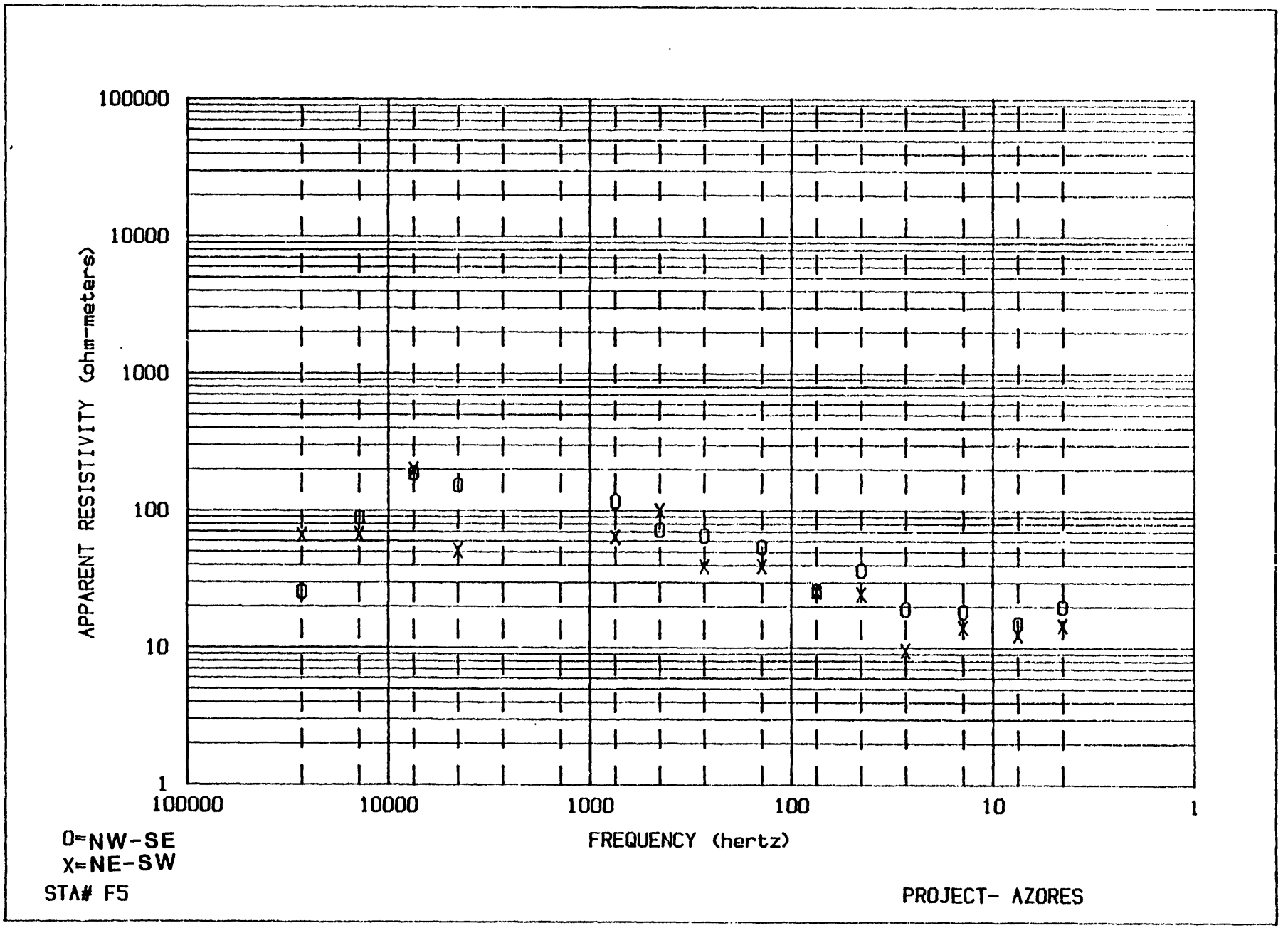
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F4
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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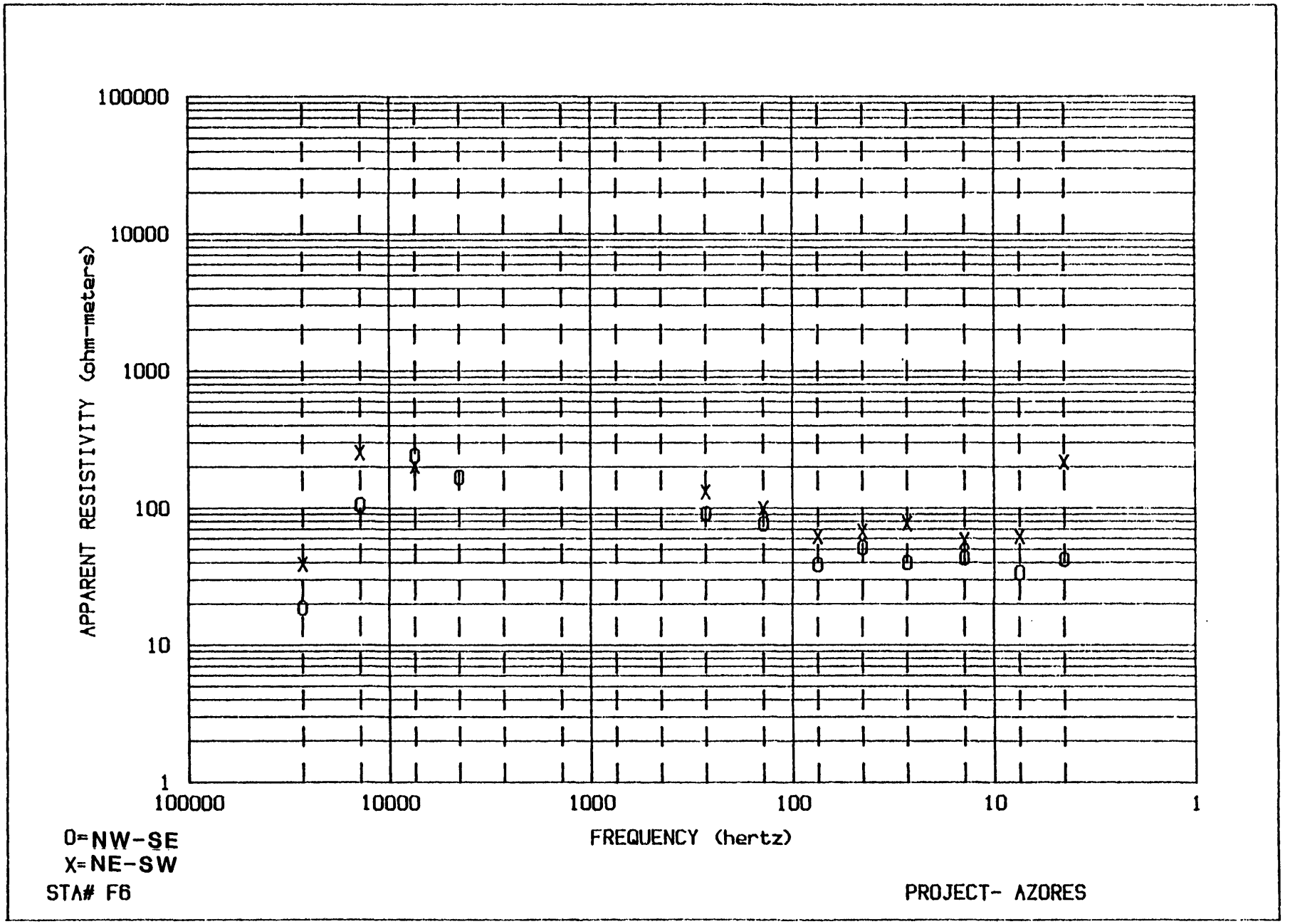
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F5
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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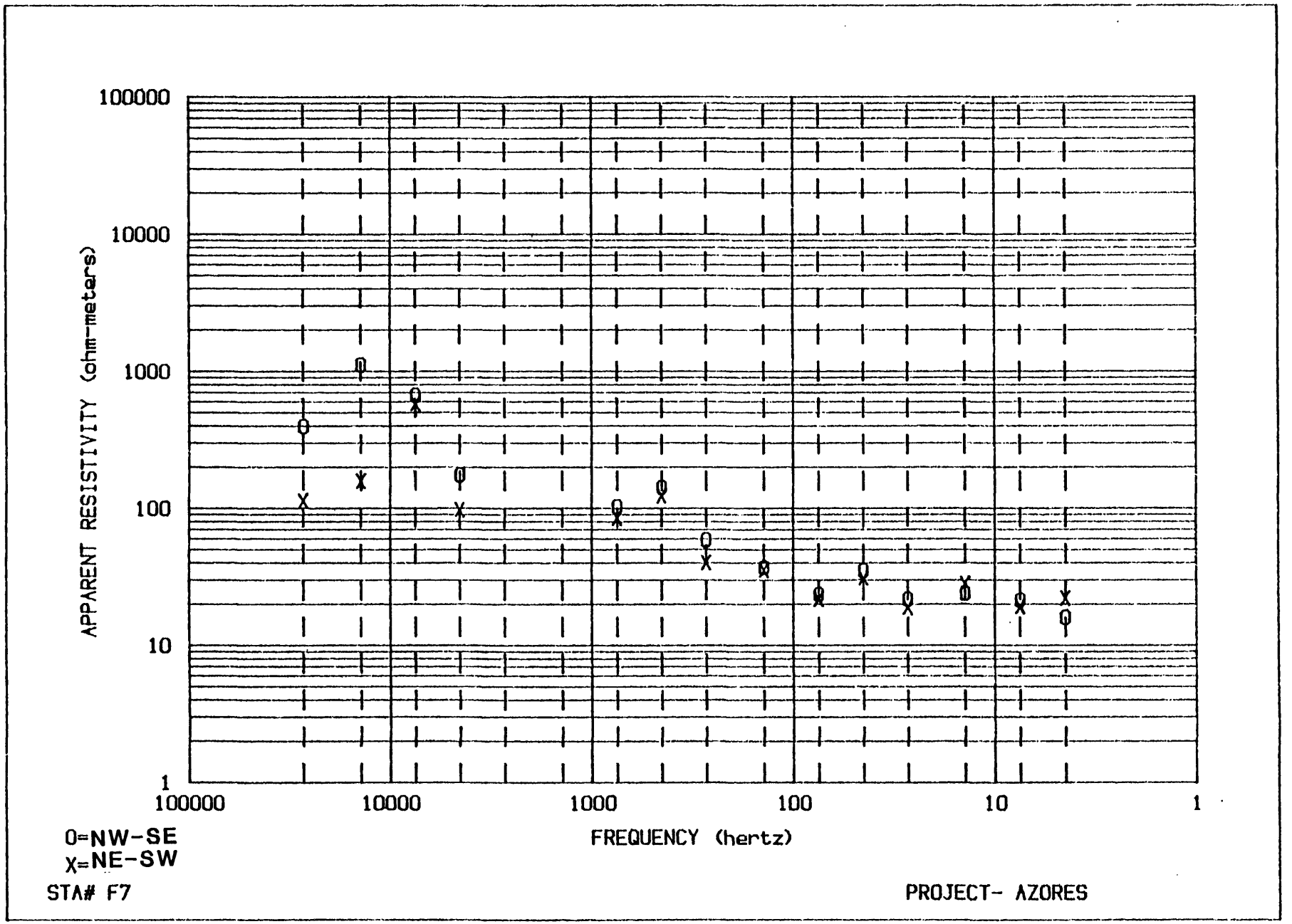
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F6
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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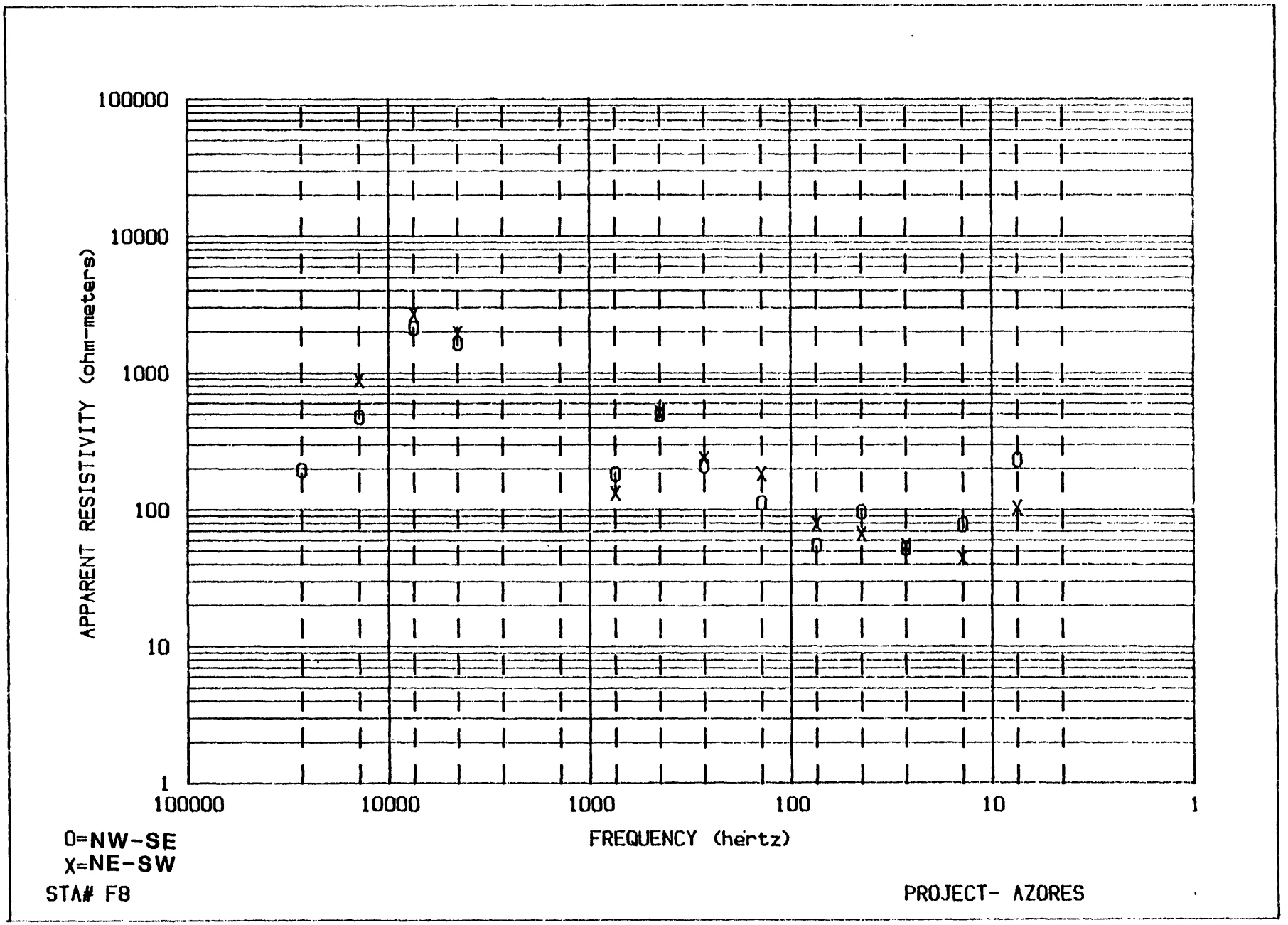
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F7
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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10
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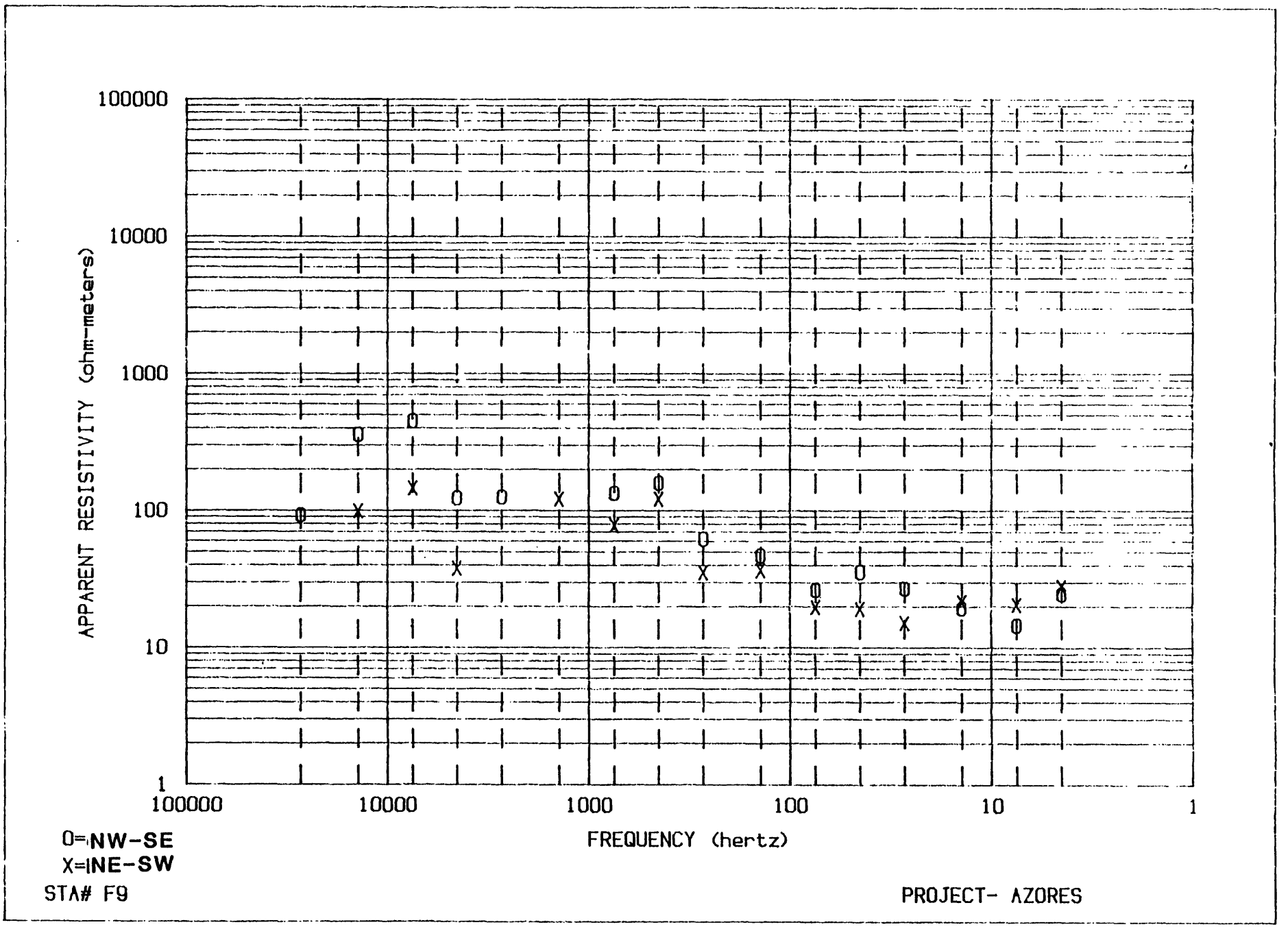
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F8
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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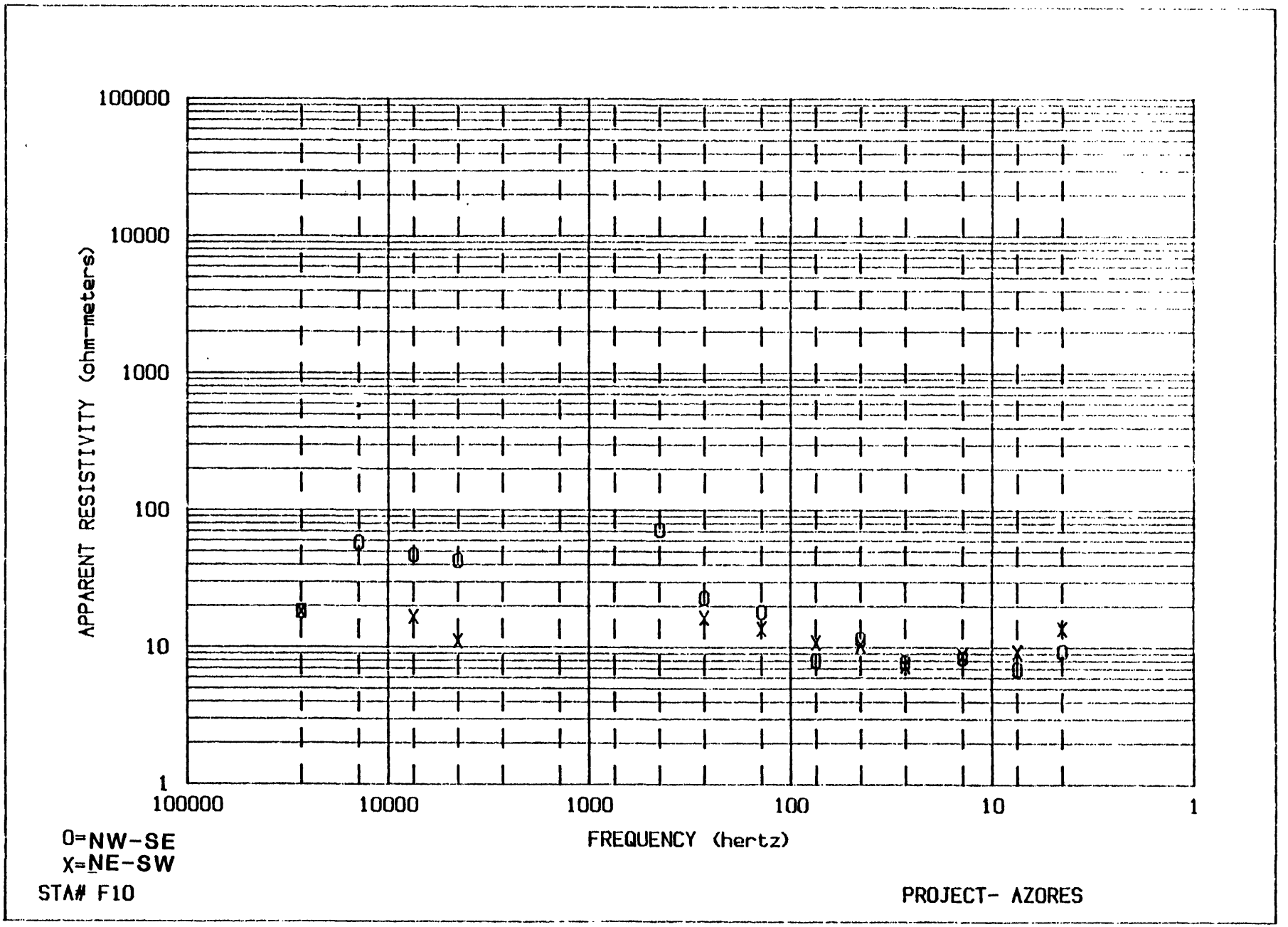
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F9
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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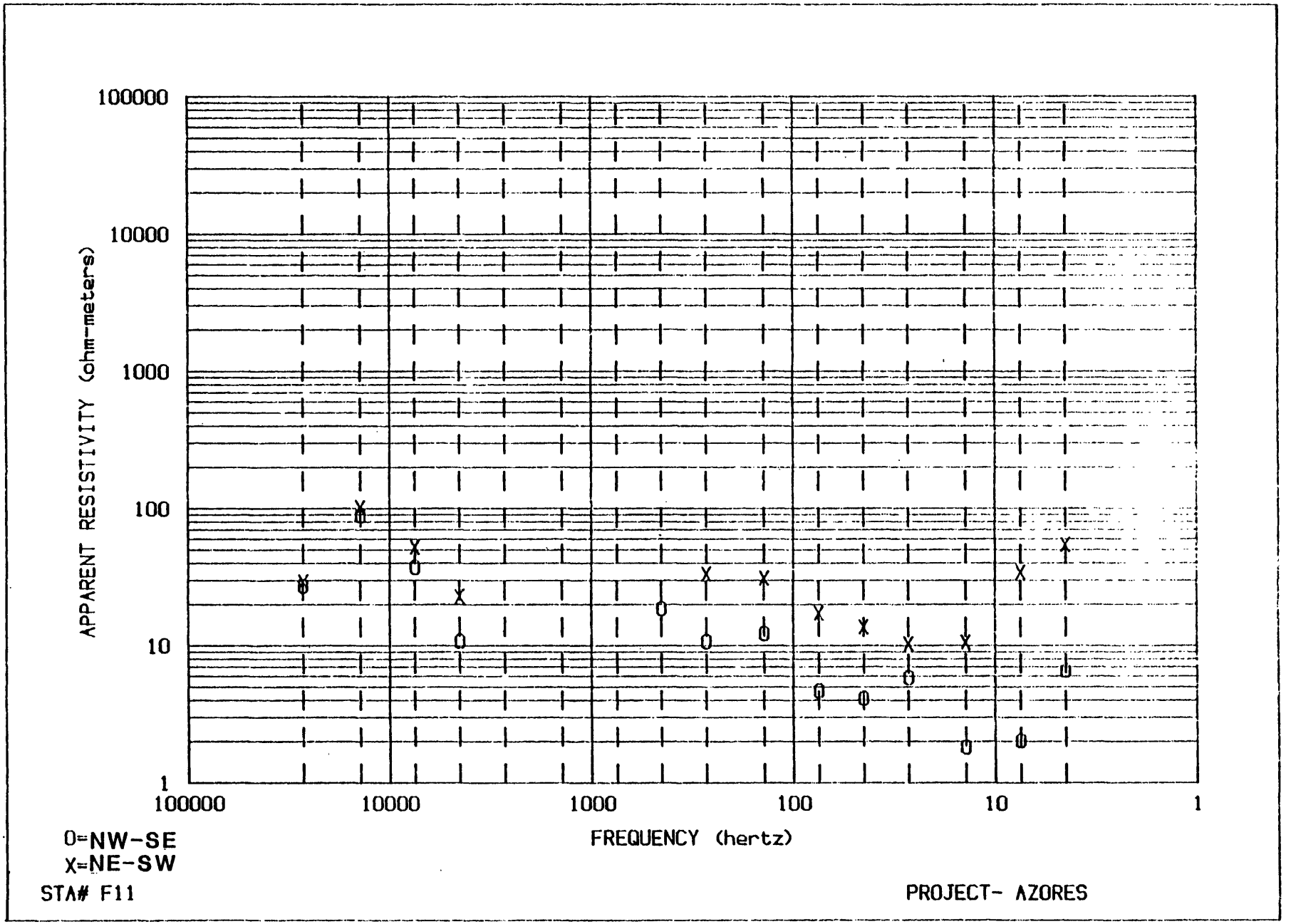
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F10
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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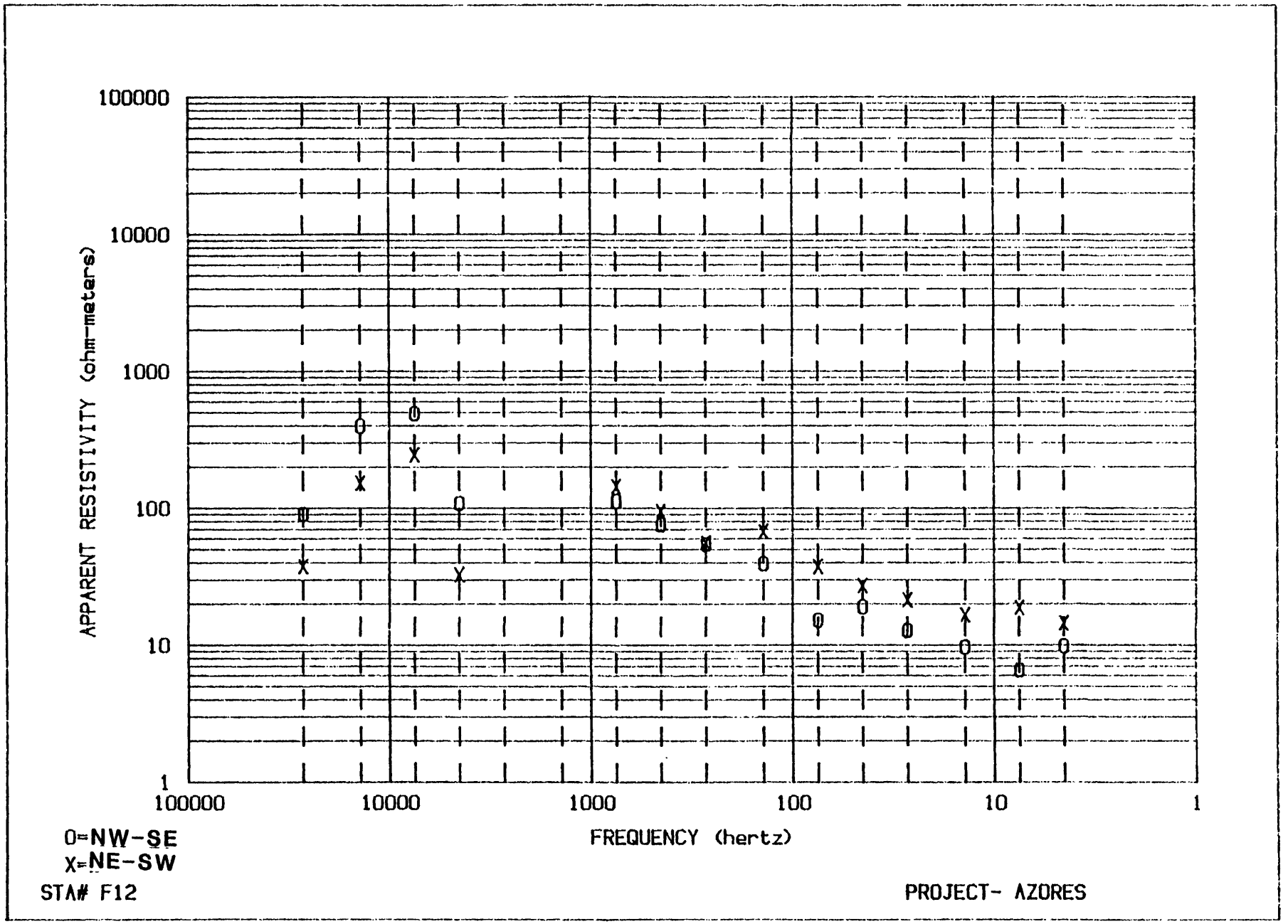
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F11
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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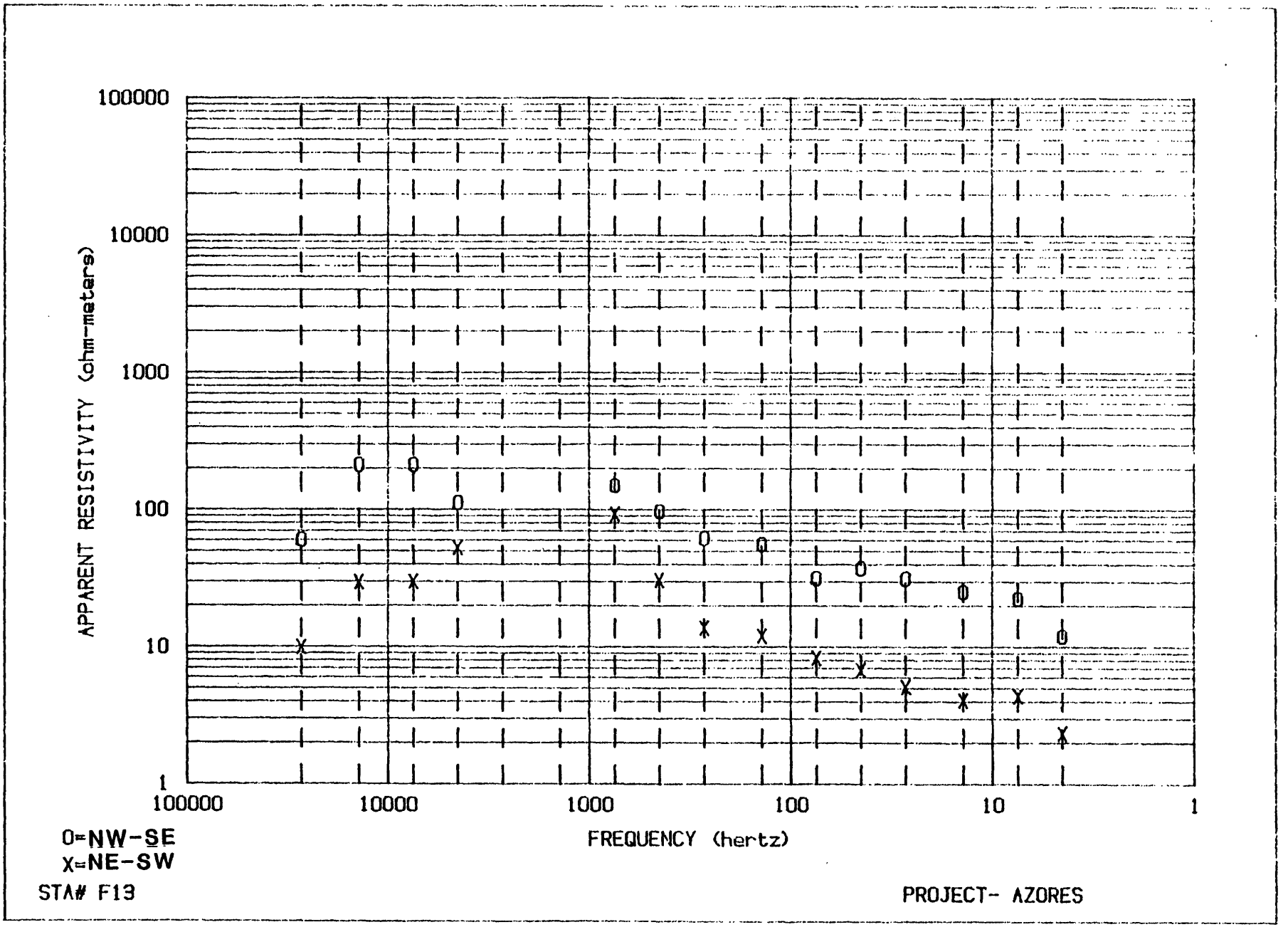
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F12
PROJECT- AZORES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APPARENT RESISTIVITY (ohm-meters)
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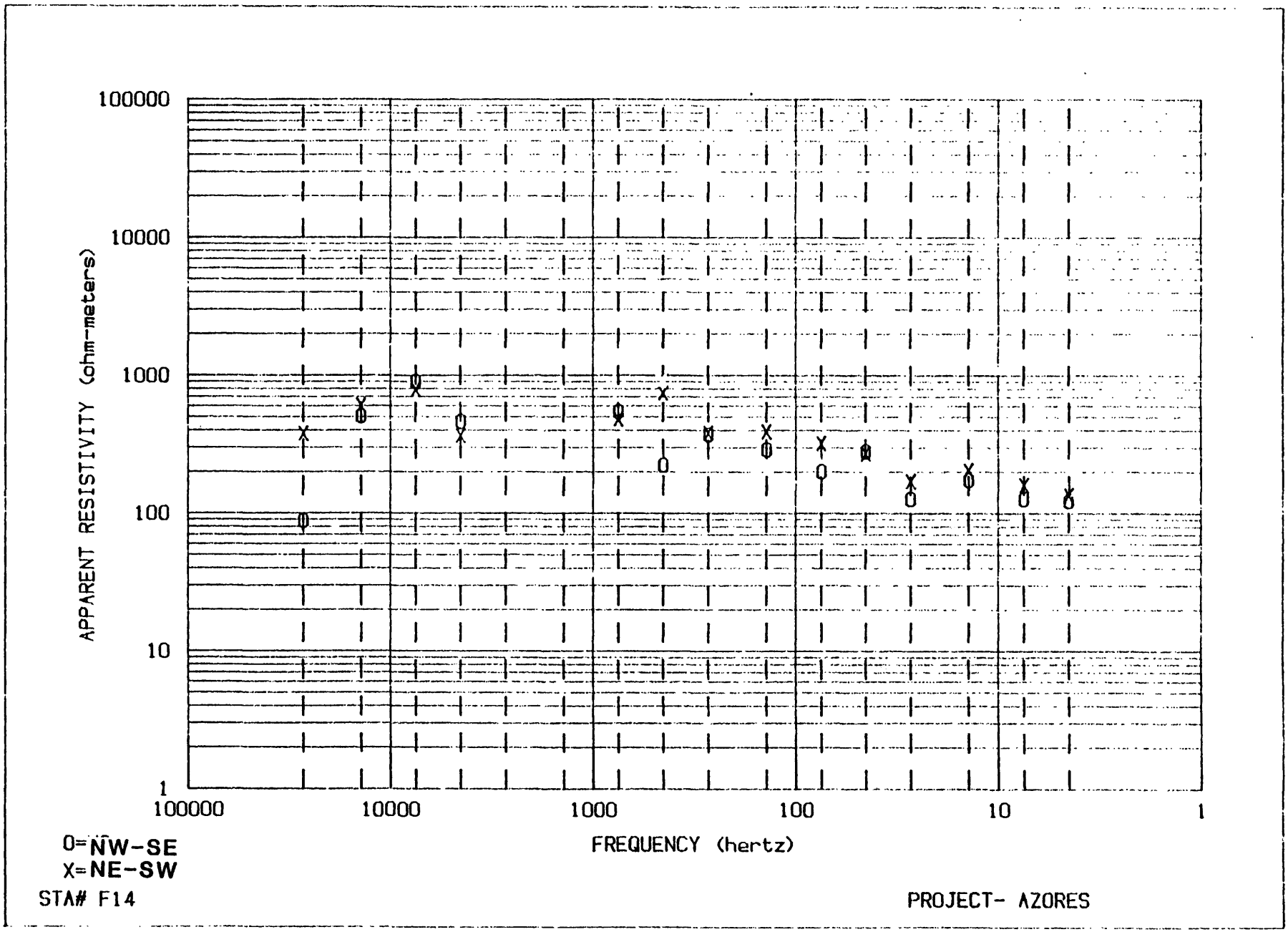
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F13
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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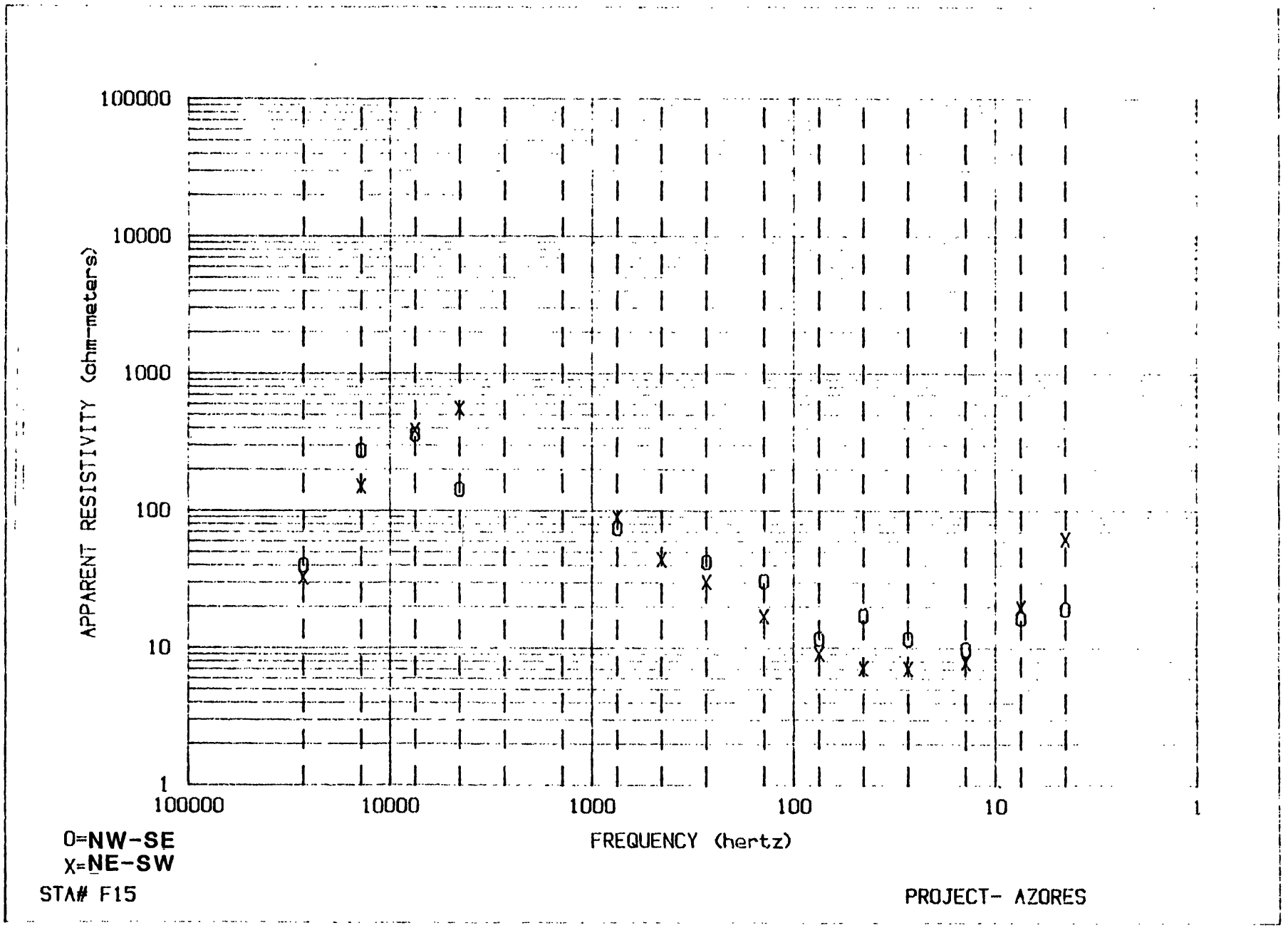
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F14
PROJECT- AZORES


100000
10000
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100
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1
APPARENT RESISTIVITY (ohm-meters)
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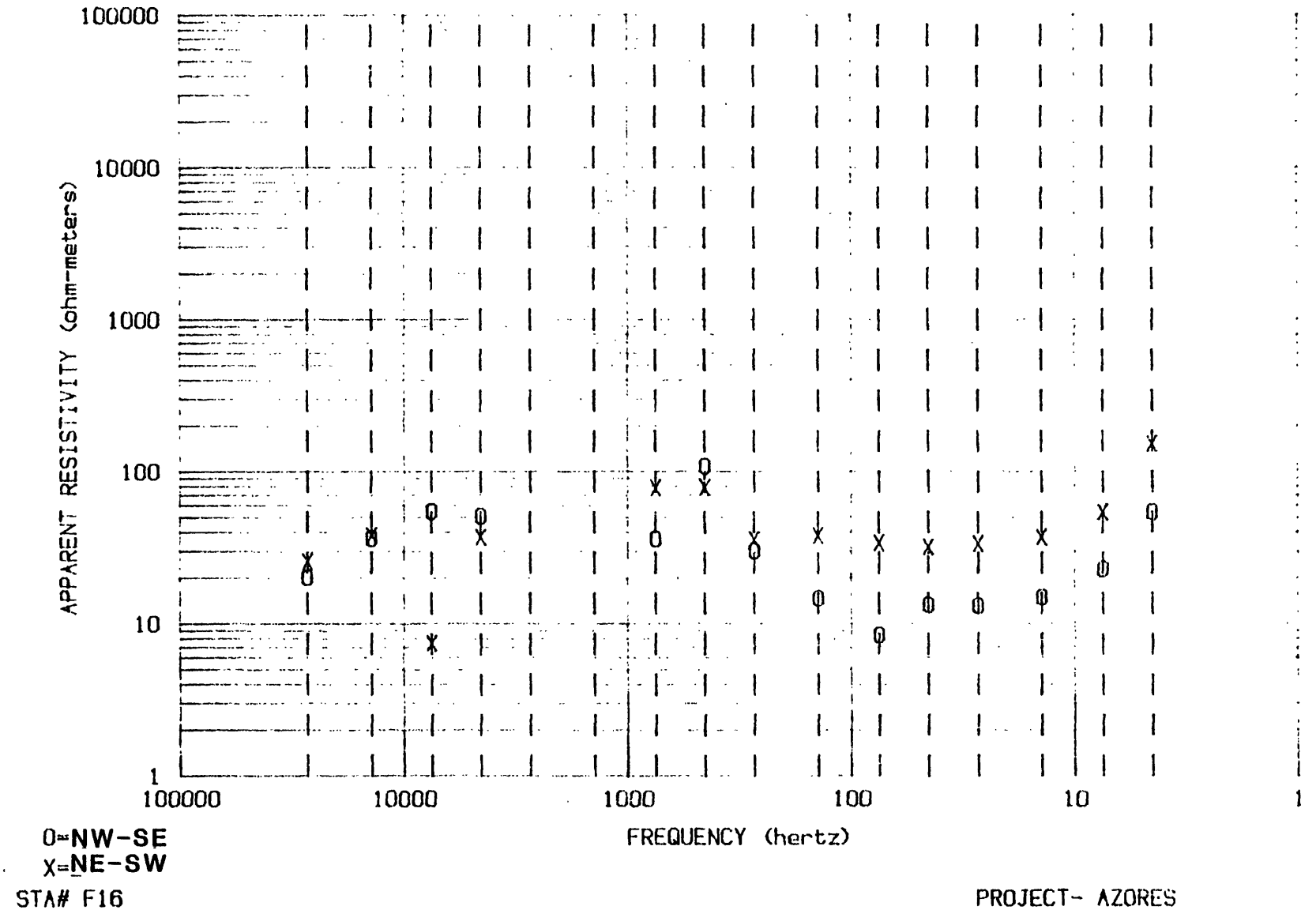
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F15
PROJECT- AZORES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10
1
APPARENT RESISTIVITY (ohm-meters)
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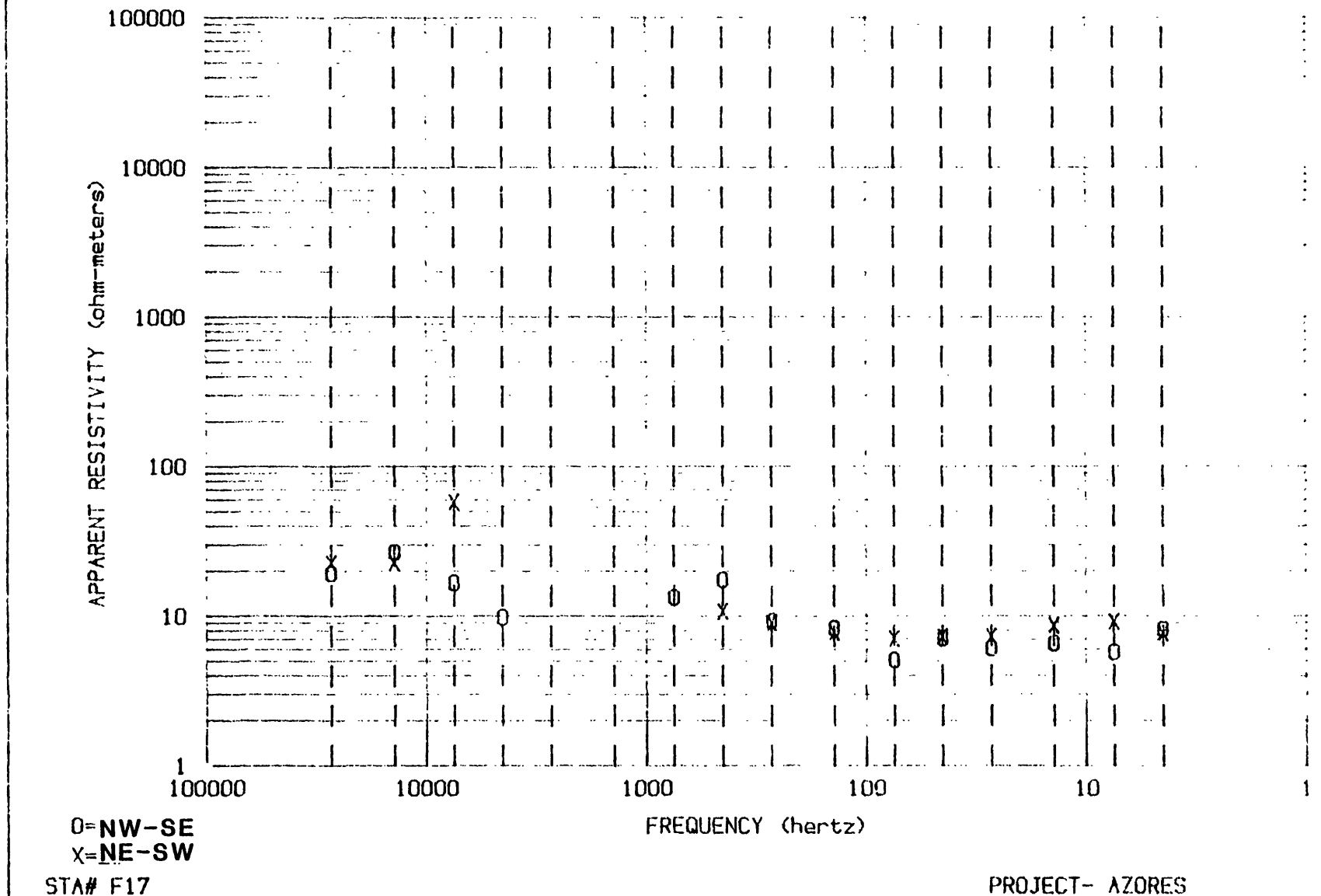
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F16
PROJECT- AZORES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1
APPARENT RESISTIVITY (ohm-meters)
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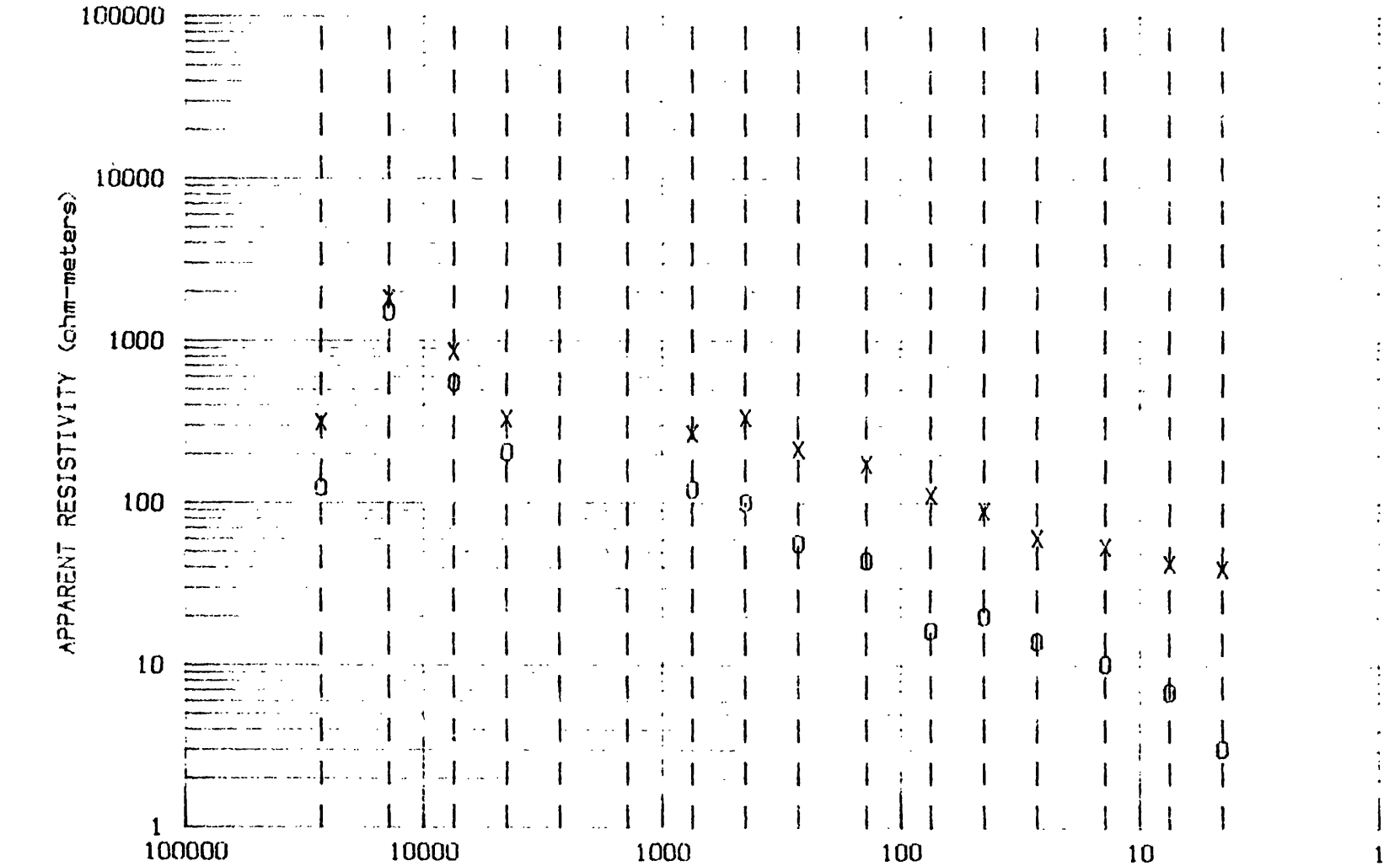
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F17
PROJECT- AZORES


100000
10000
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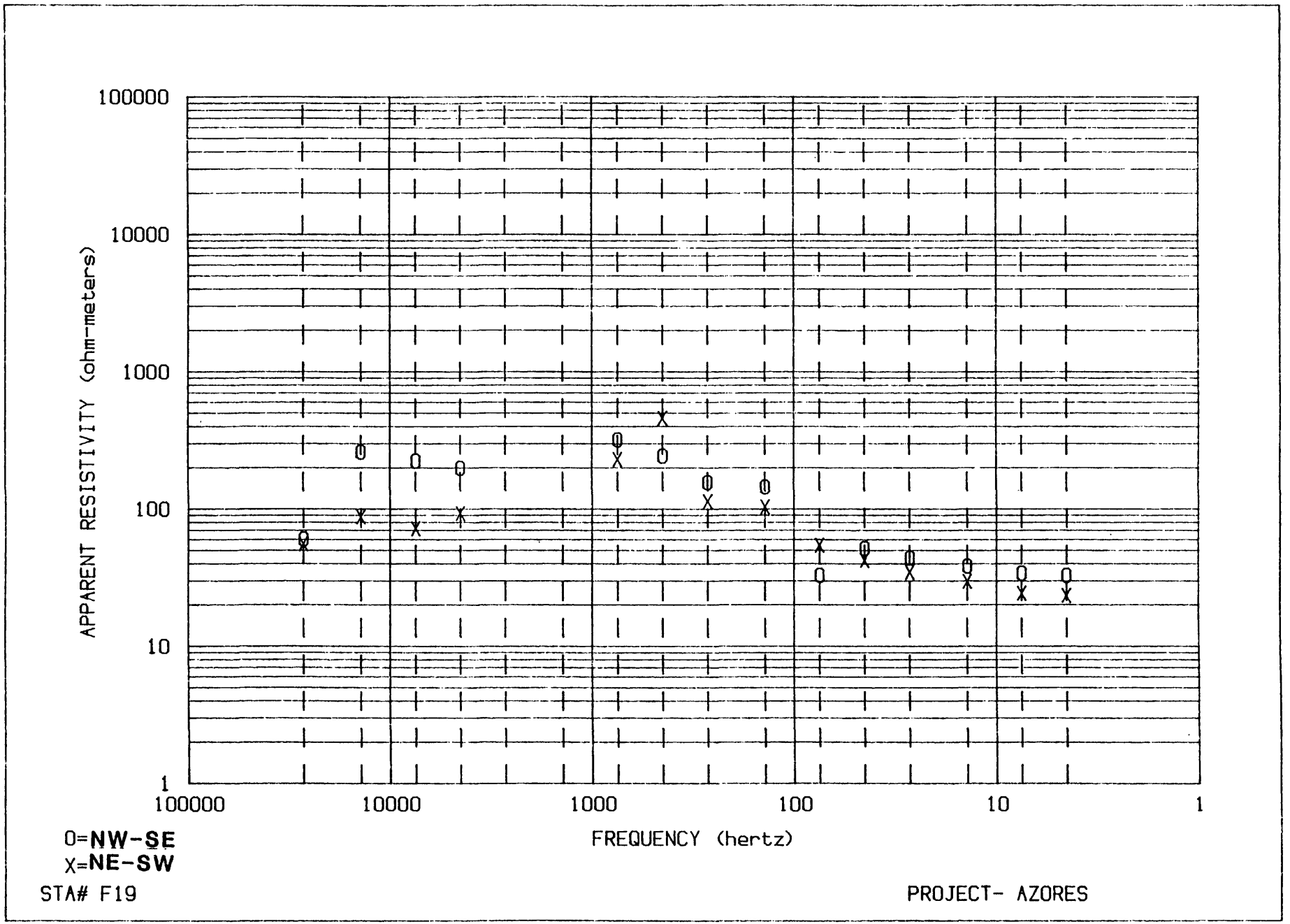
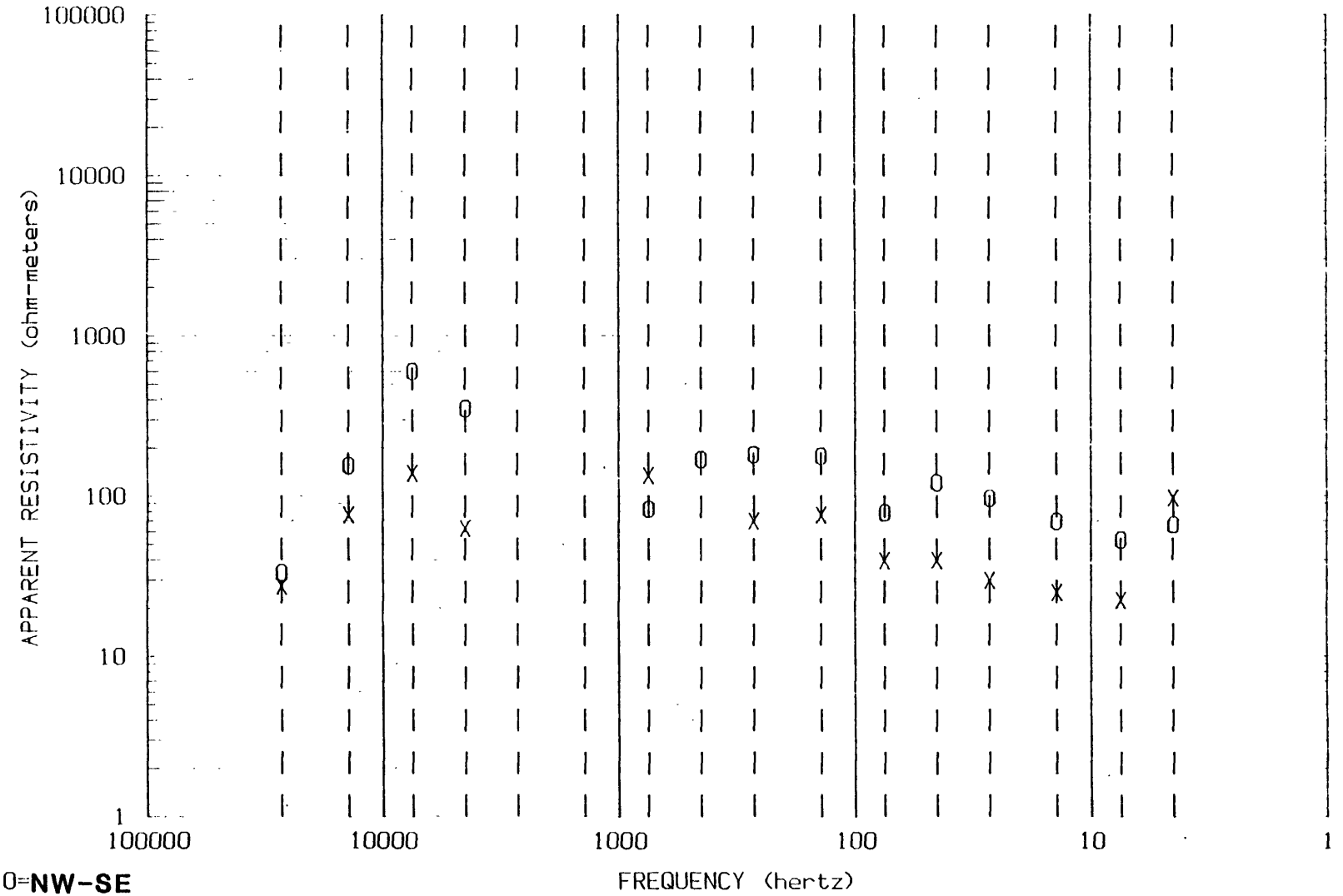
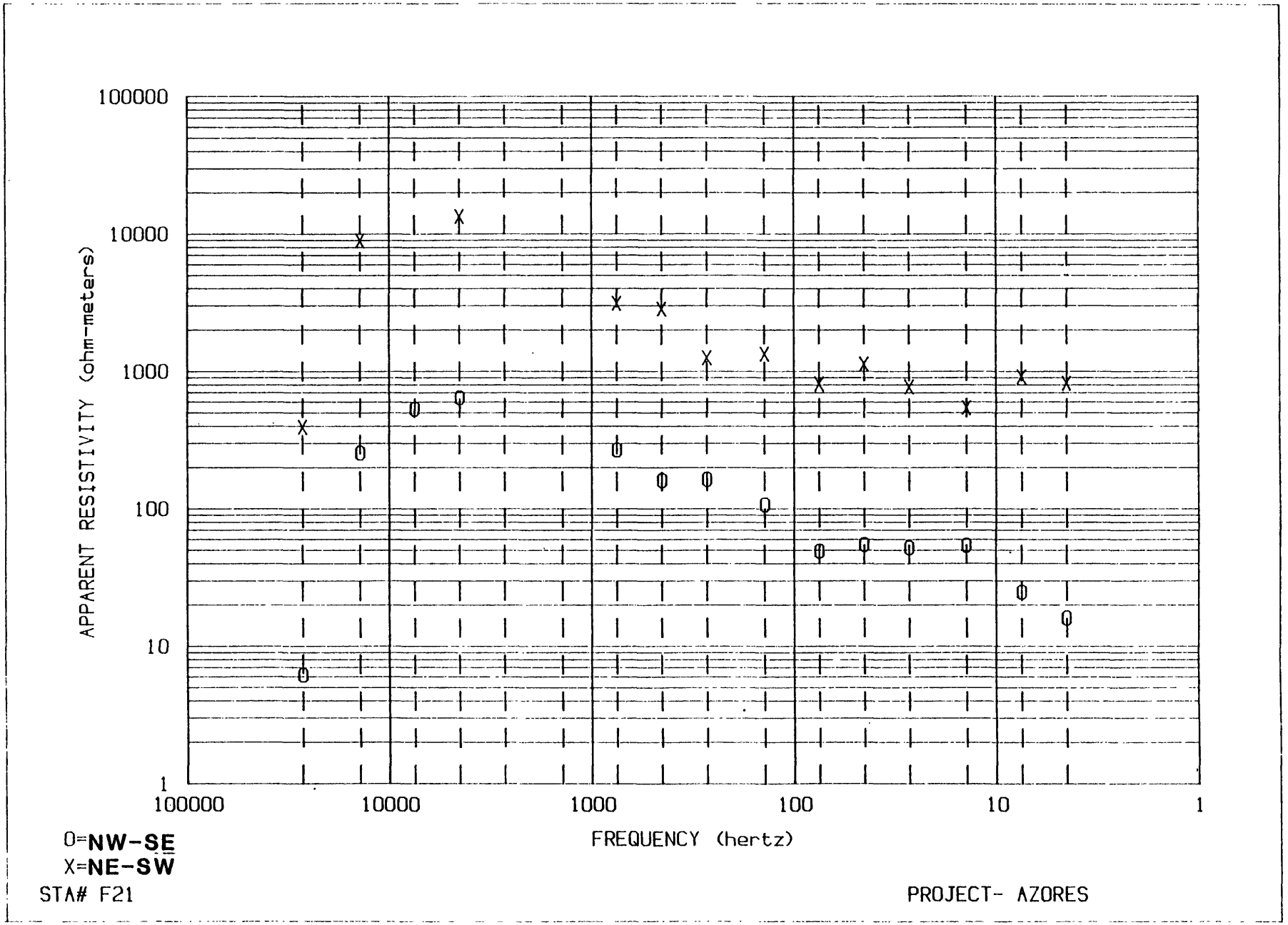
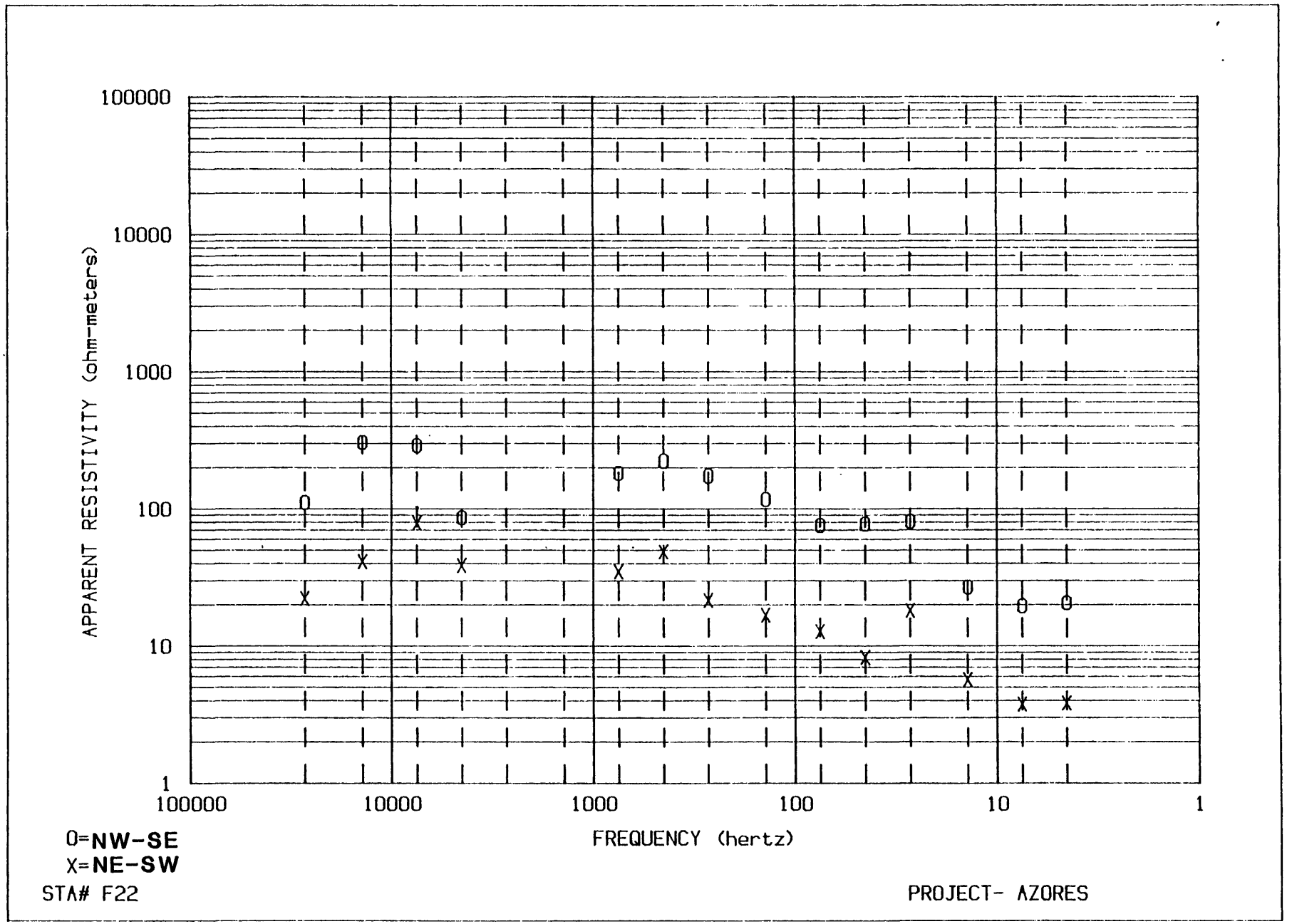
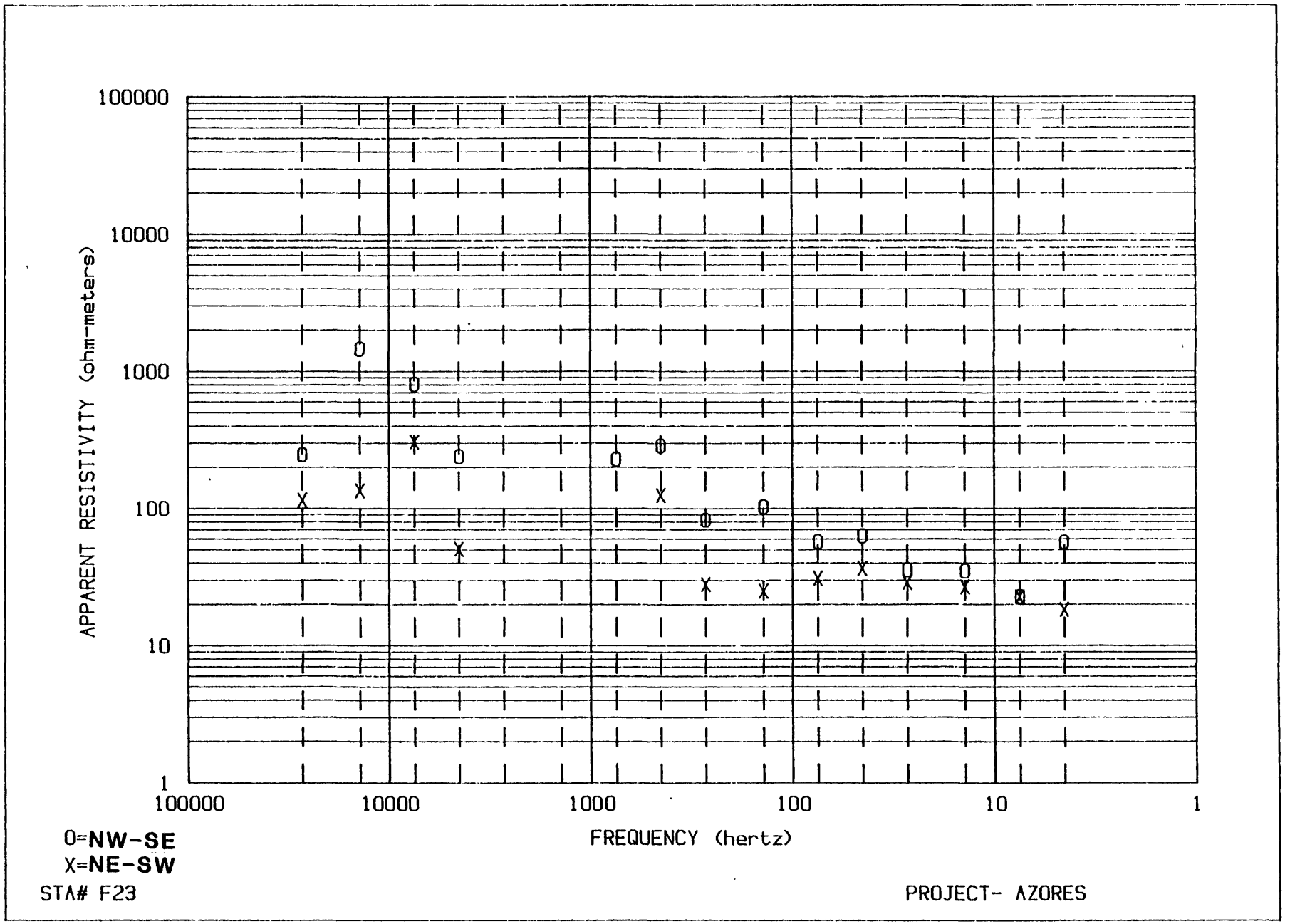
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F18
PROJECT-- AZORES

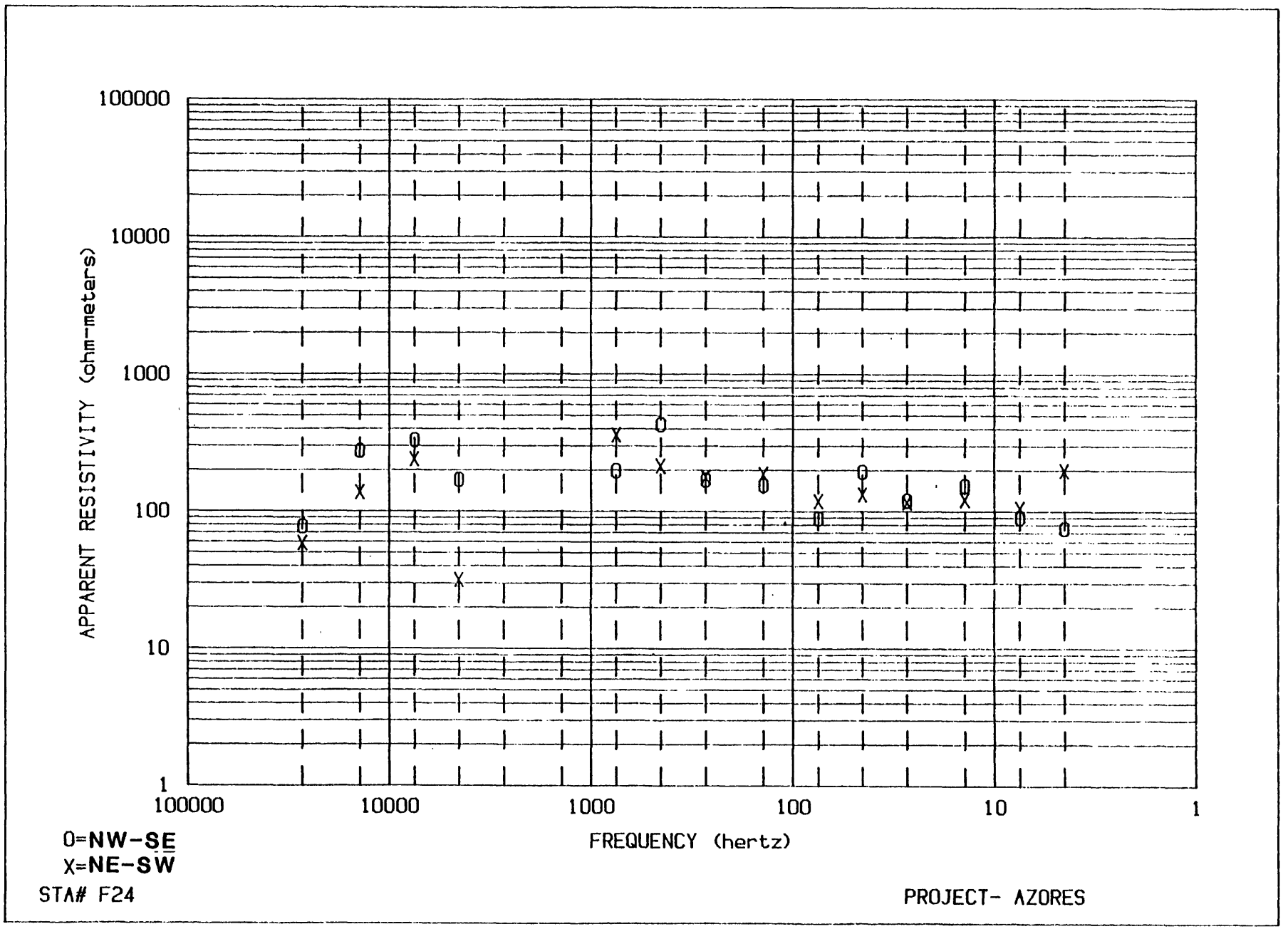

100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F19
PROJECT- AZORES

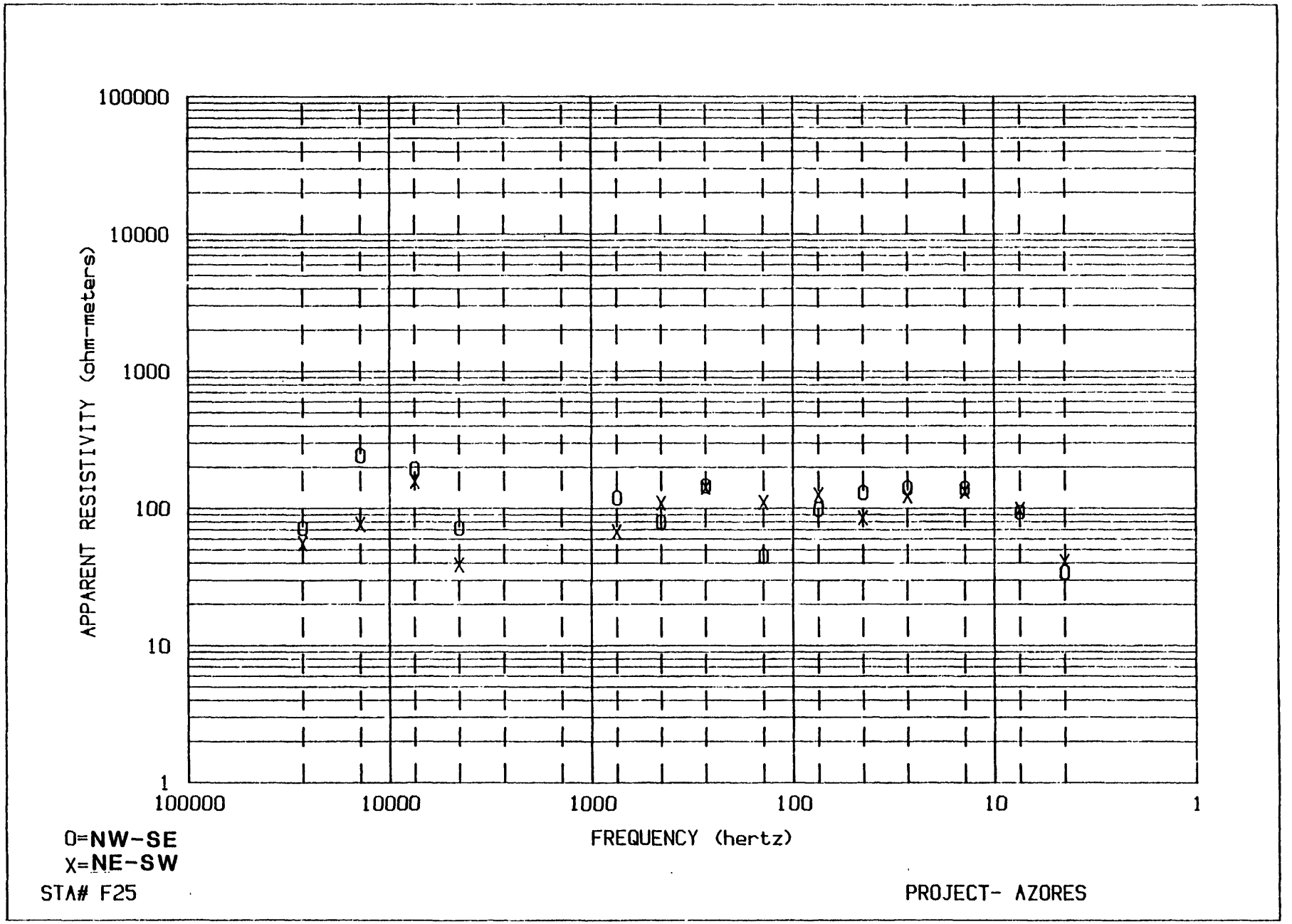

100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F20
PROJECT- AZORES

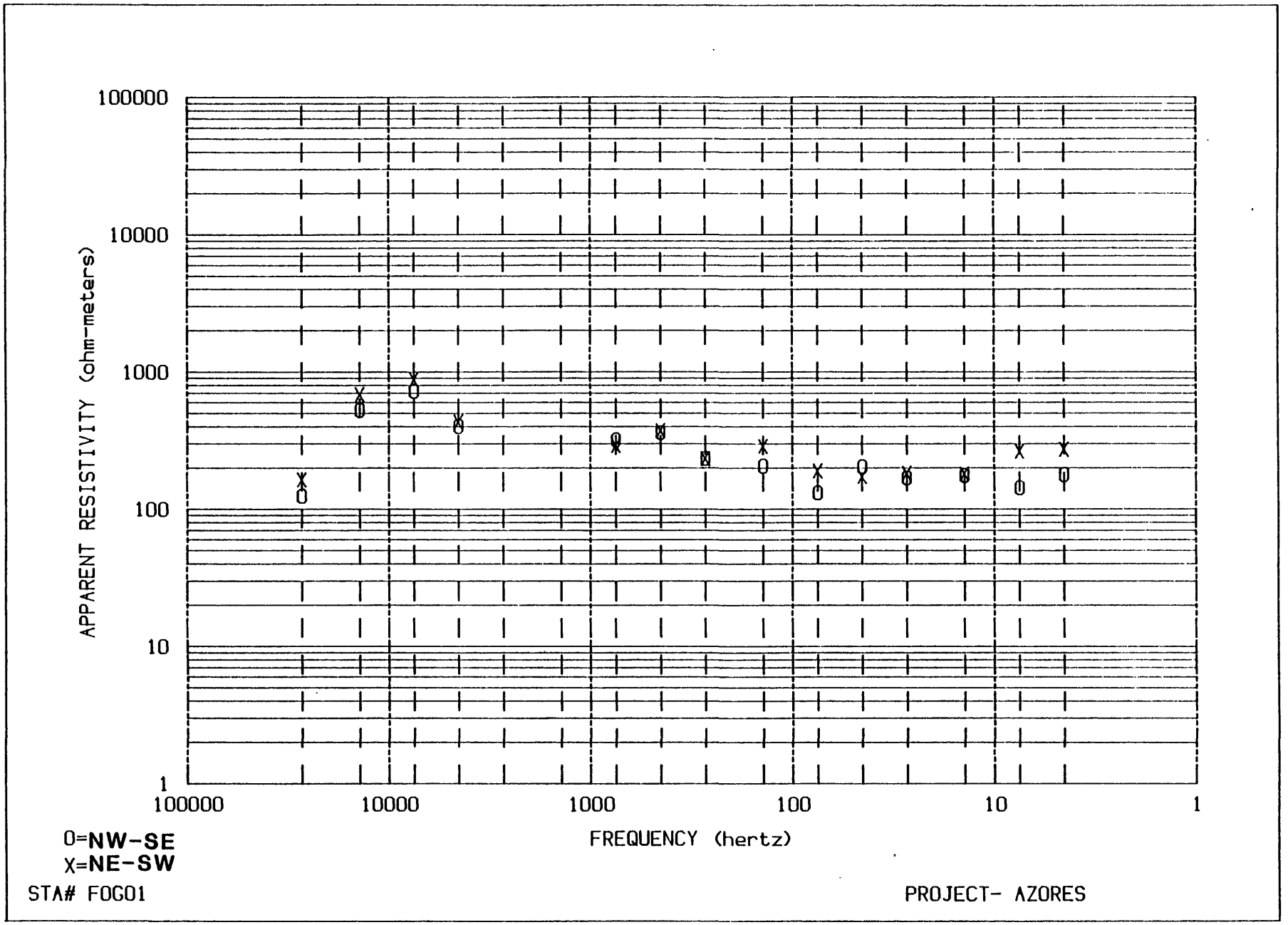

100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F21
PROJECT- AZORES


100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F22
PROJECT- AZORES


100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F23
PROJECT- AZORES


100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F24
PROJECT- AZORES


100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# F25
PROJECT- AZORES


100000
10000
1000
100
10
1
APPARENT RESISTIVITY (ohm-meters)
100000
10000
1000
100
10
1
FREQUENCY (hertz)
O=NW-SE
X=NE-SW
STA# FOGO1
PROJECT- AZORES