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PRELIMINARY GEOSTATISTICAL STUDY
OF BTU VARIATIONS
IN THE
HAT CREEK DEPOSIT

Respectfully submitted

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F O R E W O R D

This report describes the work done following the proposal # 1 made to B.C. Hydro on March 13, 1978 by IREM-MERI, concerning the Hat Creek Project. It contains conclusions, variograms and maps obtained by kriging.

C O N C L U S I O N S

1. The purpose of this first study was to estimate the Hat Creek deposit for BTU content layer by layer, using geostatistics.
2. Each layer has been horizontally projected, but as no vertical thicknesses were available, no tonnage calculations have been made.
3. Due to the existence of the fault and almost vertical attitude of layers in its vicinity, only the western part of the deposit has been considered in a first phase. Figure 1 shows the definition of the zone considered. This zone in fact encompasses most of the tonnage of the deposit.

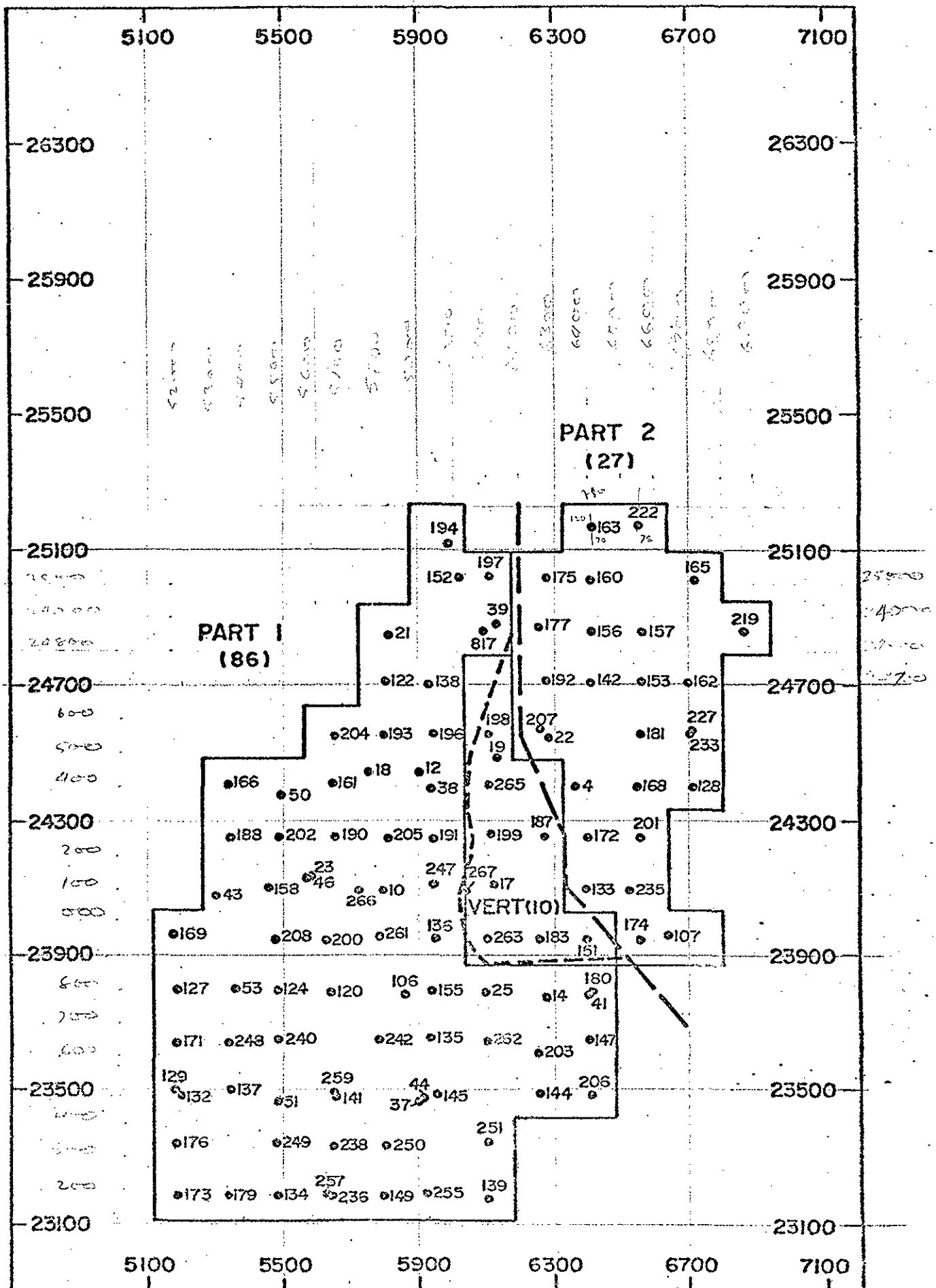


FIGURE 1 (legend on the following page)

FIGURE 1 : Map of location of drill holes with sampling information codified in the data file supplied by MINTEC. The deposit has been divided in a north-eastern zone (PART2 with 27 holes) and a southwestern zone (PART1 with 86 holes). Both zones are synclines separated by a fault. The study has been restricted to PART1 only. In that zone, the group of 10 holes drilled in the nearly vertical limb of the syncline close to the fault (VERT on the figure) has not been considered too.

TABLE 1 : (Legend on the following page)

LAYER	NUMBER OF INTERCEPTS IN PART 1	MEDIAN BTU	MEAN BTU	MINIMUM BTU	MAXIMUM BTU	STANDARD DEVIATION BTU
A1-1	20	5752.5	5588.7	3208	7132	1042.1
A1-2	27	5569.0	5558.3	3508	7205	742.7
A1-3	30	5404.0	5391.5	2368	7757	1486.2
A1-4	32	5350.5	5061.2	2236	6900	1242.5
A2-1	29	1333.0	1387.9	0	5561	1265.1
B1-1	33	7314.0	6841.5	1508	9874	1863.8
B1-2	33	6101.0	5730.4	1051	7964	1913.4
C1-1	33	666.0	1353.6	0	6597	1773.8
C2-1	33	3284.0	2982.4	0	6385	1926.8
C2-2	41	3841.0	3536.3	164	6963	2010.2
D1-1	41	7654.0	7386.9	2914	9499	1566.7
D1-2	46	8670.5	8541.5	3741	10536	1360.4
D1-3	49	9822.0	9570.1	5875	11017	1084.9
D1-4	52	9590.0	9382.0	6500	10489	814.4

TABLE 1 : Statistics of the distributions of BTU values in each layer and reported from holes in the isoclinal PARTI only (see Figure 1 for the limits of that zone).

The layers of economic importance (A, B and D) are characterized by some negative dissymmetry with the median values greater than the means. The relative dispersion in these layers keeps small with coefficients of variation ranging from 8% to 28%. It should be noted that in the richer D horizon, the dispersion is decreasing when the mean value increases. This has to be related to the progressive disappearance of the low values in the distributions (see the variation of the minimum values).

The layers which yield a large proportion of uneconomic values (A2-1 and C) generally show some positive dissymmetry and larger relative dispersions (coefficients of variation from 57% to 131%).

4. The data considered is the average BTU content within an intersection (including samples below 4000 BTU, no cut-off made), as read from the tape supplied by Mintec. The list of hole numbers and BTU content for each layer is given in Appendix 1, for the zone considered. Table 1 shows a summary of statistics for the 14 layers.

5. VARIOGRAMS

As the thickness (vertical) is not available, but regular, variograms have been computed on BTU content for different directions in order to check for anisotropies. They are shown in Appendix 2 for the 12 layers and two partings.

6. As expected anisotropies and trends are present in several layers. The models retained are summarized in table 2. One should note that when trends are present, one can in fact handle it as a "geometrical anisotropy" to avoid having to go to universal kriging. One can see from this table that there are several groups of layers.

The upper layers are isotropic on distances less than 600 m. (A1-1, A1-3, A1-4 show good isotropic variograms, A1-2 shows a "bad" variogram but in fact the amplitude of variations is much smaller, and thus there is no particular problem here). Starting with

BHU's

Recursion estimate

LAYER	NUGGET EFFECT	SLOPE(S)	AVERAGE STANDARD ERROR
A1-1	0	2,500 isotropic	350 (6%)
A1-2	150,000	844 min cart 542.86 - in max cart ratio 92 for shop of ref.	230 (4%)
A1-3	0	2,909	380 (7%)
A1-4	0	2,100	330 (7%)
A2-1	200,000 <i>Unstable</i>	1,550 688.89	300 (22%)
B1-1	300,000	3,000 1,153.85	330 (5%)
B1-2	400,000	4,000 1,600	400 (7%)
C1-1	750,000 <i>Unstable</i>	2,300 836.36	550 (41%)
C2-1	0 <i>Unstable</i>	7,200 3,272.73	400 (13%)
C2-2	500,000	7,777.78 3,181.82	550 (16%)
D1-1	200,000	3,125 1,590.91	380 (5%)
D1-2	150,000	1,295.24 715.79	280 (3%)
D1-3	0	1,181.80 541.70	150 (2%)
D1-4	60,000	350.	220 (2%)

TABLE 2 : (Legend on the following page)

TABLE 2 : Variogram models for the variations of BTU in each layer and corresponding average standard error in the estimation of the average BTU content of 75 x 75 m blocks. In all cases, the variograms are the sum of a nugget effect and an anisotropic or isotropic linear model. When the model is isotropic, a single value for the slope is given. When the model is anisotropic the maximum and the minimum slopes are given. The maximum slope is assigned to the variogram along the direction N-23°-E and the minimum slope is for the variogram in the perpendicular direction. In the models, the distance is always expressed in meters. The average standard error is the mean of the standard errors for all the 75 x 75 m blocks estimated by kriging in the layer. The value between parenthesis is the relative standard error of precision for a 68% confidence level.

layer B, the trend is more and more pronounced, showing higher values on the east north-east side, this giving a maximum slope for the variogram in this direction.

A common characteristic of all variograms is the low variance and absence of a nugget effect; all this corresponding to the expected good continuity of the BTU content.

7. KRIGING:

Using the equations of Table 2 kriging has been performed for each layer. Blocks are 75 m x 75 m and the origin of the blocks is at 5137.5E, 23087.5N .

8. Maps have been produced at a scale of 1" = 300 m. The outline of the layer, taken from isoelevation maps supplied by B.C. Hydro is shown. Within each block BTU content and the precision of the estimation (one standard deviation) is given. These maps should be compared with the map produced by inverse square distance method in the COMINCO-MONENCO model. Difference can be expected, if only due to the fact that the trend is now taken into account. The maps are given in Appendix 3. These maps can be plotted at other scales on request.

9. The estimation of blocks in the "vertical" section should require a more sophisticated model. The estimation of blocks in the small syncline can be done using the same techniques.
10. The precision of the estimation is different in each layer. Table 2 shows for instance the average precision obtained in each layer when the BTU content of a 75×75 m is estimated by kriging. The precision in absolute value is fairly constant (less than 500 BTU) which means that in rich layers the relative precision is better and areas of leaner quality are relatively less well known.

APPENDIX 1

File of the sample values used in this study

For each layer, the intercept of an hole with the layer is characterized by:

- the hole number
- the coordinates (in the order: longitude, latitude, elevation) of the top of the intercept
- the coordinates (in the same order) of the bottom of the intercept if they can be derived from the data file supplied by MINTEC (another layer has been encountered below). Otherwise, these values are set to zero.
- the average ash content in the intercept (in percent).
- the average BTU in the intercept.
- the average specific gravity of the rocks in the intercept.
- the true length of the intercept i.e. the length of its projection in the direction of the shortest dimension of the layer (in meters).

25	6120.5	23786.4	920.1	6137.4	23786.4	890.8	54.24	4859.	1.60	33.66
37	6036.2	23469.1	783.7	6059.4	23469.1	743.7	48.71	5543.	1.56	42.75
44	5833.3	23469.1	815.7	5814.6	23469.1	783.4	45.04	6078.	1.54	37.02
106	5867.4	23782.1	852.5	5867.4	23782.1	818.2	37.26	7132.	1.48	32.89
135	5932.1	23658.7	822.8	5930.4	23659.6	786.2	42.60	6249.	1.52	33.58
136	5956.6	23946.3	861.4	5956.0	23946.6	827.9	44.72	6120.	1.53	33.48
139	6106.6	23171.9	691.6	6106.6	23171.9	627.6	46.76	5962.	1.55	60.33
141	5649.5	23491.2	948.3	5648.0	23491.5	915.1	48.34	5456.	1.57	20.29
144	6258.8	23487.9	907.3	6258.8	23488.0	849.4	37.24	7069.	1.47	44.23
145	5951.3	23487.3	793.11	5950.4	23487.4	752.0	43.47	6021.	1.52	41.31
149	5806.4	23187.8	811.4	5808.6	23190.9	738.0	55.97	4238.	1.62	57.10
155	5951.0	23792.7	838.5	5951.8	23793.0	804.8	46.28	6000.	1.55	33.79
203	6258.8	23606.3	914.5	6262.1	23608.3	870.5	38.53	7001.	1.49	40.46
236	5642.2	23184.5	952.1	5639.1	23185.7	876.3	61.78	3208.	1.67	63.88
242	5785.9	23643.3	943.8	5777.4	23639.3	819.9	41.33	6524.	1.51	35.80
247	5944.4	24110.8	901.6	5942.7	24110.3	877.0	48.68	5141.	1.57	23.87
250	5796.1	23346.2	812.4	5793.3	23349.6	760.9	49.77	5246.	1.57	46.03
251	6205.0	23353.7	790.6	6224.1	23355.0	755.3	56.82	4069.	1.62	40.01
255	5913.0	23217.9	733.6	5909.7	23211.4	679.3	52.08	4616.	1.59	51.51
262	6106.3	23539.6	853.0	6106.5	23638.8	812.8	48.30	5242.	1.55	34.56

Layer Al-1

10	5800	3	24092	7	924	5	5800	3	24092	7	885	2	46	43	5818	1	55	34	03	
25	6137	4	23786	4	890	8	6174	7	23786	4	826	2	52	98	4961	1	60	73	52	
37	6059	4	23469	1	743	7	6104	8	23469	1	665	0	48	00	5569	1	56	86	59	
38	5975	8	24393	2	871	2	5990	1	24393	2	846	5	42	22	6141	1	52	16	81	
44	5814	6	23469	1	783	4	5784	1	23469	1	730	6	43	41	6220	1	54	60	87	
106	5867	4	23782	1	818	2	5867	4	23782	1	760	4	49	19	5275	1	57	55	70	
135	5930	4	23659	6	786	2	5927	8	23661	1	728	4	43	43	6334	1	53	57	88	
136	5956	0	23946	5	827	9	5955	0	23947	0	771	5	48	25	5726	1	57	56	13	
139	6106	6	23171	9	627	6	6106	6	23171	9	580	7	51	38	5455	1	59	86	44	
141	5648	0	23491	5	915	1	5645	4	23491	9	858	5	51	98	5030	1	59	34	64	
148	6258	8	23488	0	849	4	6258	9	23488	3	766	5	47	19	5686	1	56	65	39	
145	5950	4	23487	4	752	0	5948	9	23487	5	684	1	47	30	5500	1	55	67	24	
149	5808	6	23190	9	738	0	5810	3	23193	4	679	5	52	00	5088	1	60	44	80	
155	5951	8	23793	0	804	8	5953	2	23793	4	749	3	47	03	5828	1	56	55	46	
191	5948	1	24245	5	883	7	5946	5	24242	1	837	6	55	43	4496	1	63	37	37	
203	6262	1	23608	3	870	5	6266	7	23611	0	811	4	44	74	6194	1	53	49	63	
206	6375	5	23490	7	894	9	0	0	0	0	0	0	0	35	78	7205	1	46	44	50
238	5639	1	23185	7	876	3	5637	0	23186	4	820	3	50	05	5181	1	58	45	18	
238	5651	2	23330	9	968	2	5645	2	23330	6	831	1	53	16	4574	1	60	102	83	
242	5777	4	23639	3	819	9	5773	0	23637	3	755	5	45	88	5865	1	55	55	75	
247	5942	7	24110	3	877	0	5938	6	24108	9	816	5	40	43	6634	1	50	59	16	
250	5793	3	23349	6	760	9	5790	0	23353	5	701	3	45	20	5978	1	54	52	51	
251	6224	1	23355	0	755	3	6254	7	23357	0	698	9	50	94	5024	1	59	64	01	
255	5909	7	23211	4	679	3	5905	7	23215	5	614	3	46	72	5281	1	55	61	99	
257	5622	1	23195	8	951	1	5603	2	23208	9	874	1	58	65	3508	1	64	68	21	
261	5794	7	23951	2	920	7	5795	9	23953	3	865	8	43	96	6155	1	53	25	12	
262	6106	5	23638	8	812	8	6107	1	23636	7	695	8	48	28	5277	1	56	107	22	

Layer A1-2

10	5800	3	24092	7	885	2	5800	3	24092	7	860	8	35	70	7444	1	47	20	09
12	5911	3	24443	8	904	3	5911	3	24443	8	866	6	48	19	5468	1	57	31	97
25	6174	7	23786	4	826	2	6185	9	23786	4	806	8	56	95	4322	1	63	21	99
37	6104	8	23469	1	665	0	6124	4	23469	1	631	0	46	02	5766	1	54	38	24
38	5990	1	24393	2	846	5	5999	3	24393	2	830	6	45	84	5905	1	56	10	56
44	5784	1	23469	1	730	6	5770	0	23469	1	706	2	53	17	4503	1	61	28	20
106	5867	4	23782	1	760	4	5867	4	23782	1	741	4	37	57	7237	1	49	18	33
120	5649	1	23788	5	936	1	5652	5	23788	2	872	8	54	74	4313	1	62	33	99
135	5927	8	23661	1	728	4	5926	7	23661	8	704	1	42	73	6438	1	53	24	39
136	5955	0	23947	0	771	5	5954	6	23947	2	748	6	35	43	7593	1	47	22	51
139	6106	6	23171	9	580	7	6106	6	23171	9	552	9	51	81	5110	1	60	27	68
141	5645	4	23491	9	858	5	5643	8	23492	2	824	6	54	57	4514	1	62	20	71
144	6258	9	23488	3	766	5	6259	0	23488	4	733	9	55	89	4642	1	63	25	71
145	5848	9	23487	5	684	1	5948	2	23487	5	656	3	41	04	6634	1	51	27	44
149	5810	3	23193	4	679	5	5811	3	23194	9	645	2	56	84	4231	1	64	25	86
155	5953	2	23793	4	749	3	5945	0	0	0	0	0	48	24	5778	1	57	26	76
191	5946	5	24242	1	837	6	5945	9	24240	8	819	4	32	80	7757	1	45	14	95
196	5952	8	24502	0	910	8	5952	6	24562	1	902	2	39	84	6837	1	49	8	05
203	6266	7	23611	0	811	4	6266	4	23612	1	788	8	50	61	5340	1	58	16	75
205	5812	8	24248	0	912	7	5812	7	24247	7	901	3	70	74	2368	1	70	8	90
236	5637	0	23186	4	820	3	5635	7	23186	9	786	9	58	53	3814	1	65	27	74
238	5645	2	23330	6	831	1	5643	7	23330	5	797	6	58	54	3871	1	65	25	09
242	5773	4	23637	3	755	5	5771	3	23636	4	729	7	43	37	6366	1	53	22	94
247	5938	6	24108	9	816	5	5937	2	24108	3	794	5	38	55	7038	1	49	21	15
250	5790	0	23353	5	701	3	5788	4	23355	4	672	1	50	50	5297	1	58	25	16
251	6254	7	23357	0	698	9	6278	1	23358	6	655	5	63	22	3195	1	69	49	23
255	5905	7	23215	5	814	3	5905	8	23217	5	583	8	52	52	4811	1	60	28	84
257	5603	2	23208	9	874	1	5596	0	23213	8	844	9	66	58	2438	1	72	25	81
261	5798	9	23953	3	865	8	5796	5	23954	4	838	5	36	76	7219	1	47	12	60
262	6107	1	23636	7	695	8	6107	3	23636	2	667	1	47	94	5497	1	56	27	69

Layer A1-3

10	5800	3	24092	7	860	8	5800	3	24092	7	824	2	43	06	6420	1	53	29	32
12	5911	3	24443	8	866	6	5911	3	24443	8	852	6	54	69	4811	1	63	11	81
14	6280	4	23770	2	905	6	6280	4	23770	2	890	3	39	52	6792	1	50	6	47
25	6185	9	23786	4	806	8	6203	1	23786	4	777	0	58	85	4067	1	66	33	03
37	6124	4	23469	1	631	0	6144	1	23469	1	596	9	07	38	5776	1	57	38	83
38	5999	3	24393	2	830	6	6027	3	24393	2	782	0	54	00	4672	1	61	37	95
44	5770	0	23469	1	706	2	5751	0	23469	1	673	2	51	42	5025	1	59	37	85
100	5867	4	23782	1	741	4	5867	4	23782	1	696	7	45	53	6092	1	55	42	91
120	5652	5	23788	2	872	8	5654	4	23788	0	837	2	50	62	5267	1	59	19	08
125	5926	7	23461	8	704	1	5924	6	23662	9	658	4	46	75	5912	1	56	45	68
136	5954	6	23947	2	748	6	5953	8	23947	5	706	0	41	67	6639	1	51	41	67
139	6106	6	23171	9	552	9	6106	6	23171	9	506	9	52	12	5434	1	61	45	98
141	5643	8	23492	2	824	6	5641	6	23492	6	777	8	58	37	4183	1	66	33	71
144	6259	0	23488	4	733	9	6259	1	23488	6	666	9	60	37	3781	1	68	53	03
145	5948	2	23487	5	656	3	0	0	0	0	0	0	48	72	5448	1	57	50	84
149	5811	3	23194	9	645	2	5812	8	23197	1	595	8	61	82	3407	1	68	36	85
191	5945	9	24240	8	819	4	5944	2	24237	3	771	0	48	07	5724	1	57	41	02
196	5952	6	24562	1	902	2	5951	5	24562	9	855	9	48	03	5579	1	56	43	32
203	6268	4	23612	1	788	8	6272	0	23614	2	741	8	56	81	4337	1	63	34	70
205	5812	7	24247	7	901	3	5812	0	24246	6	855	3	45	40	6010	1	54	36	89
236	5635	7	23186	9	786	9	5634	1	23187	5	743	7	66	98	2381	1	72	35	66
238	5623	7	23330	5	797	6	5641	9	23330	4	755	7	52	42	3668	1	66	31	38
242	5771	3	23636	4	729	7	5768	4	23635	1	687	9	48	50	5499	1	57	37	83
244	5937	2	24108	3	794	5	5934	2	24107	4	751	7	46	50	5938	1	56	40	58
250	5768	4	23355	4	672	1	5786	0	23358	2	628	8	52	94	4772	1	60	36	79
251	6278	1	23258	6	655	5	0	0	0	0	0	0	60	84	3483	1	66	45	04
255	5903	8	23217	5	583	8	0	0	0	0	0	0	58	32	3737	1	64	43	19
257	5596	0	23213	8	844	9	5587	0	23220	0	808	4	67	76	2236	1	73	31	90
259	5618	7	23481	1	930	6	5588	5	23482	1	856	5	49	76	5152	1	56	65	68
261	5796	5	23954	4	838	6	5797	6	23956	5	786	1	42	07	6426	1	51	25	44
262	6107	3	23636	2	667	1	6107	5	23635	2	615	3	43	83	6392	1	53	48	73
266	5716	2	24096	6	926	0	5714	7	24096	6	921	8	40	16	6900	1	51	3	92

Layer A1-4

10	5800	3	24092	7	824	2	0	0	24443	8	824	8	77	83	0	1	84	20	60
12	5911	3	24443	8	852	6	5911	3	24443	8	824	8	77	83	413	1	82	23	51
14	6280	4	23770	2	890	3	6280	4	23770	2	875	0	48	06	5561	1	57	6	47
25	6203	1	23786	4	777	0	6216	1	23786	4	754	5	61	07	3419	1	68	24	01
37	6144	1	23469	1	596	9	6155	1	23469	1	577	9	72	41	1982	1	77	21	79
38	6027	3	24393	2	782	0	6036	3	24393	2	766	4	71	70	1991	1	76	15	07
40	5751	0	23469	1	673	2	5729	6	23469	1	636	2	83	94	543	1	87	41	17
100	5867	4	23782	1	696	7	5867	4	23782	1	676	6	75	73	847	1	80	19	17
120	5654	4	23788	0	837	2	5656	8	23787	8	793	4	78	09	539	1	82	24	33
135	5924	6	23662	9	658	4	5923	5	23663	5	634	1	75	07	1444	1	80	24	39
136	5953	8	23947	5	706	0	5953	5	23947	7	687	7	69	31	2510	1	75	17	95
139	6106	6	23171	9	506	9	6106	6	23171	9	485	9	75	43	1333	1	80	21	00
141	5641	6	23492	6	777	8	5639	6	23492	9	735	1	79	84	337	1	84	35	67
143	6259	1	23488	6	666	0	6259	1	23488	7	636	9	73	94	1308	1	79	24	66
149	5812	8	23147	1	595	8	0	0	0	0	0	0	0	0	0	1	84	14	54
191	5944	2	24237	3	771	0	5943	5	24236	0	752	8	73	54	2052	1	78	16	22
190	5951	5	24562	9	855	9	5951	1	24563	2	841	3	70	71	2623	1	76	13	66
203	6272	0	23614	2	741	8	6273	5	23615	1	721	8	74	23	1709	1	79	14	78
205	5812	0	24240	6	855	3	5811	8	24240	2	840	4	67	50	2805	1	73	12	07
236	5634	1	23187	5	743	7	5631	5	23188	4	675	6	79	81	36	1	84	55	28
238	5641	9	23330	4	755	7	5639	2	23330	3	694	7	79	56	81	1	84	46	46
242	5768	4	23635	1	687	9	5766	4	23634	2	658	3	73	60	1277	1	78	27	15
247	5934	2	24107	4	751	7	5932	7	24106	4	729	0	70	80	2056	1	76	21	69
250	5786	0	23358	2	628	8	5783	0	23361	8	574	2	80	00	0	1	84	46	07
257	5587	0	23220	0	868	4	5577	6	23226	5	769	9	80	00	0	1	84	33	28
259	5588	5	23482	1	856	5	5568	6	23482	7	807	8	79	59	230	1	84	43	18
261	5797	0	23956	5	766	1	5798	2	23957	6	759	9	70	85	1758	1	75	15	90
262	6107	5	23635	2	615	3	6107	6	23634	8	594	4	72	51	1534	1	77	19	45
266	5714	7	24096	6	921	8	5709	3	24096	6	907	0	72	02	1861	1	77	13	56

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12	5911	3	24443	8	824	6	5911	3	24443	8	781	2	31	31	8260	1	48	38	05
14	6280	4	23770	2	875	0	6280	4	23770	2	792	7	28	44	8425	1	45	36	72
16	5759	6	24444	1	926	9	5759	6	24444	1	883	7	35	42	6692	1	52	34	71
25	0216	1	23786	4	754	5	6231	3	23786	4	728	1	31	15	8173	1	48	28	
37	6155	1	23469	1	577	9	6185	6	23469	1	525	1	36	57	7201	1	53	69	61
38	6038	3	24393	2	766	4	6051	6	24393	2	740	0	31	13	7945	1	48	27	95
44	5729	6	23469	1	636	2	5715	9	23469	1	612	5	44	34	6289	1	60	25	58
106	5807	4	23782	1	676	6	5867	4	23782	1	630	1	35	13	7427	1	51	44	10
120	5656	8	23787	8	793	4	5658	9	23787	5	753	1	73	73	1508	1	87	24	20
134	5492	5	23177	9	853	1	5492	5	23177	3	825	4	60	09	3760	1	75	18	70
155	5923	5	23663	5	638	1	5921	2	23664	8	585	4	34	85	7676	1	51	48	35
136	5953	5	23947	7	687	7	5952	8	23948	0	685	1	31	29	8159	1	48	41	91
138	5940	9	24702	1	896	7	5941	8	24700	8	854	7	28	77	8294	1	46	38	28
139	6106	6	23171	9	485	9	0	0	0	0	0	0	35	95	7665	1	52	25	90
141	5639	5	23492	9	735	1	5637	9	23493	2	698	7	49	51	5666	1	65	29	94
144	0259	1	23488	7	636	9	0	0	0	0	0	0	37	78	7267	1	53	11	03
147	6412	8	23637	2	893	3	6414	4	23638	9	839	8	26	30	8975	1	43	42	06
191	5943	5	24236	0	752	8	5942	3	24233	4	716	4	36	09	7314	1	52	33	00
196	5951	1	24503	2	841	5	5950	4	24563	7	810	8	29	99	8309	1	47	28	54
200	5635	7	23940	3	980	9	5636	5	23938	5	933	6	52	97	4652	1	67	22	01
202	6273	5	23615	1	721	8	0	0	0	0	0	0	36	09	7406	1	52	34	83
205	5811	8	24246	2	840	4	5811	3	24245	4	808	2	30	15	8302	1	47	25	04
235	5631	5	23188	4	675	6	0	0	0	0	0	0	16	99	9874	1	35	97	
238	5630	2	23330	3	694	7	0	0	0	0	0	0	46	81	6592	1	62	12	58
242	5766	4	23634	2	658	3	5764	0	23633	0	622	9	39	36	6908	1	55	32	75
247	5932	7	24106	8	729	0	5930	7	24106	1	699	1	33	66	7826	1	50	28	66
249	5410	7	23343	6	903	4	5400	4	23344	5	885	3	71	69	2030	1	86	20	03
250	5783	0	23361	8	574	2	5781	4	23363	8	544	6	46	79	5823	1	62	24	97
257	5577	6	23226	5	769	9	5574	5	23228	7	757	2	48	49	5662	1	63	10	88
259	5568	6	23482	7	807	8	5557	5	23483	1	780	6	57	28	4131	1	72	24	28
261	5798	2	23957	6	759	9	5799	2	23949	4	714	1	37	39	7130	1	53	34	33
262	6107	6	23634	8	594	4	6107	9	23634	0	548	2	35	08	7680	1	51	43	62
265	5709	3	24096	6	907	0	5697	5	24096	6	874	5	39	13	6747	1	55	30	11

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N	α_c	γ_c	ζ_c	α_i	β_i	γ_i	ASL	BTU	SG	L
12	5911.3	24443.8	781.2	5911.3	24443.8	765.3	37.81	7274.	1.54	14.14
14	6280.0	23770.2	792.7	6280.4	23770.2	747.0	46.62	6009.	1.62	24.04
16	5759.8	24444.1	884.7	5759.8	24444.1	871.5	58.56	3647.	1.73	10.05
25	6231.3	23786.4	728.1	6243.5	23786.4	707.0	34.06	7713.	1.50	22.70
37	6185.6	23469.1	525.1	6194.7	23469.1	509.2	44.11	6101.	1.60	18.15
38	6051.6	24393.2	740.0	6066.8	24393.2	713.7	33.12	7659.	1.50	28.91
44	5715.9	23469.1	612.5	5706.8	23469.1	596.6	57.17	4393.	1.72	16.91
46	5582.4	24131.4	963.8	5591.8	24131.4	947.4	48.85	5483.	1.65	6.46
106	5867.4	23782.1	630.1	5867.4	23782.1	590.7	41.68	6632.	1.57	37.08
120	5658.9	23787.5	753.1	5661.5	23787.3	704.8	55.45	4598.	1.70	31.69
124	5494.7	23793.3	977.5	5495.1	23793.4	940.7	73.93	1327.	1.88	25.73
134	5492.5	23177.3	825.4	5492.5	23176.3	781.0	64.37	3282.	1.79	28.89
135	5921.2	23664.8	585.4	5919.9	23665.5	556.5	38.40	7164.	1.54	28.32
136	5952.8	23948.0	645.1	5952.2	23948.3	613.1	37.82	7130.	1.53	31.49
138	5941.8	24700.8	854.7	5942.3	24700.2	833.4	32.49	7959.	1.49	19.43
141	5637.9	23493.2	698.7	0.0	0.0	0.0	0.0	56.35	4640.	1.72
147	6414.4	23638.9	839.8	0.0	0.0	0.0	0.0	36.43	7427.	1.52
161	5655.4	24408.2	930.4	5655.4	24408.0	931.1	53.05	4448.	1.69	7.48
190	5655.2	24254.8	954.7	5655.2	24254.8	918.7	37.43	6956.	1.53	26.96
191	5942.3	24233.4	716.4	5941.4	24231.6	692.1	35.25	7481.	1.52	22.27
193	5802.5	24558.2	906.8	5801.6	24558.7	879.4	37.65	7084.	1.53	24.06
196	5950.4	24563.7	810.8	5949.8	24564.1	787.4	32.71	7918.	1.49	21.99
200	5636.5	23938.5	933.6	5637.3	23936.6	882.2	55.29	4399.	1.69	31.38
205	5811.3	24245.4	808.2	5810.8	24244.6	777.7	37.19	7195.	1.53	22.96
246	5490.3	23651.0	918.1	5490.3	23651.0	901.0	77.61	1051.	1.92	12.13
242	5764.0	23633.0	622.9	0.0	0.0	0.0	0.0	52.34	5041.	1.67
247	5950.7	24106.1	699.1	5928.8	24105.5	671.6	33.03	7964.	1.50	25.93
256	5781.4	23363.8	544.6	0.0	0.0	0.0	0.0	59.02	4256.	1.74
257	5574.5	23228.7	757.2	5571.5	23230.7	745.3	68.18	2506.	1.82	10.00
259	5557.5	23483.1	780.6	5551.3	23483.3	765.4	53.95	4899.	1.69	13.90
261	5799.2	23959.4	714.1	0.0	0.0	0.0	0.0	41.90	6539.	1.57
262	6107.9	23634.0	548.2	6108.1	23633.3	513.3	39.02	7202.	1.55	33.73
266	5697.5	24096.6	874.5	5689.8	24096.6	853.4	46.83	5726.	1.62	19.87

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12	5911	.3	24443	.8	765	.3	5911	.3	24443	.8	754	.4	80	.00	0	.01	9	.58		
14	6280	.4	23770	.2	747	.0	0	0	0	0	0	42	.57	6597	.1	59	.52			
15	5759	.8	24444	.1	871	.5	5759	.8	24444	.1	842	.2	73	.34	1163	.1	93	.43		
25	6243	.5	23786	.4	707	.0	6249	.6	23786	.4	696	.4	61	.78	3704	.1	81	.39		
37	6194	.7	23469	.1	509	.2	6203	.9	23469	.1	493	.4	75	.87	870	.1	96	.12		
38	6066	.8	24393	.2	713	.7	6079	0	24393	.2	692	.6	54	.28	4352	.1	72	.67		
43	5706	.8	23469	.1	596	.6	5691	.7	23469	.1	570	.6	81	.88	0	.2	28	.45		
46	5591	.8	24131	.4	947	.4	5681	.7	24131	.4	791	.7	74	.08	1144	.1	94	.62		
51	5485	.4	23461	.1	958	.3	5485	.4	23461	.1	844	.9	80	.00	0	.2	21	.64		
53	5366	.0	23797	.9	1006	.5	5366	0	23797	.9	971	.1	80	.00	51	.2	29	.69		
106	5867	.4	23782	.1	590	.7	5867	.4	23782	.1	555	.0	80	.00	0	.2	33	.22		
120	5661	.5	23787	.3	704	.8	5662	.9	23787	.2	679	.2	81	.11	0	.2	17	.67		
128	5495	.1	23793	.4	940	.7	5495	.6	23793	.6	891	.5	80	.00	0	.2	36	.19		
134	5492	.5	23176	.3	781	.0	5492	.5	23175	.2	735	.3	80	.00	379	.2	01	28	.90	
135	5919	.9	23665	.5	556	.5	5918	.2	23666	.5	518	.4	79	.16	666	.2	00	37	.27	
136	5952	.2	23948	.3	613	.1	5952	.0	23948	.4	597	.9	75	.34	1831	.1	96	15	.01	
138	5942	.3	24700	.2	833	.4	5942	.5	24699	.9	821	.2	62	.30	3711	.1	81	10	.98	
158	5466	.5	24100	.0	962	.2	5465	.9	24098	.3	936	.7	63	.96	3200	.1	83	23	.01	
161	5655	.4	24400	.6	931	.1	5655	.1	24407	.0	885	.1	00	.00	0	.2	40	.62		
190	5555	.2	24254	.8	918	.7	5655	.2	24254	.8	857	.8	79	.84	90	.2	01	46	.31	
191	5941	.4	24231	.6	692	.1	5940	.8	24230	.4	675	.3	67	.11	2647	.1	86	15	.74	
193	5801	.6	24556	.7	879	.4	5800	.9	24559	.0	860	.9	75	.53	2016	.1	95	16	.71	
195	5944	.8	24564	.1	787	.4	5949	.3	24564	.5	764	.6	48	.37	5653	.1	64	21	.33	
200	5637	.3	23936	.6	882	.2	5638	.4	23934	.1	814	.0	78	.53	1622	.2	00	49	.04	
202	5492	.4	24254	.8	954	.0	5491	.9	24254	.8	940	.8	80	.00	0	.2	01	11	.10	
205	5810	.8	24244	.6	777	.7	5810	.3	24243	.6	739	.3	77	.69	1001	.1	98	30	.57	
208	5486	.7	23944	.3	979	.9	5487	0	23942	.6	905	.5	80	.00	0	.2	01	59	.95	
240	5490	.3	23651	.0	901	.0	5490	.3	23651	.0	878	.8	79	.74	183	.2	01	15	.14	
247	5928	.8	24105	.5	671	.6	5927	.5	24105	.0	652	.2	73	.02	2172	.1	93	18	.12	
257	5571	.5	23230	.7	745	.3	5562	.6	23236	.8	708	.9	79	.77	149	.2	01	29	.96	
259	5551	.3	23483	.3	765	.4	5535	.9	23483	.8	727	.4	80	.19	0	.2	02	32	.91	
262	6108	.1	23633	.3	513	.3	0	0	0	0	0	0	0	72	00	1469	.1	91	8	.65
266	5689	.6	24096	.6	853	.4	5670	.7	24096	.6	800	.8	80	.00	0	.2	01	51	.55	

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12	5911	5	24443	8	754	9	0	0	0	0	50	03	2154	1	00	60	11		
18	5759	8	24444	1	842	2	5759	8	24444	1	810	5	51	61	4824	1	69	27	03
23	5579	6	24131	4	805	1	5579	6	24131	4	851	9	69	07	2757	1	88	27	76
25	6249	6	23786	4	696	4	6258	7	23786	4	680	7	47	85	5929	1	65	16	96
37	6203	9	23469	1	493	8	6213	0	23469	1	477	5	52	00	4587	1	70	18	12
38	6079	0	24393	2	692	6	6084	6	24393	2	682	8	53	46	4545	1	71	11	22
44	5691	7	23469	1	570	5	5658	9	23469	1	513	8	78	20	1149	1	99	63	50
46	5681	7	24131	4	791	7	5708	6	24131	4	745	2	61	67	3303	1	79	20	55
50	5505	3	24376	1	940	0	5505	3	24376	1	917	1	65	31	2934	1	84	22	90
51	5485	4	23461	1	844	9	5485	4	23461	1	765	3	80	00	0	2	01	23	27
53	5300	0	23797	9	971	1	5368	0	23797	9	933	6	74	89	1253	1	95	32	70
106	5867	4	23782	1	555	0	5867	4	23782	1	526	3	59	40	3756	1	77	26	92
120	5662	9	23787	2	679	2	5664	7	23787	0	645	2	79	67	189	2	01	24	49
124	5495	0	23793	6	891	5	5496	1	23793	8	855	3	80	98	721	2	02	27	04
134	5492	5	23175	2	735	3	0	0	0	0	0	0	78	25	434	1	99	24	69
135	5918	2	23666	5	518	4	5917	0	23667	2	492	6	63	87	3284	1	82	24	98
136	5952	0	23948	4	597	9	5951	5	23948	6	573	5	52	04	5170	1	69	24	15
138	5942	5	24699	9	821	2	5943	1	24699	1	796	8	44	27	6385	1	60	21	87
157	5465	9	24098	3	936	7	5465	4	24098	6	911	2	74	83	976	1	95	22	76
161	5655	1	24407	0	885	1	5655	0	24406	5	863	8	61	63	3744	1	80	18	50
179	5339	9	23180	3	982	8	5337	8	23178	9	905	1	75	56	882	1	96	47	95
190	5655	2	24254	8	857	8	5655	2	24254	8	822	4	58	53	3844	1	76	27	31
191	5940	8	24230	4	675	3	5940	0	24228	6	651	0	52	29	5069	1	70	23	33
193	5800	9	24559	0	860	9	5800	3	24559	3	842	6	58	22	4191	1	76	16	51
196	5949	3	24564	5	764	6	5949	0	24564	8	750	8	50	15	0952	1	67	12	91
200	5638	4	23934	1	814	0	5638	9	23932	9	779	6	72	84	2092	1	92	26	54
205	5810	3	24243	6	739	3	5809	7	24242	7	704	8	56	76	4357	1	74	29	12
208	5487	0	23942	6	906	5	5487	2	23941	7	869	9	75	63	1382	1	98	31	88
240	5490	3	23651	0	878	8	5490	3	23651	0	854	5	74	22	1312	1	94	16	57
247	5927	5	24105	0	652	2	5925	8	24104	5	626	9	51	66	5249	1	69	23	52
257	5582	6	23236	8	704	9	5553	4	23243	2	674	0	78	41	338	1	99	31	80
259	5535	9	23483	8	727	4	5527	2	23484	0	706	1	77	38	641	1	98	16	73
266	5670	7	24096	6	800	8	5664	1	24096	6	782	9	63	59	3016	1	82	18	16

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18	5759	.8	24444	.1	810	.5	5759	.8	24444	.1	791	.6	61	.81	3107	.1	80	16	.03
23	5576	.6	24131	.4	851	.9	5576	.6	24131	.4	822	.0	66	.61	3277	.1	85	24	.27
25	5258	.7	23786	.4	880	.7	6267	.9	23786	.4	664	.8	39	.76	6963	.1	55	17	.08
37	6213	.0	23469	.1	477	.5	6219	.1	23469	.1	467	.0	59	.24	3879	.1	78	11	.98
38	6084	.6	24393	.2	682	.8	6096	.8	24393	.2	661	.7	45	.55	5862	.1	62	24	.39
39	5141	.0	24877	.8	861	.5	6153	.9	24877	.8	839	.0	54	.94	4043	.1	72	17	.99
41	6425	.7	23777	.5	886	.7	6434	.2	23777	.5	871	.9	50	.59	5443	.1	68	14	.50
43	5313	.2	24076	.5	976	.6	5313	.2	24076	.5	950	.5	74	.52	1316	.1	94	23	.75
44	5658	.9	23469	.1	513	.8	5645	.8	23469	.1	491	.1	75	.78	1435	.1	96	25	.58
46	5708	.6	24131	.4	745	.2	5739	.0	24131	.4	692	.4	38	.65	6869	.1	54	29	.56
50	5505	.3	24376	.1	917	.1	5505	.3	24376	.1	890	.6	57	.65	3911	.1	76	26	.50
51	5485	.4	23461	.1	765	.3	5485	.4	23461	.1	694	.6	78	.34	393	.1	99	30	.99
53	5366	.0	23797	.9	933	.6	5366	.0	23797	.9	884	.4	75	.95	1226	.1	96	45	.36
106	5867	.4	23782	.1	526	.3	5867	.4	23782	.1	496	.8	41	.36	6647	.1	57	28	.21
120	5664	.7	23787	.0	645	.2	5667	.2	23786	.7	600	.1	73	.89	1275	.1	94	33	.41
124	5496	.1	23793	.8	855	.3	5496	.5	23794	.0	818	.1	62	.85	3483	.1	80	28	.21
135	5917	.0	23567	.2	492	.0	5916	.3	23667	.6	477	.4	57	.27	4505	.1	74	14	.27
136	5951	.5	23948	.6	573	.5	5951	.1	23948	.8	549	.1	51	.75	4930	.1	68	24	.16
137	5342	.6	23495	.7	914	.8	5341	.7	23495	.0	887	.1	63	.47	3478	.1	82	21	.16
138	5943	.1	24699	.1	796	.8	5943	.6	24698	.4	772	.5	45	.60	5661	.1	62	22	.06
158	5465	.4	24096	.6	911	.2	5464	.7	24094	.4	878	.1	70	.19	1915	.1	90	29	.18
161	5655	.0	24406	.5	863	.8	5654	.8	24405	.9	837	.6	59	.41	4104	.1	78	22	.59
179	5337	.8	23178	.9	905	.1	5335	.8	23177	.5	830	.7	77	.16	603	.1	98	45	.60
180	6411	.1	23790	.3	891	.2	6411	.1	23790	.3	839	.7	42	.01	6176	.1	57	28	.05
188	5344	.7	24250	.3	961	.3	5344	.4	24250	.0	946	.7	70	.45	2627	.1	90	13	.58
190	5655	.2	24254	.8	822	.4	5655	.2	24254	.8	783	.1	46	.38	5567	.1	62	31	.59
91	5940	.0	24228	.6	651	.0	5939	.1	24226	.8	625	.2	50	.08	5135	.1	67	24	.98
193	5800	.3	24559	.3	842	.6	5799	.2	24559	.9	811	.5	50	.10	5038	.1	67	28	.12
196	5949	.0	24564	.8	750	.8	5948	.6	24565	.1	733	.8	48	.11	5528	.1	64	15	.91
200	5638	.9	23932	.9	779	.6	5639	.5	23931	.5	743	.0	60	.60	3841	.1	77	27	.22
202	5491	.9	24254	.8	940	.8	5489	.7	24254	.7	882	.2	65	.06	3238	.1	84	51	.40
204	5660	.2	24554	.2	897	.1	5661	.8	24554	.2	859	.1	79	.90	164	.2	01	36	.02
205	5809	.7	24242	.7	704	.8	5809	.3	24242	.0	678	.0	45	.64	5905	.1	62	23	.34
208	5487	.2	23941	.7	869	.9	5487	.2	23941	.2	848	.6	71	.05	2208	.1	90	19	.26
240	5490	.3	23651	.0	854	.5	5490	.3	23651	.0	821	.6	72	.89	1415	.1	93	21	.04
247	5925	.8	24104	.5	626	.9	5924	.3	24103	.9	604	.7	51	.84	5109	.1	68	20	.99
248	5338	.5	23632	.1	916	.1	5337	.6	23631	.1	892	.5	71	.53	1555	.1	91	22	.88
249	5400	.4	23344	.5	885	.3	0	0	0	0	0	0	74	.01	1134	.1	93	80	.11
257	5553	.4	23243	.2	671	.4	5541	.5	23251	.4	622	.9	77	.91	445	.1	99	41	.78
259	5527	.2	23484	.0	706	.1	5516	.5	23484	.4	679	.9	73	.39	1430	.1	93	20	.76
266	5664	.1	24096	.6	782	.9	5653	.7	24096	.6	754	.1	57	.63	4147	.1	75	28	.79

Layer C2-2

18	5759	8	24444	1	791	6	5759	8	24444	1	745	0	30	02	8336	1	47	39	94
23	5576	6	24131	4	822	0	5576	6	24131	4	791	5	35	05	7648	1	51	35	06
25	6267	9	23786	4	664	8	6283	1	23786	4	638	4	33	42	7678	1	49	28	52
37	6219	1	23469	1	467	0	6229	8	23469	1	448	5	28	25	8521	1	45	21	19
38	6096	8	24393	2	661	7	6112	1	24393	2	635	2	25	28	8999	1	43	30	41
39	6153	9	24877	8	839	0	6169	1	24877	8	812	7	26	89	8872	1	44	21	12
41	6434	2	23777	5	871	0	6446	4	23777	5	850	7	38	26	6980	1	54	21	62
43	5313	2	24076	5	950	5	5313	2	24076	5	926	1	50	42	5191	1	66	22	11
44	5645	8	23469	1	491	1	5641	2	23469	1	483	1	43	11	6433	1	59	9	01
46	5739	0	24131	4	692	4	5763	4	24131	4	650	2	30	60	8245	1	47	27	46
50	5505	3	24376	1	890	6	5505	3	24376	1	872	3	34	39	7416	1	51	18	30
51	5485	4	23461	1	694	6	5485	4	23461	1	662	6	52	00	5103	1	67	15	51
53	5366	0	23797	9	884	4	5366	0	23797	9	873	9	32	27	7769	1	49	9	82
100	5867	4	23782	1	496	8	5867	4	23782	1	472	4	32	24	8039	1	49	23	54
120	5667	2	23786	7	600	1	5668	5	23786	6	575	1	66	03	2914	1	80	18	55
124	5496	5	23794	0	818	1	5496	7	23794	1	793	7	37	50	7288	1	54	18	15
135	5916	3	23667	6	477	4	5915	2	23666	2	453	0	52	43	4896	1	67	22	79
136	5951	1	23948	8	549	1	5950	7	23949	0	526	2	27	55	8769	1	45	22	65
137	5341	7	23495	0	887	1	5341	2	23494	6	868	8	46	21	6014	1	62	14	43
138	5943	6	24698	4	772	5	5944	1	24697	7	748	1	24	02	9141	1	41	22	15
152	6021	9	25020	5	851	0	6021	9	25020	5	821	7	22	06	9458	1	40	29	30
158	5464	7	24094	4	878	1	5464	2	24092	9	856	1	41	72	6422	1	58	19	34
161	5654	8	24105	0	837	6	5654	6	24105	1	801	0	34	01	7654	1	50	31	71
179	5335	8	23177	5	830	7	5335	3	23177	1	811	8	58	38	4407	1	73	11	52
180	6411	1	23790	3	839	7	641	1	23790	3	803	2	20	81	9499	1	38	19	88
188	5344	4	24250	0	946	7	5343	6	24249	5	919	0	44	97	5732	1	61	25	85
190	5655	2	24250	8	783	1	5655	2	24254	8	752	6	25	62	8794	1	43	24	51
191	5939	1	24226	8	625	2	5938	0	24224	6	594	8	29	53	8401	1	47	29	42
193	5799	2	24559	9	811	5	5798	0	24560	5	774	9	25	71	9032	1	43	33	73
196	5948	6	24565	1	733	8	5947	8	24565	6	703	3	29	39	8470	1	46	28	54
200	5639	5	23931	5	743	0	5639	9	23930	6	718	7	38	53	6964	1	55	17	49
202	5489	7	24254	7	882	2	5488	9	24254	7	862	5	34	32	7616	1	51	17	99
204	5661	8	24554	2	859	1	5663	4	24554	2	822	2	49	15	5612	1	64	34	99
205	5809	3	24242	0	678	0	5808	9	24241	2	647	5	27	29	8816	1	44	27	25
208	5487	2	23941	2	848	6	5487	4	23940	4	816	4	37	46	7285	1	54	28	58
817	6100	2	24860	8	851	6	6100	2	24860	8	794	3	23	40	9367	1	41	52	35
240	5490	3	23651	0	821	6	5490	3	23651	0	794	8	37	28	7188	1	53	17	14
247	5924	3	24103	9	604	7	5922	2	24103	2	574	8	27	63	8804	1	45	29	02
248	5337	6	23631	1	892	5	5336	0	23630	4	872	7	47	74	5606	1	63	18	93
259	5516	5	23884	4	679	9	5507	6	23484	6	658	2	47	91	5778	1	63	17	92
265	5653	7	24096	6	754	1	5647	4	24096	6	736	9	33	48	7705	1	50	16	88

Layer D1-1

18	5759	8	24444	1	745	0	5759	8	24444	1	718	5	26	26	8622	1	43	22	77
23	5576	6	24131	4	791	5	5576	6	24131	4	767	1	26	12	9071	1	43	19	47
25	6283	1	23786	4	638	4	6301	4	23786	4	606	7	22	63	9412	1	40	34	28
37	6229	8	23469	1	448	5	6243	5	23469	1	424	8	20	77	9811	1	38	27	13
38	6112	1	24393	2	635	2	6121	2	24393	2	619	4	17	54	10286	1	35	18	18
39	6169	1	24877	8	812	7	6181	3	24877	8	791	6	20	82	9623	1	38	17	10
41	6446	4	23777	5	850	7	0	0	0	0	0	0	24	77	9057	1	42	24	39
43	5313	2	24076	5	926	1	5313	2	24076	5	907	8	35	52	7434	1	52	16	55
44	5641	2	23469	1	483	1	5632	1	23469	1	467	3	33	63	7785	1	50	17	69
46	5763	4	24131	4	650	2	5781	7	24131	4	618	5	20	05	9870	1	38	21	64
50	5605	3	24376	1	872	3	5505	3	24376	1	844	9	29	86	8063	1	47	27	40
51	5485	4	23461	1	692	6	5485	4	23461	1	635	2	36	07	7570	1	53	12	97
53	5366	0	23797	9	873	9	5366	0	23797	9	853	4	37	96	7052	1	54	19	14
106	5867	4	23782	1	472	4	5867	4	23782	1	448	0	20	63	9768	1	38	23	65
120	5668	5	23786	6	575	1	5670	3	23786	4	542	8	59	84	3741	1	74	23	59
128	5496	7	23794	1	793	7	5497	0	23794	2	769	3	27	59	8719	1	45	16	75
127	5192	9	23798	0	948	7	5193	2	23798	9	921	2	41	86	6928	1	57	24	61
129	5184	3	23501	1	939	1	0	0	0	0	0	0	37	37	7330	1	53	5	44
132	5199	0	23492	5	937	0	5199	3	23492	8	922	4	30	82	8173	1	48	14	70
135	5915	2	23668	2	453	0	5913	5	23669	1	416	5	32	13	8214	1	49	33	23
136	5950	7	23949	0	526	2	5950	2	23949	2	497	3	24	05	9415	1	41	28	50
137	5341	2	23494	6	868	8	5340	3	23493	9	840	8	33	15	7951	1	50	23	17
138	5944	1	24697	7	748	1	5944	5	24697	2	729	8	29	75	8348	1	47	16	51
152	6021	9	25020	5	821	7	6021	9	25020	5	809	5	15	01	10536	1	33	12	20
158	5464	2	24092	9	856	1	5463	6	24091	3	831	9	30	32	7920	1	47	21	26
161	5654	6	24405	1	801	0	5654	6	24404	9	788	8	22	56	9370	1	40	10	70
166	5349	8	24407	8	930	5	5349	8	24407	8	914	1	44	06	6219	1	60	15	21
169	5186	4	23961	0	950	7	5186	4	23961	0	941	5	33	87	7759	1	51	7	72
179	5335	3	223177	1	811	8	5334	9	23176	8	795	7	51	88	5066	1	67	9	92
180	6411	1	23790	3	803	2	6411	1	23790	3	760	5	15	81	10299	1	34	23	26
188	5343	6	24249	5	919	0	5343	2	24249	2	900	7	30	42	8106	1	47	17	14
190	5655	2	24254	8	752	6	5655	2	24254	8	734	3	17	25	10002	1	35	14	32
191	5938	0	24224	6	594	8	5937	3	24223	3	576	5	27	00	8917	1	44	17	50
193	5798	0	24560	5	774	9	5797	1	24560	9	750	5	16	05	10392	1	34	22	73
196	5947	8	24565	6	703	3	5947	4	24565	9	685	0	21	61	9599	1	39	17	12
200	5639	9	23930	6	718	7	5640	5	23929	3	682	1	24	41	9215	1	42	24	98
202	5488	9	24254	7	862	5	5488	1	24254	6	839	8	31	77	8014	1	48	20	93
204	5663	4	24554	2	822	2	5664	2	24554	2	803	9	21	55	9448	1	39	17	30
205	5808	9	24241	2	647	5	5808	6	24240	8	629	2	22	93	9552	1	40	16	56
208	5487	4	23940	4	816	4	5487	5	23939	7	785	9	25	82	8907	1	43	27	11
217	6100	2	24860	8	794	3	6100	2	24860	8	769	9	18	33	9979	1	36	22	29
240	5490	3	23651	0	794	8	5490	3	23651	0	770	8	27	92	8591	1	45	16	36
242	5922	2	24103	2	574	8	5921	4	24103	0	562	8	30	87	8213	1	48	11	71
248	5336	9	23630	4	872	7	5335	7	23629	1	839	6	31	67	7997	1	48	31	65
259	5507	6	23464	6	658	2	5499	1	23484	9	637	2	33	72	7737	1	50	17	42
266	5647	4	24096	6	736	9	5634	9	24096	6	702	6	26	15	8826	1	43	33	72

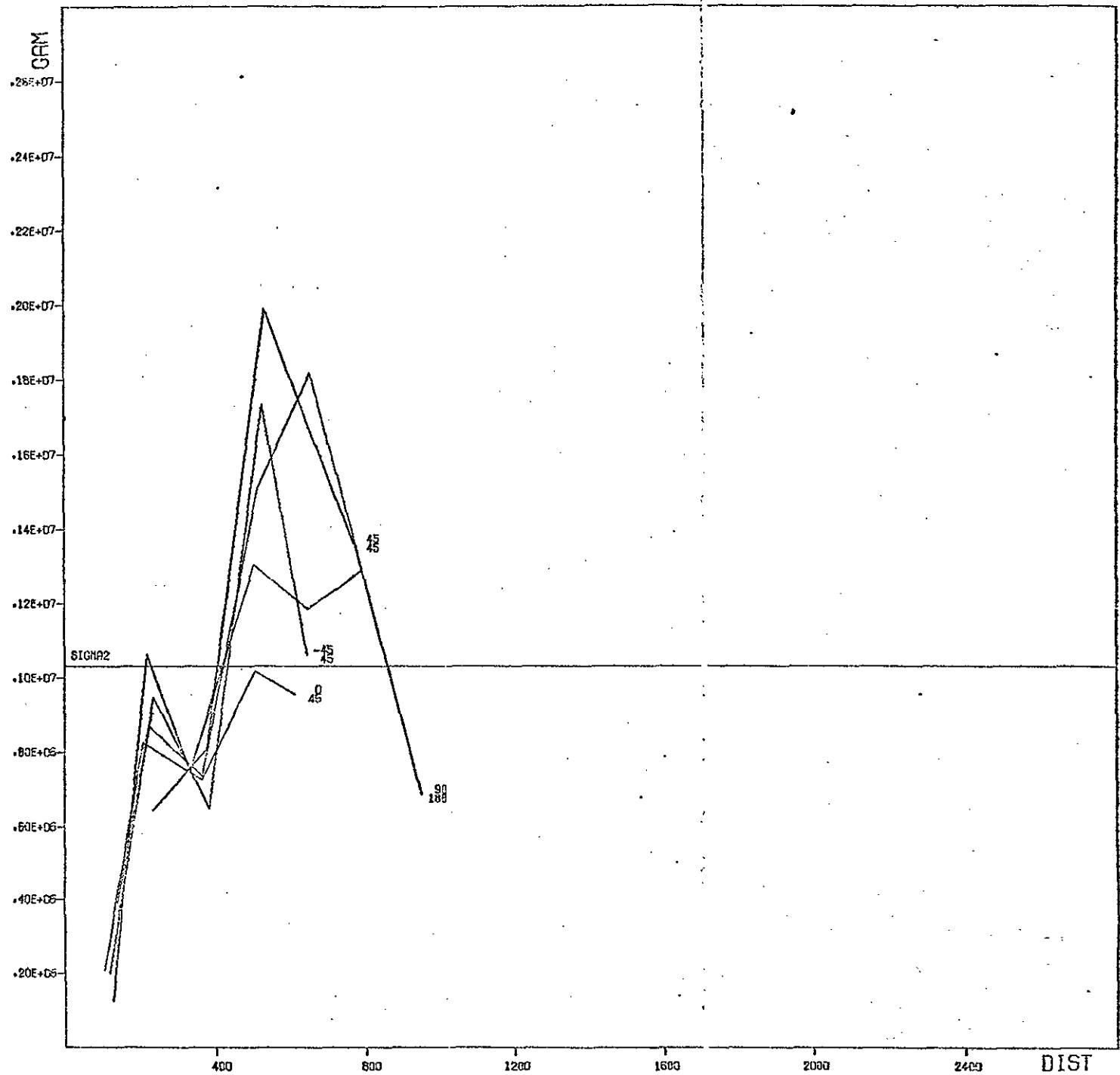
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23	5576	8	24131	4	767	1	5576	6	24131	4	755	0	18	28	9936	1	36	9	06
25	6301	4	23786	4	606	7	6313	6	23786	4	585	6	16	84	10327	1	35	23	00
37	6243	5	23469	1	424	8	6248	1	23469	1	416	8	15	53	10895	1	34	9	11
38	6121	2	24393	2	619	4	6127	3	24393	2	608	9	13	90	11017	1	32	12	03
39	6161	3	24877	8	791	6	6190	5	24877	8	775	7	16	69	10453	1	35	12	94
43	5313	2	24076	5	907	8	5313	2	24076	5	880	2	26	71	8794	1	44	25	26
44	5632	1	23469	1	467	3	5623	0	23469	1	451	5	22	38	9677	1	40	18	07
46	5781	7	24131	4	618	5	5795	6	24131	4	594	5	17	51	10298	1	35	17	43
50	5505	3	24376	1	844	9	5505	3	24376	1	826	6	19	10	9695	1	37	18	30
51	5485	4	23461	1	635	2	5485	4	23461	1	604	7	24	17	9261	1	41	13	61
53	5366	0	23797	9	853	4	5366	0	23797	9	831	8	29	98	8224	1	47	20	23
106	5867	4	23782	1	448	0	5867	4	23782	1	435	8	15	45	10606	1	33	11	84
120	5670	3	23786	4	542	8	5671	2	23786	3	524	6	37	65	7303	1	54	13	14
124	5497	0	23794	2	709	3	5497	2	23794	3	757	1	22	09	9521	1	40	8	26
127	5193	2	23798	9	921	3	5193	3	23799	5	903	0	21	64	9750	1	39	16	32
132	5199	3	23492	8	922	5	5199	6	23493	1	910	2	23	87	9093	1	41	12	20
135	5913	5	23669	1	416	5	5912	5	23669	7	393	7	19	10	10316	1	37	20	01
136	5950	2	23949	2	497	3	5949	9	23949	4	477	5	15	40	10687	1	33	19	50
137	5340	3	23493	9	840	8	5339	8	23493	5	826	2	21	85	9822	1	39	12	15
138	5944	5	24697	2	729	8	5944	9	24696	6	711	5	16	20	10197	1	34	16	58
152	6021	9	25020	5	809	5	6021	9	25020	5	791	2	17	00	10188	1	35	18	30
158	5463	6	24091	3	831	9	5463	4	24090	5	819	7	24	11	9170	1	42	10	87
161	5654	6	24404	9	788	8	5654	6	24404	6	776	6	19	44	9596	1	37	10	26
166	5349	8	24407	8	914	1	5349	8	24407	8	899	8	46	30	5875	1	62	13	26
169	5186	4	23961	0	941	5	5186	4	23961	0	922	3	27	48	8590	1	45	16	10
171	5186	7	23636	0	931	8	5185	8	23635	5	911	9	24	17	8910	1	41	16	82
176	5191	1	23339	6	949	3	5191	3	23339	8	943	5	34	29	7438	1	51	3	69
179	5334	9	23176	8	795	7	5334	4	23176	4	777	4	36	23	7499	1	53	11	40
180	6411	1	23790	3	760	5	6411	1	23790	3	723	9	23	43	9227	1	40	19	93
188	5343	2	24249	2	900	7	5342	7	24248	9	882	4	23	35	9070	1	41	17	14
190	5655	2	24254	8	734	3	5655	6	24254	8	716	0	16	15	10204	1	34	14	47
191	5937	3	24223	3	576	6	5936	9	24222	4	564	5	15	75	10615	1	34	11	60
193	5797	1	24560	9	750	5	5796	5	24561	2	732	2	13	79	10836	1	32	16	96
194	5994	5	25120	8	851	7	5994	5	25120	8	833	1	15	69	10438	1	34	18	60
196	5947	4	24565	9	685	0	5947	0	24566	3	666	7	15	25	10653	1	33	17	12
197	6114	2	25020	2	812	3	6114	2	25020	2	804	9	37	66	7076	1	53	6	81
200	5640	5	23929	3	682	1	5640	8	23928	6	663	9	19	03	9823	1	37	11	96
202	5488	1	24254	6	839	8	5487	6	24254	6	827	6	21	64	9563	1	39	11	25
204	5664	2	24554	2	803	9	5665	0	24554	2	785	6	15	65	10430	1	34	17	025
205	5808	6	24240	8	629	2	5808	4	24240	5	617	1	18	77	10110	1	36	10	95
208	5487	5	23939	7	785	9	5487	6	23939	5	767	6	19	60	9781	1	37	16	41
817	6100	2	24860	8	769	9	6100	2	24860	8	751	6	16	70	10276	1	35	16	72
240	5490	3	23651	0	770	8	5490	3	23651	0	757	8	19	03	9850	1	37	9	43
247	5921	4	24103	0	562	8	5920	6	24102	7	550	9	17	31	10396	1	35	11	75
248	5335	7	23629	1	839	6	5335	3	23628	7	827	6	21	41	9004	1	39	11	34
259	5499	1	23484	9	637	2	5492	7	23485	1	621	7	24	54	9104	1	42	12	62
266	5634	9	24096	6	702	6	5628	7	24096	6	685	5	17	89	9971	1	36	16	69

18	5759	8	24444	1	676	7	0.0	0.0	0.0	19	60	9780	1.37	16.03
21	5893	4	24879	2	794	9	0.0	0.0	0.0	41	38	6500	1.58	2.69
23	5576	6	24131	4	755	0	0.0	0.0	0.0	24	86	9116	1.42	16.53
25	6313	0	23786	4	585	6	0.0	0.0	0.0	22	34	9592	1.40	18.61
37	6248	1	23469	1	416	8	0.0	0.0	0.0	23	55	9790	1.41	15.05
38	6127	3	24393	2	608	9	0.0	0.0	0.0	18	89	10235	1.36	26.55
39	6190	5	24877	8	775	7	0.0	0.0	0.0	21	05	9807	1.39	17.10
43	5313	2	24076	5	880	2	0.0	0.0	0.0	21	18	9588	1.39	23.88
44	5623	0	23469	1	451	5	0.0	0.0	0.0	22	36	9857	1.40	16.62
46	5795	6	24131	4	594	5	0.0	0.0	0.0	20	99	9886	1.38	18.17
50	5505	3	24376	1	826	6	0.0	0.0	0.0	22	00	9411	1.39	21.00
51	5485	4	23461	1	604	7	0.0	0.0	0.0	22	90	9454	1.40	3.90
53	5366	0	23797	9	831	8	0.0	0.0	0.0	18	42	9989	1.30	11.39
100	5867	4	23782	1	435	8	0.0	0.0	0.0	22	35	9625	1.40	26.00
120	5671	2	23786	3	524	6	0.0	0.0	0.0	25	72	9254	1.43	13.25
122	5808	2	24711	7	792	2	0.0	0.0	0.0	19	99	10152	1.38	19.38
124	5497	2	23794	3	757	1	0.0	0.0	0.0	22	91	9489	1.40	15.49
127	5193	3	23799	5	903	0	0.0	0.0	0.0	29	33	8701	1.46	9.60
132	5199	6	23893	1	910	2	0.0	0.0	0.0	29	86	8371	1.47	11.40
135	5912	5	23669	7	393	7	0.0	0.0	0.0	20	77	10099	1.38	13.55
136	5949	9	23949	4	477	5	0.0	0.0	0.0	18	83	10255	1.37	16.57
137	5339	8	23493	5	826	2	0.0	0.0	0.0	26	30	9081	1.43	11.08
138	5944	9	24696	6	711	5	0.0	0.0	0.0	19	91	10057	1.38	13.68
152	6021	9	25020	5	791	2	0.0	0.0	0.0	19	51	10008	1.37	19.78
158	5463	4	24090	5	819	7	0.0	0.0	0.0	21	59	9563	1.39	21.30
161	5654	5	24404	6	776	6	0.0	0.0	0.0	18	90	9952	1.37	32.55
166	5349	8	24407	8	699	4	0.0	0.0	0.0	19	18	9831	1.37	28.28
169	5186	4	23961	0	922	3	0.0	0.0	0.0	23	49	9310	1.41	14.26
171	5185	8	23635	5	911	0	0.0	0.0	0.0	26	92	8558	1.44	12.63
173	5190	1	23185	3	973	8	0.0	0.0	0.0	29	36	8202	1.46	15.90
176	5191	3	23339	8	943	5	0.0	0.0	0.0	27	09	8582	1.44	11.59
179	5334	4	23176	4	777	4	0.0	0.0	0.0	31	71	8105	1.46	10.87
180	6411	1	23790	3	723	9	0.0	0.0	0.0	33	03	7697	1.50	15.58
188	5342	7	24248	9	882	4	0.0	0.0	0.0	20	50	9509	1.38	18.51
190	5655	2	24254	8	716	0	0.0	0.0	0.0	19	05	9913	1.37	12.72
191	5936	9	24222	4	564	5	0.0	0.0	0.0	24	76	9106	1.41	26.83
193	5796	5	24561	2	732	2	0.0	0.0	0.0	18	14	10186	1.36	21.52
194	5994	5	25120	8	833	1	0.0	0.0	0.0	18	98	10092	1.37	24.40
196	5947	9	24556	3	666	7	0.0	0.0	0.0	23	83	9180	1.41	15.72
197	6114	2	25020	2	804	9	0.0	0.0	0.0	23	13	9448	1.40	16.98
200	5640	8	23928	6	663	9	0.0	0.0	0.0	23	91	9325	1.41	11.65
202	5487	6	24254	6	827	6	0.0	0.0	0.0	19	24	9933	1.37	26.77
204	5665	0	24554	2	785	6	0.0	0.0	0.0	24	01	9606	1.41	19.99
205	5808	4	24240	5	617	1	0.0	0.0	0.0	17	17	10489	1.35	29.75
208	5487	6	23939	2	767	6	0.0	0.0	0.0	21	73	9674	1.39	11.48
817	6100	2	24860	8	751	6	0.0	0.0	0.0	19	38	9955	1.37	16.72
240	5490	3	23651	0	757	8	0.0	0.0	0.0	21	95	9552	1.39	8.70
247	5920	6	24102	7	550	9	0.0	0.0	0.0	20	56	9935	1.38	19.60
248	5335	3	23628	7	827	6	0.0	0.0	0.0	27	27	8801	1.44	10.84
257	5541	5	23251	4	622	9	0.0	0.0	0.0	40	37	6887	1.56	10.82
259	5492	7	23485	1	621	7	0.0	0.0	0.0	28	23	8637	1.45	10.81
256	5628	7	24096	6	685	5	0.0	0.0	0.0	20	77	9740	1.38	14.06

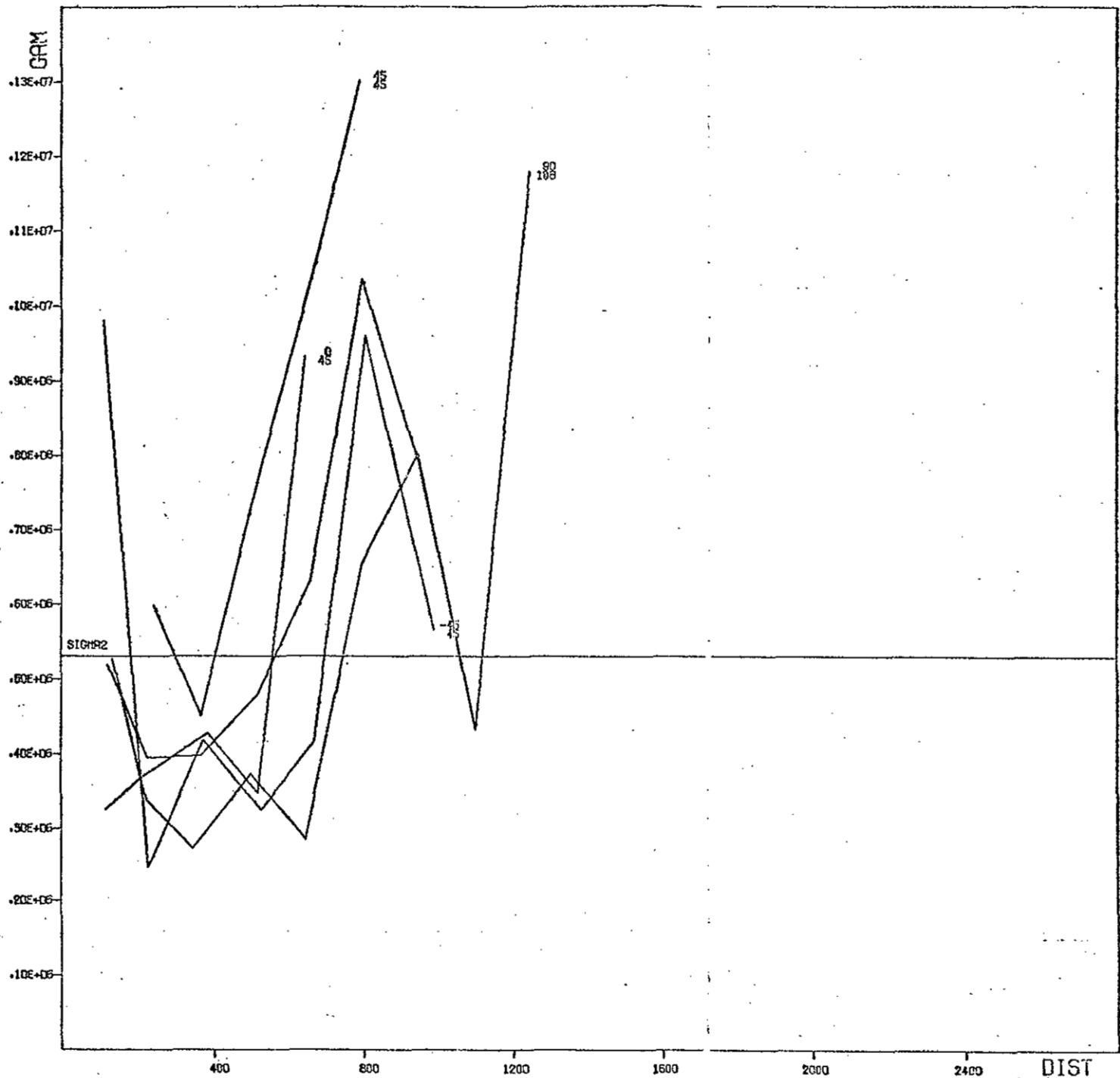
APPENDIX 2

Experimental variograms of BTU in the layers

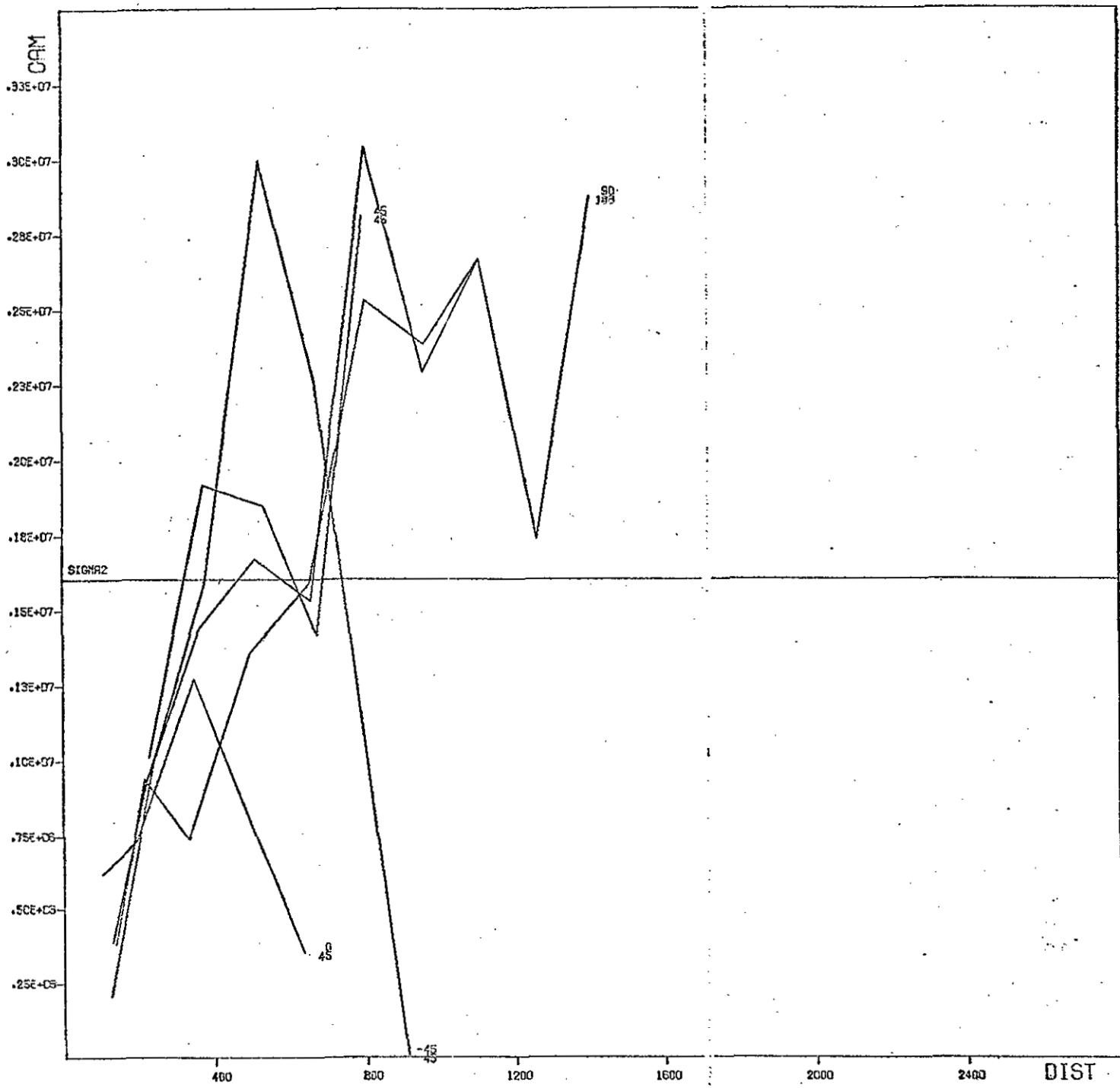
The variograms have been computed along the four principal directions of the horizontal plane : N-S or 90, NE-SW or 45, E-W or 0, NW-SW or -45. The MAREC2 program (See David, p.149) has been used with an angular regularization $\text{PSI}=45^\circ$ and an interval for distances $\text{STEP}=150\text{m}$. The average variogram ($\text{PSI}=180^\circ$, same STEP) has also been determined (noted 0-180 on the diagrams). In the computation, the intercepts are localized by the three coordinates of their top. Thus the distance is the true distance between the intercepts and not the projected distance in the horizontal plane. On the diagram, the horizontal line with SIGMA^2 indicates the amplitude of the experimental variance of the sample values.



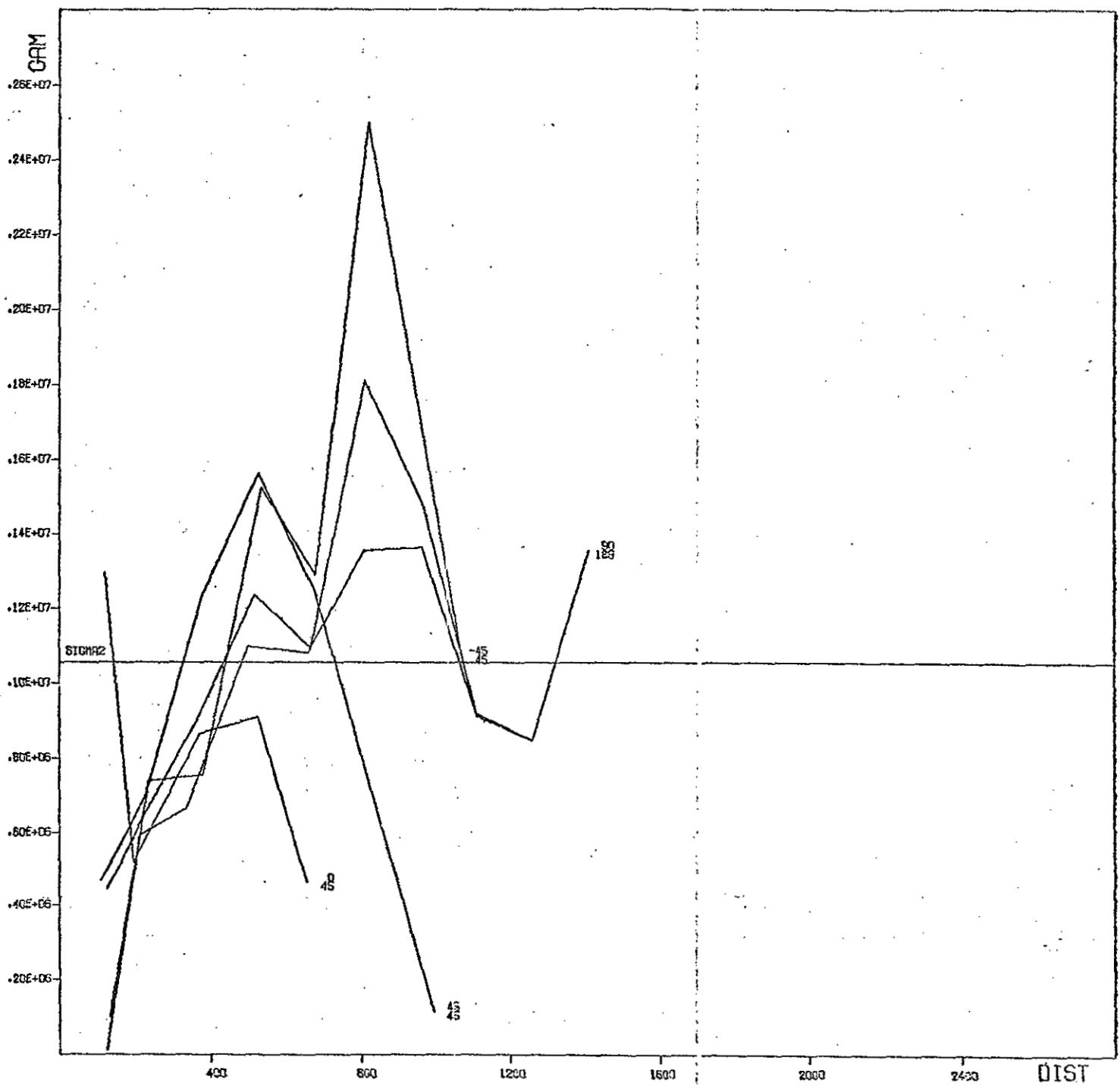
VARIOGRAMS OF BTU IN ZONE 111 (A1-1)



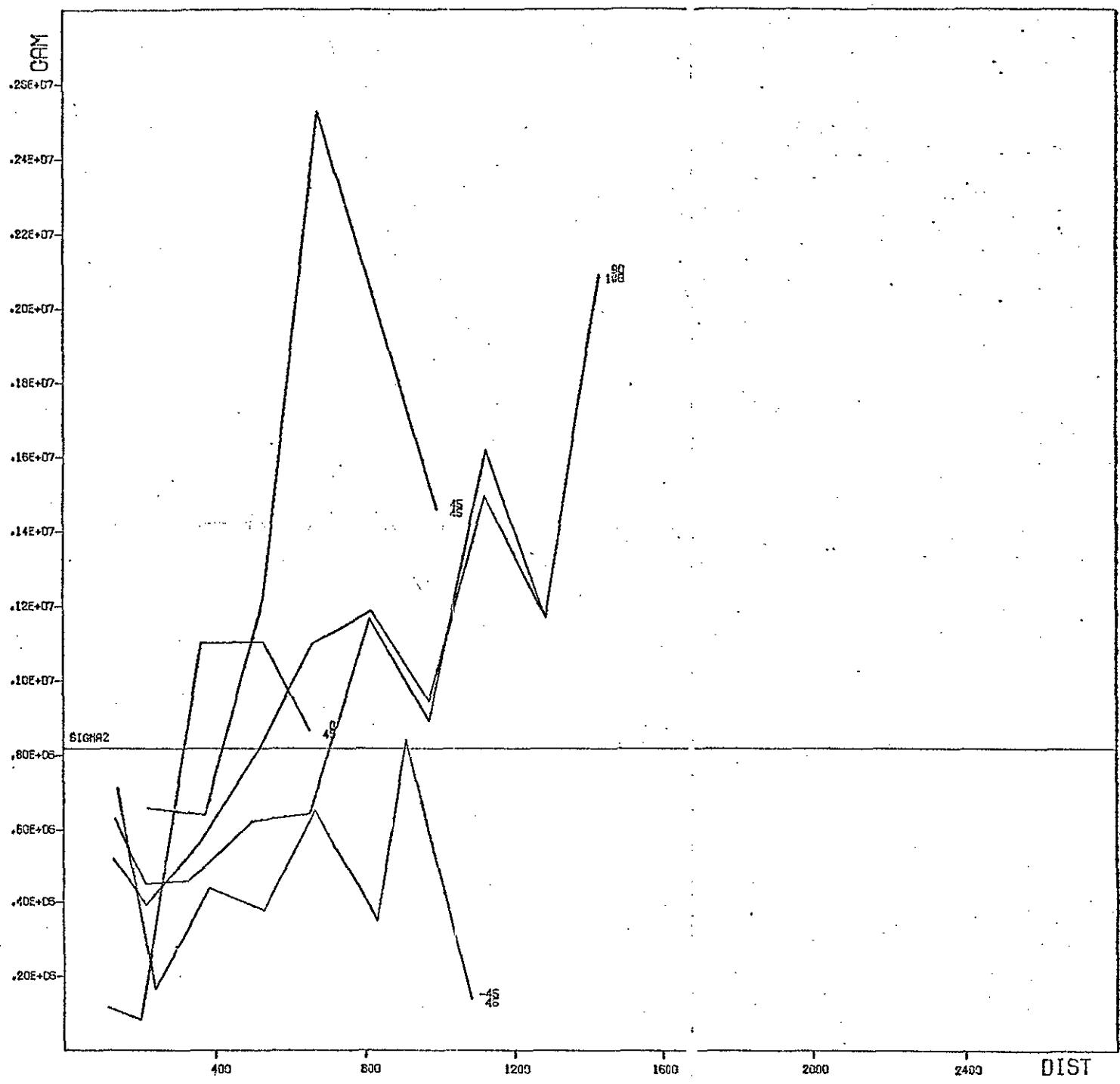
VARIOGRAMS OF BTU IN ZONE 112 (AI-2)



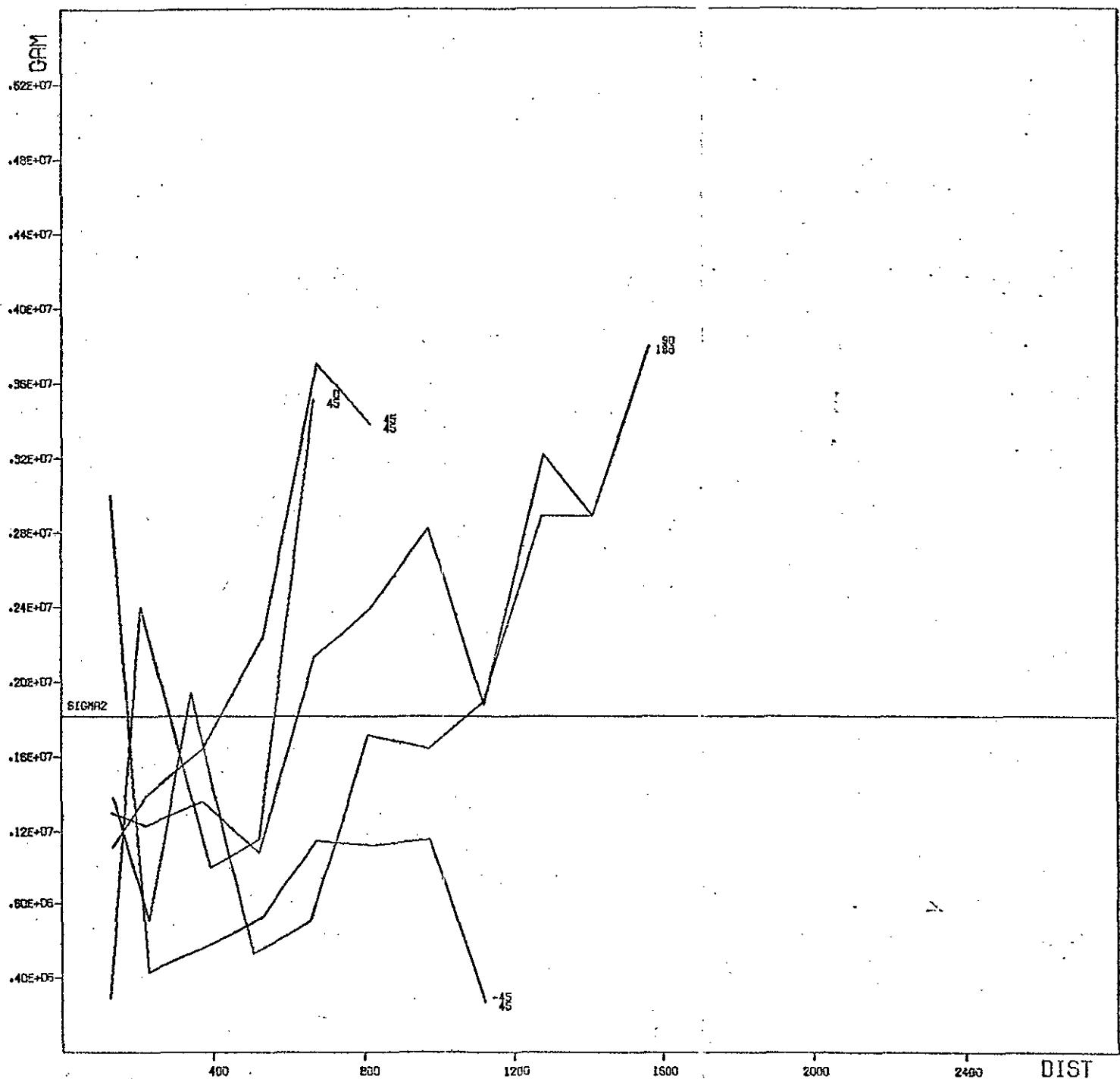
VARIOGRAMS OF BTU IN ZONE 113 (A1-3)



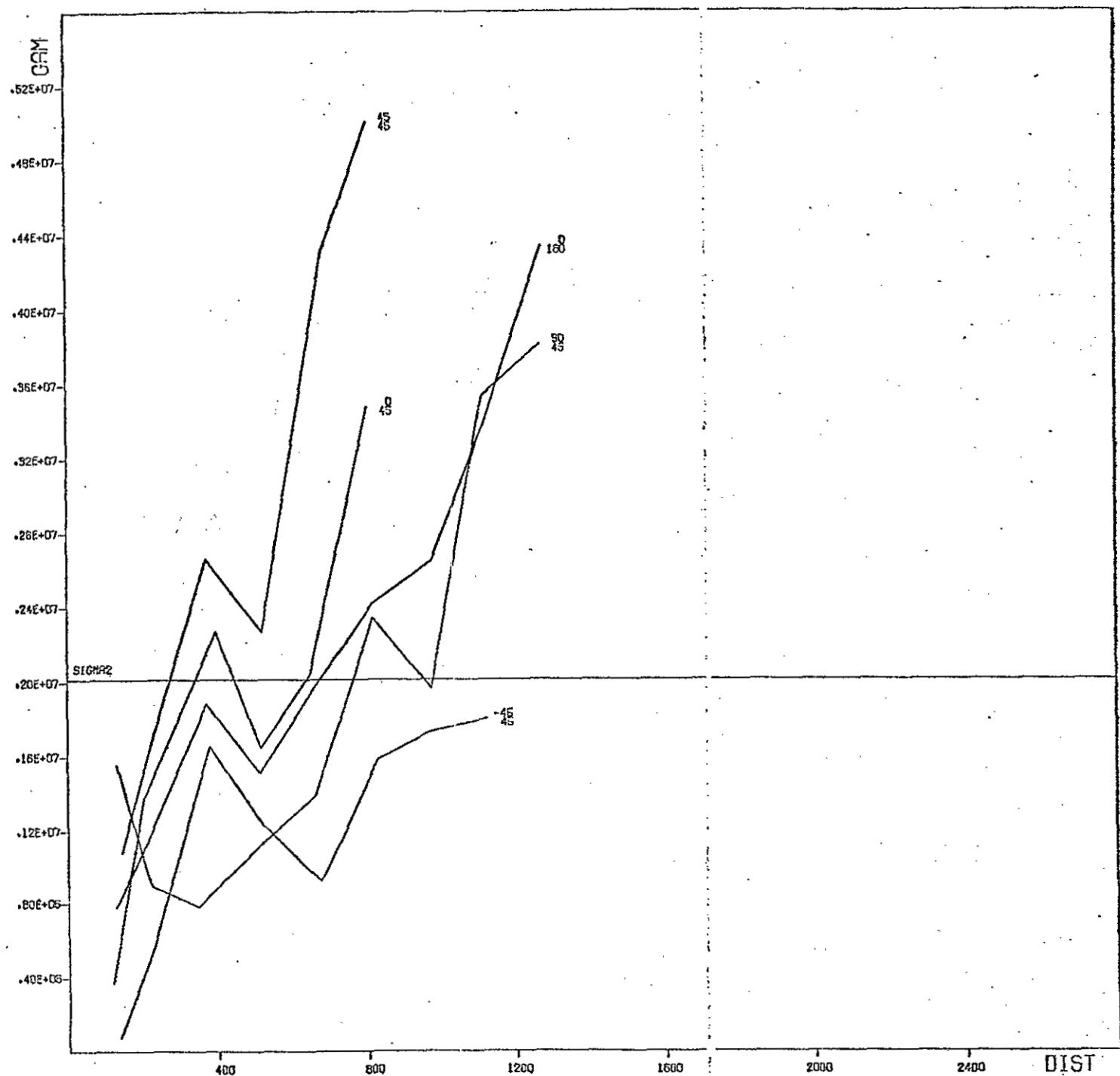
VARIOGRAM S OF BTU IN ZONE 114 (A1-4)



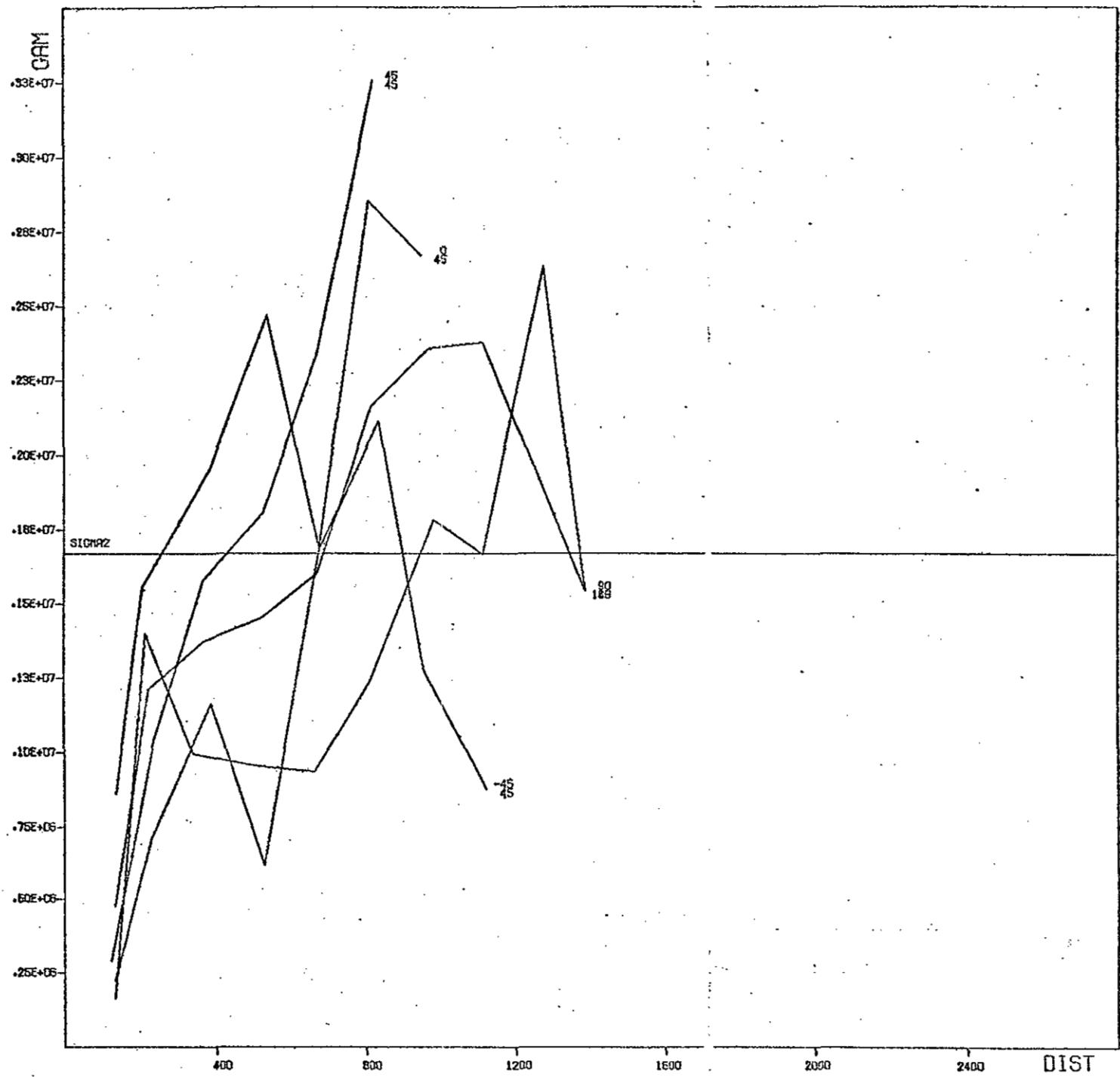
VARIOGRAMS OF BTU IN ZONE 121 (A2-1)



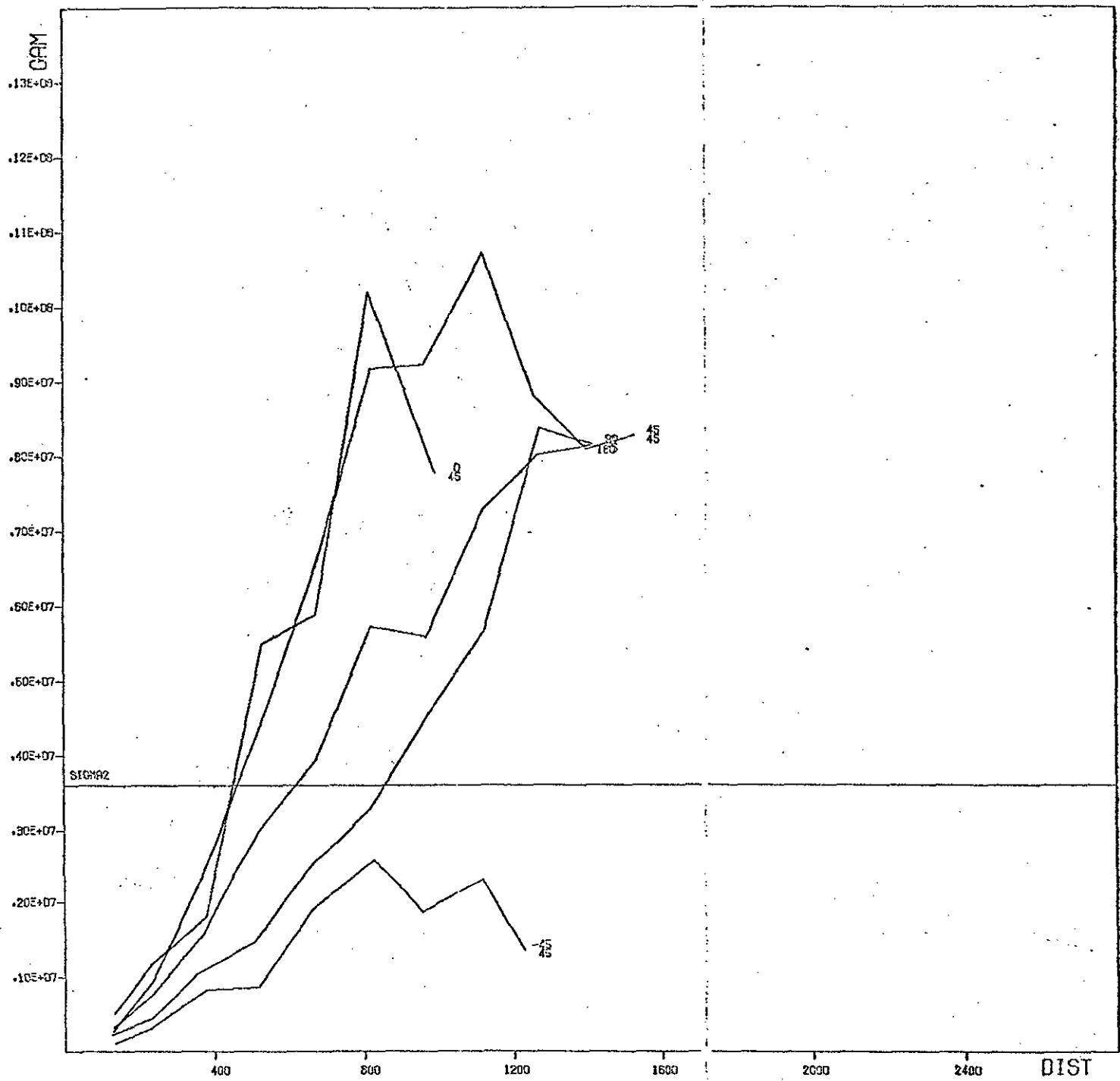
VARIOGRAMS OF BTU IN ZONE 211 (BA-1)



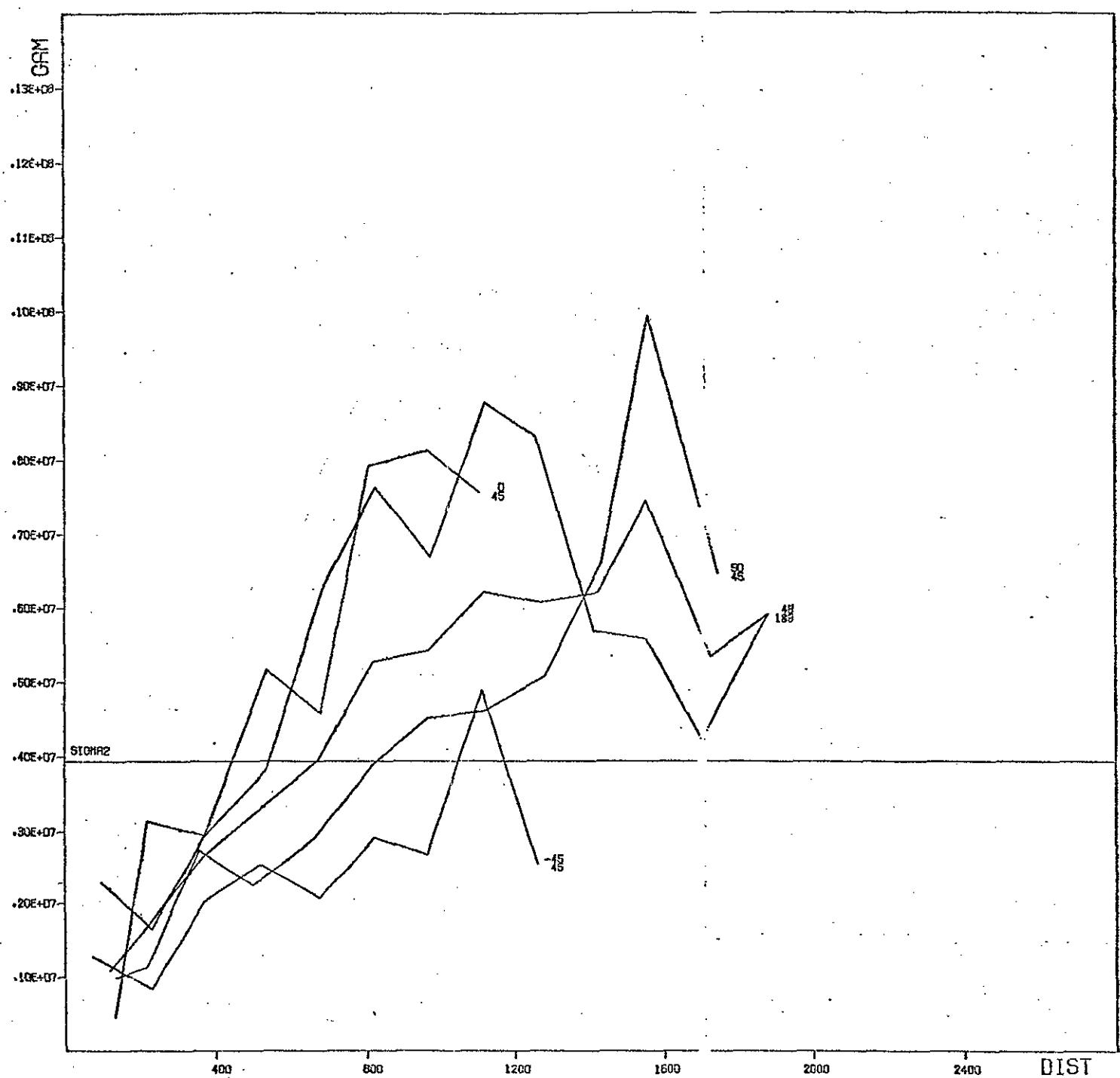
VARIOGRAMS OF BTU IN ZONE 212 (B1-2)



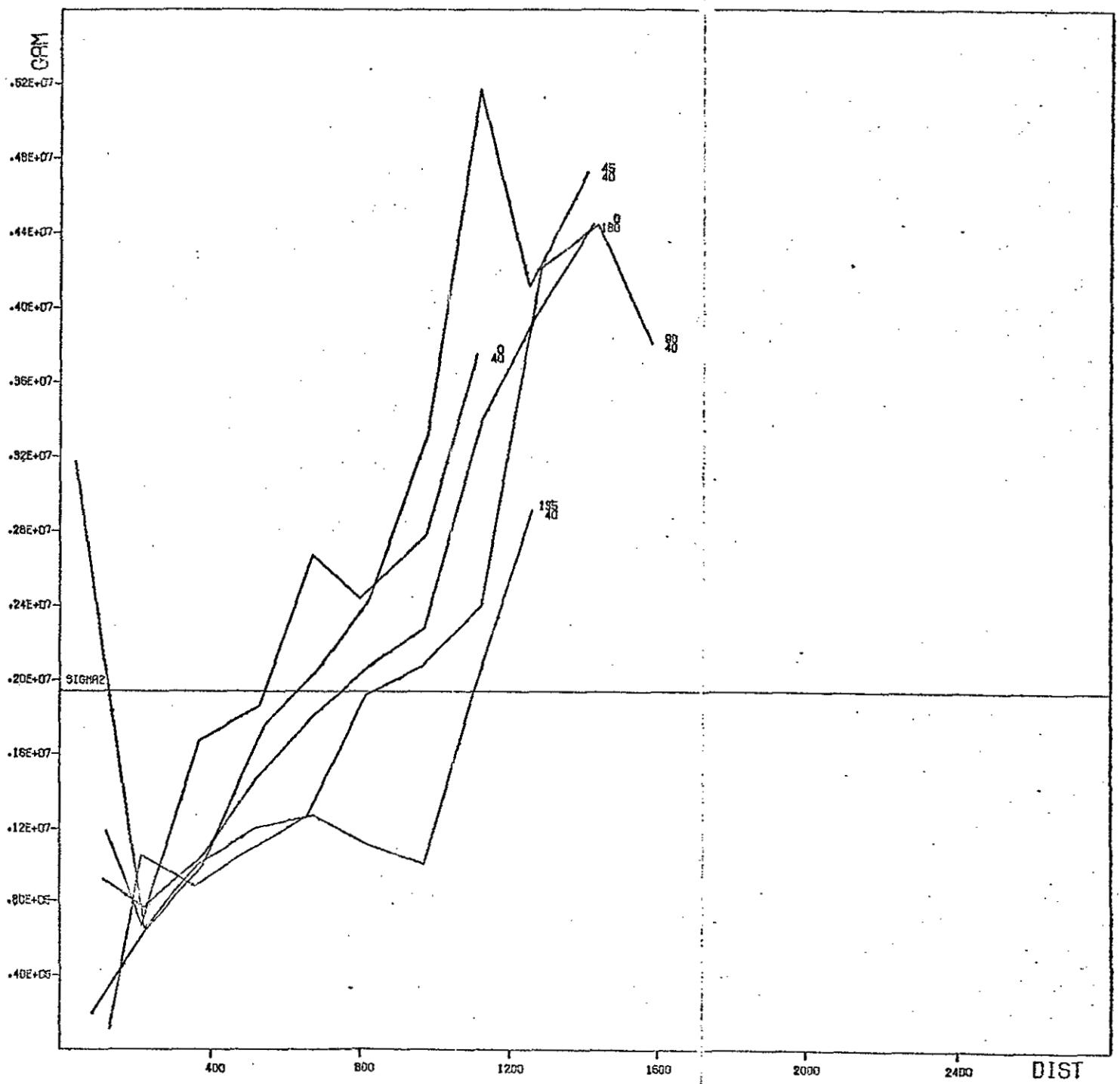
VARIODRAMS OF BTU IN ZONE 311 (C1-1)



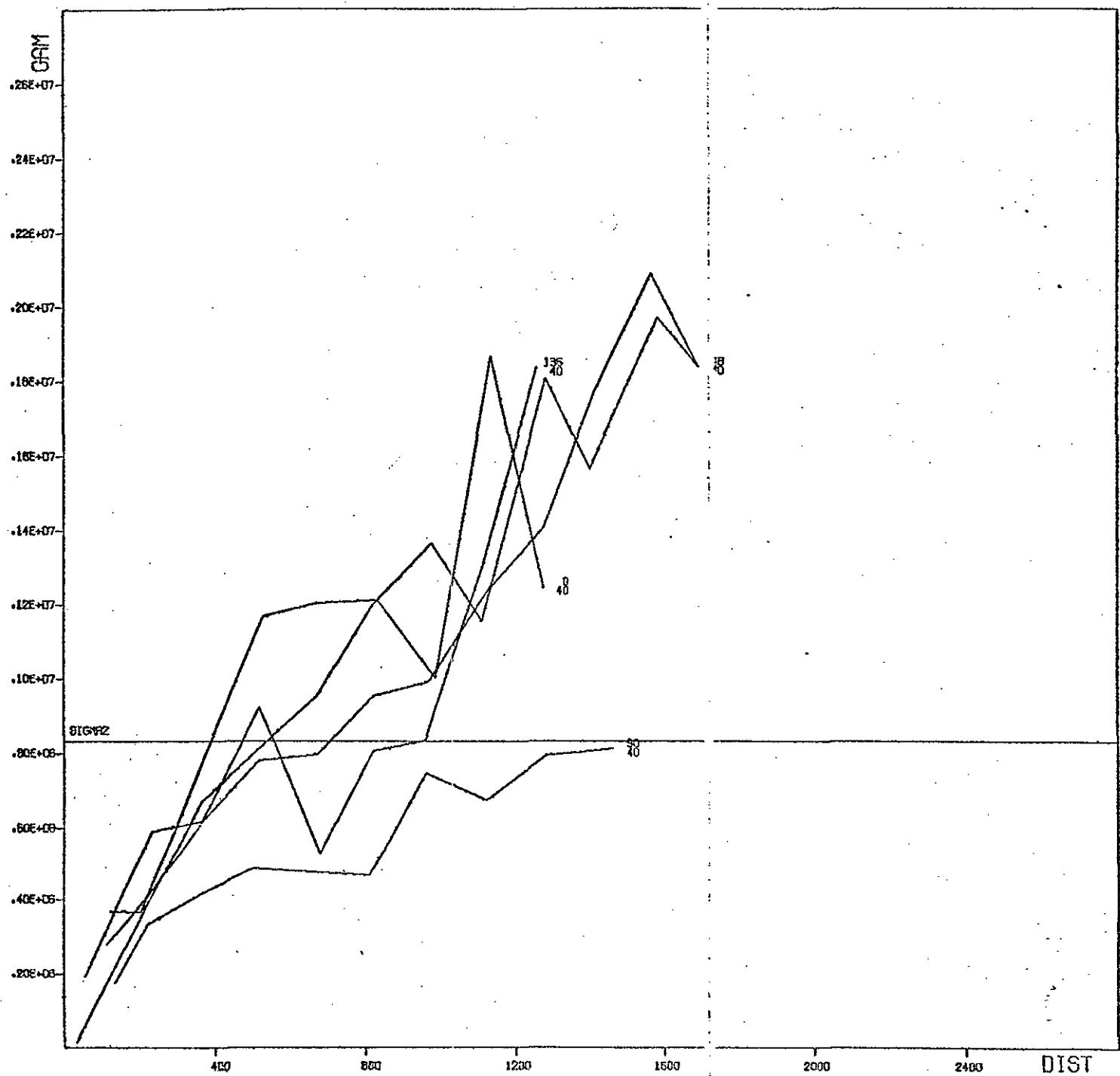
VARIOGRAMS OF BTU IN ZONE 321 (C2-1)



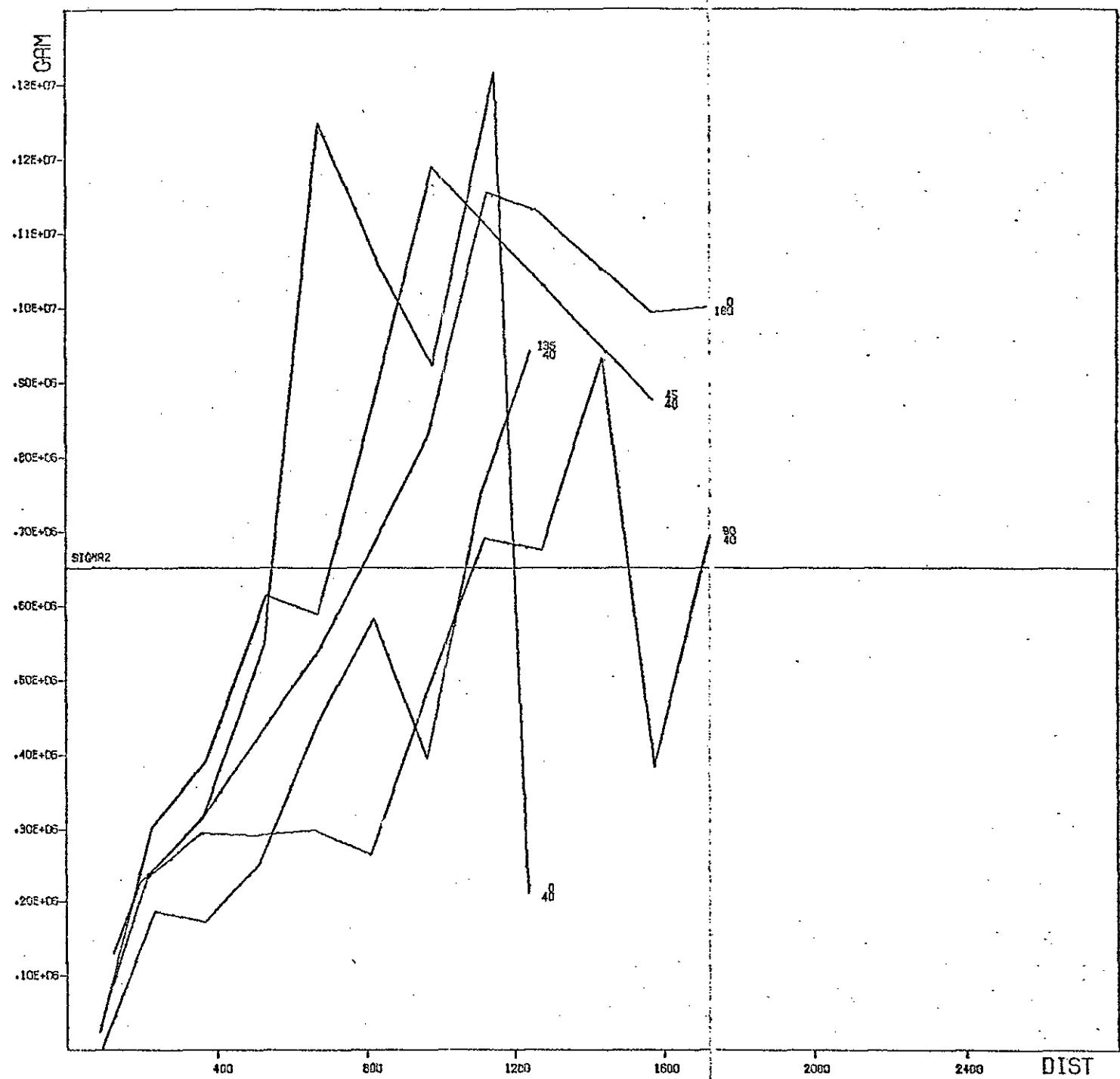
VARIOGRAMS OF BTU IN ZONE 322 (C2-2)



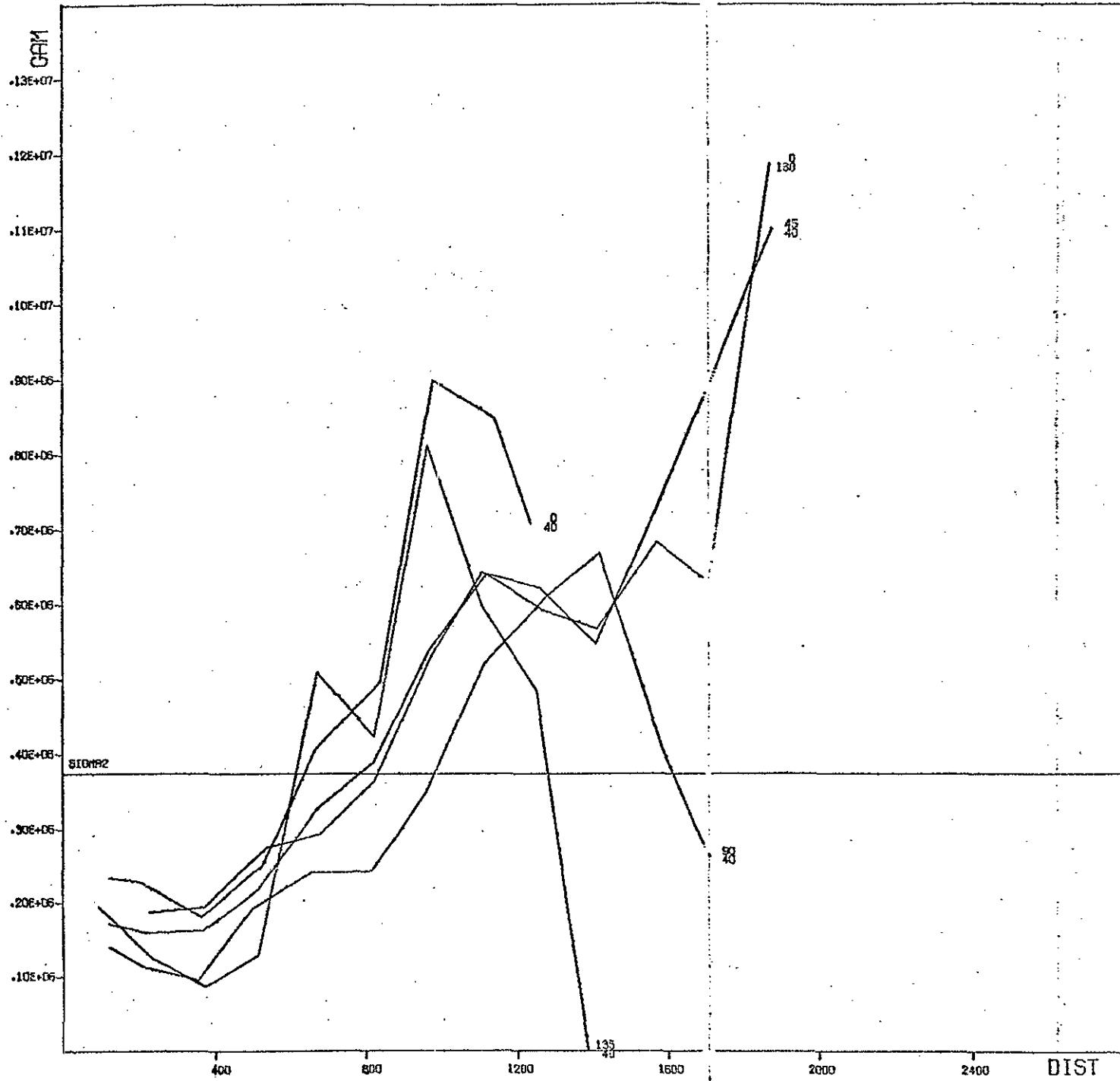
VARIABLE B.T.U. ZONE D1-1



VARIABLE B.T.U. ZONE 01-2



VARIABLE B.T.U. ZONE 01-3



VARIABLE B.T.U. ZONE D1-4

APPENDIX 3

Maps of the estimated 75 x 75 m blocks in each layer

All the following maps have been obtained automatically, hence blocks are generated outside the extend of the deposit. The heavy line on each map shows the relevant area. Any block outside the central area should not be considered. Where a block is left blank inside a contour it means that no sufficient samples were available to estimate it. In each block one reads the estimated BTU content and its standard error of estimation.

HORIZ. = 1 VERT. = 2 KRIGEAGE EN PROJECTION
SCALE 1" = 300.m

ZONE A1-2 B.T.U.

25400

25100

24800

24500

24200

23900

23600

23300

23000

5100

5400

5700

6000

6300

6600

-25400

-25100

-24800

-24500

-24200

-23900

-23600

-23300

-23000

6140	6140	6140
774	737	705
6140	6140	6140
742	701	655
6450	6450	6510
659	613	571
6450	6470	6500
824	571	522

5820	5820	5760	5760	5530	5520	6140
781	726	547	517	457	421	417
5820	5820	5750	5740	5740	5490	6140
728	688	505	445	402	336	368
5850	6120	5520	5720	5720	5740	6350
548	581	493	398	328	282	327
5850	5850	5750	5650	5550	5720	5290
611	658	450	350	285	257	324
5860	6050	5620	5170	5580	5530	5040
575	568	401	323	200	226	293
5860	5850	6010	5880	5790	5670	5560
643	462	369	270	230	233	288
5880	5880	5930	5850	5820	5700	5550
455	412	320	134	228	235	283
5880	5850	5900	6100	5840	5750	5700
758	541	391	303	234	229	231

5030	5440	5790	5820	5910	5840	5870	5840	5610	5530	5700	5570
761	643	483	375	263	258	229	222	257	301	336	416
6030	5430	5570	5740	5890	5830	5790	5750	5620	5500	5510	5630
727	507	551	378	300	248	215	218	253	268	233	371
4960	5280	5410	5480	5750	5610	5770	5750	5680	5550	5600	5720
649	553	438	355	232	238	204	211	241	235	283	319
4880	4850	5370	5450	5700	5260	5880	5740	5540	5610	5740	5090
612	550	443	367	267	230	213	216	234	226	253	273
4720	4860	5200	5410	5540	5180	5880	5790	5570	5590	5670	6180
650	498	395	328	247	221	219	226	229	219	240	235

5510	4760	4720	5110	5250	5570	5790	5820	5730	5520	5540	5720	5890	6160	6500	6850
752	524	455	346	282	247	124	224	222	227	229	235	221	255	322	436
4280	4500	4690	4940	5150	5430	5730	5820	5570	5530	5640	5850	6170	6340	6640	
612	481	314	321	138	233	207	221	218	227	239	233	281	245	329	440
4230	4400	4650	4770	5000	5340	5520	5650	5630	5450	5450	5800	5840	6090	6270	6630
810	525	385	293	135	220	213	230	247	249	261	235	251	305	378	477
3510	4400	4590	4640	530	5220	5600	5480	5500	5450	5450	5450	5770	5930	6130	6200
656	454	366	276	214	218	220	243	252	267	272	256	281	356	429	529
4200	4390	4221	4750	5030	5270	5380	5420	5410	5350	5330	5730	5930	6130	6300	6630
518	385	293	215	230	234	259	276	276	293	295	245	425	460	539	
4250	4390	4221	4750	5130	5330	5520	5650	5630	5450	5450	5450	5770	5930	6130	6410
439	377	273	243	257	252	264	284	301	264	374	439	442	529	581	
3510	4320	4410	4630	4930	5080	5230	5350	5390	5430	5320	5300	5370	5640	5800	621
560	424	347	317	305	319	359	337	347	376	412	471	518	575	621	

5100

5400

5700

6000

6300

6600

ZONE A1-3 B.T.U. KRIEAGE EN PROJECTION
 HORIZ.= 1 VERT.= 2 SCALE 1" = 300.m

	5100	5400	5700	6000	6300	6600	
-25400							25400
-25100							25100
-24800							24800
	8540 1903	6840 1540	6340 1510				
	6370 1470	6700 1460	6340 1350	6940 1340			
	6470 1580	6570 1340	6660 1260	6740 1190	6540 1170	6340 1200	
	5410 1470	5430 1210	5550 1080	6720 823	5620 565	5940 1020	6840 1140
	5440 1500	5550 1440	5600 876	6710 637	5800 285	5840 482	6840 753
	5440 1580	5550 1270	5600 830	6710 651	5800 313	5840 455	6840 748
	5470 1250	6450 1190	6450 632	6550 623	6750 465	6750 345	6550 549
	7440 1630	5950 1150	6410 897	6190 897	6190 429	6310 335	5480 580
	7440 1500	7440 1440	6050 876	6160 637	5740 367	5930 285	6210 482
	7420 1380	7350 1270	6430 830	6250 851	6220 313	6400 455	6690 748
	7420 1250	7370 1190	7620 632	6550 623	7010 465	7110 345	7020 549
	4310 1630	6680 1110	7420 821	7620 745	7250 693	7430 415	7470 300
	4310 1510	6520 1440	6660 898	7410 812	7470 597	7310 357	7110 315
	4310 1380	6050 1200	6460 900	7040 720	7380 473	7260 282	6620 358
	4310 1250	5590 1150	6110 891	5800 659	7310 457	7390 360	7323 385
	4340 1140	5150 985	5670 746	6450 579	7050 337	7270 345	7070 393
	4350 1050	4150 851	4270 609	5020 451	5930 459	5770 417	5250 349
	4320 1070	4910 766	4530 519	5600 297	5860 439	5710 360	5800 246
	4450 1250	4820 789	4510 611	4990 333	5820 369	6510 319	5240 322
	2440 1620	4010 1120	3950 779	4480 619	5070 60	5720 340	6220 337
	2440 1510	2970 1030	4070 828	4330 521	4780 357	5110 392	5530 395
	2450 1380	3570 953	3970 753	4120 476	4450 293	4590 320	5610 275
	2440 1250	3030 1020	3560 721	3735 465	4210 369	4710 349	5210 459
	2440 1200	2810 944	3150 692	3330 419	3930 262	4560 368	5050 355
	2440 1150	2720 942	2730 651	3620 312	4280 339	4540 404	4540 320
	2640 952	2150 705	3377 412	3000 333	4513 436	4243 328	4213 305
	2440 1050	3000 888	3270 725	3650 549	3910 649	4141 611	4320 723

ZONE A1-4 B.T.U. VERT. = 2
 HORIZ. = 1 KRIEAGE EN PROJECTION
 SCALE 1" = 300.m

	5100	5400	5700	6000	6300	6600	
-25400							25400
-25100							25100
-24800							24800
-24500							24500
-24200							24200
-23900							23900
-23600							23600
-23300							23300
-23000							23000
	5100	5400	5700	6000	6300	6600	
5100	5100	5400	5700	6000	6300	6600	
5400							
5700							
6000							
6300							
6600							

ZONE A2-1 B.T.U. KRIGEAGE EN PROJECTION
 HORIZ. = 1 VERT. = 2 SCALE 1" = 300.m

	5100	5400	5700	6000	6300	6600										
-25400							25400									
-25100							25100									
-24800							24800									
-24500							24500									
-24200							24200									
-23900							23900									
-23600							23600									
-23300							23300									
-23000							23000									
	5100	5400	5700	6000	6300	6600										
	2520 836	2620 707	2520 739													
	1610 740	1630 684	2620 693	2620 656												
	413 647	1680 704	1720 631	1750 598	2410 543	2620 590										
	413 817	1580 668	1710 587	1740 516	1804 455	2360 466										
	2810 650	1580 705	2040 592	1740 587	1780 457	1820 387	2310 459									
	2810 619	1580 669	2040 581	2010 467	1580 384	1590 314	1750 357	2270 443								
	1880 636	2350 701	1674 591	2040 589	1920 411	1750 314	1840 262	1860 329	2230 416	1980 524						
	1880 804	2320 653	2280 583	1650 462	1630 369	1640 289	1860 251	1850 304	1790 433	2210 546						
	1860 827	1860 772	2220 614	2230 557	1700 476	1950 305	1920 259	1930 254	1310 293	1590 427	2210 577	1980 707				
	1860 789	1660 740	2200 574	2240 485	1650 394	2030 277	2030 238	1920 244	1940 324	1960 467	2200 613	1950 734				
	599 848	1350 641	1480 557	2120 442	2190 384	1920 253	1950 244	2030 248	2260 308	2360 396	1760 635	1990 762				
	638 818	1330 605	1473 512	1680 319	2120 234	2130 287	1880 246	2350 258	2350 319	2440 410	2610 452	1930 782				
	599 786	1310 770	1433 467	1760 397	1830 271	2090 263	1980 245	2020 259	2270 323	2380 375	2480 433	2920 484				
	599 755	772 845	1400 431	1400 343	1580 274	1910 260	1900 251	2340 259	2250 334	2230 365	2520 410	2590 426	3420 585			
	290 857	416 572	1220 385	1271 379	1410 275	1620 249	1750 274	1950 260	2020 314	2340 359	2380 353	2780 435	2640 454			
	290 828	412 571	517 527	540 449	1060 287	1200 274	1440 264	1620 242	1550 310	1970 339	2320 311	2550 373	3420 431	3420 589		
	297 731	475 570	503 483	960 266	1050 259	1260 243	1450 247	1520 355	1920 384	2160 296	2350 212	2200 321	2170 377	2360 455		
	250 755	233 622	383 446	487 343	551 297	973 259	1100 250	1440 282	1570 284	1820 259	2020 266	2200 257	2050 230	2020 389	2330 511	
	176 683	215 577	355 412	447 320	522 271	776 241	881 255	1210 263	1530 304	1550 307	1930 268	2040 264	1930 265	1800 356	1710 484	
	187 655	211 536	251 440	473 289	476 239	803 256	906 322	1120 339	1460 311	1570 287	1840 268	1870 273	1770 375	1750 333	1710 705	
	165 625	205 501	222 387	410 213	535 232	779 266	1080 314	1320 381	1520 338	1600 320	1720 312	1700 285	1720 313	1720 421	1490 530	625
	28 756	151 494	168 373	231 250	351 241	416 287	1050 419	1370 392	1580 377	1550 337	1640 293	1650 395	1700 384	1700 473	1750 572	1460 657
	142 474	160 315	204 286	212 252	361 392	411 450	1070 421	1200 435	1550 369	1550 310	1480 327	1480 321	1480 326	1480 604	1480 691	
	35 678	122 389	135 363	108 295	221 367	328 474	853 449	1112 463	1580 360	1580 351	1470 351	1470 346	1470 375	1470 644	1480 725	
	30 653	35 452	39 334	717 365	235 439	223 528	807 465	1040 471	1350 513	1350 376	1350 345	1440 495	1440 572	1500 583	1510 616	
	36 582	54 414	106 423	159 515	220 566	233 640	1070 491	1330 513	1330 506	1580 503	1580 506	1440 611	1310 797	1310 647	1310	

ZONE B1-1 B.T.U. HORIZ.= 1 VERT.= 2 KRIGEAGE EN PROJECTION
SCALE 1" = 300'.m

	5100	5400	5700	6000	6300	6600	
-25400							25400
-25100							25100
-24800							24800
-24500							24500
-24200							24200
-23900							23900
-23600							23600
-23300							23300
-23000							23000
	5100	5400	5700	6000	6300	6600	

ZONE B1-2 B.T.U. KRIEGEAGE EN PROJECTION
 HORIZ.= 1 VERT.= 2 SCALE 1" = 300. m

	5100	5400	5700	6000	6300	6600	
-25400							25400
-25100							25100
-24800							24800
-24500							24500
-24200							24200
-23900							23900
-23600							23600
-23300							23300
-23000							23000
	5100	5400	5700	6000	6300	6600	
7860 1240	7960 1163	7860 1050					
7950 1150	7950 1110	7950 1020	7950 952				
7090 1250	7460 1260	7530 969	7940 977	7940 879	7950 833	7950 852	
5460 1110	5510 1020	7480 802	7510 785	7940 804	7940 707	7950 800	
4450 1250	4180 1100	5840 957	6440 945	7530 803	7580 715	7680 607	7840 532
4450 1200	4130 1040	5050 804	5340 723	6390 728	5603 593	7810 476	7970 536
5430 1050	4870 858	5560 823	5350 713	5860 574	6570 501	6930 407	7750 397
5310 1000	4900 698	5460 751	5520 615	5610 496	6390 375	6880 368	7710 369
5480 1240	5320 945	4950 811	5360 659	5450 518	5720 395	6250 343	7050 347
5480 1180	5330 826	5320 769	5010 593	5390 472	5580 342	6200 368	7110 336
5480 1150	5240 698	5260 699	5040 511	5450 559	5830 348	6610 365	7080 353
5480 1100	5830 654	5290 627	5480 464	5720 343	6010 351	6500 347	7180 369
1330 1250	4020 941	4550 771	5320 573	5520 419	6390 341	6740 363	7150 349
1330 1200	2980 887	4110 738	5020 552	5510 375	5760 356	5590 348	6880 378
1220 1060	1220 934	3710 695	4720 496	4350 395	5500 346	6090 359	6500 369
1220 1030	1220 822	3530 628	3810 478	4610 382	5380 356	6630 370	7080 385
1050 1250	1210 673	1760 845	2440 673	3920 446	3850 390	4660 353	5670 374
1790 997	1770 779	2080 618	3720 302	4740 358	5520 358	6080 383	6700 383
1620 855	1680 714	2050 538	2560 384	3540 368	4490 356	5280 392	6060 370
2340 952	1930 680	1850 459	2490 351	3590 377	4230 385	5210 366	5670 354
1720 856	1893 615	2030 475	2760 403	3850 380	4360 372	5050 397	5530 361
5280 1210	2330 673	2330 430	3930 350	4450 347	4880 345	5370 385	5710 465
5280 1250	3220 1160	2160 843	2840 595	3690 409	4200 353	4480 382	5240 414
3280 1110	3280 778	2860 525	3440 403	3740 361	4050 368	4450 404	5240 504
3280 1070	3280 655	2860 597	3440 415	3650 364	3780 403	4050 453	5250 588
3280 1020	3280 973	2860 658	3440 442	3650 521	3780 535	4050 634	4450 749
3280 973	3280 627	2860 596	3440 442	3650 561	3780 640	4050 729	4450 924
3280 973	3280 627	2860 596	3440 442	3650 561	3780 640	4050 729	4450 924
3280 973	3280 627	2860 596	3440 442	3650 561	3780 640	4050 729	4450 924
3280 973	3280 627	2860 596	3440 442	3650 561	3780 640	4050 729	4450 924

ZONE C1-1 B.T.U. HORIZ.=1 VERT.=2 KRIEAGE EN PROJECTION SCALE 1" = 300.m

	5100	5400	5700	6000	6300	6600	
-25400							25400
-25100							25100
-24800							24800
-24500							24500
-24200							24200
-23900							23900
-23600							23600
-23300							23300
-23000							23000
	5100	5400	5700	6000	6300	6600	

ZONE C2-1 B.T.U. VERT.= 2 HORIZ.= 1 KRIEAGE EN PROJECTION
SCALE 1" = 300. m

	5100	5400	5700	6000	6300	6600	
25400							25400
25100							25100
24800							24800
24500							24500
24200							24200
23900							23900
23600							23600
23300							23300
23000							23000
	5100	5400	5700	6000	6300	6600	

C2-2 B.T.U. HORIZONTAL = 1 VERT.= 2 KRIEAGE EN PROJECTION SCALE 1" = 300.m

HORIZ. = 1 VERT. = 2

ZONE 52-2 B.T.U.

5400

25100

24800

24500

24200

23900

23600

2330

2300

5100 **5400** **5700** **6000** **6300** **6600**

-25490

-25100

-24600

-24500

-24200

-2390-

- 2360

- 2330

- 2300

5100 5400 5700 6000 6300 6600

-1 B.T.U. *** KRIGEAGE EN PROJECTION
ORIZ.= 1 VERT.= 2 SCALE 1" = 300.m

HORITZ, = 1

SCALE 1" = 300.m

VERT.

25400

25100

24800

24500

24200

23900

23600

23305

23000

6300 6600

5100

5400

5700

6000

6300

6500

ZONE D1-2. B.T.U. VERT.= 1 HORIZ.= 1 KRIEGEAGE EN PROJECTION
SCALE 1" = 300.m

	5100	5400	5700	6000	6300	6600	
-25400							25400
-25100							25100
-24800							24800
-24500							24500
-24200							24200
-23900							23900
-23600							23600
-23300							23300
-23000							23000
	5100	5400	5700	6000	6300	6600	
	16500	16400	16300	16200	16100	16000	
	711	602	593	469	448	638	
	6350	6749	5890	10300	10300	10200	
	630	619	535	454	355	358	517
	8350	9590	9840	10300	10100	10000	9820
	793	580	461	380	321	311	532
	8450	8450	9600	10400	9430	9410	9360
	839	792	702	719	653	534	452
	8450	8450	9510	9600	9520	9710	9820
	803	751	643	538	605	544	408
	6220	6220	6640	8060	8820	9290	9570
	628	781	659	802	670	653	583
	6220	6220	5820	8620	8810	8550	9580
	752	740	648	602	624	560	533
	6910	6980	7070	6940	7580	9100	9560
	714	655	682	538	470	504	439
	6820	6900	7050	7080	7550	8660	9090
	674	687	624	462	409	423	362
	6950	6970	7050	7100	7510	8500	8940
	623	548	482	387	315	322	295
	6890	7000	7020	7110	7600	8130	8830
	583	487	393	304	238	269	256
	7120	7040	7110	7270	7750	8270	8760
	522	454	372	264	259	224	236
	7850	7200	7370	7540	7850	8320	8890
	541	395	316	243	239	222	234
	7740	7300	7460	7710	8010	8460	8890
	486	353	277	240	234	225	224
	7480	7720	7540	7690	8050	8500	8930
	482	351	292	248	235	273	208
	7480	7640	7650	7760	8050	8550	8840
	422	312	243	249	232	226	221
	7450	7400	7600	7640	8470	8650	8540
	352	372	254	268	244	224	234
	7470	7423	7550	7750	8100	8350	8770
	336	253	273	261	242	225	256
	7410	7940	7440	7710	7970	8220	7650
	318	253	274	210	235	227	243
	7490	7520	7500	7760	8140	8620	7530
	318	265	281	232	233	225	251
	7460	7450	7500	7620	8150	8650	8720
	321	277	255	236	224	231	259
	7380	7110	7210	7930	8110	8680	8730
	335	254	236	224	235	233	266
	7420	7370	7630	7750	7920	7970	8230
	311	253	236	230	243	232	265
	7450	7501	7520	7540	7850	8280	8740
	322	243	234	215	230	283	251
	7160	7210	7220	7160	7760	7820	8210
	353	319	250	279	261	300	333
	6570	7720	8260	6750	6780	6030	8210
	352	318	328	295	313	351	404
	6740	6170	6410	6360	6520	6650	7770
	426	395	341	308	357	435	473
	6150	6253	5113	5313	6251	6330	7750
	477	414	350	382	424	487	537
	5070	5820	5920	5930	6300	6390	7720
	514	453	410	436	518	555	607

23000

23300

23600

23900

24200

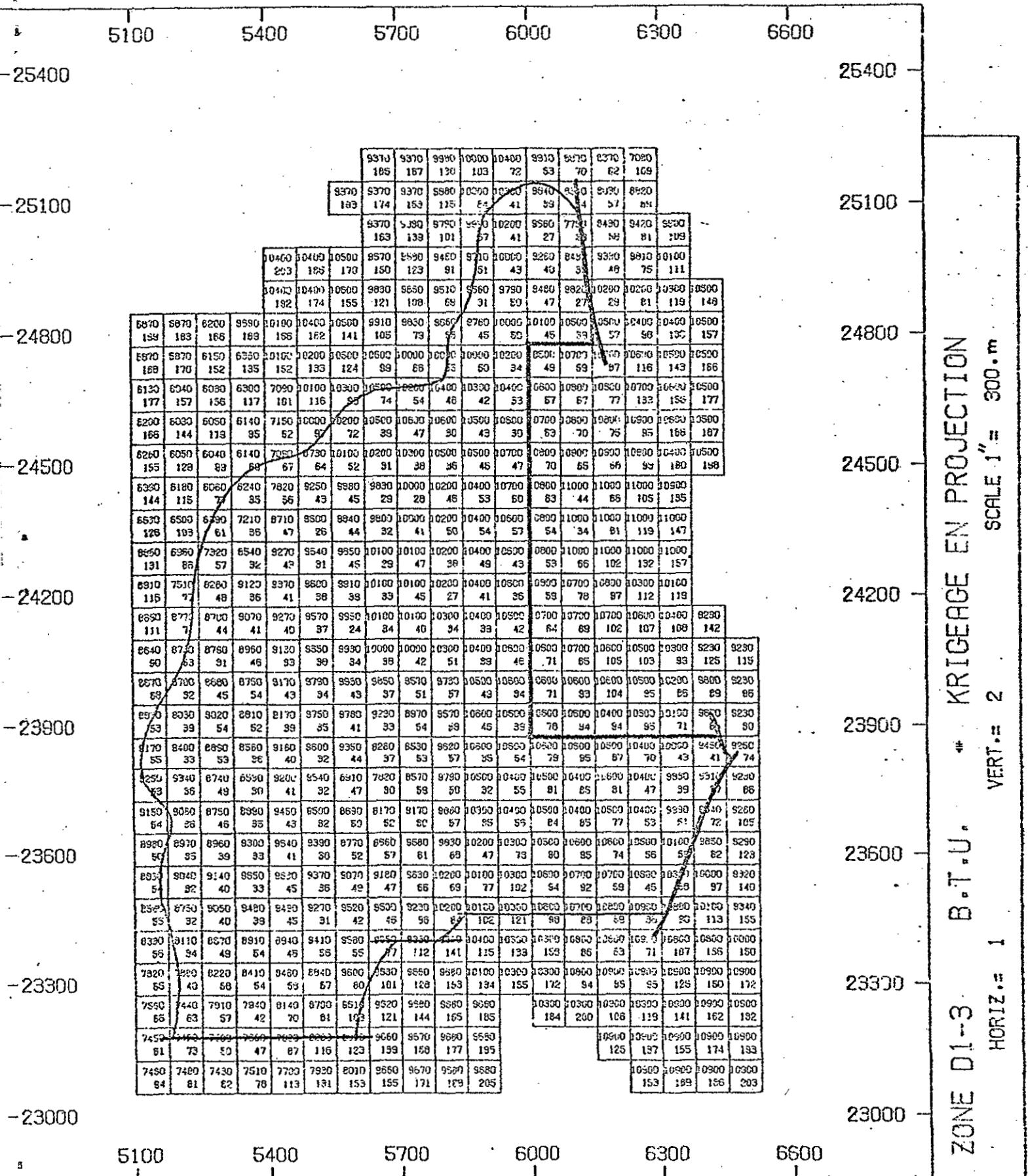
24500

24800

25100

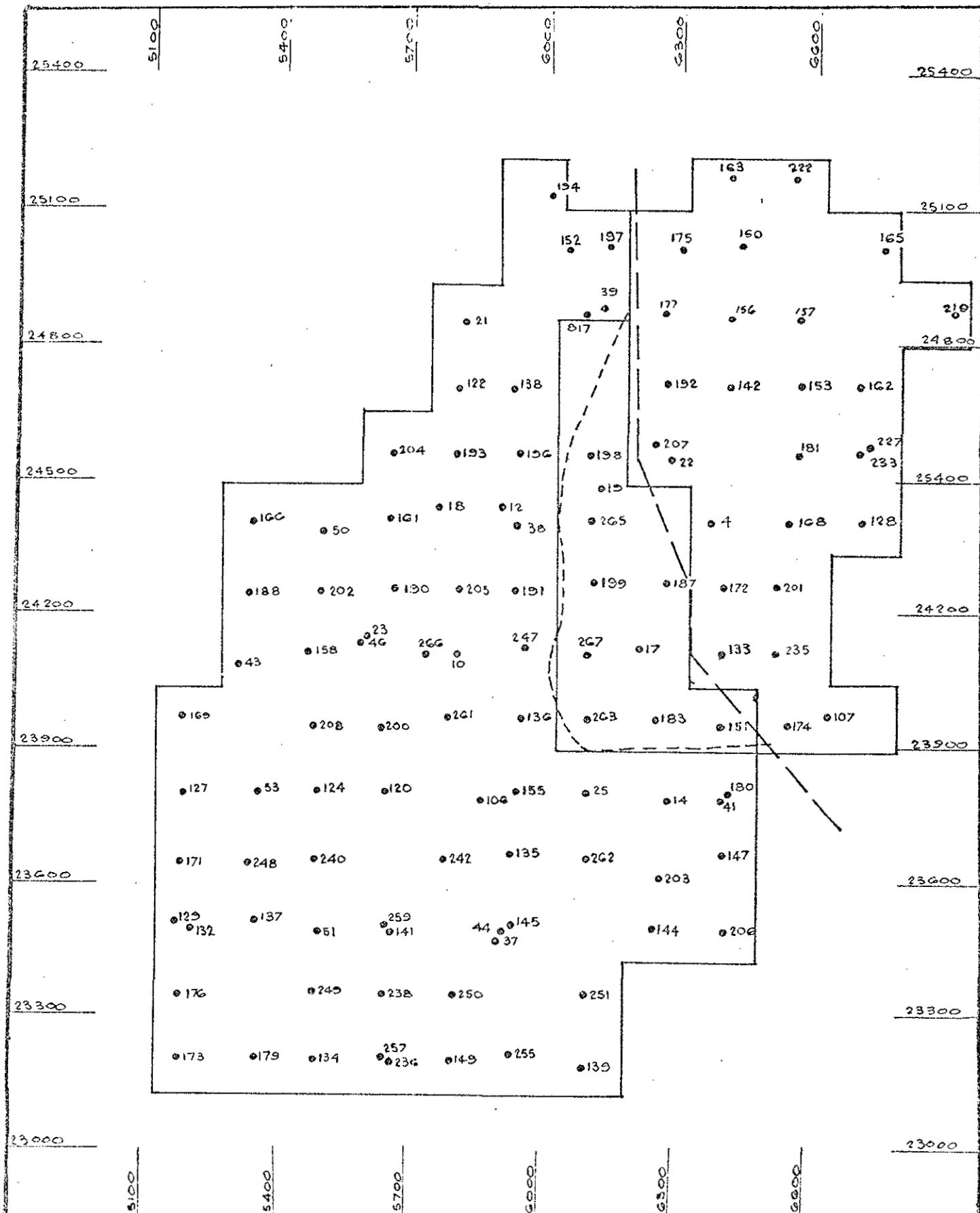
25400

Caution - On this map, the standard errors have to be multiplied by 3.16



ZONE D1-4 B.T.U. VERT.= 1 HORIZ.= 1 KRIGEAGE EN PROJECTION
 SCALE 1" = 300.m

	5100	5400	5700	6000	6300	6600	
25400							25400
25100							25100
24800							24800
24500							24500
24200							24200
23900							23900
23600							23600
23300							23300
23000							23000
	5100	5400	5700	6000	6300	6600	
5100							
5400							
5700							
6000							
6300							
6600							



HAT CREEK PROJECT MAP OF HOLE COLLARS
SCALE 1" = 300 m