

NASA TECHNICAL MEMORANDUM

NASA TM X-73453

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(NASA-TM-X-73453) CONCENTRATIONS OF TRACE
ELEMENTS AND COMPOUNDS IN THE AIRBORNE
SUSPENDED PARTICULATE MATTER IN CLEVELAND,
OHIO, FROM AUGUST 1971 TO AUGUST 1972 AND
THEIR DEPENDENCE ON WIND DIRECTION:

N 16-28683
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G3/45 47711

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IN THE AIRBORNE SUSPENDED PARTICULATE MATTER IN
CLEVELAND, OHIO, FROM AUGUST 1971 TO AUGUST 1972
AND THEIR DEPENDENCE ON WIND DIRECTION:
COMPLETE DATA LISTING AND CONCENTRATION ROSES

by Robert B. King and Harold E. Neustadter
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June 1976





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1 Report No. NASA TM X-73453	2. Government Accession No.	3 Recipient's Catalog No.	
4 Title and Subtitle CONCENTRATIONS OF TRACE ELEMENTS AND COMPOUNDS IN THE AIRBORNE SUSPENDED PARTICULATE MATTER IN CLEVELAND, OHIO, FROM AUGUST 1971 TO AUGUST 1972 AND THEIR DEPENDENCE ON WIND DIRECTION: COMPLETE DATA LISTING AND CONCENTRATION ROSES		5. Report Date	
		6. Performing Organization Code	
7 Author(s) Robert B. King and Harold E. Neustadter		8. Performing Organization Report No E-8795	
		10. Work Unit No.	
9. Performing Organization Name and Address Lewis Research Center National Aeronautics and Space Administration Cleveland, Ohio 44135		11. Contract or Grant No.	
		13. Type of Report and Period Covered Technical Memorandum	
12. Sponsoring Agency Name and Address National Aeronautics and Space Administration Washington, D. C. 20546		14. Sponsoring Agency Code	
		15. Supplementary Notes	
16. Abstract <p>Concentrations of 75 chemical constituents in the airborne particulate matter were measured in Cleveland, Ohio during 1971 and 1972. Daily values, maxima, geometric means and their standard deviations covering a 1-year period (45 to 50 sampling days) at each of 16 sites are presented on microfiche for 60 elements, and for a lesser number of days for 10 polycyclic aromatic hydrocarbon compounds (PAH), the aliphatic hydrocarbon compounds (AH) as a group and carbon. In addition, concentration roses showing directional properties are presented for 39 elements, 10 PAH and the AH as a group. The elements (except carbon) are shown both in terms of concentration and percentage of the suspended particulate matter.</p>			
17. Key Words (Suggested by Author(s)) Air pollution; Particulates; Trace elements; Polycyclic aromatics; Cleveland, Ohio		18. Distribution Statement Unclassified - unlimited	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of Pages	22. Price*

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SUMMARY

Concentrations of 75 chemical constituents in the airborne particulate matter were measured in Cleveland, Ohio during 1971 and 1972. Daily values, maxima, geometric means and their standard deviations covering a 1-year period (45 to 50 sampling days) at each of 16 sites are presented on microfiche for 60 elements, and for a lesser number of days for 10 polycyclic aromatic hydrocarbon compounds (PAH), the aliphatic hydrocarbon compounds (AH) as a group and carbon. In addition, concentration roses showing directional properties are presented for 39 elements, 10 PAH and the AH as a group. The elements (except carbon) are shown both in terms of concentration and percentage of the suspended particulate matter.

In previous publications (refs. 1 and 2) a fairly extensive analysis of the data from a 1-year study of the trace element and compound composition of the total suspended particulate matter (TSP) in the ambient air in Cleveland, Ohio was presented. Included were means and maxima of the 75 constituents determined for the period August 10, 1971 - August 10, 1972. However, because of the large volume of data involved (~30 000 separate data values), the individual 24-hour values were not presented. Substantial interest has been indicated in these values by individuals wishing to examine the data according to their own specific needs and interests. We are consequently making this data available as a convenient package on microfiche.

To aid the reader we have included a map showing the measurement locations. Also presented here are complete sets of concentration roses for 39 elements, 10 polycyclic aromatic hydrocarbon compounds (PAH), and the aliphatic hydrocarbons (AH) as a group. Table I lists the specific constituents

for which data is presented. Finally, the results of a linear correlation study of the hydrocarbons and carbon are included.

The experimental and data analysis procedures have previously been reported (refs. 1 and 2). Some of the previously reported values (means, etc.) for the hydrocarbons and carbon may differ slightly from those reported here because of a programming error in the earlier work that affected the results when more than two determinations were averaged to obtain a single value. This has been corrected and, hopefully, there are no further errors. In addition to the daily values and their percentage of the TSP, we have included the geometric means and their standard deviations, and the maximum value for each monitoring site for each constituent. It is important to note that the tables are a direct computer printout. Consequently, the number of places is not significant. The uncertainties associated with the data have previously been discussed (refs. 1 and 2).

The concentration roses were generated using this same data. The daily 24-hour values were separated using the resultant vector wind direction obtained from the National Weather Service (NWS) (ref. 3), and the mean value for each of 16 directions was plotted logarithmically on the polar plot, the direction of the line being that from which the (resultant) wind blew. Two sets of plots are presented for the elements (except carbon) - one (unmarked) as the concentrations in ng/m^3 and the other (marked "percent") as the percentage of the TSP. The plots for the hydrocarbons and carbon are in terms of ng/m^3 only. The values for the inner and outer circles and for the maximum are given in scientific notation. For example, for sodium (percent) the maximum value is 0.641E01, which means 6.41 percent. The elements are sequentially arranged according to their atomic number. Accompanying each plot is a chart showing how many values were averaged for each direction at each site. A minus one indicates that there were one or more "less than" values (values below the detection limit of the method). When a "less than" value is met, a value two-thirds of the smallest value for that site is entered for the average computation. Unfortunately, when a minus one is entered into the chart, the number of entries for that direction is not presented.

Since the wind did not blow exclusively from one direction over the 24-hour sampling period, the mean concentration for each direction was weighted for directional stability. The directional stability factor for the wind (totally stable $\equiv 1$) is defined as the ratio of the vector wind velocity v_i to the scalar wind speed s_i for the i th day. The mean stability-weighted mean concentration of each constituent \bar{C} for each of 16 vector wind directions (0° , 22.5° , 45° , 67.5° , . . . , etc.) for which data was available was obtained from the equation

$$\bar{C} = \frac{\sum_i \frac{v_i}{s_i} C_i}{\sum_i \frac{v_i}{s_i}}$$

where C_i is the observed concentration of that constituent on the i th day. The summations were made over the days for which data was available. Values of v_i and s_i are available from the NWS tabulations (ref. 3). In the polar plots each wind direction line bisects a sector covering $22\frac{1}{2}^\circ$ (e. g., at 90° (east) the sector coverage is from $78\frac{3}{4}^\circ$ to $101\frac{1}{4}^\circ$).

Wind data is available from two locations, one at Cleveland Hopkins Airport on the far southwest side and one at Burke Lakefront Airport on Lake Erie near downtown Cleveland. Wind data from one or the other was utilized for a site according to its location relative to these weather stations. Sites 1, 4, 6, 7, 10, 15, 17, 20, and 21 used Burke wind data while sites 2, 5, 8, 9, 12, 13, and 14 used Hopkins wind data. Obviously the farther the site is from the weather station, the less confidence one places in the directional results. This, in addition to the fact that the samples were collected over a 24-hour period during which the wind blew from several directions, cautions one to use the results with discretion. However, in our opinion they are an excellent indicator of emitting sources in the general direction shown.

Because a number of the hydrocarbons are considered carcinogenic to man and their individual analysis is difficult, we analyzed the hydrocarbon and carbon data to see what correlations exist to determine if the analysis of one or two might make possible the reliable estimation of a number of others. In general, we found no correlations that we felt were significant. The linear correlation coefficient for each pair (hydrocarbons and carbon) is listed in Table II.

REFERENCES

1. King, Robert B.; et al.: Extensive 1-Year Survey of Trace Elements and Compounds in the Airborne Suspended Particulate Matter in Cleveland, Ohio. NASA TN D-8110, 1976.
2. Neustadter, H. E.; King, R. B.; and Fordyce, J. S.: Elemental Composition of Suspended Particulates as Functions of Space and Time in Cleveland, Ohio. NASA TM X-71688, 1975.

3. Climatological Data for Cleveland, Ohio, 1971 and 1972. National Weather Service, National Oceanic and Atmospheric Agency, 1971-1972.

TABLE I. - CONSTITUENTS FOR WHICH DATA IS PRESENTED

Elements	Hydrocarbons
Carbon	3,4-Benzopyrene (BaP)
Sodium	1,2-Benzopyrene (BeP)
Aluminum	Pyrene
Silicon	1,2-Benzofluorene
Chlorine	Benz-m, n, o-fluoranthene
Potassium	Benzacridine
Scandium	Benzanthracene
Titanium	3,4-Benzfluoranthene
Vanadium	Perylene
Chromium	1,12-Benzoperylene
Manganese	Aliphatic hydrocarbons as a group
Iron	
Cobalt	
Copper	
Zinc	
Gallium	
Arsenic	
Selenium	
Bromine	
Rubidium	
Silver	
Cadmium	
Indium	
Tin	
Antimony	
Cesium	
Lanthanum	
Cerium	
Samarium	
Europium	
Terbium	
Dysprosium	
Ytterbium	
Lutetium	
Hafnium	
Mercury	
Lead	
Bismuth	
Thorium	

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TABLE II. - HYDROCARBON AND CARBON CORRELATION COEFFICIENTS FOR THE RATIOS LISTED

Symbol	Compound or element
A	Pyrene
B	1, 2-Benzofluorene
C	Benzo-m, n, o-fluoranthene
D	Benzacridine
E	Benzanthracene
F	3, 4-Benzofluoranthene
G	1, 2-Benzopyrene
H	3, 4-Benzopyrene
I	Perylene
J	1, 12-Benzoperylene
K	Aliphatics (total)
L	Carbon (before)
M	Carbon (after)

Ratio	Sites															
	1	3	4	5	6	7	8	9	10	12	13	14	15	17	20	21
B:A	0.818	0.771	0.456	0.582	0.374	0.453	0.194	0.693	0.659	0.728	0.476	0.133	0.325	0.676	0.766	0.773
C:A	.887	.123	.740	-.088	.334	.147	-.056	.596	.267	-.032	.835	.225	.116	.342	.716	.200
C:B	.573	-.142	.199	.111	.383	.195	.010	.385	.172	.160	.467	.048	-.216	.212	.441	.268
D:A	.996	-.093	.343	.685	.968	.461	.292	.333	.383	.883	.947	.735	.540	.885	.994	.308
D:B	.948	.034	-.621	.016	.989	.758	.640	.258	.283	.955	.697	.728	.926	.881	.693	.923
D:C	.996	.003	.626	-.149	.724	.111	.252	.539	-.061	.432	.795	.524	.665	.967	.992	.613
E:A	.367	.143	-.007	.269	.406	.013	-.111	.586	.446	.023	.069	-.057	.091	.226	.026	.544
E:B	.685	.030	.190	.562	.924	.644	-.005	.601	.281	.646	.180	.599	.360	.423	-.059	.739
E:C	.126	.294	-.064	.647	.489	.105	-.065	.877	.174	.184	.224	.514	-.071	-.025	-.107	.302
E:D	.506	.220	.089	.651	.834	.795	.539	.503	.067	-.217	.885	.769	.702	.927	.969	.873
F:A	.914	.337	-.039	.489	.429	.658	.246	.209	.612	.399	.015	.190	.112	.701	.807	.605
F:B	.720	.072	.463	.702	.139	.763	.590	.712	.390	.526	.118	-.004	.162	.504	.585	.644
F:C	.760	.613	-.087	.048	.491	.201	-.069	.200	.136	.242	.166	.244	-.088	.640	.832	.368
F:D	.943	.075	.920	.590	-.017	.638	.575	-.136	.067	.442	.716	.965	.601	.981	.998	.917
F:E	.467	.241	.477	.832	.377	.285	-.018	.453	.026	.266	.982	.467	.094	.057	.044	.597
G:A	.939	.511	.458	.475	.612	.540	.251	.198	.774	.515	.232	.031	.612	.460	.767	.590
G:B	.690	.252	.543	.712	.122	.525	.576	.725	.417	.522	.493	-.081	.304	.363	.563	.518
G:C	.801	.256	.524	.008	-.024	.033	-.062	.254	.289	.004	.290	.282	-.184	.515	.818	.301
G:D	.973	-.142	.717	.731	.326	.334	.464	-.302	.830	.384	.713	.753	.871	.721	.100	.607
G:E	.397	.069	.549	.842	.136	.087	.093	.492	.039	.176	.079	.433	.292	.043	-.038	.512
G:F	.991	.578	.760	.967	.523	.621	.884	.891	.564	.675	.708	.908	.311	.749	.989	.928
H:A	.958	.285	.726	.422	.182	.125	.100	.189	.738	.658	.230	.060	.640	.407	.880	.597
H:B	.658	.063	.267	.476	-.077	.247	.260	.736	.415	.710	.624	-.056	.306	.292	.573	.565
H:C	.906	.195	.976	-.087	-.095	-.001	-.116	.147	.270	.100	.203	.322	-.165	.477	.819	.314
H:D	.980	-.041	.238	.747	-.300	.653	.267	-.257	.388	.528	.780	.793	.999	.735	.991	.707
H:E	.299	.138	-.103	.230	.128	.201	.465	.340	.081	.169	.221	.525	.095	.032	-.019	.512
H:F	.952	.745	-.055	.686	.273	.343	.790	.840	.748	.732	.248	.905	.259	.751	.993	.931
H:G	.973	.747	.537	.696	.668	.325	.872	.949	.856	.818	.847	.929	.824	.858	.987	.987
I:A	.929	.270	.663	.396	.698	.399	.488	.341	.539	.444	.233	-.060	.628	.085	.852	.712
I:B	.676	-.030	.253	.610	.243	.436	.238	.763	.323	.632	.567	-.173	.322	.204	.658	.588

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TABLE II. - Concluded.

Ratio	Sites															
	1	3	4	5	6	7	8	9	10	12	13	14	15	17	20	21
I:C	0.963	0.928	0.960	0.027	0.074	-.025	-.154	0.429	0.161	0.023	0.198	0.257	-.250	0.094	0.503	0.196
I:D	.976	-.137	.463	.782	.905	.188	.384	.404	.880	.375	.187	.735	.893	.083	.999	.572
I:E	.323	.427	.103	.952	.234	.104	-.162	.647	.021	.374	.563	.489	.221	.378	-.015	.525
I:F	.882	.769	.069	.930	.353	.555	.808	.868	.605	.539	.578	.872	.476	.285	.605	.918
I:G	.902	.395	.589	.948	.871	.433	.930	.931	.803	.865	.955	.923	.931	.585	.599	.975
I:H	.971	.398	.963	.451	.887	.328	.882	.852	.714	.752	.900	.887	.918	.475	.851	.975
J:A	.909	.332	.056	.128	.322	.137	-.002	.131	.229	.404	-.244	-.260	.450	.397	.731	.368
J:B	.560	.125	.222	.452	-.015	.494	.054	.668	.190	.530	.062	-.053	.080	.340	.378	.431
J:C	.968	.039	-.125	.150	.589	.266	-.052	.080	.098	.460	-.022	.080	-.195	.453	.782	.391
J:D	.992	-.137	.921	-.481	-.621	.144	.238	-.115	.495	.740	.891	-.158	.184	.897	.100	.973
J:E	.092	-.046	.259	.308	.592	.672	-.055	.277	.033	.164	-.185	-.020	.163	.191	.029	.475
J:F	.819	.280	.563	.421	.831	.401	.523	.835	.421	.485	-.180	.395	-.007	.570	.759	.911
J:G	.886	.862	.379	.471	.514	.216	.391	.838	.274	.336	-.010	.296	.727	.419	.781	.810
J:H	.945	.547	-.034	.456	.337	.365	.384	.853	.334	.305	.496	.276	.808	.582	.735	.825
J:I	.947	.108	-.080	.395	.364	.419	.482	.764	.410	.378	-.009	.221	.759	.202	.901	.740
K:A	.875	.037	.224	.690	.694	-.238	-.071	.148	.260	.467	.708	-.140	.386	.465	.445	.873
K:B	.699	.141	-.523	.353	-.094	.457	.188	-.218	-.296	.599	.898	-.087	-.254	.384	-.153	.688
K:C	.639	-.150	.461	-.235	-.084	.551	-.036	.276	.434	.430	.408	.315	-.049	.325	.213	.398
K:D	.653	-.415	.100	.524	.647	.394	-.097	.705	-.332	-.867	.275	.659	-----	-.269	.100	-.100
K:E	.799	-.120	.262	.251	-.017	.623	.084	.287	-.301	.456	.937	.177	.157	.262	-.001	.668
K:F	.501	-.280	.287	.691	.442	.429	.233	-.324	.249	.599	.692	.847	.406	.365	.219	.710
K:G	.566	.013	.219	.707	.668	-.028	.324	-.394	.650	.292	.935	.761	.419	.271	.265	.637
K:H	.486	.001	.320	.736	.319	.291	.330	-.412	.536	.544	.959	.848	.220	-.017	.067	.257
K:I	.566	.012	.446	.776	.758	.153	.140	-.509	.597	.350	.962	.822	.572	.044	.106	.671
K:J	.223	-.329	.504	-.262	.468	.414	.033	-.321	-.330	.225	.318	.364	.261	.136	.486	.477
L:A	.423	.381	.051	.489	.725	.279	.116	-.062	.436	.507	.069	-.139	-.061	.400	.702	.777
L:B	.646	.252	-.136	.351	.091	.615	-.047	-.097	.191	.745	.335	.048	-.027	.294	.551	.420
L:C	.209	.141	.057	-.093	.276	.111	.064	-.200	.165	.127	-.038	.135	-.297	.032	.570	.281
L:D	.850	-.280	-.036	.628	.336	.646	-.401	-.237	.216	.728	.746	.433	.962	.423	.100	.679
L:E	.552	.272	-.191	.082	.230	.416	.101	-.218	-.082	.476	.117	.378	.270	-.124	.444	.375
L:F	.341	.435	.083	.222	.564	.613	.299	.010	.373	.544	.165	.723	.255	.295	.603	.517
L:G	.328	.508	.048	.283	.389	.259	.285	.111	.376	.516	.655	.691	.275	.087	.535	.498
L:H	.297	.402	.099	.316	.083	.327	.450	.098	.426	.734	.823	.750	.280	-.058	.494	.445
L:I	.314	.282	.013	.182	.136	.349	.288	.030	.246	.584	.705	.639	.509	-.147	.479	.532
L:J	.203	.375	.388	-.164	.359	.226	.392	-.048	-.045	.222	.074	.529	.349	.162	.498	.425
L:K	.854	.510	-.144	.847	.855	.734	.652	.403	.606	.687	.771	.919	.560	.749	.280	.656
M:A	.437	.227	.027	.579	.574	.255	.216	-.086	.288	.405	.076	-.138	-.189	.277	.671	.742
M:B	.643	.111	-.183	.334	-.006	.599	.011	-.110	.199	.633	.291	.122	-.248	.214	.537	.382
M:C	.254	.151	.045	-.080	.249	.143	.105	-.158	.129	.129	-.062	.088	-.283	.131	.557	.271
M:D	.910	-.289	-.507	.673	.454	.488	-.281	-.269	.131	.485	.499	.519	.708	.321	.100	.616
M:E	.522	.235	-.226	-.009	.172	.355	-.040	-.194	-.115	.503	.047	.385	.044	-.105	.415	.223
M:F	.297	.300	-.086	.161	.451	.577	.343	-.119	.242	.528	.038	.708	.055	.215	.534	.668
M:G	.279	.468	-.070	.219	.287	.227	.265	.064	.314	.445	.513	.620	.073	.105	.471	.646
M:H	.278	.328	.108	.318	.033	.312	.383	.068	.304	.647	.691	.682	.047	-.072	.429	.622
M:I	.339	.235	.028	.115	.128	.354	.239	-.027	.200	.535	.567	.615	.178	-.111	.396	.669
M:J	.243	.341	.137	-.123	.266	.230	.425	-.054	-.164	.196	-.288	.493	.082	.186	.464	.545
M:K	.895	.477	.008	.984	.725	.614	.397	.500	.741	.696	.771	.883	.290	.781	.311	.719
M:L	.927	.907	.847	.939	.911	.916	.864	.937	.894	.905	.838	.960	.855	.807	.974	.815

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SODIUM

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NUMBER OF READINGS

WIND FROM

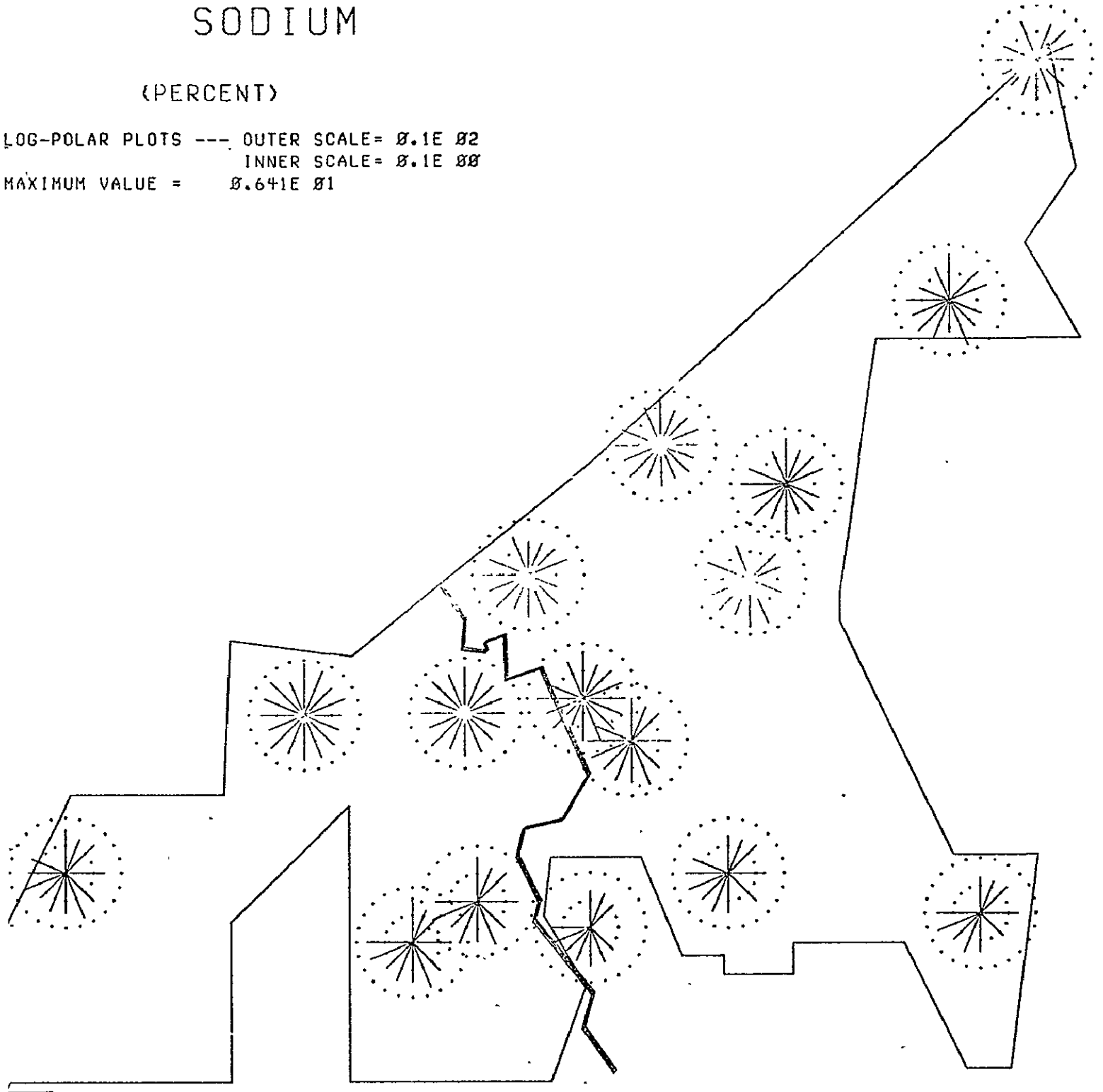
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	3	1	1	2	2	1	2	5	4	7	3	0	4
3	3	3	3	0	3	0	1	3	6	9	6	5	4	0	0	0
4	0	0	2	-1	0	1	0	1	1	2	4	4	6	1	0	3
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14	2	1	3	0	3	0	-1	0	4	5	2	3	3	0	0	0
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17	1	1	6	3	0	1	1	-1	2	3	4	6	5	3	0	3
20	0	1	6	2	1	0	2	2	1	2	1	4	5	2	0	4
21	1	1	7	1	0	-1	2	2	2	2	2	6	6	4	0	3

-1 INDICATES ESTIMATED VALUE

SODIUM

(PERCENT)

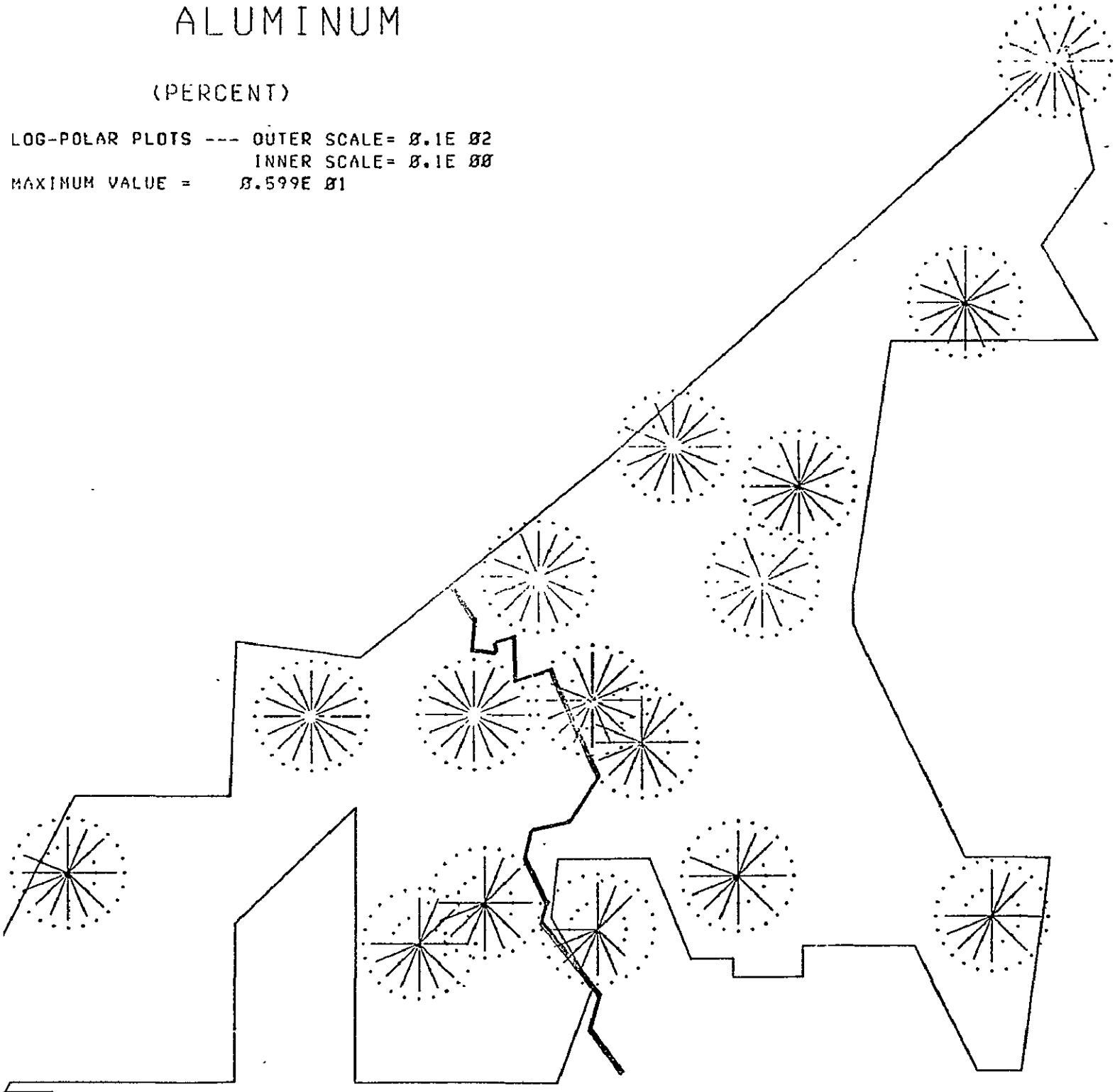
LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.641E 01$



ALUMINUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $8.1E \ 02$
INNER SCALE = $8.1E \ 00$
MAXIMUM VALUE = $8.599E \ 01$



ALUMINUM

(PERCENT)

NUMBER OF READINGS

WIND DIRECTION

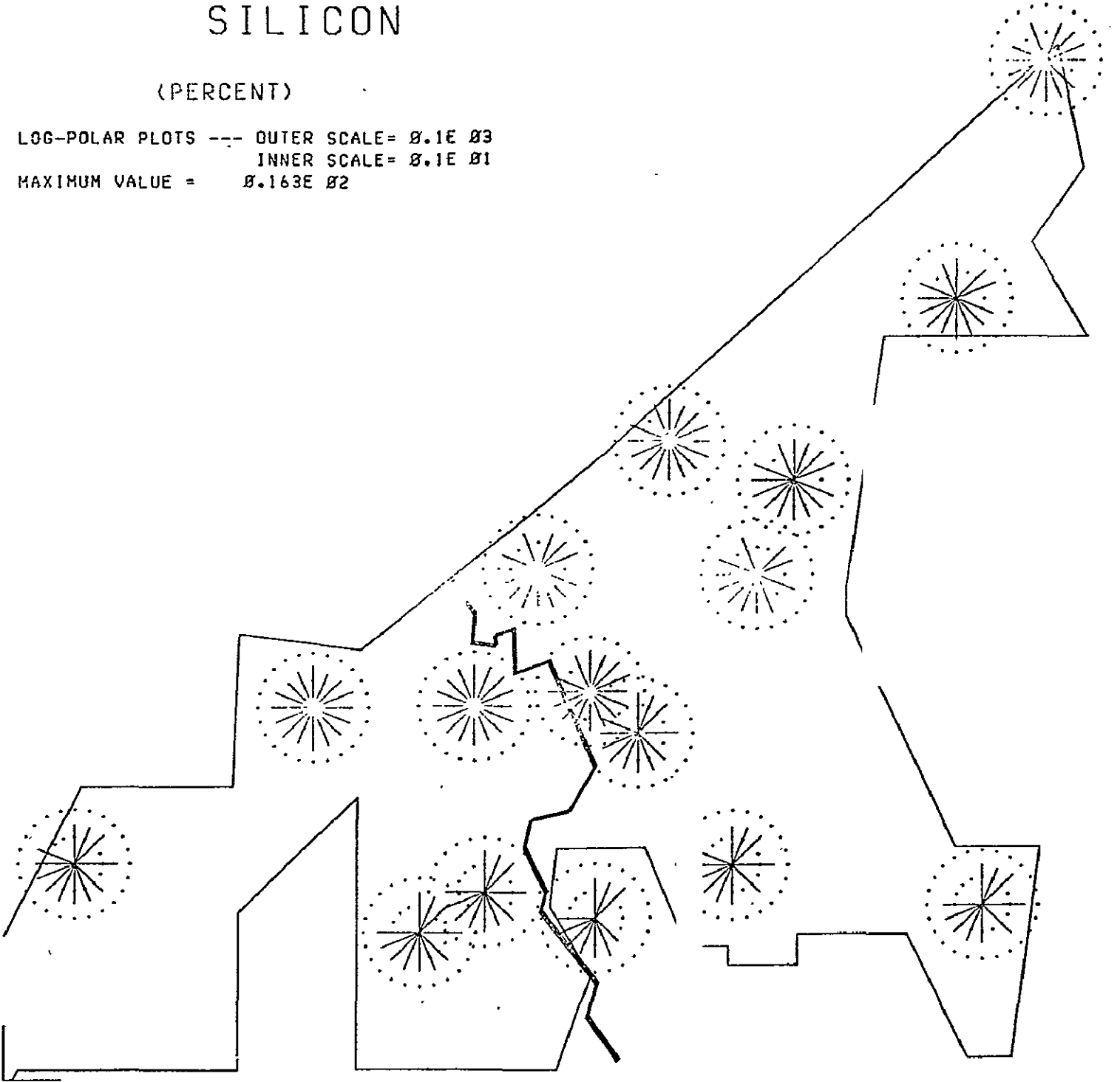
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	1	1	0	0	1	1	2	2	2	2	6	4	7	3	0	4	
	3	3	3	4	3	3	0	2	3	9	11	6	5	4	0	0	0	
	4	0	0	2	1	0	2	0	1	1	2	5	4	6	2	0	3	
	5	3	3	5	0	3	0	2	0	6	8	4	4	2	1	0	0	
	6	1	0	5	3	0	2	1	1	1	1	5	4	5	1	0	3	
	7	1	1	0	0	1	2	1	2	4	3	0	7	7	3	1	5	
	8	3	3	4	0	3	0	2	3	9	10	6	4	2	0	0	0	
	9	3	2	4	0	3	0	1	2	8	9	4	5	4	1	0	0	
	10	1	1	0	3	1	2	1	1	3	1	6	0	0	7	4	0	4
	12	3	3	4	0	3	0	2	3	8	11	6	3	3	1	0	0	
	13	3	4	1	0	0	0	1	1	4	7	4	4	4	0	0	0	
	14	3	1	4	0	3	0	1	0	7	7	2	2	3	0	0	0	
	15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3	
	17	1	1	7	4	0	1	1	0	4	3	5	6	5	4	0	3	
	20	0	1	6	2	1	0	2	2	3	2	2	4	5	2	0	4	
	21	1	1	7	2	0	1	2	2	3	2	3	6	6	4	0	3	

1 INDICATES ESTIMATED VALUE

SILICON

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.163E 02$



SILICON

(PERCENT)

NUMBER OF READINGS

WIND FROM

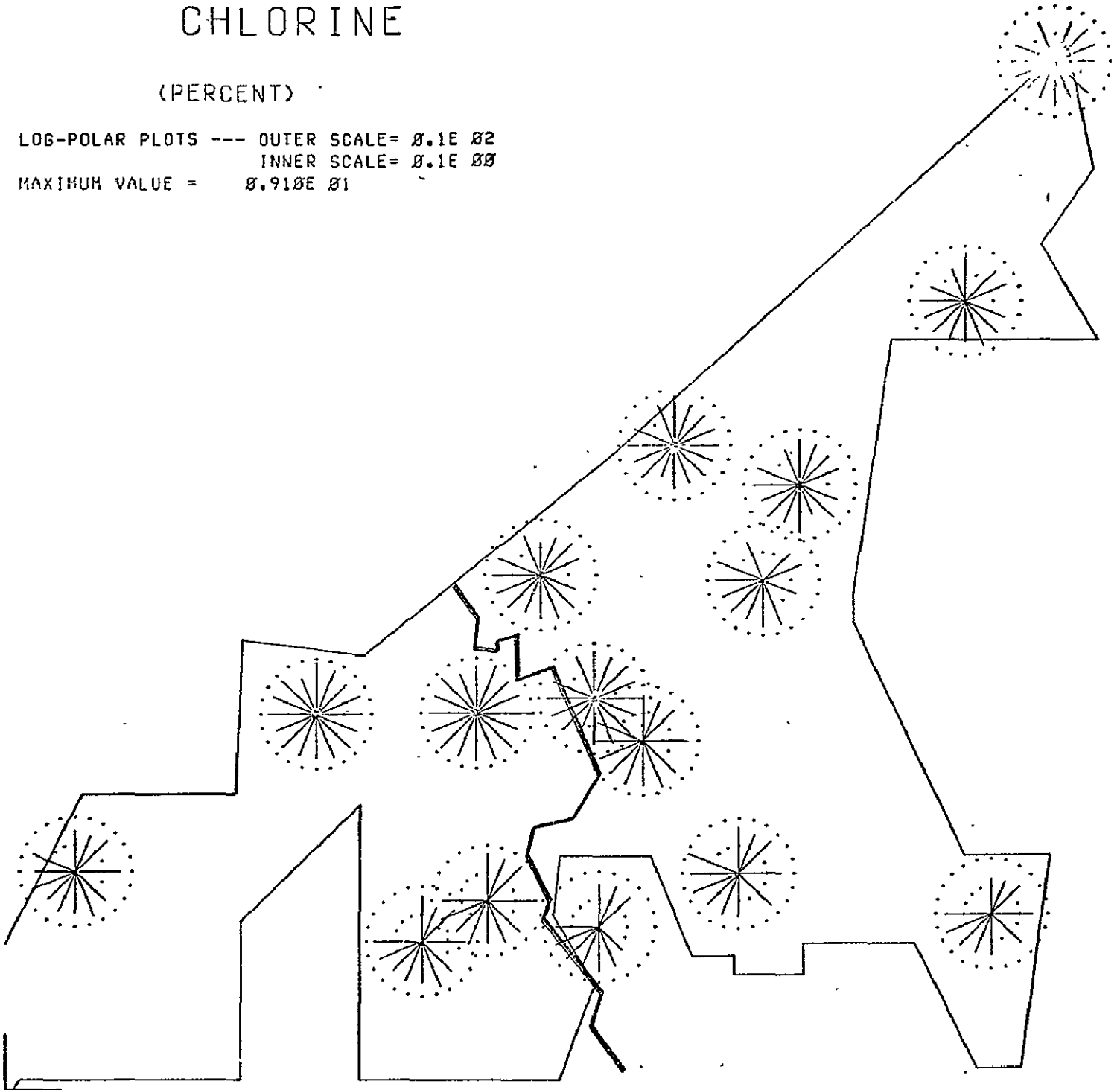
SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	3	2	2	6	4	7	3	0	5
3	-	4	3	4	0	3	0	2	3	10	11	6	5	4	0	0	0
4	-	0	0	2	1	0	2	0	1	1	2	5	4	6	2	0	3
5	-	3	3	5	0	3	0	2	0	6	8	4	4	2	1	0	0
6	-	1	0	5	3	0	2	1	2	1	1	5	4	5	1	0	3
7	-	1	1	6	4	1	2	1	3	4	3	4	7	7	3	1	4
8	-	3	3	4	0	3	0	2	3	10	10	6	3	2	0	0	0
9	-	4	2	4	0	3	0	1	2	8	9	4	5	4	1	0	0
10	-	1	1	8	3	1	2	1	2	3	1	6	8	7	4	0	5
12	-	4	3	4	0	3	0	2	3	9	11	6	3	3	1	0	0
13	-	3	4	1	0	0	0	1	1	4	7	4	4	4	0	0	0
14	-	4	1	4	0	3	0	1	0	8	7	2	3	3	0	0	0
15	-	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
17	-	1	1	7	4	0	1	1	1	4	3	5	6	5	4	0	3
20	-	0	1	6	2	1	0	2	3	3	2	2	4	5	2	0	5
21	-	0	1	7	2	0	1	2	2	2	2	3	6	6	4	0	3

-1 INDICATES ESTIMATED VALUE

CHLORINE

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.910E 01$



CHLORINE

(PERCENT)

NUMBER OF READINGS

WIND FROM

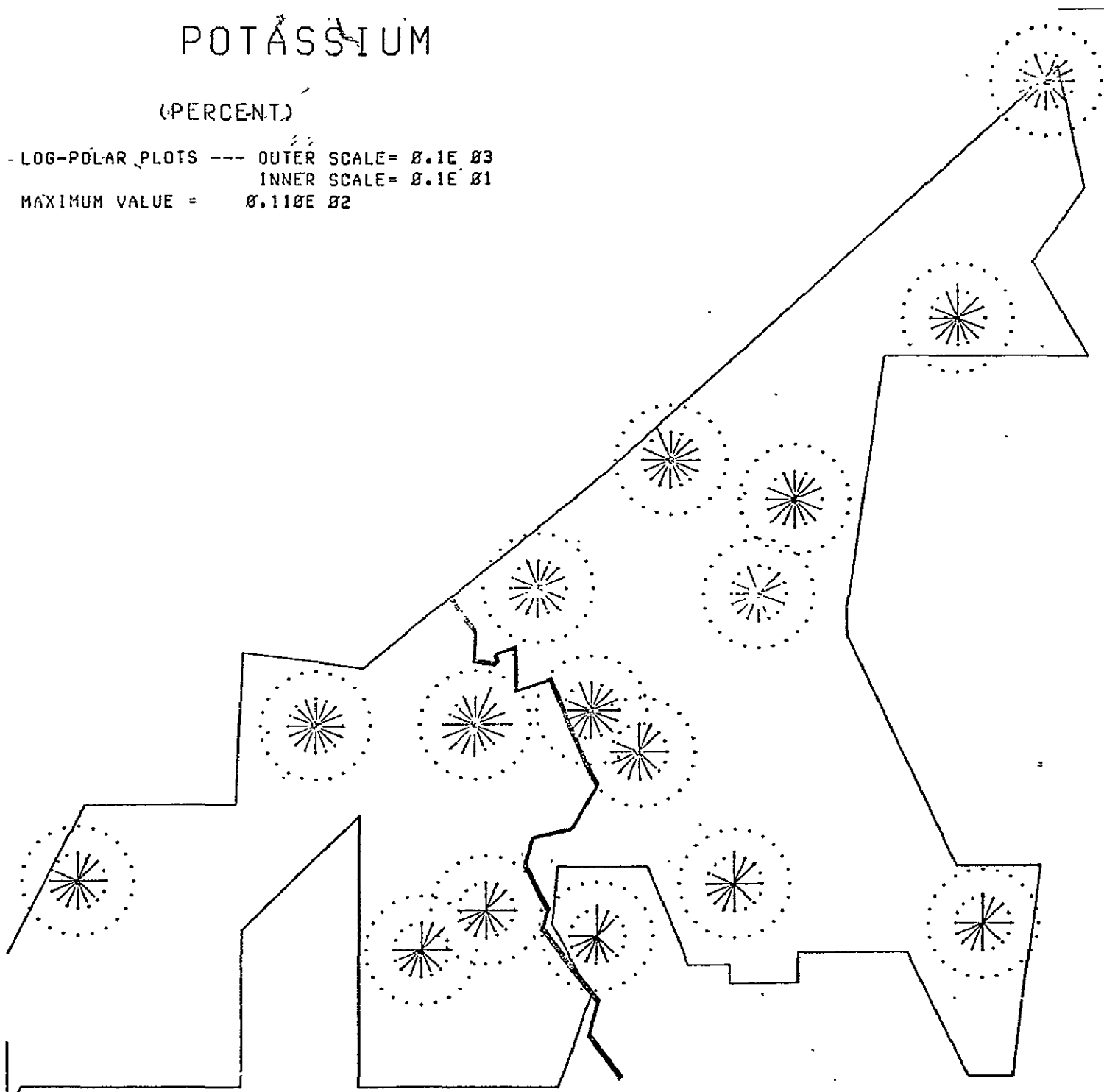
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
	1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
	3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
	4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
	5	-	2	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
	6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
	7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
	8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
	9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
	1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
	12	-	3	3	4	Ø	3	Ø	2	3	8	1Ø	6	3	3	1	Ø	Ø
	13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
	14	-	2	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
	15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
	17	-	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
	2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
	21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

POTASSIUM

(PERCENT)

- LOG-POLAR PLOTS --- OUTER SCALE = 0.1E 03
INNER SCALE = 0.1E 01
MAXIMUM VALUE = 0.110E 02



POTASSIUM

(PERCENT)

NUMBER OF READINGS

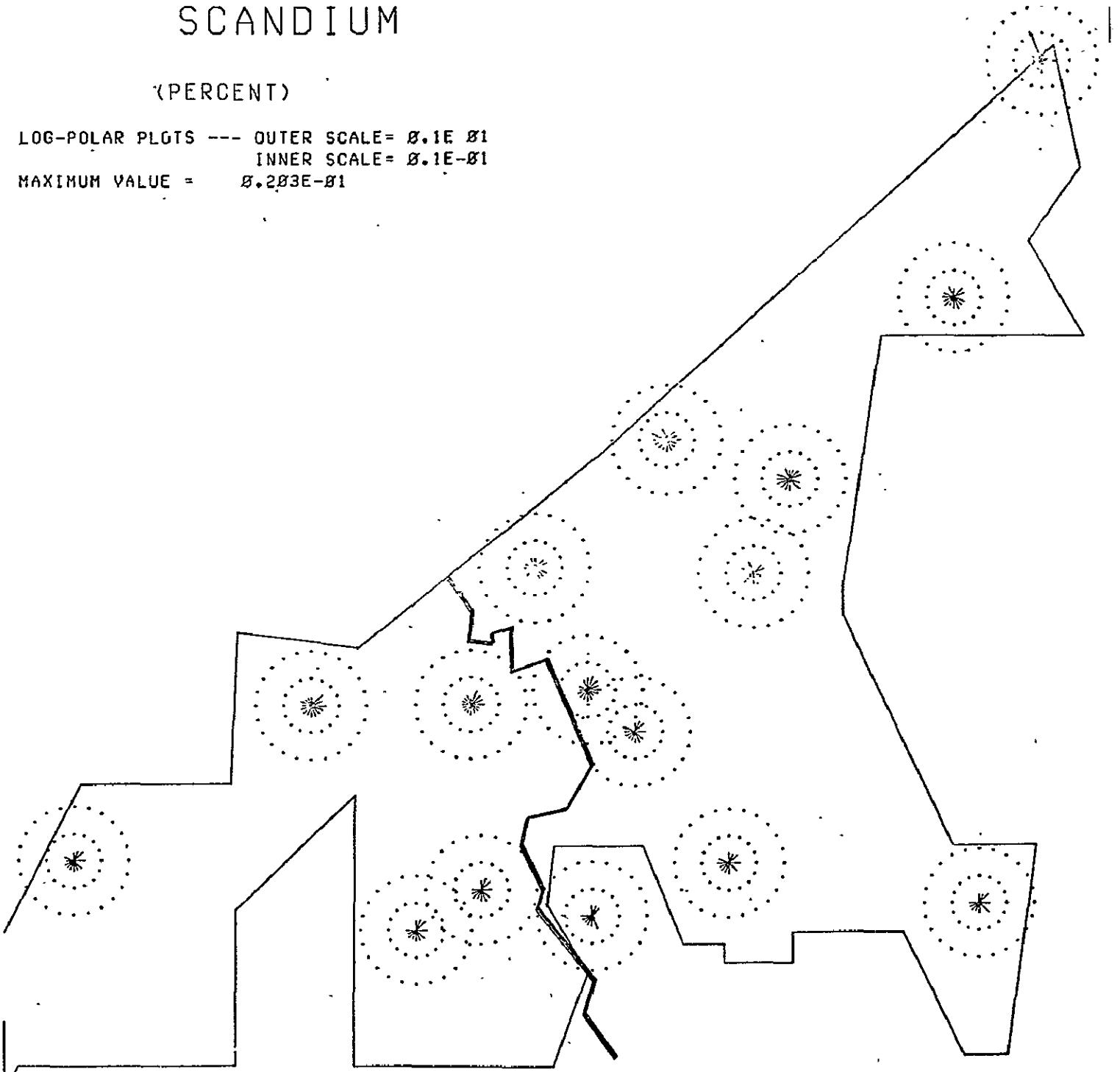
KIND FROM

SITE	KIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	4	3	1	1	1	-1	1	2	5	3	3	1	Ø	4
3	3	2	2	Ø	3	Ø	-1	-1	4	7	5	1	2	Ø	Ø	Ø
4	Ø	Ø	2	-1	Ø	1	Ø	-1	1	1	4	3	3	-1	Ø	3
5	2	2	3	Ø	3	Ø	-1	Ø	2	5	3	1	1	-1	Ø	Ø
6	1	Ø	4	3	Ø	1	1	-1	-1	1	4	2	3	-1	Ø	3
7	-1	-1	5	3	1	1	-1	-1	2	2	3	5	3	-1	-1	3
8	3	2	2	Ø	3	Ø	-1	-1	4	6	5	-1	1	Ø	Ø	Ø
9	3	1	2	Ø	3	Ø	-1	1	3	7	3	2	3	-1	Ø	Ø
1Ø	1	-1	5	3	1	1	-1	-1	1	1	5	6	4	1	Ø	4
11	1	2	2	Ø	3	Ø	-1	-1	4	7	5	1	3	-1	Ø	Ø

SCANDIUM

(PERCENT)

LOG-POLAR PLGTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.203E-01$



SCANDIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

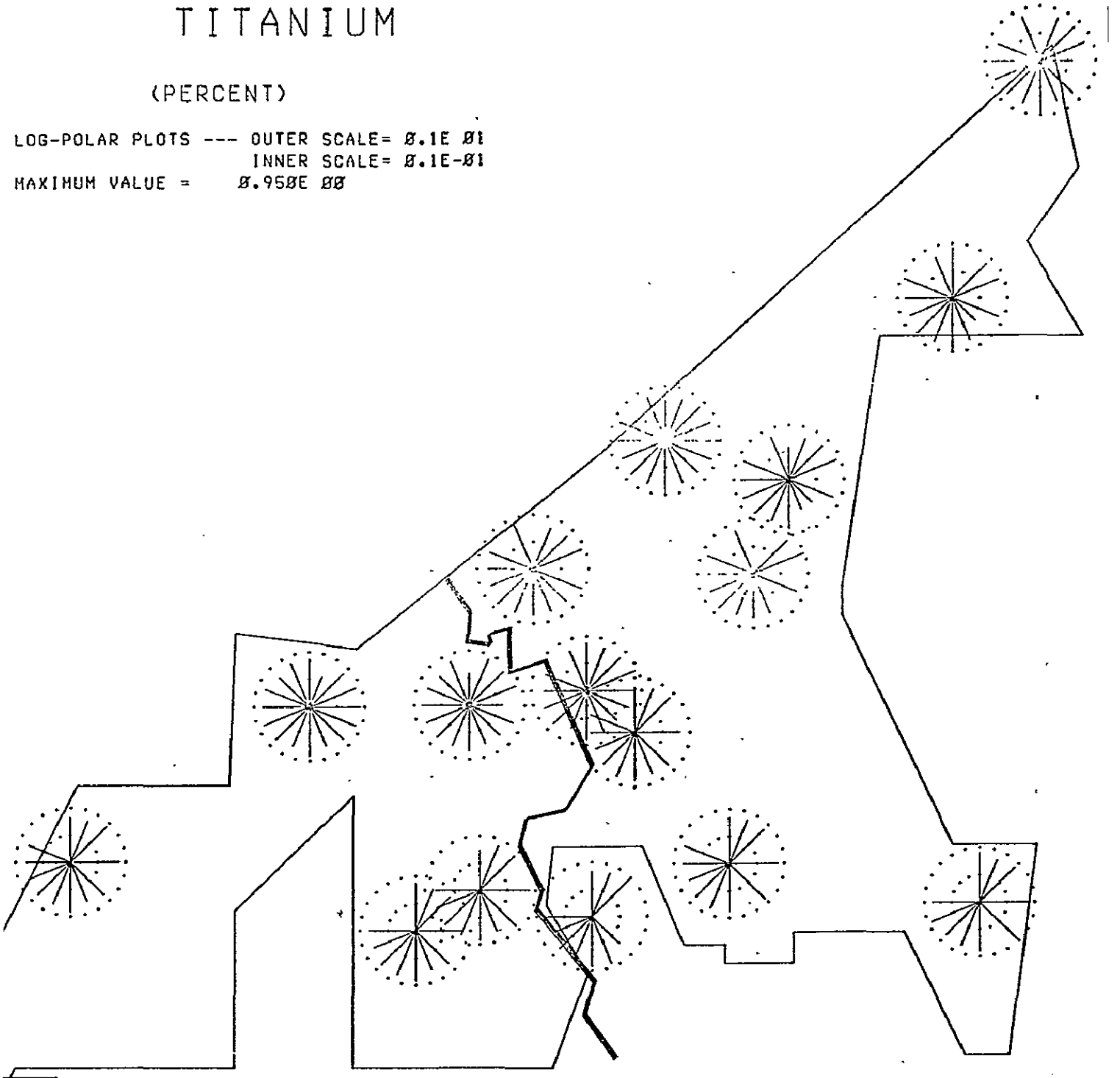
SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	-	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

TITANIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.950E 00$



TITANIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

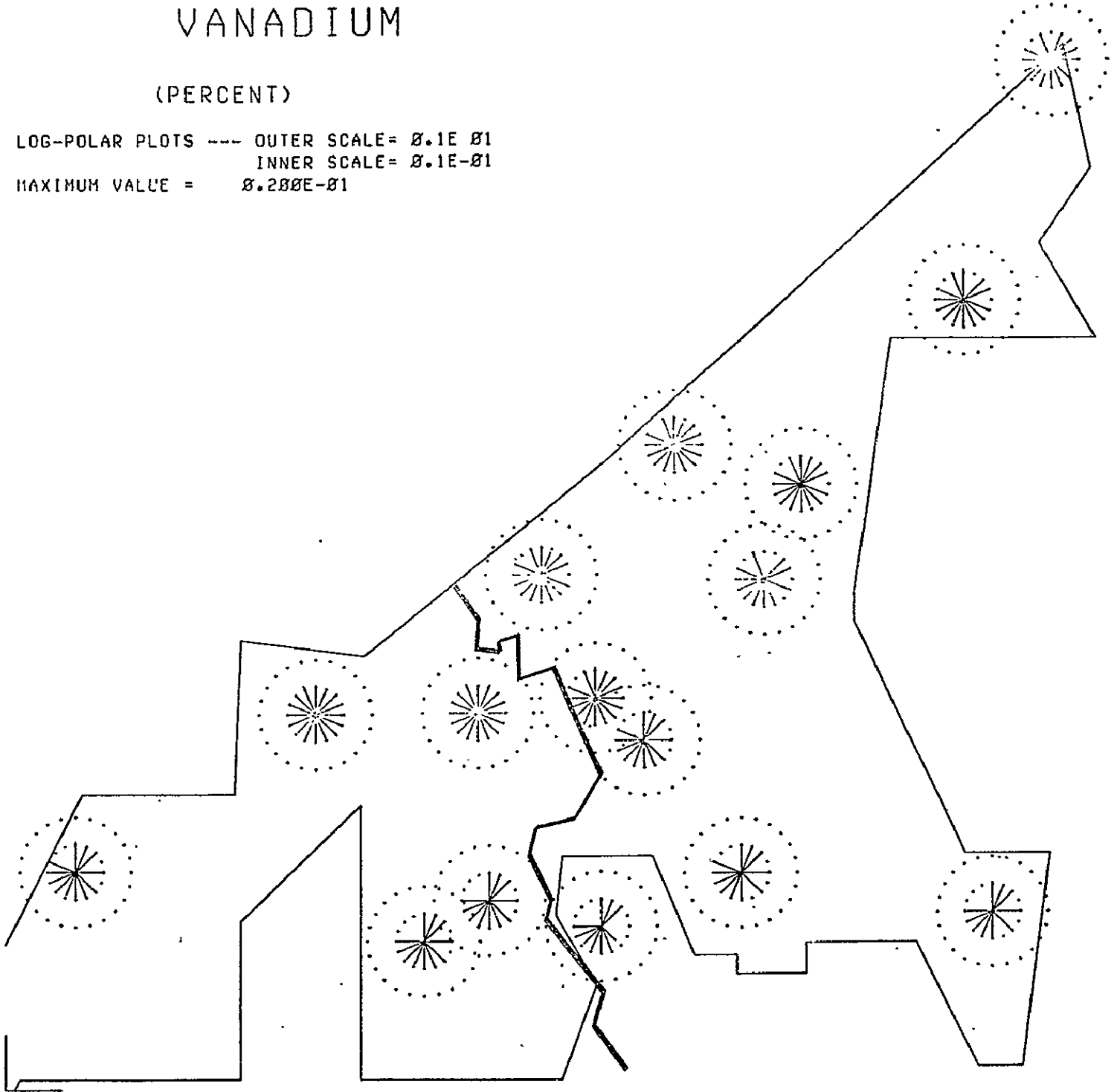
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	7	1	1	1	2	2	1	5	3	5	3	0	2
3	2	3	4	0	2	0	2	5	8	9	6	5	4	0	0	0
4	0	0	2	1	0	2	0	1	1	2	4	4	5	2	0	2
5	3	3	5	0	3	0	2	0	5	7	4	4	2	1	0	0
6	1	0	5	3	0	2	-1	1	1	1	5	4	4	1	0	3
7	1	1	8	4	1	2	1	2	3	2	3	7	6	3	1	2
8	3	3	4	0	3	0	2	2	7	7	5	4	2	0	0	0
9	2	2	4	0	2	0	1	2	7	5	2	4	2	1	0	0
10	1	1	8	3	1	2	1	1	2	1	3	8	7	4	0	2
12	3	2	3	0	3	0	2	3	7	6	5	3	2	1	0	0
13	3	3	1	0	0	0	1	1	4	6	3	4	3	0	0	0
14	1	1	3	0	3	0	1	0	7	7	2	1	3	0	0	0
15	-1	1	6	4	-1	2	1	2	2	2	1	4	8	4	1	3
17	-1	1	6	4	0	1	-1	-1	4	3	4	6	5	4	0	3
20	0	1	6	2	-1	0	1	2	3	1	2	4	4	2	0	4
21	0	1	6	2	0	1	1	2	3	2	2	5	4	4	0	2

-1 INDICATES ESTIMATED VALUE

VANADIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.200E-01$



VANADIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

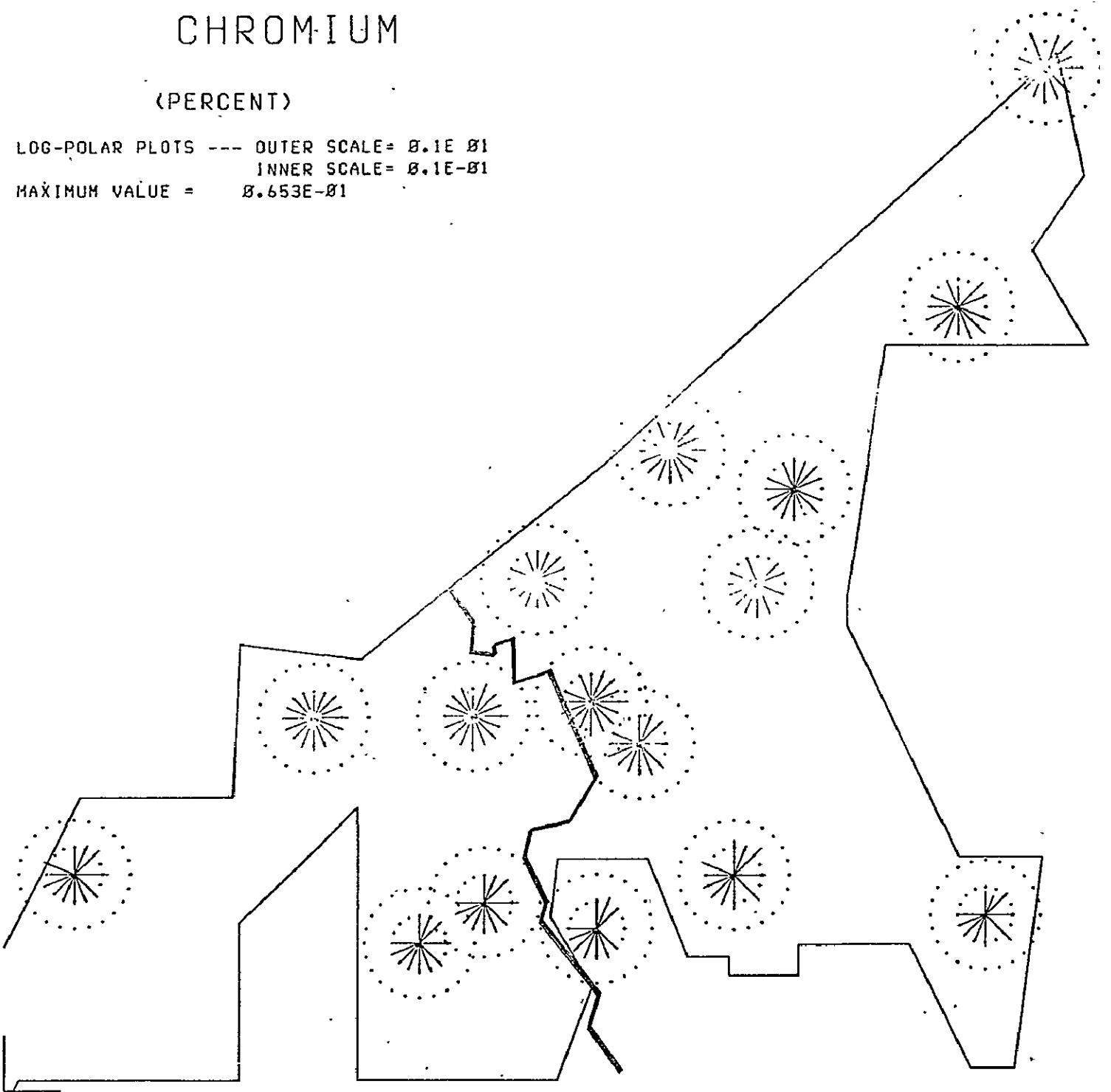
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	-	1	1	6	4	1	1	2	3	2	2	4	4	7	3	5
3	-	4	3	4	3	3	2	3	10	11	6	5	4	5	5	5
4	-	0	0	2	1	0	2	0	1	1	2	5	4	6	2	3
5	-	3	3	5	0	3	0	2	0	6	8	4	4	2	1	0
6	-	1	0	5	3	0	2	1	2	1	1	5	4	5	1	3
7	-	1	1	8	4	1	2	1	3	4	3	4	7	7	3	4
8	-	3	3	4	0	3	0	2	3	10	10	6	4	2	0	0
9	-	4	2	4	0	3	0	1	2	8	9	4	5	4	1	0
10	-	1	1	8	3	1	2	1	2	3	1	6	8	8	4	5
12	-	4	3	4	0	3	0	2	3	9	11	6	3	3	1	0
13	-	3	4	1	0	0	0	1	1	4	7	4	4	4	0	0
14	-	4	1	4	0	3	0	1	0	8	7	2	3	3	0	0
15	-	1	2	7	4	1	2	1	3	2	3	4	7	8	4	4
17	-	1	1	7	4	0	1	1	1	4	3	5	6	5	4	3
20	-	0	1	6	2	1	0	2	3	3	2	2	4	5	2	5
21	-	1	1	7	2	0	1	2	2	3	2	3	6	6	4	3

-1 INDICATES ESTIMATED VALUE

CHROMIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.653E-01$



CHROMIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	2	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	2	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	2	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	2	1	4	Ø	3	Ø	1	Ø	6	5	2	3	3	Ø	Ø	Ø
15	-1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	4	2	Ø	4
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

MANGANESE

(PERCENT)

NUMBER OF READINGS

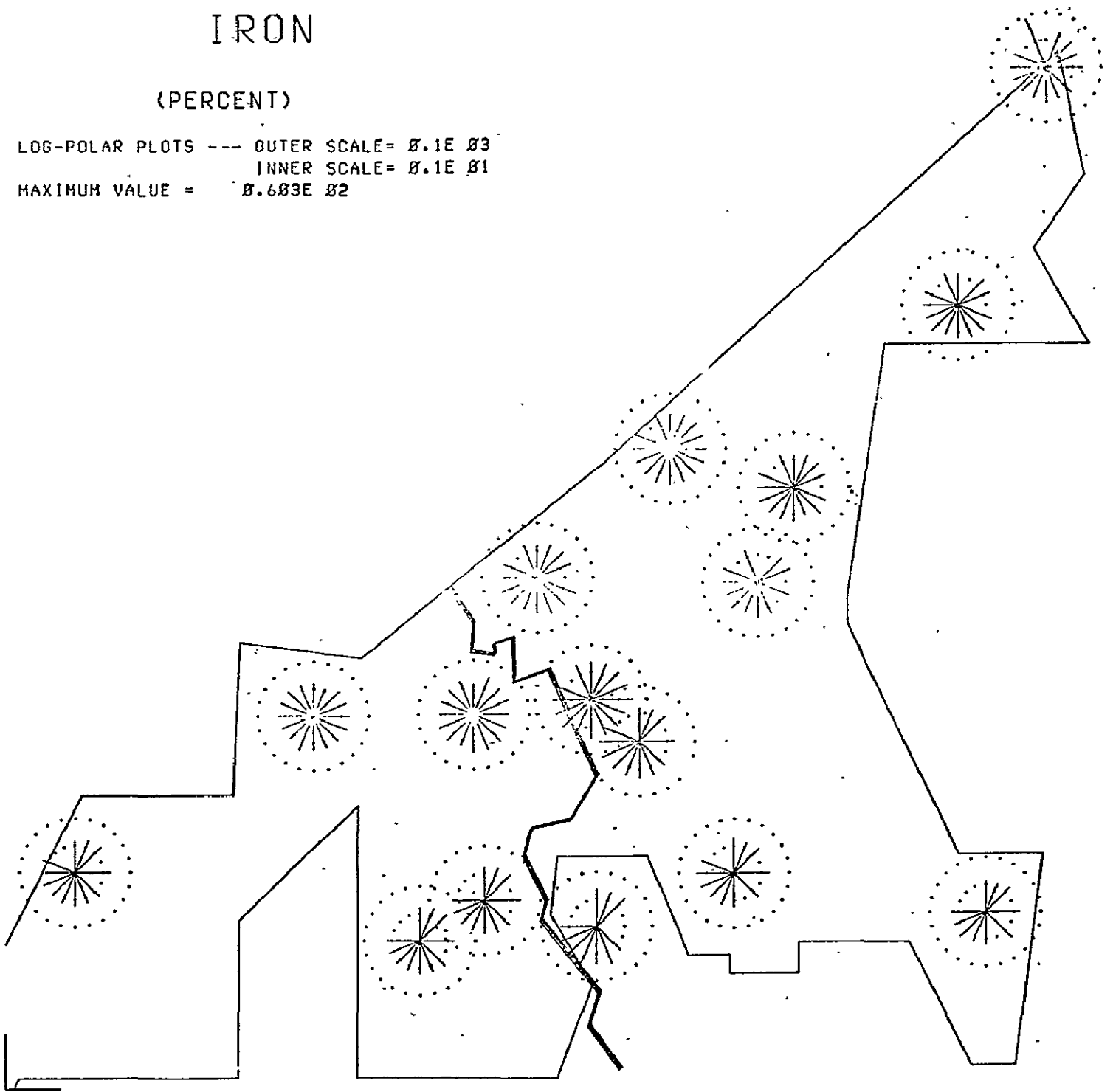
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
2	-	3	3	4	Ø	3	2	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	2	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
-	-	1	4	Ø	3	Ø	1	Ø	7	7	1	3	3	Ø	Ø	Ø	

IRON

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.603E 02$



IRON

(PERCENT)

NUMBER OF READINGS

WIND FROM

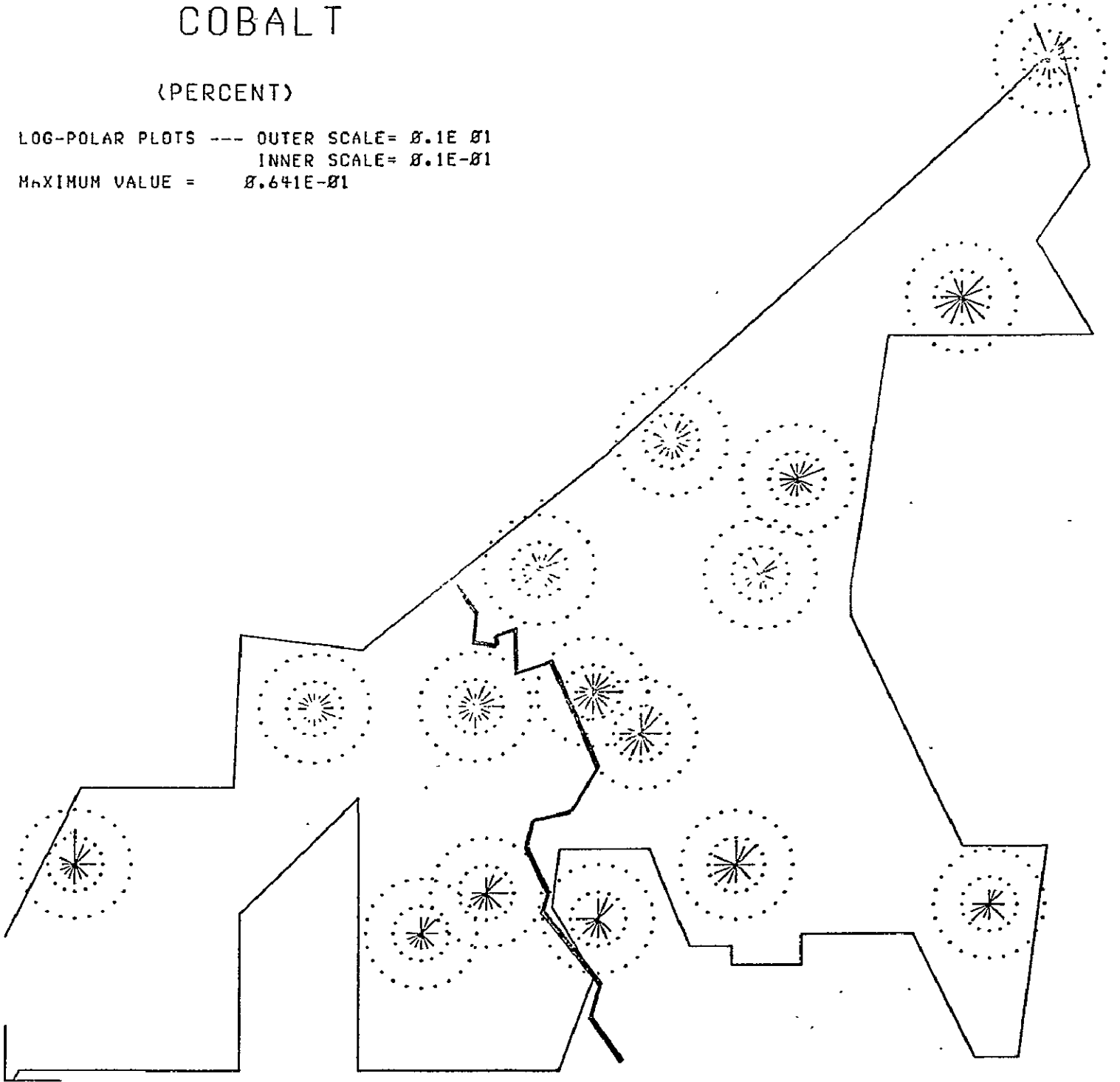
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1 -	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3 -	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4 -	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5 -	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6 -	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7 -	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8 -	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9 -	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø -	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12 -	3	3	3	Ø	3	Ø	2	3	8	11	6	3	2	1	Ø	Ø
13 -	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14 -	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15 -	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17 -	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø -	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21 -	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

COBALT

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E-01$
INNER SCALE= $0.1E-01$
MAXIMUM VALUE = $0.641E-01$



COBALT

(PERCENT)

NUMBER OF READINGS

WIND FROM

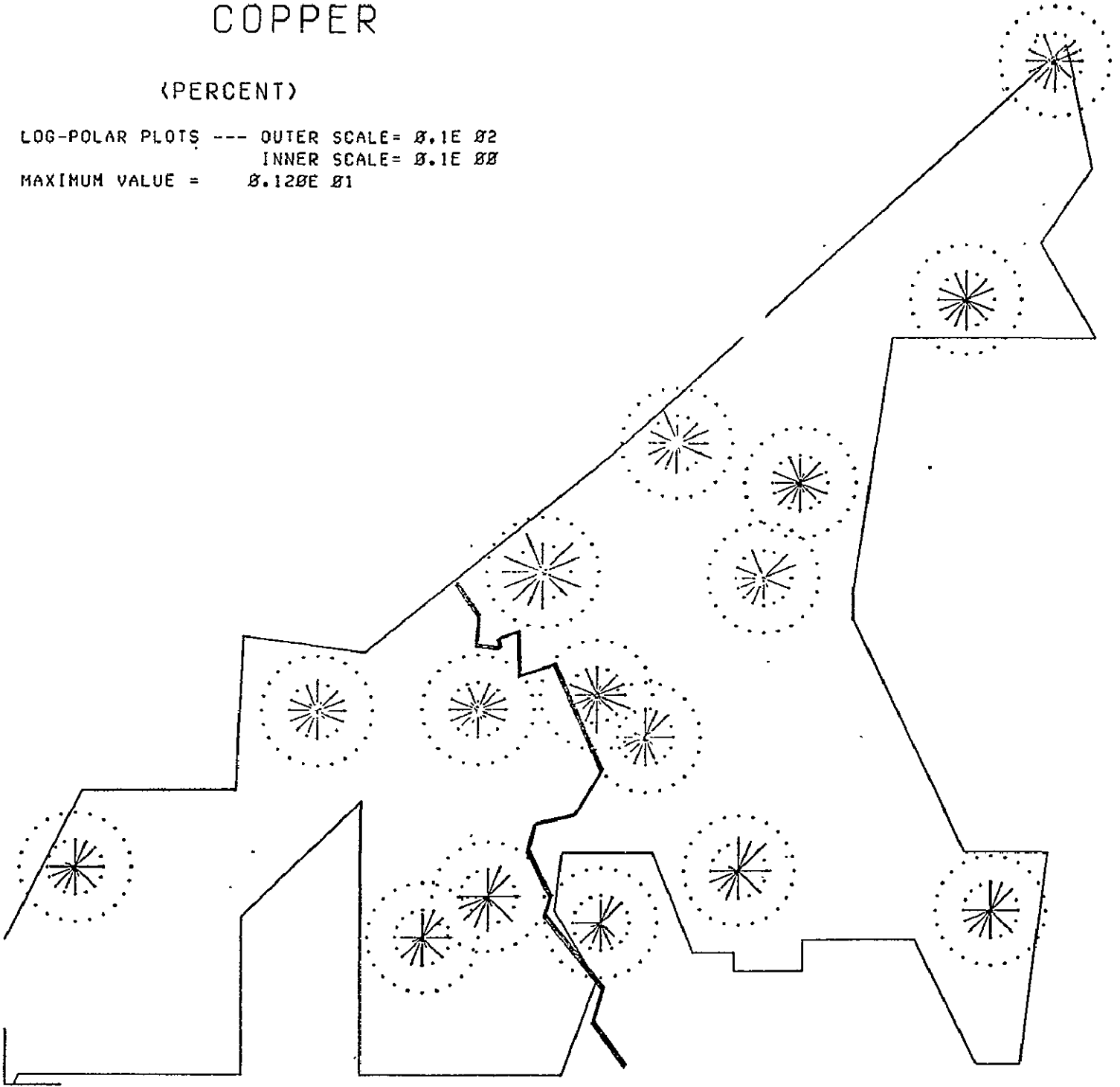
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1 -	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3 -	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4 -	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5 -	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6 -	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7 -	1	1	Ø	4	1	2	1	2	4	3	4	7	7	3	1	3
8 -	3	3	4	Ø	3	Ø	2	3	9	10	6	4	2	Ø	Ø	Ø
9 -	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
10 -	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12 -	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13 -	3	4	1	Ø	Ø	Ø	1	1	4	6	4	1	3	Ø	Ø	Ø
14 -	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15 -	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17 -	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
20 -	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21 -	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

COPPER

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.120E 01$



COPPER
(PERCENT) NUMBER OF READINGS

KIND FROM

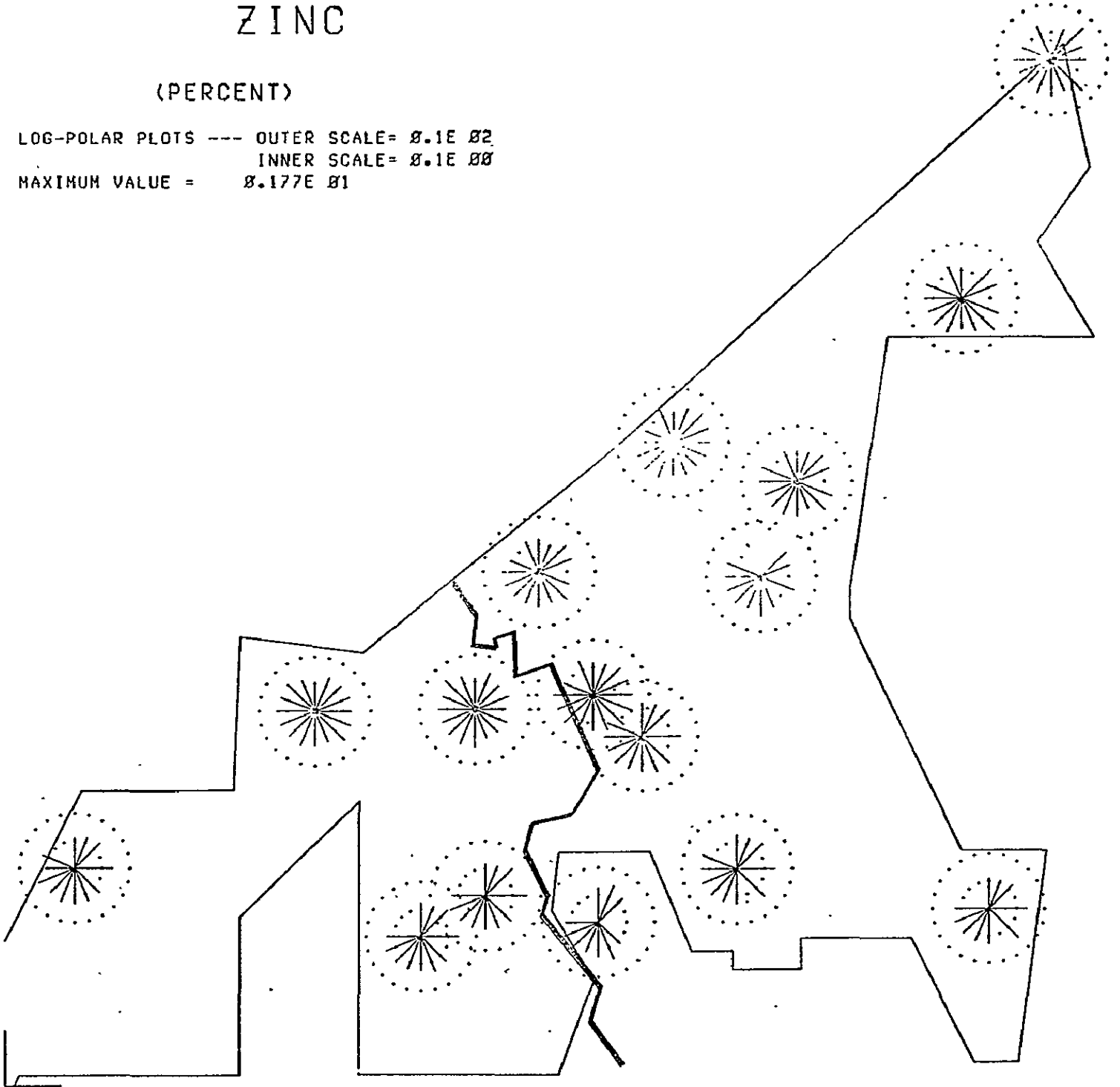
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1 -	1	-1	4	4	1	1	1	-1	2	2	6	3	3	1	Ø	4
	3 -	3	2	3	Ø	3	Ø	1	-1	7	9	5	1	2	Ø	Ø	Ø
	4 -	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
	5 -	2	2	4	Ø	3	Ø	1	Ø	4	7	3	1	1	-1	Ø	Ø
	6 -	1	Ø	5	3	Ø	2	1	-1	1	1	5	2	3	1	Ø	3
	7 -	1	-1	6	4	1	2	-1	-1	4	2	4	5	3	1	-1	3
	8 -	3	2	3	Ø	3	Ø	1	-1	6	8	5	-1	1	Ø	Ø	Ø
	9 -	3	1	3	Ø	3	Ø	-1	1	5	6	2	2	3	-1	Ø	Ø
	1Ø -	1	-1	6	3	1	2	-1	-1	3	1	6	6	4	2	Ø	4
	12 -	3	2	3	Ø	3	Ø	1	-1	6	9	5	1	3	-1	Ø	Ø
	13 -	3	3	1	Ø	Ø	Ø	1	1	4	6	4	1	3	Ø	Ø	Ø
	14 -	3	1	4	Ø	3	Ø	1	Ø	6	5	1	3	2	Ø	Ø	Ø
	15 -	-1	1	5	4	1	2	-1	-1	2	1	4	5	4	1	-1	3
	17 -	1	-1	5	4	Ø	1	1	-1	4	2	5	5	3	2	Ø	3
	2Ø -	Ø	-1	4	2	1	Ø	1	-1	3	2	2	3	3	1	Ø	4
	21 -	-1	-1	4	2	Ø	1	1	-1	3	2	3	4	3	2	Ø	3

-1 INDICATES ESTIMATED VALUE

ZINC

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE= 0.1E 02
INNER SCALE= 0.1E 00
MAXIMUM VALUE = 0.177E 01



ZINC

(PERCENT

NUMBER OF READINGS

WIND FROM

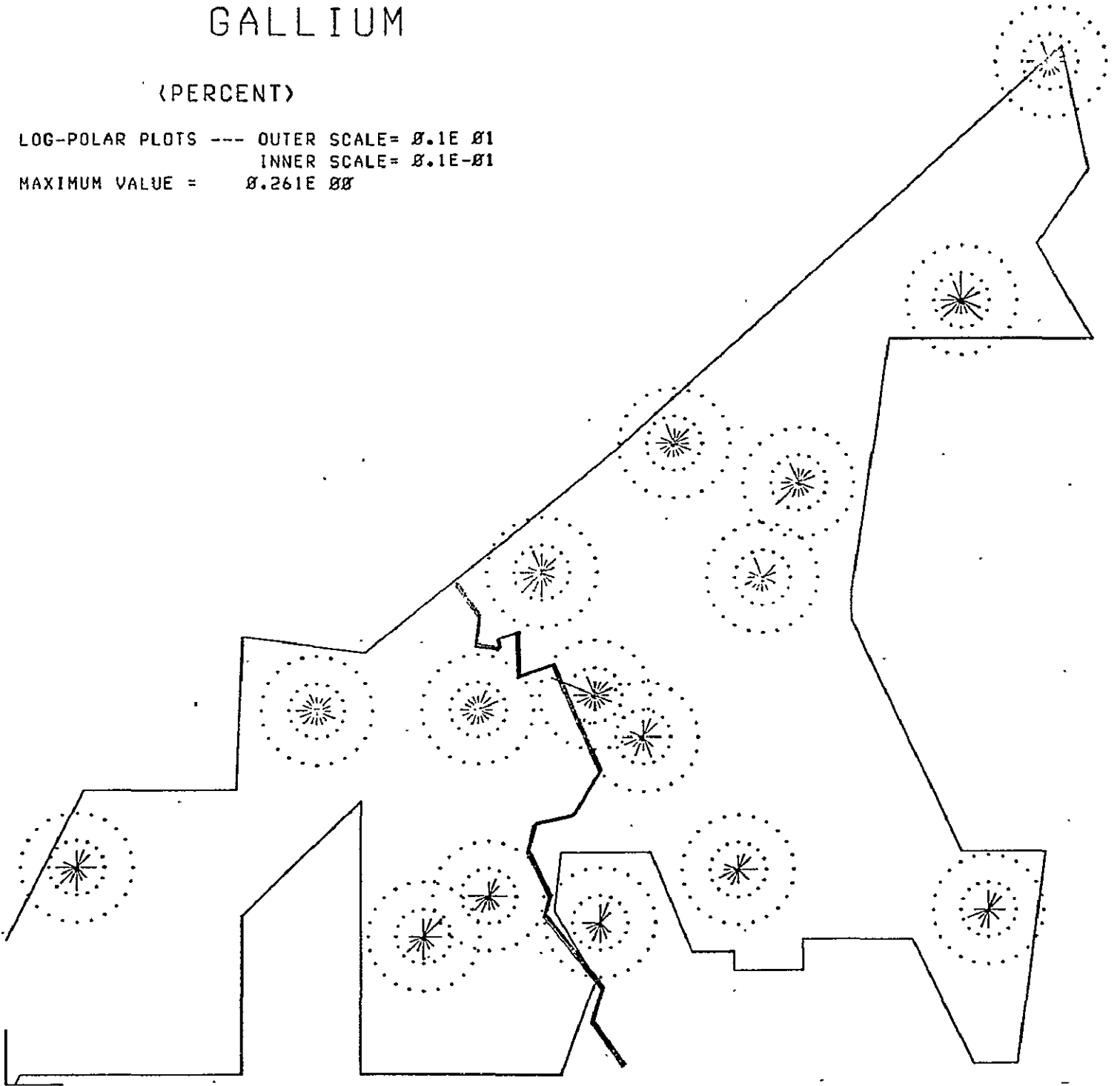
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSH	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	10	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
10	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	3	3	4	Ø	3	Ø	2	3	8	11	6	3	2	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
20	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	3
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

GALLIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 01$
INNER SCALE = $0.1E -01$
MAXIMUM VALUE = $0.261E 00$



GALLIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

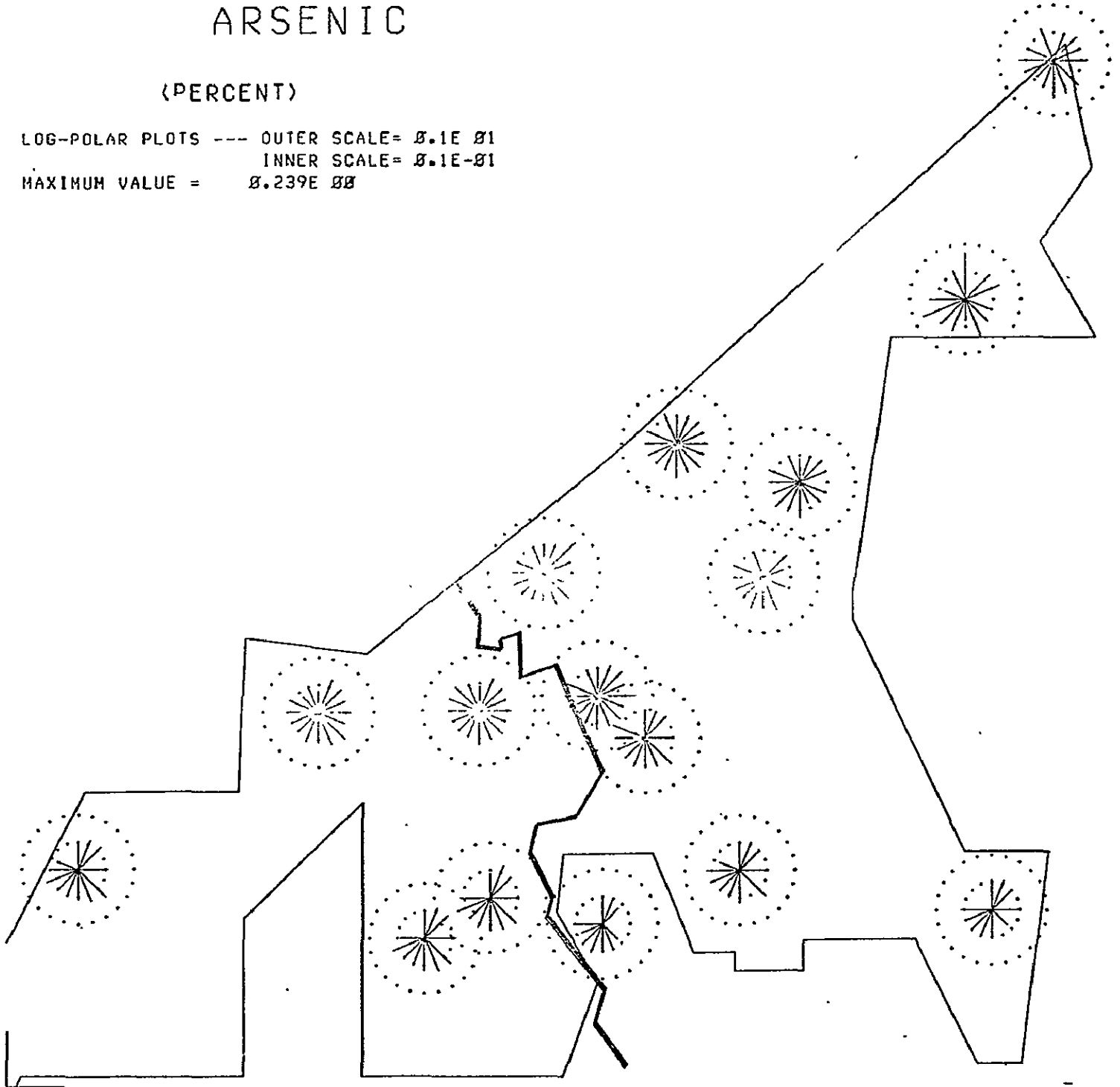
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	-	-1	-1	2	1	-1	1	-1	-1	-1	-1	1	1	1	Ø	2	
	3	-	-1	2	-1	Ø	2	Ø	-1	-1	-1	2	2	-1	1	Ø	Ø	Ø
	4	-	Ø	Ø	1	-1	Ø	1	Ø	-1	-1	-1	-1	3	-1	-1	Ø	3
	5	-	-1	1	2	Ø	2	Ø	-1	Ø	-1	2	-1	1	-1	-1	Ø	Ø
	6	-	1	Ø	1	1	Ø	1	1	-1	-1	-1	4	2	2	-1	Ø	1
	7	-	-1	-1	1	-1	-1	1	-1	-1	-1	1	1	3	1	-1	-1	2
	8	-	1	1	1	Ø	2	Ø	-1	-1	1	2	1	-1	-1	Ø	Ø	Ø
	9	-	-1	1	2	Ø	1	Ø	-1	1	-1	2	-1	2	2	-1	Ø	Ø
	10	-	-1	-1	3	-1	-1	1	-1	-1	-1	1	-1	4	2	-1	Ø	1
	12	-	1	1	1	Ø	2	Ø	-1	-1	2	4	1	1	1	-1	Ø	Ø
	13	-	1	1	-1	Ø	Ø	Ø	-1	1	1	4	3	1	2	Ø	Ø	Ø
	14	-	1	1	1	Ø	1	Ø	-1	Ø	2	2	-1	2	-1	Ø	Ø	Ø
	15	-	-1	1	2	1	-1	1	-1	-1	-1	2	1	3	1	-1	-1	-1
	17	-	-1	-1	2	2	Ø	1	-1	-1	-1	1	1	4	2	-1	Ø	2
	20	-	Ø	-1	3	2	-1	Ø	-1	-1	-1	1	-1	2	2	-1	Ø	1
	21	-	1	-1	4	-1	Ø	-1	-1	-1	1	2	2	2	1	-1	Ø	2

-1 INDICATES ESTIMATED VALUE

ARSENIC

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE= $8.1E-01$
INNER SCALE= $8.1E-01$
MAXIMUM VALUE = $8.239E-08$



ARSENIC
(PERCENT) NUMBER OF READINGS

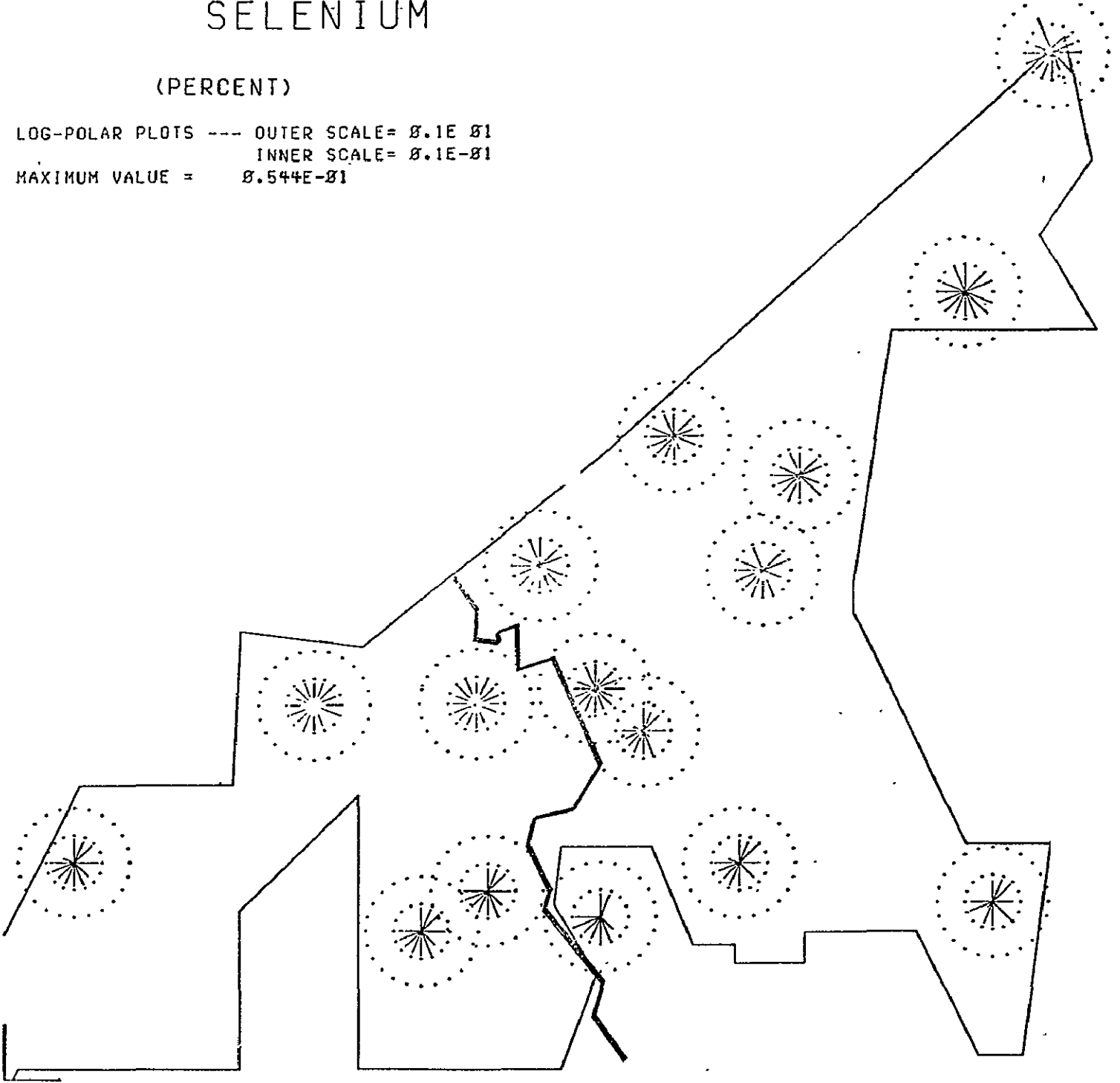
		WIND FROM																
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1 -	1	1	6	3	1	1	2	2	1	2	5	4	7	3	Ø	4	
	3 -	2	3	3	Ø	3	Ø	1	3	6	8	6	4	4	Ø	Ø	Ø	
	4 -	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	4	1	Ø	3	
	5 -	3	3	4	Ø	3	Ø	1	Ø	4	6	4	4	2	1	Ø	Ø	
	6 -	1	Ø	4	3	Ø	1	1	1	-1	1	4	4	5	-1	Ø	3	
	7 -	-1	1	7	3	1	1	1	2	2	3	3	6	7	2	-1	3	
	8 -	3	3	3	Ø	3	Ø	1	3	6	7	5	3	2	Ø	Ø	Ø	
	9 -	3	2	3	Ø	3	Ø	1	2	5	7	4	5	4	1	Ø	Ø	
	1Ø -	1	1	7	3	1	1	1	1	1	1	1	5	8	8	3	Ø	4
	12 -	3	3	3	Ø	2	Ø	1	2	5	6	6	3	3	-1	Ø	Ø	
	13 -	3	4	-1	Ø	Ø	Ø	-1	1	2	6	4	2	4	Ø	Ø	Ø	
	14 -	2	1	3	Ø	3	Ø	-1	Ø	4	5	2	3	3	Ø	Ø	Ø	
	15 -	1	2	7	3	1	1	1	2	2	3	4	7	6	3	1	3	
	17 -	1	1	6	3	Ø	1	1	-1	1	3	4	6	5	3	Ø	3	
	2Ø -	Ø	1	6	2	1	Ø	2	2	1	2	1	4	5	2	Ø	4	
	21 -	1	1	7	1	Ø	-1	2	2	2	2	2	6	6	2	Ø	3	

— -1 INDICATES ESTIMATED VALUE

SELENIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E-01$
INNER SCALE= $0.1E-01$
MAXIMUM VALUE = $0.544E-01$



SELENIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

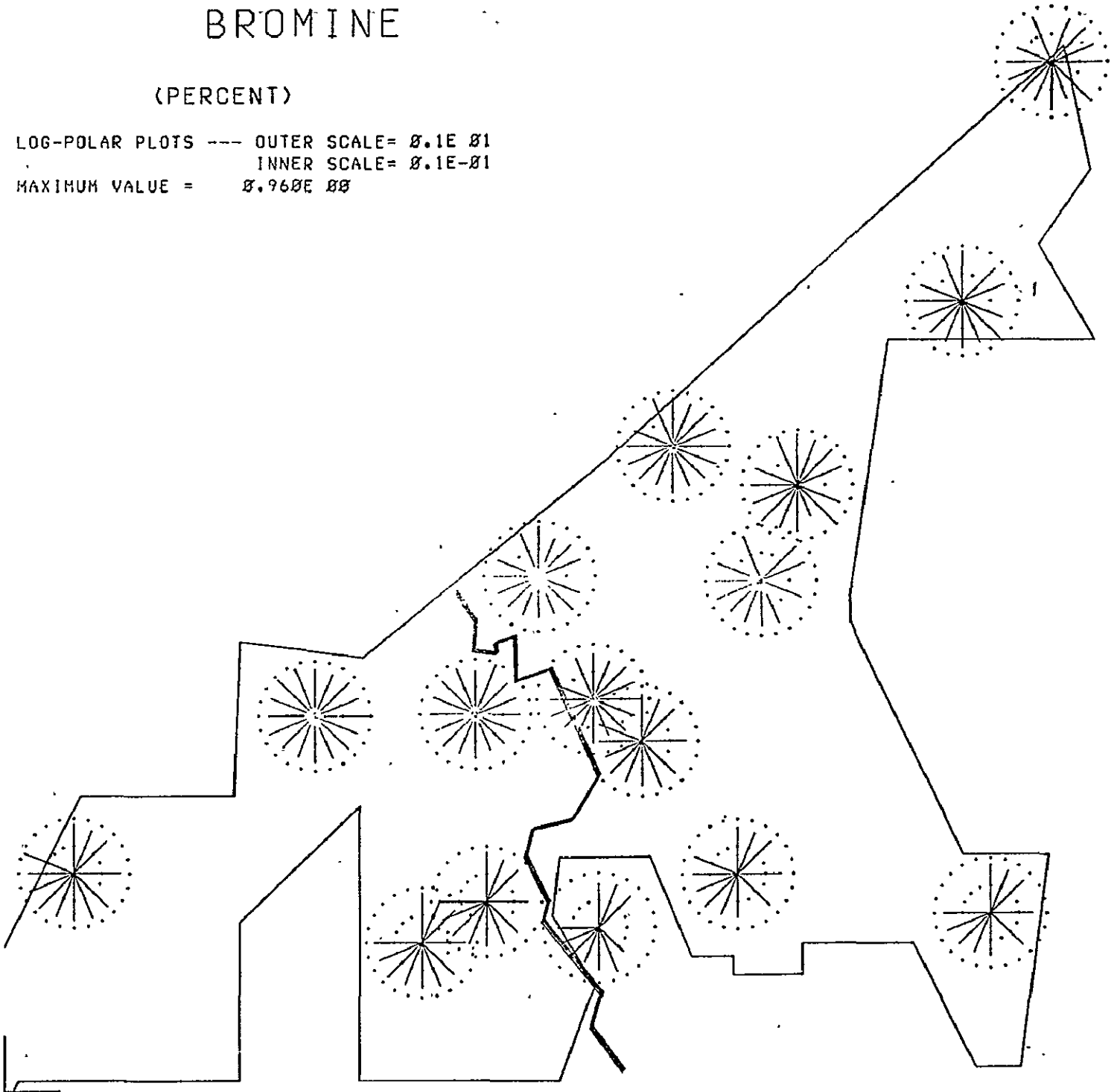
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	2	Ø	1	1	1	1	1	5	4	5	1	Ø	2
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	1	3	1	6	8	7	4	Ø	4
12	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	3	4	-1	Ø	Ø	Ø	1	1	3	5	3	3	3	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	7	1	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

BROMINE

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E 01$
INNER SCALE= $0.1E-01$
MAXIMUM VALUE = $0.960E 00$



BROMINE
(PERCENT) NUMBER OF READINGS

WIND FROM

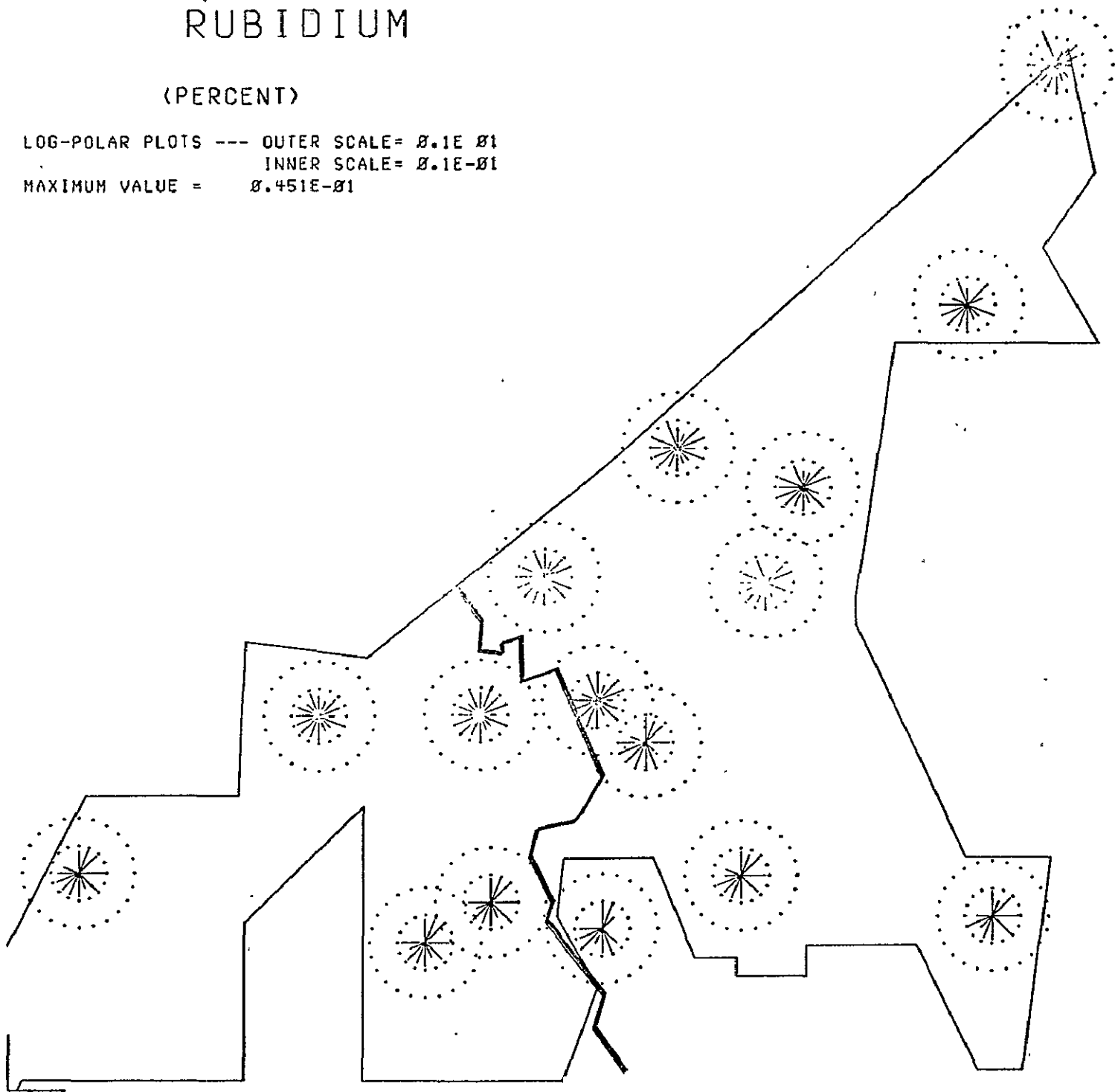
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	3	4	4	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	1	1	7	1	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

RUBIDIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.451E-01$



RUBIDIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

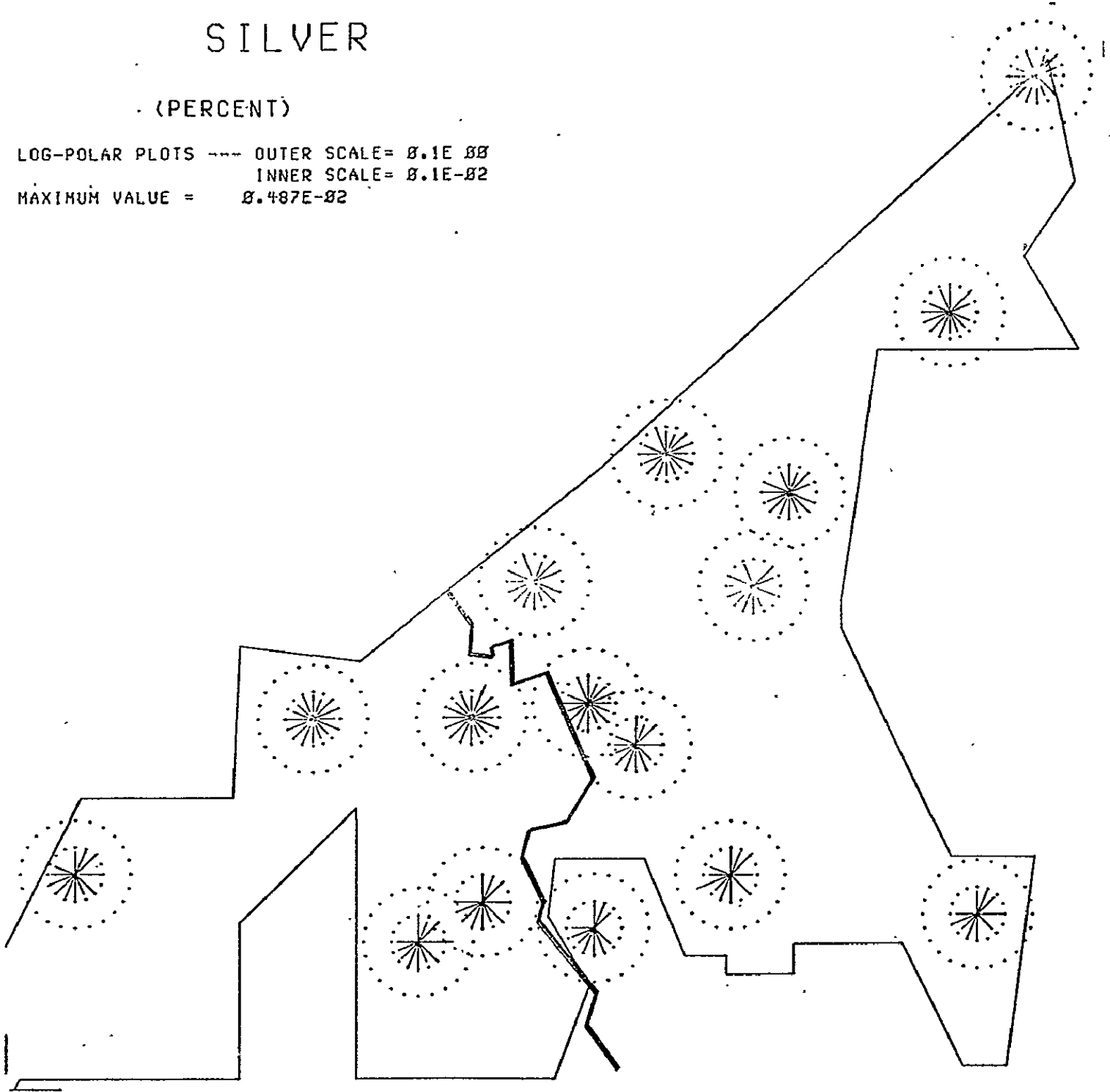
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	-	1	-1	4	3	-1	1	1	-1	1	2	6	2	2	-1	Ø	4
	3	-	3	2	2	Ø	3	Ø	1	-1	6	7	4	-1	2	Ø	Ø	Ø
	4	-	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	4	2	3	1	Ø	3
	5	-	1	2	3	Ø	3	Ø	1	Ø	4	5	1	1	-1	-1	Ø	Ø
	6	-	-1	Ø	4	-1	Ø	1	-1	-1	1	1	2	1	2	-1	Ø	2
	7	-	1	-1	5	3	-1	2	-1	-1	3	2	4	4	1	1	-1	3
	8	-	3	1	2	Ø	3	Ø	1	-1	6	7	4	-1	1	Ø	Ø	Ø
	9	-	1	1	3	Ø	3	Ø	-1	1	4	8	3	1	2	-1	Ø	Ø
	1Ø	-	1	-1	6	2	-1	1	-1	-1	2	1	6	5	4	1	Ø	4
	12	-	2	1	2	Ø	3	Ø	1	-1	6	6	4	1	2	-1	Ø	Ø
	13	-	2	2	-1	Ø	Ø	Ø	1	1	2	-1	1	1	1	Ø	Ø	Ø
	14	-	2	-1	4	Ø	3	Ø	1	Ø	5	6	-1	2	-1	Ø	Ø	Ø
	15	-	1	1	5	4	-1	2	-1	-1	1	2	4	4	4	1	-1	3
	17	-	1	-1	5	4	Ø	-1	1	-1	3	2	5	4	2	1	Ø	3
	2Ø	-	Ø	-1	3	2	-1	Ø	-1	-1	2	1	2	1	1	-1	Ø	3
	21	-	1	-1	5	1	Ø	1	1	-1	3	2	2	1	3	1	Ø	3

-1 INDICATES ESTIMATED VALUE

SILVER

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-08$
INNER SCALE = $0.1E-02$
MAXIMUM VALUE = $0.487E-02$



SILVER
(PERCENT) NUMBER OF READINGS

WIND FLY

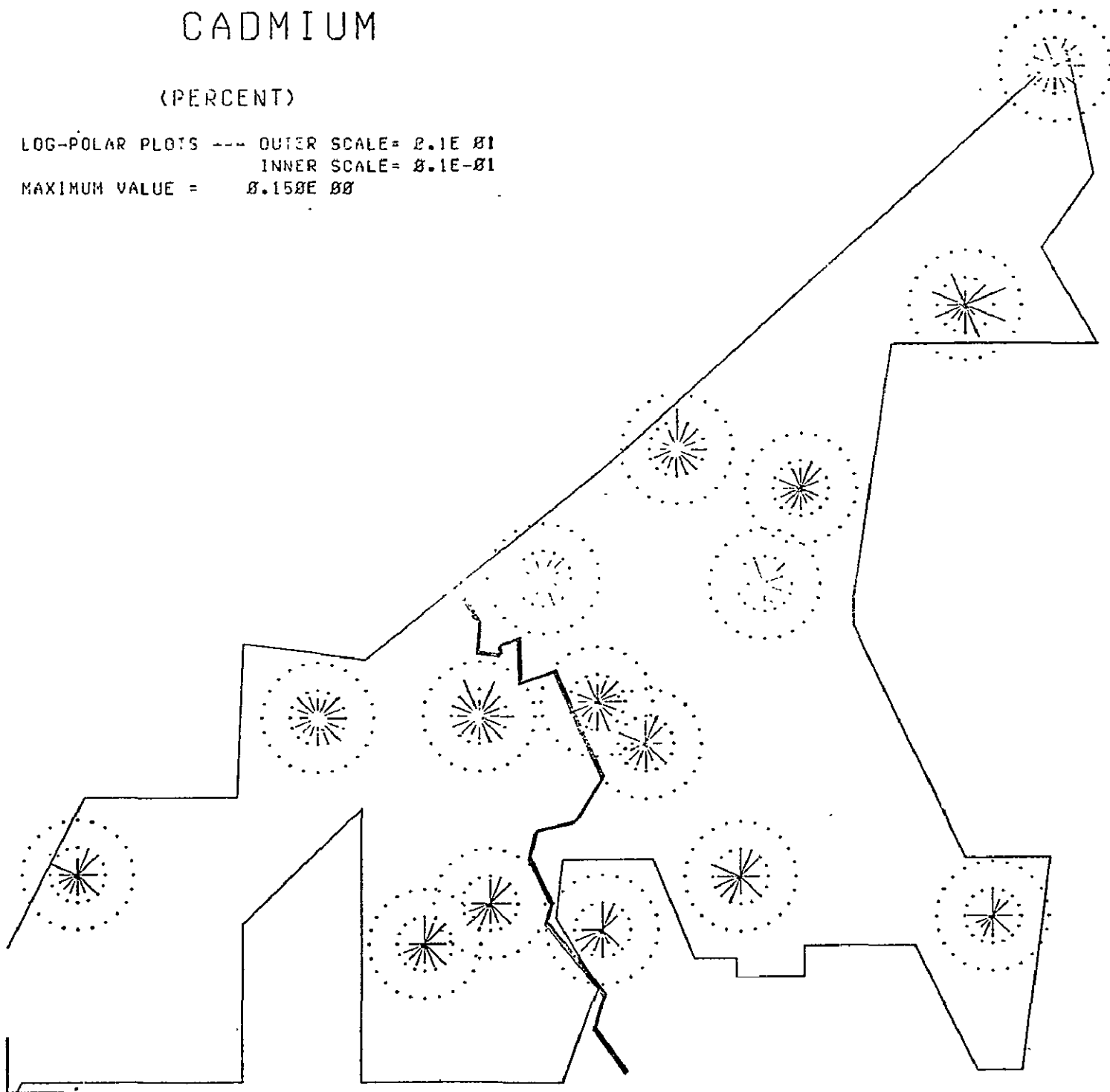
SITE	WIND FLY																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	-1	4	3	-1	-1	1	-1	1	2	3	-1	3	-1	Ø	2
3	-	2	1	2	Ø	2	Ø	1	-1	5	5	2	1	2	Ø	Ø	Ø
4	-	Ø	Ø	1	-1	Ø	2	Ø	-1	1	1	3	2	2	1	Ø	1
5	-	2	2	4	Ø	1	Ø	1	Ø	1	6	-1	1	-1	-1	Ø	Ø
6	-	1	Ø	2	-1	Ø	-1	-1	-1	-1	1	3	2	2	-1	Ø	1
7	-	1	-	1	3	-1	2	-1	1	3	1	1	1	2	-1	-1	3
8	-	1	-1	3	Ø	2	Ø	1	-1	5	3	1	-1	-1	Ø	Ø	Ø
9	-	1	-1	2	Ø	2	Ø	-1	1	3	6	1	-1	-1	-1	Ø	Ø
10	-	1	-1	6	2	-1	1	-1	-1	-1	1	6	4	3	1	Ø	3
12	-	1	2	2	Ø	1	Ø	1	-1	4	6	4	1	2	-1	Ø	Ø
13	-	2	2	-1	Ø	Ø	Ø	1	1	3	2	-1	1	-1	Ø	Ø	Ø
14	-	1	1	3	Ø	1	Ø	-1	Ø	2	2	-1	1	-1	Ø	Ø	Ø
15	-	-1	1	2	1	-1	2	-1	-1	1	2	4	4	4	1	-1	1
17	-	1	-1	1	-1	Ø	1	1	-1	1	1	4	4	2	1	Ø	2
20	-	Ø	-1	3	1	-1	Ø	1	-1	1	1	2	-1	2	-1	Ø	2
21	-	Ø	-1	5	2	Ø	1	1	-1	3	2	3	2	3	1	Ø	3

INDICATES ESTIMATED VALUE

CADMIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.150E 00$



CADMIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

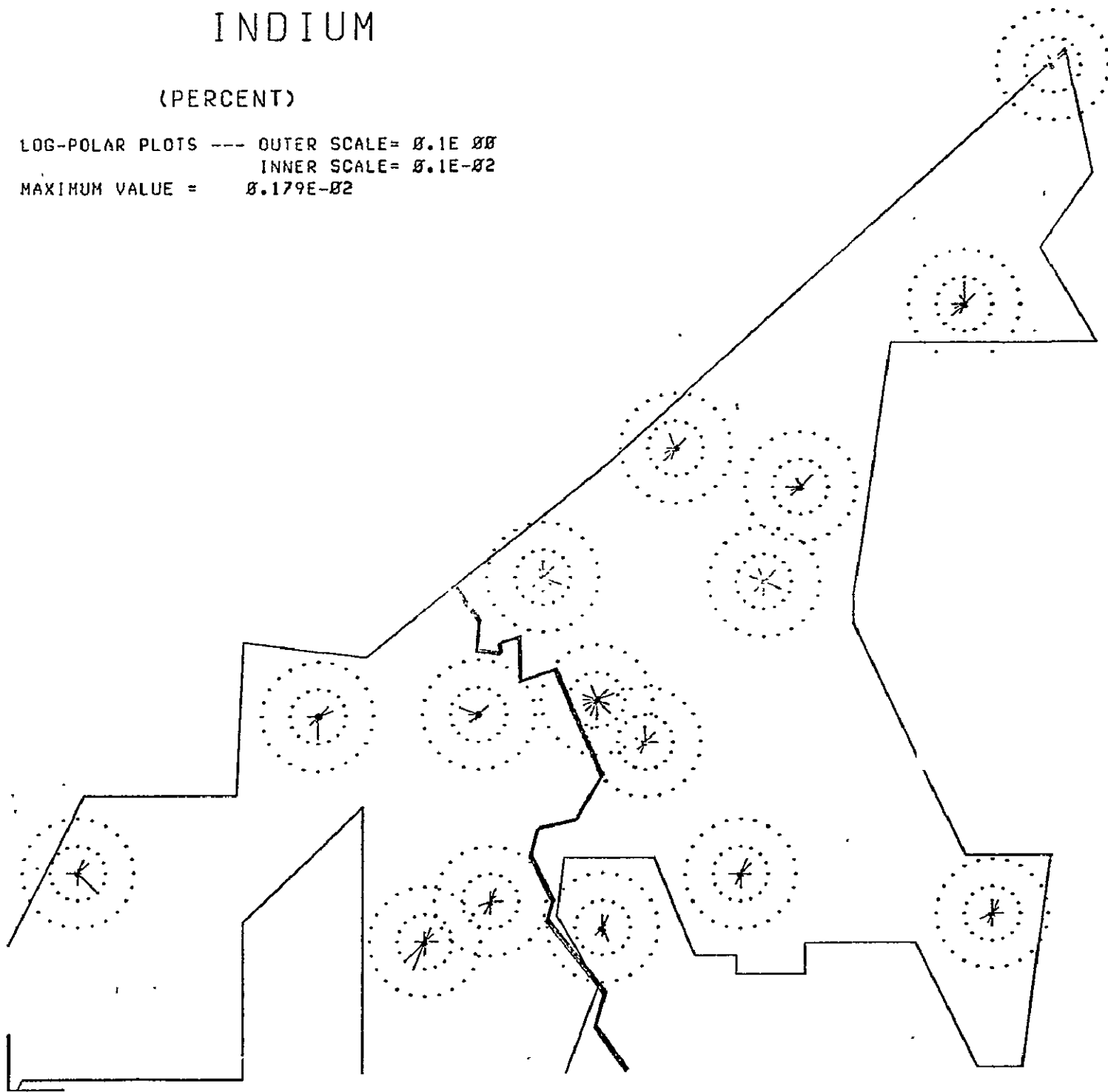
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
.....	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1	1	1	6	4	1	1	2	3	2	2	5	4	7	3	Ø	4
	3	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	3	Ø	Ø	Ø
	4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
	5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
	6	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
	7	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	3
	8	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	3	2	Ø	Ø	Ø
	9	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
	1Ø	1	1	8	3	1	2	1	2	3	1	6	8	7	4	Ø	5
	12	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
	13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
	14	4	1	4	Ø	3	Ø	1	Ø	8	7	2	3	3	Ø	Ø	Ø
	15	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
	17	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
	2Ø	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
	21	Ø	1	7	2	Ø	1	2	2	2	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

INDIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-08$
INNER SCALE = $0.1E-02$
MAXIMUM VALUE = $0.179E-02$



INDIUM

(PERCENT)

NUMBER OF READINGS

OBTAINED FROM

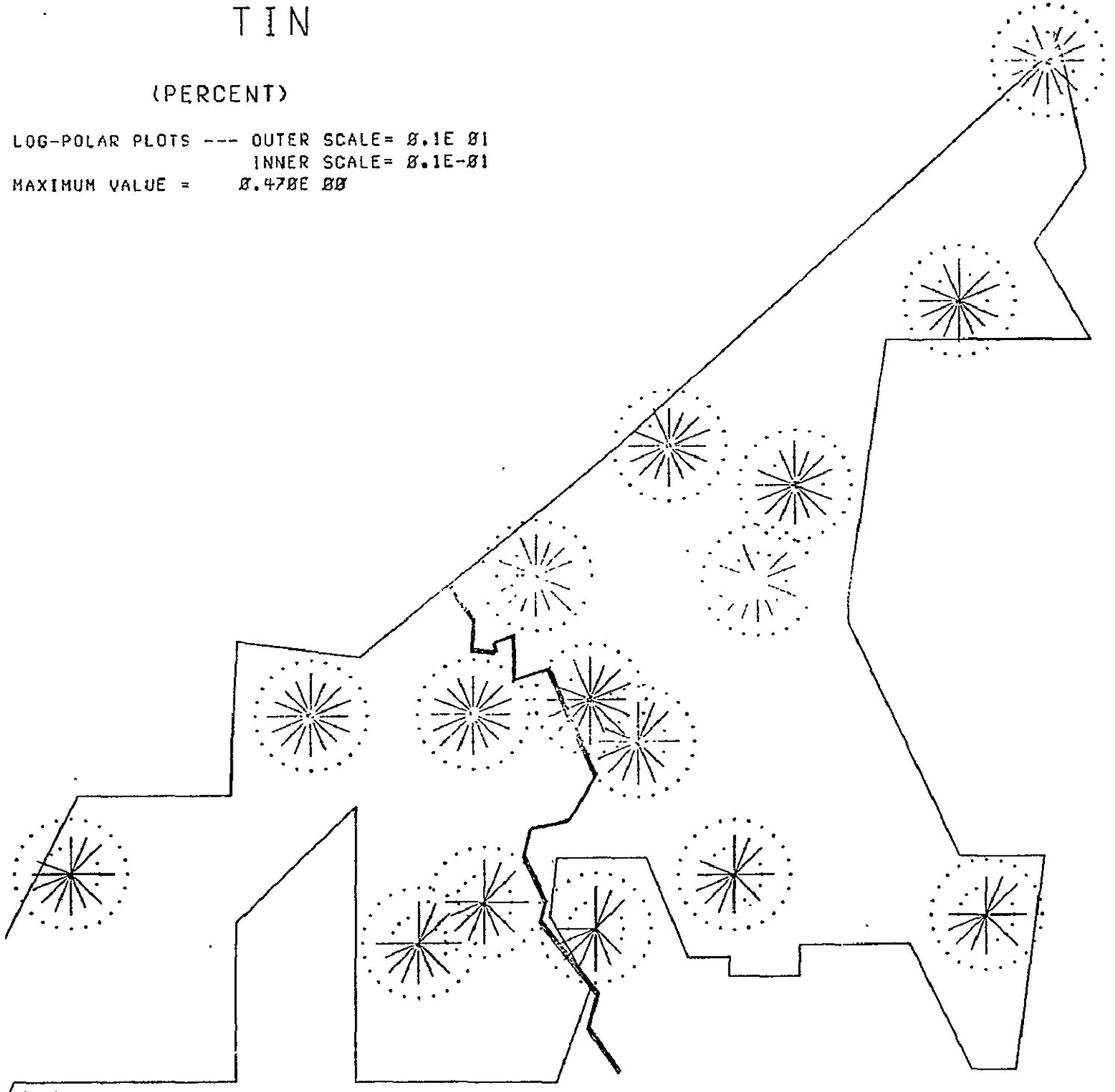
SITE	DIRECTION FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	-1	-1	3	2	-1	1	1	-1	1	1	4	2	1	1	Ø	2
3	-	2	2	1	Ø	2	Ø	-1	-1	1	2	-1	1	-1	Ø	Ø	Ø
4	-	Ø	Ø	1	-1	Ø	1	Ø	-1	1	-1	2	1	1	1	Ø	1
5	-	-1	1	1	Ø	1	Ø	-1	Ø	1	1	-1	-1	1	-1	Ø	Ø
6	-	1	Ø	1	-1	Ø	-1	-1	-1	-1	1	1	1	1	-1	Ø	1
7	-	-1	-1	4	1	-1	-	1	1	1	1	1	-1	1	-1	-1	-1
8	-	1	1	2	Ø	2	Ø	-1	-1	1	2	2	-1	1	Ø	Ø	Ø
9	-	1	-1	1	Ø	2	Ø	-1	-1	-1	2	1	-1	-1	-1	Ø	Ø
10	-	-1	-1	4	-1	-1	-1	-1	-1	-1	1	3	3	1	-1	Ø	1
12	-	-1	1	2	Ø	-1	Ø	1	-1	2	1	-1	-1	1	-1	Ø	Ø
13	-	1	3	-1	Ø	Ø	Ø	-1	1	2	2	1	1	-1	Ø	Ø	Ø
14	-	1	1	2	Ø	1	Ø	-1	Ø	3	3	-1	2	-1	Ø	Ø	Ø
15	-	-1	-1	3	-1	-1	-1	-1	-1	-1	1	2	-1	1	1	-1	-1
17	-	-1	-1	4	-1	Ø	-1	-1	-1	-1	-1	1	2	3	-1	Ø	1
20	-	Ø	-1	2	1	-1	Ø	-1	-1	-1	1	-1	-1	2	-1	Ø	2
21	-	1	-1	2	-1	Ø	1	1	-1	2	1	1	-1	1	-1	Ø	1

-1 INDICATES ESTIMATED VALUE

TIN

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.470E 00$



TIN
(PERCENT) NUMBER OF READINGS

WIND FROM

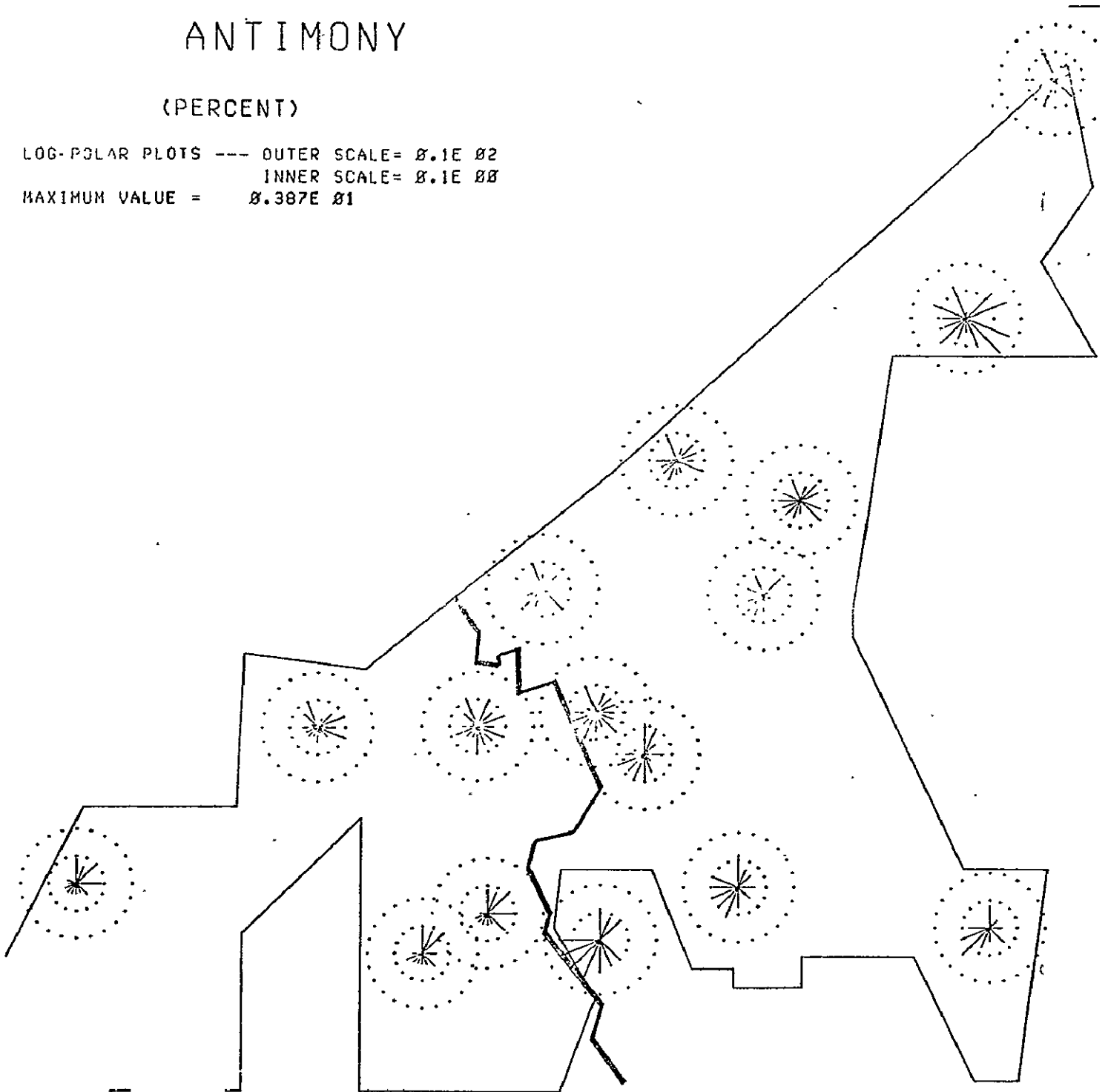
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	3	3	-1	1	1	-1	1	1	6	2	3	-1	Ø	4
3	2	2	3	Ø	3	Ø	1	-1	6	8	4	-1	2	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
5	2	2	3	Ø	2	Ø	1	Ø	4	6	2	1	-1	-1	Ø	Ø
6	1	Ø	5	2	Ø	1	-1	-1	1	1	4	1	3	1	Ø	3
7	1	-1	5	4	-1	2	-1	-1	3	1	4	4	3	1	-1	3
8	3	2	3	Ø	3	Ø	1	-1	6	6	4	-1	1	Ø	Ø	Ø
9	3	1	2	Ø	3	Ø	-1	1	5	8	3	2	2	-1	Ø	Ø
10	1	-1	6	3	-1	2	-1	-1	2	-1	6	4	4	1	Ø	4
12	2	2	3	Ø	3	Ø	1	-1	6	7	4	1	2	-1	Ø	Ø
13	2	3	1	Ø	Ø	Ø	1	1	3	4	1	1	1	Ø	Ø	Ø
14	3	1	3	Ø	3	Ø	1	Ø	6	6	1	3	1	Ø	Ø	Ø
15	1	-1	4	4	-1	2	-1	-1	1	1	4	4	4	1	-1	3
17	1	-1	5	4	Ø	1	1	-1	3	1	5	4	3	1	Ø	3
20	Ø	-1	4	2	-1	Ø	1	-1	1	1	2	2	3	-1	Ø	2
21	1	-1	4	2	Ø	1	1	-1	3	1	3	2	3	1	Ø	3

-1 INDICATES ESTIMATED VALUE

ANTIMONY

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.387E 01$



ANTIMONY

(PERCENT)

NUMBER OF READINGS

WIND FROM

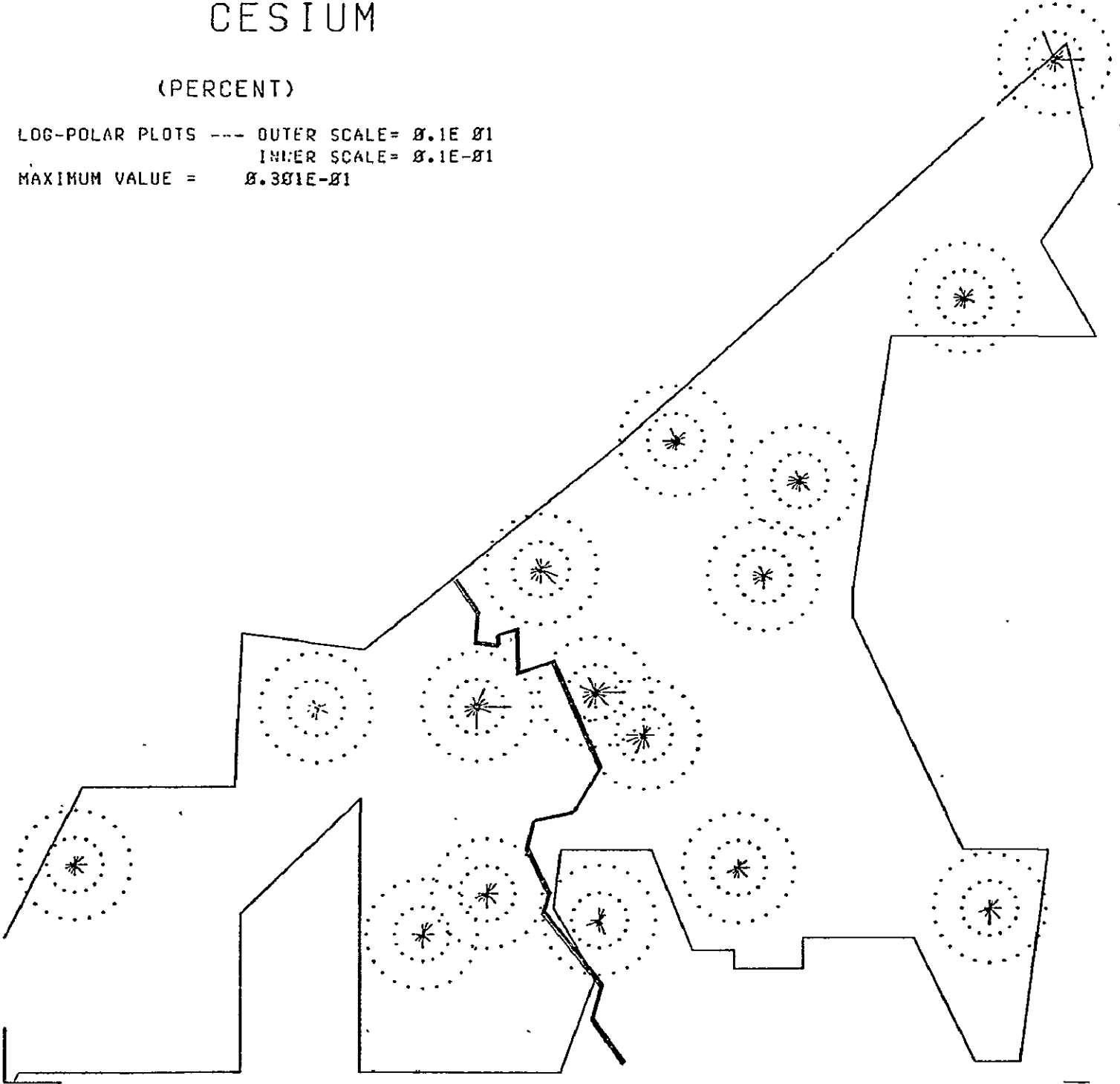
SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	5	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	5	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	5	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	-	1	1	7	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	3	2	Ø	Ø	Ø
9	-	3	1	4	Ø	3	Ø	1	2	8	9	3	5	4	-1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	5	2	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	6	7	2	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	2	2	3	4	7	7	4	1	3
17	-	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

CESIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.301E-01$



CESIUM
(PERCENT)

NUMBER OF READINGS

WIND FROM

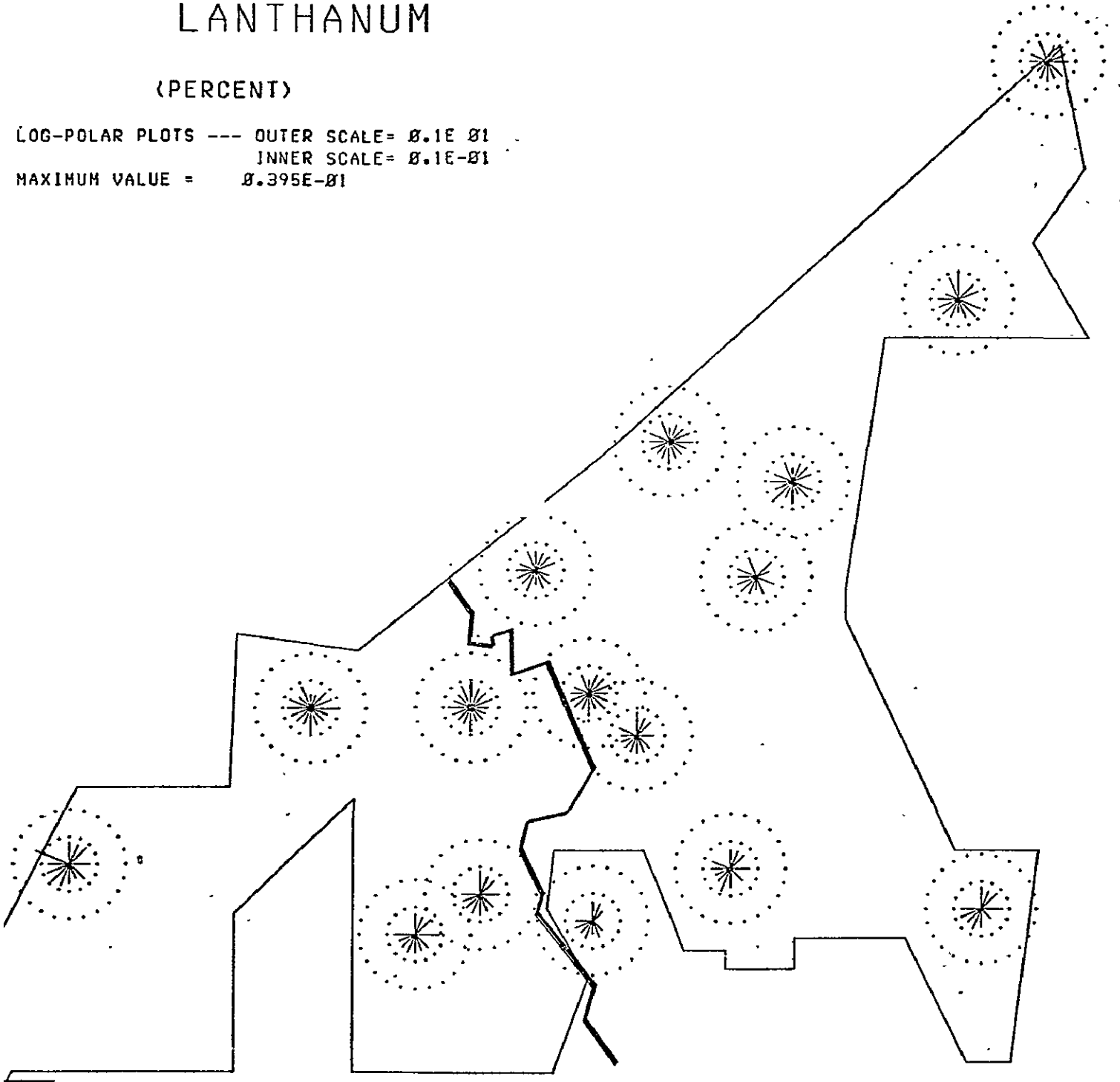
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	4	4	1	1	1	-1	1	2	6	2	3	1	Ø	4
3	3	2	3	Ø	3	Ø	1	-1	7	7	4	1	2	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
5	2	2	4	Ø	3	Ø	1	Ø	4	6	2	1	-1	-1	Ø	Ø
6	1	Ø	5	1	Ø	1	-1	-1	1	1	4	2	3	1	Ø	2
7	1	-1	6	4	-1	2	-1	-1	3	2	4	5	3	1	-1	3
8	3	2	3	Ø	3	Ø	1	-1	7	7	4	-1	1	Ø	Ø	Ø
9	3	1	3	Ø	3	Ø	-1	1	4	9	3	2	2	-1	Ø	Ø
1Ø	1	-1	6	3	-1	2	-1	-1	2	1	6	5	4	2	Ø	4
12	3	2	3	Ø	3	Ø	1	-1	6	8	4	1	2	-1	Ø	Ø
13	3	3	1	Ø	Ø	Ø	1	1	3	3	-1	1	1	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	6	-1	3	1	Ø	Ø	Ø
15	-1	1	5	4	1	2	-1	-1	2	1	4	4	4	1	-1	3
17	1	-1	5	4	Ø	1	1	-1	3	2	5	4	3	1	Ø	3
2Ø	Ø	-1	4	2	1	Ø	1	-1	2	2	2	2	3	-1	Ø	4
21	1	-1	5	2	Ø	1	1	-1	3	2	3	3	3	1	Ø	3

Ø -1 INDICATES ESTIMATED VALUE

LANTHANUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.395E-01$



LANTHANUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

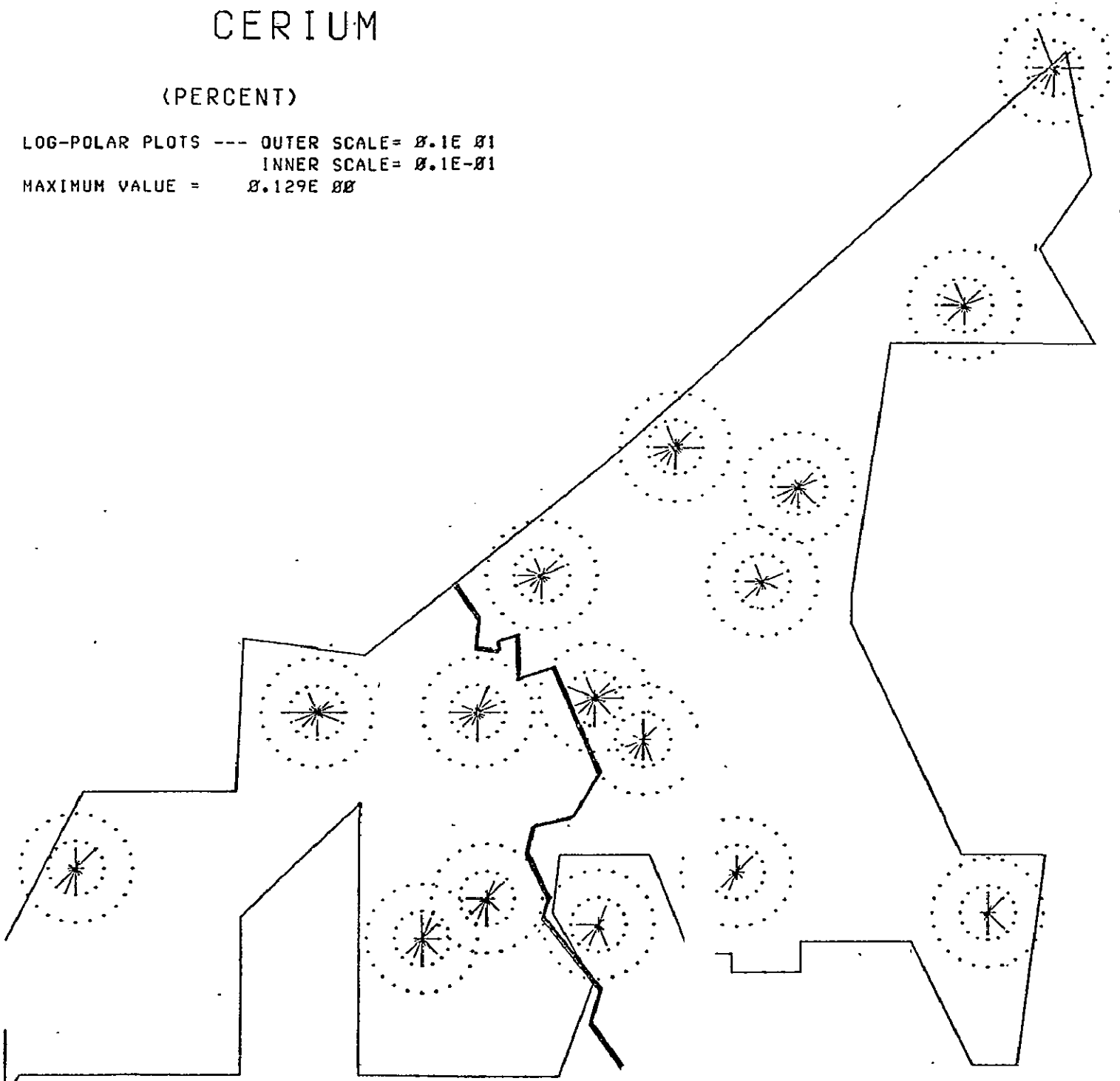
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1	-1	1	5	1	1	1	2	2	1	1	2	4	5	3	Ø	3
	3	2	3	3	Ø	1	Ø	1	3	3	6	6	4	4	Ø	Ø	Ø
	4	Ø	Ø	2	-1	Ø	1	Ø	1	-1	2	1	4	4	1	Ø	3
	5	2	3	3	Ø	2	Ø	1	Ø	4	4	4	3	2	1	Ø	Ø
	6	1	Ø	3	3	Ø	1	1	1	-1	1	2	4	5	-1	Ø	3
	7	-1	1	6	1	1	1	1	2	1	3	2	7	6	2	1	2
	8	2	3	2	Ø	2	Ø	1	3	3	7	6	4	2	Ø	Ø	Ø
	9	1	2	2	Ø	2	Ø	1	1	3	2	3	5	3	1	Ø	Ø
	10	-1	1	5	1	1	1	1	1	1	1	1	8	7	3	Ø	3
	12	2	3	3	Ø	2	Ø	1	3	3	8	6	3	2	1	Ø	Ø
	13	3	3	-1	Ø	Ø	Ø	-1	1	-1	6	4	4	4	Ø	Ø	Ø
	14	2	1	2	Ø	3	Ø	-1	Ø	3	4	2	2	2	Ø	Ø	Ø
	15	1	2	6	2	1	1	1	2	1	3	2	7	7	3	1	1
	17	-1	1	5	3	Ø	1	1	-1	1	3	3	6	5	3	Ø	3
	20	Ø	1	5	2	1	Ø	2	2	1	2	1	4	4	2	Ø	3
	21	1	1	7	1	Ø	-1	1	2	2	2	1	5	4	4	Ø	2

-1 INDICATES ESTIMATED VALUE

CERIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.129E 00$



CERIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW

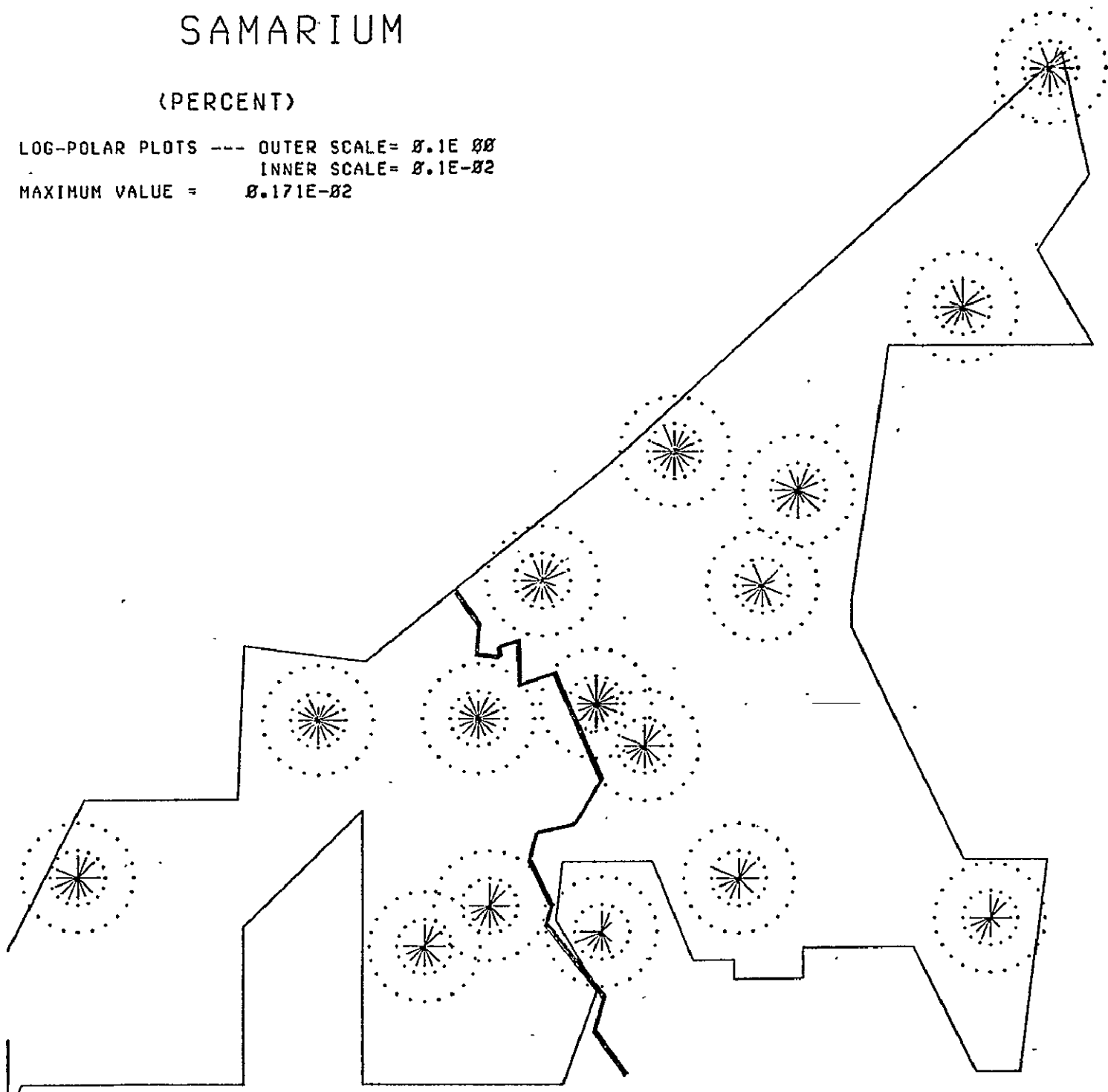
SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	-1	-1	2	1	1	-1	1	-1	1	1	3	2	-1	1	Ø	4
3	-	-1	2	1	Ø	-1	Ø	1	-1	1	5	2	-1	1	Ø	Ø	Ø
4	-	Ø	Ø	-1	1	Ø	1	Ø	-1	-1	1	2	-1	2	-1	Ø	2
5	-	1	-1	1	Ø	-1	Ø	-1	Ø	-1	1	2	-1	-1	-1	Ø	Ø
6	-	-1	Ø	4	1	Ø	-1	-1	-1	1	-1	2	-1	2	1	Ø	1
7	-	-1	-1	2	3	1	1	-1	-1	3	1	1	2	1	-1	-1	1
8	-	1	2	2	Ø	1	Ø	1	-1	1	3	2	-1	-1	Ø	Ø	Ø
9	-	1	-1	1	Ø	-1	Ø	-1	1	3	6	2	1	-1	-1	Ø	Ø
1Ø	-	-1	-1	4	1	1	-1	-1	-1	2	1	2	2	2	-1	Ø	1
12	-	2	-1	1	Ø	-1	Ø	-1	-1	1	5	3	-1	-1	-1	Ø	Ø
13	-	-1	1	-1	Ø	Ø	Ø	-1	1	-1	4	3	-1	2	Ø	Ø	Ø
14	-	2	-1	2	Ø	-1	Ø	1	Ø	2	-1	-1	-1	-1	Ø	Ø	Ø
15	-	-1	1	4	2	1	-1	-1	-1	1	1	1	1	2	1	-1	-1
17	-	-1	-1	5	1	Ø	-1	1	-1	2	2	1	2	1	-1	Ø	-1
2Ø	-	Ø	-1	1	-1	1	Ø	-1	-1	1	1	2	1	1	-1	Ø	2
21	-	Ø	-1	2	1	Ø	-1	-1	-1	1	1	1	1	1	1	Ø	1

-1 INDICATES ESTIMATED VALUE

SAMARIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-08$
INNER SCALE = $0.1E-02$
MAXIMUM VALUE = $0.171E-02$



SAMARIUM

<PERCENT>

NUMBER OF READINGS

WIND FROM

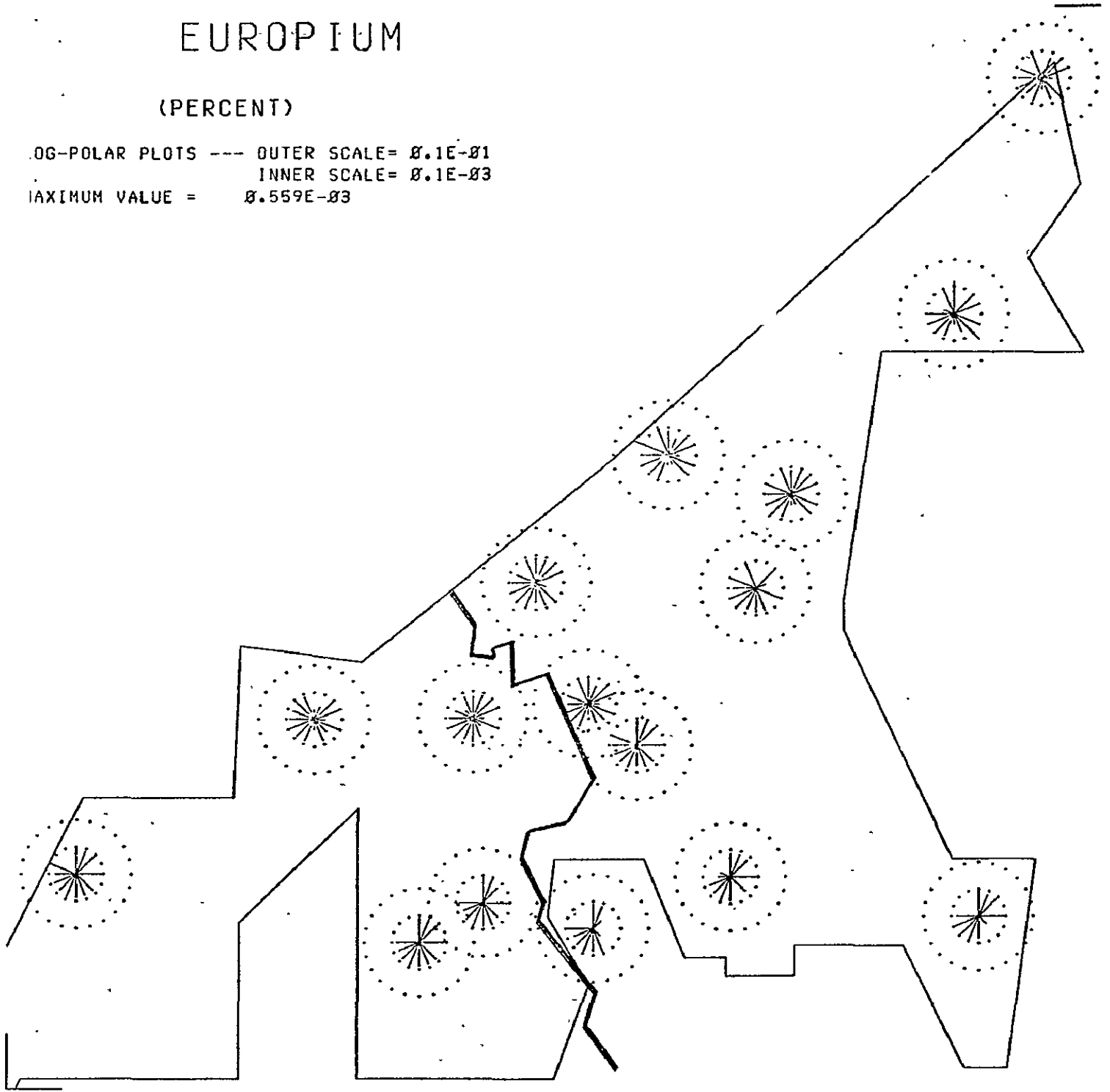
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1 -	1	1	6	3	1	1	1	2	1	2	5	4	4	3	Ø	4
3 -	2	3	3	Ø	3	Ø	1	3	5	7	6	4	4	Ø	Ø	Ø
4 -	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	4	1	Ø	3
5 -	3	3	4	Ø	3	Ø	1	Ø	3	4	4	4	2	1	Ø	Ø
6 -	1	Ø	3	3	Ø	1	-1	1	-1	1	3	4	4	-1	Ø	3
7 -	-1	1	7	3	1	1	1	2	1	3	3	7	6	2	1	3
8 -	3	3	3	Ø	3	Ø	1	3	4	7	6	4	2	Ø	Ø	Ø
9 -	3	2	3	Ø	3	Ø	1	2	4	5	4	5	4	1	Ø	Ø
1Ø -	1	1	7	3	1	1	1	1	1	1	4	8	8	3	Ø	4
12 -	2	3	3	Ø	3	Ø	1	3	5	7	6	3	3	1	Ø	Ø
13 -	3	4	-1	Ø	Ø	Ø	-1	1	2	6	4	4	4	Ø	Ø	Ø
14 -	2	1	3	Ø	3	Ø	-1	Ø	4	5	2	3	3	Ø	Ø	Ø
15 -	1	2	7	3	1	1	1	2	2	3	4	7	6	3	1	2
17 -	-1	1	6	3	Ø	1	1	-1	1	3	3	6	5	3	Ø	3
2Ø -	Ø	1	6	2	1	Ø	2	2	1	2	1	4	5	2	Ø	4
21 -	1	1	7	1	Ø	-1	2	2	2	2	2	6	4	4	Ø	2

-1 INDICATES ESTIMATED VALUE

EUROPIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-03$
MAXIMUM VALUE = $0.559E-03$



EUROPIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

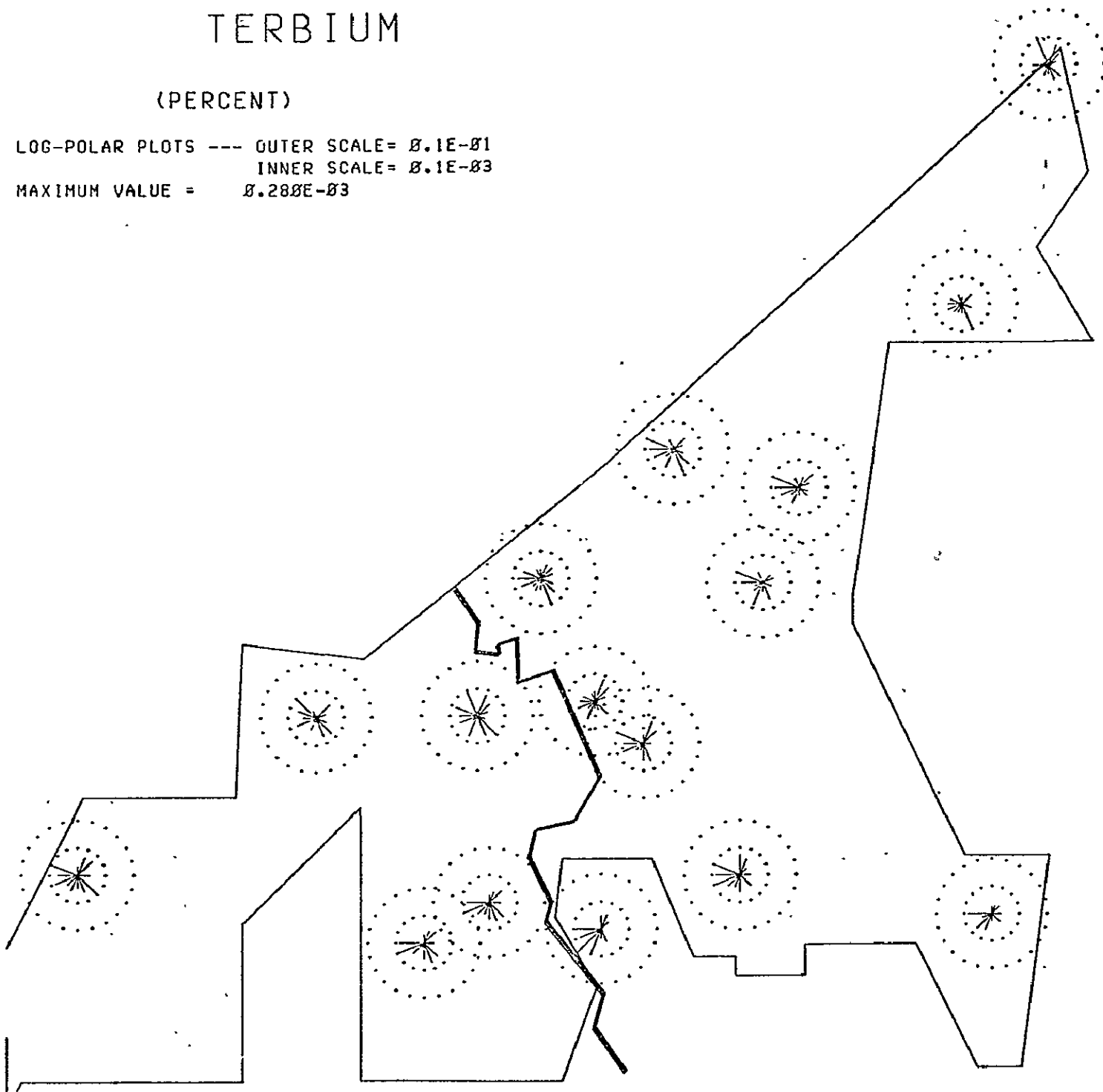
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSH	SW	WSW	W	WNW	NW	NNW
1	1	1	6	3	-1	1	2	1	-1	2	5	3	6	3	Ø	4
3	3	3	2	Ø	3	Ø	1	3	4	7	6	4	4	Ø	Ø	Ø
4	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	4	1	Ø	3
5	2	3	4	Ø	3	Ø	1	Ø	4	5	3	2	1	-1	Ø	Ø
6	1	Ø	3	3	Ø	1	1	1	-1	1	4	3	4	-1	Ø	3
7	-1	1	7	3	-1	1	1	2	-1	3	3	7	5	2	1	3
8	3	3	3	Ø	3	Ø	1	3	5	7	6	3	2	Ø	Ø	Ø
9	2	1	3	Ø	3	Ø	1	2	2	5	4	5	3	1	Ø	Ø
10	1	1	7	3	-1	1	1	1	-1	1	5	8	7	3	Ø	4
12	2	3	3	Ø	3	Ø	1	2	4	7	6	3	3	1	Ø	Ø
13	3	3	-1	Ø	Ø	Ø	-1	1	2	5	4	1	2	Ø	Ø	Ø
14	2	1	3	Ø	3	Ø	-1	Ø	3	5	2	3	3	Ø	Ø	Ø
15	1	2	7	3	-1	1	-1	2	1	3	4	7	5	3	-1	2
17	1	1	6	3	Ø	1	1	-1	-1	3	4	6	4	3	Ø	3
20	Ø	1	6	2	-1	Ø	2	2	-1	2	1	4	4	2	Ø	4
21	1	1	7	1	Ø	-1	2	2	2	2	2	6	5	4	Ø	2

-1 INDICATES ESTIMATED VALUE

TERBIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-03$
MAXIMUM VALUE = $0.280E-03$



TERBIUM
(PERCENT)

NUMBER OF READINGS

WIND FROM

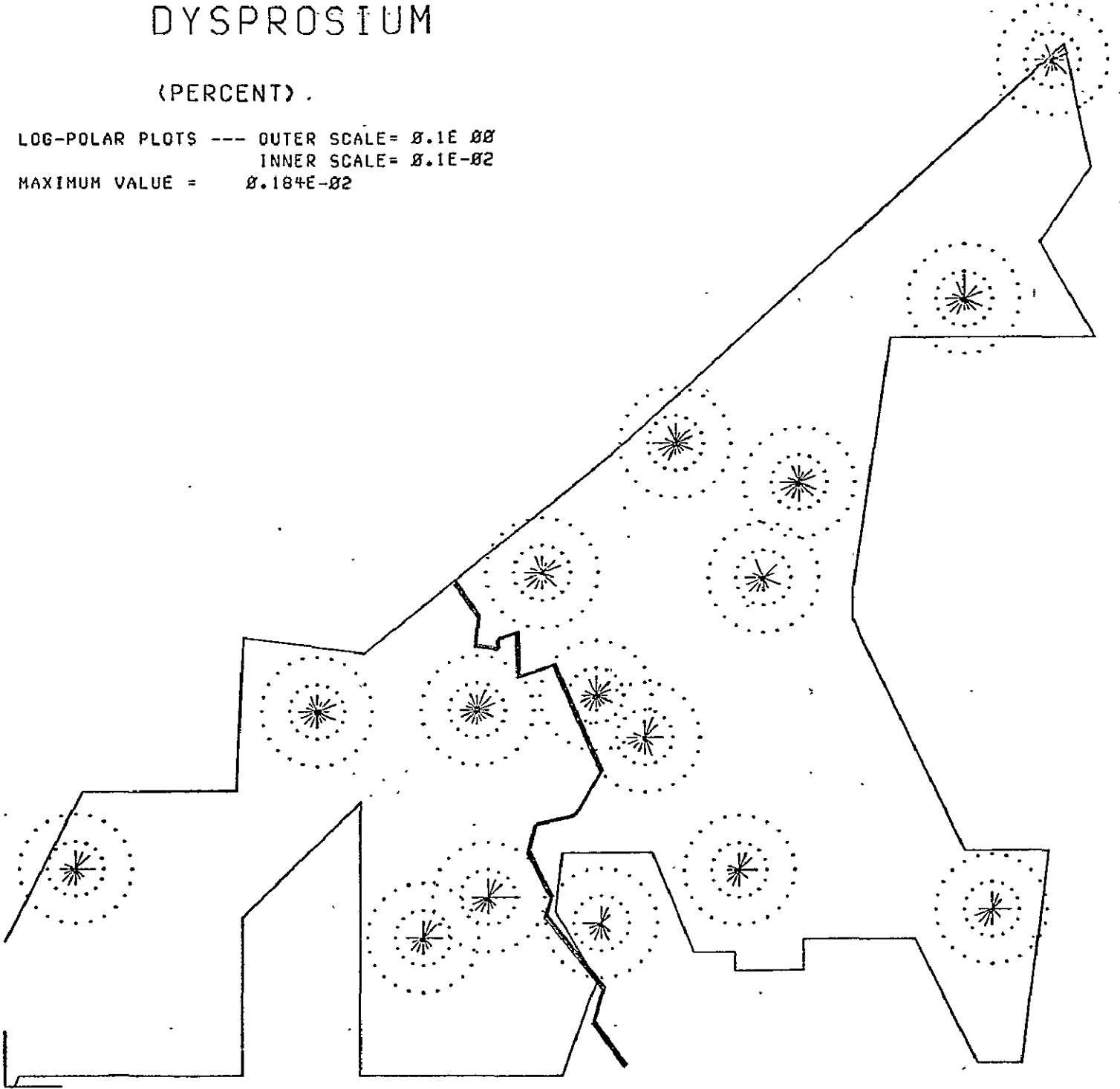
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	-	1	1	5	4	-1	-1	2	1	1	1	6	4	6	1	Ø	4
	3	-	2	2	3	Ø	2	Ø	2	2	8	8	6	4	3	Ø	Ø	Ø
	4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	3	6	2	Ø	3
	5	-	3	3	4	Ø	3	Ø	2	Ø	5	7	3	2	2	1	Ø	Ø
	6	-	1	Ø	3	-1	Ø	1	-1	1	1	1	4	4	4	1	Ø	2
	7	-	1	-1	8	4	-1	2	1	2	3	2	4	6	5	2	1	2
	8	-	3	2	4	Ø	3	Ø	2	3	8	6	6	1	1	Ø	Ø	Ø
	9	-	2	2	4	Ø	3	Ø	-1	2	7	8	4	5	4	1	Ø	Ø
	10	-	-1	-1	8	3	-1	2	1	1	2	1	6	8	8	4	Ø	4
	12	-	2	3	3	Ø	3	Ø	2	3	7	10	5	2	1	1	Ø	Ø
	13	-	2	4	1	Ø	Ø	Ø	-1	1	3	5	1	2	3	Ø	Ø	Ø
	14	-	3	1	4	Ø	2	Ø	1	Ø	5	4	1	1	2	Ø	Ø	Ø
	15	-	1	1	7	4	-1	2	1	2	-1	1	3	5	8	2	-1	2
	17	-	-1	1	7	4	Ø	1	1	-1	3	3	5	6	5	4	Ø	3
	20	-	Ø	1	4	2	-1	Ø	2	1	2	1	2	3	1	-1	Ø	4
	21	-	1	1	6	2	Ø	1	2	2	3	2	3	6	5	4	Ø	3

Ø INDICATES ESTIMATED VALUE

DYSPROSIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-08$
INNER SCALE = $0.1E-02$
MAXIMUM VALUE = $0.184E-02$



DYSPROSIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

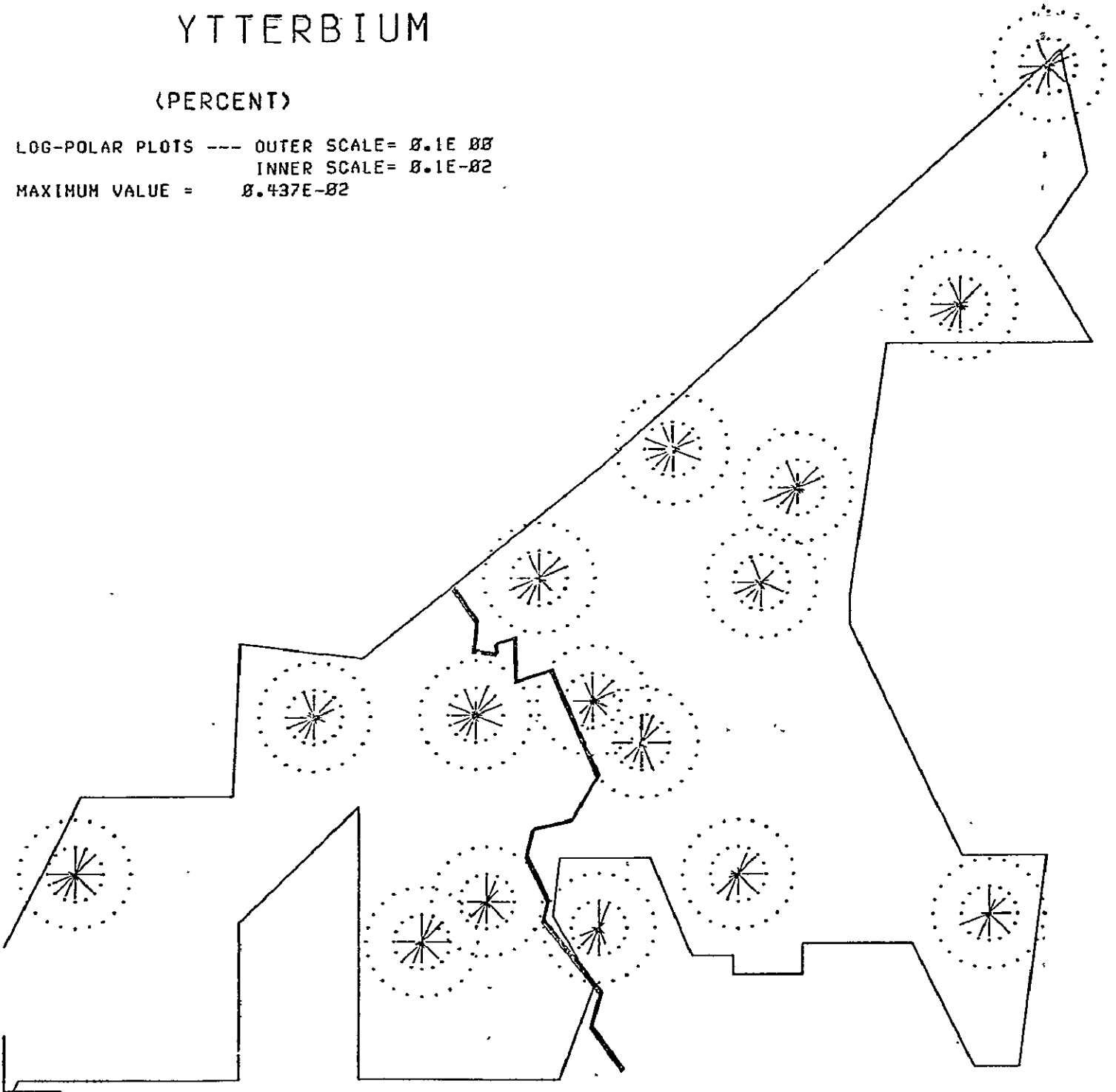
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	4	3	-1	1	-1	-1	-1	1	5	2	2	-1	Ø	3
3	3	2	2	Ø	3	Ø	-1	-1	3	6	4	1	2	Ø	Ø	Ø
4	Ø	Ø	2	-1	Ø	1	Ø	-1	1	1	4	3	3	-1	Ø	3
5	1	2	3	Ø	3	Ø	-1	Ø	2	5	2	-1	-1	-1	Ø	Ø
6	1	Ø	4	3	Ø	1	1	-1	-1	1	4	2	3	-1	Ø	3
7	1	-1	5	3	-1	1	-1	-1	1	2	3	5	3	-1	-1	3
8	3	2	2	Ø	3	Ø	-1	-1	3	5	4	-1	1	Ø	Ø	Ø
9	3	1	2	Ø	3	Ø	-1	1	2	6	3	2	2	-1	Ø	Ø
10	1	-1	5	3	-1	1	-1	-1	-1	1	5	5	4	-1	Ø	4
12	3	2	2	Ø	3	Ø	-1	-1	3	6	4	-1	2	-1	Ø	Ø
13	3	3	-1	Ø	Ø	Ø	-1	1	2	5	4	1	2	Ø	Ø	Ø
14	2	1	3	Ø	3	Ø	-1	Ø	3	4	1	3	1	Ø	Ø	Ø
15	1	1	5	3	-1	1	-1	-1	1	1	4	3	4	-1	-1	3
17	1	-1	4	3	Ø	1	1	-1	1	2	4	4	3	-1	Ø	3
20	Ø	-1	4	2	-1	Ø	1	-1	-1	2	1	2	3	-1	Ø	4
21	1	-1	4	1	Ø	-1	1	-1	1	2	2	2	3	-1	Ø	3

-1 INDICATES ESTIMATED VALUE.

YTTERBIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-08$
INNER SCALE = $0.1E-02$
MAXIMUM VALUE = $0.437E-02$



YTTERBIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

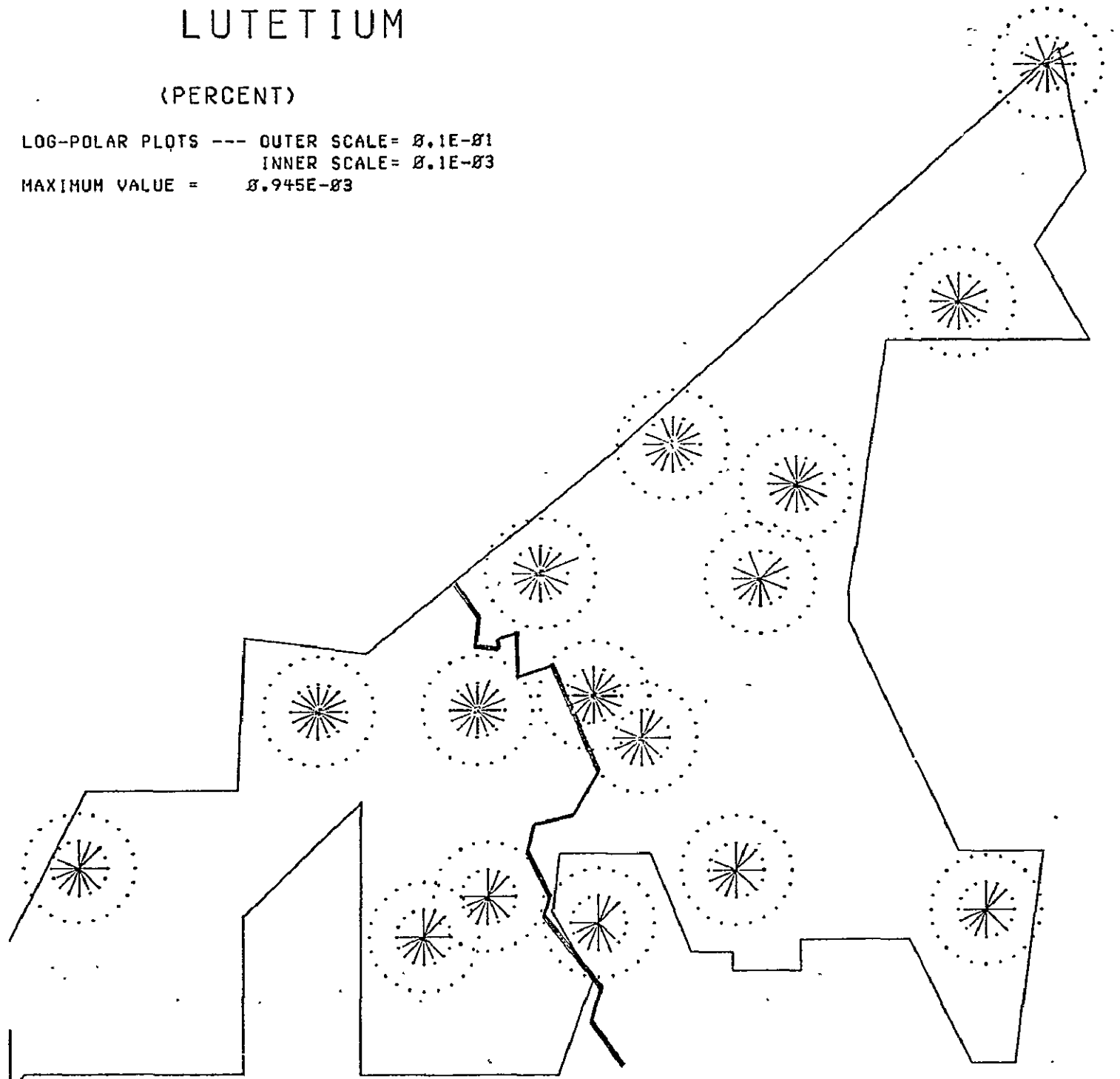
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	4	4	-1	1	1	-1	1	2	4	-1	1	-1	Ø	3
3	3	2	2	Ø	3	Ø	1	-1	6	7	4	-1	2	Ø	Ø	Ø
4	Ø	Ø	1	-1	Ø	2	Ø	-1	1	1	4	3	3	-1	Ø	3
5	-1	2	2	Ø	2	Ø	1	Ø	4	4	2	1	-1	-1	Ø	Ø
6	1	Ø	2	-1	Ø	-1	-1	-1	1	1	3	1	2	-1	Ø	2
7	1	-1	5	3	-1	1	-1	-1	2	2	3	5	3	-1	-1	3
8	1	2	3	Ø	3	Ø	1	-1	6	5	4	-1	1	Ø	Ø	Ø
9	2	1	2	Ø	3	Ø	-1	1	5	5	1	-1	2	-1	Ø	Ø
10	1	-1	4	3	-1	2	-1	-1	2	1	5	5	4	1	Ø	4
12	1	2	2	Ø	3	Ø	1	-1	6	5	3	1	2	-1	Ø	Ø
13	3	2	-1	Ø	Ø	Ø	-1	1	3	3	1	1	1	Ø	Ø	Ø
14	3	1	2	Ø	3	Ø	1	Ø	6	4	-1	2	-1	Ø	Ø	Ø
15	1	1	5	3	-1	2	-1	-1	1	2	3	4	4	1	-1	3
17	1	-1	3	3	Ø	-1	-1	-1	2	2	5	3	2	-1	Ø	3
20	Ø	-1	3	2	-1	Ø	1	-1	2	1	-1	2	2	-1	Ø	2
21	1	-1	5	2	Ø	-1	1	-1	2	2	2	1	3	-1	Ø	3

— -1 INDICATES ESTIMATED VALUE

LUTETIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-03$
MAXIMUM VALUE = $0.945E-03$



LUTETIUM

(PERCENT)

NUMBER OF READINGS

WIND FROM

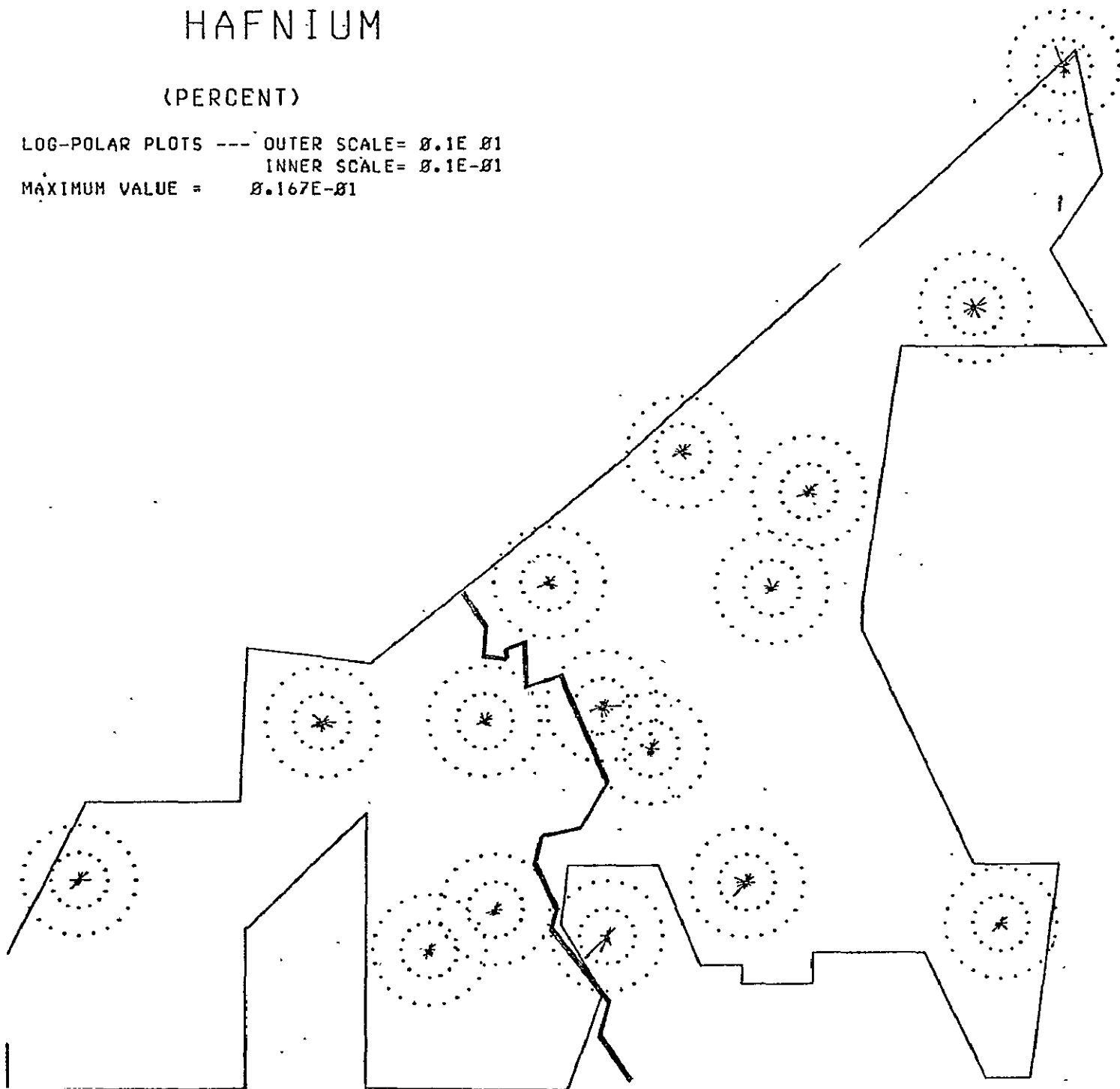
SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	-1	3	4	-1	1	1	-1	1	1	6	1	3	-1	Ø	4
3	-	3	2	2	Ø	3	Ø	1	-1	6	8	4	-1	2	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
5	-	1	2	4	Ø	2	Ø	1	Ø	4	6	2	1	-1	-1	Ø	Ø
6	-	1	Ø	3	2	Ø	1	-1	-1	1	1	4	1	3	1	Ø	2
7	-	1	-1	6	3	-1	2	-1	-1	3	2	4	5	3	1	-1	2
8	-	3	2	3	Ø	3	Ø	1	-1	6	7	4	-1	1	Ø	Ø	Ø
9	-	3	1	3	Ø	3	Ø	-1	1	5	7	3	2	2	-1	Ø	Ø
1Ø	-	1	-1	6	3	-1	2	-1	-1	2	1	6	5	4	1	Ø	4
12	-	2	2	3	Ø	3	Ø	1	-1	6	7	4	1	2	-1	Ø	Ø
13	-	2	3	1	Ø	Ø	Ø	1	1	3	2	1	1	1	Ø	Ø	Ø
14	-	2	1	4	Ø	3	Ø	1	Ø	6	6	-1	2	-1	Ø	Ø	Ø
15	-	1	1	5	4	-1	2	-1	-1	1	2	4	3	4	1	-1	3
17	-	1	-1	5	4	Ø	1	1	-1	3	2	5	4	3	1	Ø	3
2Ø	-	Ø	-1	4	2	-1	Ø	1	-1	2	2	2	1	1	-1	Ø	2
21	-	1	-1	5	2	Ø	1	1	-1	3	2	2	2	3	1	Ø	3

-1 INDICATES ESTIMATED VALUE

HAFNIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.167E-01$



HAFNIUM
(PERCENT)

NUMBER OF READINGS

WIND FROM

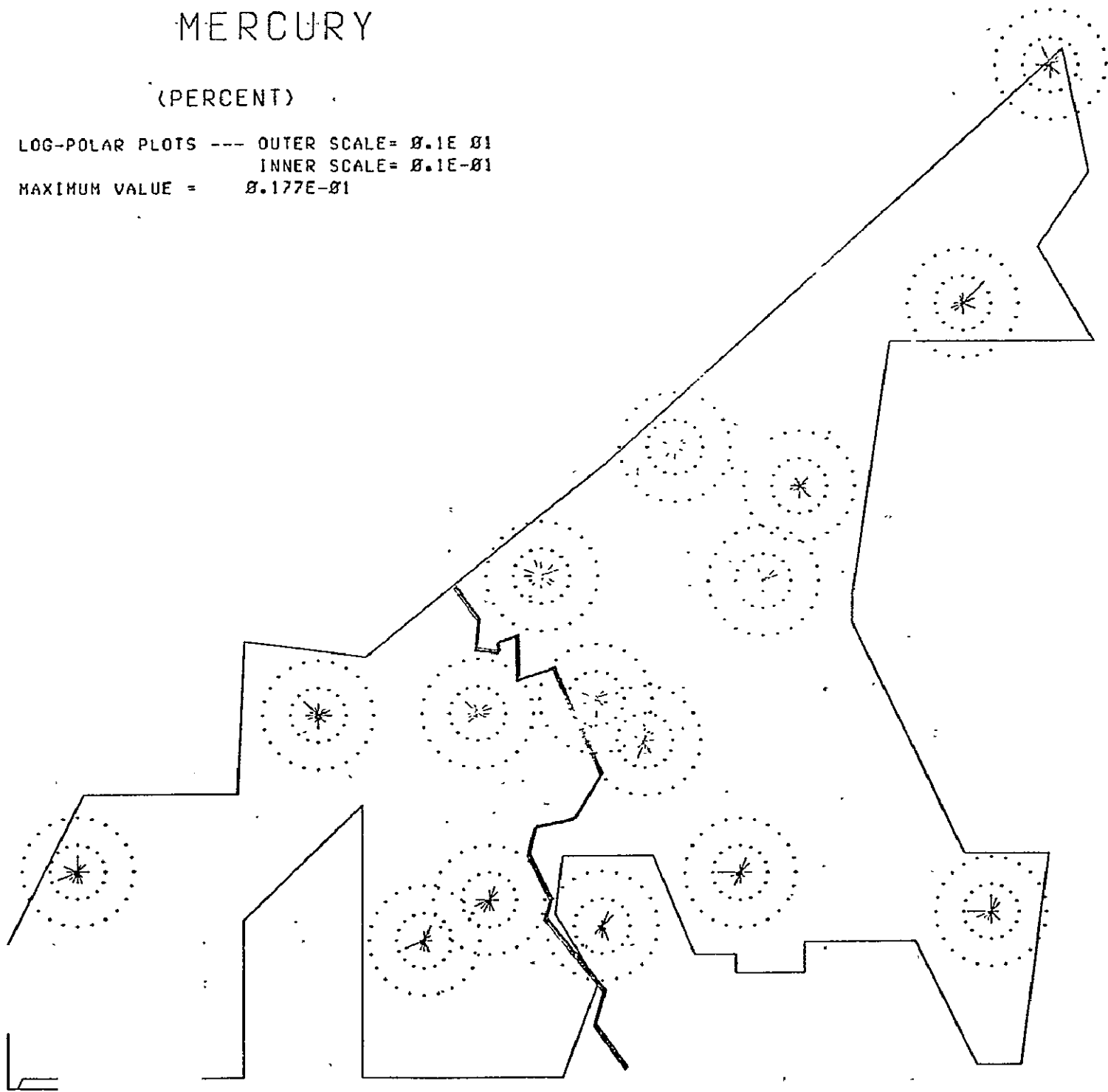
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	3	7	2	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	7	4	4	2	1	Ø	Ø
6	1	Ø	5	2	Ø	1	-1	1	1	1	4	4	5	1	Ø	3
7	1	1	7	4	1	2	1	2	4	3	4	7	6	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	8	5	3	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	8	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	-1	2	1	1	2	1	6	8	8	4	Ø	4
12	3	3	4	Ø	3	Ø	2	2	7	11	5	3	3	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	3	3	1	1	1	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	6	2	3	3	Ø	Ø	Ø
15	1	1	7	4	-1	2	1	2	1	3	4	6	8	4	1	2
17	1	1	7	4	Ø	1	1	-1	3	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	-1	Ø	2	2	3	1	2	4	4	2	Ø	4
21	1	1	7	2	Ø	1	2	2	3	2	3	6	5	4	Ø	3

-1 INDICATES ESTIMATED VALUE

MERCURY

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-01$
INNER SCALE = $0.1E-01$
MAXIMUM VALUE = $0.177E-01$



MERCURY

(PERCENT)

NUMBER OF READINGS

WIND FROM

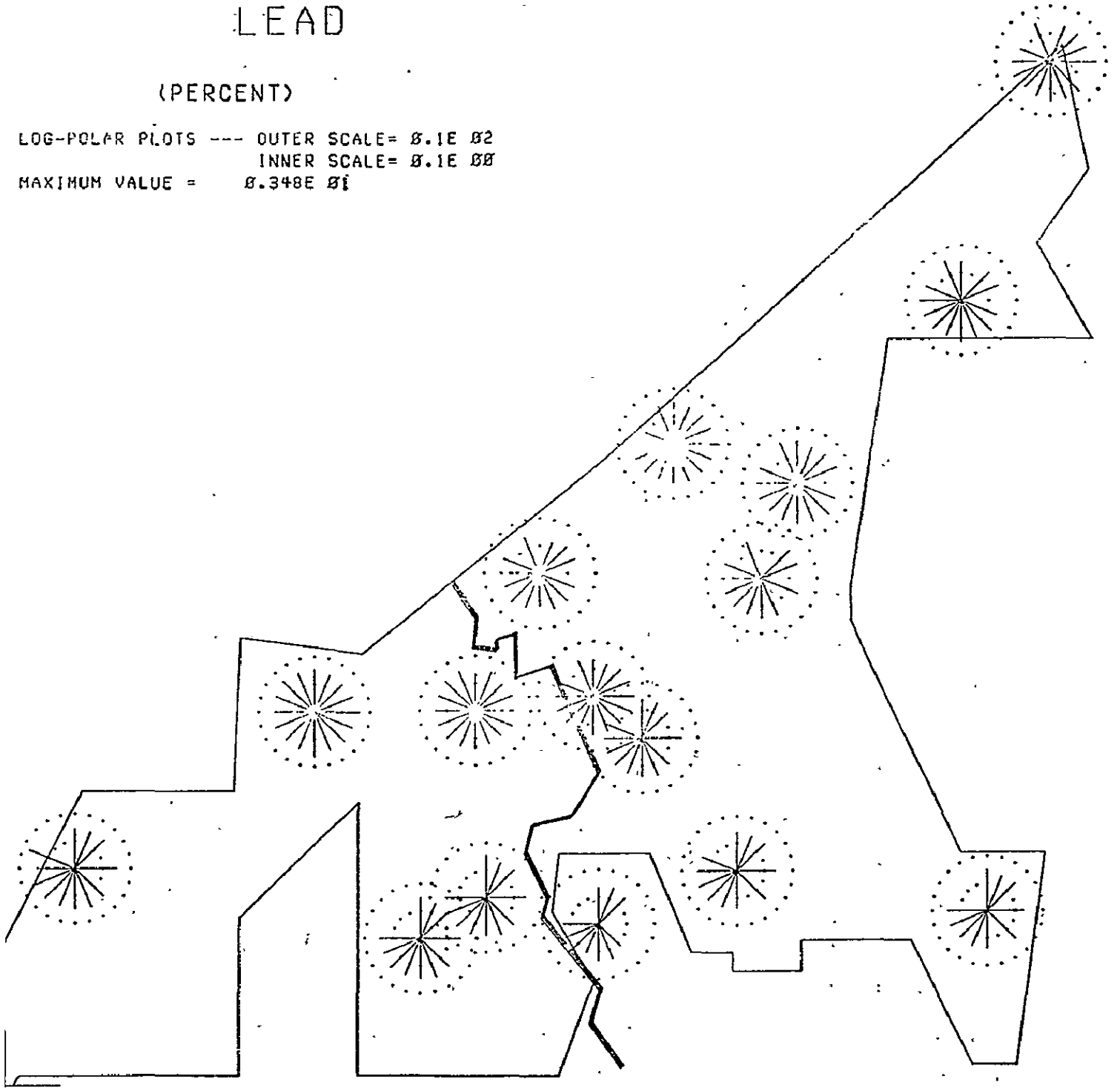
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	5	4	-1	1	1	-1	2	1	6	4	7	3	0	3
3	3	3	3	0	3	0	2	3	8	11	6	4	3	2	0	2
4	0	0	2	1	0	2	0	1	1	1	5	4	4	2	0	3
5	2	3	5	0	3	0	2	0	4	7	4	2	2	1	0	0
6	1	0	4	2	0	1	-1	-1	1	1	3	3	4	1	0	2
7	1	-1	6	4	1	2	1	2	4	2	4	7	6	2	1	3
8	3	2	3	0	3	0	2	3	6	8	6	2	2	0	0	0
9	3	1	3	0	3	0	-1	2	5	9	4	3	3	-1	0	0
10	1	1	8	3	-1	2	1	-1	3	1	6	8	6	2	0	4
12	3	3	4	0	2	0	2	3	7	9	5	3	3	1	0	0
13	2	4	1	0	0	0	1	1	3	4	2	1	2	0	0	0
14	3	1	4	0	3	0	1	0	6	7	1	3	3	0	0	0
15	1	1	6	4	1	2	-1	1	2	3	4	7	7	4	1	2
17	1	-1	7	4	0	1	1	-1	3	2	5	5	5	4	0	3
20	0	1	5	2	-1	0	2	1	3	2	2	4	4	2	0	4
21	1	1	7	2	0	1	2	1	3	2	3	6	5	4	0	3

-1 INDICATES ESTIMATED VALUE

LEAD

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 08$
MAXIMUM VALUE = $0.348E 01$



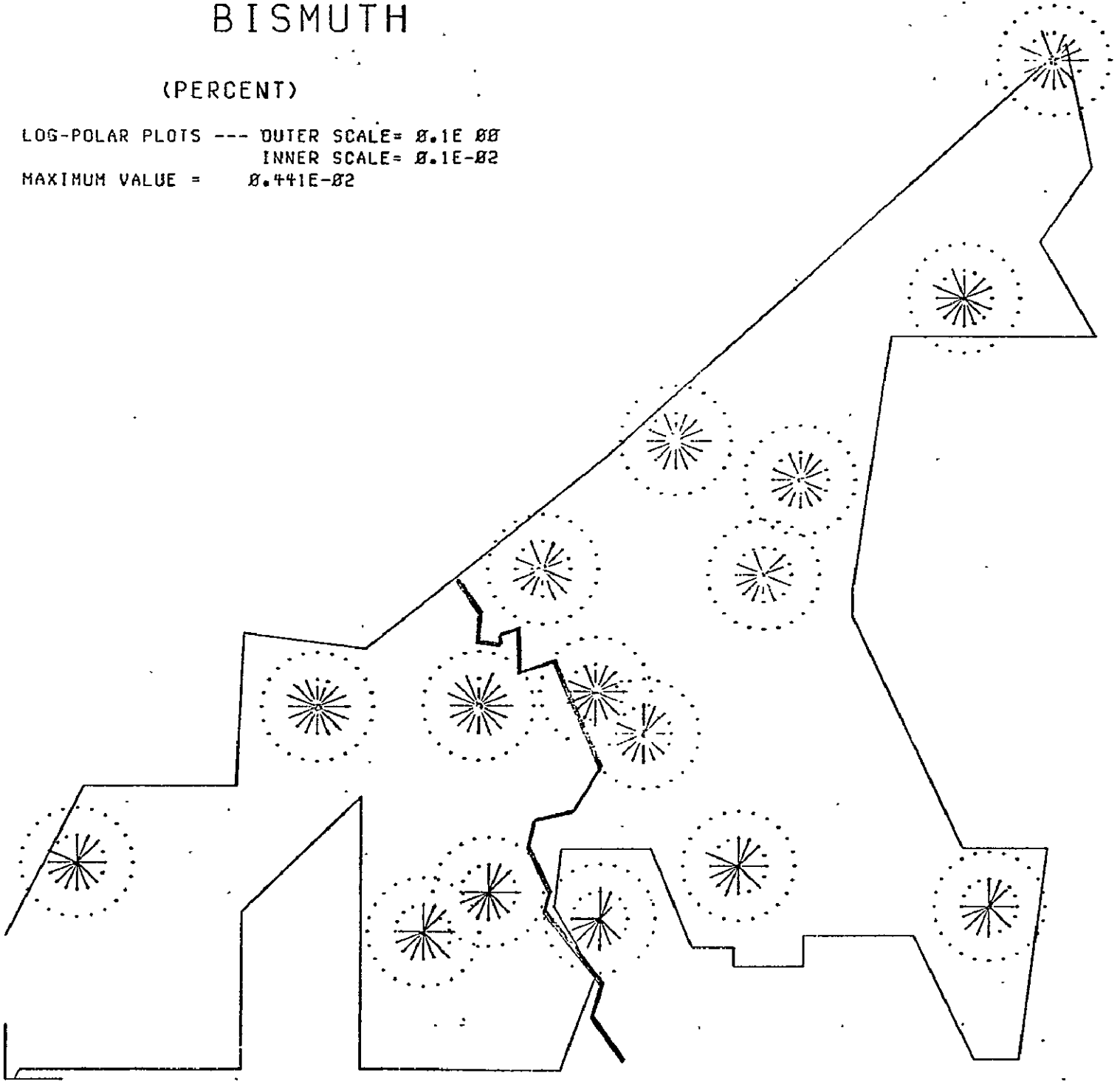
LEAD (PERCENT)		NUMBER OF READINGS															
		WIND FROM															
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1 -	1	1	6	4	1	1	2	3	2	2	6	4	7	3	Ø	5
	3 -	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	4	Ø	Ø	Ø
	4 -	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
	5 -	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
	6 -	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
	7 -	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	4
	8 -	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	3	2	Ø	Ø	Ø
	9 -	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
	1Ø -	1	1	8	3	1	2	1	2	3	1	6	8	7	4	Ø	5
	12 -	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
	13 -	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
	14 -	4	1	4	Ø	3	Ø	1	Ø	8	7	2	3	3	Ø	Ø	Ø
	15 -	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
	17 -	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
	2Ø -	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
	21 -	Ø	1	7	2	Ø	1	2	2	2	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

BISMUTH

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E-08$
INNER SCALE= $0.1E-02$
MAXIMUM VALUE = $0.441E-02$



BISMUTH
(PERCENT)

NUMBER OF READINGS

WIND FROM

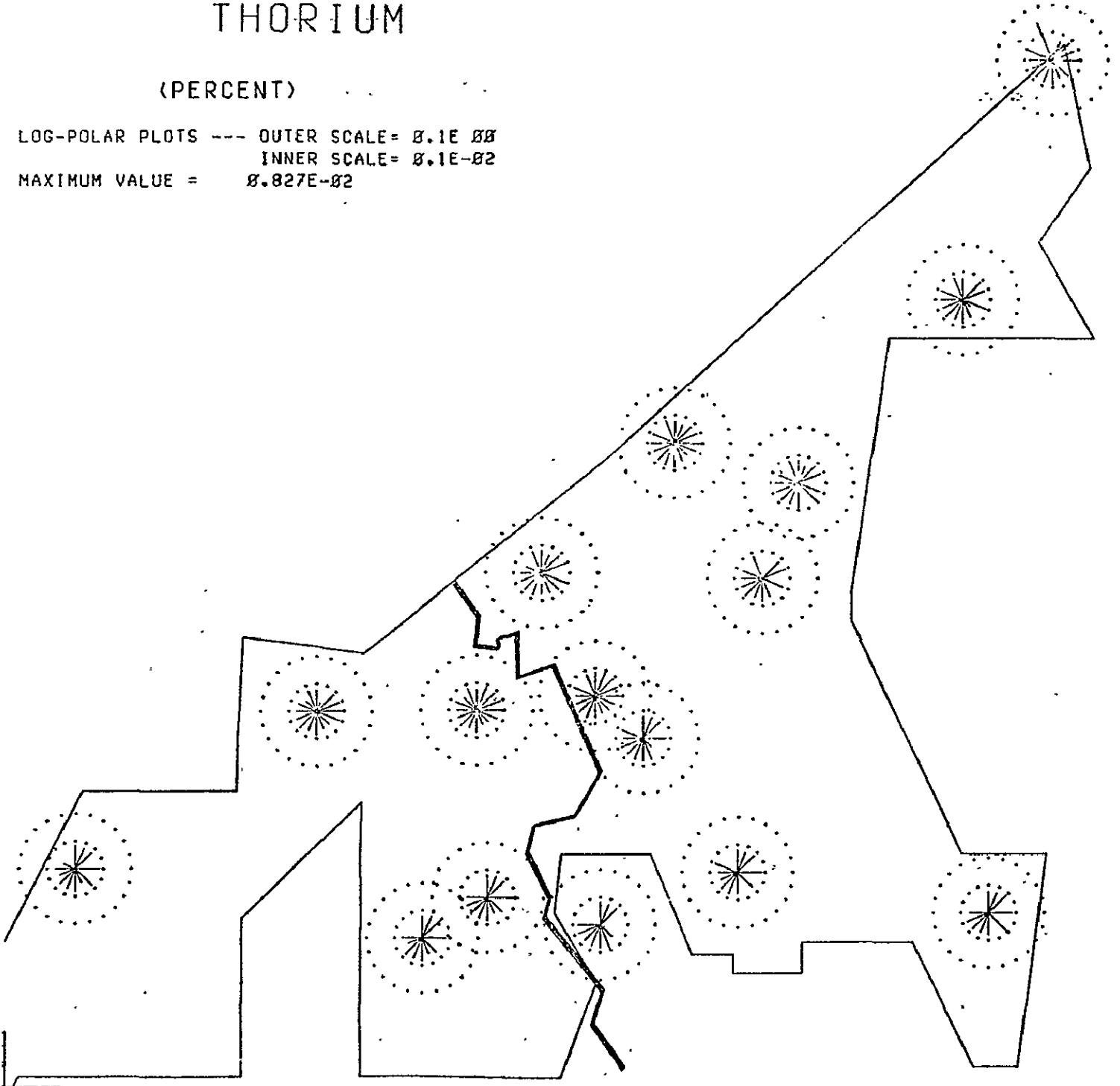
SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	3	2	2	6	4	7	3	Ø	5
3	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	4
8	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	3	2	Ø	Ø	Ø
9	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	2	3	1	6	8	7	4	Ø	5
12	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	4	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
17	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
21	Ø	1	7	2	Ø	1	2	2	2	2	3	6	6	4	Ø	3

. -1 INDICATES ESTIMATED VALUE

THORIUM

(PERCENT)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E-08$
INNER SCALE = $0.1E-02$
MAXIMUM VALUE = $0.827E-02$



THORIUM
(PERCENT) NUMBER OF READINGS

WIND DIRECTION

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1 -	1	1	6	4	1	1	2	2	1	2	0	4	7	2	0	4
	3 -	3	3	4	0	3	0	2	3	0	11	6	5	4	0	0	0
	4 -	0	0	2	1	0	2	0	1	1	2	5	4	6	2	0	3
	5 -	3	3	5	0	3	0	2	0	6	8	4	3	2	1	0	0
	6 -	1	0	5	2	0	1	-1	1	1	1	4	4	5	1	0	3
	7 -	1	1	8	4	1	2	1	2	4	3	4	7	7	2	1	3
	8 -	3	3	4	0	3	0	2	3	9	10	6	4	2	0	0	0
	9 -	3	2	4	0	3	0	1	2	8	9	4	4	4	1	0	0
	10 -	1	1	8	3	1	2	1	1	3	1	6	8	8	4	0	4
	12 -	3	3	4	0	3	0	1	3	8	10	6	3	3	1	0	0
	13 -	3	4	1	0	0	0	1	1	3	6	2	3	4	0	0	0
	14 -	3	1	4	0	3	0	1	0	6	7	2	3	3	0	0	0
	15 -	1	2	7	4	1	2	1	2	2	3	4	7	7	4	1	3
	17 -	1	1	6	4	0	1	1	-1	4	3	5	6	5	4	0	3
	20 -	0	1	6	2	1	0	2	2	3	2	2	4	5	2	0	4
	21 -	1	1	7	2	0	1	2	2	3	2	3	6	6	4	0	3

-1 INDICATES ESTIMATED VALUE

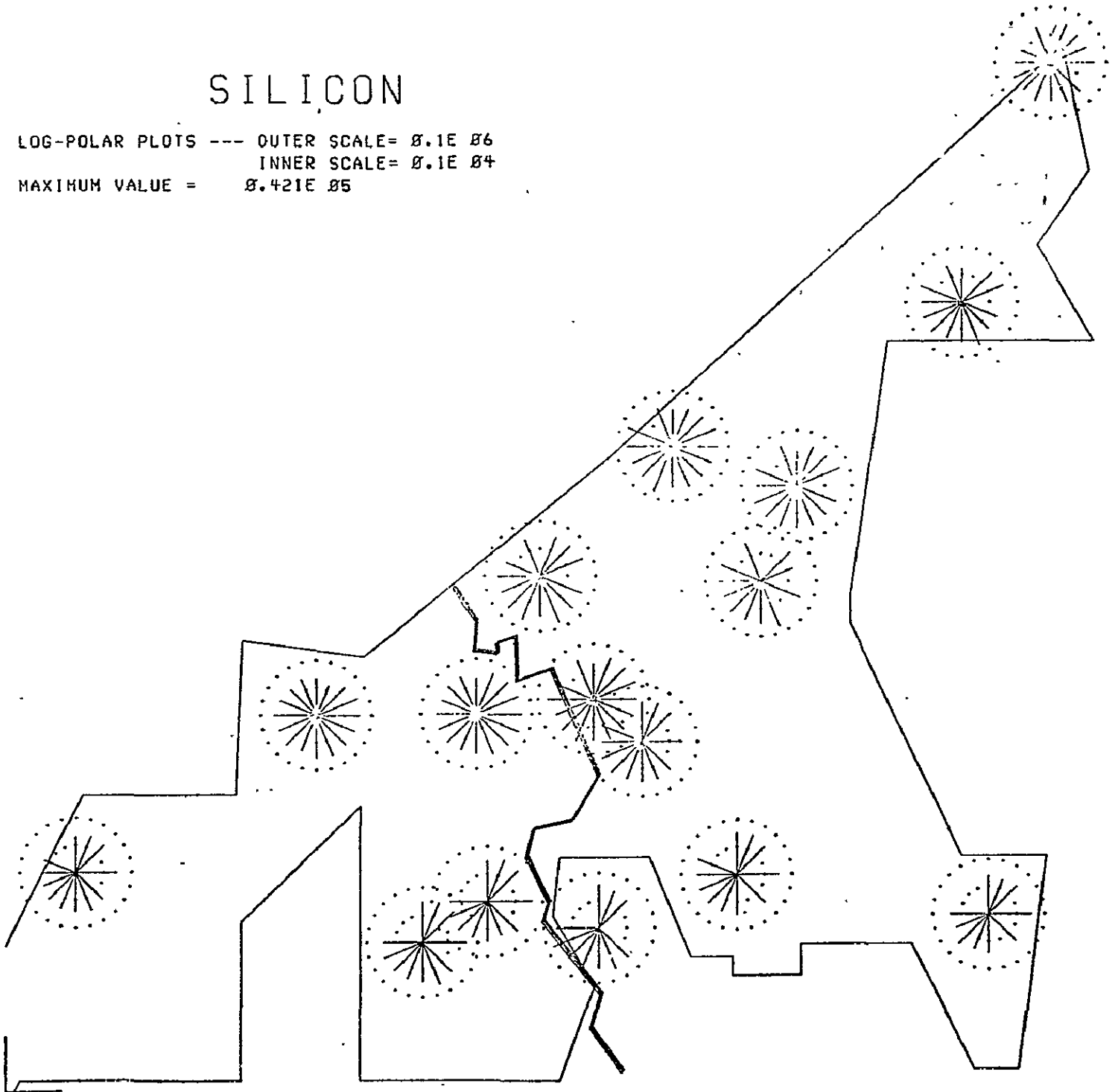
ECNEUSTL

15 OCT 1975

~~08~~:21:25

SILICON

LOG-POLAR PLOTS --- OUTER SCALE= 0.1E 06
INNER SCALE= 0.1E 04
MAXIMUM VALUE = 0.421E 05



SILICON

NUMBER OF READINGS

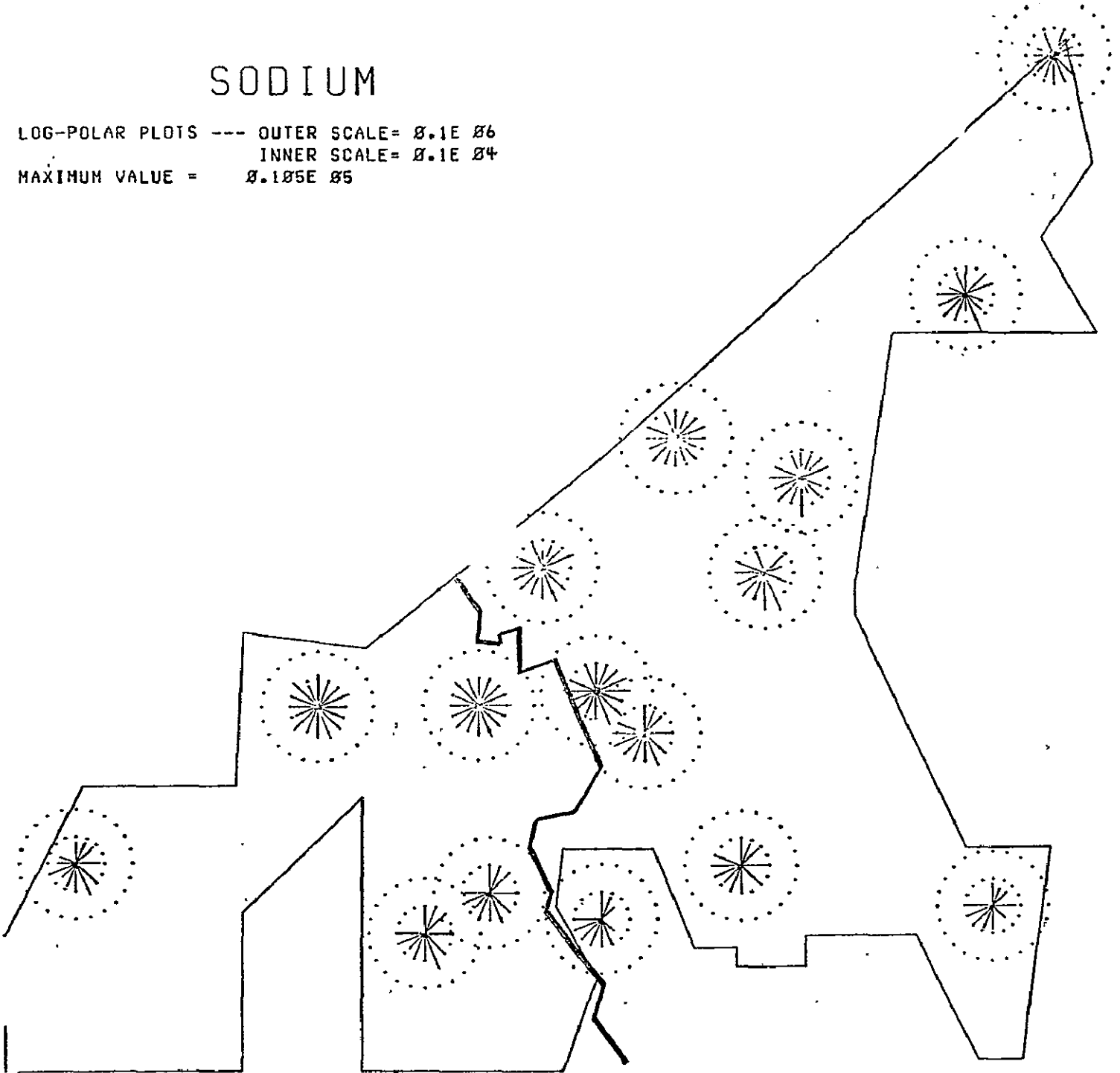
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	3	2	2	6	4	7	3	Ø	5
3	-	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	4
8	-	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	3	2	Ø	Ø	Ø
9	-	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	2	3	1	6	8	7	4	Ø	5
12	-	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	-	4	1	4	Ø	3	Ø	1	Ø	8	7	2	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
17	-	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
21	-	Ø	1	7	2	Ø	1	2	2	2	2	4	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

SODIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 06$
INNER SCALE = $0.1E \ 04$
MAXIMUM VALUE = $0.105E \ 05$



SODIUM

NUMBER OF READINGS

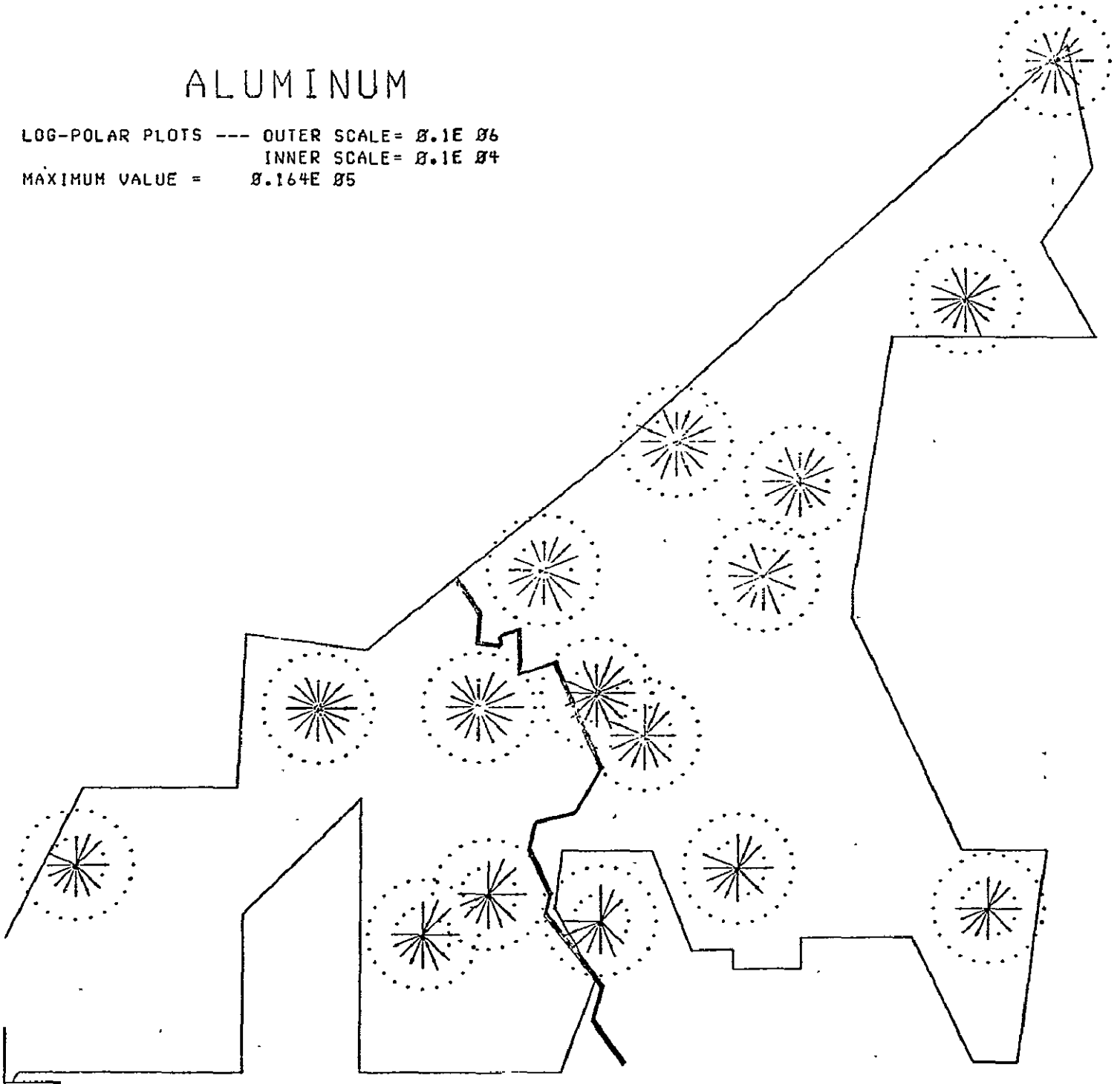
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	3	1	1	2	2	1	2	5	4	7	3	Ø	4
3	3	3	3	Ø	3	Ø	1	3	6	9	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	6	1	Ø	3
5	2	3	4	Ø	3	Ø	1	Ø	4	6	4	4	2	1	Ø	Ø
6	1	Ø	4	3	Ø	1	1	1	-1	1	4	4	5	-1	Ø	3
7	1	1	7	3	1	1	1	2	2	3	3	7	7	2	1	3
8	3	3	3	Ø	3	Ø	1	3	6	8	6	4	2	Ø	Ø	Ø
9	3	2	3	Ø	3	Ø	1	2	5	7	4	5	4	1	Ø	Ø
10	1	1	7	3	1	1	1	1	1	1	5	8	8	3	Ø	4
12	3	3	3	Ø	3	Ø	1	3	5	9	6	3	3	1	Ø	Ø
13	3	4	-1	Ø	Ø	Ø	-1	1	2	6	4	4	4	Ø	Ø	Ø
14	2	1	3	Ø	3	Ø	-1	Ø	4	5	2	3	3	Ø	Ø	Ø
15	1	2	7	3	1	1	1	2	2	3	4	7	8	3	1	3
17	1	1	6	3	Ø	1	1	-1	2	3	4	6	5	3	Ø	3
20	Ø	1	6	2	1	Ø	2	2	1	2	1	4	5	2	Ø	4
21	1	1	7	1	Ø	-1	2	2	2	2	2	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

ALUMINUM

LOG-POLAR PLOTS --- OUTER SCALE = $8.1E \ 06$
INNER SCALE = $8.1E \ 04$
MAXIMUM VALUE = $8.164E \ 05$



ALUMINUM

NUMBER OF READINGS

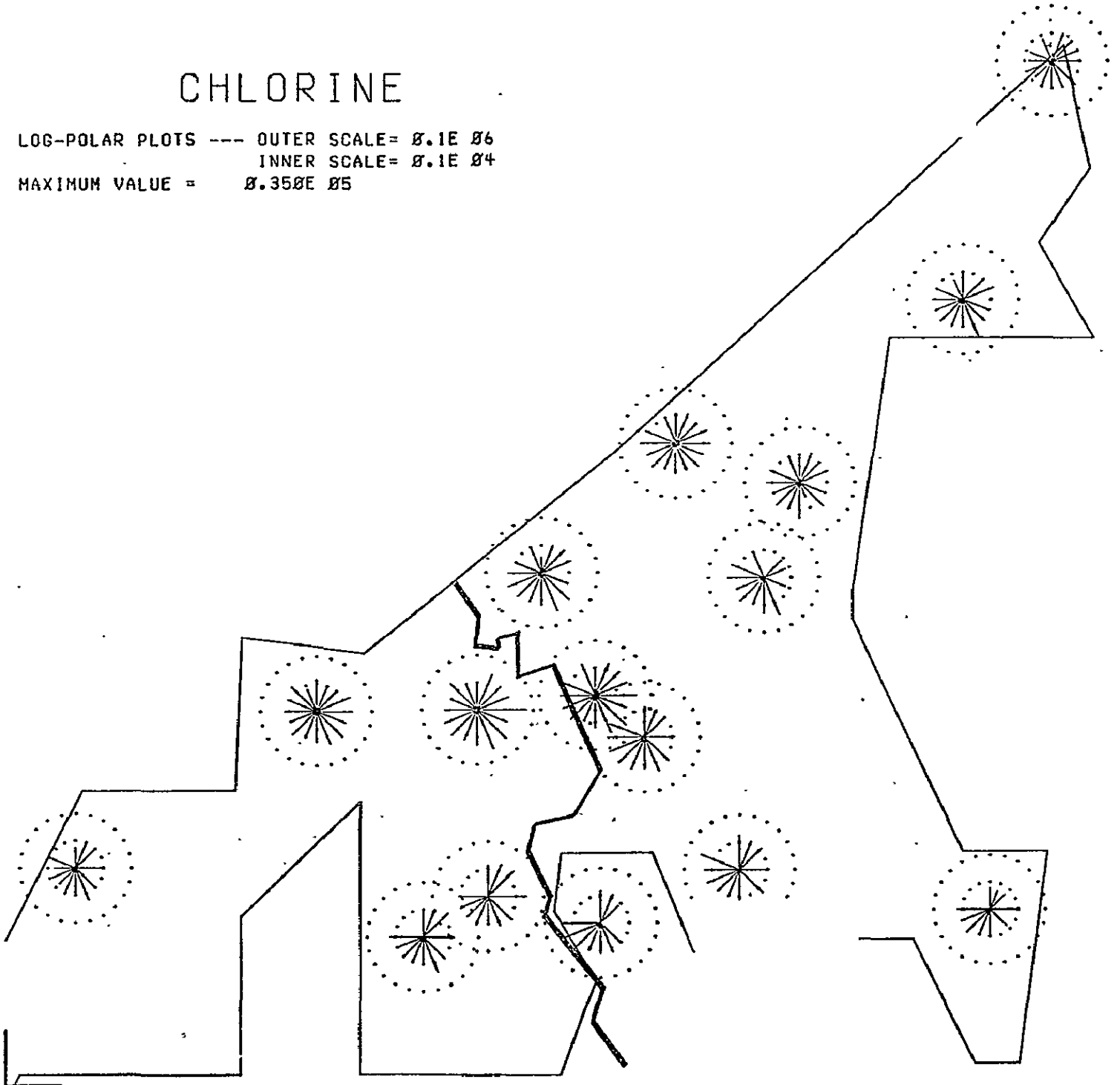
KIND FROM

SITE	KIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	7	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	7	7	2	2	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	-	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

CHLORINE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 06$
INNER SCALE = $0.1E \ 04$
MAXIMUM VALUE = $0.350E \ 05$



CHLORINE

NUMBER OF READINGS

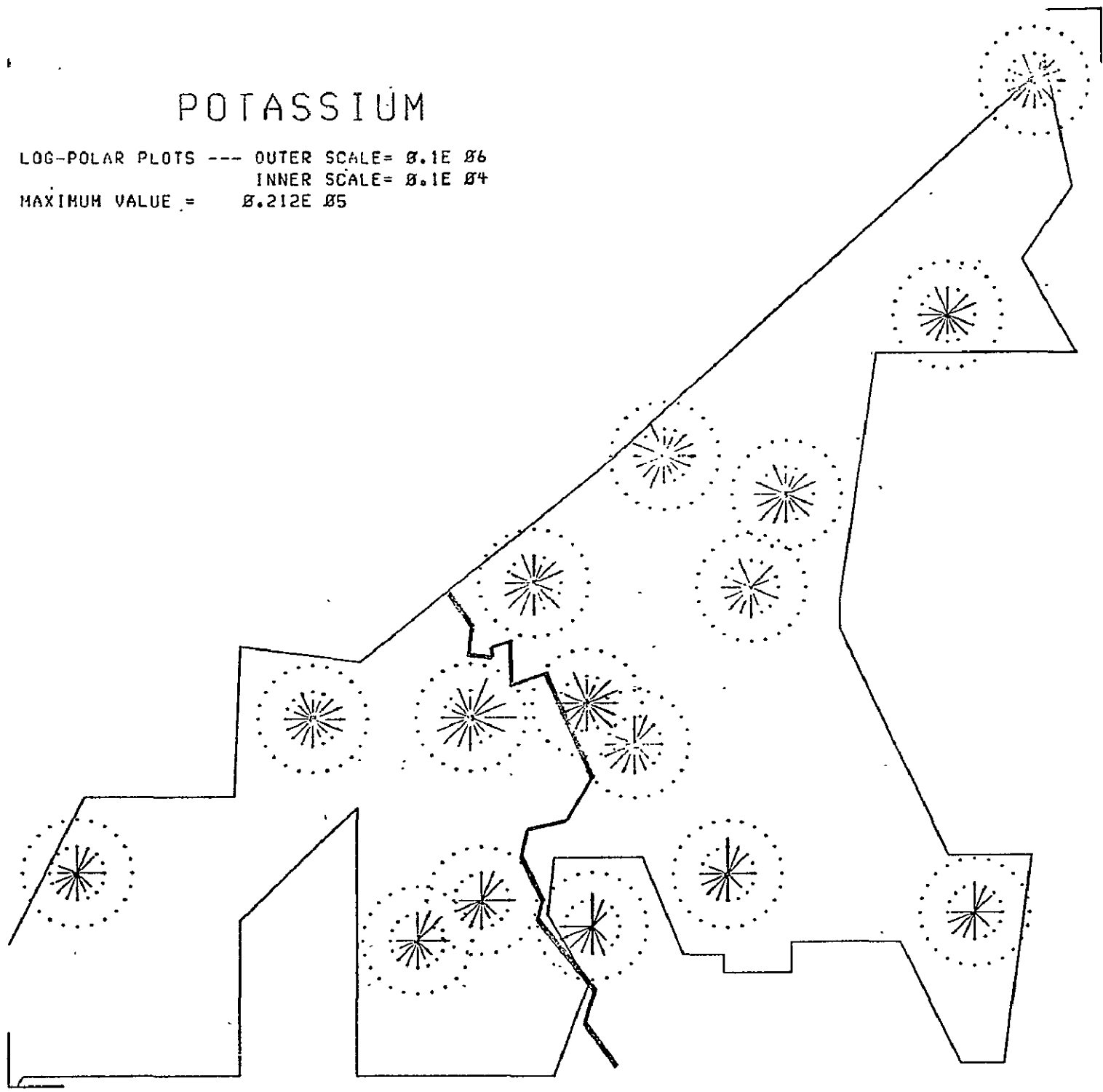
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	0	4
3	-	3	3	4	0	3	0	2	3	9	11	6	5	4	0	0	0
4	-	0	0	2	1	0	2	0	1	1	2	5	4	6	2	0	3
5	-	2	3	5	0	3	0	2	0	6	8	4	4	2	1	0	0
6	-	1	0	5	3	0	2	1	1	1	1	5	4	5	1	0	3
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	0	3	0	2	3	9	10	6	4	2	0	0	0
9	-	3	2	4	0	3	0	1	2	8	9	4	5	4	1	0	0
10	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	0	4
12	-	3	3	4	0	3	0	2	3	8	10	6	3	3	1	0	0
13	-	3	4	1	0	0	0	1	1	4	7	4	4	4	0	0	0
14	-	2	1	4	0	3	0	1	0	7	7	2	3	3	0	0	0
15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	-	1	1	7	4	0	1	1	-1	4	3	5	6	5	4	0	3
20	-	0	1	6	2	1	0	2	2	3	2	2	4	5	2	0	4
21	-	1	1	7	2	0	1	2	2	3	2	3	6	6	4	0	3

-1 INDICATES ESTIMATED VALUE

POTASSIUM

LOG-POLAR PLOTS --- OUTER SCALE = 0.1E 06
INNER SCALE = 0.1E 04
MAXIMUM VALUE = 0.212E 05



POTASSIUM

NUMBER OF READINGS

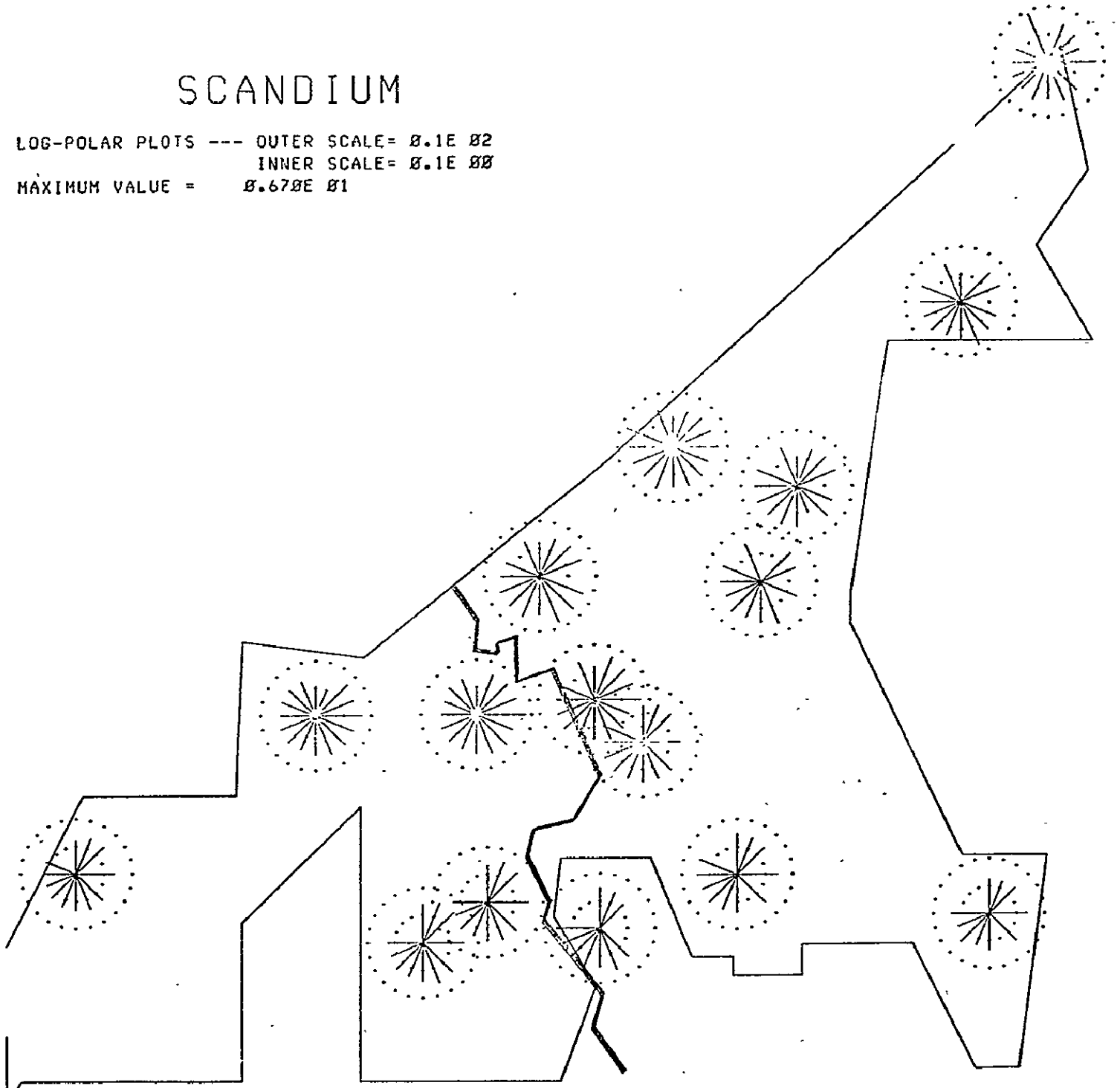
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	1	-	1	-1	4	3	1	1	1	-1	1	2	5	3	3	1	Ø	4
	3	-	3	2	2	Ø	3	Ø	-1	-1	4	7	5	1	2	Ø	Ø	Ø
	4	-	Ø	Ø	2	-1	Ø	1	Ø	-1	1	1	4	3	3	-1	Ø	3
	5	-	2	2	3	Ø	3	Ø	-1	Ø	2	5	3	1	1	-1	Ø	Ø
	6	-	1	Ø	4	3	Ø	1	1	-1	-1	1	4	2	3	-1	Ø	3
	7	-	-1	-1	5	3	1	1	-1	-1	2	2	3	5	3	-1	-1	3
	8	-	3	2	2	Ø	3	Ø	-1	-1	4	6	5	-1	1	Ø	Ø	Ø
	9	-	3	1	2	Ø	3	Ø	-1	1	3	7	3	2	3	-1	Ø	Ø
	1Ø	-	1	-1	5	3	1	1	-1	-1	1	1	5	6	4	1	Ø	4
	12	-	3	2	2	Ø	3	Ø	-1	-1	4	7	5	1	3	-1	Ø	Ø
	13	-	3	3	-1	Ø	Ø	Ø	-1	1	2	5	4	1	3	Ø	Ø	Ø
	14	-	2	1	3	Ø	3	Ø	-1	Ø	4	4	1	3	2	Ø	Ø	Ø
	15	-	1	1	5	3	1	1	-1	-1	2	2	4	5	3	-1	-1	3
	17	-	1	-1	4	3	Ø	1	1	-1	1	2	4	5	3	1	Ø	3
	2Ø	-	Ø	-1	4	2	1	Ø	1	-1	1	2	1	3	3	1	Ø	4
	21	-	1	-1	4	1	Ø	-1	1	-1	1	2	2	3	2	1	Ø	3

— -1 INDICATES ESTIMATED VALUE

SCANDIUM

LOG-POLAR PLOTS --- OUTER SCALE= 0.1E 02
INNER SCALE= 0.1E 00
MAXIMUM VALUE = 0.670E 01



C-2

SCANDIUM

NUMBER OF READINGS

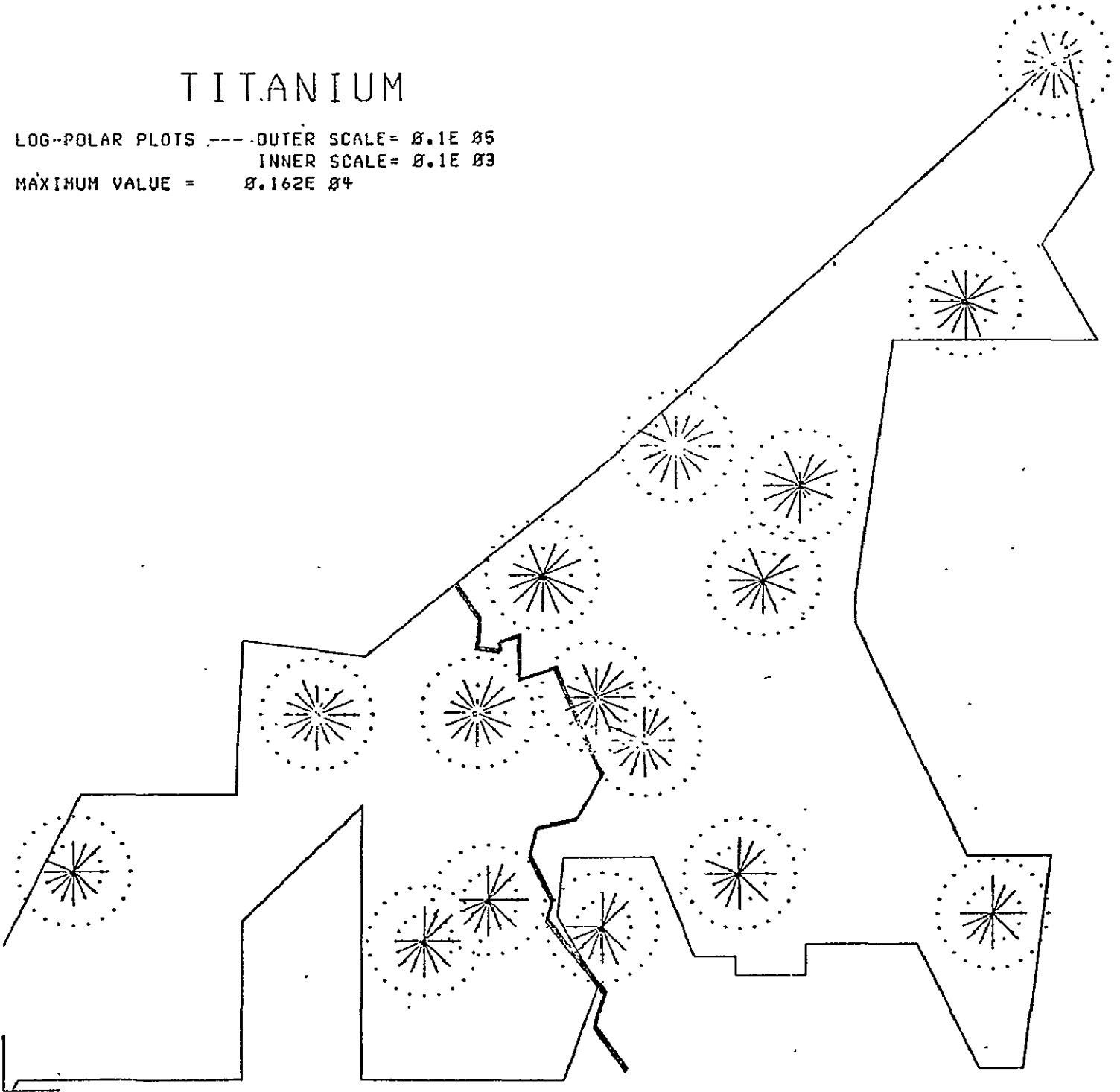
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

TITANIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 05$
INNER SCALE = $0.1E 03$
MAXIMUM VALUE = $0.162E 04$



TITANIUM

NUMBER OF READINGS

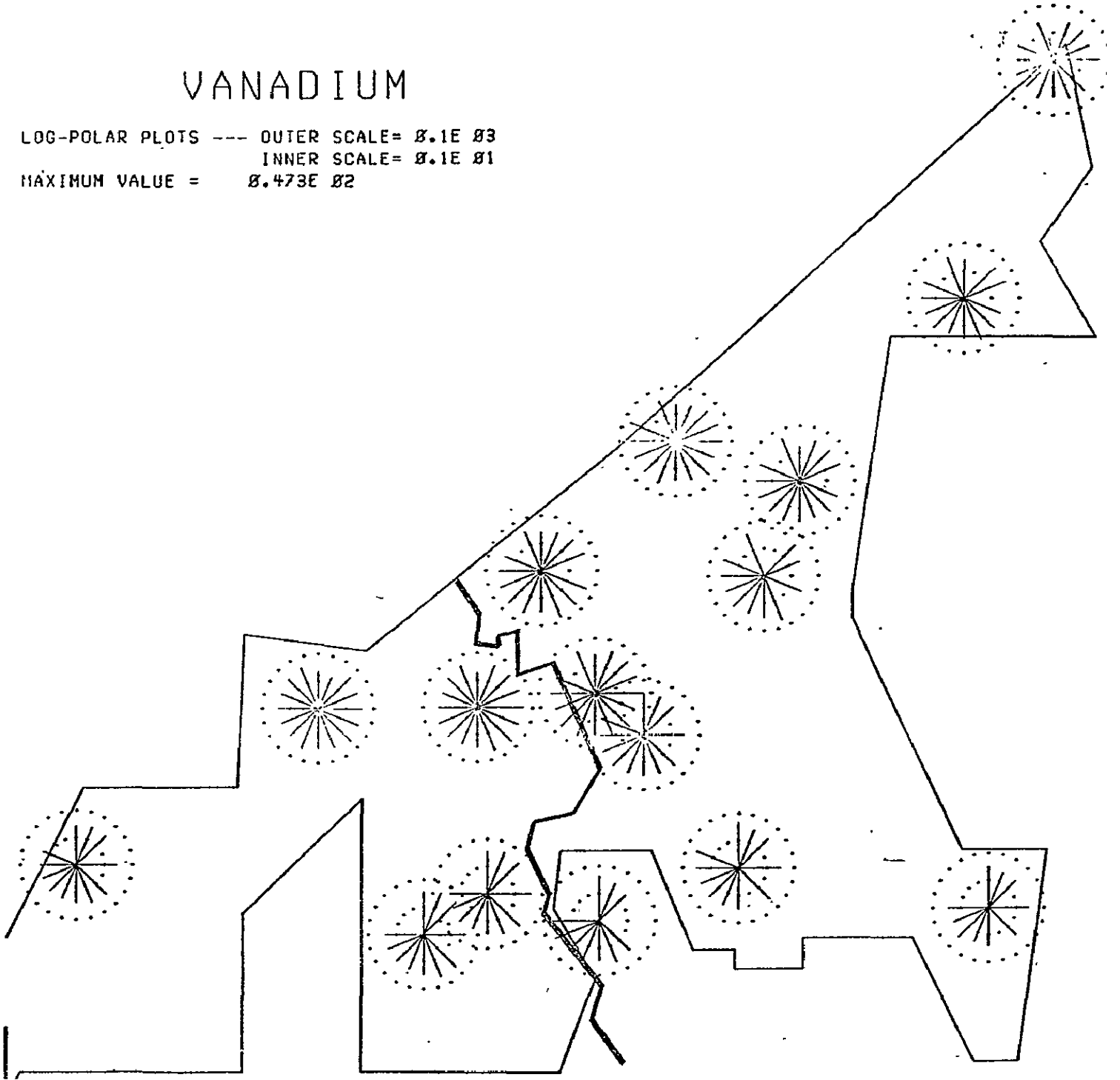
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	1	2	2	1	5	3	5	3	Ø	2
3	2	3	4	Ø	2	Ø	2	3	8	9	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	4	4	5	2	Ø	2
5	3	3	5	Ø	3	Ø	2	Ø	5	7	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	-1	1	1	1	5	4	4	1	Ø	3
7	1	1	8	4	1	2	1	2	3	2	3	7	6	3	1	2
8	3	3	4	Ø	3	Ø	2	2	7	7	5	4	2	Ø	Ø	Ø
9	2	2	4	Ø	2	Ø	1	2	7	5	2	4	2	1	Ø	Ø
10	1	1	8	3	1	2	1	1	2	1	3	8	7	4	Ø	2
12	3	2	3	Ø	3	Ø	2	3	7	6	5	3	2	1	Ø	Ø
13	3	3	1	Ø	Ø	Ø	1	1	4	6	3	4	3	Ø	Ø	Ø
14	1	1	3	Ø	3	Ø	1	Ø	7	7	2	1	3	Ø	Ø	Ø
15	-1	1	6	4	-1	2	1	2	2	2	1	4	8	4	1	3
17	-1	1	6	4	Ø	1	-1	-1	4	3	4	6	5	4	Ø	3
20	Ø	1	6	2	-1	Ø	1	2	3	1	2	4	4	2	Ø	4
21	Ø	1	6	2	Ø	1	1	2	3	2	2	5	4	4	Ø	2

-1 INDICATES ESTIMATED VALUE

VANADIUM

LOG-POLAR PLOTS --- OUTER SCALE= 0.1E 03
INNER SCALE= 0.1E 01
MAXIMUM VALUE = 0.473E 02



VANADIUM

NUMBER OF READINGS

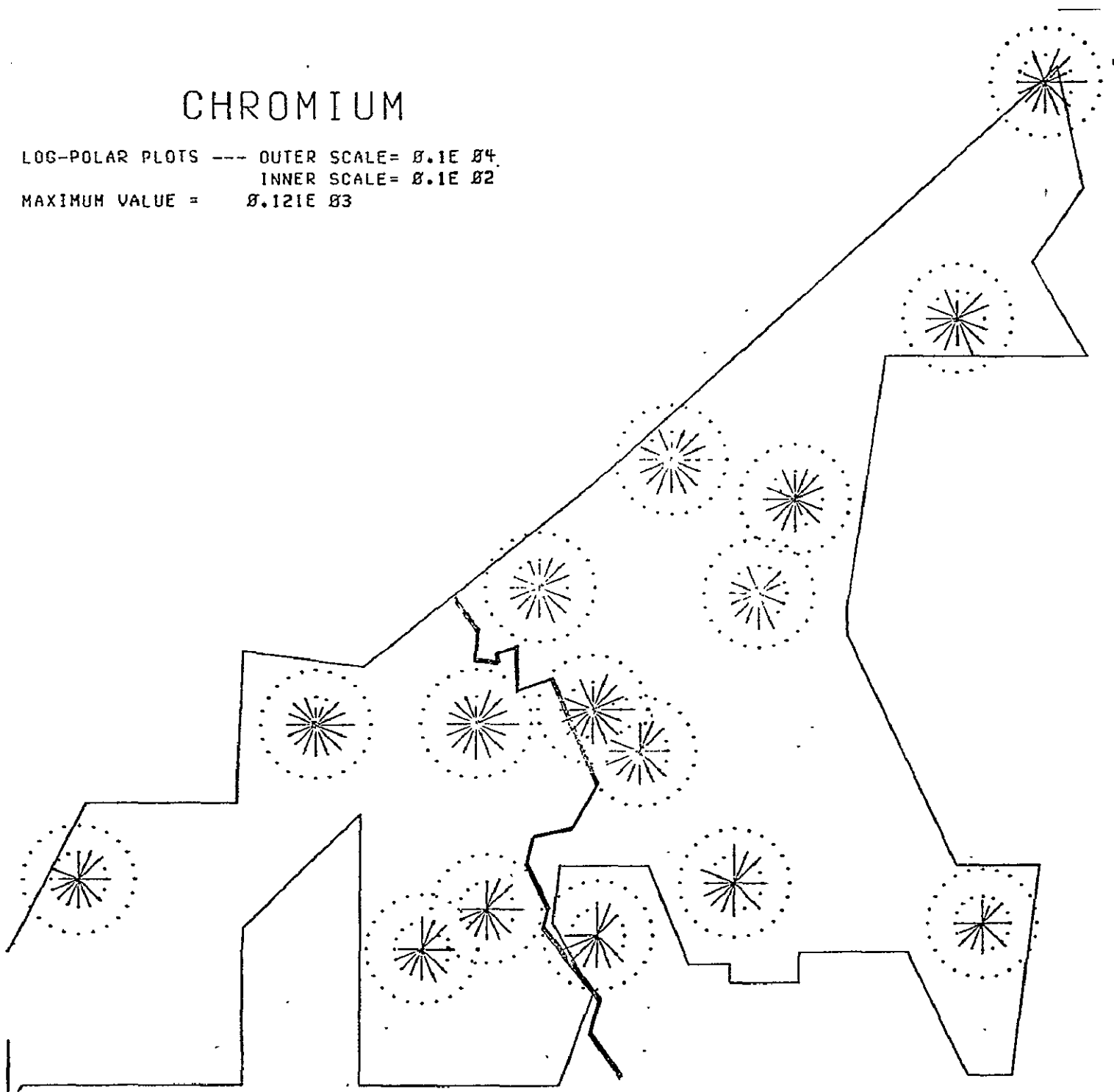
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1 -	1	1	6	4	1	1	2	3	2	2	6	4	7	3	Ø	5
3 -	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	4	Ø	Ø	Ø
4 -	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5 -	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6 -	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
7 -	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	4
8 -	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	4	2	Ø	Ø	Ø
9 -	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø -	1	1	8	3	1	2	1	2	3	1	6	8	8	4	Ø	5
12 -	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
13 -	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14 -	4	1	4	Ø	3	Ø	1	Ø	8	7	2	3	3	Ø	Ø	Ø
15 -	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
17 -	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
2Ø -	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
21 -	1	1	7	2	Ø	1	2	2	3	2	4	6	6	4	Ø	3

— -1 INDICATES ESTIMATED VALUE

CHROMIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 04$
INNER SCALE = $0.1E 02$
MAXIMUM VALUE = $0.121E 03$



CHROMIUM

NUMBER OF READINGS

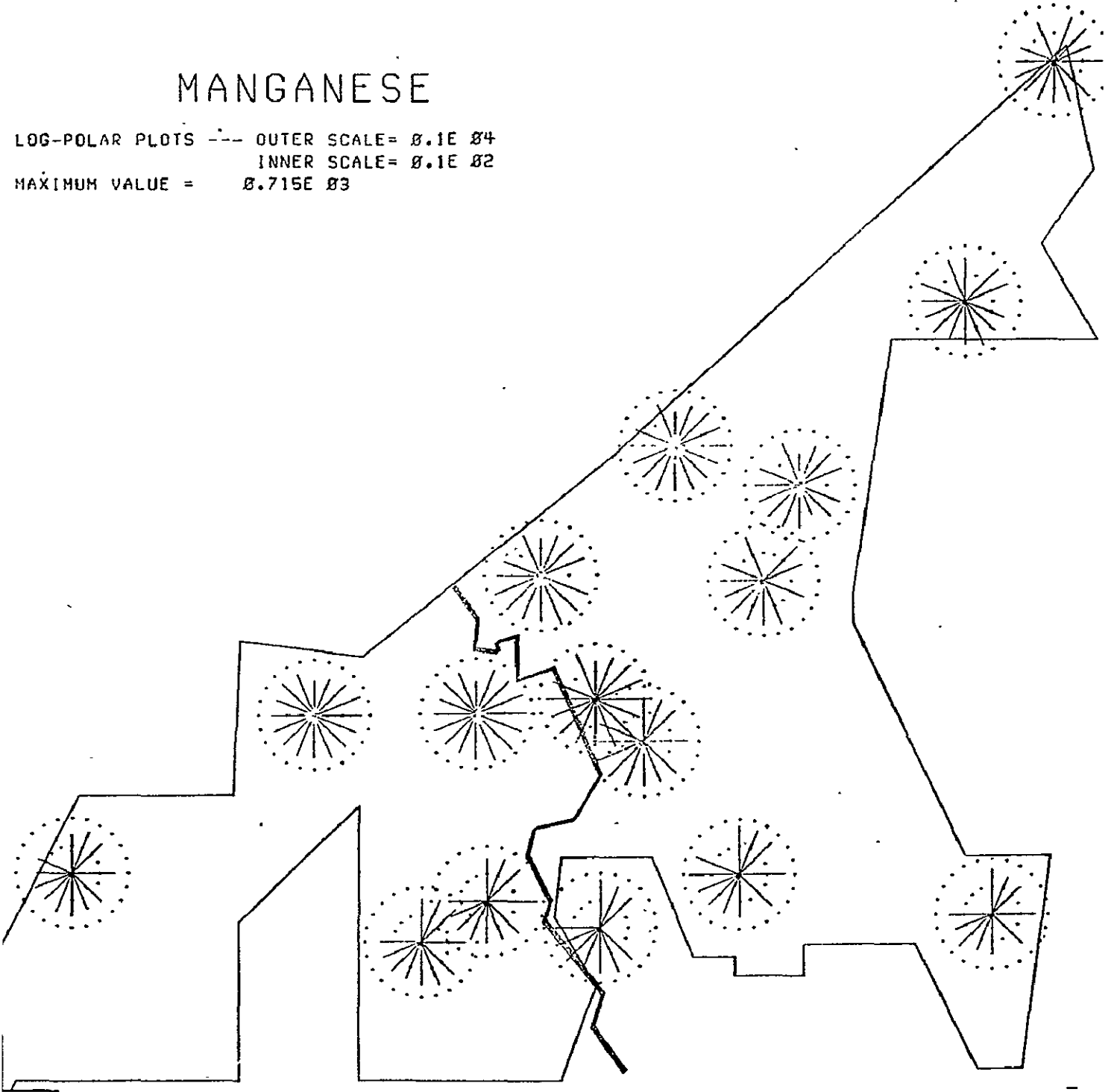
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1 -	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
	3 -	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
	4 -	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
	5 -	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
	6 -	-1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
	7 -	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
	8 -	2	3	4	Ø	3	Ø	2	3	9	10	6	4	2	Ø	Ø	Ø
	9 -	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
	10 -	-1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
	12 -	2	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
	13 -	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
	14 -	2	1	4	Ø	3	Ø	1	Ø	6	5	2	3	3	Ø	Ø	Ø
	15 -	-1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
	17 -	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
	20 -	Ø	1	6	2	1	Ø	2	2	3	2	2	4	4	2	Ø	4
21 -	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3	

-1 INDICATES ESTIMATED VALUE

MANGANESE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 04$
INNER SCALE = $0.1E \ 02$
MAXIMUM VALUE = $0.715E \ 03$



MANGANESE

NUMBER OF READINGS

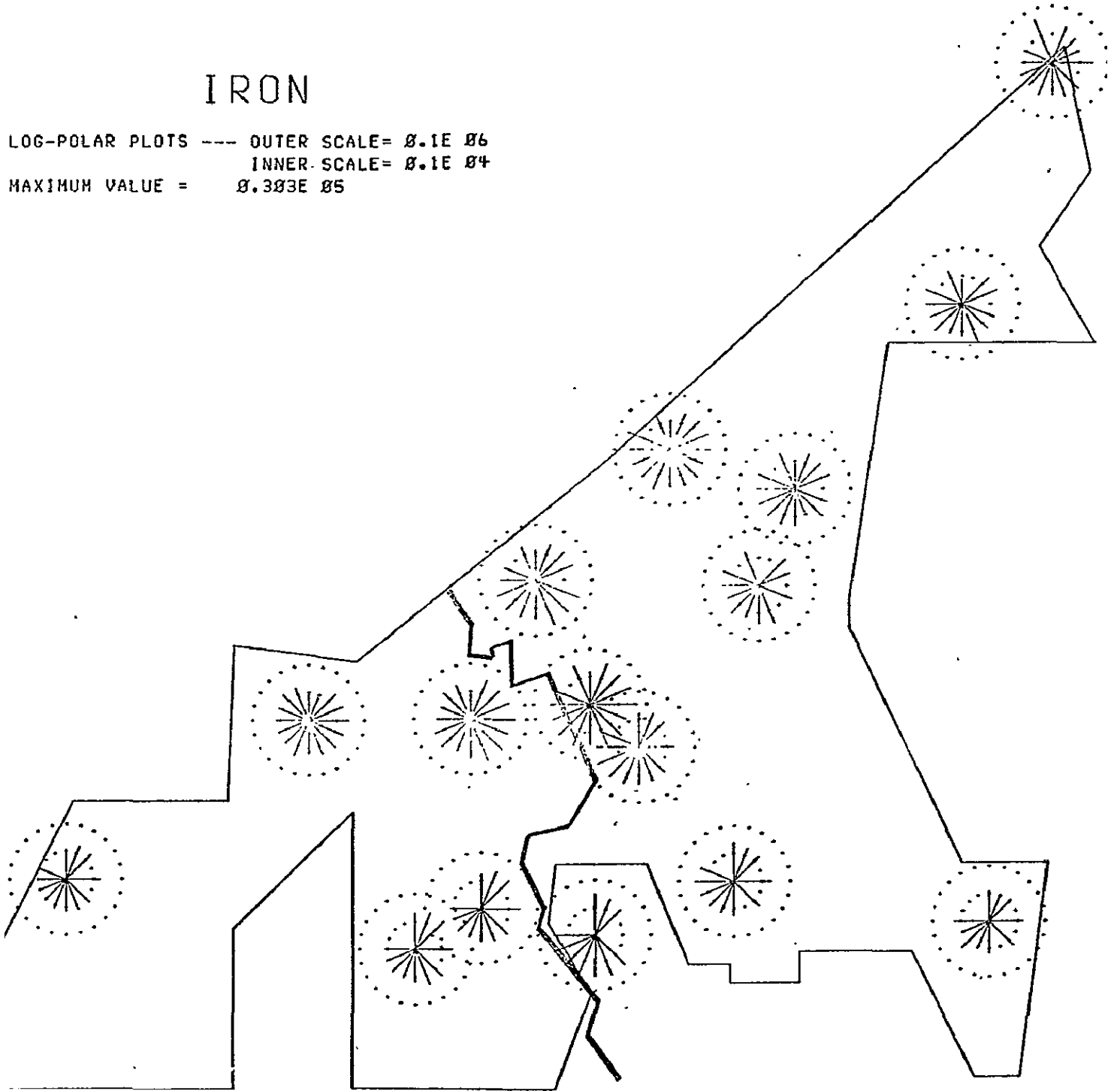
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NH	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	2	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	-	2	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	-	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

IRON

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 06$
INNER SCALE = $0.1E 04$
MAXIMUM VALUE = $0.303E 05$



IRON

NUMBER OF READINGS

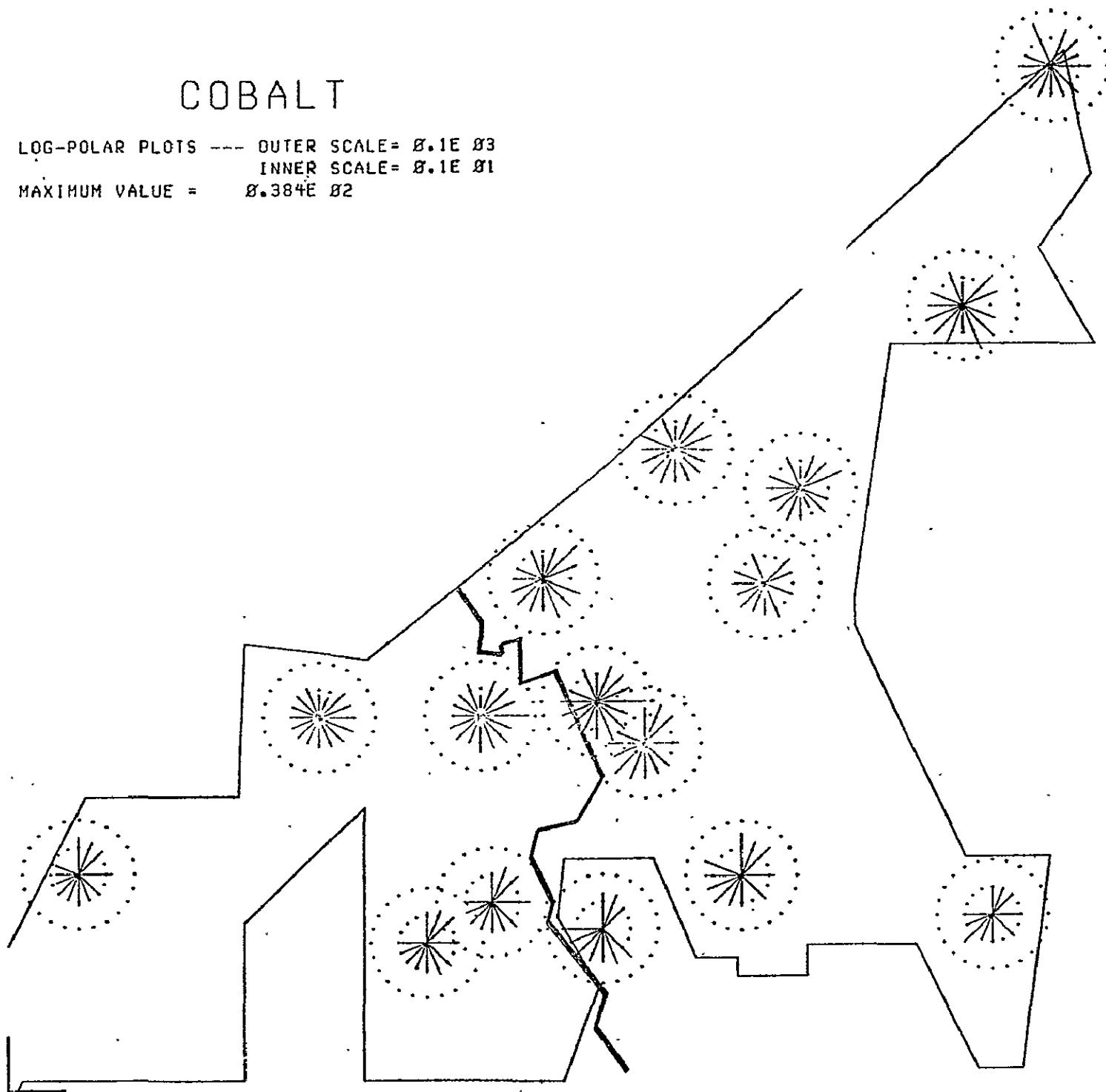
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	3	3	3	Ø	3	Ø	2	3	8	11	6	3	2	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

COBALT

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 03$
INNER SCALE = $0.1E \ 01$
MAXIMUM VALUE = $0.384E \ 02$



COBALT

NUMBER OF READINGS

WIND FROM

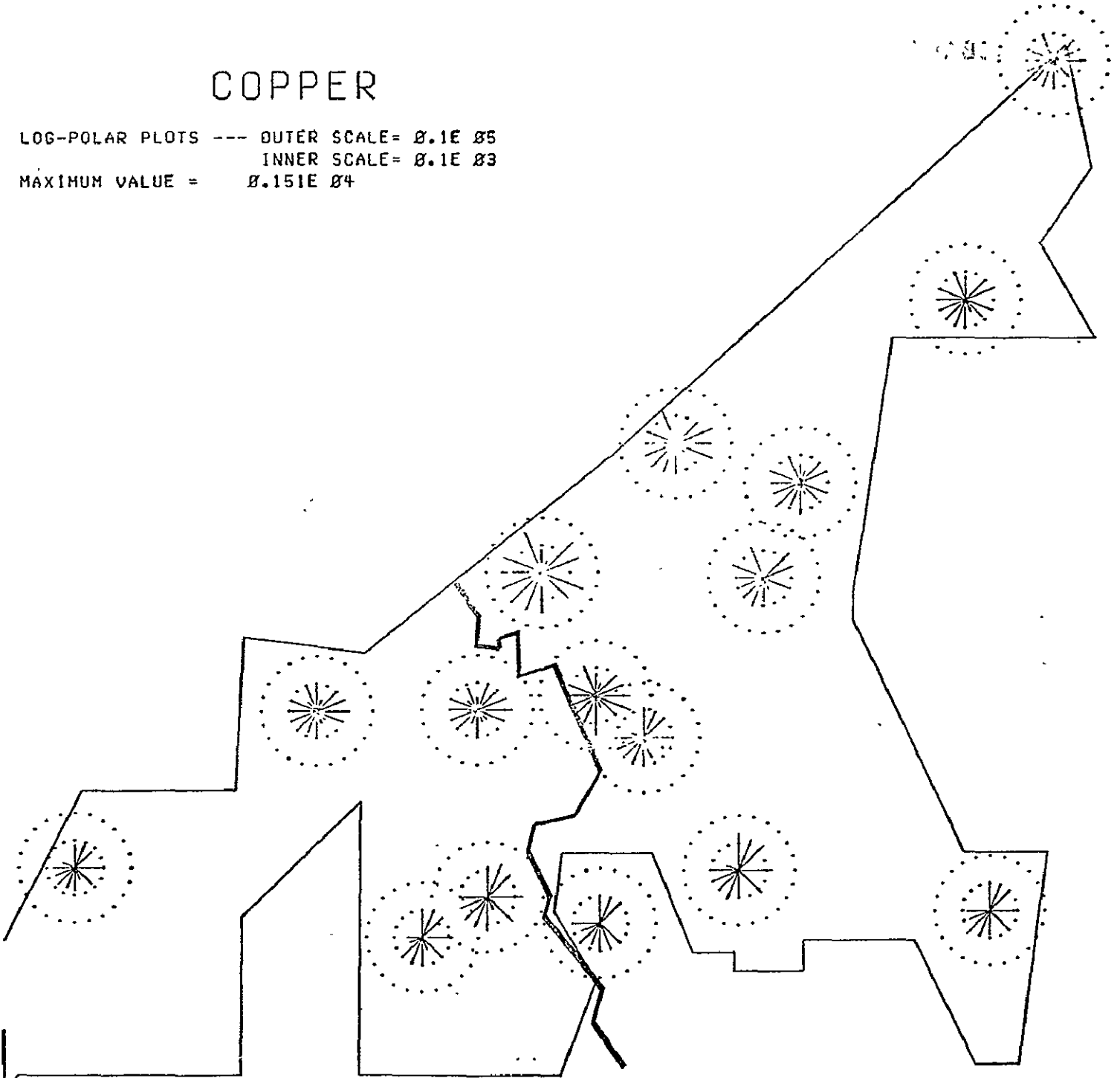
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	6	4	1	3	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	-	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

SITE

-1 INDICATES ESTIMATED VALUE

COPPER

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 05$
INNER SCALE = $0.1E 03$
MAXIMUM VALUE = $0.151E 04$



COPPER

NUMBER OF READINGS

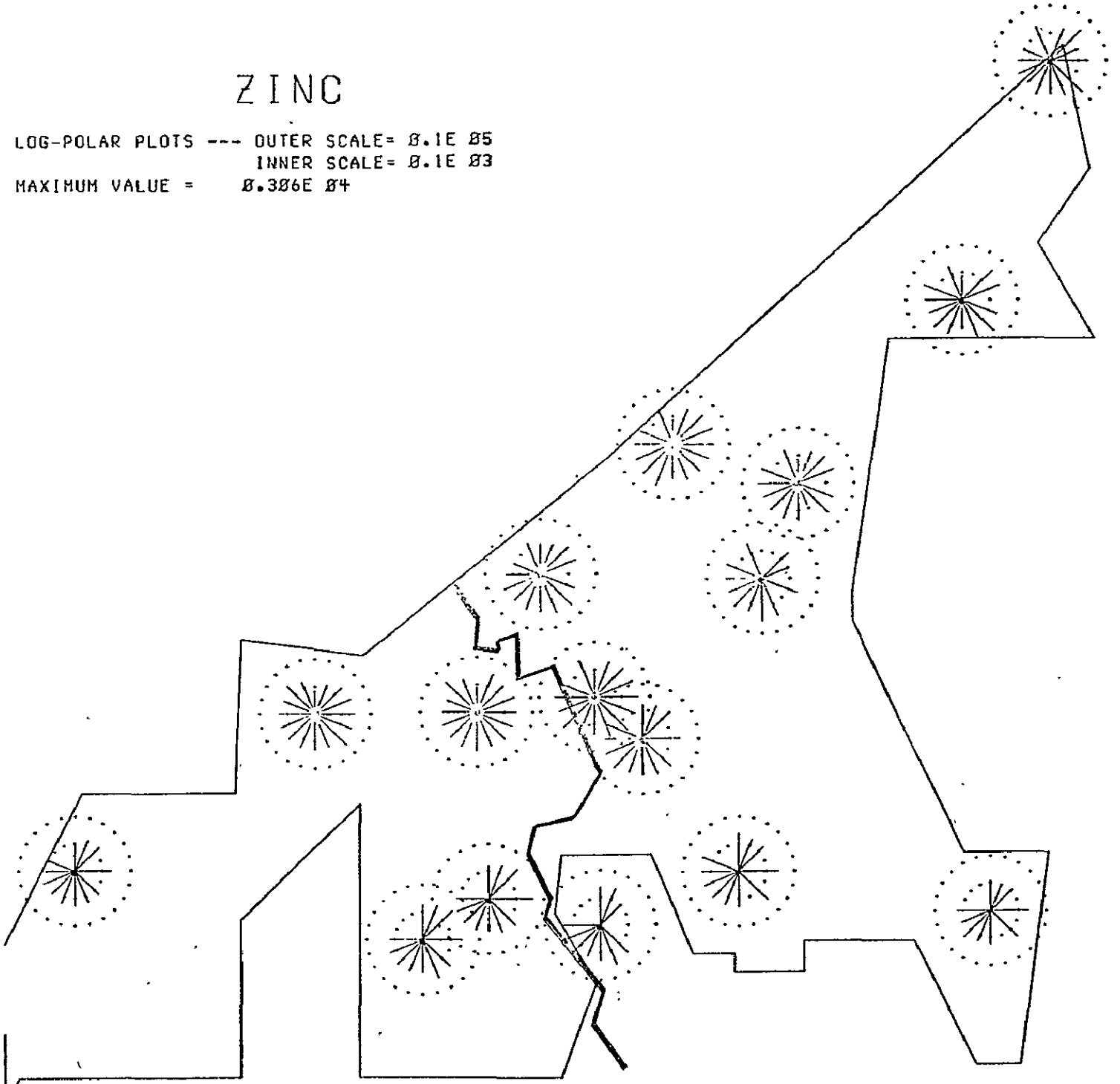
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	4	4	1	1	1	-1	2	2	6	3	3	1	Ø	4
3	3	2	3	Ø	3	Ø	1	-1	7	9	5	1	2	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
5	2	2	4	Ø	3	Ø	1	Ø	4	7	3	1	1	-1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	-1	1	1	5	2	3	1	Ø	3
7	1	-1	6	4	1	2	-1	-1	4	2	4	5	3	1	-1	3
8	3	2	3	Ø	3	Ø	1	-1	6	8	5	-1	1	Ø	Ø	Ø
9	3	1	3	Ø	3	Ø	-1	1	5	6	2	2	3	-1	Ø	Ø
1Ø	1	-1	6	3	1	2	-1	-1	3	1	6	6	4	2	Ø	4
12	3	2	3	Ø	3	Ø	1	-1	6	9	5	1	3	-1	Ø	Ø
13	3	3	1	Ø	Ø	Ø	1	1	4	6	4	1	3	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	6	5	1	3	2	Ø	Ø	Ø
15	-1	1	5	4	1	2	-1	-1	2	1	4	5	4	1	-1	3
17	1	-1	5	4	Ø	1	1	-1	4	2	5	5	3	2	Ø	3
2Ø	Ø	-1	4	2	1	Ø	1	-1	3	2	2	3	3	1	Ø	4
21	1	-1	4	2	Ø	1	1	-1	3	2	3	4	3	2	Ø	3

-1 INDICATES ESTIMATED VALUE

ZINC

LOG-POLAR PLOTS --- OUTER SCALE= $8.1E \ 85$
INNER SCALE= $8.1E \ 83$
MAXIMUM VALUE = $8.386E \ 84$



ZINC

NUMBER OF READINGS

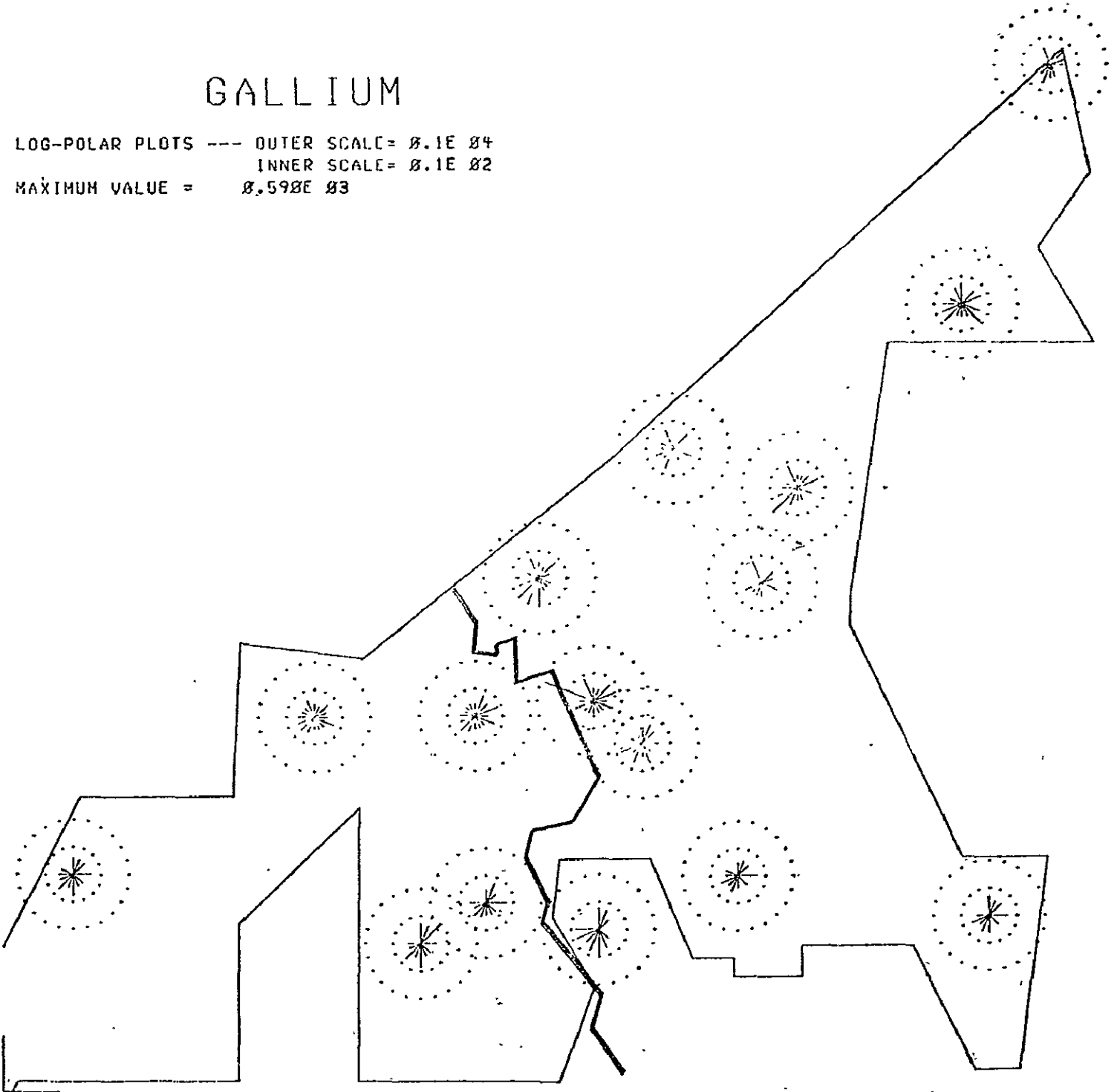
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSH	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	3	3	4	Ø	3	Ø	2	3	8	11	6	3	2	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	3
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

GALLIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 04$
INNER SCALE = $0.1E 02$
MAXIMUM VALUE = $0.598E 03$



GALLIUM

NUMBER OF READINGS

WIND FROM

N NNE NE ENE E ESE SE SSE S SSW SW WSW W WNW NW NNW

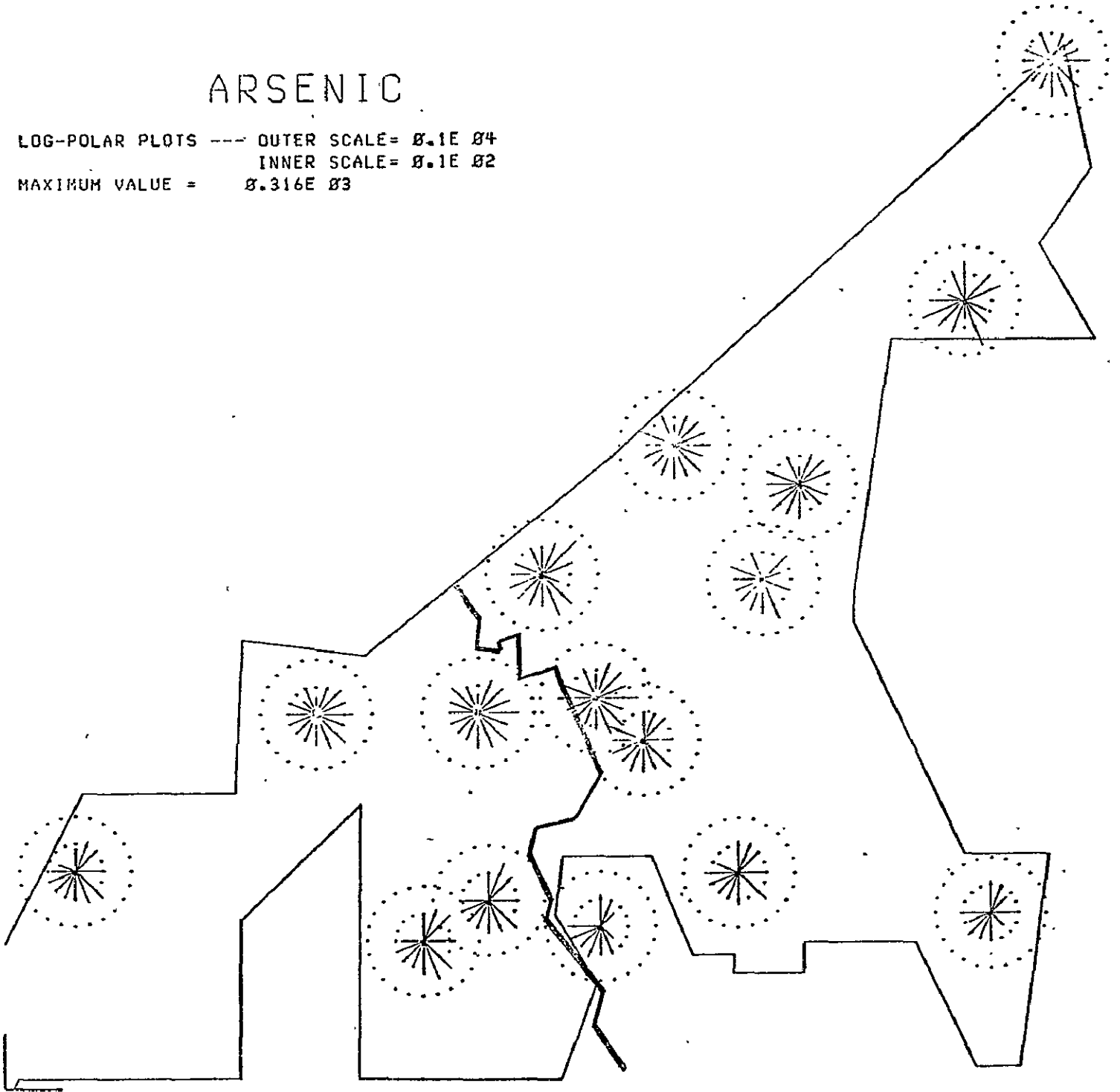
SITE

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	-	-1	-1	2	1	-1	1	-1	-1	-1	-1	1	1	1	0	2
3	-	-1	2	-1	0	2	0	-1	-1	-1	2	2	-1	1	0	0
4	-	0	0	1	-1	0	1	0	-1	-1	-1	-1	3	-1	-1	0
5	-	-1	1	2	0	2	0	-1	0	-1	2	-1	1	-1	-1	0
6	-	1	0	1	1	0	1	1	-1	-1	-1	4	2	2	-1	0
7	-	-1	-1	1	-1	-1	1	-1	-1	-1	1	1	3	1	-1	-1
8	-	1	1	1	0	2	0	-1	-1	1	3	1	-1	-1	0	0
9	-	-1	1	2	0	1	0	-1	1	-1	2	-1	2	2	-1	0
10	-	-1	-1	3	-1	-1	1	-1	-1	-1	1	-1	4	2	-1	0
12	-	1	1	1	0	2	0	-1	-1	2	4	1	1	1	-1	0
13	-	1	1	-1	0	0	0	-1	1	1	4	3	1	2	0	0
14	-	1	1	1	0	1	0	-1	0	2	2	-1	2	-1	0	0
15	-	-1	1	2	1	-1	1	-1	-1	-1	2	1	3	1	-1	-1
17	-	-1	-1	2	2	0	1	-1	-1	-1	1	1	4	2	-1	0
20	-	0	-1	3	2	-1	0	-1	-1	-1	1	-1	2	2	-1	0
21	-	1	-1	4	-1	0	-1	-1	-1	1	2	2	2	1	-1	0

-1 INDICATES ESTIMATED VALUE

ARSENIC

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 04$
INNER SCALE = $0.1E 02$
MAXIMUM VALUE = $0.316E 03$



ARSENIC

NUMBER OF READINGS

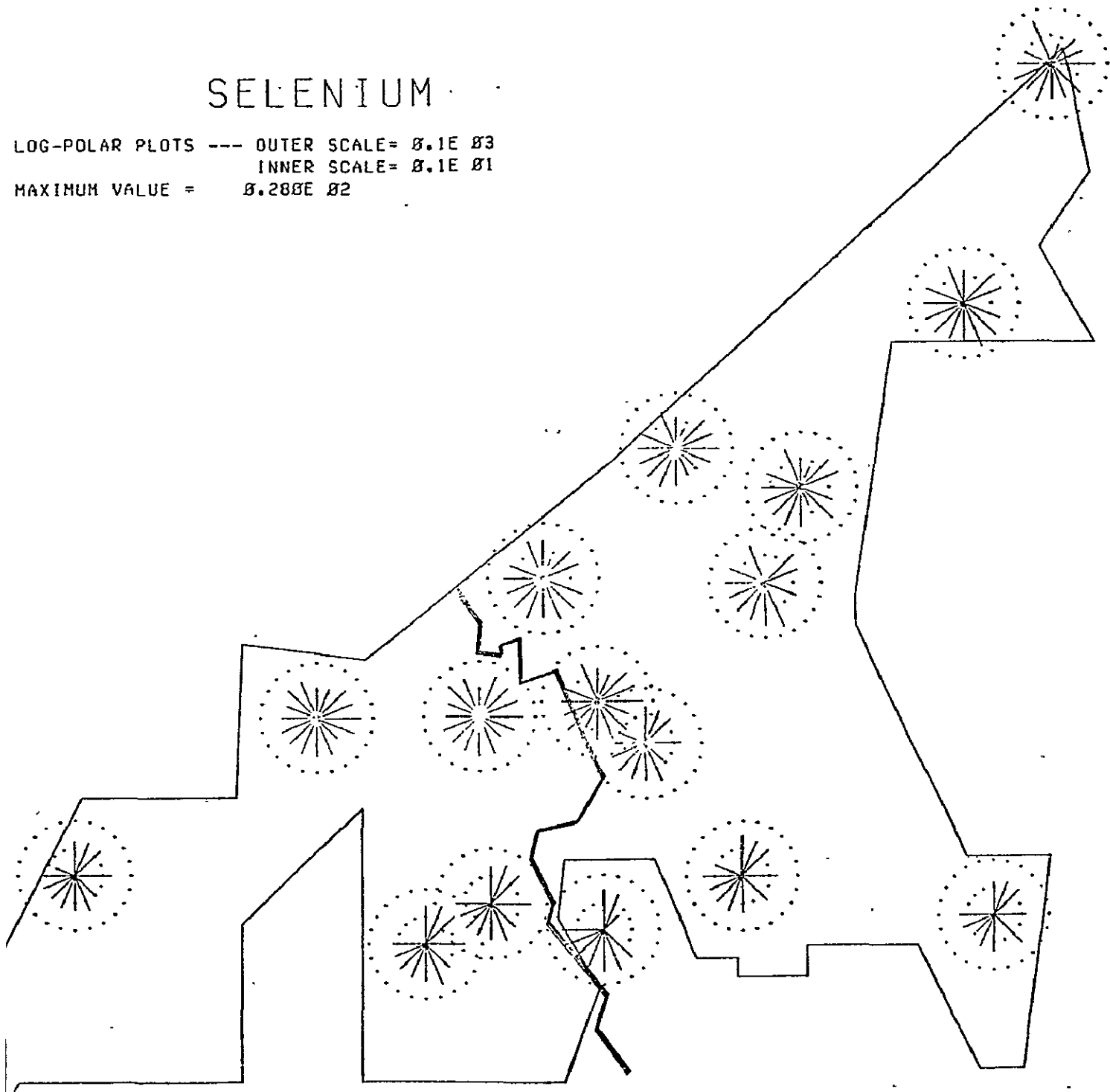
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	3	1	1	2	2	1	2	5	4	7	3	Ø	4
3	2	3	3	Ø	3	Ø	1	3	6	8	6	4	4	Ø	Ø	Ø
4	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	4	1	Ø	3
5	3	3	4	Ø	3	Ø	1	Ø	4	6	4	4	2	1	Ø	Ø
6	1	Ø	4	3	Ø	1	1	1	-1	1	4	4	5	-1	Ø	3
7	-1	1	7	3	1	1	1	2	2	3	3	6	7	2	-1	3
8	3	3	3	Ø	3	Ø	1	3	6	7	5	3	2	Ø	Ø	Ø
9	3	2	3	Ø	3	Ø	1	2	5	7	4	5	4	1	Ø	Ø
10	1	1	7	3	1	1	1	1	1	1	5	8	8	3	Ø	4
12	3	3	3	Ø	2	Ø	1	2	5	6	6	3	3	-1	Ø	Ø
13	3	4	-1	Ø	Ø	Ø	-1	1	2	6	4	2	4	Ø	Ø	Ø
14	2	1	3	Ø	3	Ø	-1	Ø	4	5	2	3	3	Ø	Ø	Ø
15	1	2	7	3	1	1	1	2	2	3	4	7	6	3	1	3
17	1	1	6	3	Ø	1	1	-1	1	3	4	6	5	3	Ø	3
20	Ø	1	6	2	1	Ø	2	2	1	2	1	4	5	2	Ø	4
21	1	1	7	1	Ø	-1	2	2	2	2	2	6	6	2	Ø	3

-1 INDICATES ESTIMATED VALUE

SELENIUM

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E \ 03$
INNER SCALE= $0.1E \ 01$
MAXIMUM VALUE = $0.288E \ 02$



SELENIUM

NUMBER OF READINGS

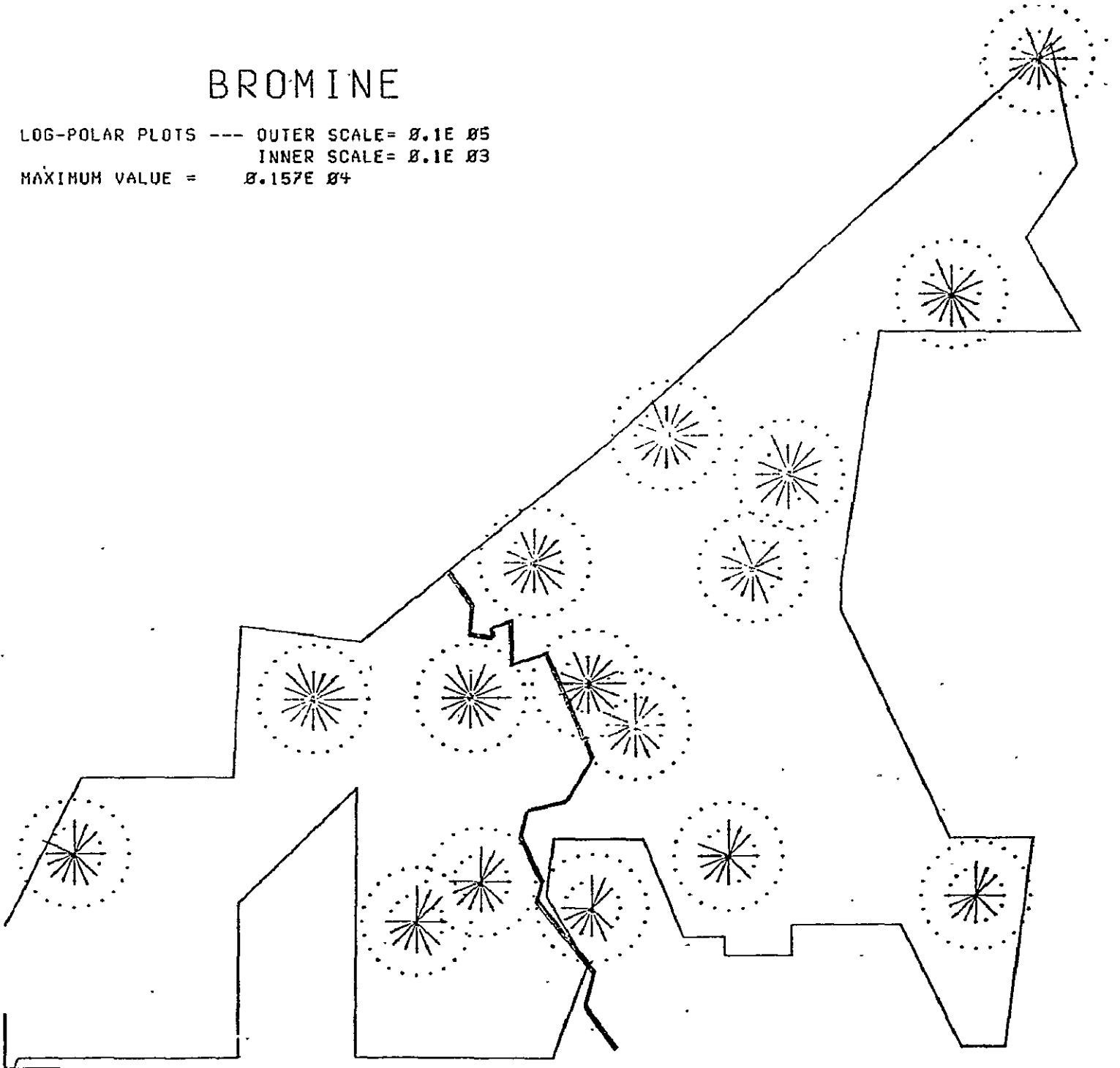
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	2	Ø	1	1	1	1	1	5	4	5	1	Ø	2
7	-	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	1	3	1	6	8	7	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
13	-	3	4	-1	Ø	Ø	Ø	1	1	3	5	3	3	3	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	7	7	1	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
17	-	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

BROMINE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 05$
INNER SCALE = $0.1E 03$
MAXIMUM VALUE = $0.157E 04$



BROMINE

NUMBER OF READINGS

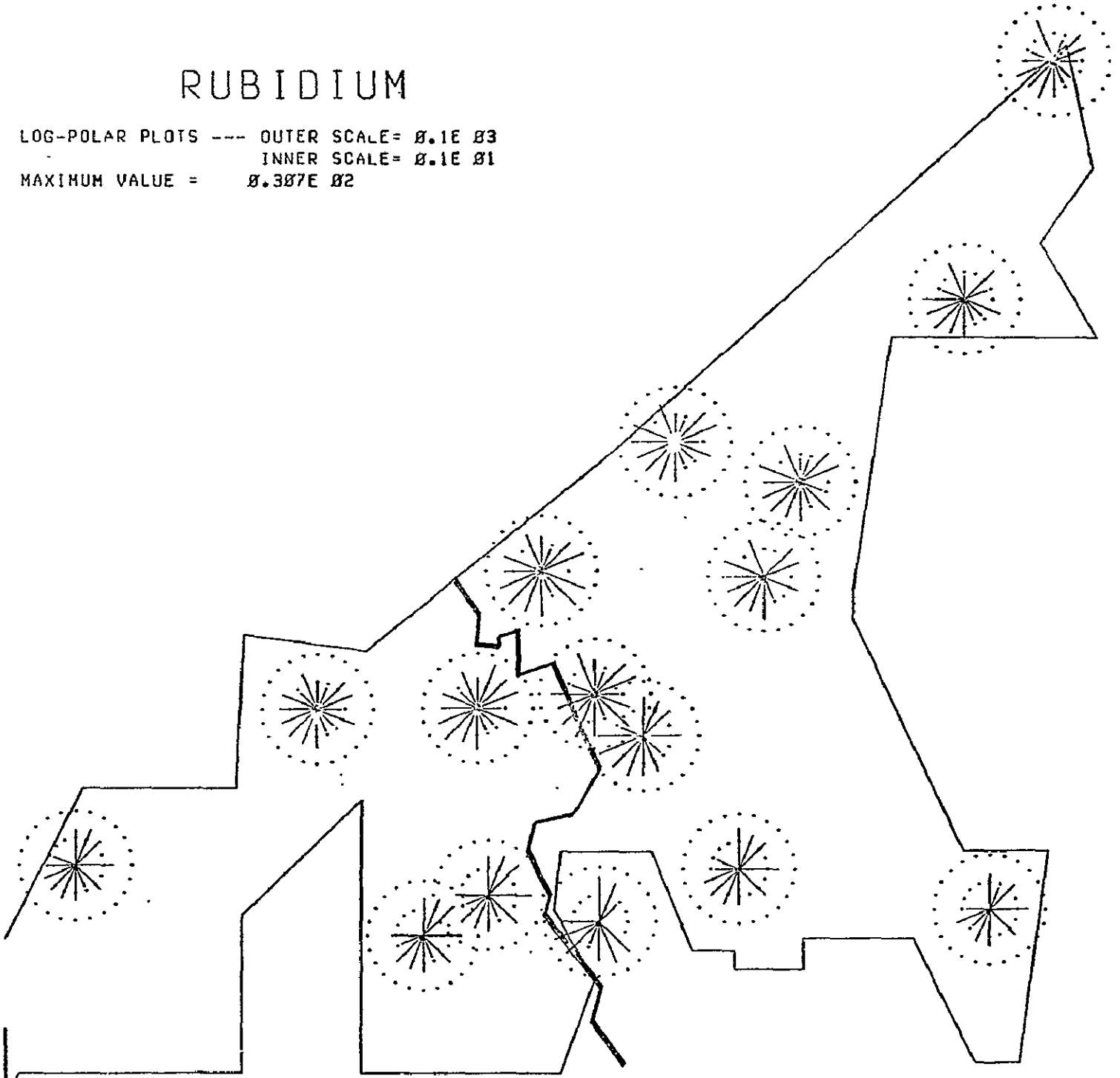
WIND FLOW

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1 -	1	1	6	4	1	1	2	2	2	2	6	4	7	3	Ø	4
	3 -	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
	4 -	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
	5 -	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
	6 -	1	Ø	5	3	Ø	2	1	1	1	1	5	4	5	1	Ø	3
	7 -	1	1	8	4	1	2	1	2	4	3	4	7	7	3	1	3
	8 -	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
	9 -	3	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
	1Ø -	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
	12 -	3	3	4	Ø	3	Ø	2	3	8	11	6	3	3	1	Ø	Ø
	13 -	3	4	1	Ø	Ø	Ø	1	1	4	7	3	4	4	Ø	Ø	Ø
	14 -	3	1	4	Ø	3	Ø	1	Ø	7	7	2	3	3	Ø	Ø	Ø
	15 -	1	2	7	4	1	2	1	2	2	3	4	7	8	4	1	3
	17 -	1	1	7	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
	2Ø -	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
	21 -	1	1	7	1	Ø	1	2	2	3	2	3	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

RUBIDIUM

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E \ 03$
INNER SCALE= $0.1E \ 01$
MAXIMUM VALUE = $0.307E \ 02$



RUBIDIUM

NUMBER OF READINGS

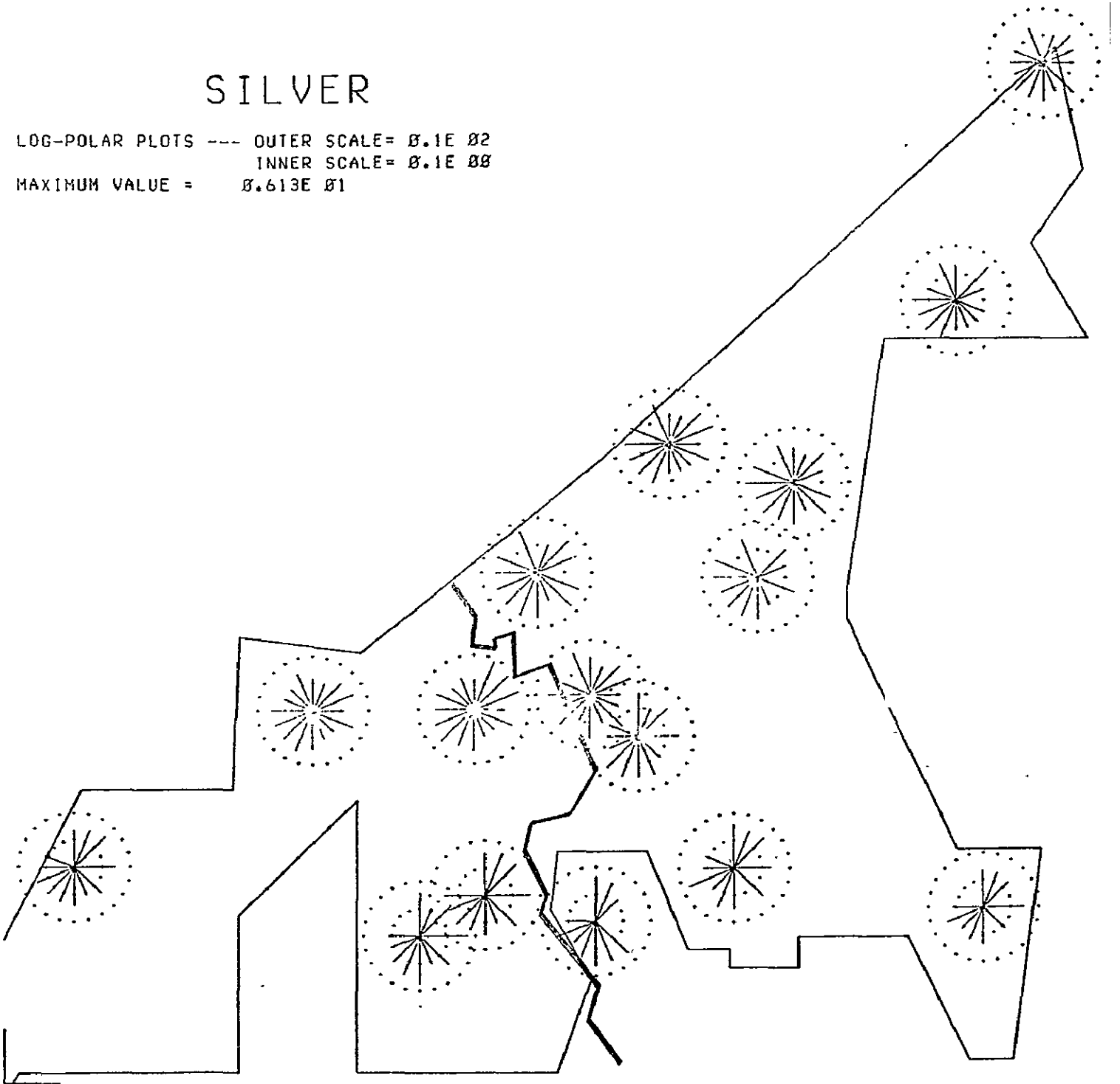
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNN	NW	NNW
	1	-	1	-1	4	3	-1	1	1	-1	1	2	6	2	-1	-3	4
	3	-	3	2	2	Ø	3	Ø	1	-1	6	7	4	-1	2	Ø	Ø
	4	-	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	4	2	3	1	Ø
	5	-	1	2	3	Ø	3	Ø	1	Ø	4	5	1	1	-1	-1	Ø
	6	-	-1	Ø	4	-1	Ø	1	-1	-1	1	1	2	1	2	-1	Ø
	7	-	1	-1	5	3	-1	2	-1	-1	3	2	4	4	1	1	-1
	8	-	3	1	2	Ø	3	Ø	1	-1	6	7	4	-1	1	Ø	Ø
	9	-	1	1	3	Ø	3	Ø	-1	1	4	8	3	1	2	-1	Ø
	10	-	1	-1	6	2	-1	1	-1	-1	2	1	6	5	4	1	Ø
	12	-	2	1	2	Ø	3	Ø	1	-1	6	6	4	1	2	-1	Ø
	13	-	2	2	-1	Ø	Ø	Ø	1	1	2	-1	1	1	1	Ø	Ø
	14	-	2	-1	4	Ø	3	Ø	1	Ø	5	6	-1	2	-1	Ø	Ø
	15	-	1	1	5	4	-1	2	-1	-1	1	2	4	4	4	1	-1
	17	-	1	-1	5	4	Ø	-1	1	-1	3	2	5	4	2	1	Ø
	20	-	Ø	-1	3	2	-1	Ø	-1	-1	2	1	2	1	1	-1	Ø
	21	-	1	-1	5	1	Ø	1	1	-1	3	2	2	1	3	1	Ø

-1 INDICATES ESTIMATED VALUE

SILVER

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.613E 01$



SILVER

NUMBER OF READINGS

WIND FROM

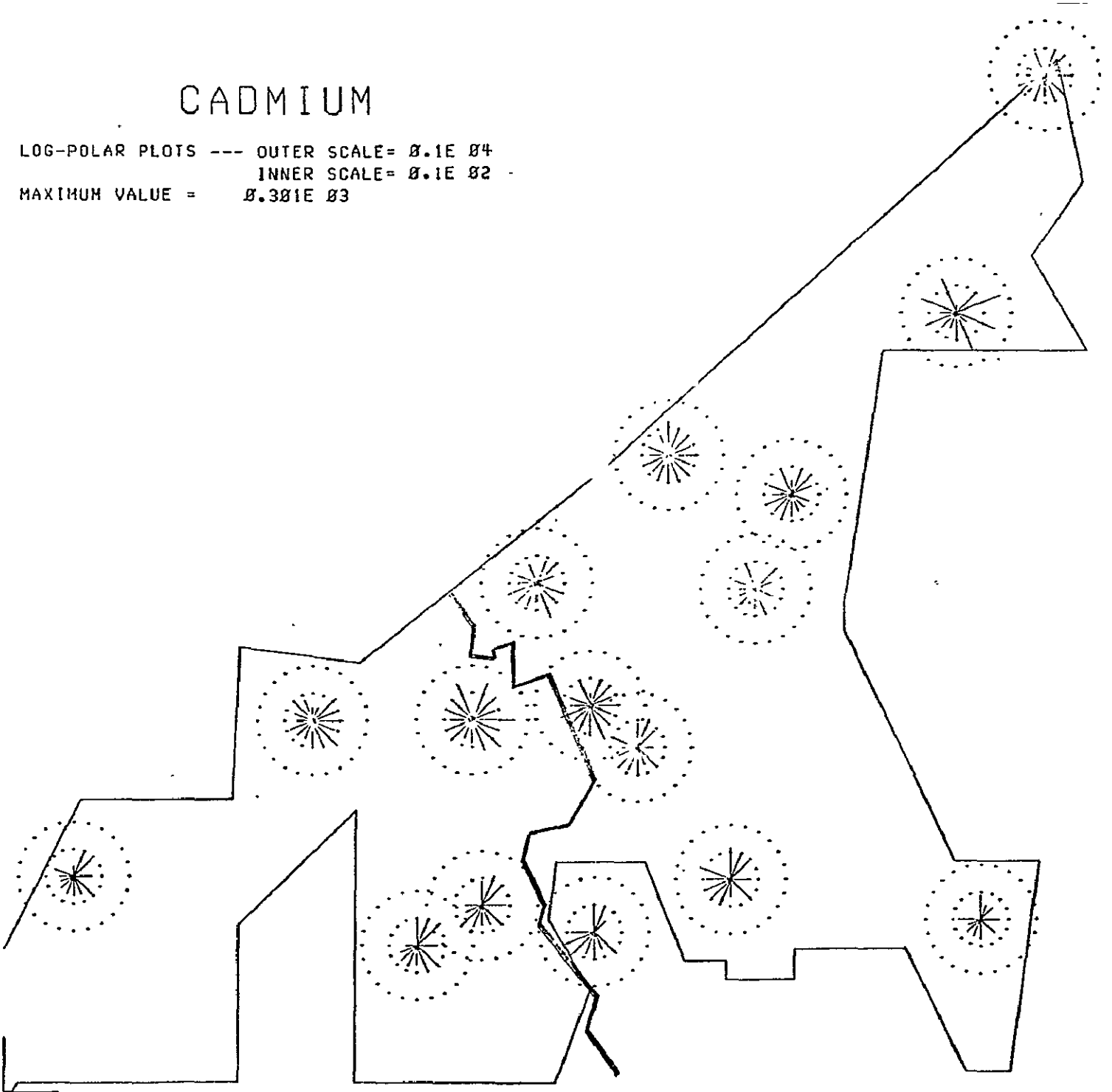
		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	1	-	1	-1	4	3	-1	-1	1	-1	1	2	3	-1	3	-1	0	2
	3	-	2	1	2	0	2	0	1	-1	5	5	2	1	2	0	0	0
	4	-	0	0	1	-1	0	2	0	-1	1	1	3	2	2	1	0	1
	5	-	2	2	4	0	1	0	1	0	1	6	-1	1	-1	-1	0	0
	6	-	1	0	2	-1	0	-1	-1	-1	1	3	2	2	-1	0	1	
	7	-	1	-1	3	3	-1	2	-1	-1	3	1	3	5	3	-1	-1	3
	8	-	1	-1	3	0	2	0	1	-1	5	3	1	-1	-1	0	0	0
	9	-	1	-1	2	0	2	0	-1	1	3	6	1	-1	-1	-1	0	0
	10	-	1	-1	6	2	-1	1	-1	-1	1	6	4	3	1	0	3	
	12	-	1	2	2	0	1	0	1	-1	4	6	4	1	2	-1	0	0
	13	-	2	2	-1	0	0	0	1	1	3	2	-1	1	-1	0	0	0
	14	-	1	1	3	0	1	0	-1	0	2	2	-1	1	-1	0	0	0
	15	-	-1	1	2	1	-1	2	-1	-1	1	2	4	4	4	1	-1	1
	17	-	1	-1	1	-1	0	1	1	-1	1	1	4	4	2	1	0	2
	20	-	0	-1	3	1	-1	0	1	-1	1	1	2	-1	2	-1	0	2
	21	-	0	-1	5	2	0	1	1	-1	3	2	3	2	3	1	0	3

SITE

-1 INDICATES ESTIMATED VALUE

CADMIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 04$
INNER SCALE = $0.1E 02$ -
MAXIMUM VALUE = $0.301E 03$



CADMIUM

NUMBER OF READINGS

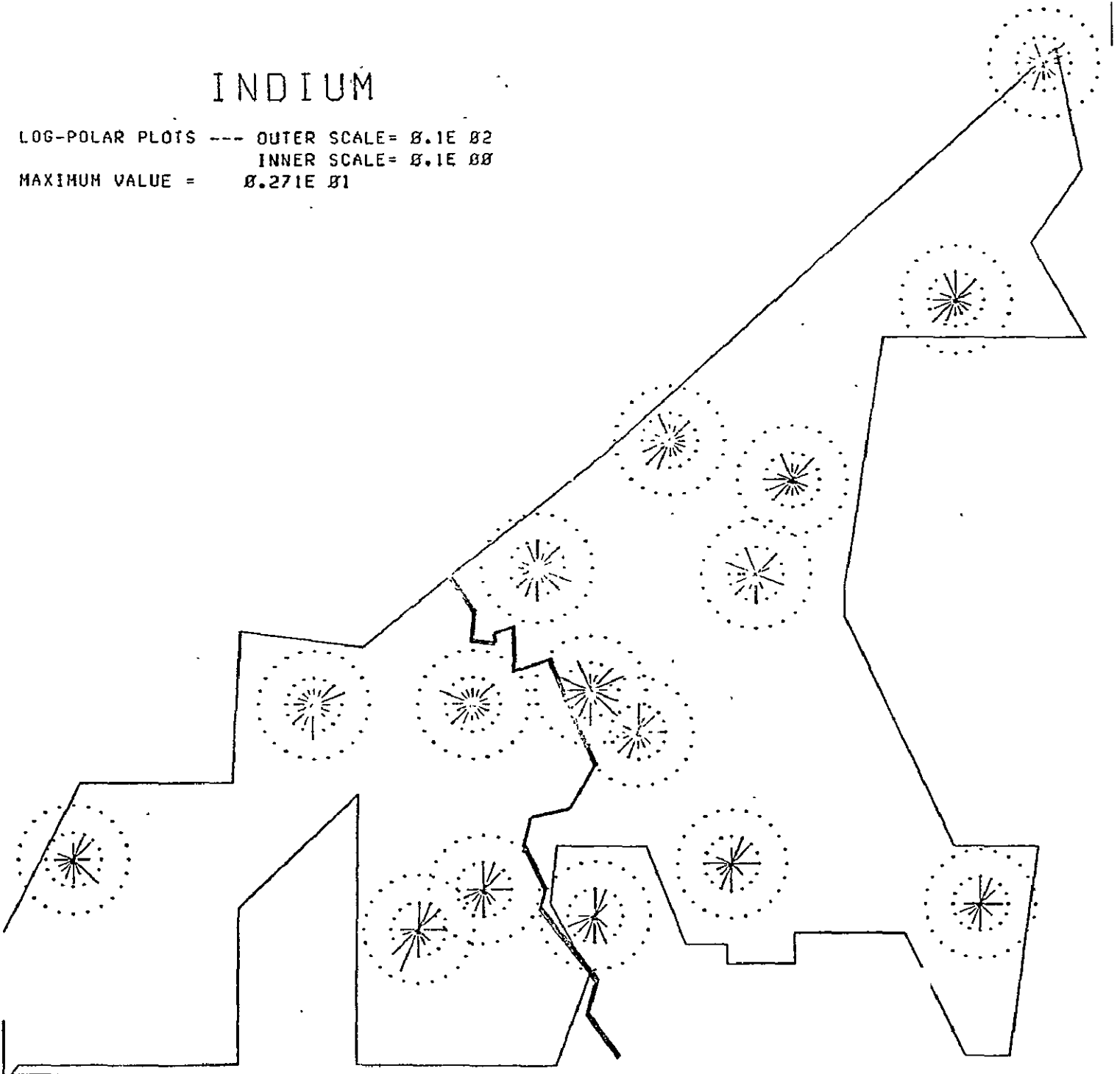
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	3	2	2	5	4	7	3	Ø	4
3	-	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	3	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
6	-	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
7	-	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	3	2	Ø	Ø	Ø
9	-	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	1	2	1	2	3	1	6	8	7	4	Ø	5
12	-	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
14	-	4	1	4	Ø	3	Ø	1	Ø	8	7	2	3	3	Ø	Ø	Ø
15	-	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
17	-	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
21	-	Ø	1	7	2	Ø	1	2	2	2	2	4	6	6	4	Ø	3

-1 INDICATES ESTIMATED VALUE

INDIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.271E 01$



INDIUM

NUMBER OF READINGS

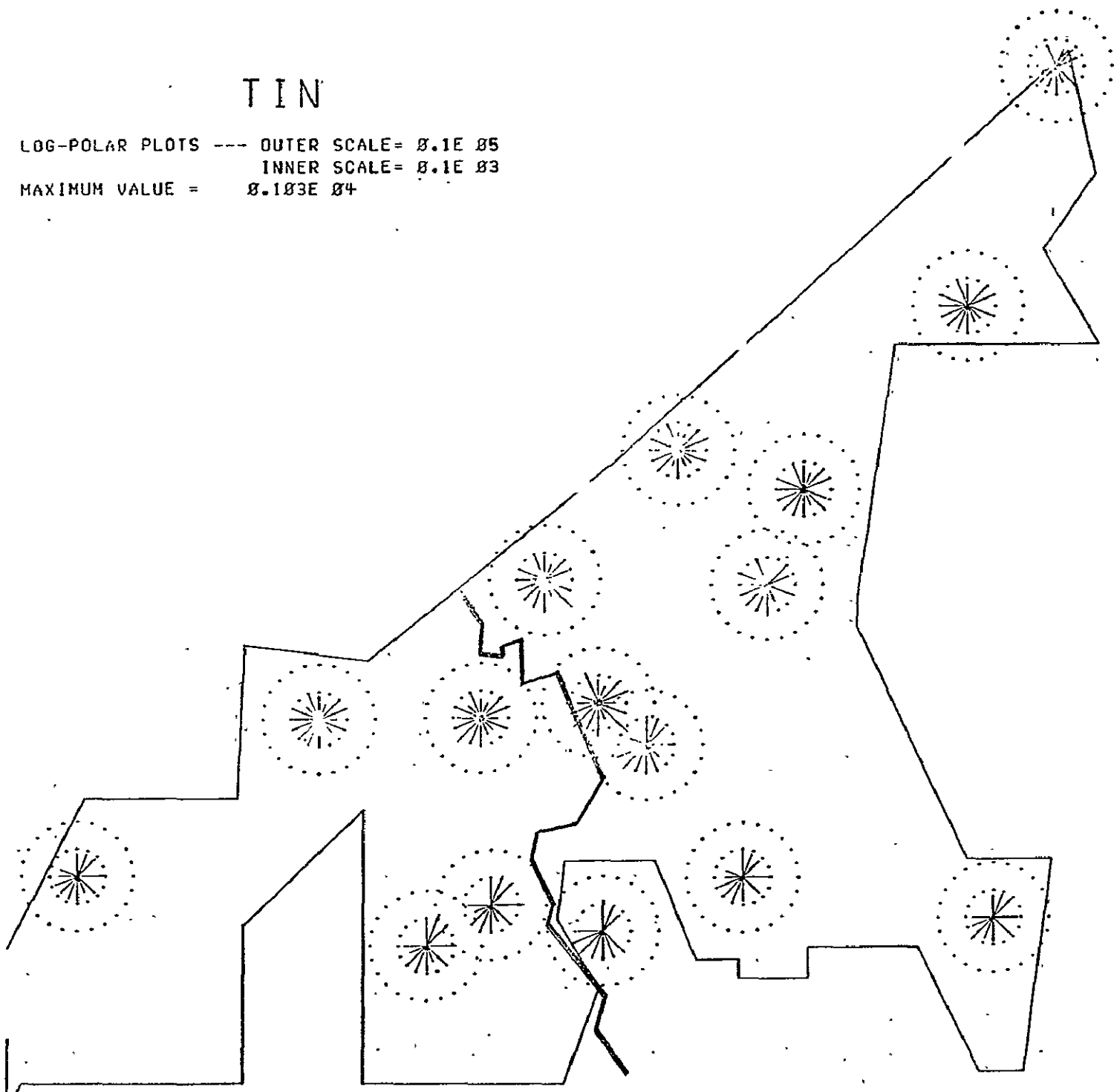
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1	-1	-1	3	2	-1	1	1	-1	1	1	4	2	1	1	Ø	2
	3	2	2	1	Ø	2	Ø	-1	-1	1	2	-1	1	-1	Ø	Ø	Ø
	4	Ø	Ø	1	-1	Ø	1	Ø	-1	1	-1	2	1	1	1	Ø	1
	5	-1	1	1	Ø	1	Ø	-1	Ø	1	1	-1	-1	1	-1	Ø	Ø
	6	1	Ø	1	-1	Ø	-1	-1	-1	-1	1	1	1	1	-1	Ø	1
	7	-1	-1	4	1	-1	-1	-1	-1	1	1	1	-1	1	-1	-1	-1
	8	1	1	2	Ø	2	Ø	-1	-1	1	2	2	-1	1	Ø	Ø	Ø
	9	1	-1	1	Ø	2	Ø	-1	-1	-1	2	1	-1	-1	-1	Ø	Ø
	1Ø	-1	-1	4	-1	-1	-1	-1	-1	-1	1	3	3	1	-1	Ø	1
	12	-1	1	2	Ø	-1	Ø	1	-1	2	1	-1	-1	1	-1	Ø	Ø
	13	1	3	-1	Ø	Ø	Ø	-1	1	2	2	1	1	-1	Ø	Ø	Ø
	14	1	1	2	Ø	1	Ø	-1	Ø	3	3	-1	2	-1	Ø	Ø	Ø
	15	-1	-1	3	-1	-1	-1	-1	-1	-1	1	2	-1	1	1	-1	-1
	17	-1	-1	4	-1	Ø	-1	-1	-1	-1	-1	1	2	3	-1	Ø	1
	2Ø	Ø	-1	2	1	-1	Ø	-1	-1	-1	1	-1	-1	2	-1	Ø	2
	21	1	-1	2	-1	Ø	1	1	-1	2	1	1	-1	1	-1	Ø	1

-1 INDICATES ESTIMATED VALUE

TIN

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 05$
INNER SCALE = $0.1E 03$
MAXIMUM VALUE = $0.103E 04$



TIN

NUMBER OF READINGS

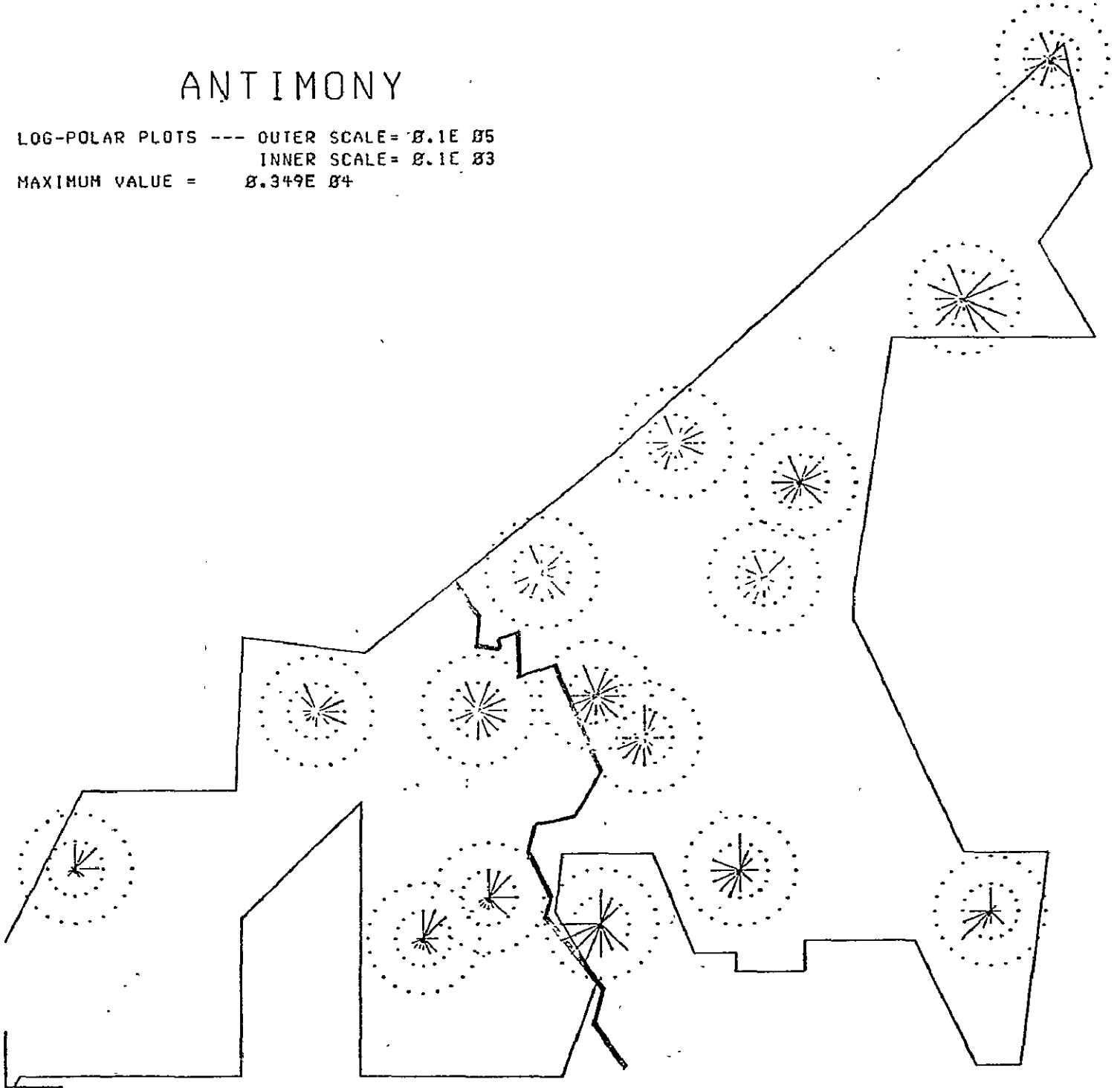
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1	1	-1	3	3	-1	1	1	-1	1	1	6	2	3	-1	0	4
	3	2	2	3	0	3	0	1	-1	6	8	4	-1	2	0	0	0
	4	0	0	2	1	0	2	0	-1	1	1	5	3	3	1	0	3
	5	2	2	3	0	2	0	1	0	4	6	2	1	-1	-1	0	0
	6	1	0	5	2	0	1	-1	-1	1	1	4	1	3	1	0	3
	7	1	-1	5	4	-1	2	-1	-1	3	1	4	4	3	1	-1	3
	8	3	2	3	0	3	0	1	-1	6	6	4	-1	1	0	0	0
	9	3	1	2	0	3	0	-1	1	5	8	3	2	2	-1	0	0
	10	1	-1	6	3	-1	2	-1	-1	2	-1	6	4	4	1	0	4
	12	2	2	3	0	3	0	1	-1	6	7	4	1	2	-1	0	0
	13	2	3	1	0	0	0	1	1	3	4	1	1	1	0	0	0
	14	3	1	3	0	3	0	1	0	6	6	1	3	1	0	0	0
	15	1	-1	4	4	-1	2	-1	-1	1	1	4	4	4	1	-1	3
	17	1	-1	5	4	0	1	1	-1	3	1	5	4	3	1	0	3
	20	0	-1	4	2	-1	0	1	-1	1	1	2	2	3	-1	0	2
	21	1	-1	4	2	0	1	1	-1	3	1	3	2	3	1	0	3

-1 INDICATES ESTIMATED VALUE

ANTIMONY

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 05$
INNER SCALE = $0.1E 03$
MAXIMUM VALUE = $0.349E 04$



ANTIMONY .

NUMBER OF READINGS

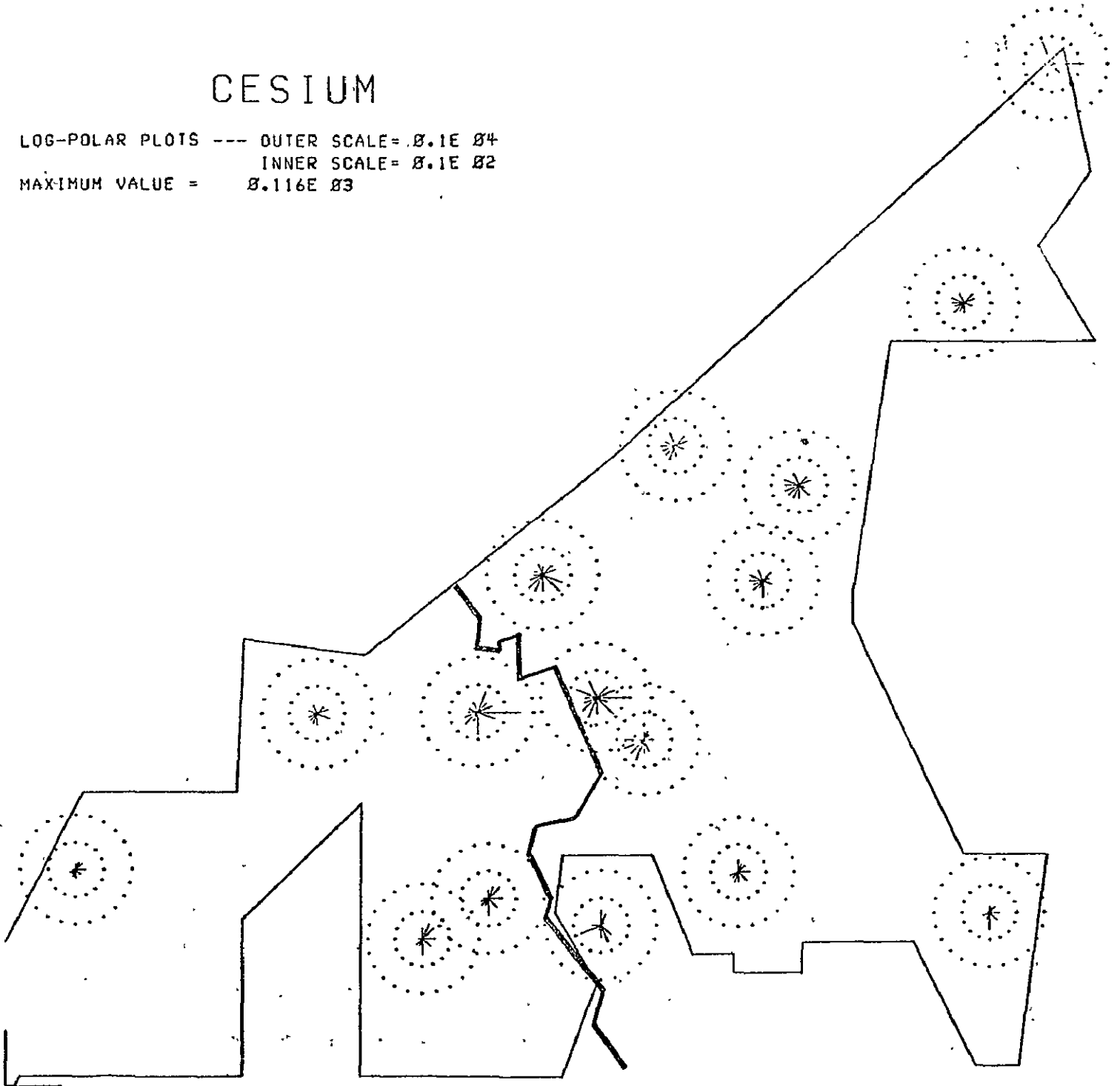
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NH	NNW
1 -	1	1	5	4	1	1	2	2	2	2	6	4	7	3	0	4
3 -	3	3	4	0	3	0	2	3	9	11	5	5	4	0	0	0
4 -	0	0	2	1	0	2	0	1	1	2	5	4	5	2	0	3
5 -	3	3	5	0	3	0	2	0	6	8	4	4	2	1	0	0
6 -	1	0	5	3	0	2	1	1	1	1	5	4	5	1	0	3
7 -	1	1	7	4	1	2	1	2	4	3	4	7	7	3	1	3
8 -	3	3	4	0	3	0	2	3	9	10	6	3	2	0	0	0
9 -	3	1	4	0	3	0	1	2	8	9	3	5	4	-1	0	0
10 -	1	1	8	3	1	2	1	1	3	1	6	8	8	4	0	4
12 -	3	3	4	0	3	0	2	3	8	11	5	2	3	1	0	0
13 -	3	4	1	0	0	0	1	1	4	7	4	4	4	0	0	0
14 -	3	1	4	0	3	0	1	0	6	7	2	3	3	0	0	0
15 -	1	2	7	4	1	2	1	2	2	3	4	7	7	4	1	3
17 -	1	1	7	4	0	1	1	-1	4	3	5	6	5	4	0	3
20 -	0	1	6	2	1	0	2	2	3	2	2	4	5	2	0	4
21 -	1	1	7	2	0	1	2	2	3	2	3	6	6	4	0	3

-1 INDICATES ESTIMATED VALUE

CESIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 04$
INNER SCALE = $0.1E \ 02$
MAXIMUM VALUE = $0.116E \ 03$



CESIUM

NUMBER OF READINGS

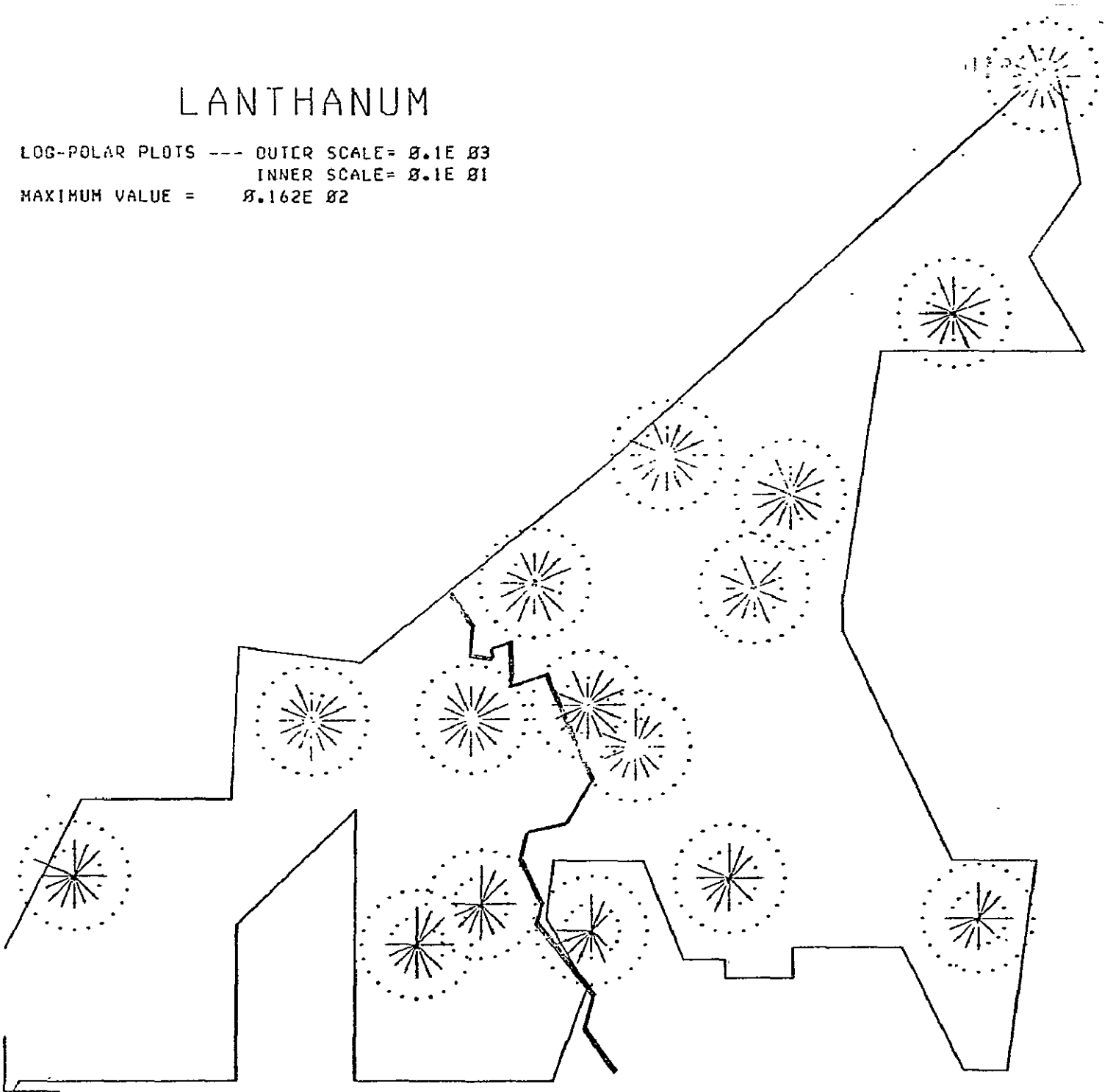
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	-	1	-1	4	4	1	1	1	-1	1	2	6	2	3	1	Ø	4
	3	-	3	2	3	Ø	3	Ø	1	-1	7	7	4	1	2	Ø	Ø	Ø
	4	-	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
	5	-	2	2	4	Ø	3	Ø	1	Ø	4	6	2	1	-1	-1	Ø	Ø
	6	-	1	Ø	5	1	Ø	1	-1	-1	1	1	4	2	3	1	Ø	2
	7	-	1	-1	6	4	-1	2	-1	-1	3	2	4	5	3	1	-1	3
	8	-	3	2	3	Ø	3	Ø	1	-1	7	7	4	-1	1	Ø	Ø	Ø
	9	-	3	-1	3	Ø	3	Ø	-1	1	4	9	3	2	2	-1	Ø	Ø
	1Ø	-	1	-1	6	3	-1	-2	-1	-1	2	1	6	5	4	2	Ø	4
	12	-	3	2	3	Ø	3	Ø	1	-1	6	8	4	1	2	-1	Ø	Ø
	13	-	3	3	1	Ø	Ø	Ø	1	1	3	3	-1	1	1	Ø	Ø	Ø
	14	-	3	1	4	Ø	3	Ø	1	Ø	7	6	-1	3	1	Ø	Ø	Ø
	15	-	-1	1	5	4	1	2	-1	-1	2	1	4	4	4	1	-1	3
	17	-	1	-1	5	4	Ø	1	1	-1	3	2	5	4	3	1	Ø	3
	2Ø	-	Ø	-1	4	2	1	Ø	1	-1	2	2	2	2	3	-1	Ø	4
	21	-	1	-1	5	2	Ø	1	1	-1	3	2	3	3	3	1	Ø	3

-1 INDICATES ESTIMATED VALUE

LANTHANUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.162E 02$



LANTHANUM

NUMBER OF READINGS

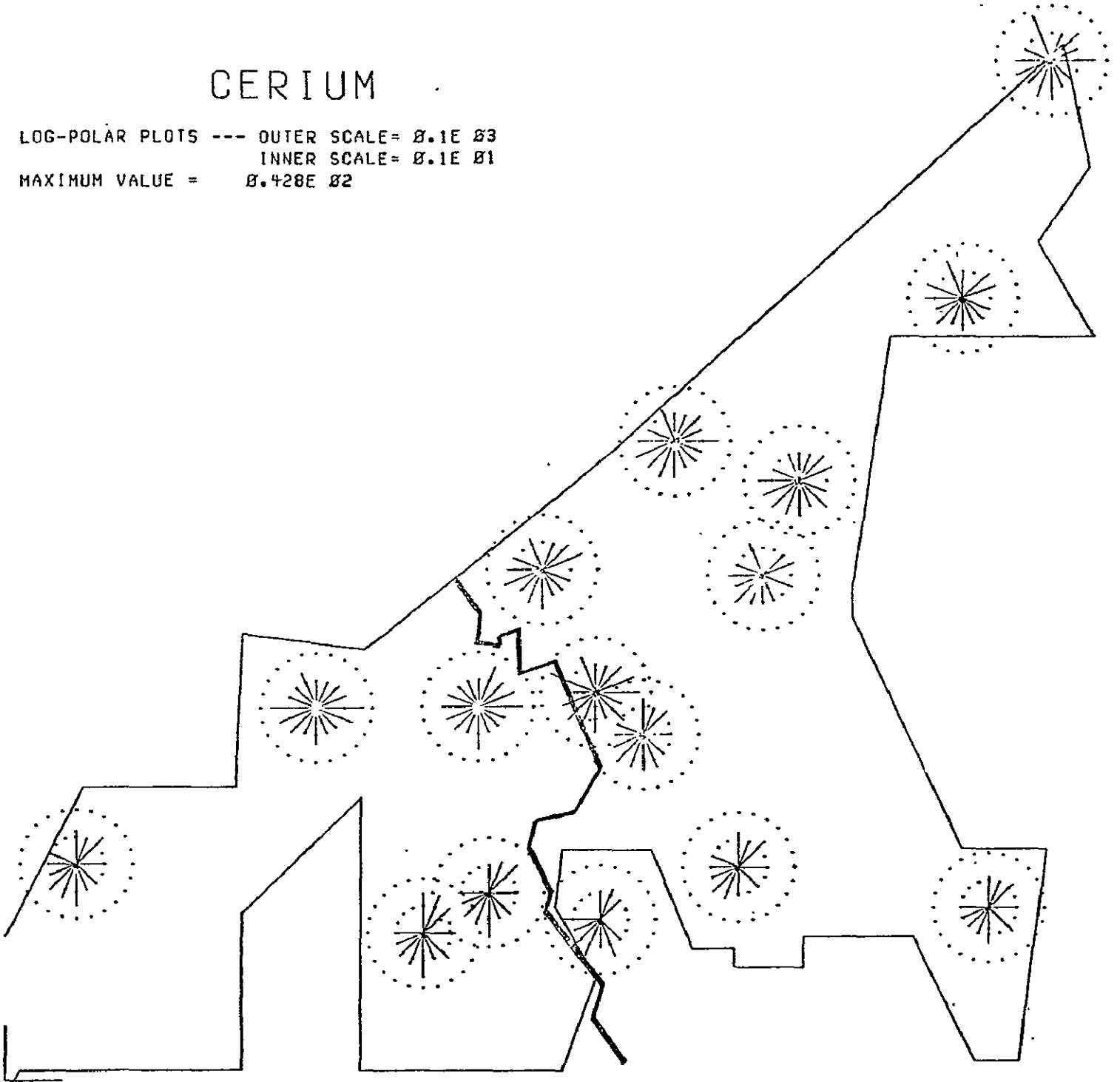
WIND

SITE	WIND															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	-1	1	5	1	1	1	2	2	1	1	2	4	5	3	Ø	3
3	2	3	3	Ø	1	Ø	1	3	3	6	6	4	4	Ø	Ø	Ø
4	Ø	Ø	2	-1	Ø	1	Ø	1	-1	2	1	4	4	1	Ø	3
5	2	3	3	Ø	2	Ø	1	Ø	4	4	4	3	2	1	Ø	Ø
6	1	Ø	3	3	Ø	1	1	1	-1	1	2	4	5	-1	Ø	3
7	-1	1	6	1	1	1	1	2	1	3	2	7	6	2	1	2
8	2	3	2	Ø	2	Ø	1	3	3	7	6	4	2	Ø	Ø	Ø
9	1	2	2	Ø	2	Ø	1	1	3	2	3	5	3	1	Ø	Ø
1Ø	-1	1	5	1	1	1	1	1	1	1	1	8	7	3	Ø	3
12	2	3	3	Ø	2	Ø	1	3	3	8	6	3	2	1	Ø	Ø
13	3	3	-1	Ø	Ø	Ø	-1	1	-1	6	4	4	4	Ø	Ø	Ø
14	2	1	2	Ø	3	Ø	-1	Ø	3	4	2	2	2	Ø	Ø	Ø
15	1	2	6	2	1	1	1	2	1	3	2	7	7	3	1	1
17	-1	1	5	3	Ø	1	1	-1	1	3	3	6	5	3	Ø	3
2Ø	Ø	1	5	2	1	Ø	2	2	1	2	1	4	4	2	Ø	3
21	1	1	7	1	Ø	-1	1	2	2	2	1	5	4	4	Ø	2

-1 INDICATES ESTIMATED VALUE

CERIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.428E 02$



CERIUM

NUMBER OF READINGS

WIND FROM

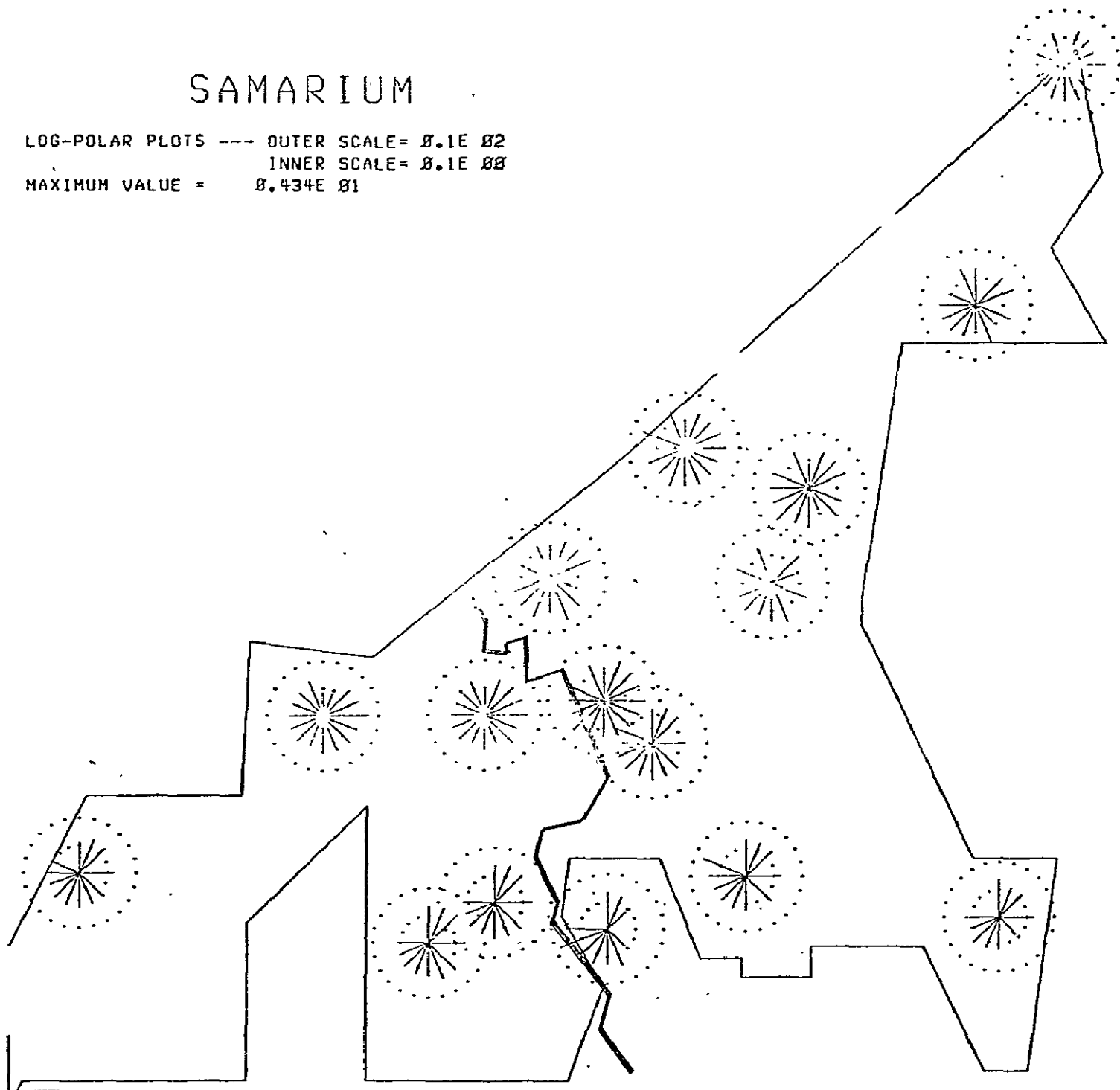
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	-1	-1	2	1	1	-1	1	-1	1	1	3	2	-1	1	Ø	4
3	-	-1	2	1	Ø	-1	Ø	1	-1	1	5	2	-1	1	Ø	Ø	Ø
4	-	Ø	Ø	-1	1	Ø	1	Ø	-1	-1	1	2	-1	2	-1	Ø	2
5	-	1	-1	1	Ø	-1	Ø	-1	Ø	-1	1	2	-1	-1	-1	Ø	Ø
6	-	-1	Ø	4	1	Ø	-1	-1	-1	1	-1	2	-1	2	1	Ø	1
7	-	-1	-1	2	3	1	1	-1	-1	3	1	1	2	1	-1	-1	1
8	-	1	2	2	Ø	1	Ø	1	-1	1	3	2	-1	-1	Ø	Ø	Ø
9	-	1	-1	1	Ø	-1	Ø	-1	1	3	6	2	1	-1	-1	Ø	Ø
10	-	-1	-1	4	1	1	-1	-1	-1	2	1	2	2	2	-1	Ø	1
12	-	2	-1	1	Ø	-1	Ø	-1	-1	1	5	3	-1	-1	-1	Ø	Ø
13	-	-1	1	-1	Ø	Ø	Ø	-1	1	-1	4	3	-1	2	Ø	Ø	Ø
14	-	2	-1	2	Ø	-1	Ø	1	Ø	2	-1	-1	-1	-1	Ø	Ø	Ø
15	-	-1	1	4	2	1	-1	-1	-1	1	1	1	1	2	1	-1	-1
17	-	-1	-1	5	1	Ø	-1	1	-1	2	2	1	2	1	-1	Ø	-1
20	-	Ø	-1	1	-1	1	Ø	-1	-1	1	1	2	1	1	-1	Ø	2
21	-	Ø	-1	2	1	Ø	-1	-1	-1	1	1	1	1	1	1	Ø	1

SITE

-1 INDICATES ESTIMATED VALUE

SAMARIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.434E 01$



SAMARIUM

NUMBER OF READINGS

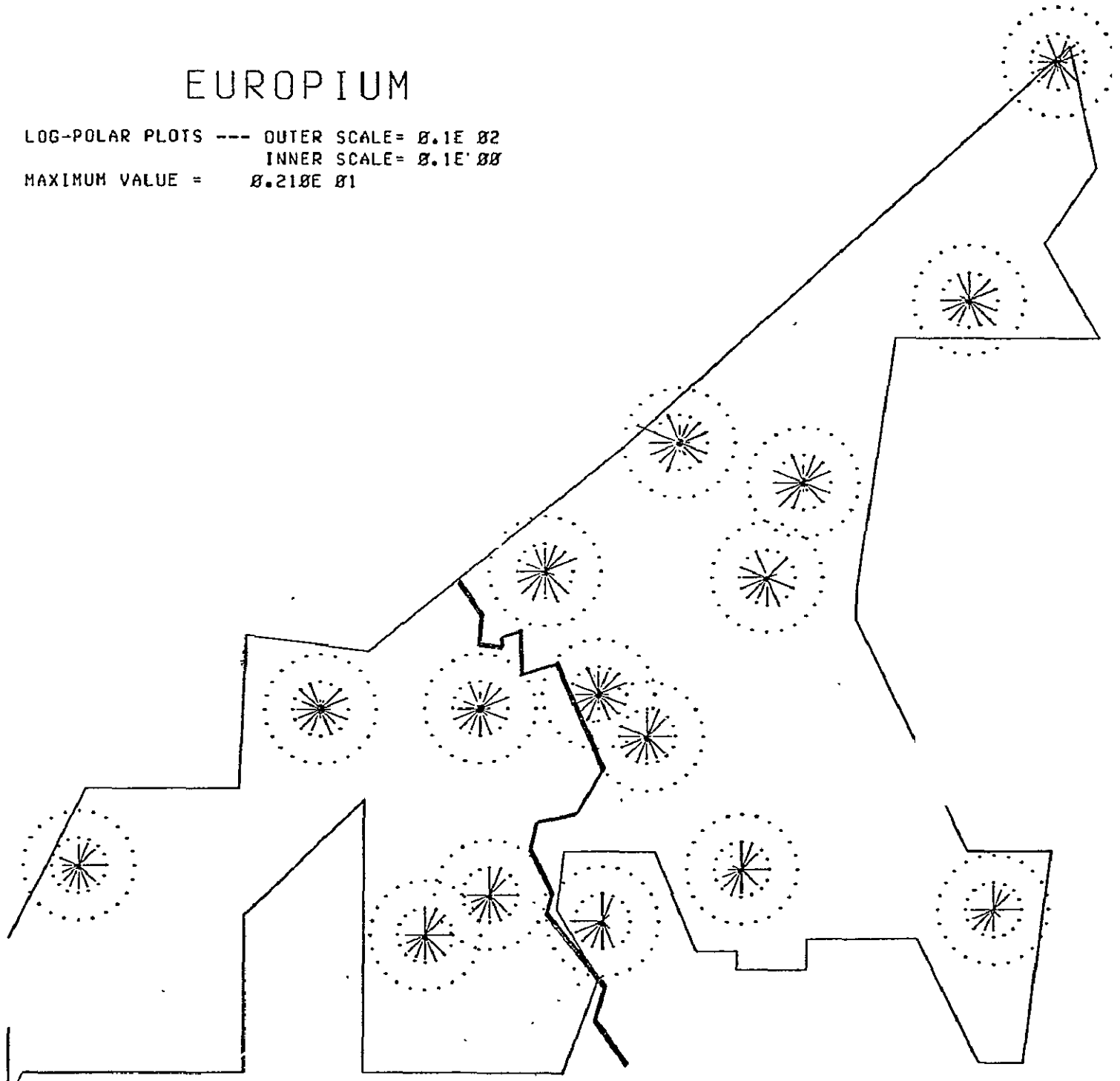
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	3	1	1	1	2	1	2	5	4	4	3	Ø	4
3	-	2	3	3	Ø	3	Ø	1	3	5	7	6	4	4	Ø	Ø	Ø
4	-	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	4	1	Ø	3
5	-	3	3	4	Ø	3	Ø	1	Ø	3	4	4	4	2	1	Ø	Ø
6	-	1	Ø	3	3	Ø	1	-1	1	-1	1	3	4	4	-1	Ø	3
7	-	-1	1	7	3	1	1	1	2	1	3	3	7	6	2	1	3
8	-	3	3	3	Ø	3	Ø	1	3	4	7	6	4	2	Ø	Ø	Ø
9	-	3	2	3	Ø	3	Ø	1	2	4	5	4	5	4	1	Ø	Ø
1Ø	-	1	1	7	3	1	1	1	1	1	1	4	8	8	3	Ø	4
12	-	2	3	3	Ø	3	Ø	1	3	5	7	6	3	3	1	Ø	Ø
13	-	3	4	-1	Ø	Ø	Ø	-1	1	2	6	4	4	4	Ø	Ø	Ø
14	-	2	1	3	Ø	3	Ø	-1	Ø	4	5	2	3	3	Ø	Ø	Ø
15	-	1	2	7	3	1	1	1	2	2	3	4	7	6	3	1	2
17	-	-1	1	6	3	Ø	1	1	-1	1	3	3	6	5	3	Ø	3
2Ø	-	Ø	1	6	2	1	Ø	2	2	1	2	1	4	5	2	Ø	4
21	-	1	1	7	1	Ø	-1	2	2	2	2	2	6	4	4	Ø	2

- -1 INDICATES ESTIMATED VALUE

EUROPIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.210E 01$



EUROPIUM

NUMBER OF READINGS

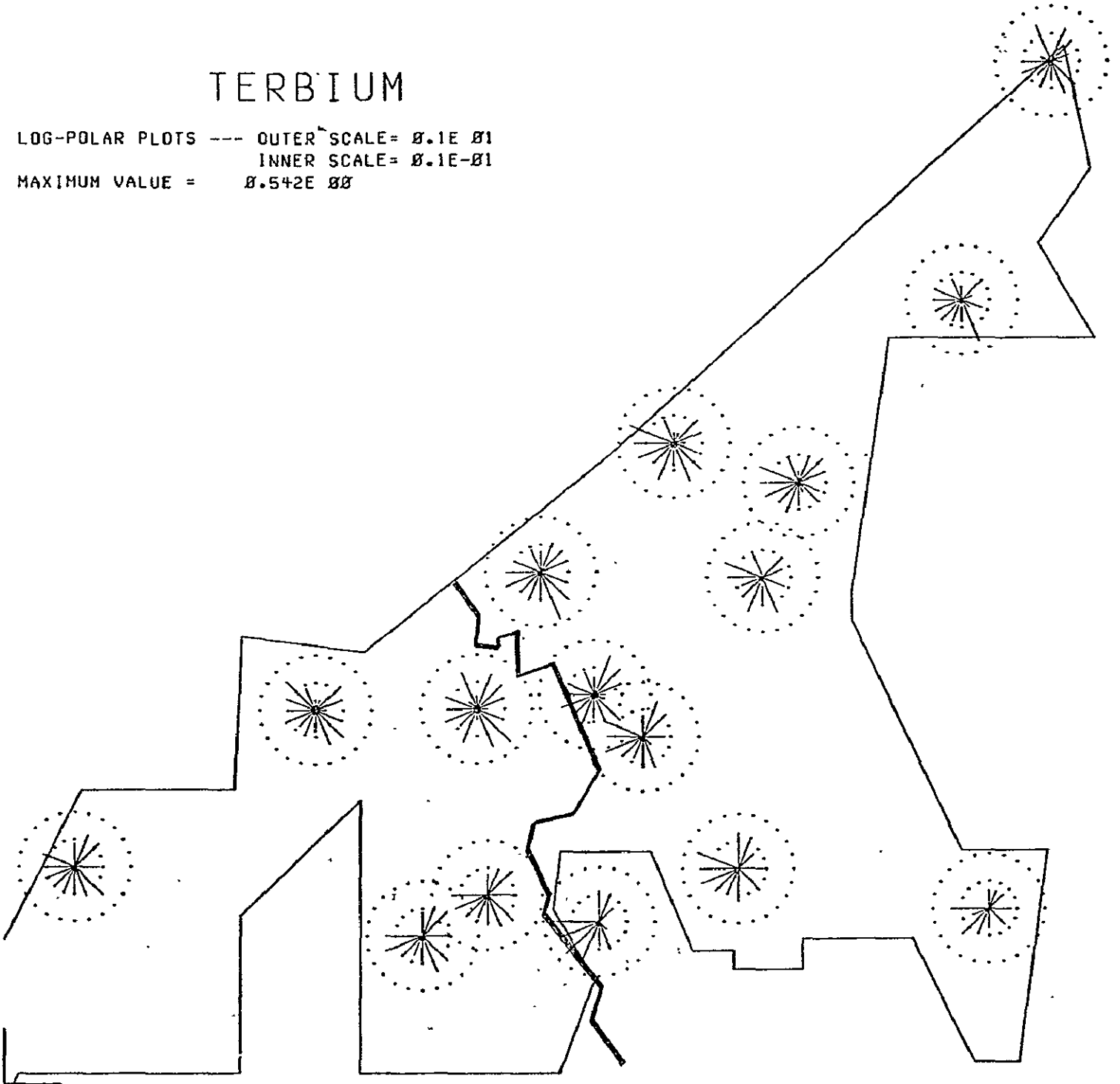
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	-	1	1	6	3	-1	1	2	1	-1	2	5	3	6	3	Ø	4
	3	-	3	3	2	Ø	3	Ø	1	3	4	7	6	4	4	Ø	Ø	Ø
	4	-	Ø	Ø	2	-1	Ø	1	Ø	1	1	2	4	4	4	1	Ø	3
	5	-	2	3	4	Ø	3	Ø	1	Ø	4	5	3	2	1	-1	Ø	Ø
	6	-	1	Ø	3	3	Ø	1	1	1	-1	1	4	3	4	-1	Ø	3
	7	-	-1	1	7	3	-1	1	1	2	-1	3	3	7	5	2	1	3
	8	-	3	3	3	Ø	3	Ø	1	3	5	7	6	3	2	Ø	Ø	Ø
	9	-	2	1	3	Ø	3	Ø	1	2	2	5	4	5	3	1	Ø	Ø
	10	-	1	1	7	3	-1	1	1	1	-1	1	5	8	7	3	Ø	4
	12	-	2	3	3	Ø	3	Ø	1	2	4	7	6	3	3	1	Ø	Ø
	13	-	3	3	-1	Ø	Ø	Ø	-1	1	2	5	4	1	2	Ø	Ø	Ø
	14	-	2	1	3	Ø	3	Ø	-1	Ø	3	5	2	3	3	Ø	Ø	Ø
	15	-	1	2	7	3	-1	1	-1	2	1	3	4	7	5	3	-1	2
	17	-	1	1	6	3	Ø	1	1	-1	-1	3	4	6	4	3	Ø	3
	20	-	Ø	1	6	2	-1	Ø	2	2	-1	2	1	4	4	2	Ø	4
	21	-	1	1	7	1	Ø	-1	2	2	2	2	2	6	5	4	Ø	2

-1 INDICATES ESTIMATED VALUE

TERBIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 01$
INNER SCALE = $0.1E -01$
MAXIMUM VALUE = $0.542E 00$



TERBIUM

NUMBER OF READINGS

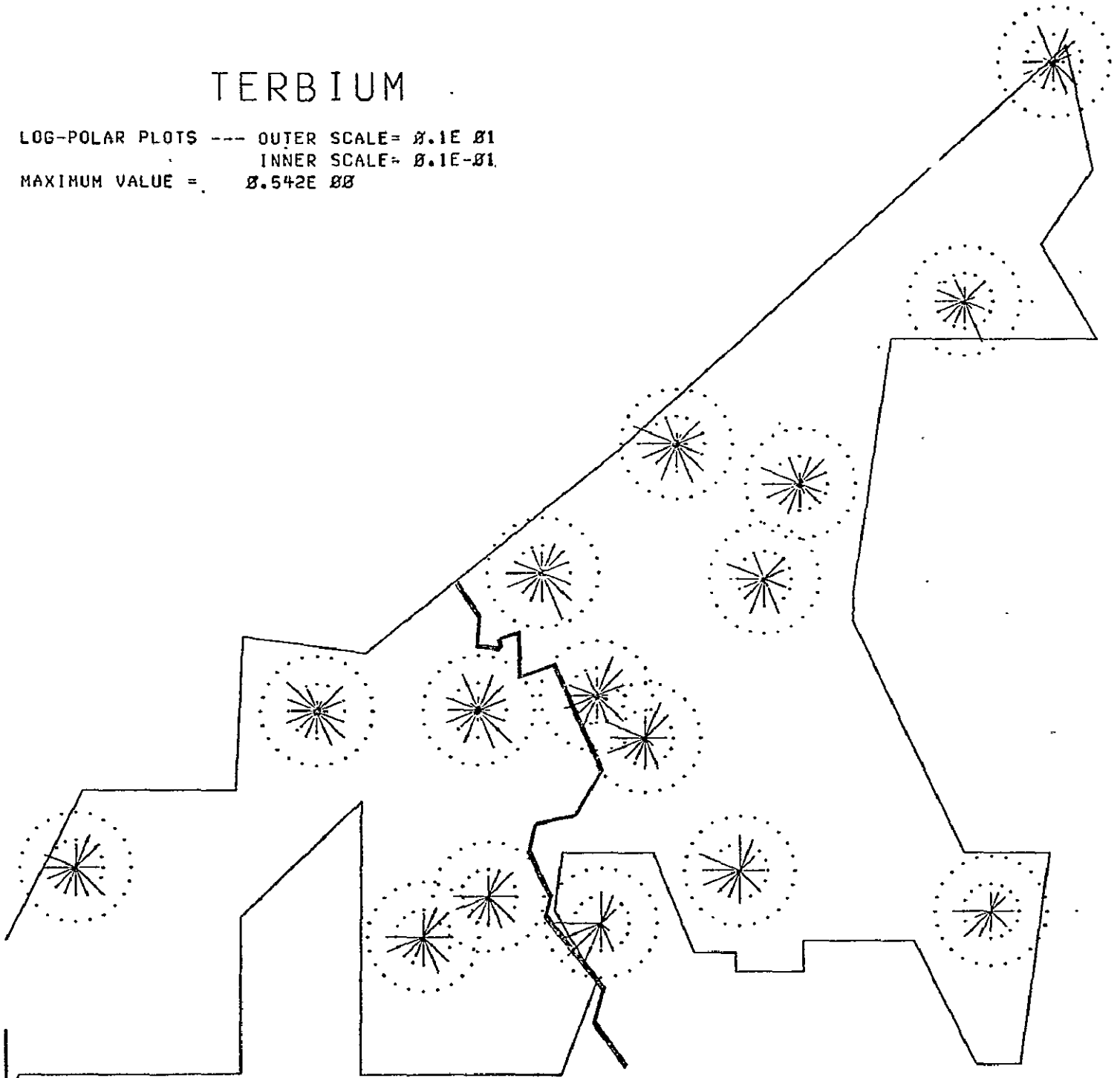
WIND FROM

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	5	4	-1	-1	2	1	1	1	6	4	6	1	Ø	4
3	2	2	3	Ø	2	Ø	2	2	8	8	6	4	3	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	3	6	2	Ø	3
5	3	3	4	Ø	3	Ø	2	Ø	5	7	3	2	2	1	Ø	Ø
6	1	Ø	3	-1	Ø	1	-1	1	1	1	4	4	4	1	Ø	2
7	1	-1	8	4	-1	2	1	2	3	2	4	6	5	2	1	2
8	3	2	4	Ø	3	Ø	2	3	8	6	6	1	1	Ø	Ø	Ø
9	2	2	4	Ø	3	Ø	-1	2	7	8	4	5	4	1	Ø	Ø
1Ø	-1	-1	8	3	-1	2	1	1	2	1	6	8	8	4	Ø	4
12	2	3	3	Ø	3	Ø	2	3	7	1Ø	5	2	1	1	Ø	Ø
13	2	4	1	Ø	Ø	Ø	-1	1	3	5	1	2	3	Ø	Ø	Ø
14	3	1	4	Ø	2	Ø	1	Ø	5	4	1	1	2	Ø	Ø	Ø
15	1	1	7	4	-1	2	1	2	-1	1	3	5	8	2	-1	2
17	-1	1	7	4	Ø	1	1	-1	3	3	5	6	5	4	Ø	3
2Ø	Ø	1	4	2	-1	Ø	2	1	2	1	2	3	1	-1	Ø	4
21	1	1	6	2	Ø	1	2	2	3	2	3	6	5	4	Ø	3

-1 INDICATES ESTIMATED VALUE

TERBIUM .

LOG-POLAR PLOTS --- OUTER SCALE= $0.1E 01$
INNER SCALE= $0.1E-01$
MAXIMUM VALUE = $0.542E 00$



TERBIUM

NUMBER OF READINGS

WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	5	4	-1	-1	2	1	1	1	6	4	6	1	Ø	4
3	2	2	3	Ø	2	Ø	2	2	8	8	6	4	3	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	3	6	2	Ø	3
5	3	3	4	Ø	3	Ø	2	Ø	5	7	3	2	2	1	Ø	Ø
6	1	Ø	3	-1	Ø	1	-1	1	1	1	4	4	4	1	Ø	2
7	1	-1	8	4	-1	2	1	2	3	2	4	6	5	2	1	2
8	3	2	4	Ø	3	Ø	2	3	8	6	6	1	1	Ø	Ø	Ø
9	2	2	4	Ø	3	Ø	-1	2	7	8	4	5	4	1	Ø	Ø
10	-1	-1	8	3	-1	2	1	1	2	1	6	8	8	4	Ø	4
12	2	3	3	Ø	3	Ø	2	3	7	10	5	2	1	1	Ø	Ø
13	2	4	1	Ø	Ø	Ø	-1	1	3	5	1	2	3	Ø	Ø	Ø
14	3	1	4	Ø	2	Ø	1	Ø	5	4	1	1	2	Ø	Ø	Ø
15	1	1	7	4	-1	2	1	2	-1	1	3	5	8	2	-1	2
17	-1	1	7	4	Ø	1	1	-1	3	3	5	6	5	4	Ø	3
20	Ø	1	4	2	-1	Ø	2	1	2	1	2	3	1	-1	Ø	4
21	1	1	6	2	Ø	1	2	2	3	2	3	6	5	4	Ø	3

-1 INDICATES ESTIMATED VALUE

DYSPROSIUM

NUMBER OF READINGS

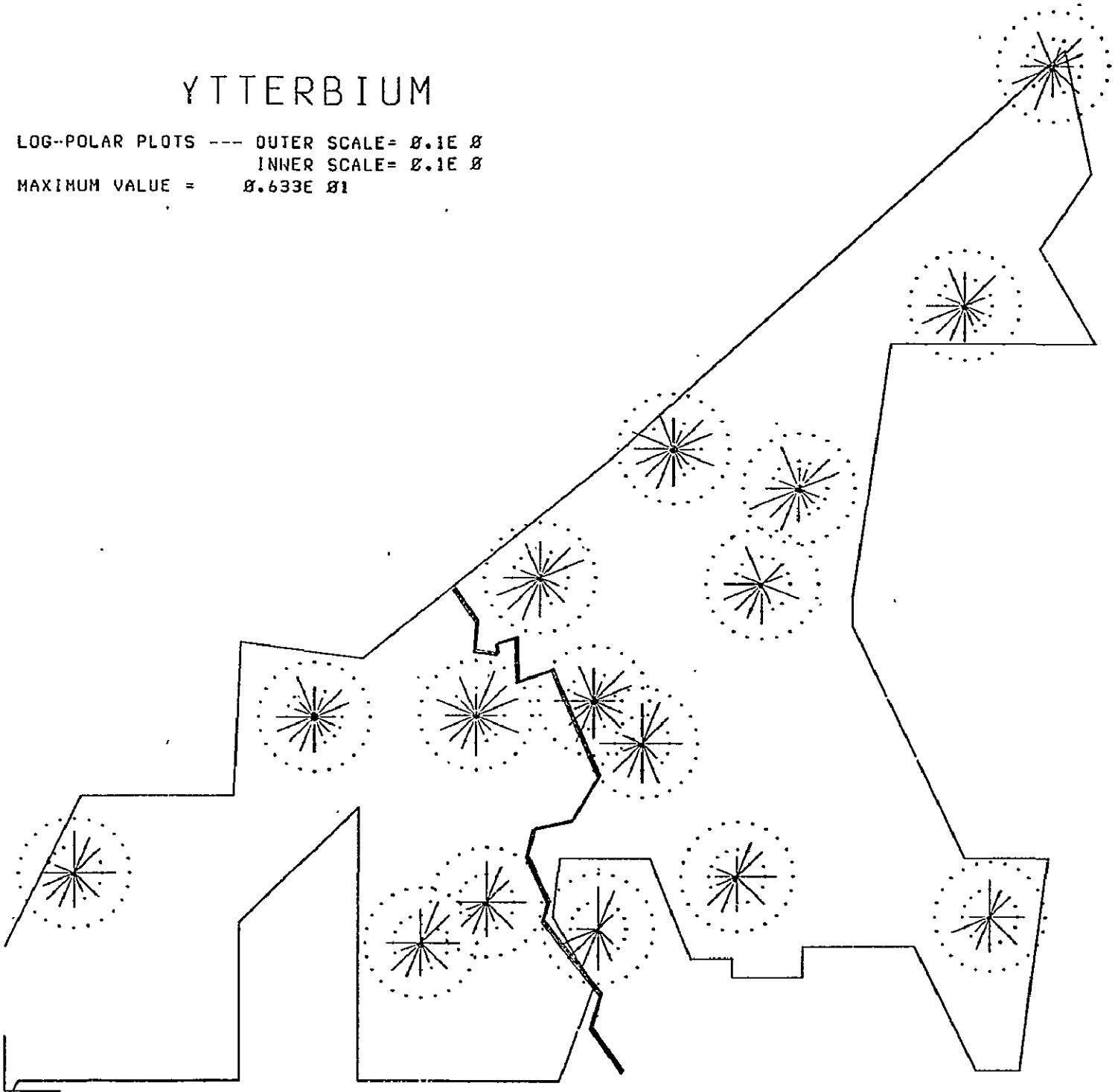
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
SITE	1	-	1	-1	4	3	-1	1	-1	-1	-1	1	5	2	2	-1	Ø	3
	3	-	3	2	2	Ø	3	Ø	-1	-1	3	6	4	1	2	Ø	Ø	Ø
	4	-	Ø	Ø	2	-1	Ø	1	Ø	-1	1	1	4	3	3	-1	Ø	3
	5	-	1	2	3	Ø	3	Ø	-1	Ø	2	5	2	-1	-1	-1	Ø	Ø
	6	-	1	Ø	4	3	Ø	1	1	-1	-1	1	4	2	3	-1	Ø	3
	7	-	1	-1	5	3	-1	1	-1	-1	1	2	3	5	3	-1	-1	3
	8	-	3	2	2	Ø	3	Ø	-1	-1	3	5	4	-1	1	Ø	Ø	Ø
	9	-	3	1	2	Ø	3	Ø	-1	1	2	6	3	2	2	-1	Ø	Ø
	10	-	1	-1	5	3	-1	1	-1	-1	-1	1	5	5	4	-1	Ø	4
	12	-	3	2	2	Ø	3	Ø	-1	-1	3	6	4	-1	2	-1	Ø	Ø
	13	-	3	3	-1	Ø	Ø	Ø	-1	1	2	5	4	1	2	Ø	Ø	Ø
	14	-	2	1	3	Ø	3	Ø	-1	Ø	3	4	1	3	1	Ø	Ø	Ø
	15	-	1	1	5	3	-1	1	-1	-1	1	1	4	3	4	-1	-1	3
	17	-	1	-1	4	3	Ø	1	1	-1	1	2	4	4	3	-1	Ø	3
	20	-	Ø	-1	4	2	-1	Ø	1	-1	-1	2	1	2	3	-1	Ø	4
	21	-	1	-1	4	1	Ø	-1	1	-1	1	2	2	2	3	-1	Ø	3

. -1 INDICATES ESTIMATED VALUE

YTTERBIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 0$
INNER SCALE = $0.1E 0$
MAXIMUM VALUE = $0.633E 01$



YTTERBIUM

NUMBER OF READINGS

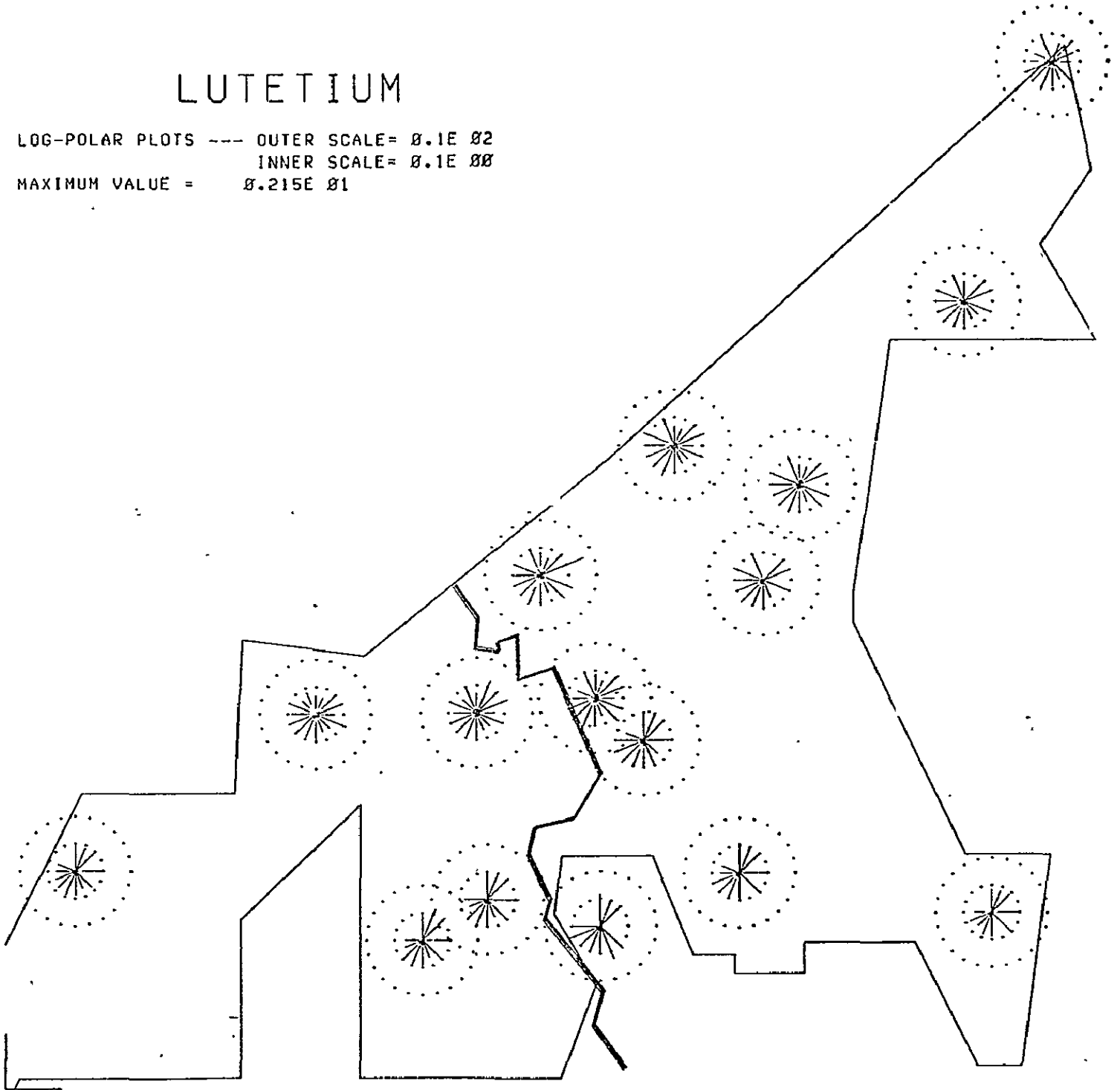
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
	1	-	1	-1	4	4	-1	1	1	-1	1	2	4	-1	1	-1	Ø	3
	3	-	3	2	2	Ø	3	Ø	1	-1	6	7	4	-1	2	Ø	Ø	Ø
	4	-	Ø	Ø	1	-1	Ø	2	Ø	-1	1	1	4	3	3	-1	Ø	3
	5	-	-1	2	2	Ø	2	Ø	1	Ø	4	4	2	1	-1	-1	Ø	Ø
	6	-	1	Ø	2	-1	Ø	-1	-1	-1	1	1	3	1	2	-1	Ø	2
	7	-	1	-1	5	3	-1	1	-1	-1	2	2	3	5	3	-1	-1	3
	8	-	1	2	3	Ø	3	Ø	1	-1	6	5	4	-1	1	Ø	Ø	Ø
	9	-	2	1	2	Ø	3	Ø	-1	1	5	5	1	-1	2	-1	Ø	Ø
	1Ø	-	1	-1	4	3	-1	2	-1	-1	2	1	5	5	4	1	Ø	4
	12	-	1	2	2	Ø	3	Ø	1	-1	6	5	3	1	2	-1	Ø	Ø
	13	-	3	2	-1	Ø	Ø	Ø	-1	1	3	3	1	1	1	Ø	Ø	Ø
	14	-	3	1	2	Ø	3	Ø	1	Ø	6	4	-1	2	-1	Ø	Ø	Ø
	15	-	1	1	5	3	-1	2	-1	-1	1	2	3	4	4	1	-1	3
	17	-	1	-1	3	3	Ø	-1	-1	-1	2	2	5	3	2	-1	Ø	3
	2Ø	-	Ø	-1	3	2	-1	Ø	1	-1	2	1	-1	2	2	-1	Ø	2
	21	-	1	-1	5	2	Ø	-1	1	-1	2	2	2	1	3	-1	Ø	3

-1 INDICATES ESTIMATED VALUE

LUTETIUM

LOG-POLAR PLOTS --- OUTER SCALE= 0.1E 02
INNER SCALE= 0.1E 00
MAXIMUM VALUE = 0.215E 01



LUTETIUM

NUMBER OF READINGS

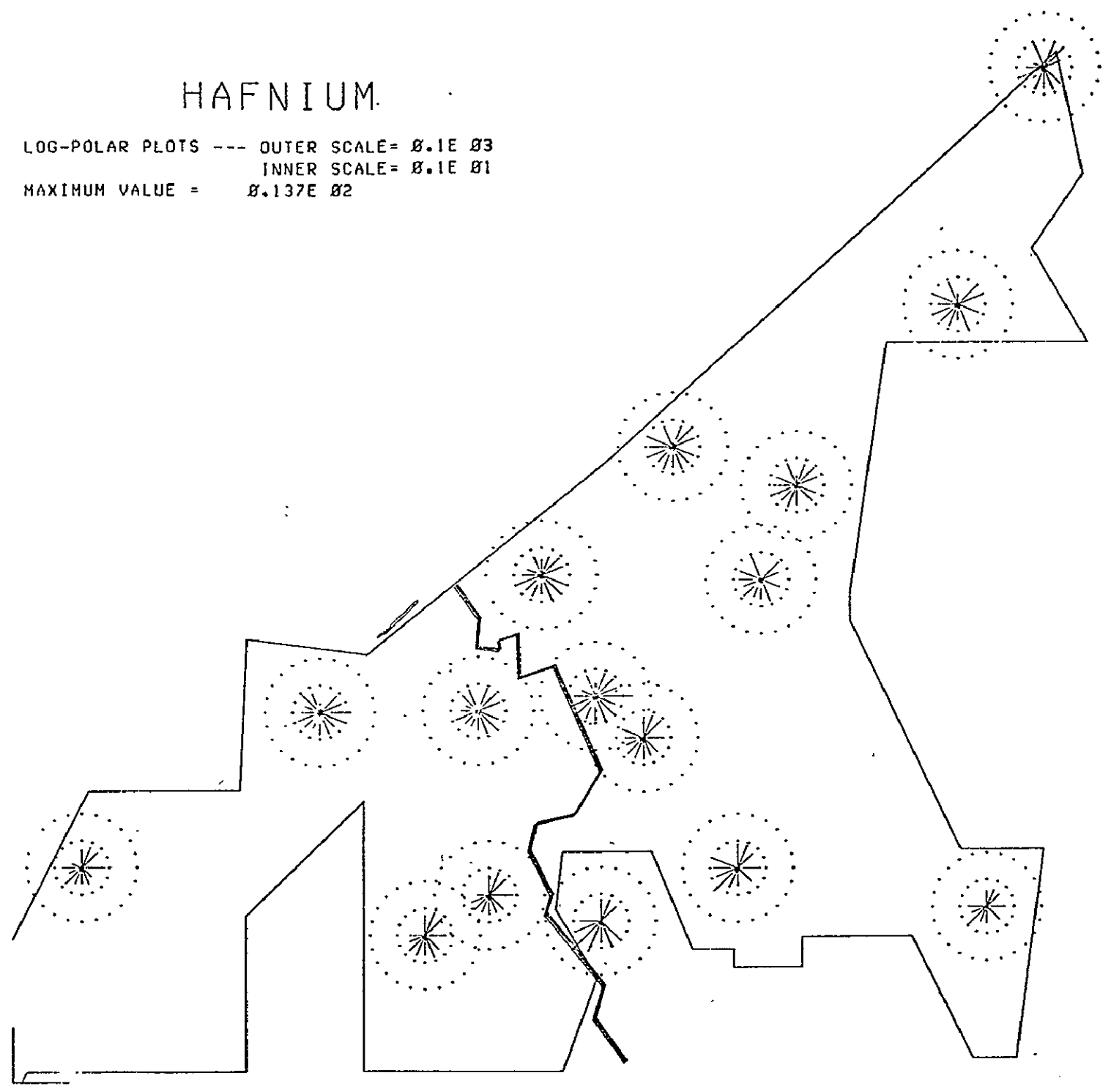
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	-1	3	4	-1	1	1	-1	1	1	6	1	3	-1	Ø	4
3	3	2	2	Ø	3	Ø	1	-1	6	8	4	-1	2	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	-1	1	1	5	3	3	1	Ø	3
5	1	2	4	Ø	2	Ø	1	Ø	4	6	2	1	-1	-1	Ø	Ø
6	1	Ø	3	2	Ø	1	-1	-1	1	1	4	1	3	1	Ø	2
7	1	-1	6	3	-1	2	-1	-1	3	2	4	5	3	1	-1	2
8	3	2	3	Ø	3	Ø	1	-1	6	7	4	-1	1	Ø	Ø	Ø
9	3	1	3	Ø	3	Ø	-1	1	5	7	3	2	2	-1	Ø	Ø
1Ø	1	-1	6	3	-1	2	-1	-1	2	1	6	5	4	1	Ø	4
12	2	2	3	Ø	3	Ø	1	-1	6	7	4	1	2	-1	Ø	Ø
13	2	3	1	Ø	Ø	Ø	1	1	3	2	1	1	1	Ø	Ø	Ø
14	2	1	4	Ø	3	Ø	1	Ø	6	6	-1	2	-1	Ø	Ø	Ø
15	1	1	5	4	-1	2	-1	-1	1	2	4	3	4	1	-1	3
17	1	-1	5	4	Ø	1	1	-1	3	2	5	4	3	1	Ø	3
2Ø	Ø	-1	4	2	-1	Ø	1	-1	2	2	2	1	1	-1	Ø	2
21	1	-1	5	2	Ø	1	1	-1	3	2	2	2	3	1	Ø	3

-1 INDICATES ESTIMATED VALUE

HAFNIUM.

LOG-POLAR PLOTS --- OUTER SCALE= 0.1E 03
INNER SCALE= 0.1E 01
MAXIMUM VALUE = 0.137E 02



HAFNIUM

NUMBER OF READINGS

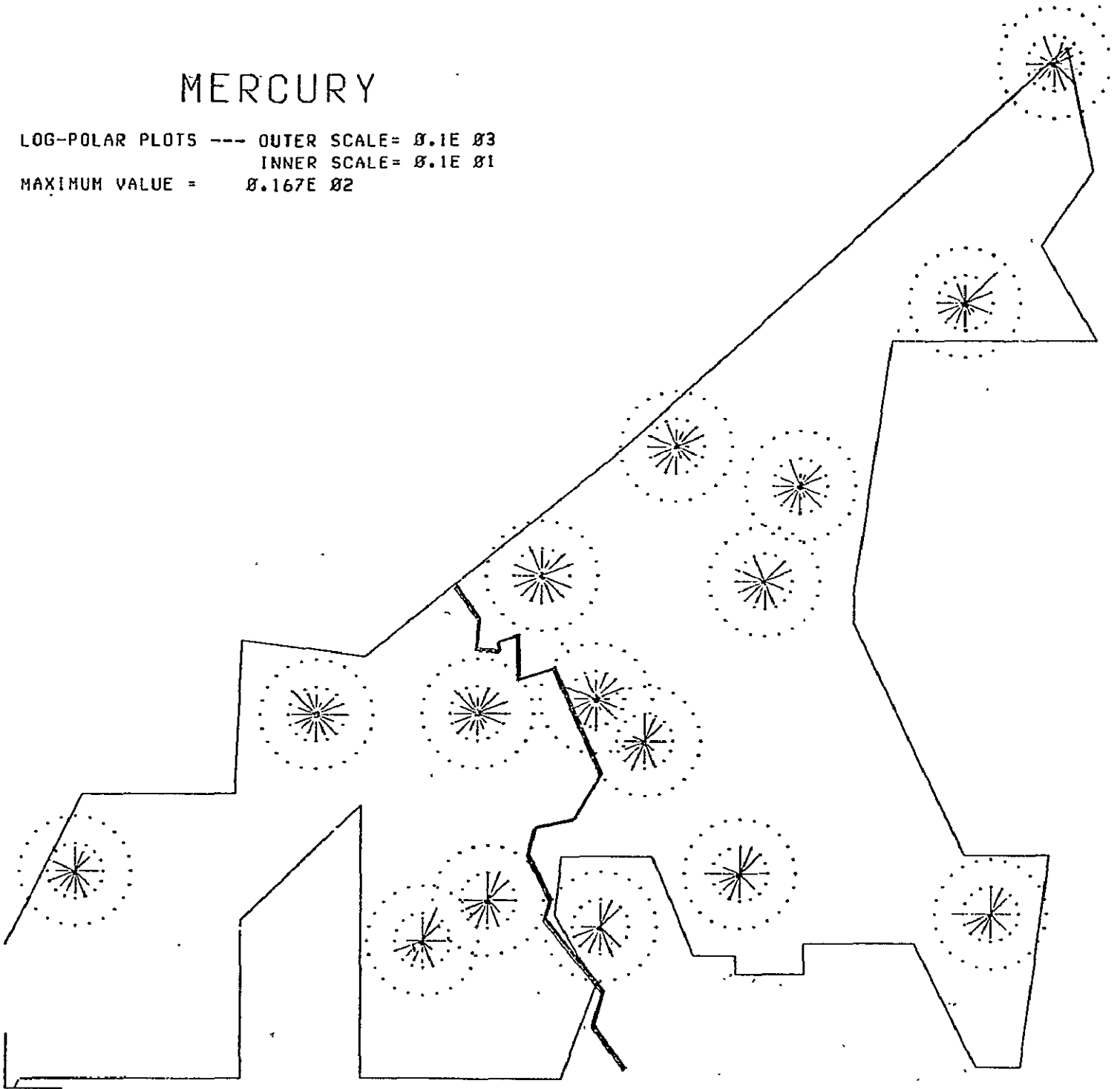
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	6	4	1	1	2	2	2	2	6	3	7	2	Ø	4
3	-	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	-	3	3	5	Ø	3	Ø	2	Ø	6	7	4	4	2	1	Ø	Ø
6	-	1	Ø	5	2	Ø	1	-1	1	1	1	4	4	5	1	Ø	3
7	-	1	1	7	4	1	2	1	2	4	3	4	7	6	3	1	3
8	-	3	3	4	Ø	3	Ø	2	3	9	8	5	3	2	Ø	Ø	Ø
9	-	3	2	4	Ø	3	Ø	1	2	8	8	4	5	4	1	Ø	Ø
1Ø	-	1	1	8	3	-1	2	1	1	2	1	6	8	8	4	Ø	4
12	-	3	3	4	Ø	3	Ø	2	2	7	11	5	3	3	1	Ø	Ø
13	-	3	4	1	Ø	Ø	Ø	1	1	3	3	1	1	1	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	7	6	2	3	3	Ø	Ø	Ø
15	-	1	1	7	4	-1	2	1	2	1	3	4	6	8	4	1	2
17	-	1	1	7	4	Ø	1	1	-1	3	3	5	6	5	4	Ø	3
2Ø	-	Ø	1	6	2	-1	Ø	2	2	3	1	2	4	4	2	Ø	4
21	-	1	1	7	2	Ø	1	2	2	3	2	3	6	5	4	Ø	3

-1 INDICATES ESTIMATED VALUE

MERCURY

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 03$
INNER SCALE = $0.1E \ 01$
MAXIMUM VALUE = $0.167E \ 02$



MERCURY

NUMBER OF READINGS

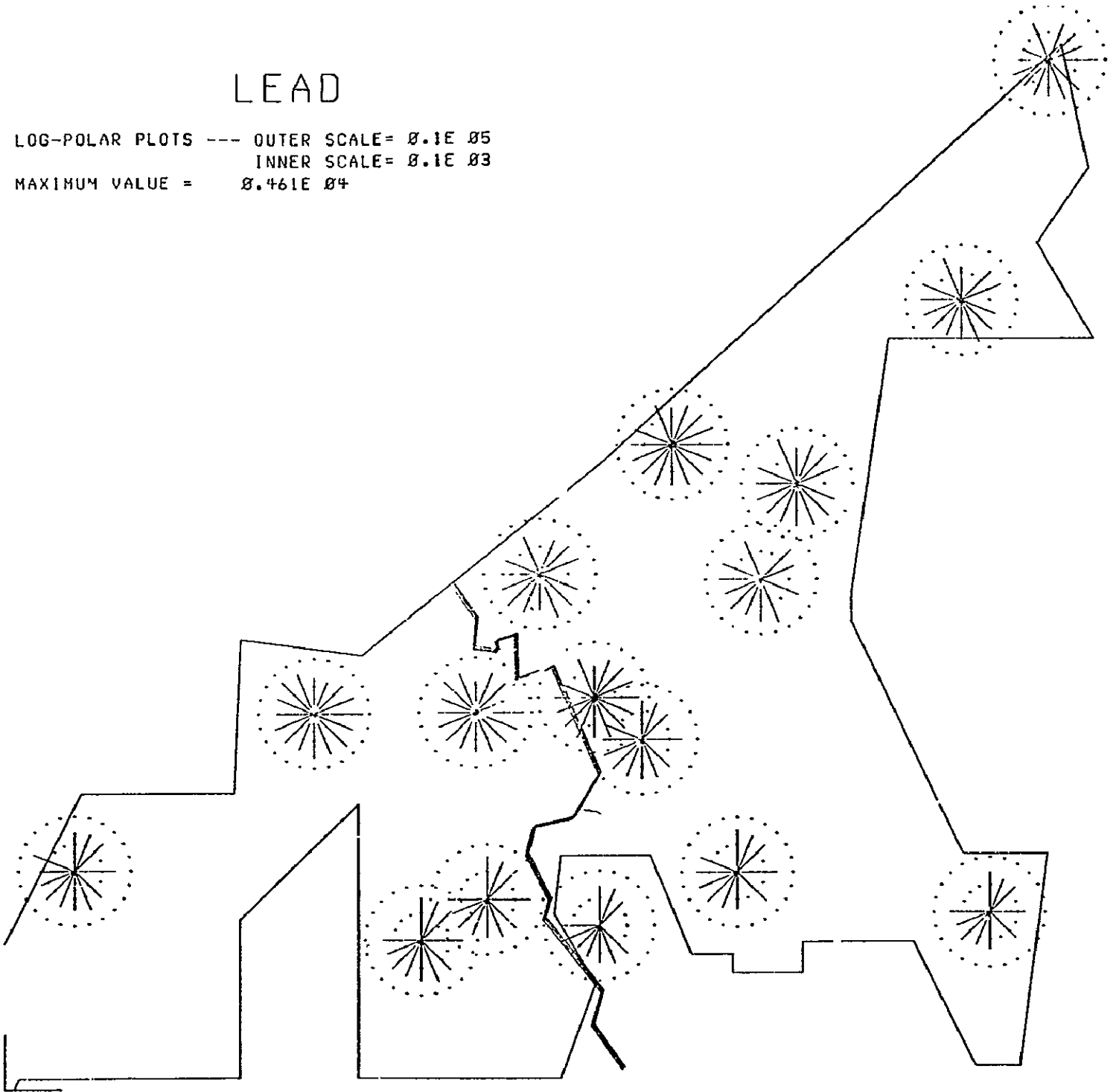
WIND FROM

SITE	WIND FROM																
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
1	-	1	1	5	4	-1	1	1	-1	2	1	6	4	7	3	Ø	3
3	-	3	3	3	Ø	3	Ø	2	3	8	11	6	4	3	Ø	Ø	Ø
4	-	Ø	Ø	2	1	Ø	2	Ø	1	1	1	5	4	4	2	Ø	3
5	-	2	3	5	Ø	3	Ø	2	Ø	4	7	4	2	2	1	Ø	Ø
6	-	1	Ø	4	2	Ø	1	-1	-1	1	1	3	3	4	1	Ø	2
7	-	1	-1	6	4	1	2	1	2	4	2	4	7	6	2	1	3
8	-	3	2	3	Ø	3	Ø	2	3	6	8	6	2	2	Ø	Ø	Ø
9	-	3	1	3	Ø	3	Ø	-1	2	5	9	4	3	3	-1	Ø	Ø
10	-	1	1	8	3	-1	2	1	-1	3	1	6	8	6	2	Ø	4
12	-	3	3	4	Ø	2	Ø	2	3	7	9	5	3	3	1	Ø	Ø
13	-	2	4	1	Ø	Ø	Ø	1	1	3	4	2	1	2	Ø	Ø	Ø
14	-	3	1	4	Ø	3	Ø	1	Ø	6	7	1	3	3	Ø	Ø	Ø
15	-	1	1	6	4	1	2	-1	1	2	3	4	7	7	4	1	2
17	-	1	-1	7	4	Ø	1	1	-1	3	2	5	5	5	4	Ø	3
20	-	Ø	1	5	2	-1	Ø	2	1	3	2	2	4	4	2	Ø	4
21	-	1	1	7	2	Ø	1	2	1	3	2	3	6	5	4	Ø	3

-1 INDICATES ESTIMATED VALUE

LEAD

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 05$
INNER SCALE = $0.1E 03$
MAXIMUM VALUE = $0.461E 04$



LEAD

NUMBER OF READINGS

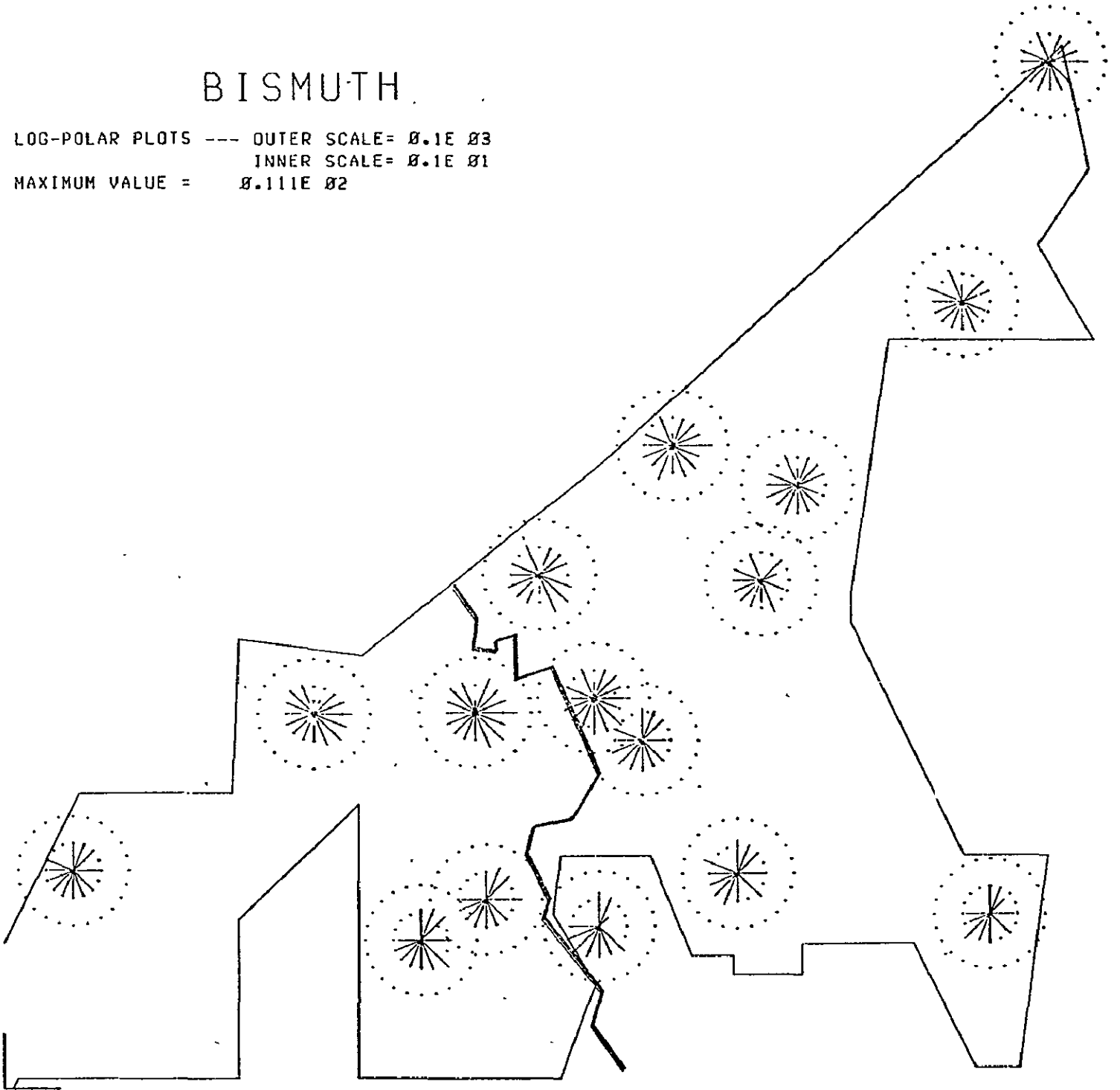
WIND FROM

		N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
SITE	1	1	1	6	4	1	1	2	3	2	2	6	4	7	3	Ø	5
	3	4	3	4	Ø	3	Ø	2	3	1Ø	11	6	5	4	Ø	Ø	Ø
	4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
	5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	4	2	1	Ø	Ø
	6	1	Ø	5	3	Ø	2	1	2	1	1	5	4	5	1	Ø	3
	7	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	4
	8	3	3	4	Ø	3	Ø	2	3	1Ø	1Ø	6	3	2	Ø	Ø	Ø
	9	4	2	4	Ø	3	Ø	1	2	8	9	4	5	4	1	Ø	Ø
	1Ø	1	1	8	3	1	2	1	2	3	1	6	8	7	4	Ø	5
	12	4	3	4	Ø	3	Ø	2	3	9	11	6	3	3	1	Ø	Ø
	13	3	4	1	Ø	Ø	Ø	1	1	4	7	4	4	4	Ø	Ø	Ø
	14	4	1	4	Ø	3	Ø	1	Ø	8	7	2	3	3	Ø	Ø	Ø
	15	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
	17	1	1	7	4	Ø	1	1	1	4	3	5	6	5	4	Ø	3
	2Ø	Ø	1	6	2	1	Ø	2	3	3	2	2	4	5	2	Ø	5
	21	Ø	1	7	2	Ø	1	2	2	2	2	4	6	6	4	Ø	3

— -1 INDICATES ESTIMATED VALUE

BISMUTH

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 03$
INNER SCALE = $0.1E \ 01$
MAXIMUM VALUE = $0.111E \ 02$



BISMUTH

NUMBER OF READINGS

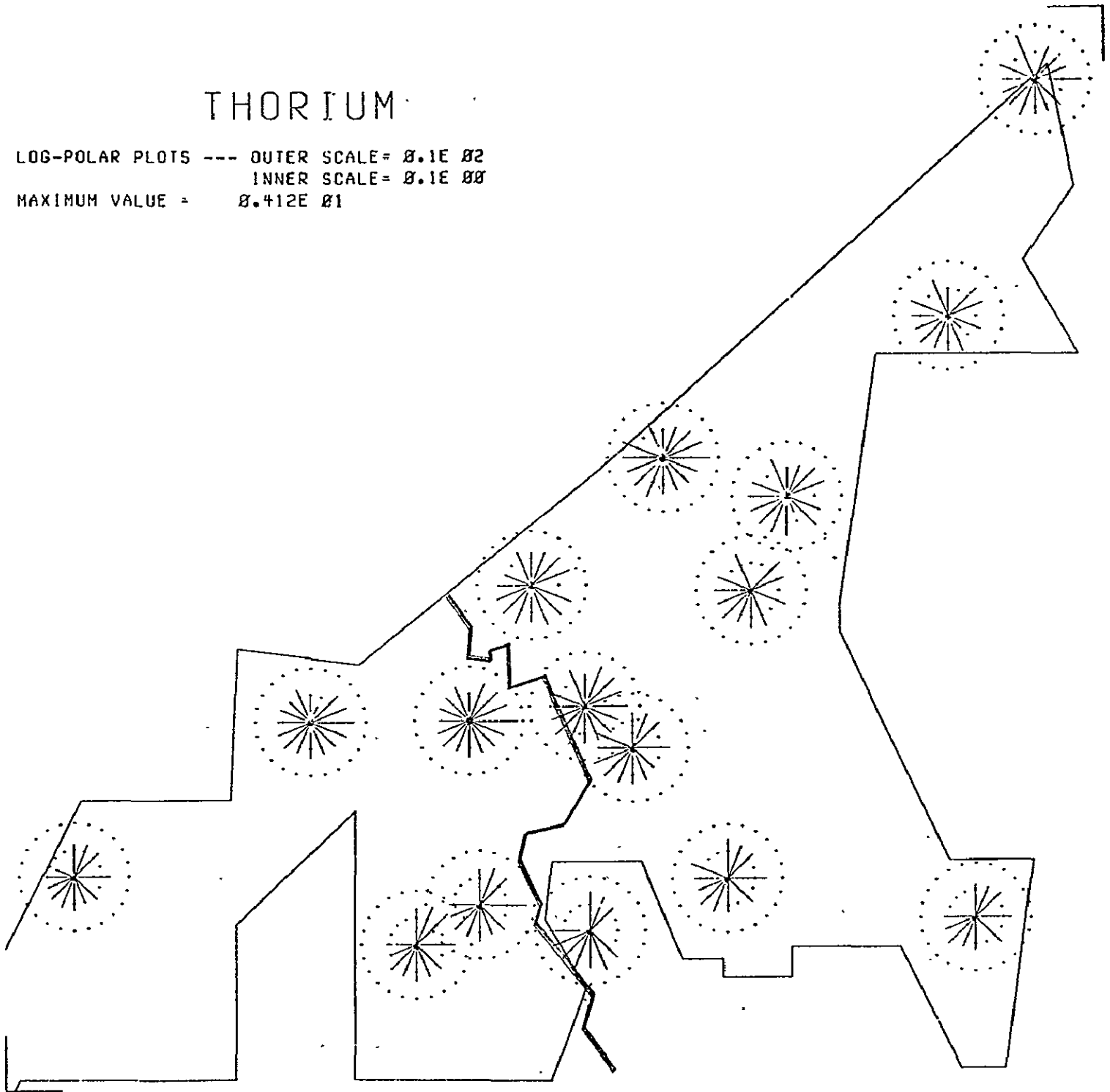
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	3	2	2	6	4	7	3	0	5
3	4	3	4	0	3	0	2	3	10	11	6	5	4	0	0	0
4	0	0	2	1	0	2	0	1	1	2	5	4	6	2	0	3
5	3	3	5	0	3	0	2	0	6	8	4	4	2	1	0	0
6	1	0	5	3	0	2	1	2	1	1	5	4	5	1	0	3
7	1	1	8	4	1	2	1	3	4	3	4	7	7	3	1	4
8	3	3	4	0	3	0	2	3	10	10	6	3	2	0	0	0
9	4	2	4	0	3	0	1	2	8	9	4	5	4	1	0	0
10	1	1	8	3	1	2	1	2	3	1	6	8	7	4	0	5
12	4	3	4	0	3	0	2	3	9	11	6	3	3	1	0	0
13	3	4	1	0	0	0	1	1	4	7	4	4	4	0	0	0
14	4	1	4	0	3	0	1	0	7	7	2	3	3	0	0	0
15	1	2	7	4	1	2	1	3	2	3	4	7	8	4	1	4
17	1	1	7	4	0	1	1	1	4	3	5	6	5	4	0	3
20	0	1	6	2	1	0	2	3	3	2	2	4	5	2	0	5
21	0	1	7	2	0	1	2	2	2	2	4	6	6	4	0	3

-1 INDICATES ESTIMATED VALUE

THORIUM

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.412E 01$



THORIUM

NUMBER OF READINGS

WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	1	1	6	4	1	1	2	2	1	2	6	4	7	2	Ø	4
3	3	3	4	Ø	3	Ø	2	3	9	11	6	5	4	Ø	Ø	Ø
4	Ø	Ø	2	1	Ø	2	Ø	1	1	2	5	4	6	2	Ø	3
5	3	3	5	Ø	3	Ø	2	Ø	6	8	4	3	2	1	Ø	Ø
6	1	Ø	5	2	Ø	1	-1	1	1	1	4	4	5	1	Ø	3
7	1	1	8	4	1	2	1	2	4	3	4	7	7	2	1	3
8	3	3	4	Ø	3	Ø	2	3	9	1Ø	6	4	2	Ø	Ø	Ø
9	3	2	4	Ø	3	Ø	1	2	8	9	4	4	4	1	Ø	Ø
1Ø	1	1	8	3	1	2	1	1	3	1	6	8	8	4	Ø	4
12	3	3	4	Ø	3	Ø	1	3	8	1Ø	6	3	3	1	Ø	Ø
13	3	4	1	Ø	Ø	Ø	1	1	3	6	2	3	4	Ø	Ø	Ø
14	3	1	4	Ø	3	Ø	1	Ø	6	7	2	3	3	Ø	Ø	Ø
15	1	2	7	4	1	2	1	2	2	3	4	7	7	4	1	3
17	1	1	6	4	Ø	1	1	-1	4	3	5	6	5	4	Ø	3
2Ø	Ø	1	6	2	1	Ø	2	2	3	2	2	4	5	2	Ø	4
21	1	1	7	2	Ø	1	2	2	3	2	3	6	6	4	Ø	3

. -1 INDICATES ESTIMATED VALUE

CARBON (BEFORE)

NUMBER OF READINGS

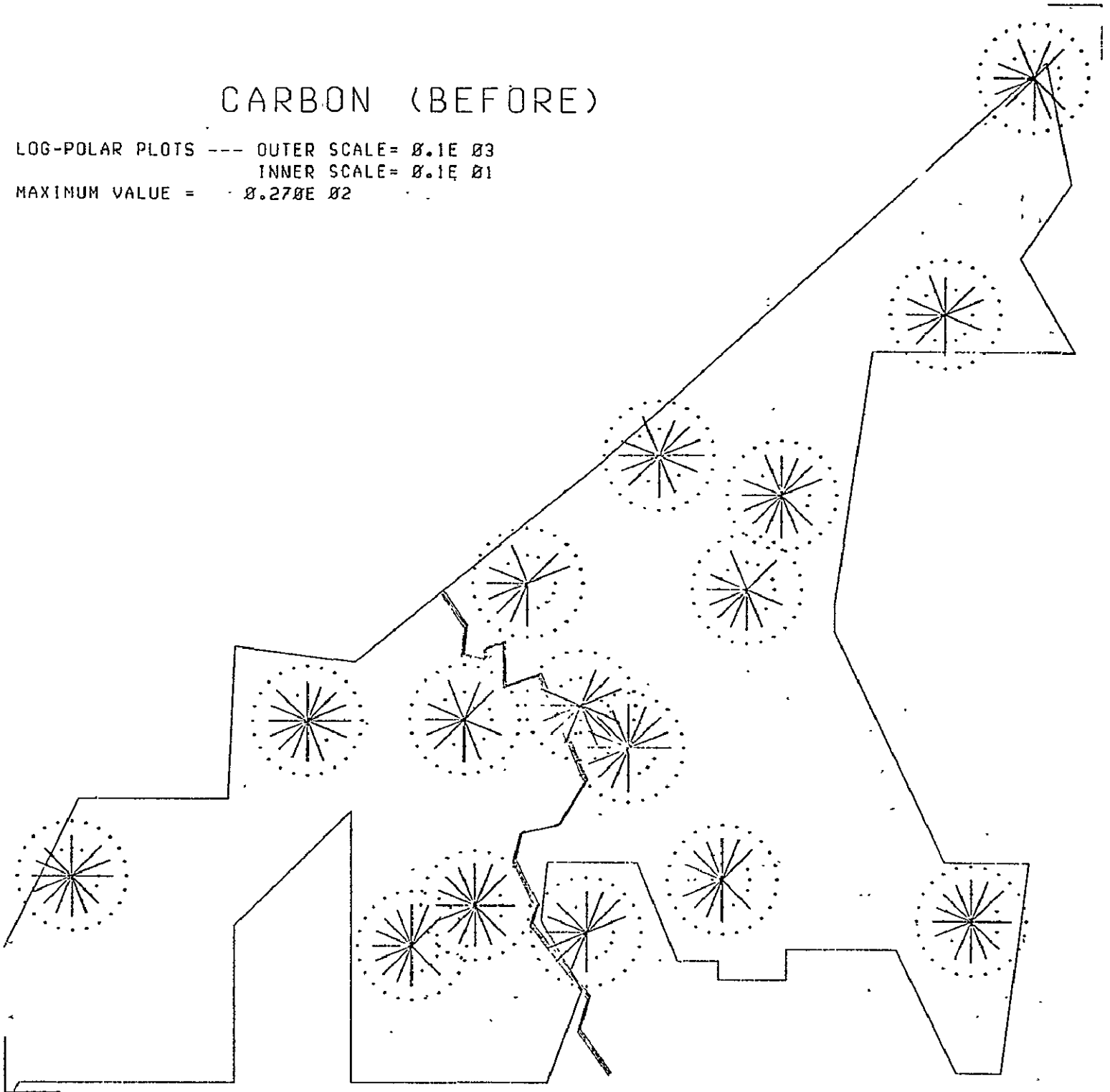
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WWW	NW	NNW
1	Ø	1	2	3	Ø	1	1	1	Ø	1	4	3	4	1	Ø	Ø
3	4	2	2	Ø	1	Ø	1	1	5	6	1	4	3	4	5	1
4	Ø	Ø	1	Ø	Ø	1	Ø	1	1	2	5	2	4	2	Ø	3
5	1	1	3	Ø	Ø	Ø	1	Ø	3	6	1	2	3	2	2	1
6	1	Ø	3	3	Ø	2	Ø	Ø	1	Ø	3	3	2	1	Ø	2
7	1	1	7	3	1	2	Ø	1	4	3	4	4	5	2	1	Ø
8	4	1	1	Ø	Ø	Ø	1	Ø	5	6	3	3	3	3	5	1
9	2	1	3	1	1	Ø	Ø	Ø	3	7	1	4	3	1	2	2
10	Ø	1	3	3	1	2	Ø	2	2	Ø	4	6	6	3	Ø	2
12	3	Ø	3	1	1	Ø	1	1	4	4	1	3	2	2	4	Ø
13	4	1	1	1	Ø	Ø	Ø	Ø	2	3	1	4	2	3	1	Ø
14	2	1	1	Ø	1	Ø	1	1	2	2	Ø	3	2	1	3	2
15	Ø	1	3	Ø	Ø	2	Ø	1	1	Ø	2	4	2	3	Ø	2
17	1	1	5	3	Ø	Ø	1	1	1	3	3	5	3	4	Ø	2
20	Ø	1	3	Ø	Ø	Ø	1	1	1	Ø	2	2	3	2	Ø	2
21	Ø	Ø	3	1	Ø	Ø	Ø	Ø	3	2	1	3	4	2	Ø	2

-1 INDICATES ESTIMATED VALUE

CARBON (BEFORE)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.270E 02$



CARBON (AFTER)

NUMBER OF READINGS

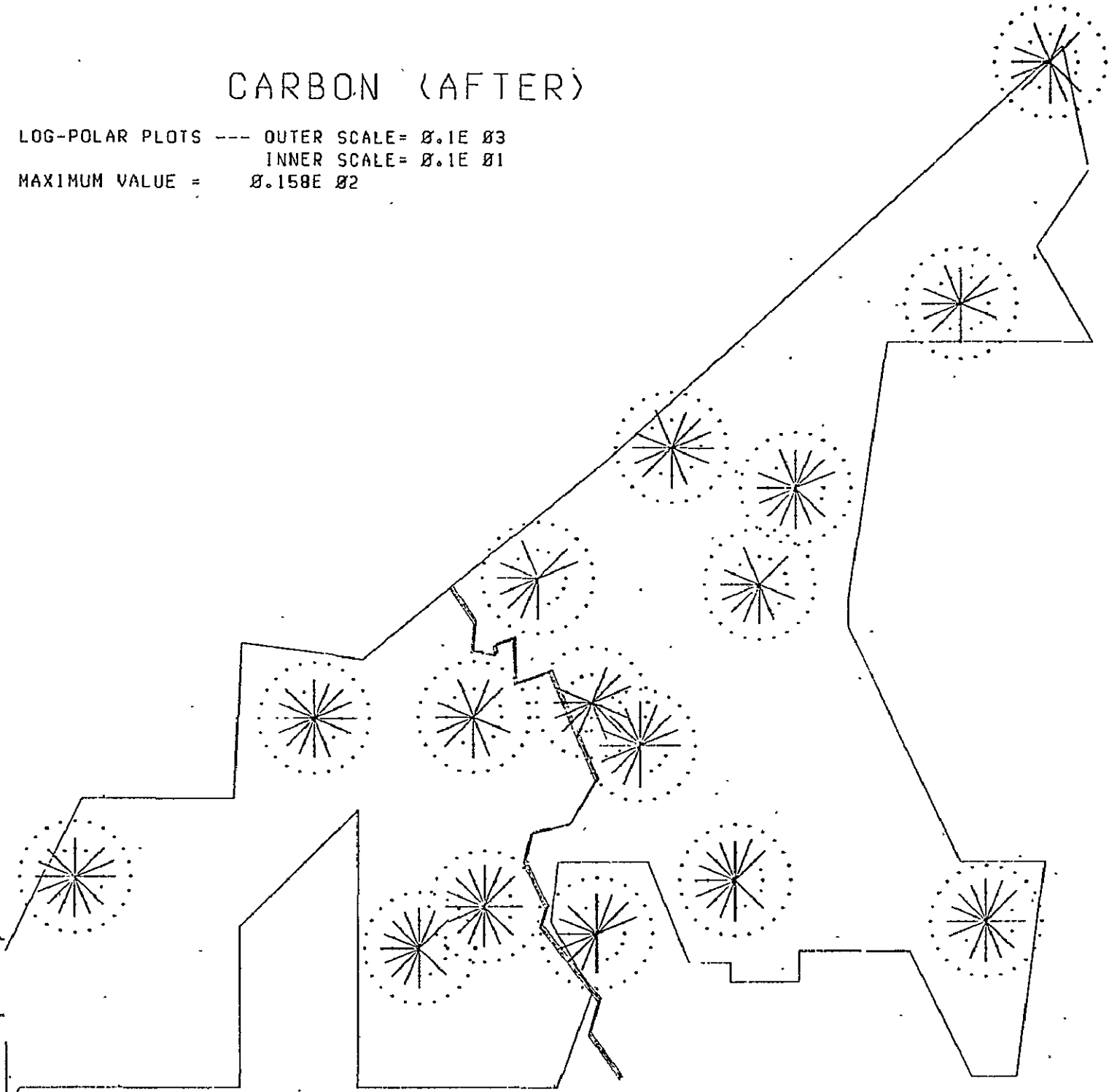
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	4	3	4	1	0	0
3	4	2	2	0	1	0	1	1	5	6	1	4	3	4	5	1
4	0	0	1	0	0	1	0	1	1	2	5	2	4	2	0	3
5	1	1	3	0	0	0	1	0	3	6	1	2	3	2	2	1
6	1	0	3	3	0	2	0	0	1	0	3	3	2	1	0	2
7	1	1	7	3	1	2	0	1	4	3	4	4	5	2	1	0
8	4	1	1	0	0	0	1	0	5	6	3	3	3	3	5	1
9	2	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	3	1	2	0	2	2	0	4	6	6	3	0	2
12	3	0	3	1	1	0	1	1	4	4	1	3	2	2	4	0
13	4	1	1	1	0	0	0	0	2	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	2	2	0	3	2	1	3	2
15	0	1	3	0	0	2	0	1	1	0	2	4	2	3	0	2
17	1	1	5	3	0	0	1	1	1	3	3	5	3	4	0	2
20	0	1	3	0	0	0	1	1	1	0	2	2	3	2	0	2
21	0	0	3	1	0	0	0	0	3	2	1	3	4	2	0	2

1 INDICATES ESTIMATED VALUE

CARBON (AFTER)

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E \ 03$
INNER SCALE = $0.1E \ 01$
MAXIMUM VALUE = $0.158E \ 02$



PYRENE

NUMBER OF READINGS

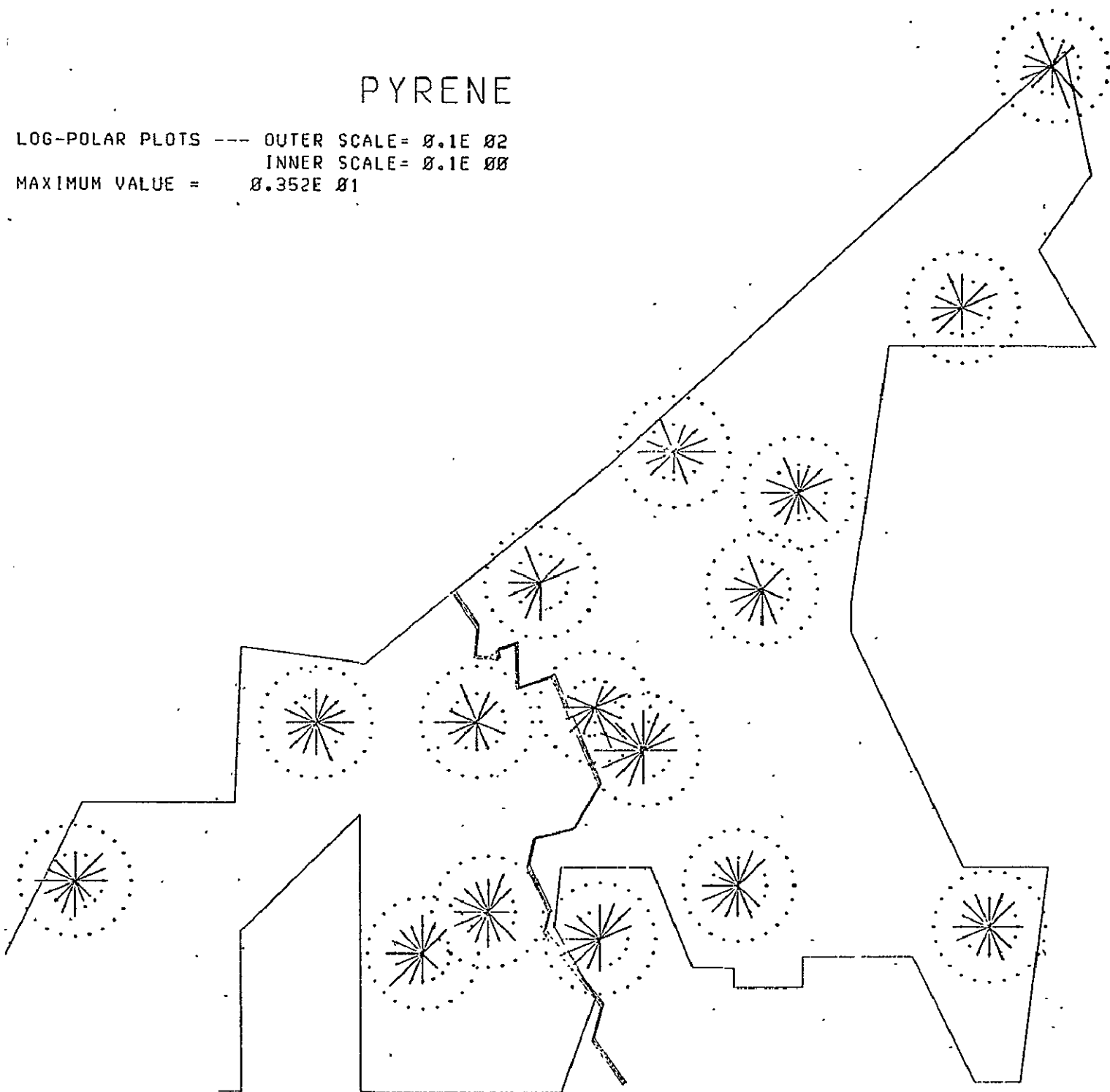
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	2	0	1	1	1	0	1	3	3	3	2	0	0
3	4	1	2	0	1	0	1	1	4	5	1	3	3	4	4	1
4	0	0	1	2	0	1	0	1	1	1	5	2	5	2	0	3
5	1	1	3	0	0	0	1	1	3	6	1	2	3	2	2	1
6	1	0	3	3	0	-1	0	0	-1	0	3	3	1	1	0	2
7	1	1	7	3	1	2	0	1	3	3	3	4	5	1	-1	0
8	3	1	1	0	0	0	-1	0	4	6	2	3	3	3	5	1
9	2	1	3	1	1	0	0	0	3	6	1	4	3	1	2	2
10	0	1	2	2	1	-2	0	2	-1	0	4	6	4	3	0	2
12	3	0	3	1	-1	0	-1	1	4	2	1	3	2	1	3	0
13	3	1	1	1	0	0	0	0	1	2	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	1	3	2
15	0	1	2	0	0	2	0	1	1	0	2	4	2	3	0	2
17	1	1	5	3	0	0	1	1	-1	3	2	3	2	3	0	2
20	0	1	3	0	0	0	1	1	-1	0	2	2	3	1	0	2
21	0	0	1	1	0	0	0	0	2	2	-1	3	3	2	0	1

. -1 INDICATES ESTIMATED VALUE

PYRENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.352E 01$



1,2 BENZOFLOURENE

NUMBER OF READINGS

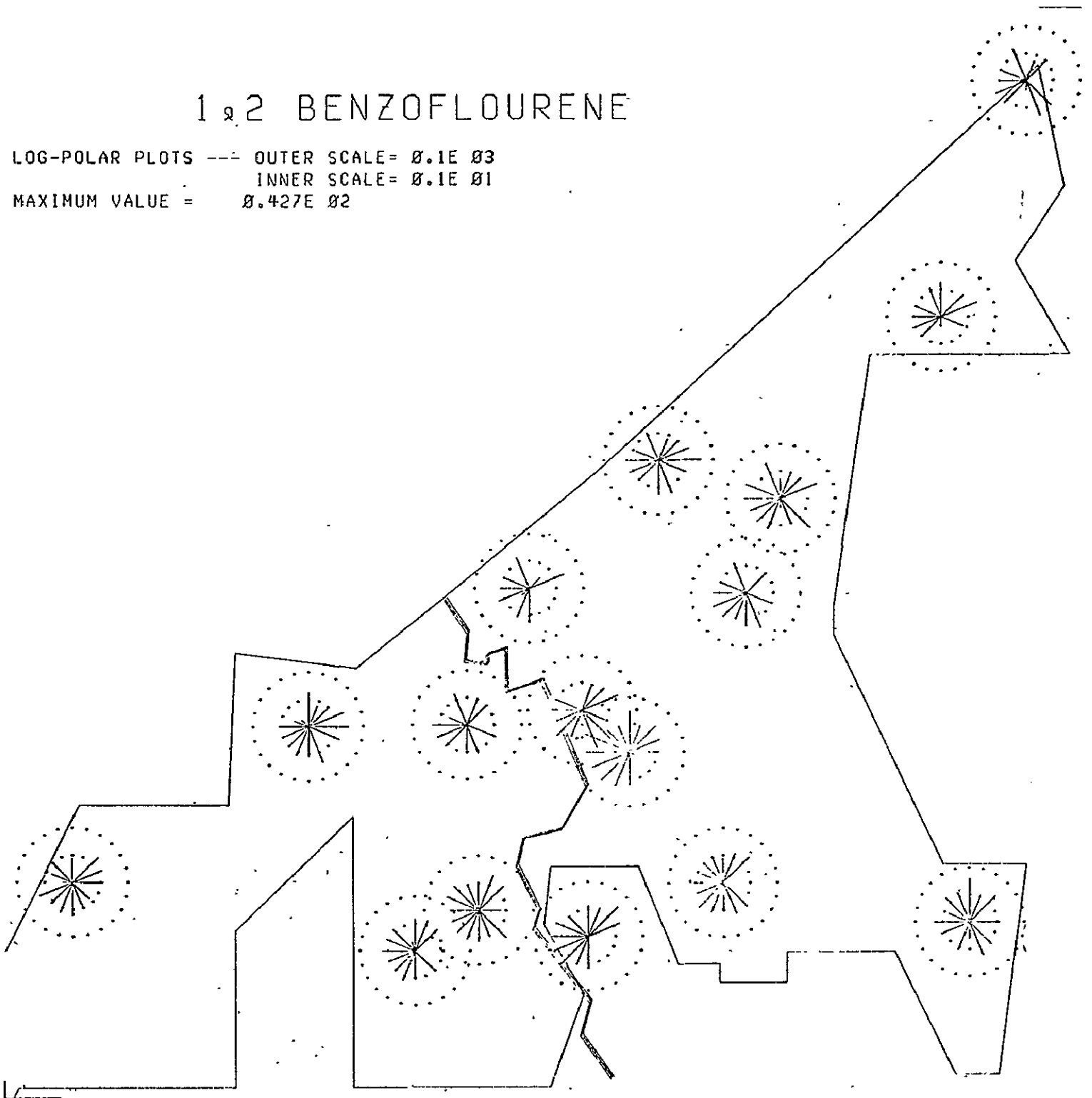
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	WW	NNW
1	0	1	2	3	0	1	1	1	0	1	3	3	4	2	0	0
3	4	1	2	0	1	0	1	1	3	6	1	4	2	4	4	1
4	0	0	1	0	0	1	0	1	1	2	5	2	8	2	0	3
5	1	1	3	0	0	0	1	1	3	5	1	2	2	2	2	1
6	1	0	2	3	0	1	0	0	-1	0	3	3	1	1	0	2
7	1	1	7	3	1	2	0	1	4	2	3	4	4	2	-1	0
8	3	1	1	0	0	0	1	0	4	6	2	3	3	3	5	-1
9	2	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	2	1	2	0	2	1	0	3	6	6	3	0	2
12	3	0	3	1	1	0	1	1	4	3	1	3	-1	2	3	0
13	4	1	1	1	0	0	0	0	1	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	1	1	3	2
15	0	1	3	0	0	2	0	1	1	0	2	4	2	2	0	2
17	1	1	4	3	0	0	1	1	-1	3	3	5	3	4	0	2
20	0	1	3	0	0	0	1	1	-1	0	2	2	3	1	0	2
21	0	0	2	1	0	0	0	0	3	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

1,2 BENZOFLOURENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.427E 02$



BENZ-M,N,O,-FLUORANTHENE

NUMBER OF READINGS

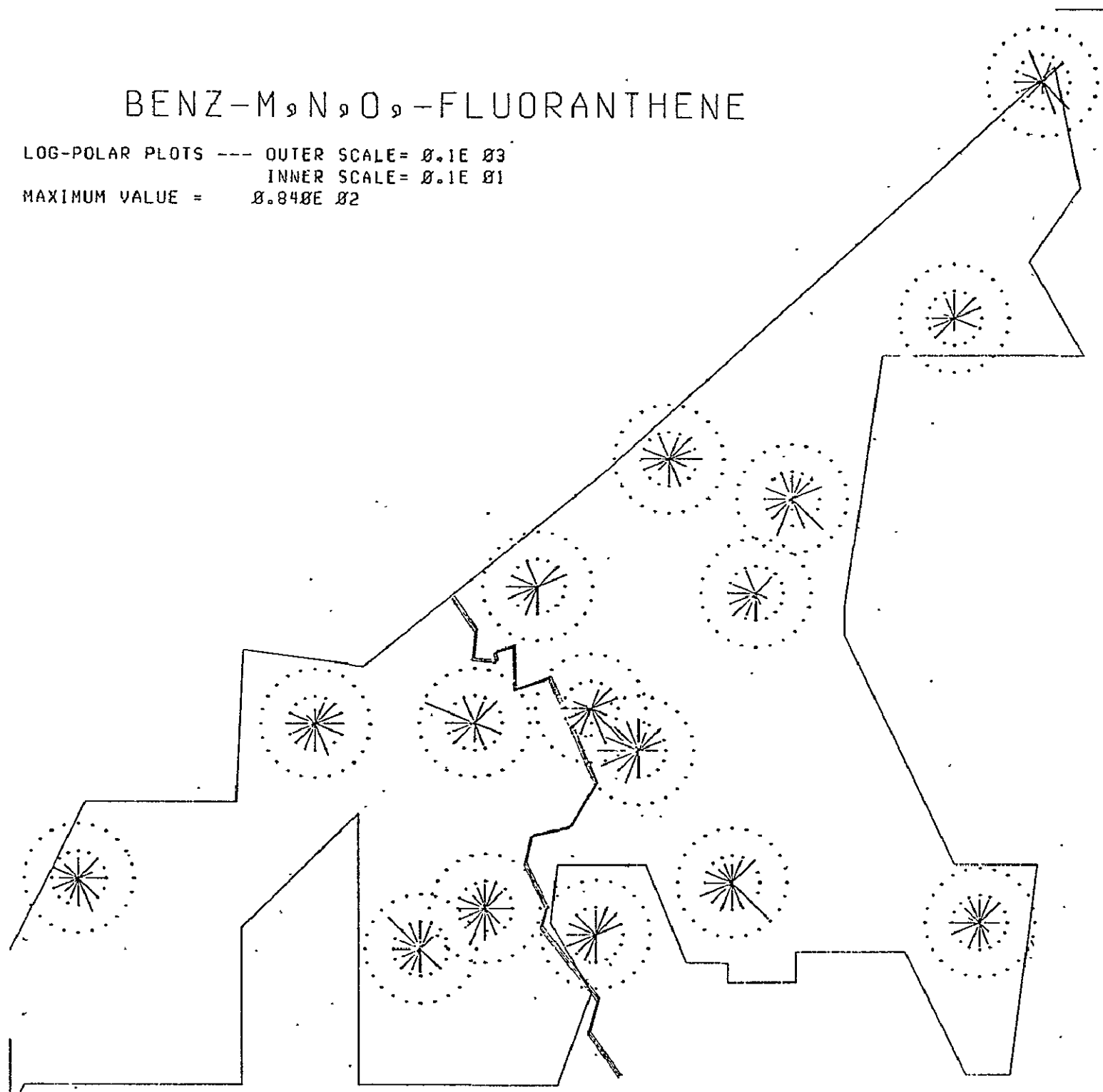
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	4	3	4	2	0	0
3	4	1	2	0	1	0	1	1	4	6	1	4	3	4	4	1
4	0	0	1	0	0	1	0	-1	1	2	5	2	5	2	0	3
5	1	1	3	0	0	0	1	1	3	6	1	2	3	2	2	1
6	1	0	3	2	0	1	0	0	-1	0	3	3	2	-1	0	2
7	1	1	7	1	1	2	0	1	4	3	4	4	5	2	-1	0
8	3	1	1	0	0	0	1	0	4	6	2	3	3	3	4	1
9	2	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	2	1	2	0	2	1	0	4	6	5	3	0	2
12	3	0	3	1	1	0	1	1	4	4	1	2	1	2	3	0
13	4	1	1	1	0	0	0	0	1	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	-1	2	2
15	0	1	2	0	0	1	0	1	1	0	2	4	2	3	0	2
17	1	1	5	3	0	0	1	1	-1	3	3	5	3	4	0	2
20	0	1	2	0	0	0	1	1	-1	0	2	2	3	2	0	2
21	0	0	2	1	0	0	0	0	2	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

BENZ-M₉N₉O₉-FLUORANTHENE

LOG-POLAR PLOTS --- OUTER SCALE = 0.1E 03
INNER SCALE = 0.1E 01
MAXIMUM VALUE = 0.840E 02



BENZACRIDINE

NUMBER OF READINGS

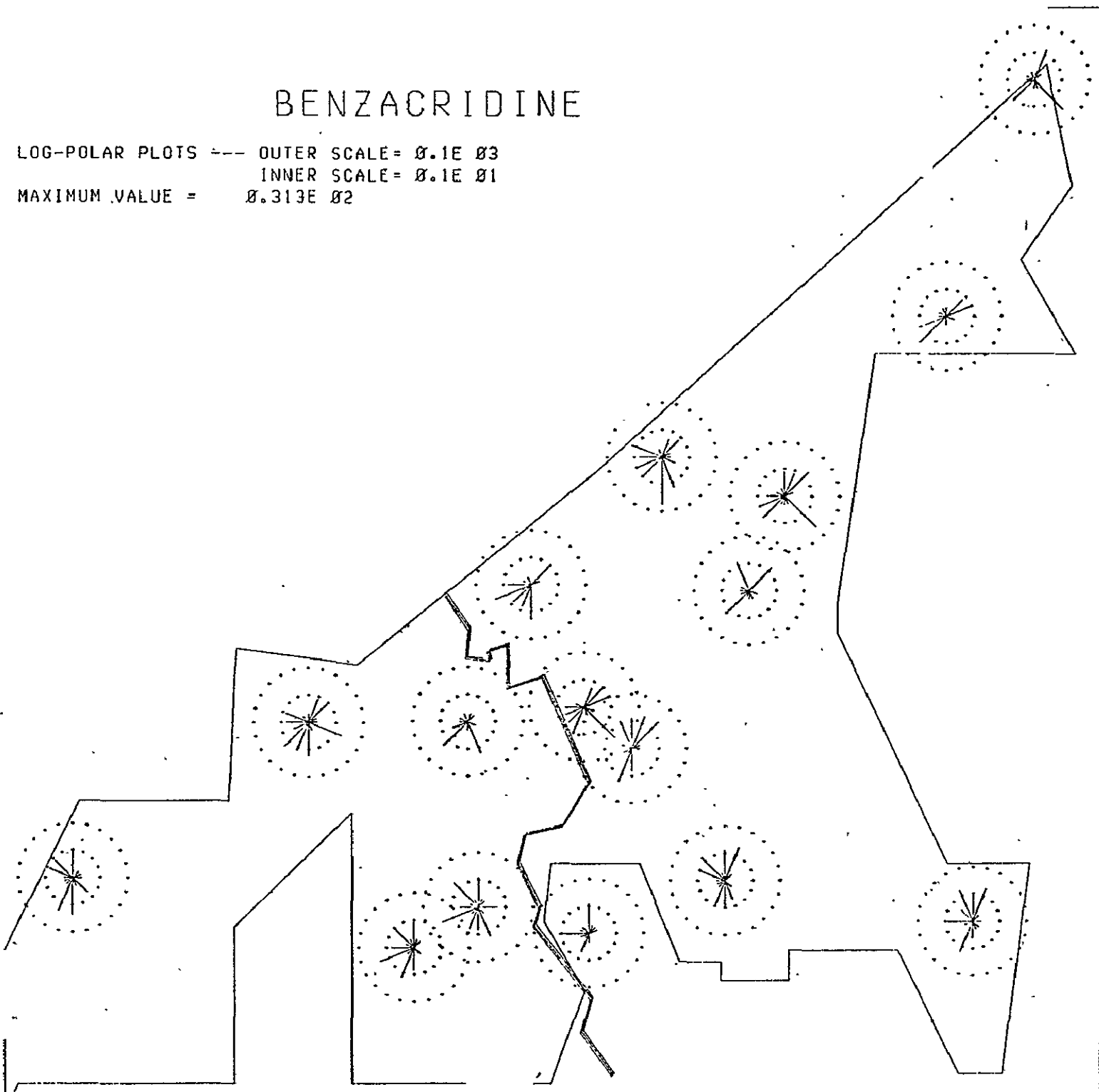
WIND FROM

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	1	1	0	-1	1	-1	0	1	1	1	1	-1	0	0
3	3	-1	-1	0	1	0	-1	1	1	1	-1	1	1	-1	1	-1
4	0	0	1	0	0	-1	0	-1	-1	-1	3	-1	-1	-1	0	1
5	1	1	-1	0	0	0	-1	1	1	3	-1	-1	-1	1	1	-1
6	-1	0	1	1	0	-1	0	0	-1	0	1	1	-1	-1	0	-1
7	-1	1	4	-1	-1	1	0	-1	1	1	3	1	2	1	-1	0
8	1	-1	-1	0	0	0	-1	0	2	2	-1	1	1	-1	1	-1
9	1	1	1	-1	-1	0	0	0	2	3	-1	-1	-1	-1	-1	2
10	0	1	1	-1	-1	1	0	2	1	0	2	1	1	1	0	-1
12	3	0	-1	-1	-1	0	1	-1	2	3	-1	-1	1	1	2	0
13	3	-1	-1	-1	0	0	0	0	-1	1	-1	-1	1	-1	-1	0
14	1	1	-1	0	-1	0	-1	-1	1	2	0	-1	1	-1	1	1
15	0	-1	-1	0	0	-1	0	1	-1	0	1	1	-1	-1	0	-1
17	1	1	3	-1	0	0	1	-1	-1	-1	2	1	1	-1	0	-1
20	0	1	-1	0	0	0	1	-1	-1	0	1	-1	-1	-1	0	-1
21	0	0	1	-1	0	0	0	0	1	1	1	1	1	-1	0	-1

-1 INDICATES ESTIMATED VALUE

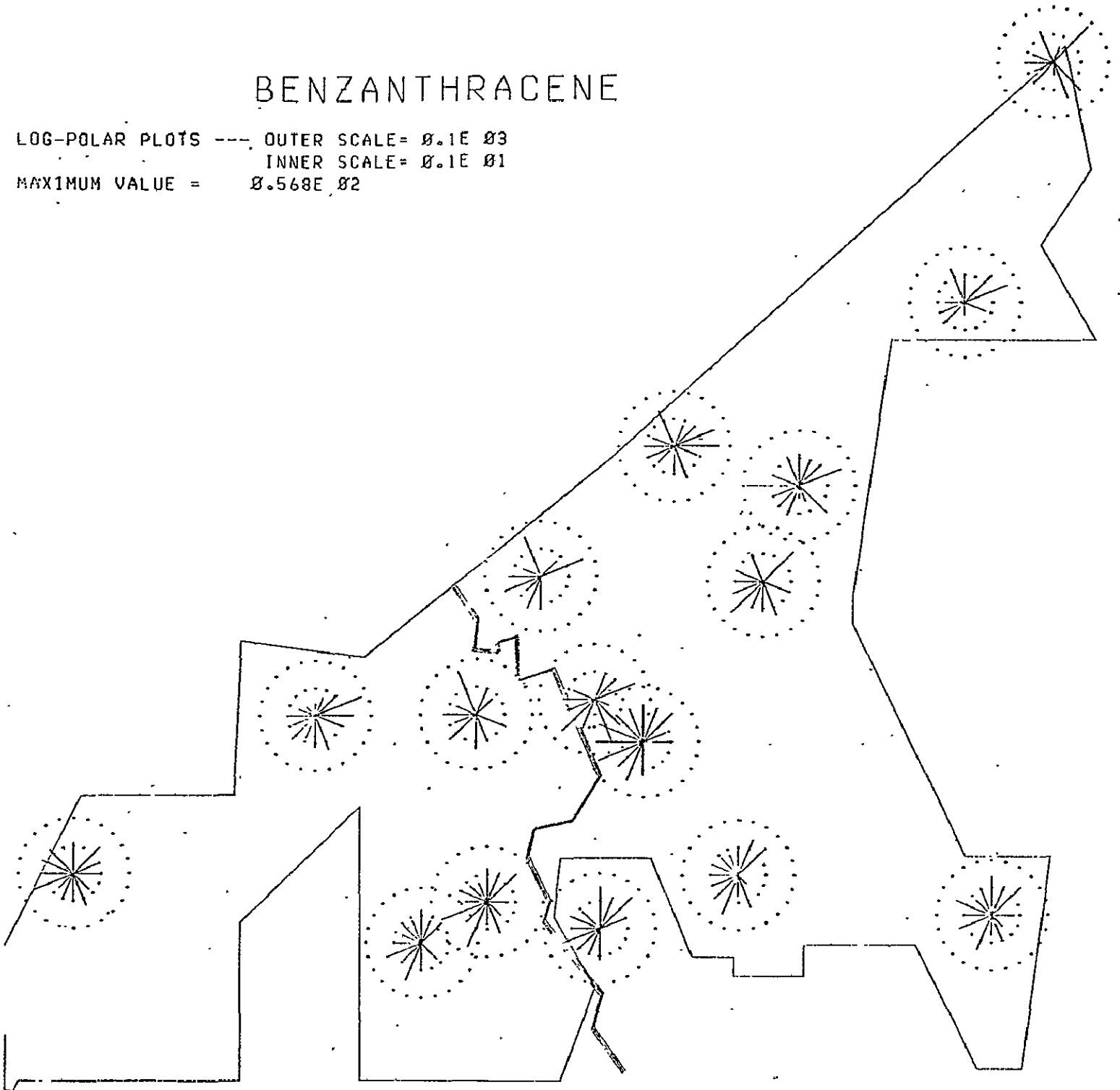
BENZACRIDINE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.313E 02$



BENZANTHRACENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.568E 02$



BENZANTHRACENE

NUMBER OF READINGS

WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	4	3	4	2	0	0
3	4	1	2	0	1	0	1	1	4	6	1	4	3	4	4	1
4	0	0	1	0	0	1	0	1	1	2	5	2	5	2	0	3
5	1	1	3	0	0	0	-1	1	3	6	1	2	3	2	2	1
6	1	0	3	3	0	1	0	0	-1	0	3	3	1	1	0	2
7	1	1	7	2	1	2	0	1	4	3	4	4	5	2	-1	0
8	3	1	1	0	0	0	1	0	4	6	2	3	3	3	3	1
9	2	1	3	1	1	0	0	0	3	7	1	3	3	1	2	2
10	0	1	3	2	1	2	0	2	1	0	4	6	6	2	0	2
12	3	0	3	1	1	0	1	1	4	5	1	3	2	2	4	0
13	4	1	1	1	0	0	0	0	1	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	1	2	2
15	0	1	3	0	0	2	0	1	1	0	2	3	2	3	0	2
17	1	1	5	3	0	0	1	1	-1	3	3	5	3	4	0	2
20	0	1	3	0	0	0	1	1	-1	0	2	2	3	2	0	2
21	0	0	3	1	0	0	0	0	2	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

3,4-BENZOFLUORANTHENE.

NUMBER OF READINGS

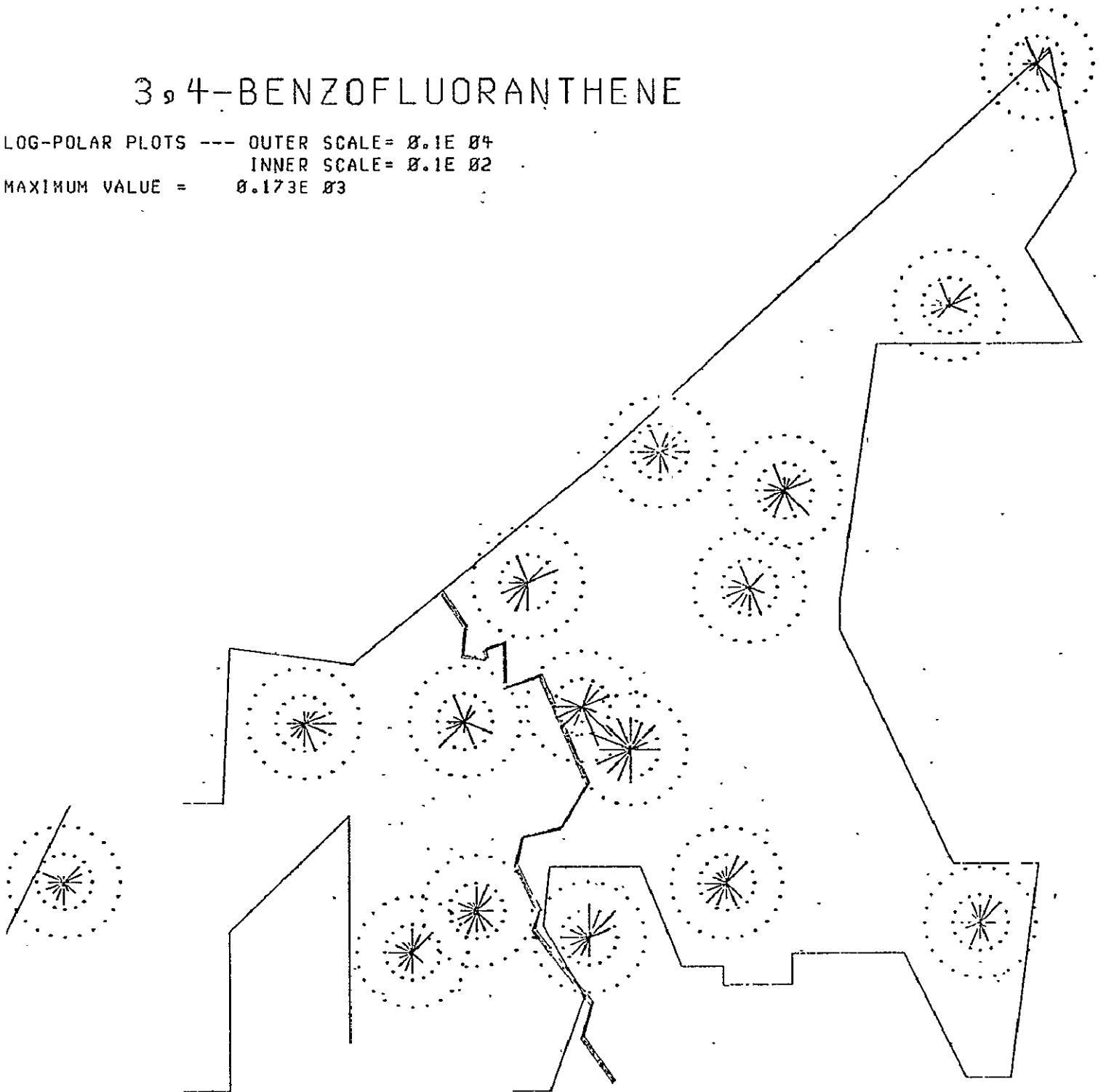
WIND FROM

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	4	3	4	2	0	0
3	4	1	2	0	1	0	1	1	5	6	1	4	3	4	4	1
4	0	0	1	0	0	1	0	1	1	2	5	2	5	2	0	3
5	1	1	3	0	0	0	1	1	3	6	1	2	3	2	2	1
6	1	0	3	3	0	1	0	0	1	0	3	3	2	1	0	2
7	1	1	7	3	1	1	0	1	4	3	3	4	5	2	-1	0
8	3	1	1	0	0	0	1	0	5	6	2	3	3	3	5	1
9	2	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	2	1	2	0	2	1	0	4	6	6	3	0	2
12	3	0	3	1	1	0	1	1	4	4	1	3	2	2	4	0
13	4	1	1	1	0	0	0	0	1	3	1	4	2	3	1	0
14	1	1	1	0	1	0	1	1	1	2	0	3	2	1	3	2
15	0	1	3	0	0	2	0	1	1	0	2	3	2	3	0	2
17	1	1	5	3	0	0	1	1	-1	3	3	5	3	4	0	2
20	0	1	3	0	0	0	1	1	1	0	2	2	3	2	0	2
21	0	0	3	1	0	0	0	0	3	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

3,4-BENZOFLUORANTHENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 04$
INNER SCALE = $0.1E 02$
MAXIMUM VALUE = $0.173E 03$



1,2-BENZOPYRENE

NUMBER OF READINGS

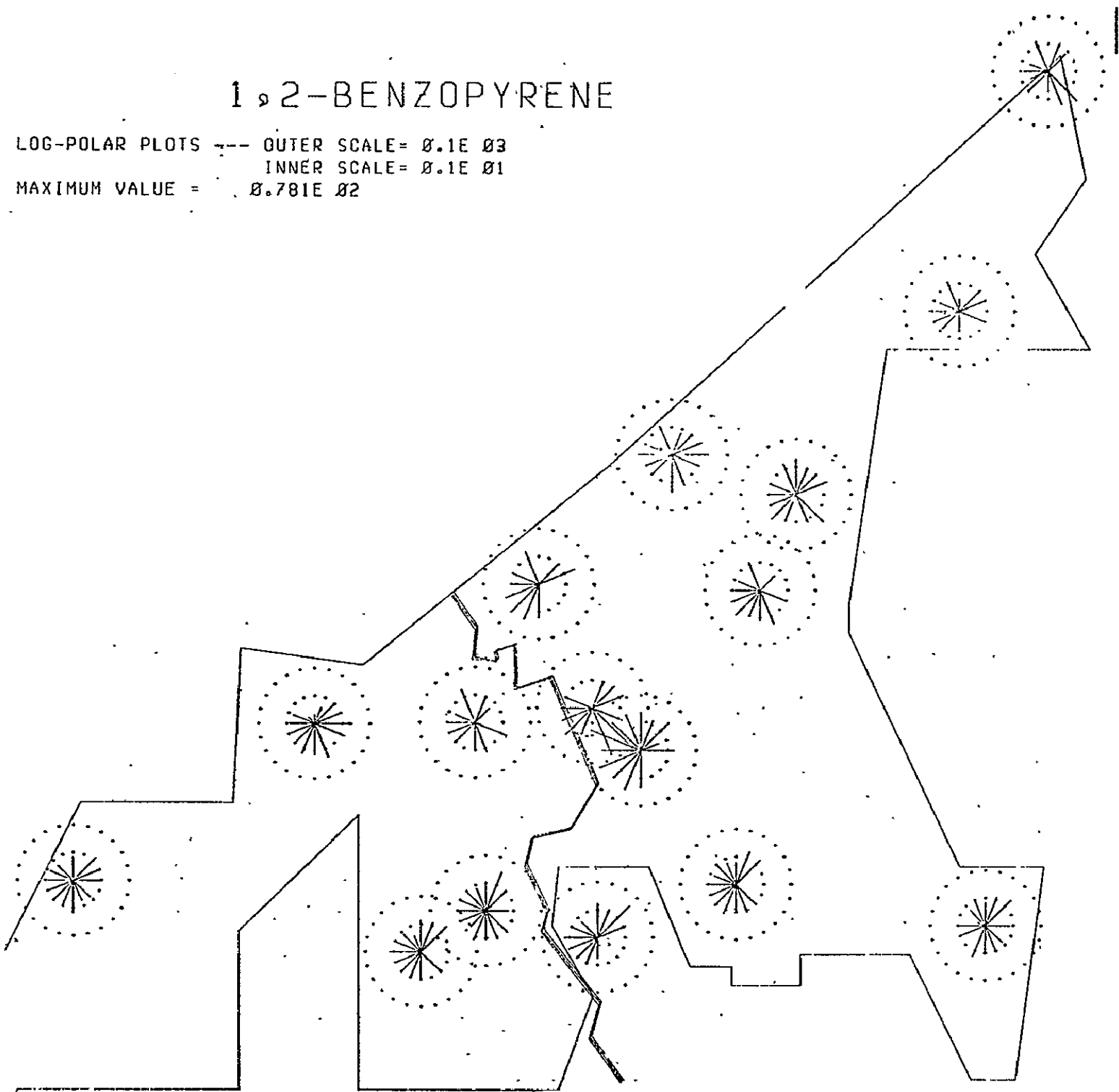
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	4	3	4	2	0	0
3	4	1	2	0	1	0	1	1	5	6	1	4	3	4	4	1
4	0	0	1	0	0	1	0	1	1	2	5	2	5	2	0	3
5	1	1	3	0	0	0	1	1	3	6	1	2	3	2	2	1
6	1	0	3	3	0	1	0	0	1	0	3	3	2	1	0	2
7	-1	1	7	3	1	2	0	1	4	3	4	4	5	2	-1	0
8	3	1	1	0	0	0	1	0	5	6	2	3	3	3	5	1
9	2	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	2	1	2	0	2	1	0	4	6	6	3	0	2
12	3	0	3	1	1	0	1	1	4	5	1	3	2	2	4	0
13	4	1	1	1	0	0	0	0	2	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	1	3	2
15	0	1	3	0	0	2	0	1	1	0	2	4	2	3	0	2
17	1	1	5	3	0	0	1	1	-1	3	3	5	3	4	0	2
20	0	1	3	0	0	0	1	1	1	0	2	2	3	2	0	2
21	0	0	3	1	0	0	0	0	3	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

1,2-BENZOPYRENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.781E 02$



3,4-BENZOPYRENE

NUMBER OF READINGS

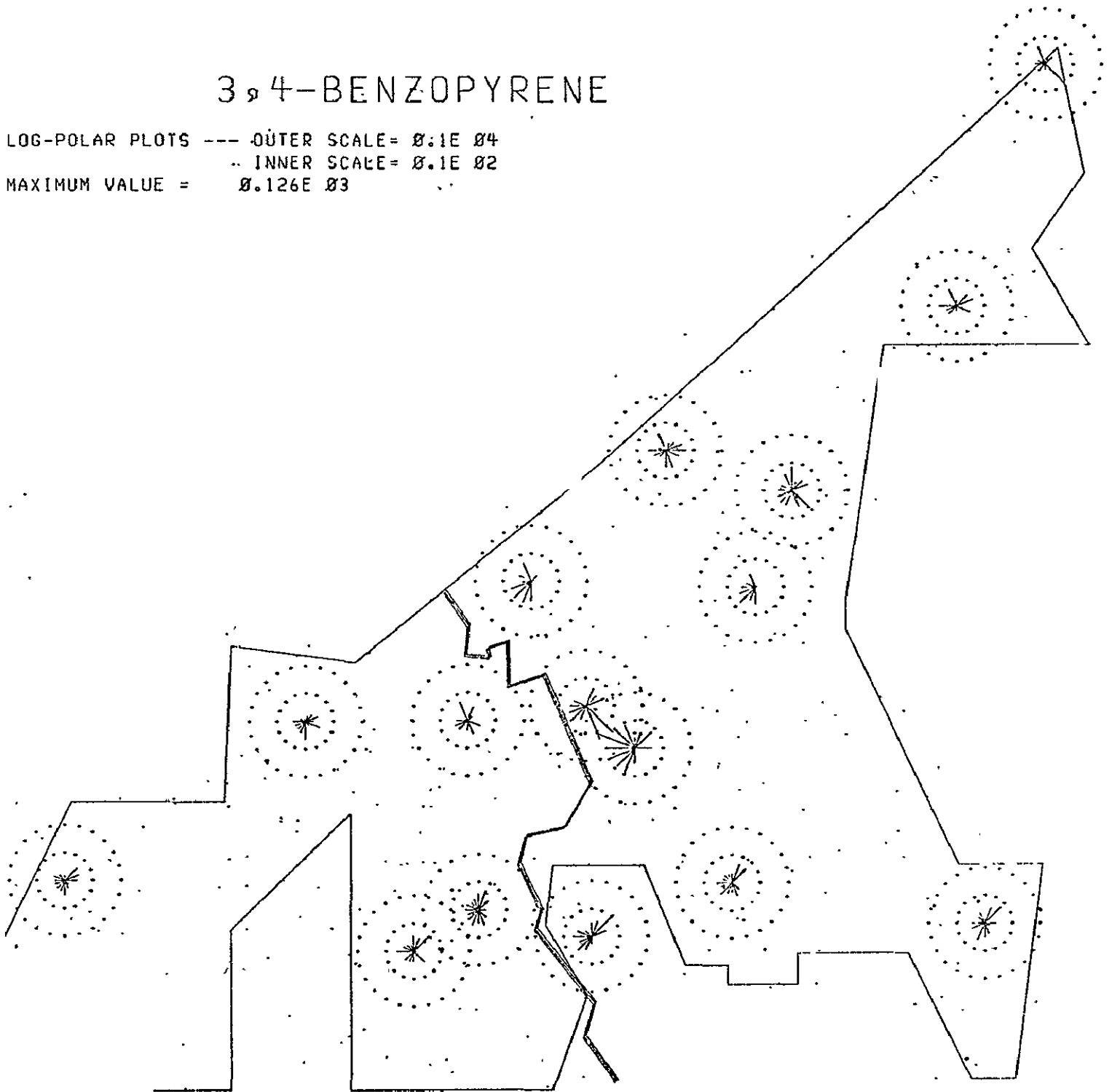
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	-1	1	1	0	1	4	3	4	2	0	0
3	4	1	2	0	1	0	1	1	5	4	1	3	3	4	4	1
4	0	0	1	0	0	-1	0	-1	1	2	5	2	5	2	0	3
5	1	1	3	0	0	0	1	1	3	5	1	2	3	2	2	1
6	1	0	3	2	0	1	0	0	1	0	3	3	2	1	0	2
7	1	1	7	3	1	2	0	-1	4	3	4	4	5	2	-1	0
8	2	1	1	0	0	0	1	0	4	4	2	1	3	3	5	1
9	1	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	2	1	1	0	2	1	0	4	5	6	3	0	2
12	3	0	3	1	1	0	1	1	4	5	1	2	2	2	4	0
13	4	1	1	1	0	0	0	0	1	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	1	3	2
15	0	1	2	0	0	2	0	1	1	0	2	4	2	3	0	2
17	1	1	5	2	0	0	1	1	-1	3	3	5	3	3	0	2
20	0	1	3	0	0	0	1	-1	1	0	2	2	3	2	0	2
21	0	0	2	-1	0	0	0	0	3	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

3,4-BENZOPYRENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 04$
-- INNER SCALE = $0.1E 02$
MAXIMUM VALUE = $0.126E 03$



PERYLENE

NUMBER OF READINGS

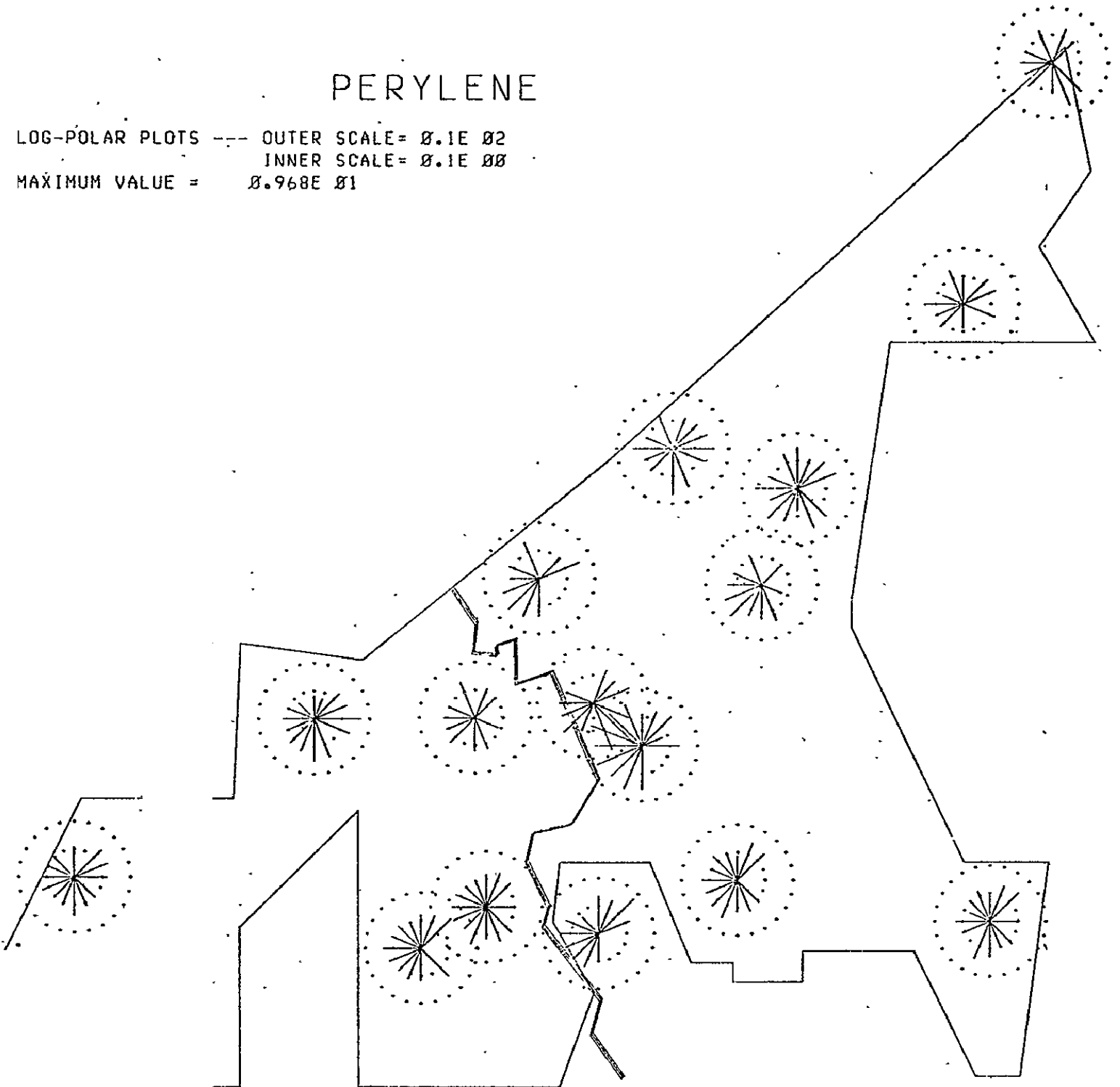
ND FROM

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	4	3	3	2	0	0
3	4	1	2	0	1	0	1	1	4	5	1	4	3	4	4	1
4	0	0	1	0	0	-1	0	1	1	2	5	2	5	2	0	3
5	1	1	3	0	0	0	1	1	3	4	1	2	3	2	2	1
6	1	0	3	1	0	1	0	0	1	0	3	3	2	1	0	2
7	1	1	7	3	1	1	0	1	4	3	4	4	5	2	-1	0
8	2	1	1	0	0	0	1	0	5	5	1	3	3	3	5	1
9	1	1	3	1	1	0	0	0	3	7	1	4	3	1	2	2
10	0	1	3	2	1	1	0	2	1	0	4	6	6	3	0	2
12	3	0	3	1	1	0	1	1	4	4	1	3	1	2	4	0
13	4	1	1	1	0	0	0	0	1	3	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	-1	3	2
15	0	1	3	0	0	1	0	1	1	0	2	3	2	3	0	2
17	1	1	4	3	0	0	1	1	-1	3	3	5	2	4	0	2
20	0	1	3	0	0	0	1	1	1	0	2	2	3	2	0	2
21	0	0	2	1	0	0	0	0	2	2	1	3	4	2	0	2

INDICATES ESTIMATED VALUE

PERYLENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 02$
INNER SCALE = $0.1E 00$
MAXIMUM VALUE = $0.968E 01$



1,12-BENZOPERYLENE

NUMBER OF READINGS

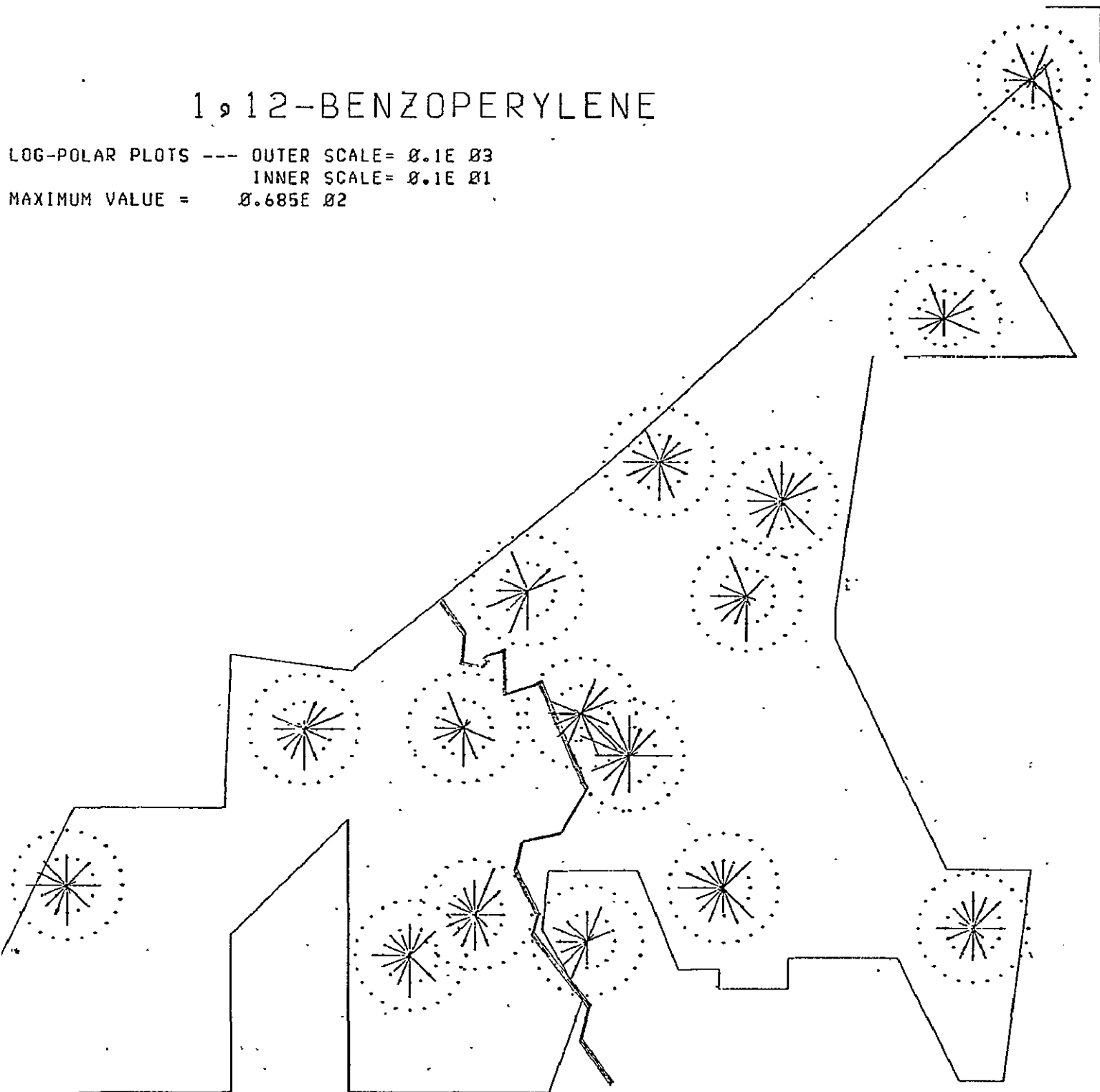
WIND FROM

SITE	WIND FROM															
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	0	1	2	3	0	1	1	1	0	1	3	3	4	1	0	0
3	4	1	2	0	1	0	1	1	4	6	1	3	3	3	3	1
4	0	0	1	0	0	-1	0	-1	1	2	4	2	4	2	0	2
5	1	1	2	0	0	0	1	1	3	5	1	2	3	1	2	1
6	1	0	2	2	0	1	0	0	1	0	3	3	2	1	0	2
7	1	1	6	3	1	2	0	1	4	3	4	4	5	1	-1	0
8	2	1	1	0	0	0	1	0	5	5	2	3	2	3	3	1
9	2	-1	3	-1	1	0	0	0	3	7	1	4	2	1	2	2
10	0	1	2	2	1	2	0	2	1	0	4	5	5	2	0	1
12	3	0	3	-1	1	0	1	-1	4	4	1	2	1	1	4	0
13	4	1	-1	1	0	0	0	0	1	1	1	4	2	3	1	0
14	2	1	1	0	1	0	1	1	1	2	0	3	2	1	2	2
15	0	-1	-1	0	0	2	0	1	1	0	2	4	2	2	0	2
17	1	1	3	3	0	0	1	1	-1	2	2	5	1	2	0	2
20	0	1	3	0	0	0	1	-1	1	0	-1	2	3	2	0	1
21	0	0	3	1	0	0	0	0	1	2	1	3	4	2	0	2

-1 INDICATES ESTIMATED VALUE

1,12-BENZOPERYLENE

LOG-POLAR PLOTS --- OUTER SCALE = $0.1E 03$
INNER SCALE = $0.1E 01$
MAXIMUM VALUE = $0.685E 02$



ALIPHATICS (TOTAL)

NUMBER OF READINGS

WIND FROM

	N	NNÈ	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
1	Ø	1	-1	3	Ø	1	-1	-1	Ø	-1	2	2	1	1	Ø	Ø
3	2	1	2	Ø	1	Ø	1	-1	3	3	-1	2	1	2	2	-1
4	Ø	Ø	1	Ø	Ø	-1	Ø	-1	-1	-1	-1	-1	3	1	Ø	2
5	1	1	2	Ø	Ø	Ø	1	Ø	3	3	-1	1	1	-1	-1	-1
6	1	Ø	2	3	Ø	1	Ø	Ø	1	Ø	1	2	-1	1	Ø	2
7	1	-1	3	3	-1	1	Ø	-1	1	1	1	3	3	1	-1	Ø
8	3	1	1	Ø	Ø	Ø	1	Ø	3	4	1	3	2	2	2	-1
9	-1	1	1	-1	-1	Ø	Ø	Ø	2	2	-1	1	-1	1	-1	1
10	Ø	1	1	3	-1	1	Ø	1	1	Ø	1	3	1	1	Ø	1
12	2	Ø	2	-1	-1	Ø	1	-1	2	1	1	3	1	-1	2	Ø
13	2	1	1	-1	Ø	Ø	Ø	Ø	2	2	-1	-1	1	1	1	Ø
14	1	1	1	Ø	-1	Ø	1	1	2	1	Ø	-1	-1	1	1	-1
15	Ø	1	-1	Ø	Ø	1	Ø	-1	-1	Ø	-1	3	-1	1	Ø	2
17	1	1	2	3	Ø	Ø	-1	1	1	1	-1	4	-1	1	Ø	2
20	Ø	1	-1	Ø	Ø	Ø	-1	-1	1	Ø	1	2	-1	-1	Ø	2
21	Ø	Ø	1	1	Ø	Ø	Ø	Ø	1	-1	-1	2	2	-1	Ø	1

Ø INDICATES ESTIMATED VALUE

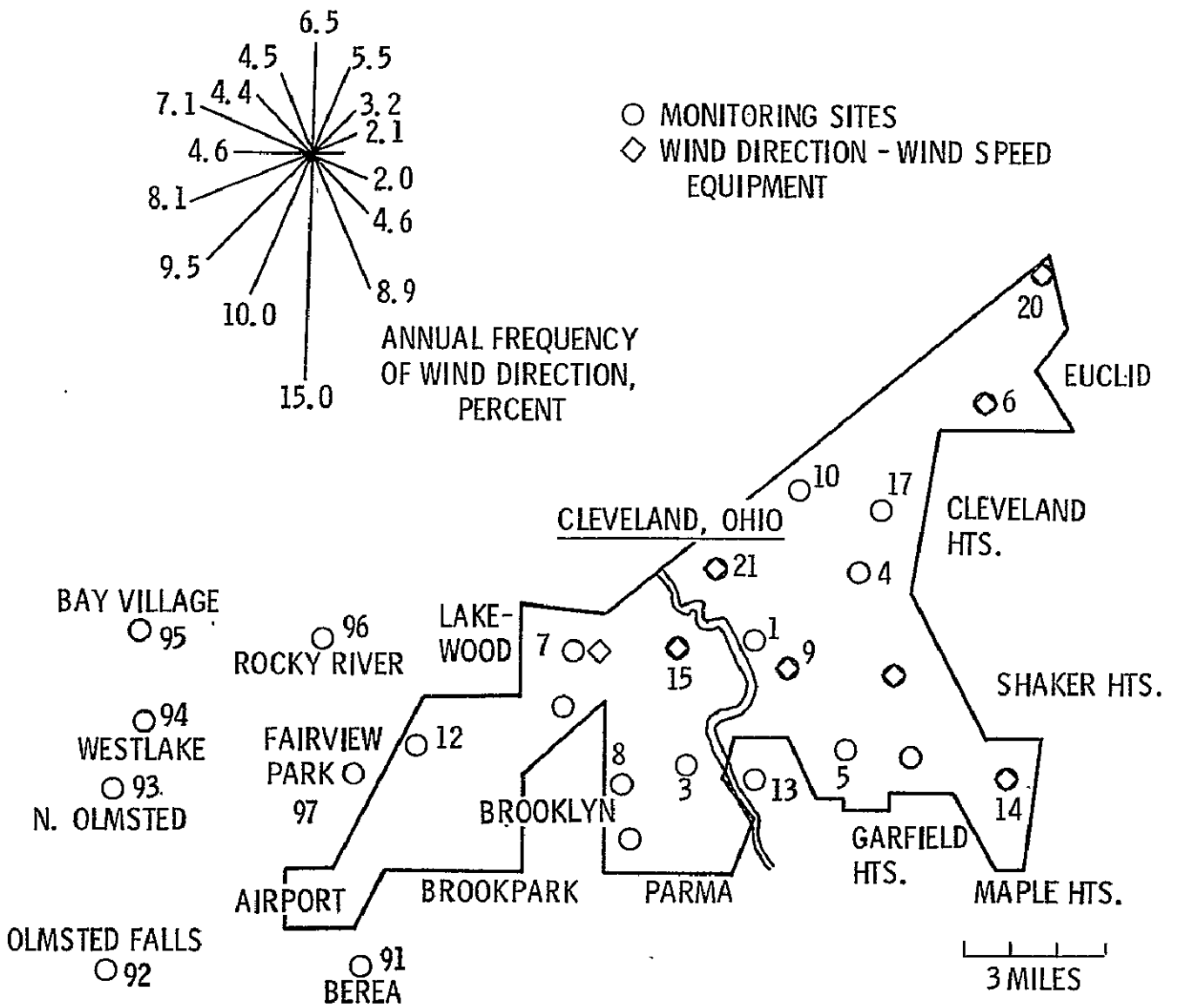


Figure 1. Sampling site locations.

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