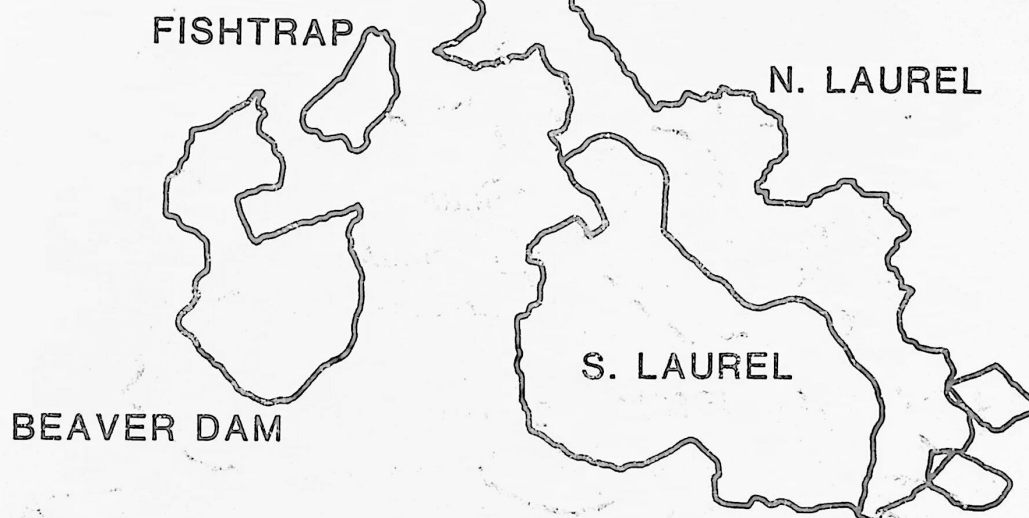




UNIVERSITY
OF KENTUCKY



**Coal Resources
of the University of Kentucky
on the Laurel, Fishtrap
and Beaverdam Creek Tracts**

prepared by the
Kentucky Geological Survey

In conjunction with
request for proposals for coal leases to mine properties.

No. PK-0017-0

December 1990

COAL RESOURCES
OF THE UNIVERSITY OF KENTUCKY
ON THE LAUREL, FISHTRAP, AND BEAVERDAM CREEK TRACTS

Prepared by

KENTUCKY GEOLOGICAL SURVEY
228 MINING AND MINERAL RESOURCES BUILDING
UNIVERSITY OF KENTUCKY
LEXINGTON, KY 40506-0107

IN CONJUNCTION WITH
REQUEST FOR PROPOSALS FOR COAL LEASES
TO MINE PROPERTIES NO. PK-0017-0

December 3, 1990

DISCLAIMER

The University of Kentucky (UK) and the Kentucky Geological Survey (KGS) have evaluated the subject properties for coal resources using available data in compliance with accepted standards and techniques. UK and KGS disclaim all warranties, express or implied, as to the quality or quantity of coal contained in the subject properties. The use of any name conforming to the geological designation of a coal seam shall not be taken or construed as a warranty by said description, it being understood and acknowledged by any user of this information that the use of such name is employed for general reference purposes only and may not be geologically exact.

This report was prepared by the Coal Section of the Kentucky Geological Survey. Questions pertaining to the technical aspects of this report should be directed to Bart Davidson, Richard Sergeant, or Jim Cobb.

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EXHIBITS

Exhibit I. 16 Maps and One Geophysical Log in Tube (separate)

Map 1- Geologic Quadrangle Map with Property Boundaries and Coal Bed Outcrops

Map 2- Skyline E Bed Data Point Locations

Map 3- Skyline D Bed Data Point Locations

Map 4- Skyline C Bed Data Point Locations

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Map 14- Fire Clay Rider Bed Data Point Locations

Map 15- Fire Clay Bed Data Point Locations

Map 16- Locations of Cores for the Study Area

Item 17- Geophysical Log

Exhibit II. Borehole Data Summary Report with Coal Quality Information

Exhibit III. Coal Resources of the University of Kentucky on the Little Caney, Rose Branch, and Hurricane Tracts, A report prepared by Gaddy Engineering Company, Provided in connection with RFP PK-0017-0.

**Coal Resources of the University of Kentucky
on the Laurel, Fishtrap, and Beaver Dam Creek Tracts,
Breathitt and Perry Counties,
Kentucky**

INTRODUCTION

The purpose of this report is to present a detailed estimate of the coal resources in five tracts of land located near the University of Kentucky Robinson Forest. This report was prepared in conjunction with University of Kentucky RFP PK-0017-0, December 3, 1990. The five tracts of land considered in this study are located on the Noble 7.5-minute quadrangle in Breathitt and Perry Counties, Kentucky. These tracts are: North Laurel Fork, South Laurel Fork, Beaver Dam Creek, Bear Branch, and Fishtrap Branch (Fig. 1). Map 1 of Exhibit I (in map tube) shows detailed locations of the tracts addressed in this report. Bear Branch is included in this study but is not part of RFP PK-0017-0.

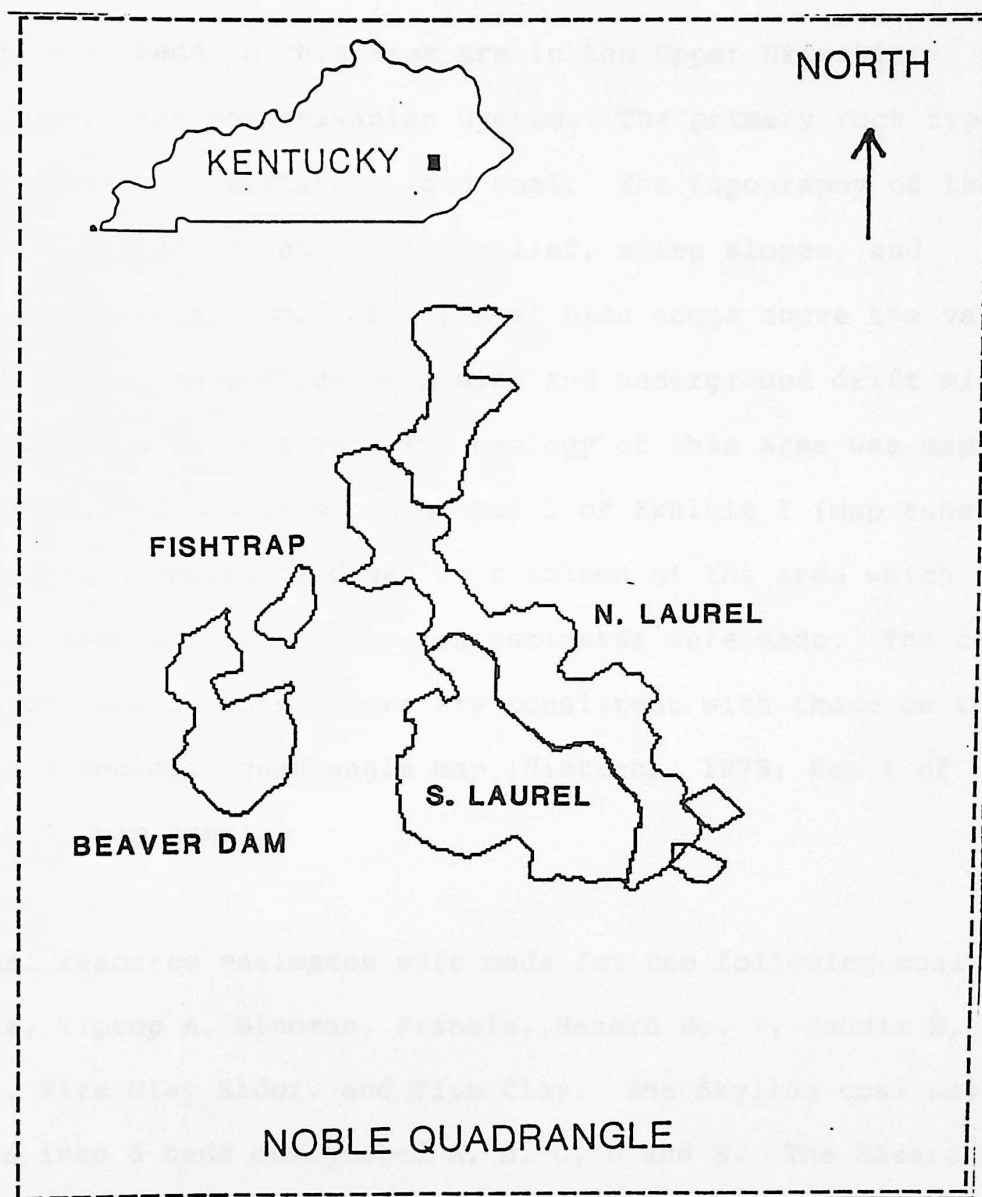


Figure 1. Location map of tracts

GENERAL GEOLOGY

The coal beds in this area are in the Upper Breathitt Formation of the Pennsylvanian System. The primary rock types are sandstone, shale, siltstone, and coal. The topography of the region is characterized by high relief, steep slopes, and dissected terrain. Most of the coal beds occur above the valley bottoms. Surface methods of mining and underground drift mines predominate in the region. The geology of this area was mapped by Hinrichs (1978) and is shown on Map 1 of Exhibit I (map tube). Figure 2 is a generalized geologic column of the area which shows the coal beds for which resource estimates were made. The coal bed names used in this report are consistent with those on the published geologic quadrangle map (Hinrichs, 1978; Map 1 of Exhibit 1, map tube).

Coal resource estimates were made for the following coal beds: Skyline, Tiptop A, Hindman, Francis, Hazard No. 7, Haddix B, Lower Hamlin, Fire Clay Rider, and Fire Clay. The Skyline coal was divided into 5 beds designated A, B, C, D and E. The Hazard No. 7 coal was divided into 2 beds designated A and B. Resources were not estimated for beds with thicknesses less than 14 inches.

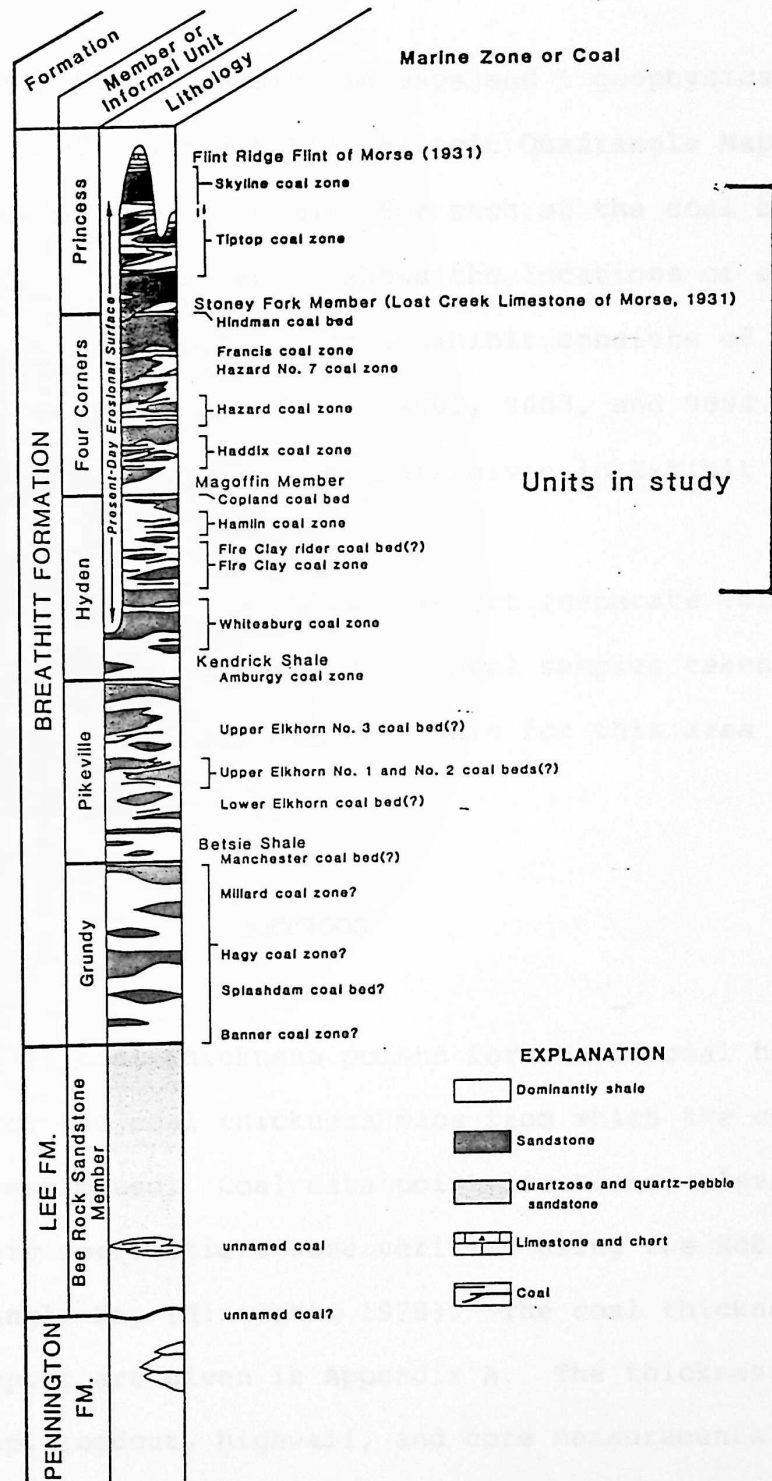


Figure 2. Generalized geologic column of study area.

Exhibit I (map tube) contains 16 maps and 1 geophysical log. Map 1 of this Exhibit is the Noble Geologic Quadrangle Map. Maps 2 through 15 are data location maps for each of the coal beds estimated in this report. Map 16 shows the locations of coreholes used in this report. Item 17 in this Exhibit consists of geophysical logs for coreholes 9001, 9002, 9003, and 9004. Written descriptions for these cores are given in Exhibit II.

Exhibit II, Borehole Data Summary Report (separate volume), gives core descriptions and analyses of coal samples taken from the cores. The coal quality data available for this area are presented in Exhibit II.

METHODS

A total of 776 coal thickness points for the 14 coal beds was used to construct the coal thickness maps from which the coal resources were estimated. Coal data point locations, elevations, and stratigraphic correlations were verified using the Noble Geologic Quadrangle Map (Hinrichs, 1978). The coal thickness data used in this report are given in Appendix A. The thickness data are from outcrop, roadcut, highwall, and core measurements.

The term coal resource as used in this report includes all coal beds in the ground 14 inches or more in thickness. The coal outcrops were taken from the Noble Geologic Quadrangle Map (Hinrichs, 1978). Coal resources were calculated by the GARNET computer software program developed by the U.S. Geological Survey. Coal resources for the tract areas were estimated for individual beds from a computer-generated coal thickness grid. Resources were calculated in thickness, reliability, and overburden classes. The thickness classes used in this report are the standard 14 inch classes used by the U.S. Bureau of Mines and the U.S. Geological Survey. The reliability classes used are: measured class --all coal resources within 1/4 mile of a point of measured coal thickness; indicated class --all coal resources within 3/4 mile of a point of measured coal thickness; and inferred class --all coal resources within 3 miles of a point of measured coal thickness. The overburden classes were determined by the use of a U.S. Geological Survey Digital Elevation Model (DEM) for the Noble quadrangle and the elevations of coal beds. The overburden classes are less than 100 feet of overburden and greater than 100 feet of overburden.

RESULTS

A composite summary of the coal resources of all five tracts is given in Table 1. Resources in Table 1 are shown by bed and by overburden class. Computer-generated plots showing coal resources by thickness and overburden for each bed are presented in Appendix B of this report. A brief discussion of the resources in each tract is given below.

NORTH LAUREL FORK TRACT

The North Laurel Fork tract consists of approximately 1188 acres, and has a total of 15,785,000 tons of coal resources. Coal resources for 13 beds were calculated for this area: Skyline E, Skyline D, Skyline C, Skyline B, Skline A, Tiptop A, Hindman, Francis, Hazard No. 7B, Hazard No. 7A, Haddix B, Fire Clay Rider, and Fire Clay. These are the only beds indicated by the data to be greater than 14 inches thick. Table 2 shows the coal resources by bed, subdivided by thickness, reliability, and overburden classes.

SOUTH LAUREL FORK TRACT

The South Laurel Fork tract consists of approximately 1149 acres, and has a total of 11,446,586 tons of coal resources. The

coal beds greater than 14 inches in thickness for which estimates were made are: Skyline E, Skyline D, Skyline B, Tiptop A, Hindman, Francis, Hazard No.7B, Hazard No. 7A, Haddix B, Fire Clay Rider, and Fire Clay. Table 3 shows the coal resources by bed, reliability, thickness, and overburden classes for the South Laurel Fork tract.

BEAVER DAM CREEK TRACT

The Beaver Dam Creek tract consists of approximately 481 acres and has a total of 4,193,849 tons of coal resources. The coal beds greater than 14 inches in thickness for which resources were estimated are: Skyline B, Skyline A, Tiptop A, Hindman, Francis, and Haddix B. Table 4 shows the coal resources by bed, reliability, thickness, and overburden classes for the Beaver Dam Creek tract.

FISHTRAP BRANCH TRACT

The Fishtrap Branch tract consists of approximately 68 acres and has a total of 340,941 tons of coal resources. The coal beds greater than 14 inches in thickness for which resources were estimated are: Skyline A, Tiptop A, Hindman, Francis, Haddix B, and Fire Clay Rider. Table 5 shows the coal resources by bed,

reliability, thickness, and overburden classes for the Fishtrap Branch tract.

BEAR BRANCH TRACT

The Bear Branch tract consists of approximately 380 acres and has a total of 3,458,164 tons of original resources. The coal beds greater than 14 inches in thickness for which resources were estimated are: Skyline E, Skyline D, Skyline C, Skyline B, Skyline A, Tiptop, Hindman, Francis, Haddix, Hamlin, and Fire Clay Rider. Table 6 shows the coal resources by bed and reliability, thickness, and overburden classes for the Bear Branch tract.

REFERENCES

Hinrichs, E. N., 1978, Geologic Map of the Noble Quadrangle, eastern Kentucky: U.S. Geological Survey Geologic Quadrangle Map GQ-1476.

TABLE 1 A COMPOSITE OF COAL RESOURCES BY OVERBURDEN CATEGORY AND TRACT

Coal Name	BEAR BRANCH		BEAVER DAM		FISHTRAP		NORTH LAUREL		SOUTH LAUREL		Coal Bed Totals
	>14" <100'	>14" >100'	>14" <100'	>14" >100'	>14" <100'	>14" >100'	>14" <100'	>14" >100'	>14" <100'	>14" >100'	
Skyline E	6,613	NA	NA	NA	NA	NA	19,761	NA	8,600	NA	34,974
Skyline D	2,794	NA	NA	NA	NA	NA	30,632	NA	6,381	NA	39,807
Skyline C	2,597	NA	NA	NA	NA	NA	30,056	NA	NA	NA	32,653
Skyline B	58,996	NA	1,229	NA	NA	NA	266,839	NA	198,954	NA	526,018
Skyline A	102,298	15,419	31,930	NA	3,069	NA	55,062	NA	NA	NA	207,778
Tiptop A	123,746	49,849	8,592	NA	6,458	NA	641,626	NA	21,639	NA	851,910
Hindman	243,587	103,121	275,683	846	14,862	223,034	1,337,877	1,948,540	1,054,485	248,904	3,502,399
Francis	381,565	397,013	1,563,180	682,123	67,415	1,705,873	1,705,873	1,948,540	980,803	1,964,266	9,690,778
Hazard No. 7B	NA	NA	NA	NA	NA	251,030	29,572	251,030	46,744	303,799	631,145
Hazard No. 7A	45,721	52,885	603,247	1,027,019	68,678	50,491	30,171	110,278	108,976	623,486	872,911
Haddix B	33,991	130,938	NA	NA	NA	NA	NA	NA	190,702	1,205,989	5,796,099
Lower Hamlin	247,422	1,459,609	NA	NA	30,207	99,761	302,328	4,273,847	47,298	3,520,647	9,981,119
Fire Clay R.	NA	NA	NA	NA	NA	NA	104,818	1,873,020	34,409	880,504	2,892,751
Fire Clay	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Totals	1,249,330	2,208,834	2,483,861	1,709,988	190,689	150,252	5,055,313	10,730,418	2,698,991	8,747,595	35,225,271

TABLE 2

NORTH LAUREL, FORK TRACT

Coal Name	Coal Bed Resource Calculations By Thickness And Overburden Categories In Tons										Coal Bed Totals
	>14" <28" <100'	>14" <28" >100'	>28" <42" <100'	>28" <42" >100'	>42" <56" <100'	>42" <56" >100'	>56" <70" <100'	>56" <70" >100'	>70" <84" <100'	>70" <84" >100'	
Skyline E	6,137		974				12,650				19,761
measured	6,003		819								6,822
indicated	134		155				12,650				12,939
inferred											
Skyline D											
measured											30,632
indicated					18,573		12,059				18,573
inferred					18,573		12,059				12,059
Skyline C	30,056										30,056
measured											
indicated	30,056										30,056
inferred	16,358				23,575		6,897		115,606		266,839
Skyline B					23,575		6,897		115,606		221,168
measured	16,358										21,697
indicated											23,974
inferred											55,062
Skyline A			55,062								55,062
measured											
indicated			55,062								
inferred											
Tip-top A	68,208		422,214		151,204						641,626
measured	23,859		340,117		151,204						515,180
indicated	37,299		48,556								85,855
inferred	7,050		33,541								40,591
Hindman	599,029	110,660	334,928	27,440	403,920	84,934					1,560,911
measured	385,871	94,817	176,675	27,117	247,869	84,934					1,017,283
indicated	190,016	15,843	138,732	323	156,051						500,965
inferred	23,142		19,521								42,663
Francis	19,171	18,427	350,126	243,563	733,848	480,726	521,605	1,039,648	166,176		3,654,413
measured	19,171	18,427	159,582	225,937	455,950	369,643	200,204	635,066	144,549		2,270,796
indicated			190,544	17,626	218,626	69,622	321,401	404,582	21,627		1,282,884
inferred					59,272	41,461					100,733
Hazard No. 7B	29,572	248,148		2,882							280,602
measured	2,483	99,708									102,191
indicated	27,089	148,440		2,882							178,411
inferred											
Hazard No. 7A	29,560	70,158	611	40,120							140,449
measured	4,171	45,964	611	40,120							90,866
indicated	25,389	24,194									49,583
inferred											
Haddix B	500,698	1,731,412		319,257							2,551,367
measured	43,117	136,220									179,337
indicated	135,979	1,053,667		138,143							1,327,789
inferred	321,602	541,525		181,114							1,044,241
Fire Clay R.	265,125	3,542,267	37,203	731,580							4,576,175
measured	28,340	99,726	12,980	145,005							286,051
indicated	121,294	1,569,072	24,223	62,233							1,776,822
inferred	115,491	1,873,469	524,342								2,513,302
Fire Clay	104,818	1,873,020									1,977,838
measured	68,385	158,399									226,784
indicated	36,433	1,301,217									1,337,650
inferred		413,404									413,404
Totals	1,668,732	7,594,092	1,201,118	1,364,842	1,331,120	565,660	553,211	1,039,648	166,176	115,606	15,785,731

TABLE 3

SOUTH LAUREL FORK TRACT

Coal Name	Coal Bed Resource Calculations By Thickness And Overburden						Categories In Tons			Coal Bed Totals
	>14" <28" <100'	>14" <28" >100'	>28" <42" <100'	>28" <42" >100'	>42" <56" <100'	>42" <56" >100'	>56" <70" <100'	>56" <70" >100'	>70" <84" <100'	>70" <84" >100'
Skyline E measured							8,600			8,600
indicated							8,600			8,600
inferred										
Skyline D measured										
indicated					6,381					6,381
inferred					6,381					6,381
Skyline B measured	7,146	2,962			8,697		54,035		49,010	198,954
indicated	7,146	2,962	2,250		6,584		45,147		40,798	179,741
inferred			2,250		2,113		8,888		8,212	19,213
Tiptop A measured	21,639									21,639
indicated	17,317									17,317
inferred	4,322									4,322
Hindman measured	898,780	246,131	153,843	2,773	1,862					1,303,389
indicated	533,264	210,325	123,221	2,773	1,862					871,445
inferred	363,557	35,806	30,622							429,985
Francis measured	1,959									1,959
indicated			310,137	334,636	625,086	1,345,301	45,580	284,329		2,945,069
inferred			124,212	231,227	357,316	1,051,568	45,580	284,329		2,094,232
Hazard No. 7B measured	46,744	303,799								350,543
indicated	8,497	107,898								116,395
inferred	38,247	195,901								234,148
Hazard No. 7A measured	79,998	263,319	28,978	360,167						732,462
indicated	45,415	202,595	22,961	262,834						533,805
inferred	34,583	60,724	6,017	97,333						198,657
Haddix B measured	190,702	1,205,989								1,396,691
indicated	42,273	277,505								319,778
inferred	17,332	562,144								579,476
Fire Clay R. measured	131,097	366,340								497,437
indicated	47,298	3,520,647								3,567,945
inferred		432,983								432,983
Fire Clay measured	47,298	1,516,067								1,571,597
indicated	34,409	880,504								1,563,365
inferred	15,529	291,699								914,913
Totals	1,326,716	6,423,351	495,208	697,576	642,026	1,345,301	108,215	284,329	49,010	11,446,586

TABLE 4

BEAVER DAM BRANCH TRACT

Coal Name	Coal Bed Resource Calculations By Thickness And Overburden Categories In Tons												Coal Bed Totals
	>14" <28" <100'	>14" <28" >100'	>28" <42" <100'	>28" <42" >100'	>42" <56" <100'	>42" <56" >100'	>56" <70" <100'	>56" <70" >100'	>70" <84" <100'	>70" <84" >100'	>84" <100'	>84" >100'	
Skyline B													
measured	1,122		107										1,229
indicated	1,122		107										1,229
inferred													
Skyline A													
measured			16,143				6,052		1,302		8,433		31,930
indicated			14,598				4,509		1,302		8,433		28,842
inferred			1,545				1,543						3,088
Tiptop A													
measured	8,592												8,592
indicated	8,592												8,592
inferred													
Hindman													
measured	266,573		9,110	846									276,529
indicated	93,119												93,119
inferred	173,454		9,110	846									183,410
Francis													
measured			58,527	790	478,727	86,193	1,025,926	595,140					2,245,303
indicated			58,527	790	102,685	12,803	331,628	284,725					791,158
inferred					376,042	73,390	694,298	310,415					1,454,145
Haddix B													
measured	47,333	190,842	555,914	836,177									1,630,266
indicated			139,738	42,463									182,201
inferred	47,333	190,842	399,485	746,149									1,383,809
inferred			16,691	47,565									64,256
Totals	323,620	190,842	639,801	837,813	478,727	86,193	1,031,978	595,140	1,302		8,433		4,193,849

TABLE 5 FISHTRAP BRANCH TRACT

Coal Bed Resource Calculations By Thickness And Overburden Categories In Tons		Coal Bed Totals			
Coal Name	>14" <28" <100'	>14" <28" >100'	>28" <42" <100'	>28" <42" >100'	>42" <56" <100'
Skyline A					3,069
measured					
indicated					
inferred					
Tiptop A	6,458				3,069
measured					
indicated					
inferred					
Hindman	6,458				3,069
measured	14,862				6,458
indicated					
inferred					
Francis	14,862				14,862
measured					
indicated					
inferred					
Haddix B	37,304	27,205	31,374	23,286	67,415
measured					
indicated					
inferred					
Fire Clay R.	37,304	27,205	31,374	23,286	67,415
measured	30,207	99,761			119,169
indicated					
inferred					
Totals	12,907	17,520			119,169
	17,300	82,241			129,968
	88,831	126,966	31,374	23,286	30,427
					99,541
					340,941

TABLE 6

BEAR BRANCH TRACT

Coal Name	Coal Bed Resource				Calculations By Thickness And Overburden Categories In Tons				Coal Bed Totals
	>14" <28"	>14" <28"	>14" <28"	>14" <28"	>28" <42"	>42" <56"	>56" <70"	>70" <100"	
Skyline E					6,613				6,613
measured					6,613				6,613
indicated									
inferred									
Skyline D									
measured	2,794								2,794
indicated	2,516								2,516
inferred									
Skyline C									
measured	2,597								2,597
indicated	2,597								2,597
inferred									
Skyline B									
measured					17,769	2,368			58,996
indicated					17,769	2,152			55,220
inferred						216			3,776
Skyline A									
measured					15,415	29,503	471	14,948	117,717
indicated					15,415	6,152	471	14,948	75,393
inferred						23,351		3,558	42,324
Tiptop A									
measured					123,746	49,849			173,595
indicated					25,713	24,520			50,233
inferred					98,033	25,329			123,362
Hindman									
measured	39,541				204,046	103,121			346,708
indicated	27,290				34,591	27,502			89,383
inferred	12,251				169,455	75,619			257,325
Francis									
measured					1,287	367,385	395,941	12,893	778,578
indicated						123,941	116,133	10,150	250,697
inferred					1,287	243,444	279,808	2,743	527,881
Haddix B									
measured	45,721								98,606
indicated									
inferred									
Lower Hamlin									
measured	45,721								98,606
indicated	33,991								164,929
inferred									
Fire Clay R.									
measured					247,422	1,459,609			1,707,031
indicated					1,521	181,690			183,211
inferred					195,631	506,187			701,818
Totals	124,644	183,823	616,298	1,613,178	399,256	396,412	109,132	15,421	3,458,164

USGS 7.5-minute Geologic Quadrangle Map

Coal and name used in this report

Coal thickness not including partings

(ft) parting thickness

(Decimal Degrees)

(Decimal Degrees)

Base of coal

Geological Survey identification number

APPENDIX A

Coal Thickness Data Points and Explanation

EXPLANATION FOR COAL THICKNESS DATA POINTS

"QUAD" = USGS 7.5-minute Geologic Quadrangle Map

"COAL" = Coal bed name used in this report

"COAL
THICKNESS" = Total coal thickness not including partings

"PTG.
THK." = Total parting thickness

"LAT" = Latitude (Decimal Degrees)

"LON" = Longitude (Decimal Degrees)

"ELE." = Elevation at base of coal

"ID" = Kentucky Geological Survey identification number

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	SKYLINE E	088.5	18.0	37.4339	-83.1677	1423	64575
NOBLE	SKYLINE E	068.0	0.0	37.4044	-83.1596	1512	64585
NOBLE	SKYLINE E	070.0	8.0	37.4087	-83.1770	1466	64590
NOBLE	SKYLINE E	071.5	7.2	37.4890	-83.2279	1378	64596
NOBLE	SKYLINE E	057.0	8.0	37.4827	-83.2288	1390	64598
NOBLE	SKYLINE E	024.0	0.0	37.4806	-83.2324	1405	64599
NOBLE	SKYLINE E	036.0	0.0	37.4818	-83.2371	1395	64600
NOBLE	SKYLINE E	040.7	8.2	37.4821	-83.2385	1405	64601
NOBLE	SKYLINE E	048.0	0.0	37.4668	-83.2309	1395	64605
NOBLE	SKYLINE E	024.0	0.0	37.4727	-83.2495	1391	64612
NOBLE	SKYLINE E	048.0	0.0	37.4786	-83.1689	1454	64616
NOBLE	SKYLINE E	095.0	22.0	37.5319	-83.1715	1425	31091
NOBLE	SKYLINE E	038.0	0.0	37.4626	-83.1857	1463	92044
NOBLE	SKYLINE E	037.0	0.0	37.4686	-83.1864	1540	92052
NOBLE	SKYLINE E	060.0	0.0	37.4041	-83.1485	1400	92058
NOBLE	SKYLINE E	054.0	0.0	37.4728	-83.2418	1406	92069
NOBLE	SKYLINE E	060.0	0.0	37.4943	-83.2291	1411	92073
NOBLE	SKYLINE E	059.0	0.0	37.4972	-83.2371	1413	92077
NOBLE	SKYLINE E	024.0	0.0	37.4995	-83.2267	1382	92087
NOBLE	SKYLINE E	064.0	4.0	37.4971	-83.2270	1393	92088
NOBLE	SKYLINE E	060.0	0.0	37.4954	-83.2463	1408	92099
NOBLE	SKYLINE E	072.0	0.0	37.4971	-83.2413	1411	92106
NOBLE	SKYLINE E	060.0	0.0	37.4768	-83.2454	1439	92109
NOBLE	SKYLINE E	144.0	0.0	37.4990	-83.1569	1440	92112
NOBLE	SKYLINE E	042.0	2.3	37.4288	-83.1668	1457	92140
NOBLE	SKYLINE E	052.0	22.0	37.4322	-83.1680	1438	92152
NOBLE	SKYLINE E	088.0	18.0	37.4346	-83.1674	1449	92252
NOBLE	SKYLINE E	030.0	8.0	37.4307	-83.1629	1473	92288
NOBLE	SKYLINE E	019.0	0.0	37.4313	-83.1788	1461	92291
NOBLE	SKYLINE E	074.0	10.0	37.4186	-83.1904	1482	92319
NOBLE	SKYLINE E	049.0	0.0	37.4160	-83.1761	1457	92329
NOBLE	SKYLINE D	033.5	0.0	37.4973	-83.2368	1357	64571
NOBLE	SKYLINE D	056.0	0.0	37.4339	-83.1677	1401	64574
NOBLE	SKYLINE D	068.0	0.0	37.4044	-83.1596	1487	64584
NOBLE	SKYLINE D	053.0	0.0	37.4087	-83.1770	1440	64589
NOBLE	SKYLINE D	015.6	0.0	37.4695	-83.1583	1410	64593
NOBLE	SKYLINE D	050.4	0.0	37.4894	-83.2276	1355	64595
NOBLE	SKYLINE D	073.7	20.2	37.4228	-83.2312	1478	64602
NOBLE	SKYLINE D	021.0	0.0	37.4727	-83.2495	1381	64611
NOBLE	SKYLINE D	013.0	1.0	37.4774	-83.1702	1417	64617
NOBLE	SKYLINE D	024.0	0.0	37.4478	-83.1737	1408	90504
NOBLE	SKYLINE D	018.0	0.0	37.4626	-83.1857	1449	92045
NOBLE	SKYLINE D	044.0	0.0	37.4728	-83.2418	1384	92070
NOBLE	SKYLINE D	048.0	0.0	37.4943	-83.2291	1390	92074
NOBLE	SKYLINE D	036.0	0.0	37.4972	-83.2371	1389	92078
NOBLE	SKYLINE D	024.0	0.0	37.4995	-83.2267	1360	92086
NOBLE	SKYLINE D	049.0	0.0	37.4971	-83.2270	1368	92089
NOBLE	SKYLINE D	040.0	0.0	37.4954	-83.2463	1390	92100
NOBLE	SKYLINE D	040.0	0.0	37.4971	-83.2413	1392	92105
NOBLE	SKYLINE D	048.0	0.0	37.4768	-83.2454	1380	92108
NOBLE	SKYLINE D	024.0	0.0	37.4990	-83.1569	1400	92113
NOBLE	SKYLINE D	057.5	0.0	37.4288	-83.1668	1431	92141
NOBLE	SKYLINE D	061.0	0.0	37.4322	-83.1680	1416	92154

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	Lon	ELE.	ID
NOBLE	SKYLINE D	032.0	0.0	37.4091	-83.1836	1433	92179
NOBLE	SKYLINE D	059.0	0.0	37.4318	-83.1622	1445	92228
NOBLE	SKYLINE D	056.0	0.0	37.4346	-83.1674	1429	92253
NOBLE	SKYLINE D	048.0	0.0	37.4383	-83.1801	1427	92280
NOBLE	SKYLINE D	050.0	0.0	37.4307	-83.1629	1444	92289
NOBLE	SKYLINE D	053.0	0.0	37.4313	-83.1788	1435	92292
NOBLE	SKYLINE D	060.0	0.0	37.4186	-83.1904	1438	92320
NOBLE	SKYLINE D	035.0	9.0	37.4160	-83.1761	1423	92331
NOBLE	SKYLINE C	000.0	0.0	37.4187	-83.2324	1456	64578
NOBLE	SKYLINE C	006.0	0.0	37.4044	-83.1596	1475	64583
NOBLE	SKYLINE C	009.5	0.0	37.4087	-83.1770	1427	64588
NOBLE	SKYLINE C	036.6	0.0	37.4654	-83.1854	1383	64607
NOBLE	SKYLINE C	018.0	0.0	37.4922	-83.1600	1383	64610
NOBLE	SKYLINE C	044.0	0.0	37.4626	-83.1857	1418	92046
NOBLE	SKYLINE C	013.0	0.0	37.4686	-83.1864	1430	92050
NOBLE	SKYLINE C	072.0	0.0	37.4990	-83.1569	1382	92114
NOBLE	SKYLINE B	008.4	0.0	37.4187	-83.2324	1450	64577
NOBLE	SKYLINE B	016.0	0.0	37.3984	-83.1607	1403	64580
NOBLE	SKYLINE B	015.0	0.0	37.4087	-83.1770	1418	64587
NOBLE	SKYLINE B	024.0	0.0	37.4157	-83.2223	1477	64614
NOBLE	SKYLINE B	030.0	0.0	37.3795	-83.2190	1540	64615
NOBLE	SKYLINE B	035.0	0.0	37.4478	-83.1737	1372	90505
NOBLE	SKYLINE B	020.0	3.5	37.4461	-83.1690	1379	90514
NOBLE	SKYLINE B	058.0	0.0	37.4626	-83.1857	1390	92047
NOBLE	SKYLINE B	064.0	0.0	37.4686	-83.1864	1388	92049
NOBLE	SKYLINE B	018.0	0.0	37.4686	-83.1864	1442	92051
NOBLE	SKYLINE B	005.0	0.0	37.4785	-83.2304	1347	92062
NOBLE	SKYLINE B	036.0	0.0	37.4943	-83.2291	1364	92075
NOBLE	SKYLINE B	048.0	0.0	37.4943	-83.2291	1341	92076
NOBLE	SKYLINE B	021.0	0.0	37.4972	-83.2371	1363	92079
NOBLE	SKYLINE B	016.0	0.0	37.4971	-83.2270	1343	92090
NOBLE	SKYLINE B	024.0	0.0	37.4954	-83.2463	1369	92101
NOBLE	SKYLINE B	022.0	0.0	37.4971	-83.2413	1367	92104
NOBLE	SKYLINE B	080.0	0.0	37.4990	-83.1569	1357	92115
NOBLE	SKYLINE B	036.0	0.0	37.4844	-83.1677	1347	92123
NOBLE	SKYLINE B	061.8	0.0	37.4392	-83.1829	1384	92135
NOBLE	SKYLINE B	049.2	0.0	37.4288	-83.1668	1414	92142
NOBLE	SKYLINE B	049.0	3.0	37.4322	-83.1680	1387	92155
NOBLE	SKYLINE B	020.0	3.0	37.4091	-83.1836	1395	92180
NOBLE	SKYLINE B	030.0	14.0	37.4128	-83.1847	1396	92217
NOBLE	SKYLINE B	040.0	0.0	37.4318	-83.1622	1425	92229
NOBLE	SKYLINE B	047.0	0.0	37.4346	-83.1674	1407	92254
NOBLE	SKYLINE B	055.0	0.0	37.4290	-83.1651	1423	92259
NOBLE	SKYLINE B	083.0	2.0	37.4383	-83.1801	1382	92281
NOBLE	SKYLINE B	022.0	0.0	37.4202	-83.1658	1424	92284
NOBLE	SKYLINE B	046.0	0.0	37.4307	-83.1629	1420	92290
NOBLE	SKYLINE B	085.0	13.0	37.4313	-83.1788	1378	92293
NOBLE	SKYLINE B	053.0	4.0	37.4300	-83.1648	1423	92296
NOBLE	SKYLINE B	083.0	13.0	37.4186	-83.1904	1391	92321
NOBLE	SKYLINE B	019.0	0.0	37.4160	-83.1761	1408	92332
NOBLE	SKYLINE B	071.0	0.0	37.4530	-83.2014	1365	92345
NOBLE	SKYLINE B	068.0	10.0	37.4247	-83.2234	1410	92360

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LOH	ELE.	ID
NOBLE	SKYLINE A	022.8	1.3	37.4973	-83.2368	1332	64570
NOBLE	SKYLINE A	047.0	0.0	37.4339	-83.1677	1379	64573
NOBLE	SKYLINE A	058.8	0.0	37.4187	-83.2324	1436	64576
NOBLE	SKYLINE A	051.0	26.0	37.3984	-83.1607	1387	64579
NOBLE	SKYLINE A	055.0	0.0	37.4297	-83.1639	1425	64581
NOBLE	SKYLINE A	060.0	5.0	37.4044	-83.1596	1437	64582
NOBLE	SKYLINE A	000.0	0.0	37.4087	-83.1770	1385	64586
NOBLE	SKYLINE A	035.4	0.0	37.4044	-83.2276	1455	64592
NOBLE	SKYLINE A	085.2	0.0	37.4694	-83.1576	1370	64594
NOBLE	SKYLINE A	063.2	7.5	37.4897	-83.2277	1320	64597
NOBLE	SKYLINE A	078.5	8.5	37.4660	-83.2334	1346	64603
NOBLE	SKYLINE A	058.3	13.2	37.4651	-83.1855	1342	64606
NOBLE	SKYLINE A	156.0	38.0	37.4683	-83.1406	1350	64608
NOBLE	SKYLINE A	072.0	0.0	37.4922	-83.1600	1362	64609
NOBLE	SKYLINE A	084.0	0.0	37.4157	-83.2223	1452	64613
NOBLE	SKYLINE A	180.0	0.0	37.4777	-83.1711	1364	64618
NOBLE	SKYLINE A	079.8	15.2	37.4658	-83.2302	1350	64604
NOBLE	SKYLINE A	016.6	0.0	37.4461	-83.1690	1370	90515
NOBLE	SKYLINE A	060.0	0.0	37.4055	-83.1553	1400	92015
NOBLE	SKYLINE A	064.0	0.0	37.4686	-83.1864	1361	92048
NOBLE	SKYLINE A	045.0	0.0	37.4041	-83.1485	1300	92059
NOBLE	SKYLINE A	067.0	0.0	37.4785	-83.2304	1319	92063
NOBLE	SKYLINE A	090.0	0.0	37.4793	-83.2344	1335	92064
NOBLE	SKYLINE A	072.0	0.0	37.4793	-83.2364	1330	92065
NOBLE	SKYLINE A	084.0	0.0	37.4800	-83.2402	1330	92066
NOBLE	SKYLINE A	084.0	0.0	37.4820	-83.2287	1332	92067
NOBLE	SKYLINE A	084.0	0.0	37.4774	-83.2333	1319	92068
NOBLE	SKYLINE A	037.0	0.0	37.4728	-83.2418	1339	92072
NOBLE	SKYLINE A	010.0	0.0	37.4972	-83.2371	1335	92080
NOBLE	SKYLINE A	024.0	0.0	37.4995	-83.2267	1328	92085
NOBLE	SKYLINE A	024.0	0.0	37.4954	-83.2463	1340	92102
NOBLE	SKYLINE A	036.0	0.0	37.4971	-83.2413	1344	92103
NOBLE	SKYLINE A	072.0	0.0	37.4768	-83.2454	1330	92107
NOBLE	SKYLINE A	170.0	0.0	37.4826	-83.1667	1370	92110
NOBLE	SKYLINE A	048.0	0.0	37.4844	-83.1677	1342	92122
NOBLE	SKYLINE A	004.0	0.0	37.4392	-83.1829	1373	92136
NOBLE	SKYLINE A	018.2	0.0	37.4288	-83.1668	1377	92143
NOBLE	SKYLINE A	008.0	0.0	37.4288	-83.1668	1364	92144
NOBLE	SKYLINE A	016.0	0.0	37.4322	-83.1680	1367	92156
NOBLE	SKYLINE A	005.0	0.0	37.4322	-83.1680	1358	92157
NOBLE	SKYLINE A	008.0	0.0	37.4091	-83.1836	1382	92181
NOBLE	SKYLINE A	024.0	0.0	37.4990	-83.1569	1352	92211
NOBLE	SKYLINE A	007.0	0.0	37.4128	-83.1847	1389	92218
NOBLE	SKYLINE A	007.0	0.0	37.4128	-83.1847	1382	92219
NOBLE	SKYLINE A	014.0	0.0	37.4346	-83.1767	1380	92237
NOBLE	SKYLINE A	002.0	0.0	37.4346	-83.1674	1380	92255
NOBLE	SKYLINE A	006.0	0.0	37.4346	-83.1674	1376	92257
NOBLE	SKYLINE A	005.0	0.0	37.4290	-83.1651	1375	92260
NOBLE	SKYLINE A	010.0	0.0	37.4259	-83.1680	1380	92271
NOBLE	SKYLINE A	004.0	0.0	37.4383	-83.1801	1378	92282
NOBLE	SKYLINE A	012.0	0.0	37.4312	-83.1710	1379	92309
NOBLE	SKYLINE A	007.0	0.0	37.4186	-83.1904	1382	92322
NOBLE	SKYLINE A	007.0	0.0	37.4160	-83.1761	1395	92333

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	SKYLINE A	000.0	0.0	37.4300	-83.1648	1385	92376
NOBLE	SKYLINE A	000.0	0.0	37.4290	-83.1651	1385	92378
NOBLE	SKYLINE A	006.0	0.0	37.4313	-83.1788	1373	92400
NOBLE	TIPTOP A	005.5	0.0	37.4973	-83.2368	1284	64619
NOBLE	TIPTOP A	031.0	4.0	37.4339	-83.1677	1327	64621
NOBLE	TIPTOP A	044.5	5.5	37.4355	-83.1771	1344	64624
NOBLE	TIPTOP A	013.5	0.0	37.4125	-83.1331	1339	64626
NOBLE	TIPTOP A	017.0	0.0	37.4117	-83.1479	1362	64631
NOBLE	TIPTOP A	015.5	9.0	37.3984	-83.1607	1346	64632
NOBLE	TIPTOP A	030.0	9.0	37.4297	-83.1639	1360	64635
NOBLE	TIPTOP A	017.0	0.0	37.4133	-83.1304	1349	64638
NOBLE	TIPTOP A	013.0	0.0	37.4087	-83.1770	1332	64640
NOBLE	TIPTOP A	026.4	0.0	37.4035	-83.2272	1428	64642
NOBLE	TIPTOP A	042.0	0.0	37.4053	-83.2267	1427	64643
NOBLE	TIPTOP A	007.8	0.0	37.4654	-83.2343	1290	64644
NOBLE	TIPTOP A	039.6	1.8	37.4655	-83.1859	1278	64646
NOBLE	TIPTOP A	000.0	0.0	37.5067	-83.0313	1457	86068
NOBLE	TIPTOP A	032.0	2.7	37.4478	-83.1737	1308	90506
NOBLE	TIPTOP A	033.6	1.5	37.4449	-83.1593	1335	90509
NOBLE	TIPTOP A	024.0	2.5	37.4461	-83.1690	1323	90516
NOBLE	TIPTOP A	036.0	0.0	37.4826	-83.1667	1327	92111
NOBLE	TIPTOP A	022.0	0.0	37.4392	-83.1829	1329	92137
NOBLE	TIPTOP A	047.0	7.0	37.4288	-83.1668	1346	92148
NOBLE	TIPTOP A	042.0	2.5	37.4322	-83.1680	1341	92160
NOBLE	TIPTOP A	009.0	8.0	37.4091	-83.1836	1336	92184
NOBLE	TIPTOP A	004.0	0.0	37.4085	-83.1815	1355	92187
NOBLE	TIPTOP A	034.0	0.0	37.4394	-83.1794	1347	92215
NOBLE	TIPTOP A	009.0	4.0	37.4318	-83.1622	1342	92231
NOBLE	TIPTOP A	045.0	4.0	37.4346	-83.1767	1341	92238
NOBLE	TIPTOP A	031.0	4.0	37.4346	-83.1674	1357	92258
NOBLE	TIPTOP A	030.0	9.0	37.4290	-83.1651	1358	92262
NOBLE	TIPTOP A	036.0	3.0	37.4372	-83.1794	1338	92267
NOBLE	TIPTOP A	036.0	4.0	37.4306	-83.1777	1362	92276
NOBLE	TIPTOP A	028.0	2.0	37.4383	-83.1801	1346	92283
NOBLE	TIPTOP A	041.0	2.0	37.4313	-83.1788	1357	92295
NOBLE	TIPTOP A	030.0	5.0	37.4300	-83.1648	1355	92297
NOBLE	TIPTOP A	048.0	2.0	37.4372	-83.1773	1344	92300
NOBLE	TIPTOP A	040.0	2.0	37.4312	-83.1710	1356	92310
NOBLE	TIPTOP A	006.0	0.0	37.4186	-83.1904	1345	92325
NOBLE	TIPTOP A	038.0	22.0	37.4530	-83.2014	1327	92347
NOBLE	TIPTOP A	000.0	0.0	37.4202	-83.1658	1370	92382
NOBLE	TIPTOP A	000.0	0.0	37.4195	-83.1634	1375	92385
NOBLE	TIPTOP A	000.0	0.0	37.4081	-83.1712	1330	92386
NOBLE	TIPTOP A	000.0	0.0	37.4072	-83.1784	1330	92387
NOBLE	TIPTOP A	000.0	0.0	37.4128	-83.1847	1330	92388
NOBLE	TIPTOP A	000.0	0.0	37.4247	-83.2234	1371	92397
NOBLE	HINDMAN	000.0	0.0	37.4973	-83.2368	1219	64660
NOBLE	HINDMAN	000.0	0.0	37.4339	-83.1677	1250	64661
NOBLE	HINDMAN	026.0	0.0	37.4355	-83.1771	1279	64662
NOBLE	HINDMAN	027.0	0.0	37.4125	-83.1168	1248	64663
NOBLE	HINDMAN	000.0	0.0	37.4357	-83.2380	1269	64664
NOBLE	HINDMAN	000.0	0.0	37.4297	-83.2323	1291	64665

QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	HINDMAN	018.0	0.0	37.4187	-83.2324	1300	64666
NOBLE	HINDMAN	025.2	2.4	37.4165	-83.2400	1299	64667
NOBLE	HINDMAN	037.0	0.0	37.4117	-83.1479	1257	64668
NOBLE	HINDMAN	012.0	0.0	37.4406	-83.1489	1270	64673
NOBLE	HINDMAN	030.0	0.0	37.4297	-83.1639	1273	64674
NOBLE	HINDMAN	011.0	0.0	37.4222	-83.1642	1304	64675
NOBLE	HINDMAN	027.0	0.0	37.4133	-83.1329	1257	64676
NOBLE	HINDMAN	026.0	0.0	37.4084	-83.1633	1307	64677
NOBLE	HINDMAN	024.0	0.0	37.4081	-83.1714	1287	64678
NOBLE	HINDMAN	020.0	0.0	37.4081	-83.1784	1280	64679
NOBLE	HINDMAN	033.0	14.0	37.4101	-83.1936	1258	64680
NOBLE	HINDMAN	048.5	21.5	37.4075	-83.2124	1240	64681
NOBLE	HINDMAN	045.6	1.7	37.4049	-83.2237	1270	64682
NOBLE	HINDMAN	005.5	0.0	37.4695	-83.1685	1242	64685
NOBLE	HINDMAN	032.5	9.2	37.4648	-83.1865	1230	64686
NOBLE	HINDMAN	033.0	1.5	37.4650	-83.1428	1284	64687
NOBLE	HINDMAN	018.0	0.0	37.3976	-83.2340	1309	64688
NOBLE	HINDMAN	030.0	0.0	37.3948	-83.2337	1301	64689
NOBLE	HINDMAN	010.0	0.0	37.4783	-83.1729	1278	64690
NOBLE	HINDMAN	042.0	0.0	37.3777	-83.2251	1304	09230
NOBLE	HINDMAN	024.0	0.0	37.6023	-83.1971	1106	31144
NOBLE	HINDMAN	036.0	1.8	37.3861	-83.2287	1280	64683
NOBLE	HINDMAN	024.0	1.5	37.4478	-83.1737	1248	90507
NOBLE	HINDMAN	022.0	0.3	37.4449	-83.1593	1269	90510
NOBLE	HINDMAN	025.0	1.0	37.4461	-83.1690	1266	90517
NOBLE	HINDMAN	036.0	0.0	37.3886	-83.2351	1307	92003
NOBLE	HINDMAN	041.0	0.0	37.3931	-83.2279	1307	92010
NOBLE	HINDMAN	045.0	0.0	37.4055	-83.1553	1310	92014
NOBLE	HINDMAN	040.8	0.0	37.3757	-83.2279	1310	92018
NOBLE	HINDMAN	007.0	0.0	37.3889	-83.2266	1303	92020
NOBLE	HINDMAN	052.0	0.0	37.3889	-83.2266	1261	92021
NOBLE	HINDMAN	043.0	0.0	37.3892	-83.2179	1285	92034
NOBLE	HINDMAN	037.0	0.0	37.3853	-83.2241	1301	92039
NOBLE	HINDMAN	027.0	0.0	37.4288	-83.1668	1276	92149
NOBLE	HINDMAN	024.0	0.0	37.4322	-83.1680	1269	92161
NOBLE	HINDMAN	038.0	14.0	37.4126	-83.1950	1286	92169
NOBLE	HINDMAN	024.0	0.0	37.4081	-83.1712	1283	92173
NOBLE	HINDMAN	027.0	0.0	37.4085	-83.1815	1290	92188
NOBLE	HINDMAN	020.0	0.0	37.4072	-83.1784	1281	92194
NOBLE	HINDMAN	048.0	0.0	37.4092	-83.1844	1270	92199
NOBLE	HINDMAN	028.0	0.0	37.4092	-83.1849	1286	92204
NOBLE	HINDMAN	016.0	0.0	37.4089	-83.1678	1294	92209
NOBLE	HINDMAN	027.0	0.0	37.4394	-83.1794	1277	92216
NOBLE	HINDMAN	022.0	0.0	37.4128	-83.1847	1282	92222
NOBLE	HINDMAN	027.0	0.0	37.4318	-83.1622	1270	92233
NOBLE	HINDMAN	026.0	0.0	37.4346	-83.1767	1277	92239
NOBLE	HINDMAN	033.0	14.0	37.4107	-83.1930	1279	92241
NOBLE	HINDMAN	024.0	0.0	37.4195	-83.1634	1305	92244
NOBLE	HINDMAN	024.0	0.0	37.4322	-83.1600	1274	92248
NOBLE	HINDMAN	030.0	0.0	37.4290	-83.1651	1272	92263
NOBLE	HINDMAN	023.0	0.0	37.4372	-83.1794	1271	92268
NOBLE	HINDMAN	026.0	0.0	37.4259	-83.1680	1288	92273
NOBLE	HINDMAN	044.0	0.0	37.4306	-83.1777	1277	92277
NOBLE	HINDMAN	026.0	0.0	37.4202	-83.1658	1302	92285

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	HINDMAN	027.0	0.0	37.4300	-83.1648	1281	92298
NOBLE	HINDMAN	027.0	0.0	37.4372	-83.1773	1279	92307
NOBLE	HINDMAN	028.0	0.0	37.4312	-83.1710	1284	92311
NOBLE	HINDMAN	024.0	0.0	37.4309	-83.1746	1293	92313
NOBLE	HINDMAN	027.0	0.0	37.4344	-83.1752	1277	92316
NOBLE	HINDMAN	024.0	0.0	37.4186	-83.1904	1290	92326
NOBLE	HINDMAN	020.0	0.0	37.4160	-83.1761	1276	92334
NOBLE	HINDMAN	026.0	0.0	37.4530	-83.2014	1267	92348
NOBLE	HINDMAN	015.0	4.0	37.4247	-83.2234	1280	92361
NOBLE	HINDMAN	048.0	0.0	37.4118	-83.1885	1270	92402
NOBLE	HINDMAN	026.0	0.0	37.4392	-83.1829	1260	92403
NOBLE	FRANCIS	029.7	9.7	37.4648	-83.2337	1169	64496
NOBLE	FRANCIS	036.0	18.6	37.3970	-83.2258	1234	64497
NOBLE	FRANCIS	025.0	12.5	37.4222	-83.1642	1222	64498
NOBLE	FRANCIS	064.0	8.0	37.3965	-83.1584	1220	64670
NOBLE	FRANCIS	059.0	5.5	37.3984	-83.1607	1225	64671
NOBLE	FRANCIS	038.5	10.2	37.4973	-83.2368	1135	64691
NOBLE	FRANCIS	048.0	15.0	37.4355	-83.1771	1198	64692
NOBLE	FRANCIS	060.5	14.0	37.4125	-83.1331	1142	64693
NOBLE	FRANCIS	045.6	9.8	37.4357	-83.2380	1186	64694
NOBLE	FRANCIS	036.0	4.8	37.4297	-83.2323	1206	64695
NOBLE	FRANCIS	048.0	18.0	37.4191	-83.2457	1189	64697
NOBLE	FRANCIS	051.6	18.0	37.4165	-83.2400	1219	64699
NOBLE	FRANCIS	038.4	22.8	37.4124	-83.2425	1223	64701
NOBLE	FRANCIS	015.6	3.6	37.4141	-83.2469	1191	64702
NOBLE	FRANCIS	064.0	9.0	37.4117	-83.1479	1191	64704
NOBLE	FRANCIS	054.0	14.0	37.4406	-83.1489	1165	64707
NOBLE	FRANCIS	056.0	11.5	37.4297	-83.1639	1214	64709
NOBLE	FRANCIS	057.0	12.0	37.4133	-83.1304	1143	64711
NOBLE	FRANCIS	063.7	11.5	37.4084	-83.1633	1205	64713
NOBLE	FRANCIS	055.5	18.2	37.4081	-83.1714	1184	64715
NOBLE	FRANCIS	058.5	12.0	37.4081	-83.1784	1175	64717
NOBLE	FRANCIS	055.0	11.5	37.4101	-83.1936	1175	64719
NOBLE	FRANCIS	050.5	16.5	37.4445	-83.2274	1155	64720
NOBLE	FRANCIS	042.6	13.2	37.3889	-83.2266	1220	64721
NOBLE	FRANCIS	060.6	1.8	37.3863	-83.2312	1208	64724
NOBLE	FRANCIS	020.5	0.0	37.4693	-83.1713	1151	64725
NOBLE	FRANCIS	004.0	0.0	37.4791	-83.2177	1183	64727
NOBLE	FRANCIS	066.0	11.5	37.3695	-83.2046	1202	64729
NOBLE	FRANCIS	059.5	23.6	37.3958	-83.1250	1185	64730
NOBLE	FRANCIS	053.7	41.5	37.4641	-83.1872	1156	64731
NOBLE	FRANCIS	016.2	2.4	37.4621	-83.1491	1180	64732
NOBLE	FRANCIS	042.0	6.0	37.3913	-83.1308	1218	64733
NOBLE	FRANCIS	030.0	0.0	37.3962	-83.1336	1202	64734
NOBLE	FRANCIS	022.0	0.0	37.4763	-83.1716	1171	64735
NOBLE	FRANCIS	005.4	0.0	37.3863	-83.2312	1205	90043
NOBLE	FRANCIS	041.0	26.6	37.4478	-83.1737	1160	90508
NOBLE	FRANCIS	031.0	11.0	37.4449	-83.1593	1162	90512
NOBLE	FRANCIS	044.0	23.0	37.4461	-83.1690	1176	90518
NOBLE	FRANCIS	062.0	0.0	37.3886	-83.2351	1236	92001
NOBLE	FRANCIS	055.2	0.0	37.3931	-83.2279	1235	92009
NOBLE	FRANCIS	045.0	0.0	37.4055	-83.1553	1180	92013
NOBLE	FRANCIS	055.2	0.0	37.3757	-83.2279	1237	92019

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LOD	ELE.	ID
NOBLE	FRANCIS	050.0	0.0	37.3889	-83.2266	1231	92023
NOBLE	FRANCIS	074.0	0.0	37.3777	-83.2251	1222	92028
NOBLE	FRANCIS	077.0	0.0	37.4180	-83.1273	1173	92032
NOBLE	FRANCIS	066.0	0.0	37.3892	-83.2179	1215	92036
NOBLE	FRANCIS	074.0	0.0	37.3853	-83.2241	1222	92040
NOBLE	FRANCIS	043.0	0.0	37.3839	-83.2303	1209	92043
NOBLE	FRANCIS	045.0	0.0	37.4041	-83.1485	1200	92060
NOBLE	FRANCIS	054.0	0.0	37.4949	-83.1569	1200	92119
NOBLE	FRANCIS	060.0	0.0	37.4951	-83.1603	1201	92120
NOBLE	FRANCIS	054.0	22.0	37.4392	-83.1829	1139	92130
NOBLE	FRANCIS	037.0	23.0	37.4288	-83.1668	1193	92150
NOBLE	FRANCIS	043.0	26.0	37.4322	-83.1680	1182	92162
NOBLE	FRANCIS	053.0	11.0	37.4126	-83.1950	1204	92170
NOBLE	FRANCIS	057.0	17.0	37.4081	-83.1712	1180	92174
NOBLE	FRANCIS	063.0	11.0	37.4085	-83.1815	1187	92189
NOBLE	FRANCIS	059.0	12.0	37.4072	-83.1784	1175	92195
NOBLE	FRANCIS	058.0	8.0	37.4118	-83.1885	1198	92200
NOBLE	FRANCIS	061.0	7.0	37.4092	-83.1849	1185	92205
NOBLE	FRANCIS	065.0	15.0	37.4089	-83.1678	1191	92212
NOBLE	FRANCIS	056.0	13.0	37.4128	-83.1847	1190	92223
NOBLE	FRANCIS	048.0	13.0	37.4318	-83.1622	1188	92234
NOBLE	FRANCIS	049.0	14.0	37.4346	-83.1767	1191	92240
NOBLE	FRANCIS	055.0	12.0	37.4107	-83.1930	1196	92242
NOBLE	FRANCIS	067.0	7.0	37.4195	-83.1634	1209	92245
NOBLE	FRANCIS	053.0	16.0	37.4322	-83.1600	1190	92249
NOBLE	FRANCIS	056.0	12.0	37.4290	-83.1651	1201	92264
NOBLE	FRANCIS	059.0	16.0	37.4372	-83.1794	1182	92269
NOBLE	FRANCIS	045.0	19.0	37.4259	-83.1680	1202	92274
NOBLE	FRANCIS	045.0	15.0	37.4306	-83.1777	1206	92278
NOBLE	FRANCIS	051.0	21.0	37.4202	-83.1658	1218	92286
NOBLE	FRANCIS	051.0	17.0	37.4300	-83.1648	1198	92299
NOBLE	FRANCIS	069.0	12.0	37.4372	-83.1773	1189	92308
NOBLE	FRANCIS	065.0	9.0	37.4312	-83.1710	1193	92312
NOBLE	FRANCIS	043.0	20.0	37.4309	-83.1746	1208	92314
NOBLE	FRANCIS	061.0	16.0	37.4344	-83.1752	1186	92317
NOBLE	FRANCIS	040.0	25.0	37.4186	-83.1904	1209	92327
NOBLE	FRANCIS	045.0	32.0	37.4160	-83.1761	1185	92335
NOBLE	FRANCIS	049.0	31.0	37.4530	-83.2014	1178	92349
NOBLE	FRANCIS	062.0	28.0	37.4247	-83.2234	1173	92364
NOBLE	FRANCIS	054.0	22.0	37.4392	-83.1829	1164	92404
NOBLE	FRANCIS	000.0	0.0	37.4372	-83.1794	1170	92932
NOBLE	FRANCIS	055.6	0.0	37.4640	-83.1871	1156	93068
NOBLE	FRANCIS	060.2	7.1	37.3971	-83.1596	1220	93069
NOBLE	HAZARD NO.7 B	029.0	0.0	37.4085	-83.1815	1160	92191
NOBLE	HAZARD NO.7 B	000.0	0.0	37.4118	-83.1885	1139	92390
NOBLE	HAZARD NO.7 B	028.0	0.0	37.4072	-83.1784	1145	92401
NOBLE	HAZARD NO.7 B	041.0	0.0	37.4379	-83.1376	1142	64745
NOBLE	HAZARD NO.7 B	000.0	0.0	37.4222	-83.1642	1170	64751
NOBLE	HAZARD NO.7 B	004.0	0.0	37.4084	-83.1633	1124	64755
NOBLE	HAZARD NO.7 B	028.0	0.0	37.4081	-83.1784	1145	64758
NOBLE	HAZARD NO.7 A	014.0	2.0	37.4449	-83.1593	1108	90513
NOBLE	HAZARD NO.7 A	049.0	0.0	37.3886	-83.2351	1197	92000
NOBLE	HAZARD NO.7 A	049.0	0.0	37.3931	-83.2279	1183	92008

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

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QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	HAZARD NO.7 A	054.0	0.0	37.3757	-83.2279	1180	92016
NOBLE	HAZARD NO.7 A	049.0	0.0	37.3889	-83.2266	1190	92025
NOBLE	HAZARD NO.7 A	084.0	0.0	37.3777	-83.2251	1193	92026
NOBLE	HAZARD NO.7 A	066.0	127.0	37.4180	-83.1273	1132	92033
NOBLE	HAZARD NO.7 A	054.0	0.0	37.3892	-83.2179	1173	92038
NOBLE	HAZARD NO.7 A	098.0	0.0	37.3853	-83.2241	1196	92041
NOBLE	HAZARD NO.7 A	054.0	0.0	37.4041	-83.1485	1160	92061
NOBLE	HAZARD NO.7 A	060.0	24.0	37.4081	-83.1712	1140	92178
NOBLE	HAZARD NO.7 A	031.5	5.0	37.4085	-83.1815	1145	92193
NOBLE	HAZARD NO.7 A	028.0	0.0	37.3405	-83.1784	1145	92197
NOBLE	HAZARD NO.7 A	034.0	0.0	37.4072	-83.1784	1129	92198
NOBLE	HAZARD NO.7 A	002.0	0.0	37.4118	-83.1885	1133	92202
NOBLE	HAZARD NO.7 A	045.0	70.0	37.4092	-83.1849	1147	92207
NOBLE	HAZARD NO.7 A	023.0	7.0	37.4089	-83.1678	1132	92214
NOBLE	HAZARD NO.7 A	022.0	34.0	37.4318	-83.1622	1134	92235
NOBLE	HAZARD NO.7 A	003.0	0.0	37.4195	-83.1634	1164	92247
NOBLE	HAZARD NO.7 A	013.0	0.0	37.4322	-83.1600	1129	92251
NOBLE	HAZARD NO.7 A	019.0	0.0	37.4160	-83.1761	1119	92337
NOBLE	HAZARD NO.7 A	014.0	0.0	37.4530	-83.2014	1120	92351
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4290	-83.1651	1130	92379
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4259	-83.1514	1140	92380
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4202	-83.1658	1150	92384
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4128	-83.1847	1135	92389
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4107	-83.1930	1130	92391
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4344	-83.1752	1120	92394
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4322	-83.1680	1115	92395
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4392	-83.1829	1120	92396
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4372	-83.1794	1120	92933
NOBLE	HAZARD NO.7 A	079.0	9.0	37.3772	-83.2170	1166	94016
NOBLE	HAZARD NO.7 A	072.0	20.0	37.3789	-83.2172	1180	94017
NOBLE	HAZARD NO.7 A	078.0	18.0	37.3793	-83.2170	1190	94018
NOBLE	HAZARD NO.7 A	084.0	9.0	37.3754	-83.2177	1165	94020
NOBLE	HAZARD NO.7 A	045.0	0.0	37.3965	-83.1584	1156	64705
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4357	-83.2380	1120	64737
NOBLE	HAZARD NO.7 A	019.2	0.0	37.4191	-83.2457	1146	64738
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4165	-83.2400	1115	64739
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4124	-83.2425	1165	64740
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4141	-83.2469	1142	64741
NOBLE	HAZARD NO.7 A	042.0	0.0	37.4379	-83.1376	1124	64744
NOBLE	HAZARD NO.7 A	040.0	0.0	37.4117	-83.1479	1119	64746
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4406	-83.1489	1130	64749
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4297	-83.1639	1150	64750
NOBLE	HAZARD NO.7 A	078.0	1.0	37.4133	-83.1304	1102	64752
NOBLE	HAZARD NO.7 A	004.0	0.0	37.4084	-83.1633	1123	64754
NOBLE	HAZARD NO.7 A	059.5	24.0	37.4081	-83.1714	1144	64756
NOBLE	HAZARD NO.7 A	034.0	0.0	37.4081	-83.1784	1128	64757
NOBLE	HAZARD NO.7 A	000.0	0.0	37.4101	-83.1936	1117	64759
NOBLE	HAZARD NO.7 A	012.0	1.2	37.3995	-83.2306	1172	64760
NOBLE	HAZARD NO.7 A	042.6	0.6	37.3950	-83.2324	1170	64761
NOBLE	HAZARD NO.7 A	066.0	15.6	37.3800	-83.2304	1160	64764
NOBLE	HAZARD NO.7 A	078.5	37.4	37.3697	-83.2044	1158	64765
NOBLE	HAZARD NO.7 A	055.2	6.0	37.3947	-83.1347	1147	64766
NOBLE	HADDIX B	083.0	6.0	37.4125	-83.1331	1039	64742

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	HADDIX B	009.5	0.0	37.4973	-83.2368	0966	64787
NOBLE	HADDIX B	004.7	0.0	37.4076	-83.2140	1070	64791
NOBLE	HADDIX B	017.4	0.0	37.4002	-83.2328	1035	64793
NOBLE	HADDIX B	001.8	0.0	37.4002	-83.2331	1029	64795
NOBLE	HADDIX B	003.5	0.0	37.4662	-83.1749	1002	64796
NOBLE	HADDIX B	020.5	0.0	37.4756	-83.2169	1020	64797
NOBLE	HADDIX B	028.7	7.2	37.3945	-83.1864	1050	64801
NOBLE	HADDIX B	031.0	4.7	37.3922	-83.1954	1040	64804
NOBLE	HADDIX B	004.0	0.0	37.4597	-83.1537	1033	64806
NOBLE	HADDIX B	003.0	0.0	37.4746	-83.1354	1023	64807
NOBLE	HADDIX B	001.5	0.0	37.4718	-83.1740	0998	64810
NOBLE	HADDIX B	017.0	0.0	37.3968	-83.2309	1073	64814
NOBLE	HADDIX B	030.0	0.0	37.4202	-83.1721	1010	64816
NOBLE	HADDIX B	008.0	0.0	37.4172	-83.1809	1008	64818
NOBLE	HADDIX B	008.0	0.0	37.4160	-83.1761	1012	92339
NOBLE	HADDIX B	036.0	0.0	37.4247	-83.2234	1034	92370
NOBLE	LOWER HAMLIN	003.0	0.0	37.4416	-83.2472	0897	64827
NOBLE	LOWER HAMLIN	011.4	0.0	37.4611	-83.1932	0881	64832
NOBLE	LOWER HAMLIN	005.5	0.0	37.4514	-83.2327	0890	64833
NOBLE	LOWER HAMLIN	003.5	0.0	37.4643	-83.1726	0900	64834
NOBLE	LOWER HAMLIN	010.2	2.5	37.4682	-83.2158	0900	64835
NOBLE	LOWER HAMLIN	005.5	0.5	37.4611	-83.2334	0884	64836
NOBLE	LOWER HAMLIN	007.2	0.0	37.4614	-83.2332	0897	64837
NOBLE	LOWER HAMLIN	016.0	0.0	37.3885	-83.2428	0919	64838
NOBLE	LOWER HAMLIN	007.0	0.0	37.4384	-83.1732	0905	64849
NOBLE	LOWER HAMLIN	012.0	3.0	37.4632	-83.1316	0876	64851
NOBLE	LOWER HAMLIN	018.0	12.0	37.4442	-83.1653	0906	64855
NOBLE	LOWER HAMLIN	012.0	0.0	37.4585	-83.1987	0870	64857
NOBLE	LOWER HAMLIN	012.0	0.0	37.3836	-83.2373	0915	64860
NOBLE	LOWER HAMLIN	007.0	5.0	37.4171	-83.2144	0904	64861
NOBLE	LOWER HAMLIN	015.0	4.0	37.3894	-83.2464	0922	64872
NOBLE	LOWER HAMLIN	009.0	0.0	37.3963	-83.1815	0907	64842
NOBLE	LOWER HAMLIN	009.0	0.0	37.4638	-83.1341	0922	64853
NOBLE	LOWER HAMLIN	006.0	0.0	37.4442	-83.1653	0908	64856
NOBLE	LOWER HAMLIN	008.0	0.0	37.3912	-83.1679	0930	64871
NOBLE	LOWER HAMLIN	004.0	0.0	37.4362	-83.1715	0922	90018
NOBLE	LOWER HAMLIN	004.0	0.0	37.4384	-83.1732	0906	90019
NOBLE	LOWER HAMLIN	003.0	0.0	37.3963	-83.1815	0908	90020
NOBLE	LOWER HAMLIN	005.0	0.0	37.4160	-83.1761	0857	92342
NOBLE	LOWER HAMLIN	007.0	0.0	37.4530	-83.2014	0879	92355
NOBLE	LOWER HAMLIN	002.0	0.0	37.4530	-83.2014	0869	92357
NOBLE	LOWER HAMLIN	002.0	0.0	37.4530	-83.2014	0868	92358
NOBLE	LOWER HAMLIN	004.0	0.0	37.4247	-83.2234	0888	92373
NOBLE	FIRE CLAY RIDER	009.0	0.0	37.4443	-83.2492	0879	64874
NOBLE	FIRE CLAY RIDER	006.5	0.0	37.4522	-83.2398	0843	64875
NOBLE	FIRE CLAY RIDER	012.4	1.2	37.3940	-83.2131	0892	64879
NOBLE	FIRE CLAY RIDER	011.5	1.7	37.3930	-83.2008	0900	64882
NOBLE	FIRE CLAY RIDER	012.0	0.0	37.4661	-83.2495	0850	64884
NOBLE	FIRE CLAY RIDER	014.0	1.0	37.4409	-83.2274	0871	64889
NOBLE	FIRE CLAY RIDER	010.8	1.8	37.3940	-83.2131	0894	64880
NOBLE	FIRE CLAY RIDER	023.0	0.0	37.4160	-83.1761	0835	92343
NOBLE	FIRE CLAY RIDER	029.0	0.0	37.4530	-83.2014	0851	92359

KENTUCKY GEOLOGICAL SURVEY COAL THICKNESS DATA

QUAD	COAL	COAL THICKNESS	PTG. THK.	LAT	LON	ELE.	ID
NOBLE	FIRE CLAY RIDER	004.0	0.0	37.4247	-83.2234	0857	92374
NOBLE	FIRE CLAY	003.5	0.0	37.4973	-83.2368	0861	64873
NOBLE	FIRE CLAY	002.5	0.0	37.4522	-83.2398	0849	64876
NOBLE	FIRE CLAY	009.0	0.5	37.4600	-83.2268	0860	64877
NOBLE	FIRE CLAY	016.7	0.0	37.4514	-83.2395	0850	64881
NOBLE	FIRE CLAY	015.0	12.0	37.4309	-83.1871	0884	64886
NOBLE	FIRE CLAY	006.0	0.0	37.4274	-83.1995	0870	64887
NOBLE	FIRE CLAY	010.0	0.0	37.4173	-83.2133	0864	64888
NOBLE	FIRE CLAY	003.5	0.0	37.4591	-83.2225	0865	64891
NOBLE	FIRE CLAY	001.2	0.0	37.4973	-83.2368	0850	64893
NOBLE	FIRE CLAY	001.3	0.0	37.4337	-83.2019	0858	64895
NOBLE	FIRE CLAY	010.8	0.0	37.4568	-83.1958	0859	64896
NOBLE	FIRE CLAY	004.8	0.0	37.3971	-83.2120	0883	64901
NOBLE	FIRE CLAY	022.5	4.2	37.3924	-83.1581	0888	64902
NOBLE	FIRE CLAY	018.0	0.0	37.4337	-83.1883	0860	64905
NOBLE	FIRE CLAY	012.0	0.0	37.4394	-83.1726	0865	64906
NOBLE	FIRE CLAY	006.0	0.0	37.4075	-83.1965	0862	64907
NOBLE	FIRE CLAY	054.0	11.0	37.3587	-83.0296	1098	16687
NOBLE	FIRE CLAY	016.0	0.0	37.4160	-83.1761	0798	92344
NOBLE	FIRE CLAY	003.0	0.0	37.4247	-83.2234	0842	92375

APPENDIX B - Coal Resource
Maps by Bed, Thickness, and Overburden

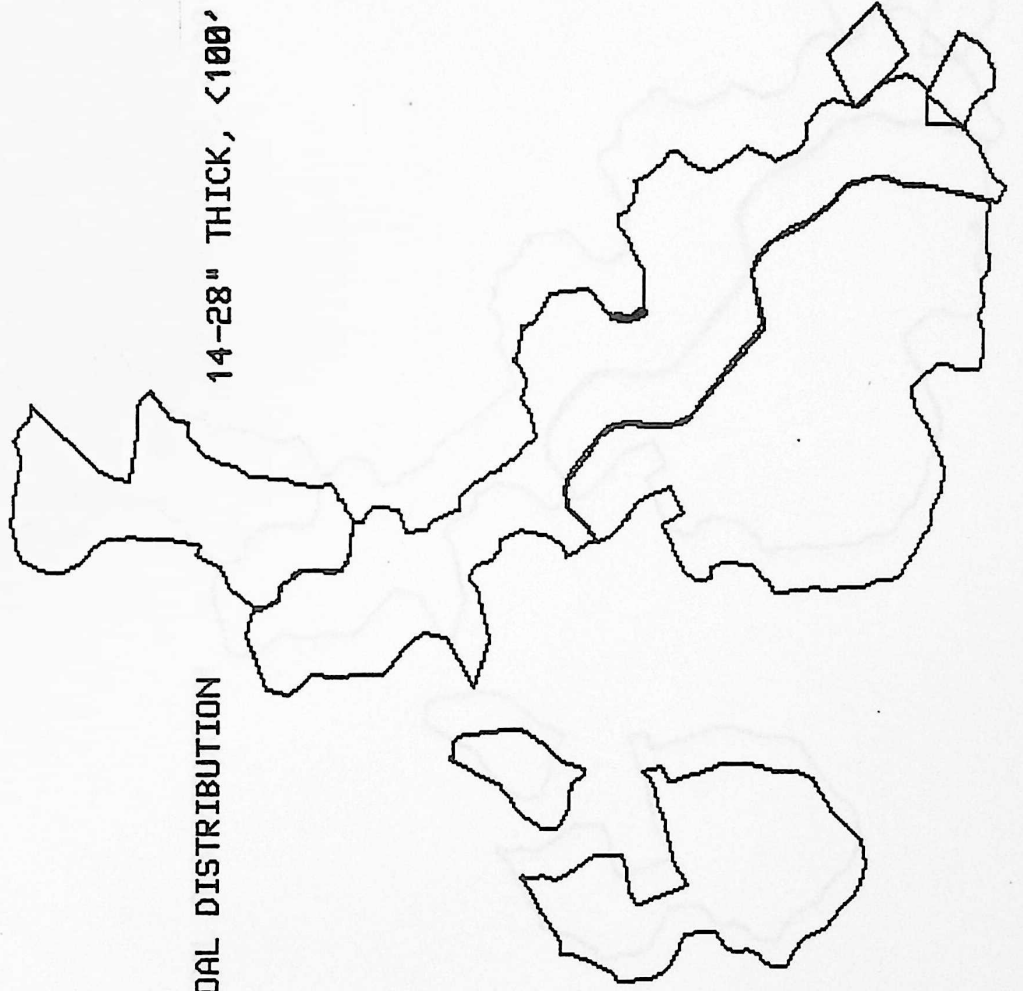
INDEX

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Skyline D	4	34
Skyline C	1	39
Skyline B	7	41
Skyline A	7	49
Tiptop	4	57
Hindman	6	62
Francis	10	69
Hazard 7B	3	80
Hazard 7A	5	84
Haddix	4	90
Hamlin	2	95
Fire Clay Rider	4	98
Fire Clay	2	103

RESOURCE MAPS FOR THE
SKYLINE E COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

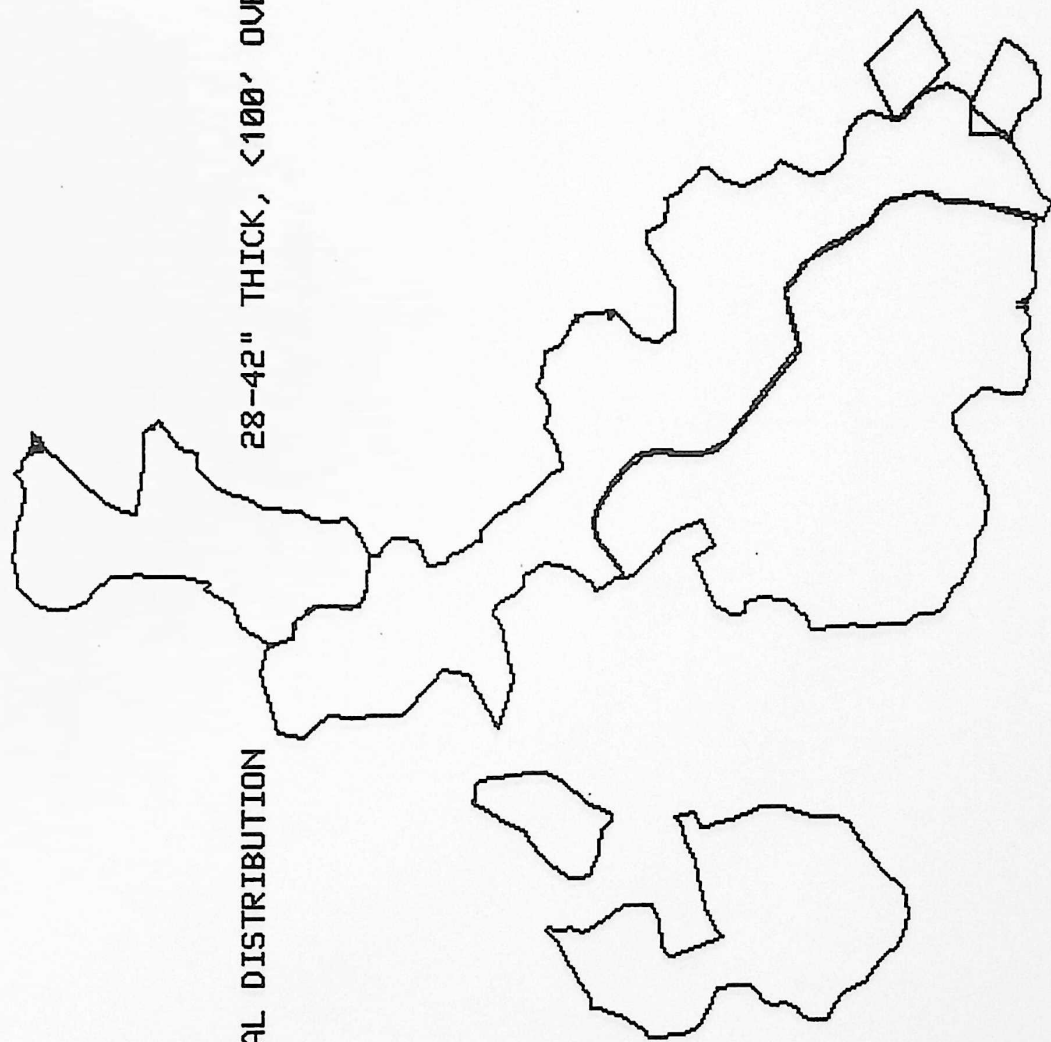
14-28" THICK, <100' OVERBURDEN

SKYLINE E COAL DISTRIBUTION



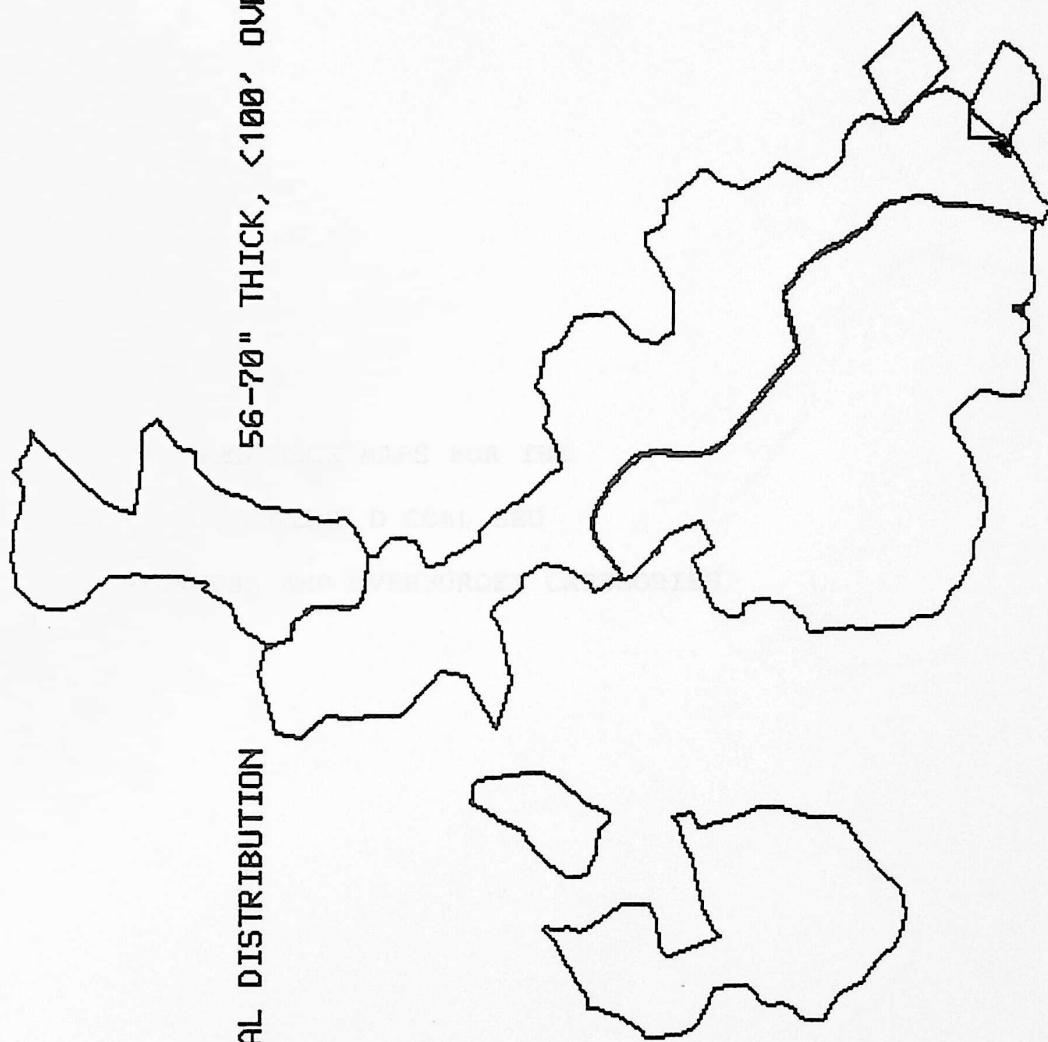
28-42" THICK, <100' OVERBURDEN

SKYLINE E COAL DISTRIBUTION



56-70" THICK, <100' OVERBURDEN

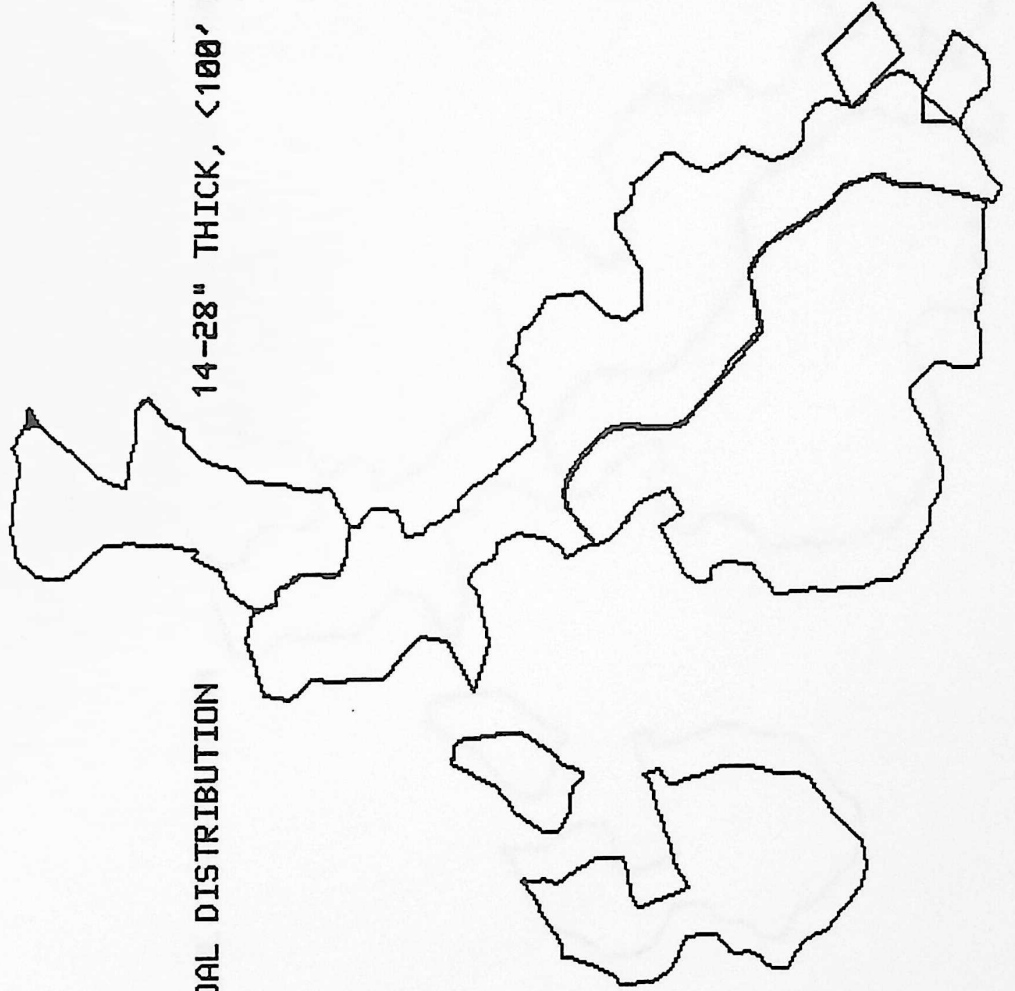
SKYLINE E COAL DISTRIBUTION



RESOURCE MAPS FOR THE
SKYLINE D COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

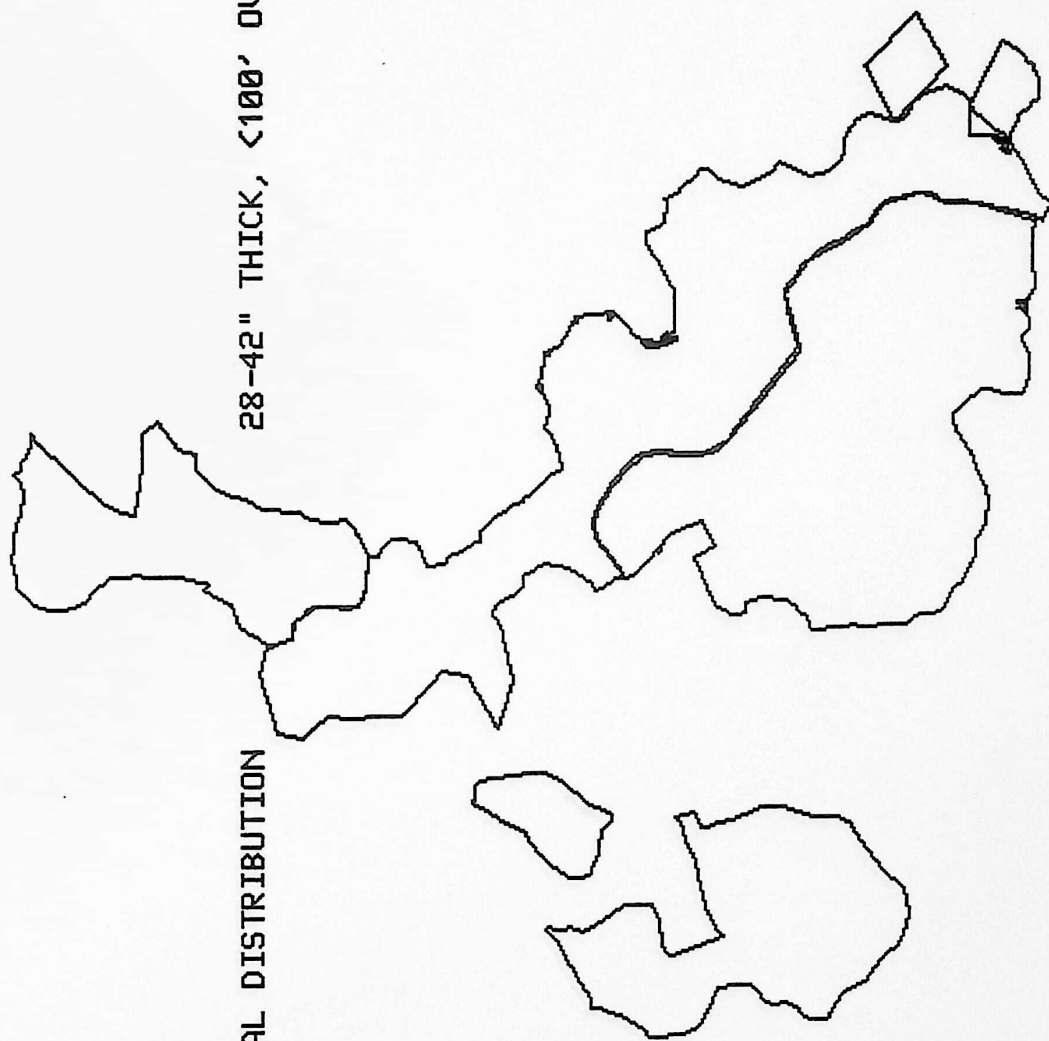
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SKYLINE D COAL DISTRIBUTION



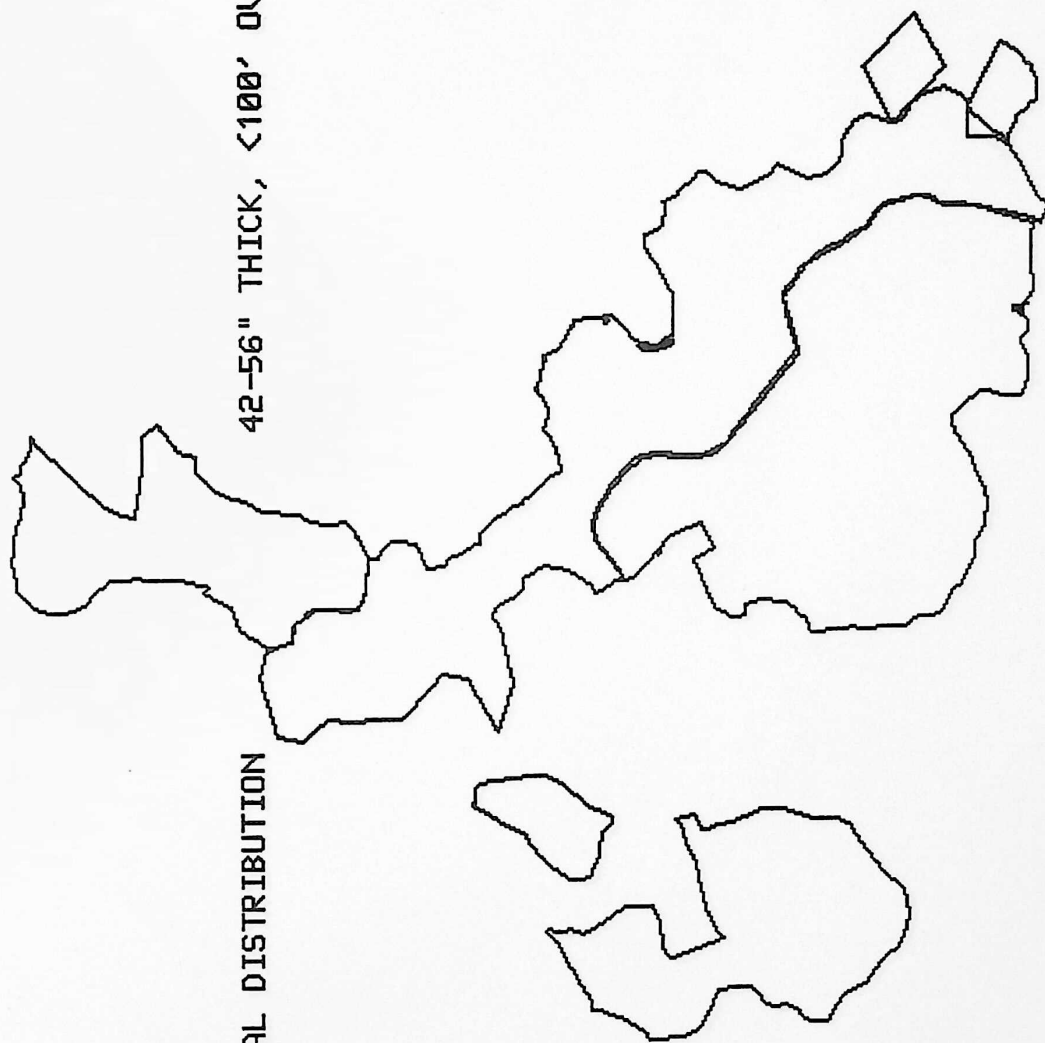
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SKYLINE D COAL DISTRIBUTION



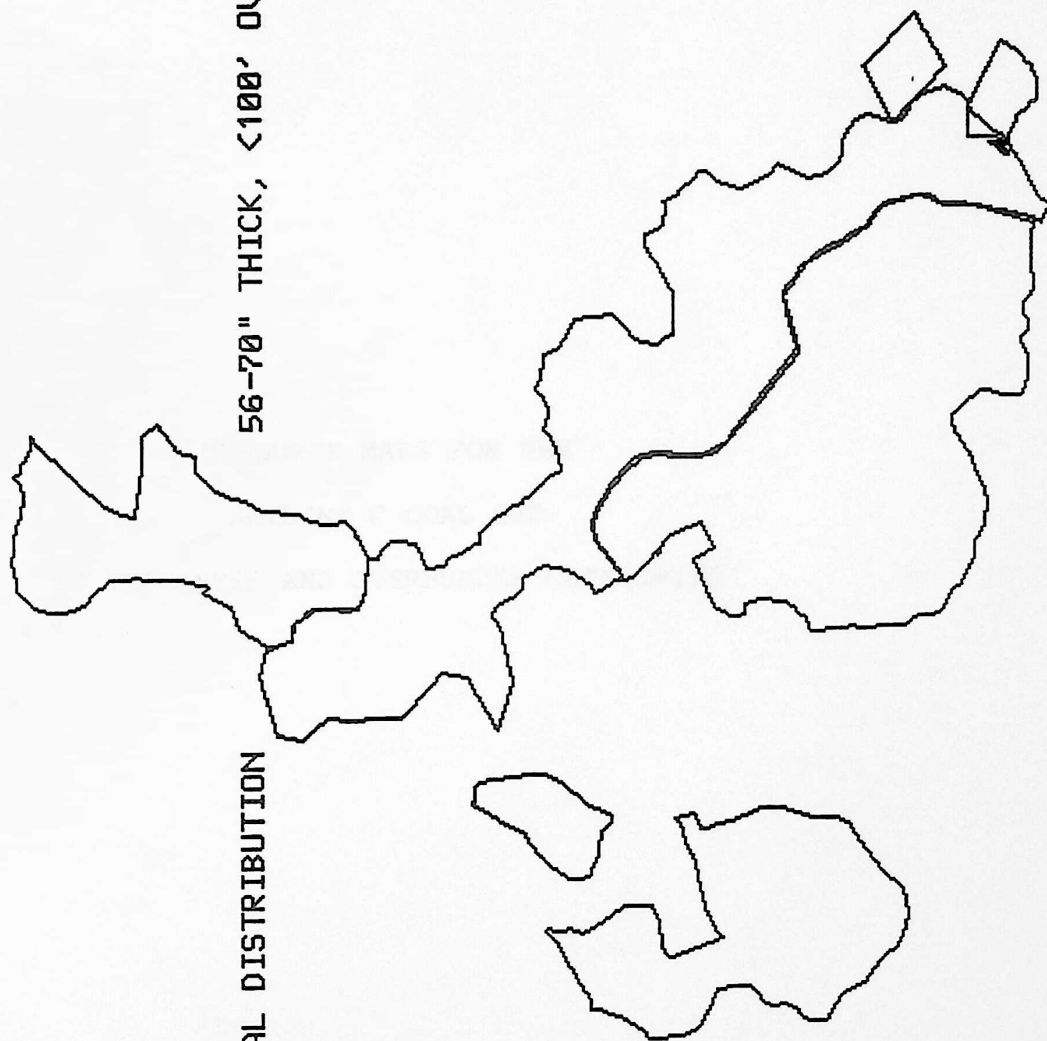
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SKYLINE D COAL DISTRIBUTION



SKYLINE D COAL DISTRIBUTION

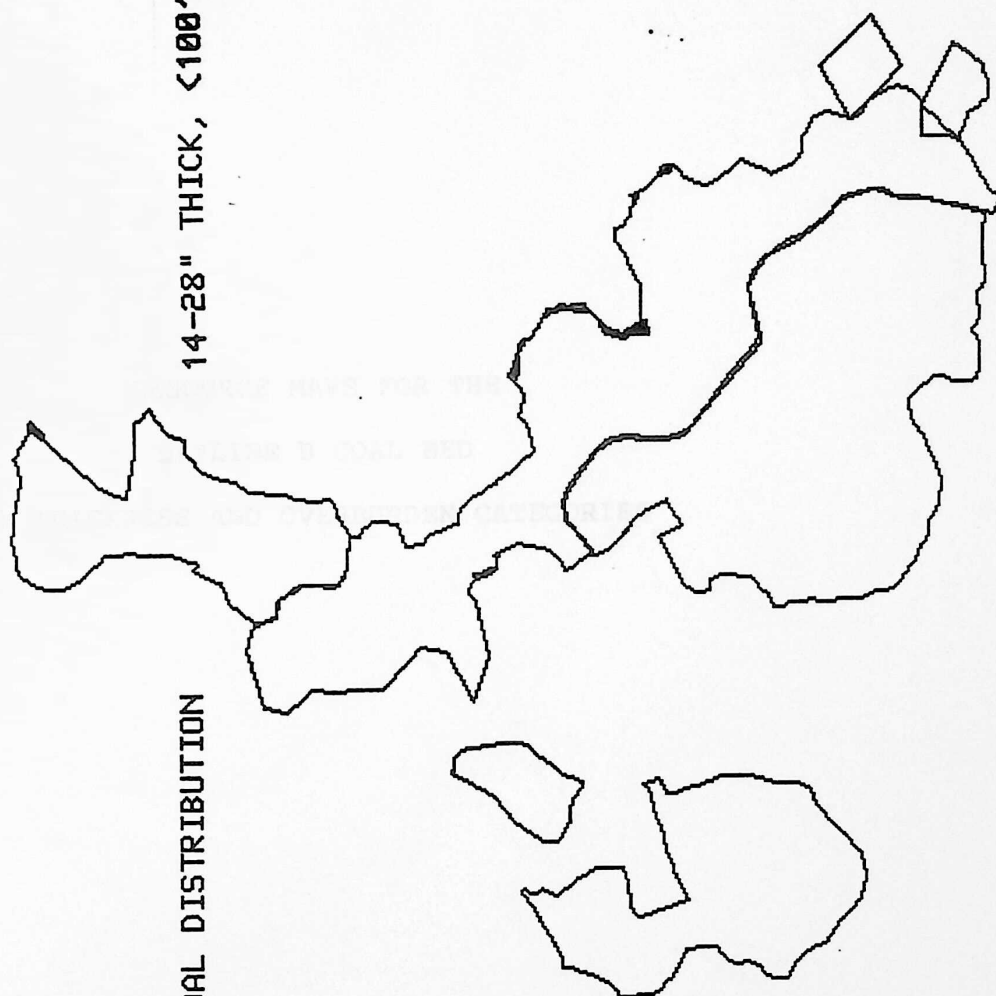
56-70" THICK, <100' OVERBURDEN



RESOURCE MAPS FOR THE
SKYLINE C COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

14-28" THICK, <100' OVERBURDEN

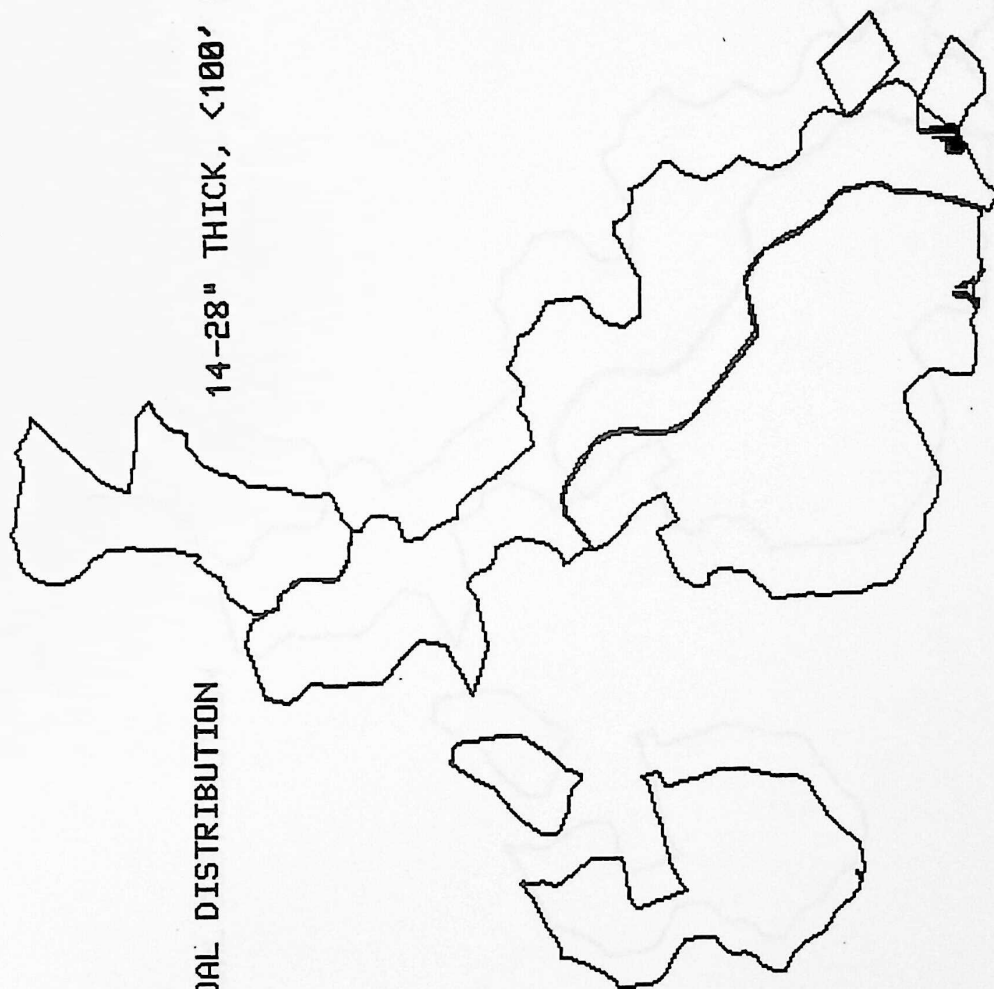
SKYLINE C COAL DISTRIBUTION



RESOURCE MAPS FOR THE
SKYLINE B COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

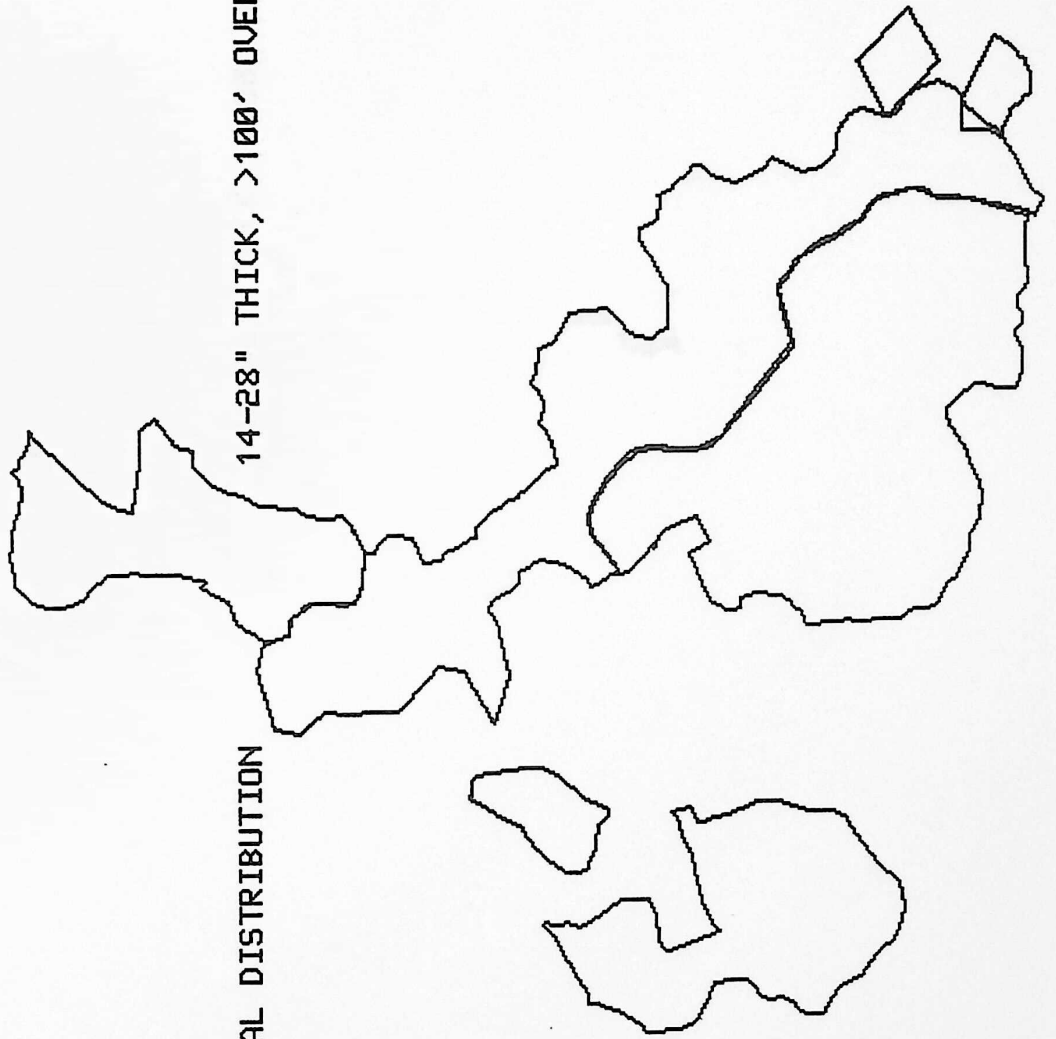
14-28" THICK, <100' OVERBURDEN

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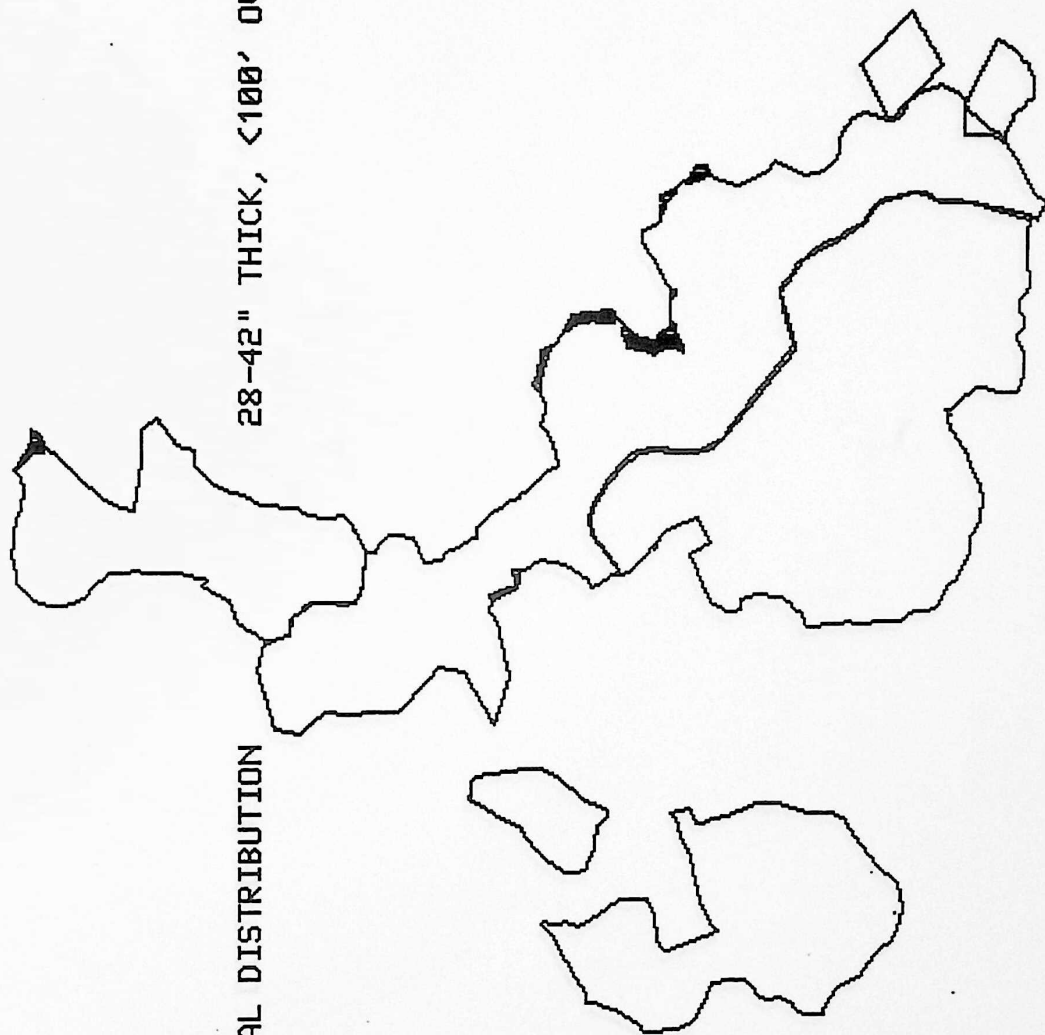
14-28" THICK, >100' OVERBURDEN

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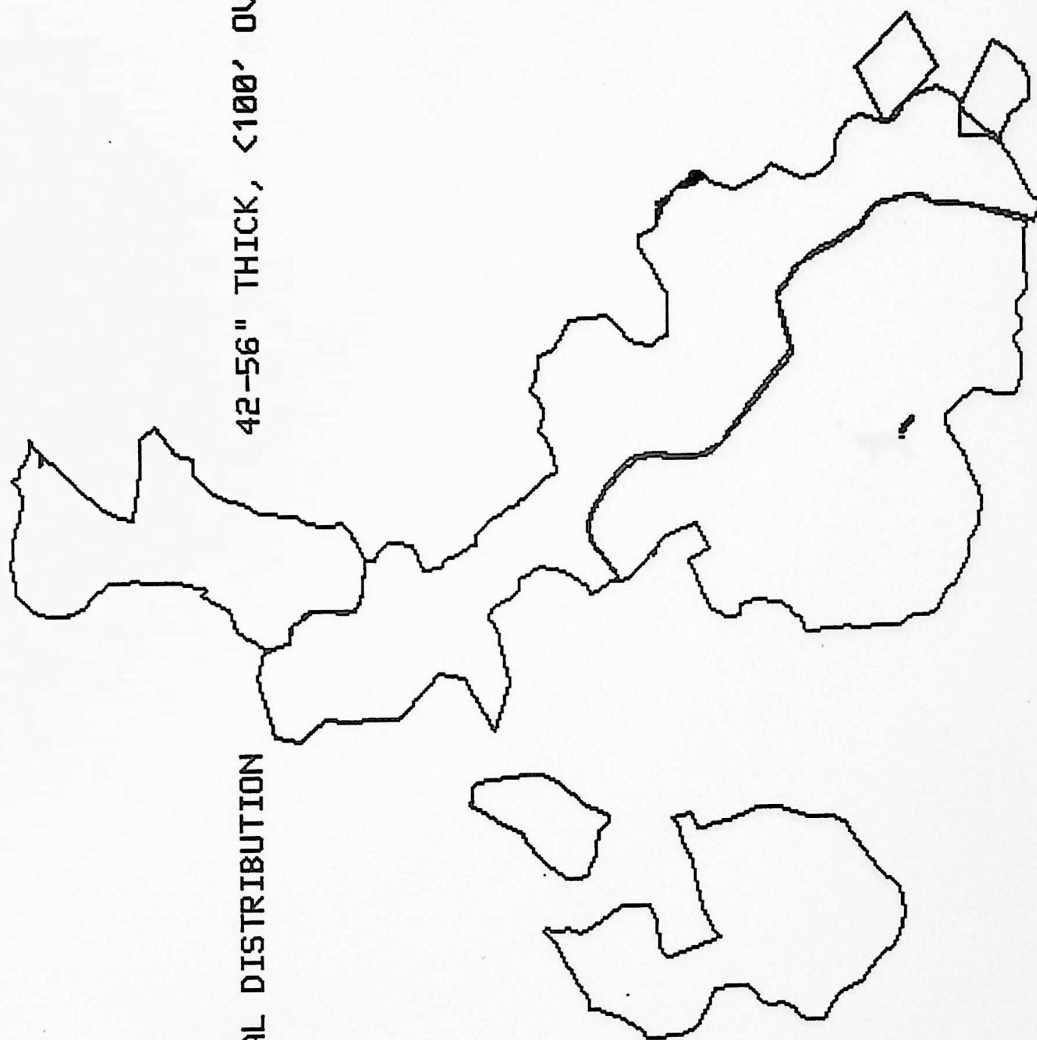
28-42" THICK, <100' OVERBURDEN

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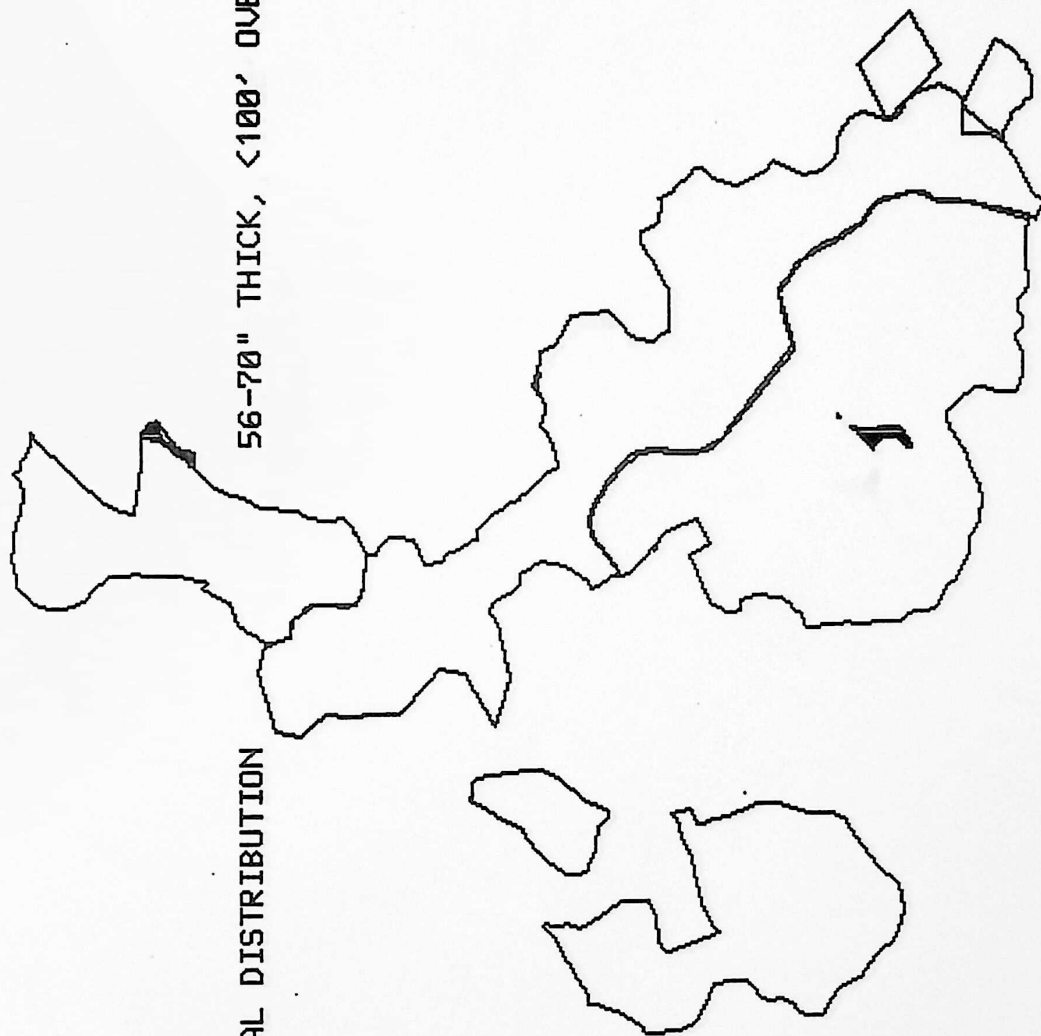
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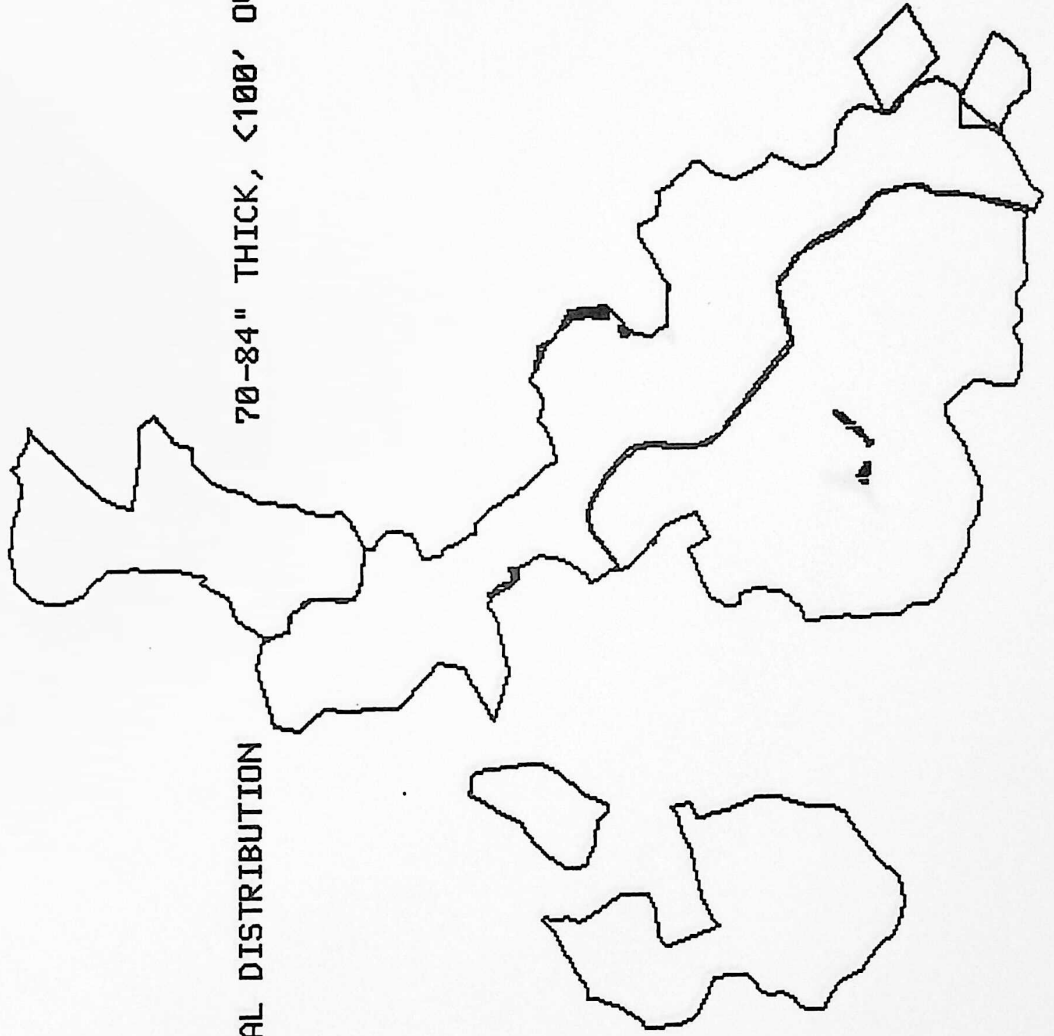
56-70" THICK, <100' OVERBURDEN

SKYLINE B COAL DISTRIBUTION



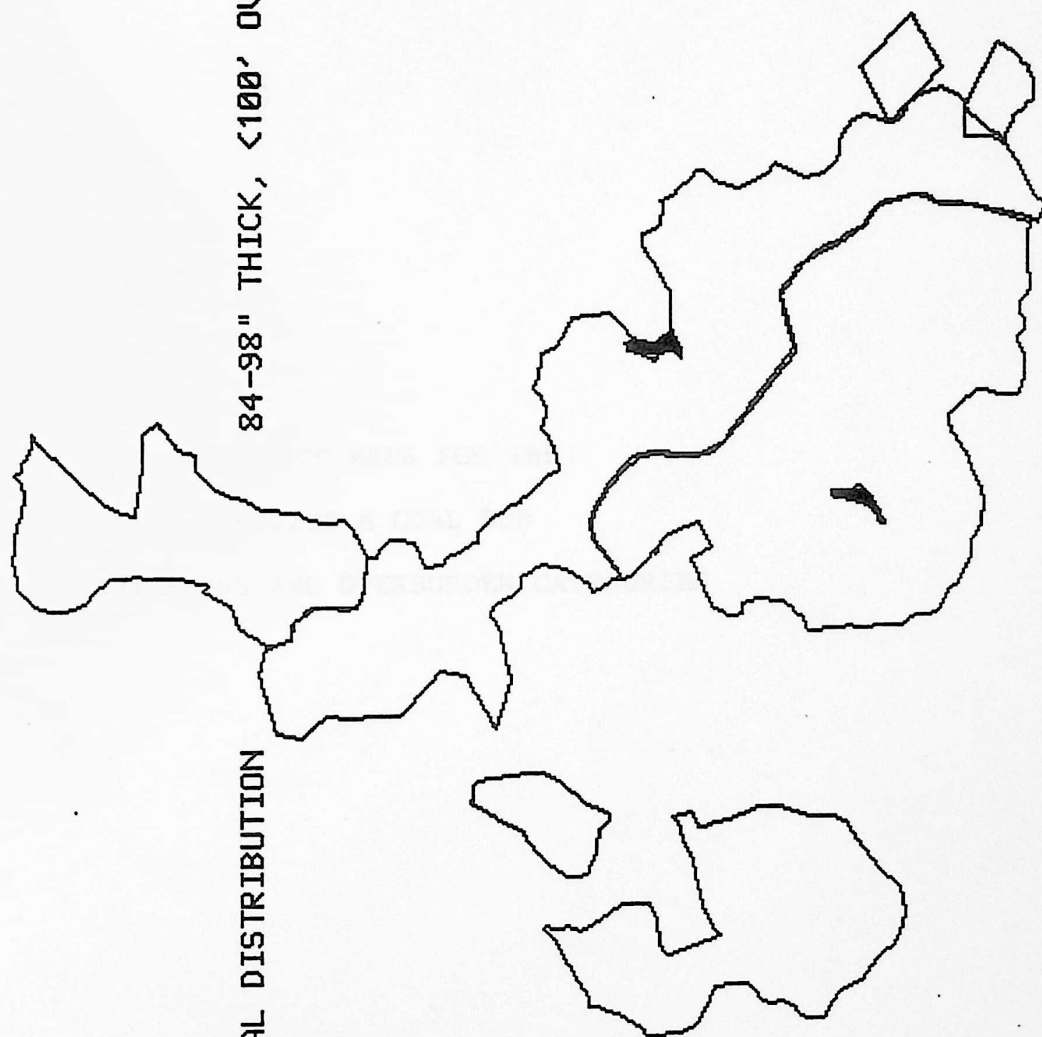
70-84" THICK, <100' OVERBURDEN

SKYLINE B COAL DISTRIBUTION



84-98" THICK, <100' OVERBURDEN

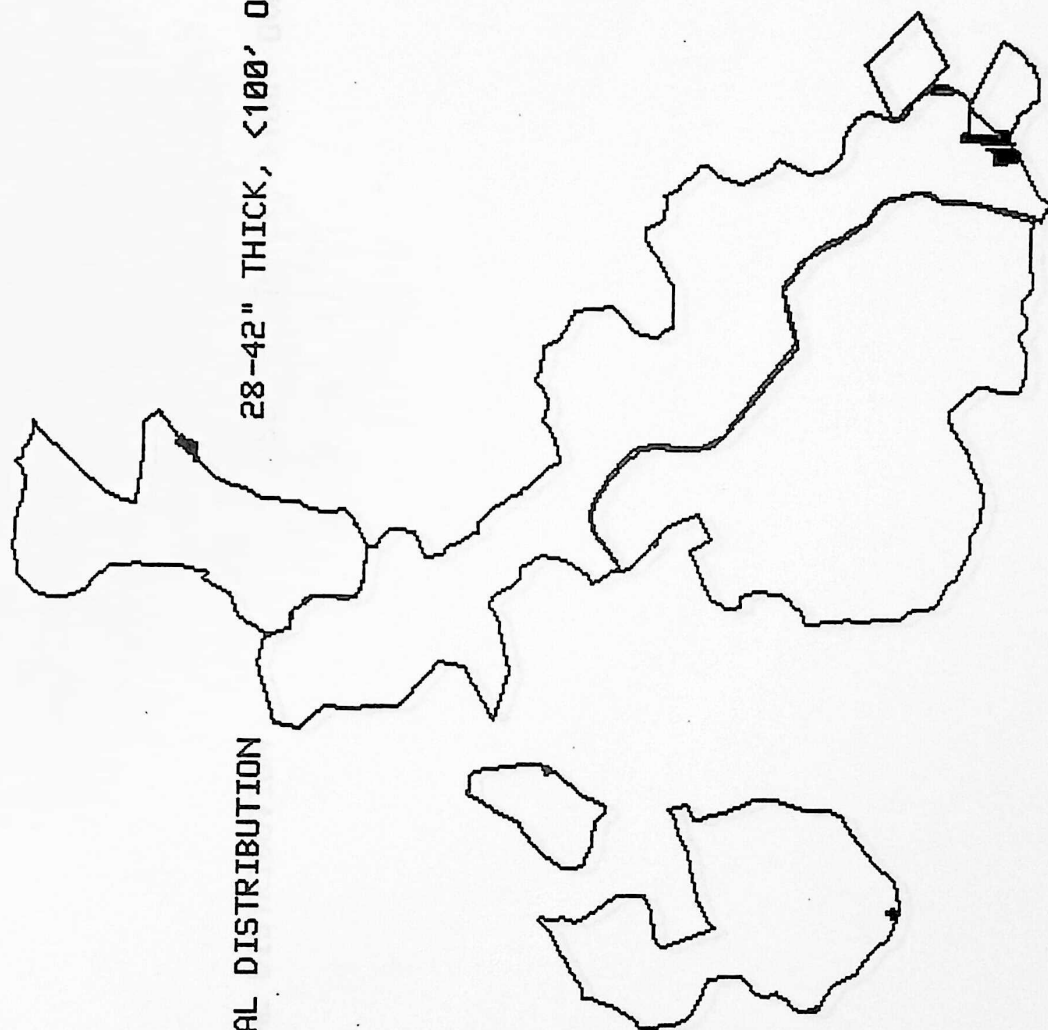
SKYLINE B COAL DISTRIBUTION



RESOURCE MAPS FOR THE
SKYLINE A COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

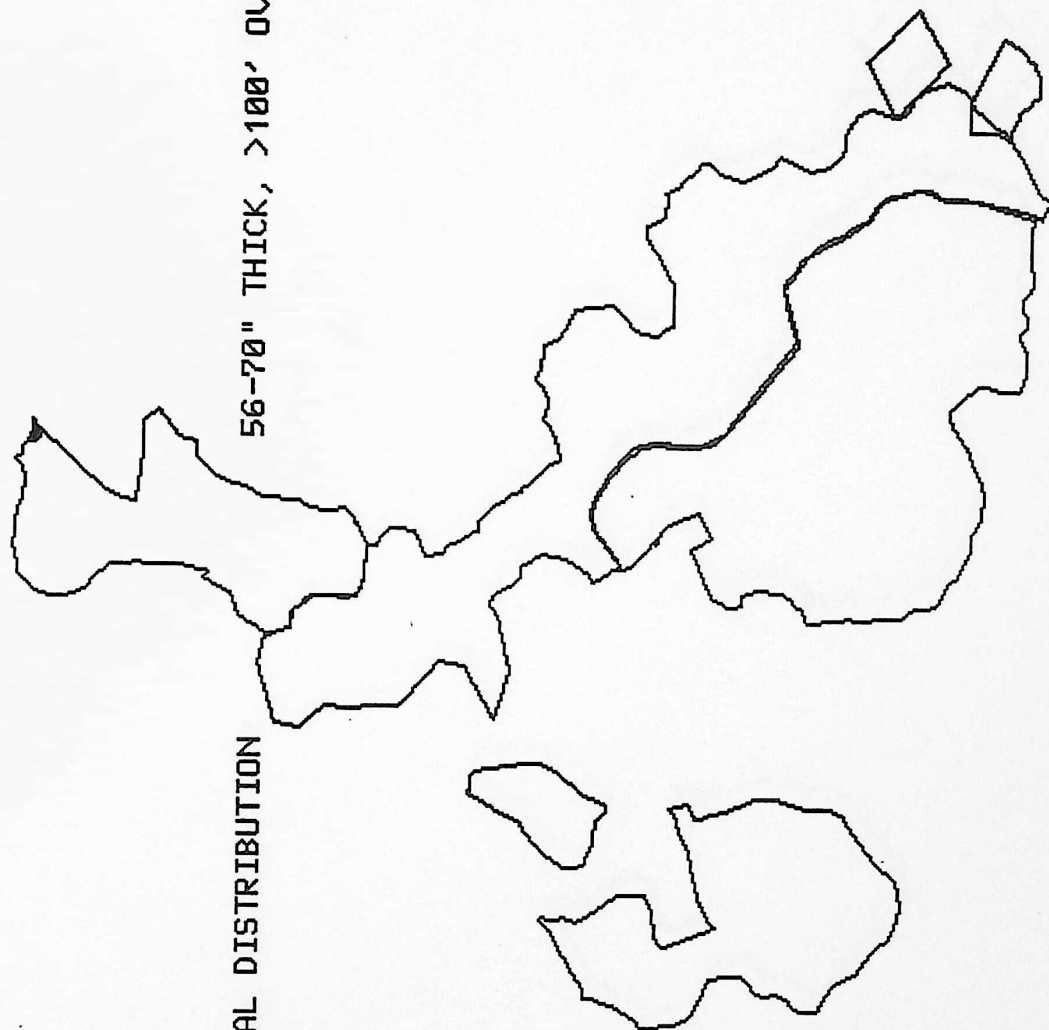
28-42" THICK, <100' OVERBURDEN

SKYLINE A COAL DISTRIBUTION



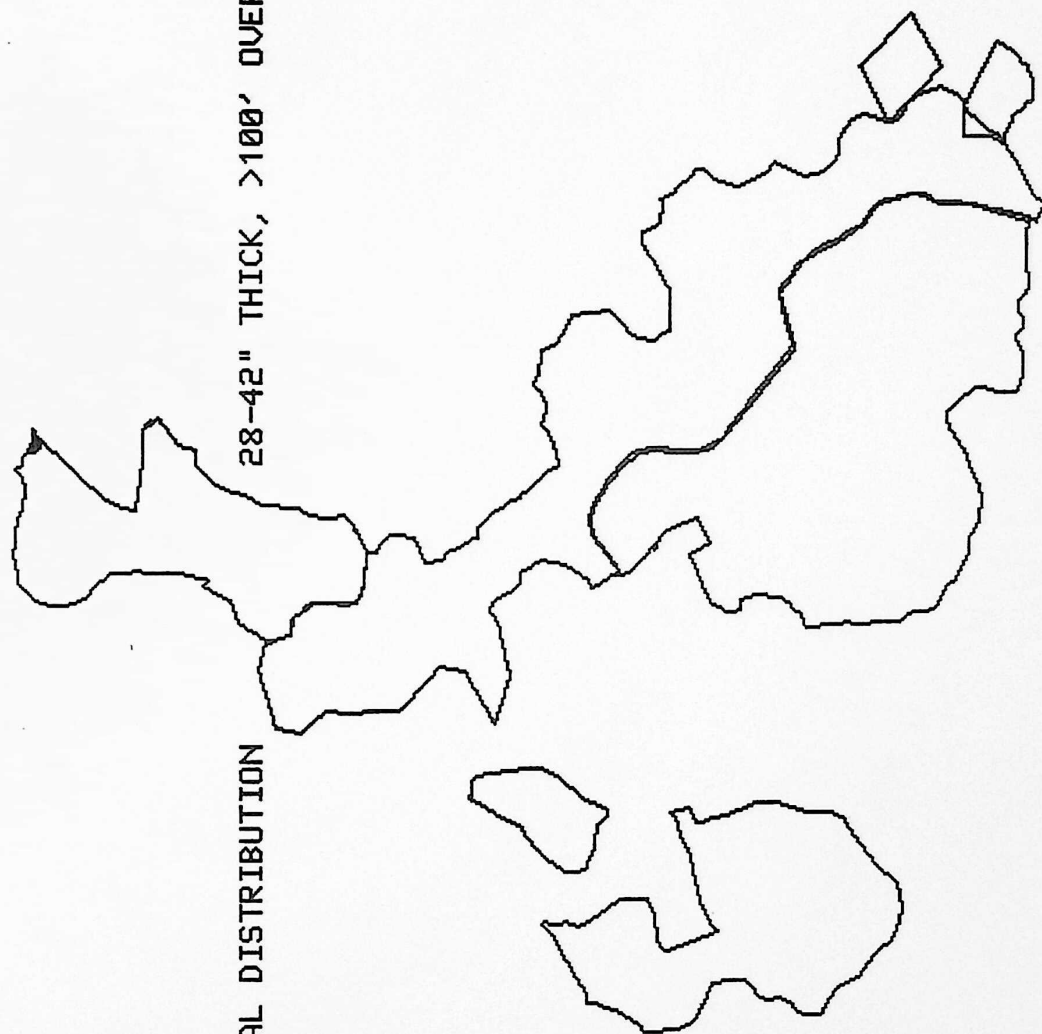
56-70" THICK, >100' OVERBURDEN

SKYLINE A COAL DISTRIBUTION



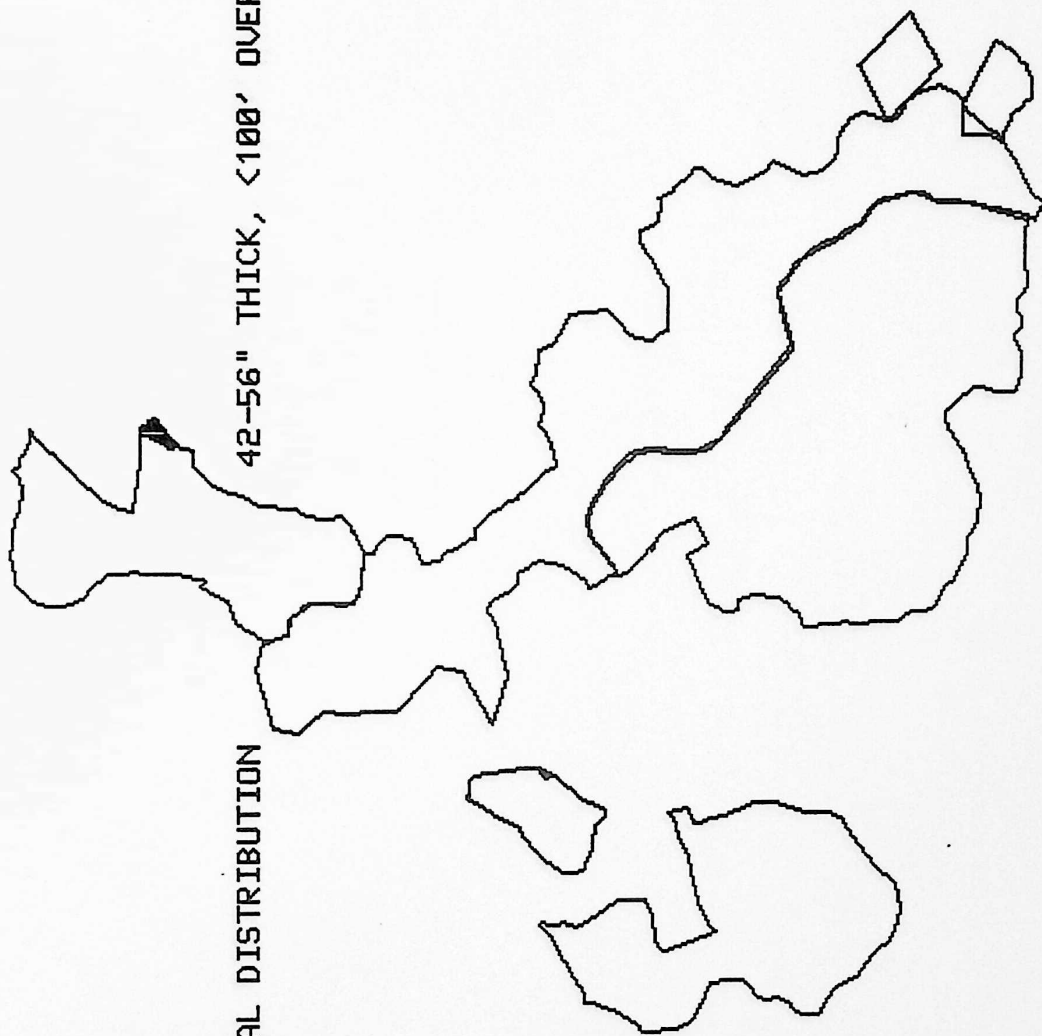
28-42" THICK, >100' OVERBURDEN

SKYLINE A COAL DISTRIBUTION



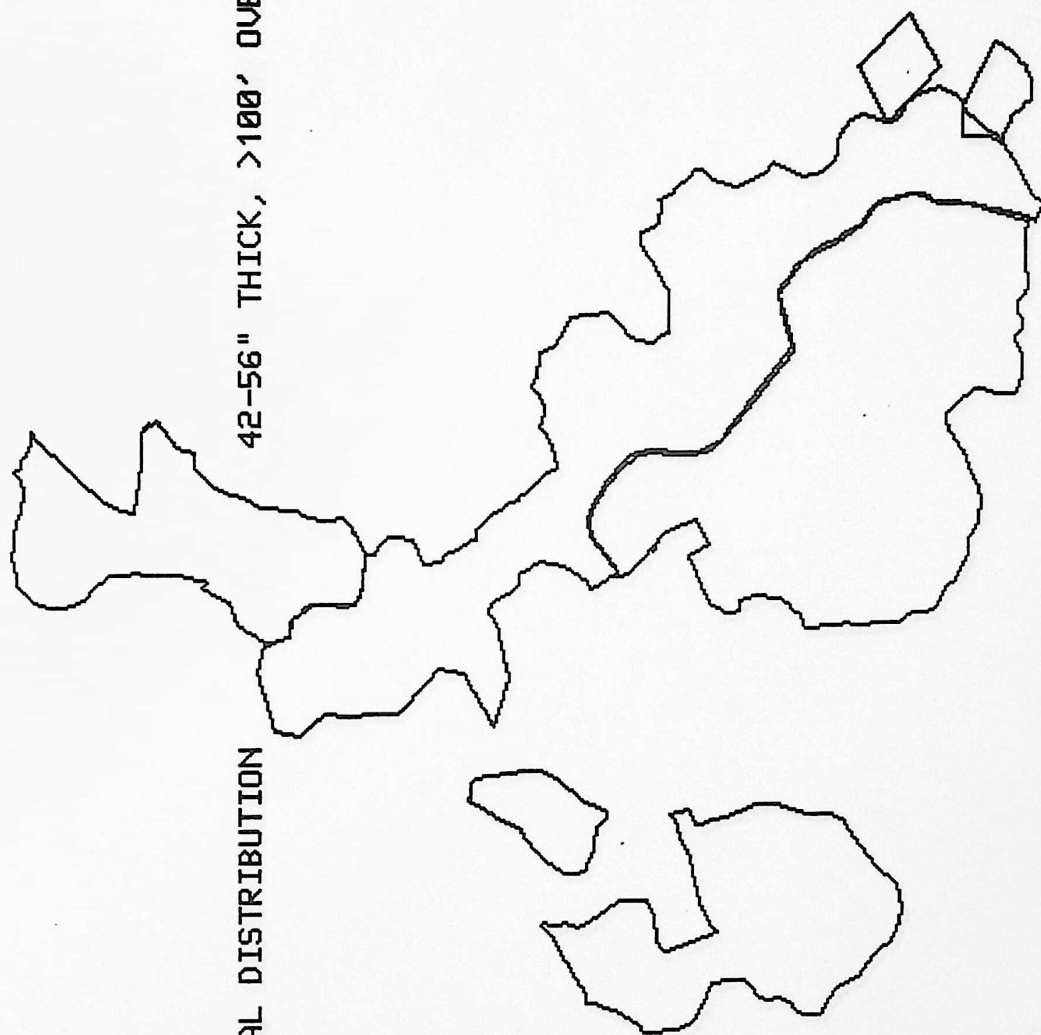
42-56" THICK, <100' OVERBURDEN

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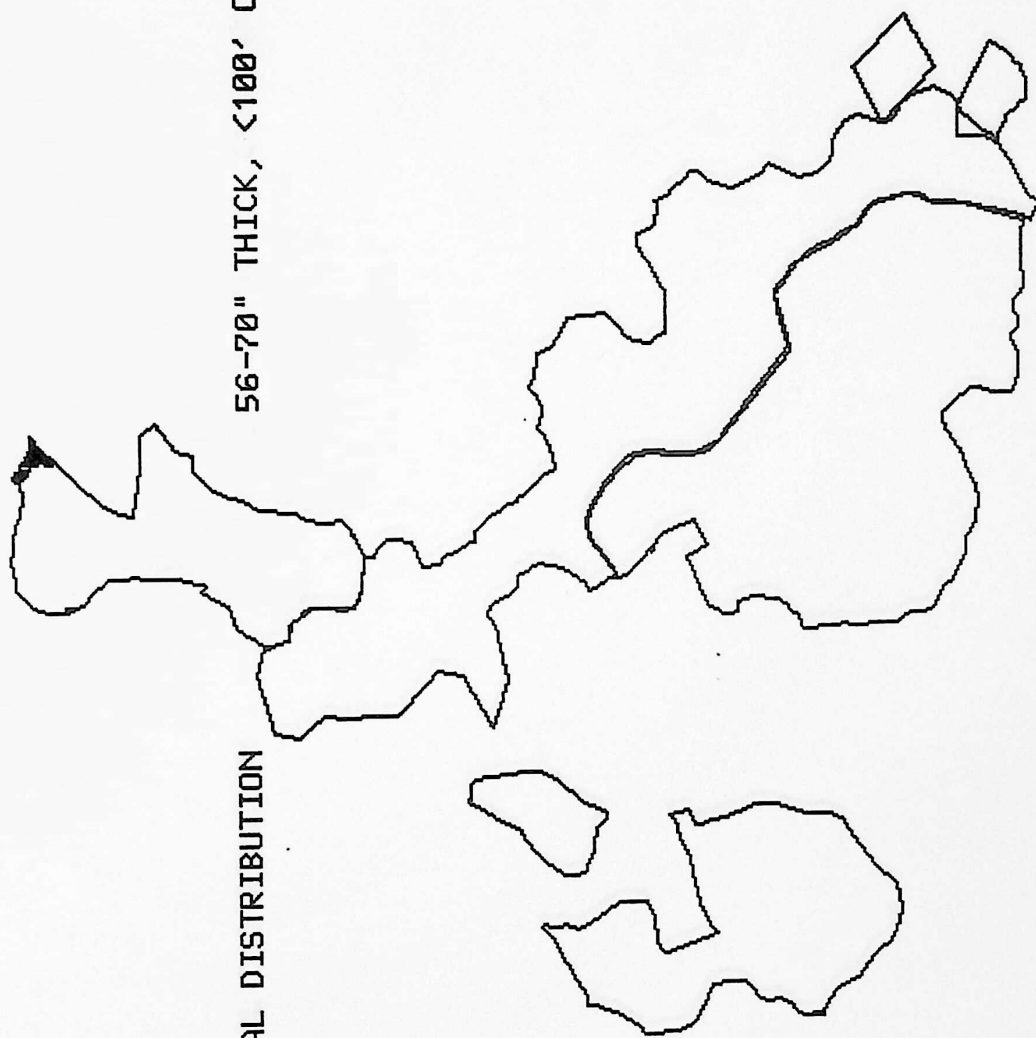
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SKYLINE A COAL DISTRIBUTION



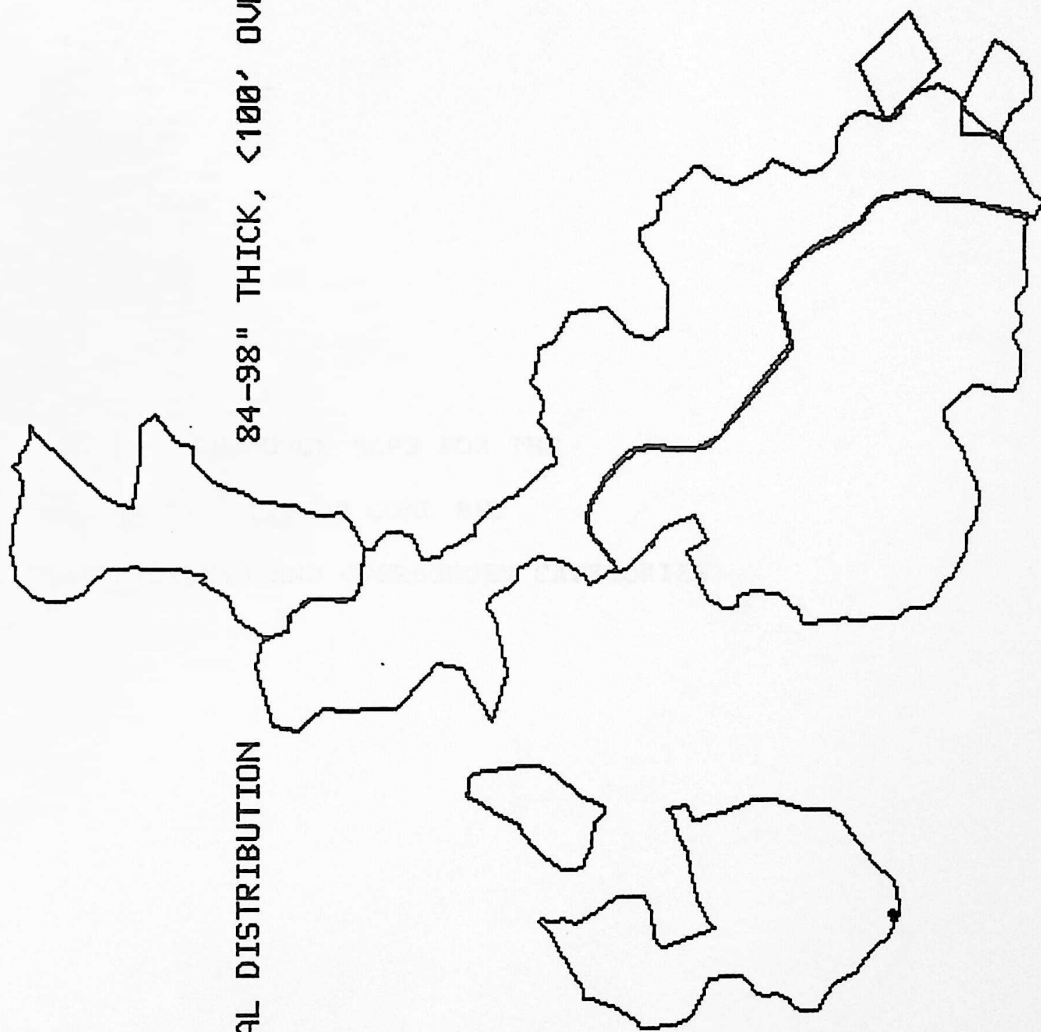
56-70" THICK, <100' OVERBURDEN

SKYLINE A COAL DISTRIBUTION



84-98" THICK, <100' OVERBURDEN

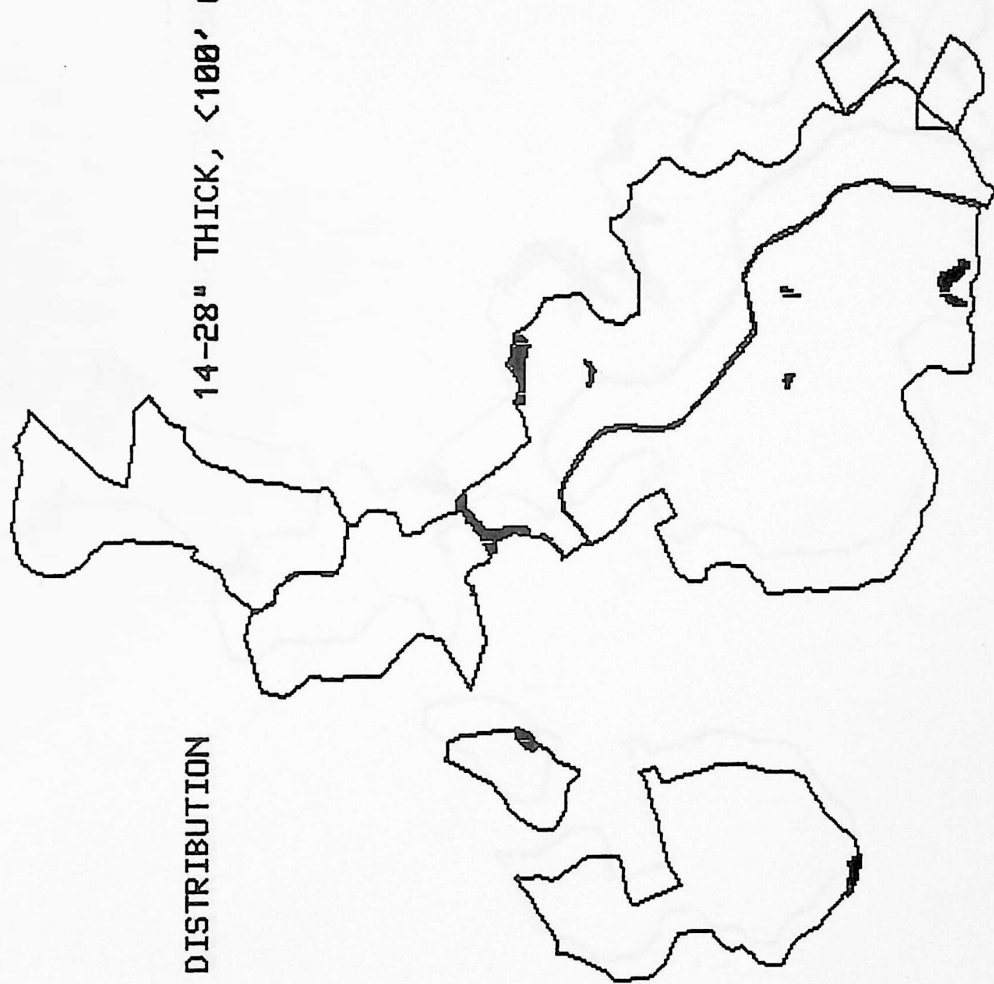
SKYLINE A COAL DISTRIBUTION



RESOURCE MAPS FOR THE
TIPTOP COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

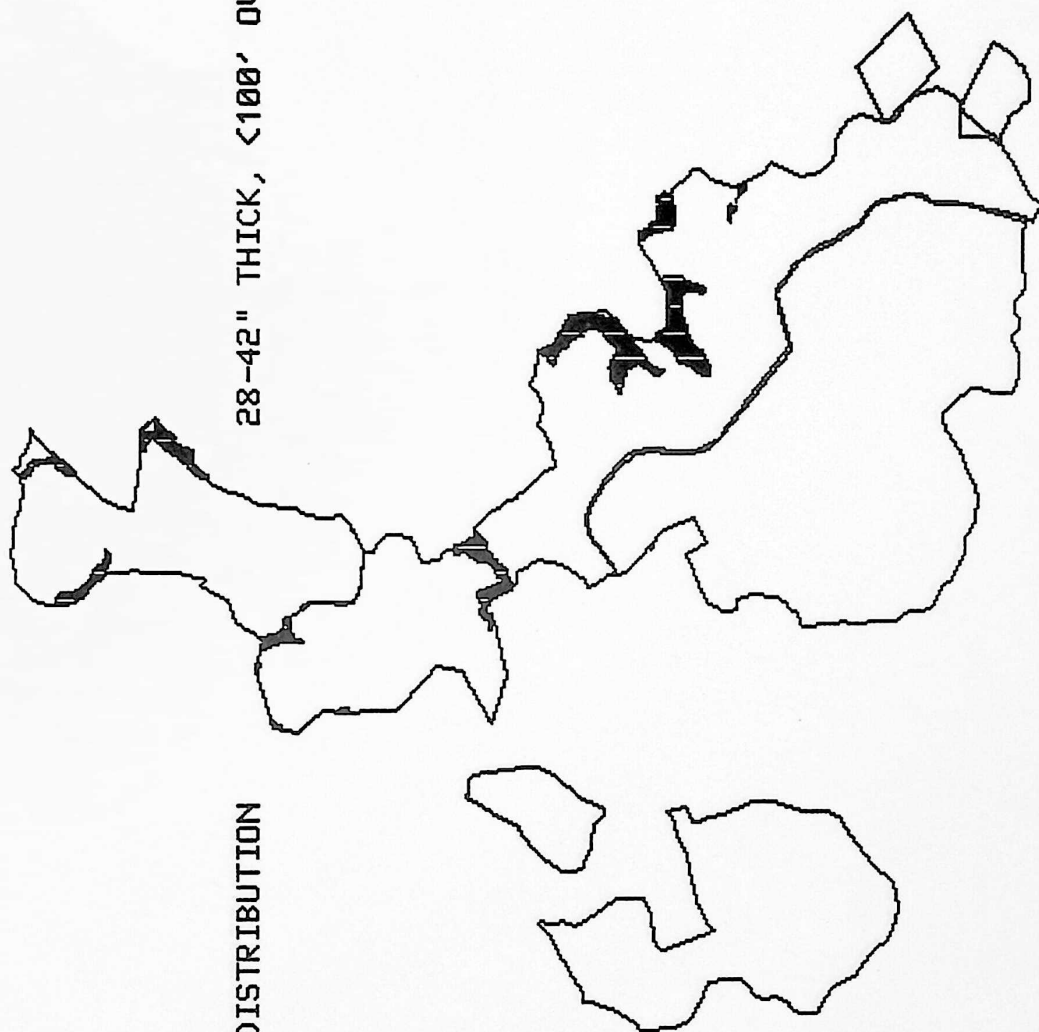
14-28" THICK, <100' OVERBURDEN

TIPTOP COAL DISTRIBUTION



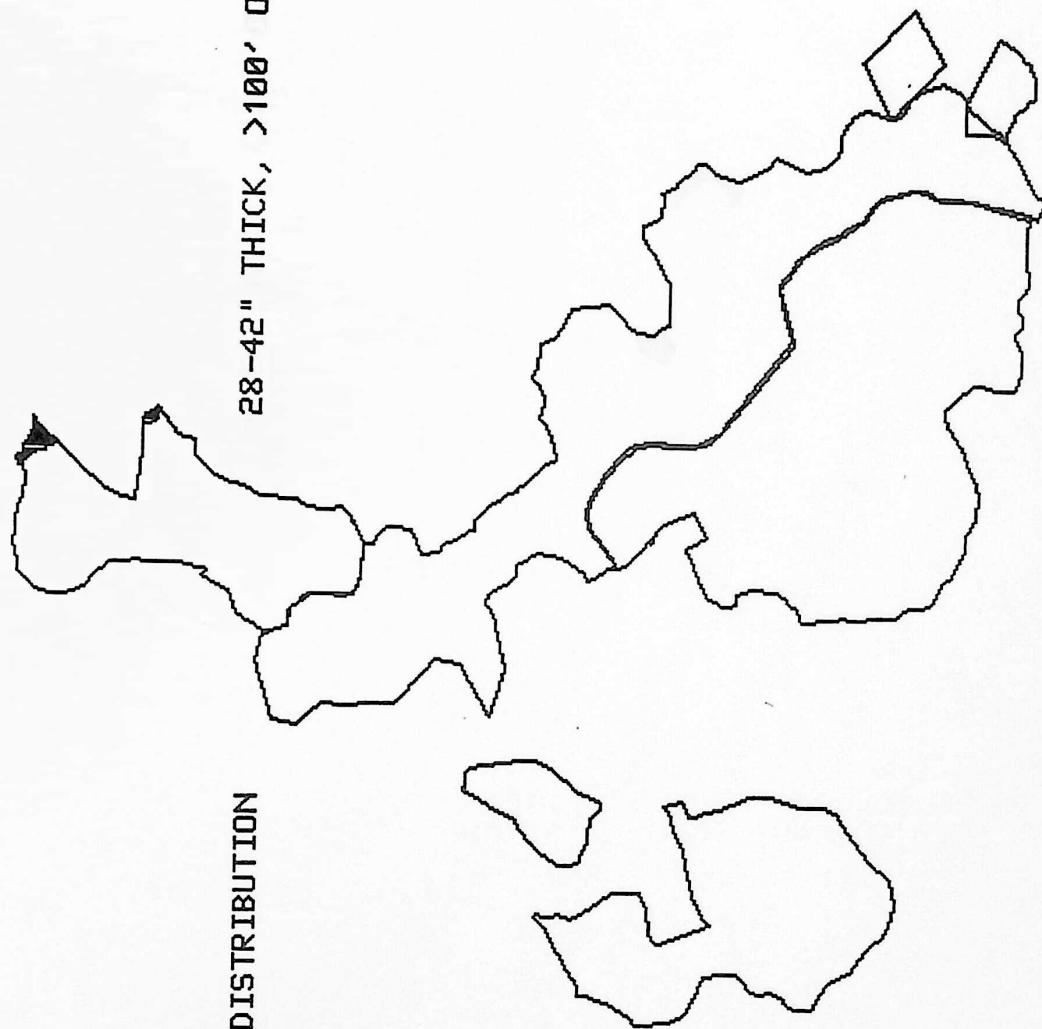
28-42" THICK, <100' OVERBURDEN

TIPTOP COAL DISTRIBUTION



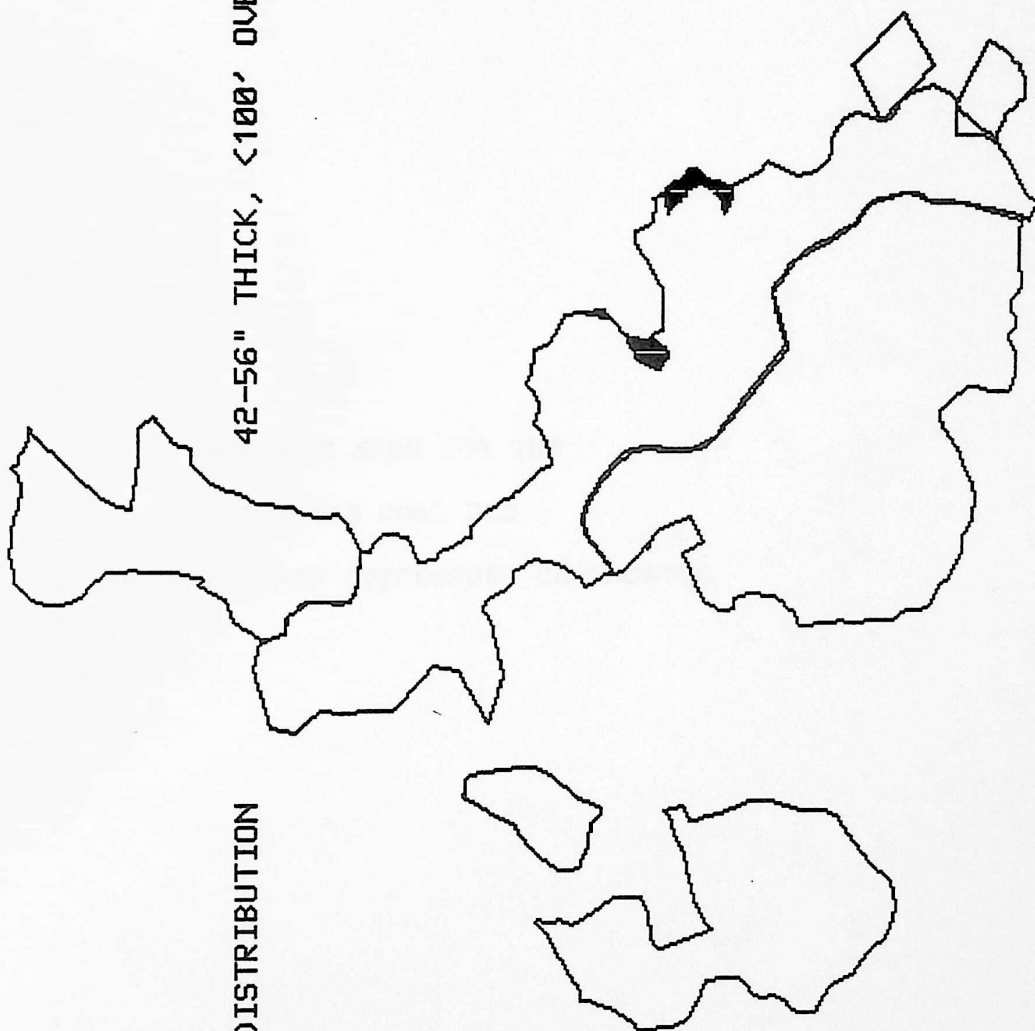
28-42" THICK, >100' OVERBURDEN

TIPTOP COAL DISTRIBUTION



42-56" THICK, <100' OVERBURDEN

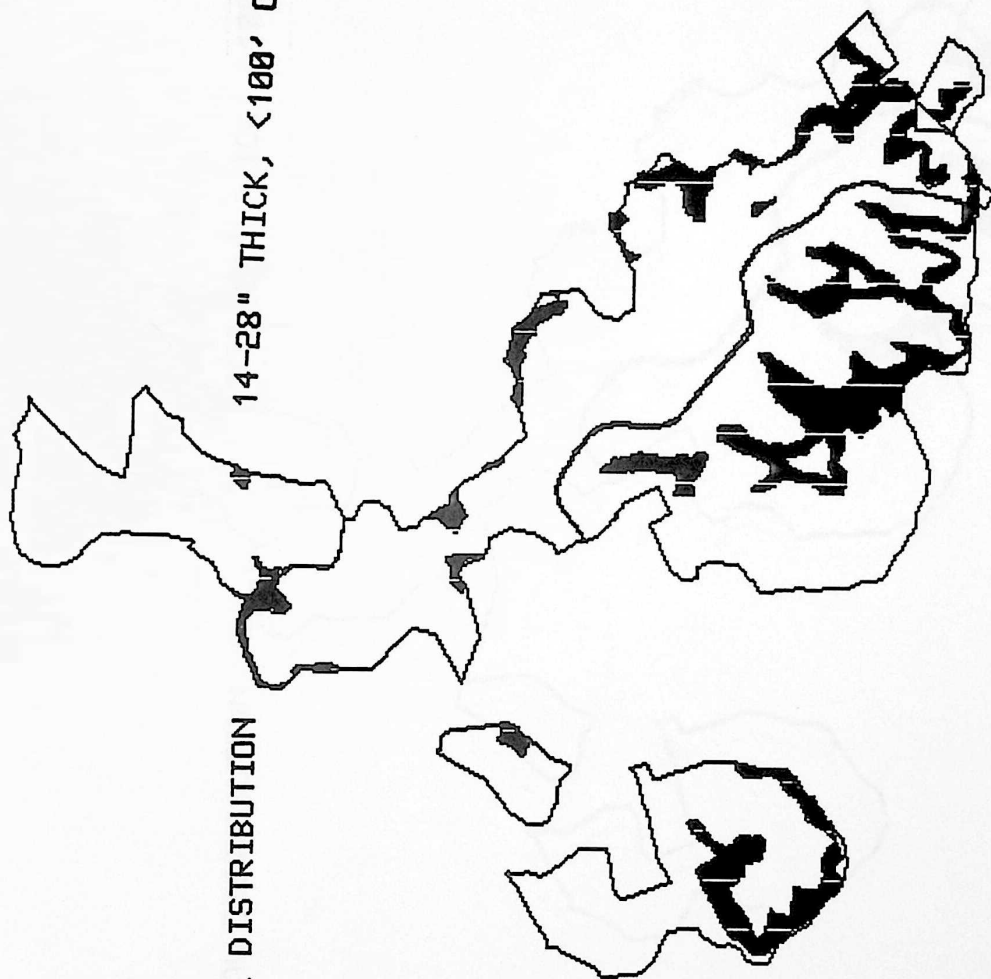
TIPTOP COAL DISTRIBUTION



RESOURCE MAPS FOR THE
HINDMAN COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

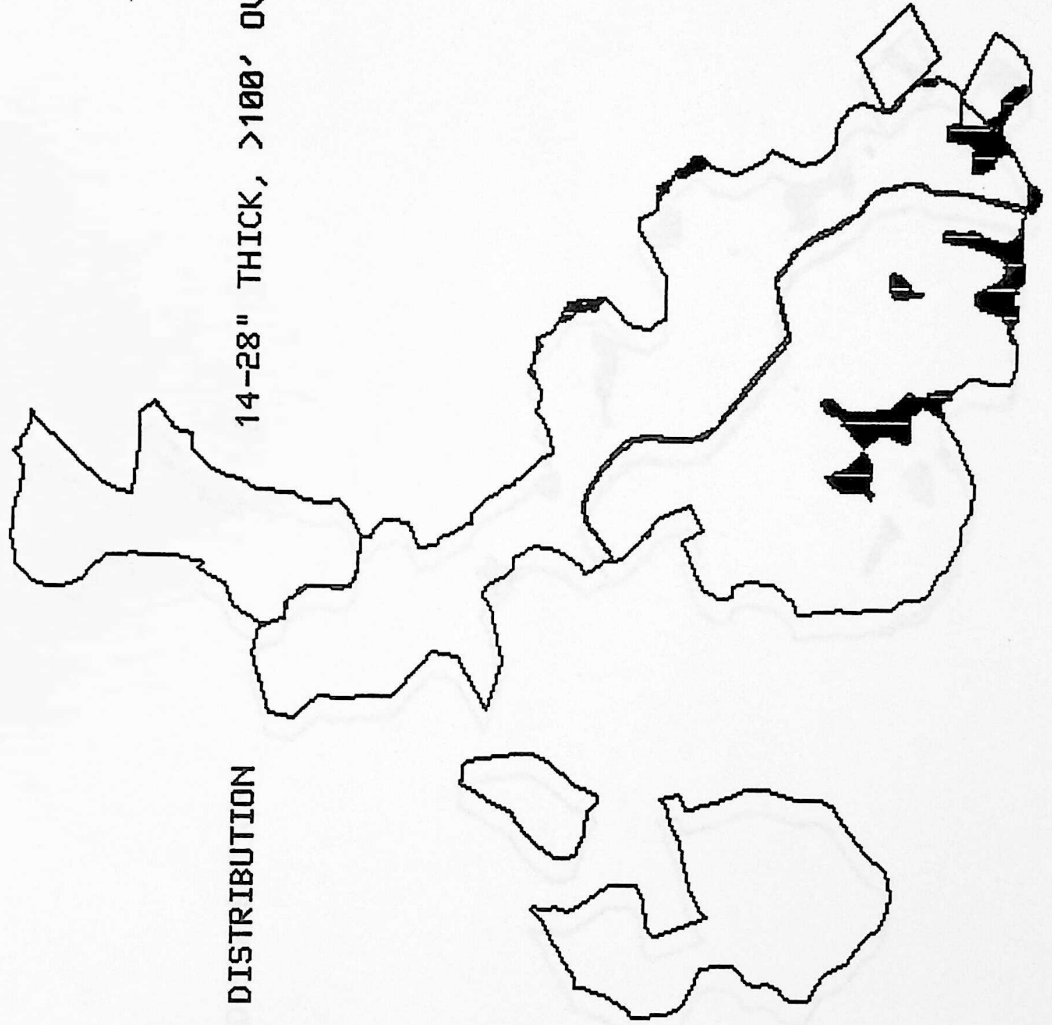
14-28" THICK, <100' OVERBURDEN

HINDMAN COAL DISTRIBUTION



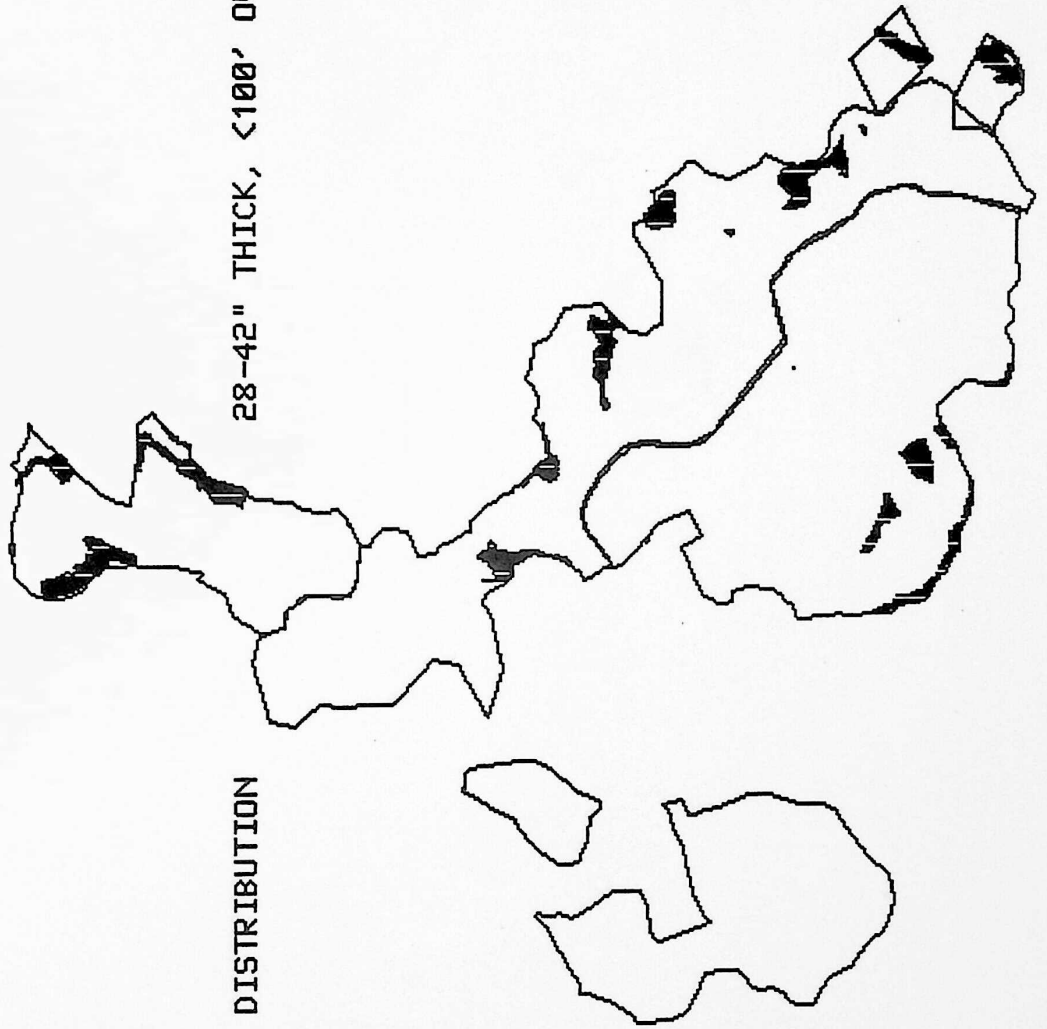
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HINDMAN COAL DISTRIBUTION



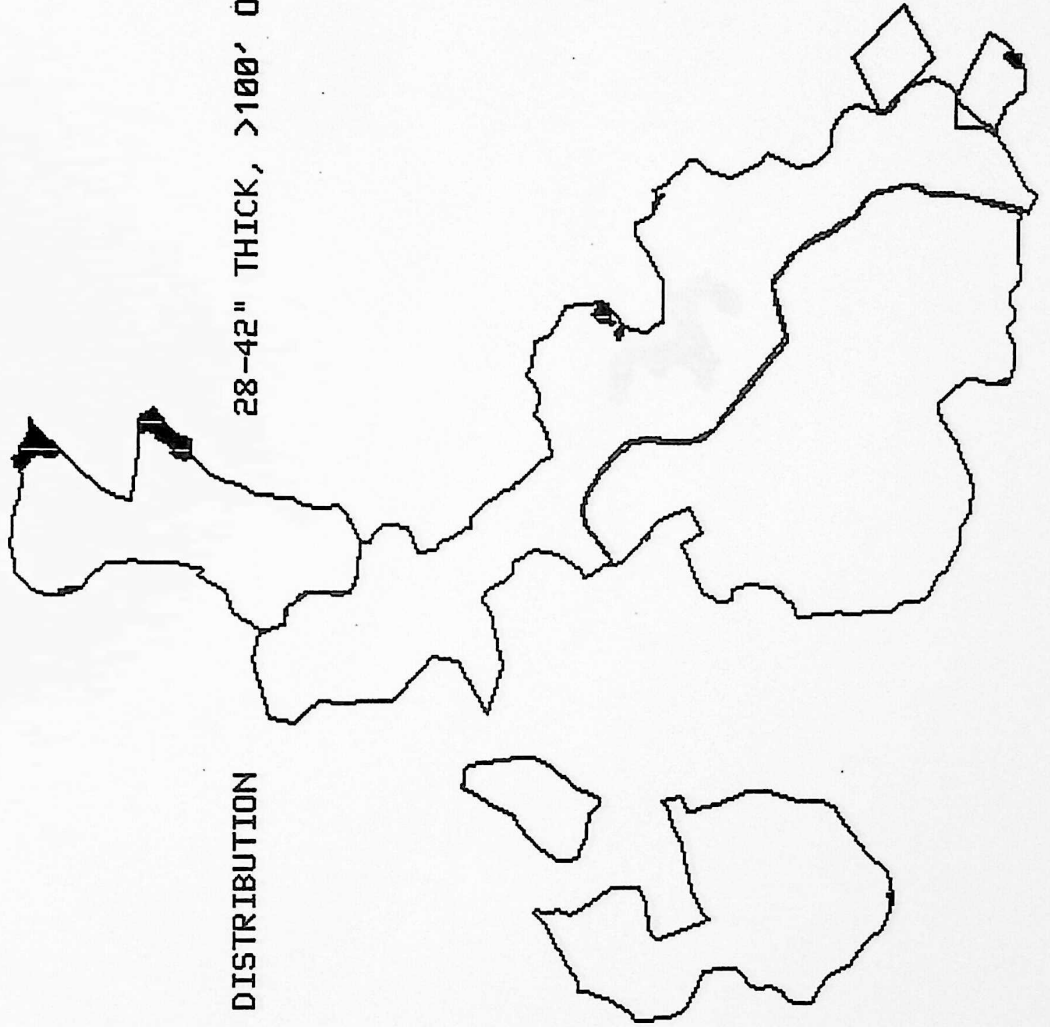
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HINDMAN COAL DISTRIBUTION



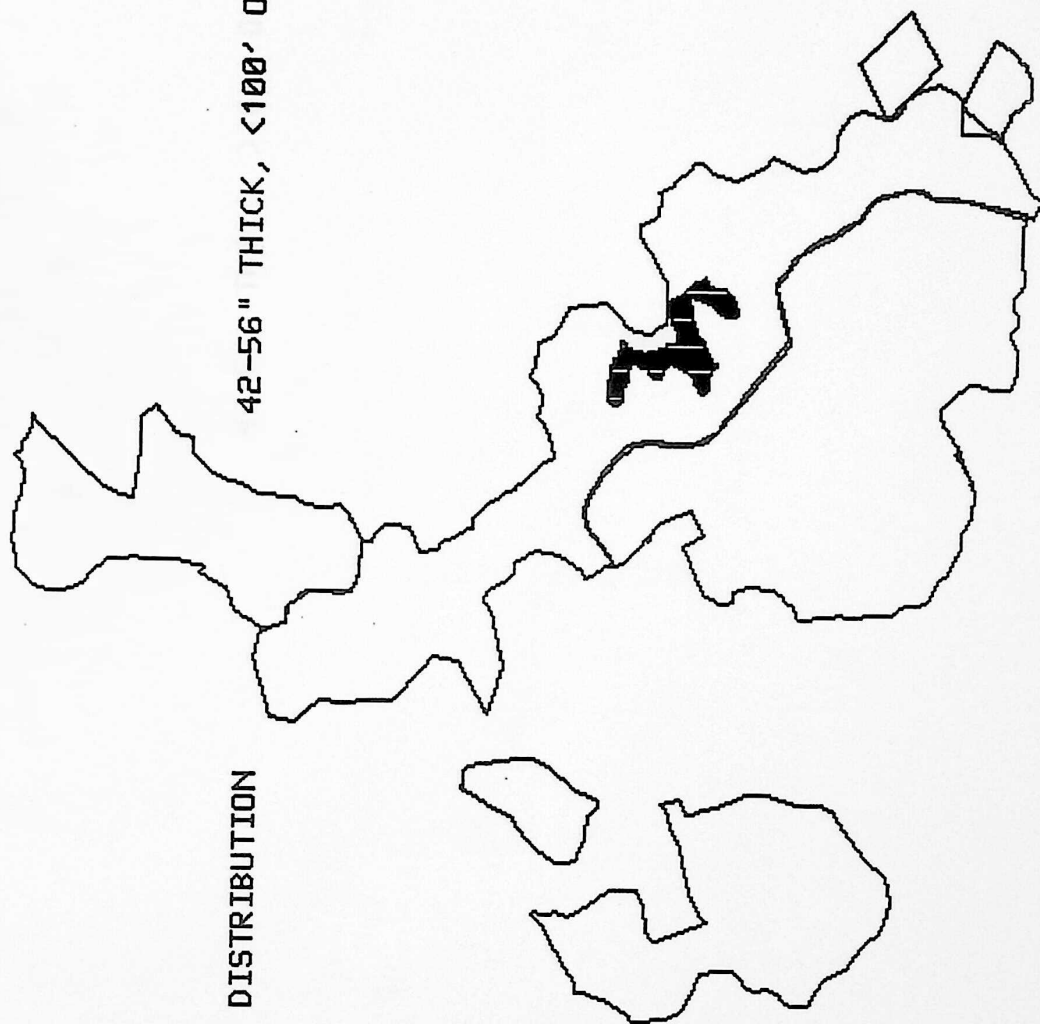
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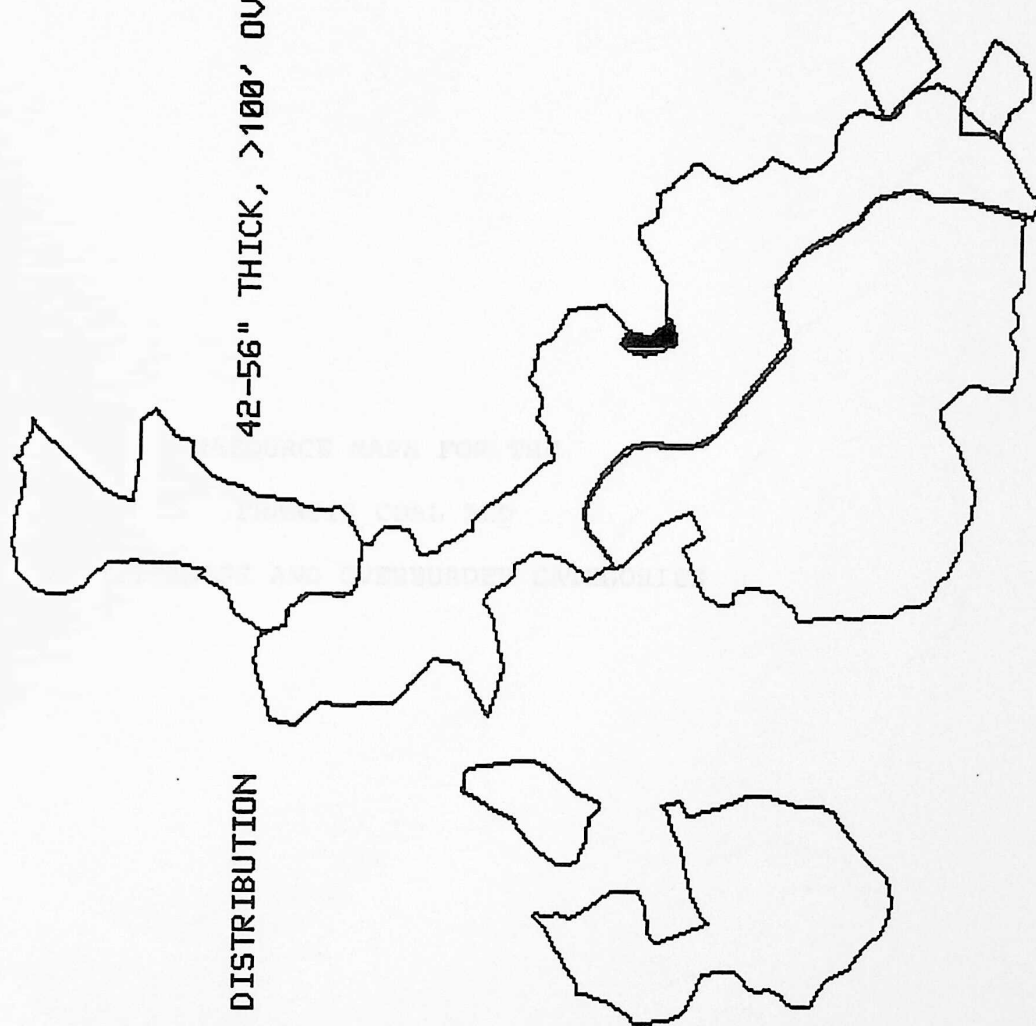
42-56" THICK, <100' OVERBURDEN

HINDMAN COAL DISTRIBUTION



42-56" THICK, >100' OVERBURDEN

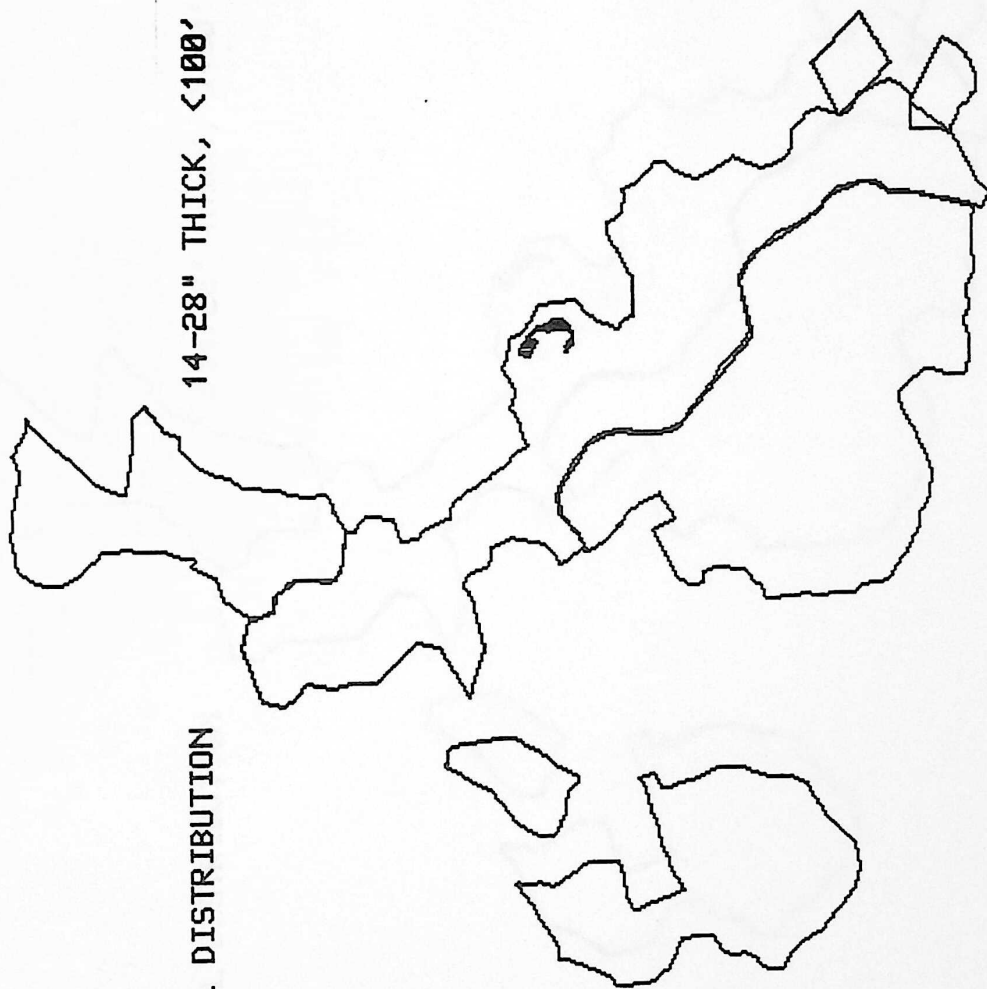
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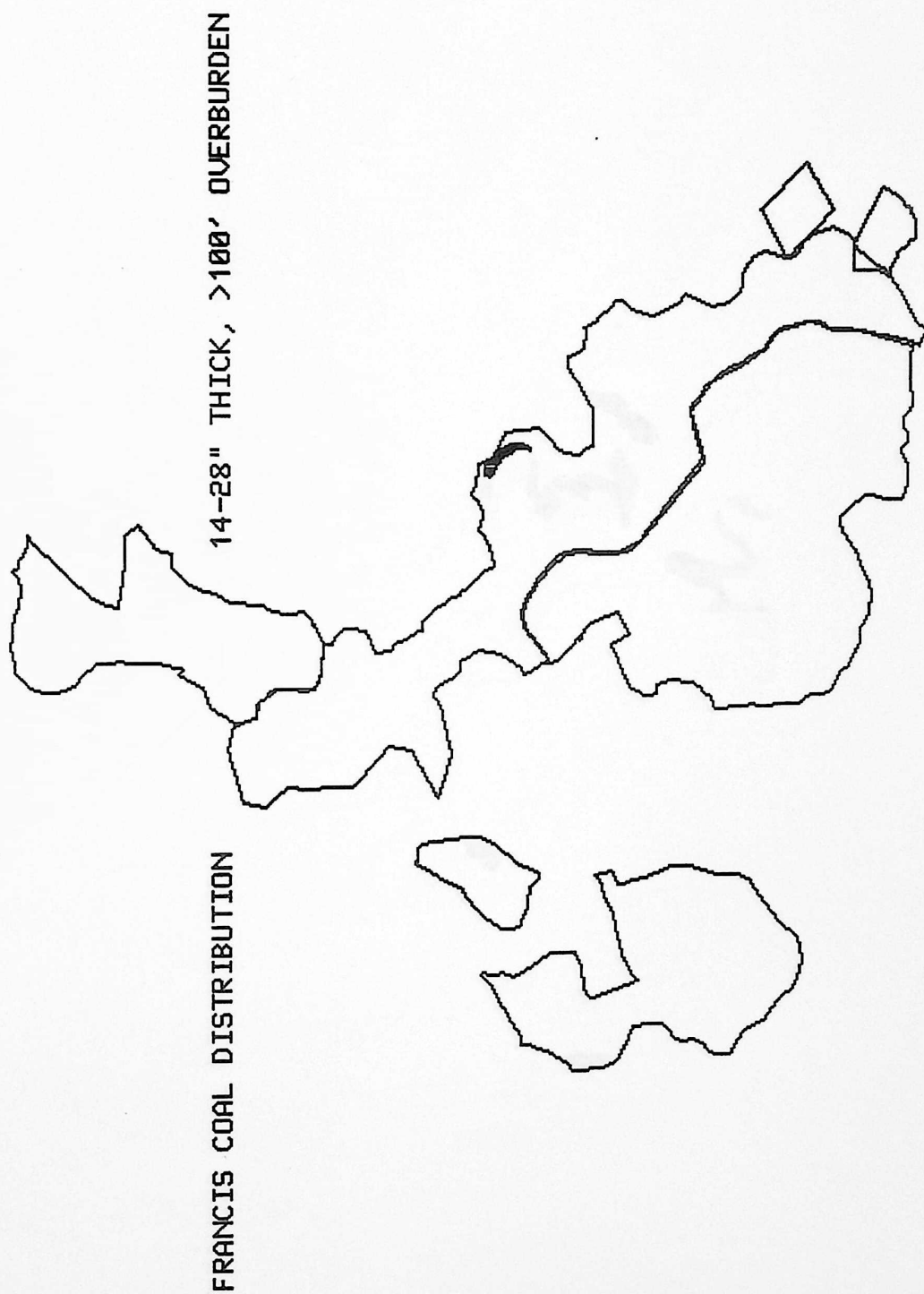


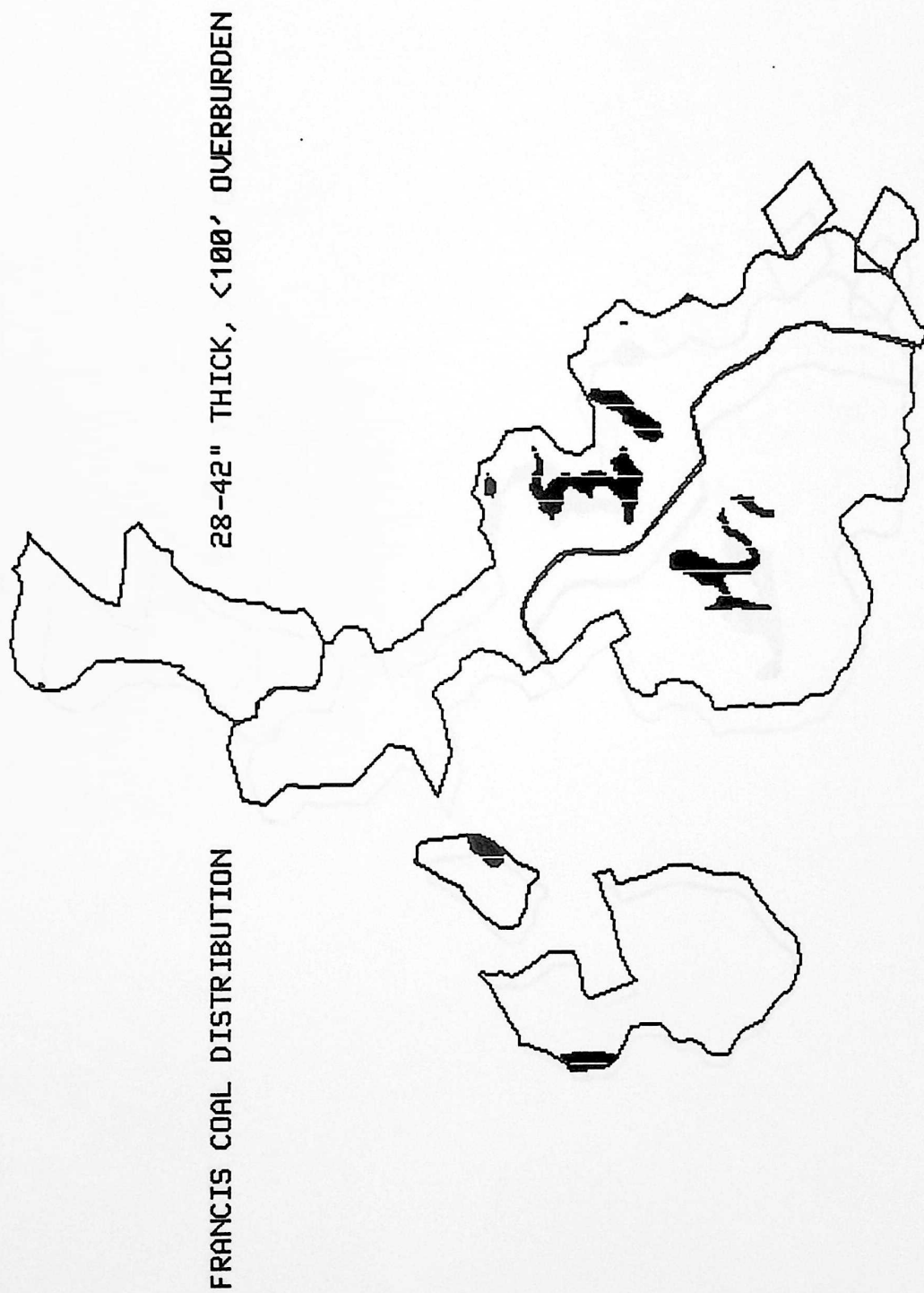
RESOURCE MAPS FOR THE
FRANCIS COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

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FRANCIS COAL DISTRIBUTION

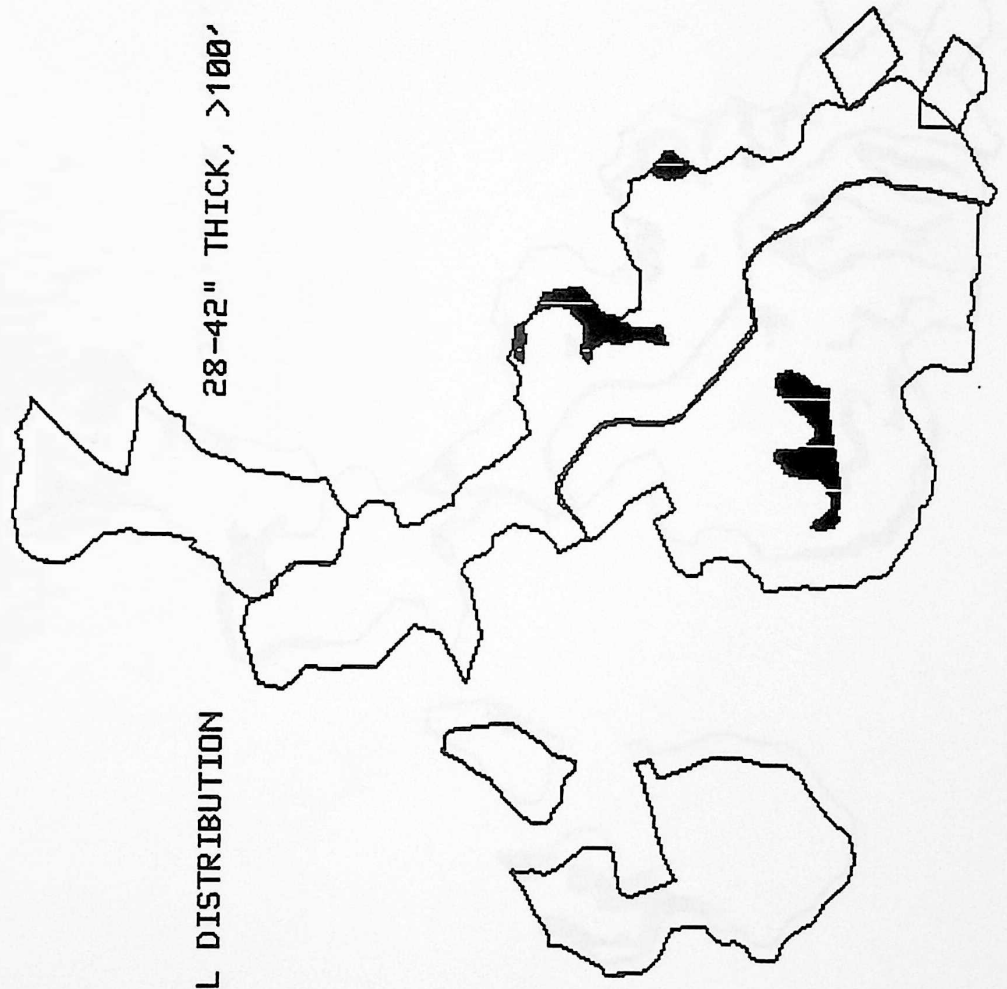






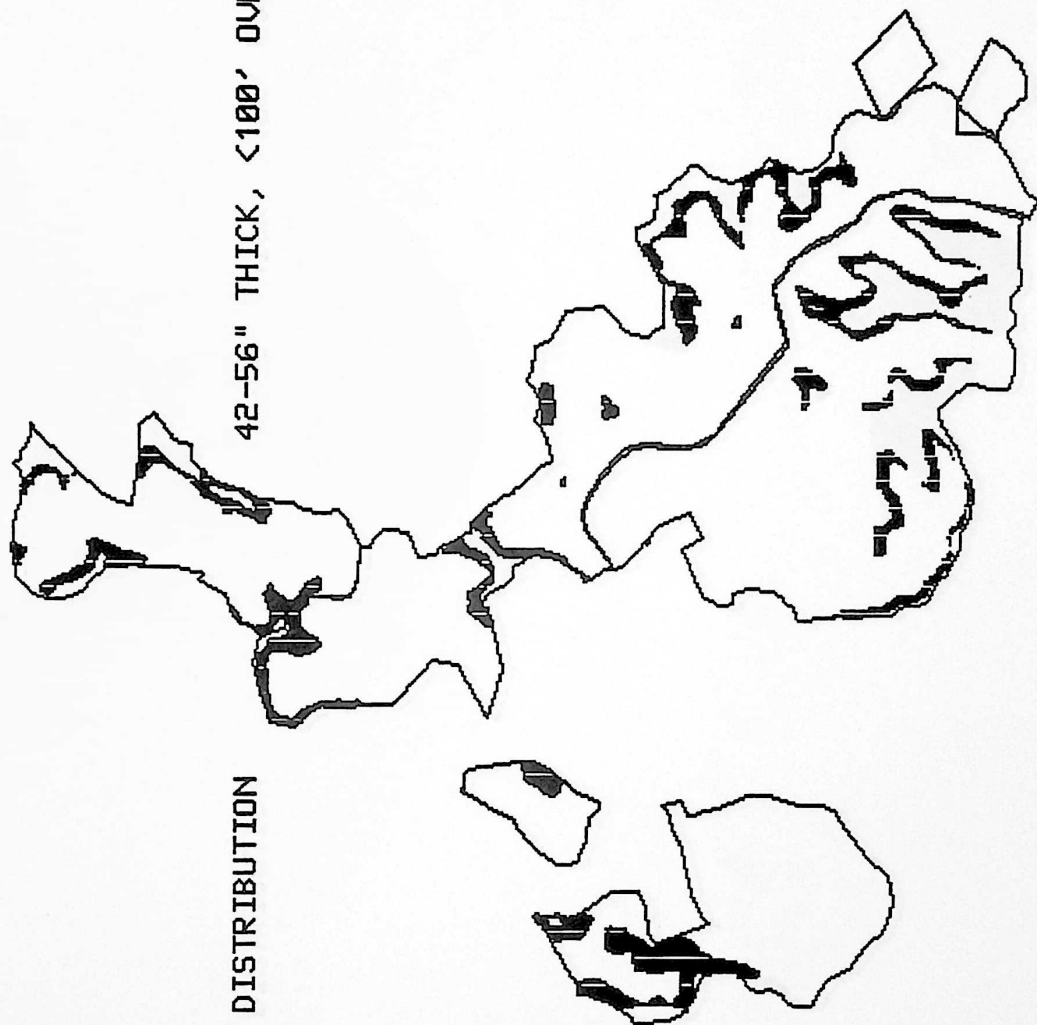
28-42" THICK, >100' OVERBURDEN

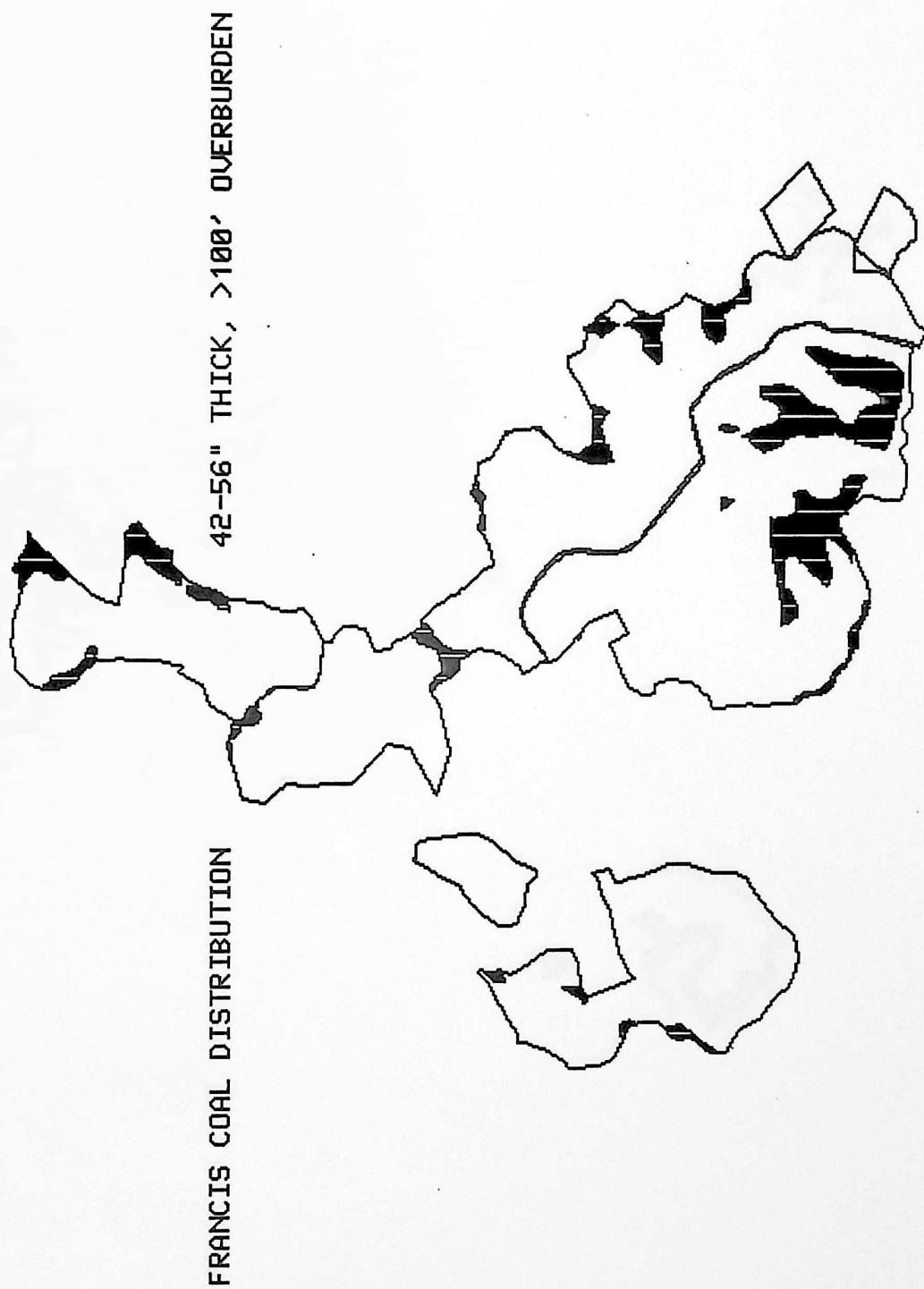
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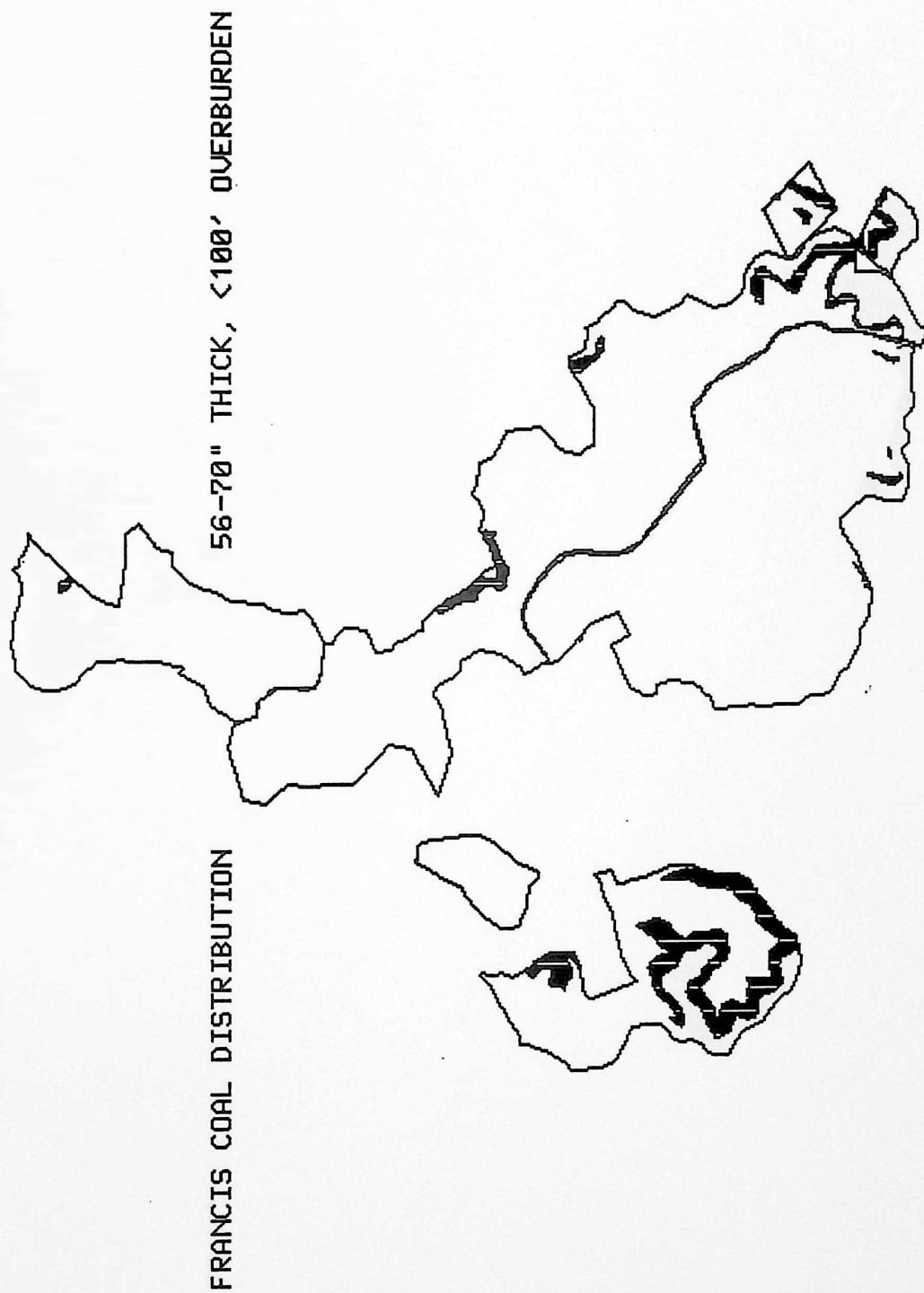


42-56" THICK, <100' OVERBURDEN

FRANCIS COAL DISTRIBUTION

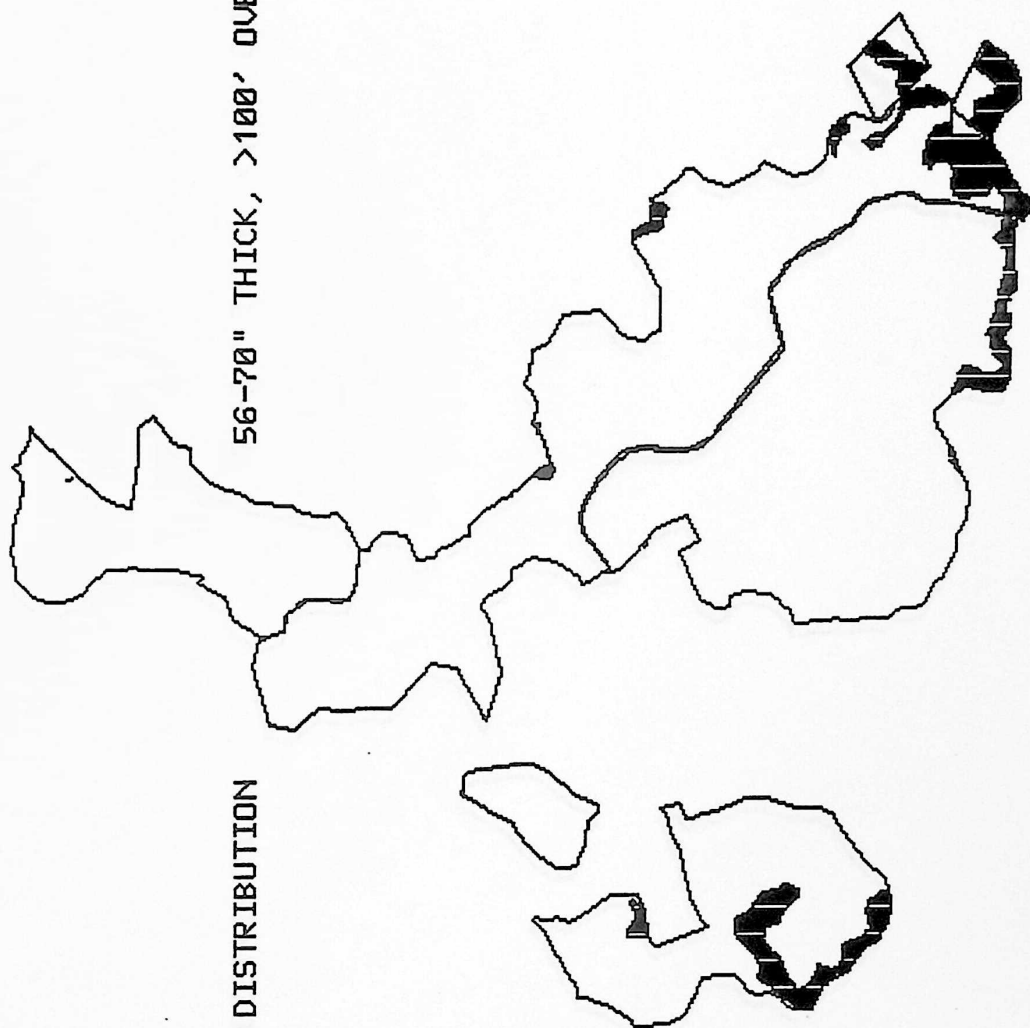






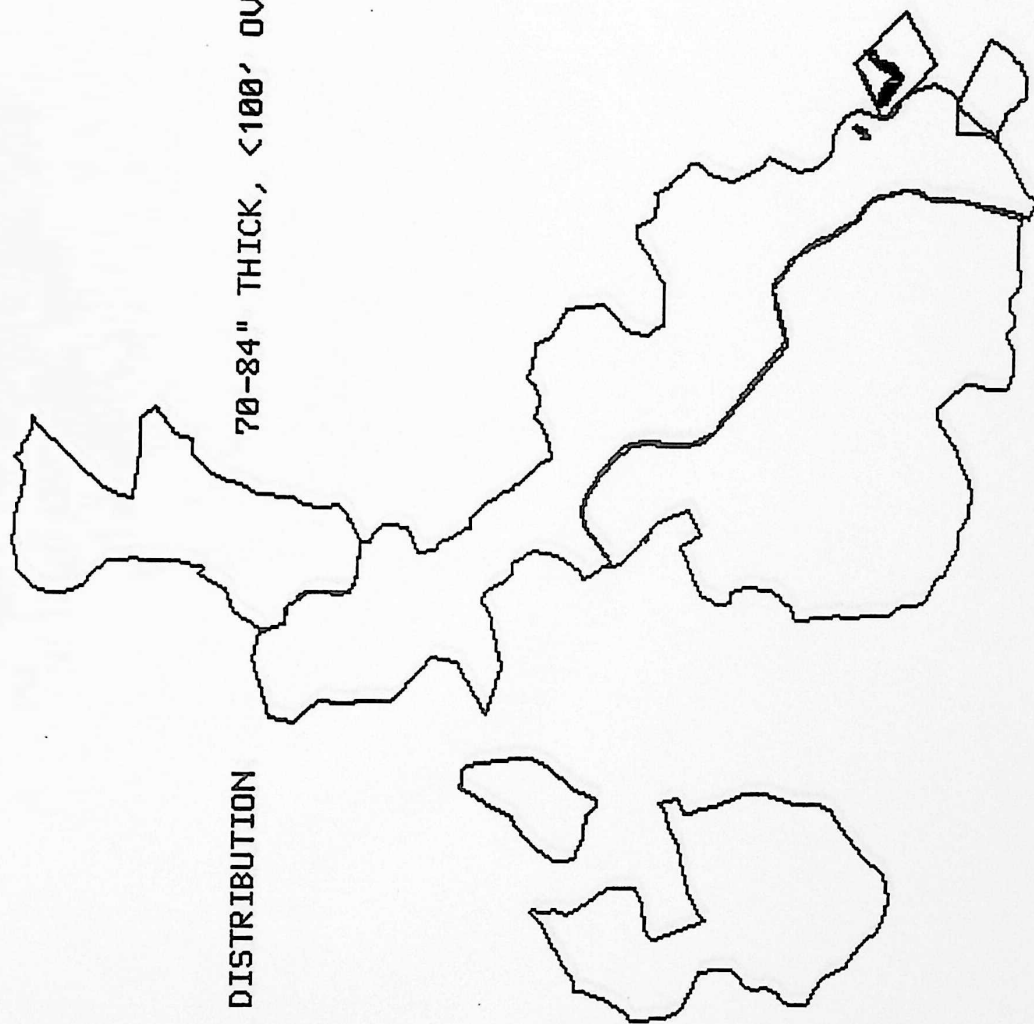
56-70" THICK, >100' OVERBURDEN

FRANCIS COAL DISTRIBUTION



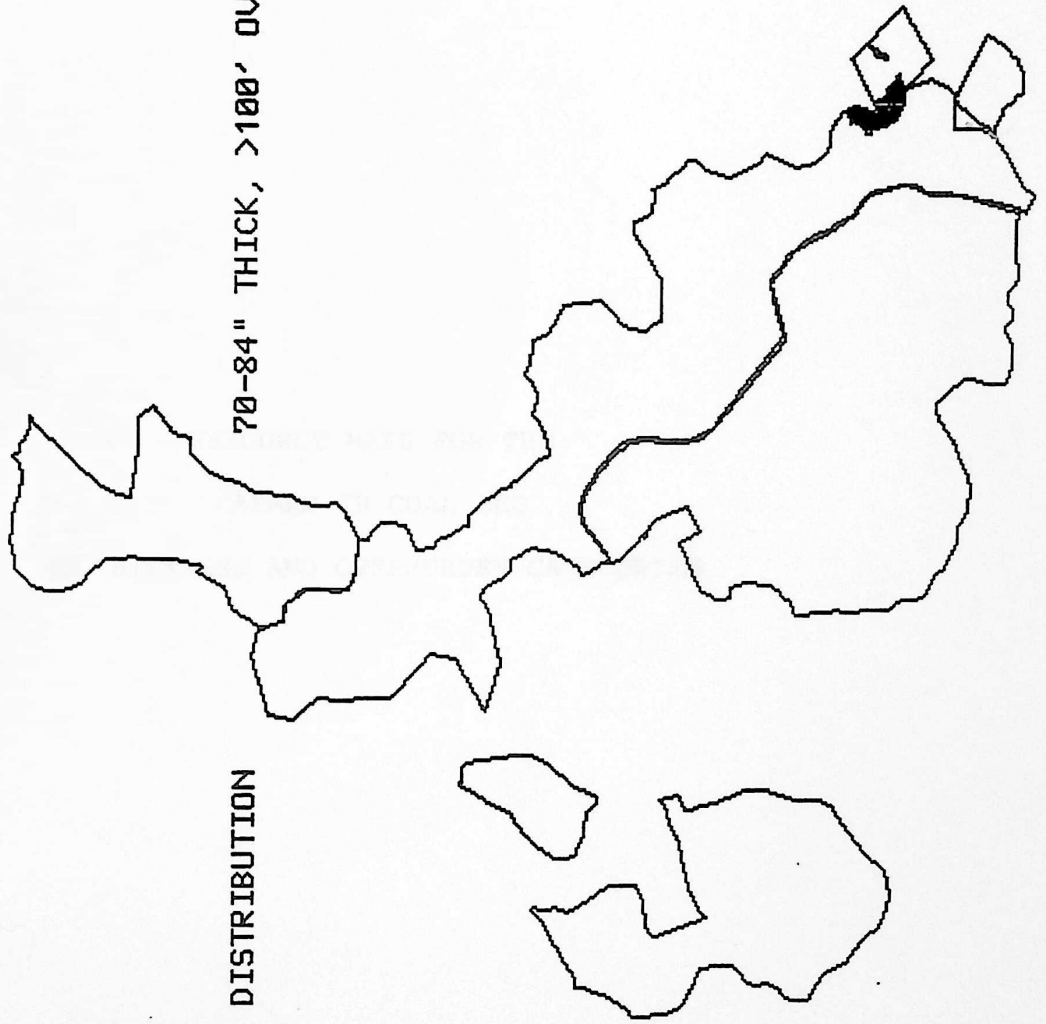
70-84" THICK, <100' OVERBURDEN

FRANCIS COAL DISTRIBUTION



70-84" THICK, >100' OVERBURDEN

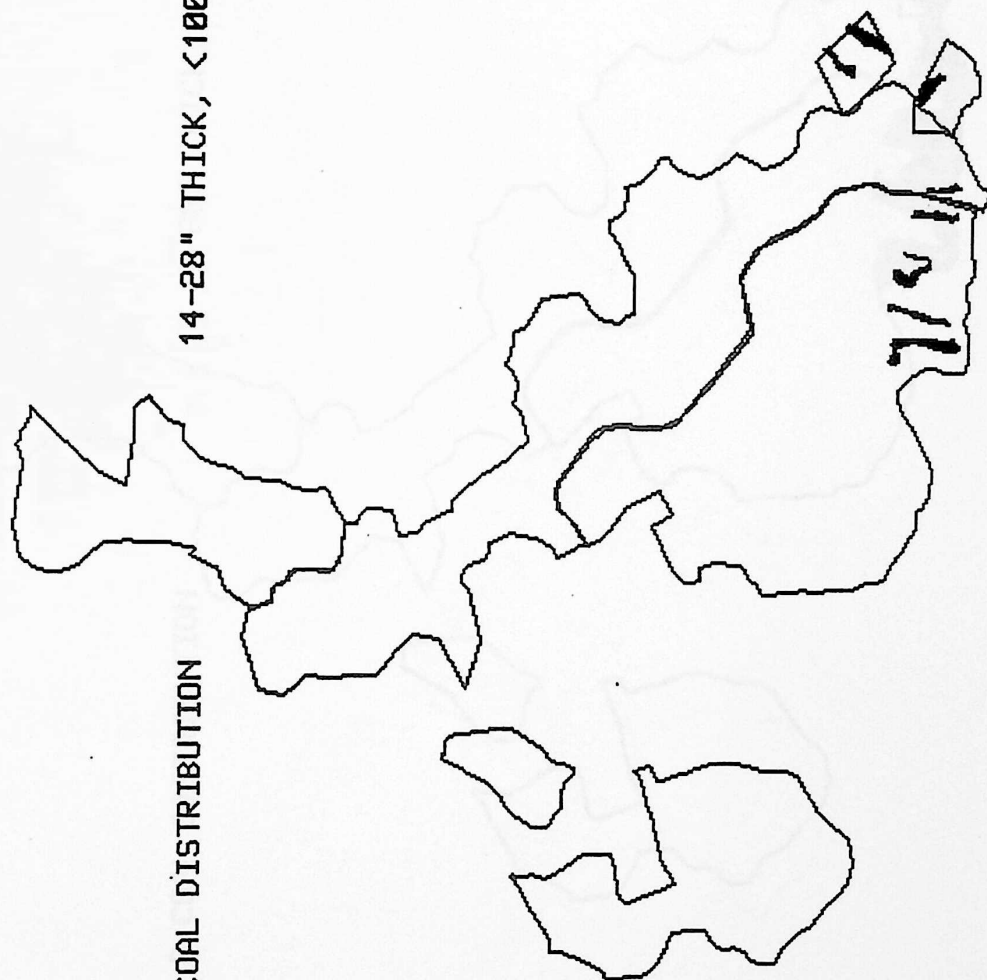
FRANCIS COAL DISTRIBUTION



RESOURCE MAPS FOR THE
HAZARD 7B COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

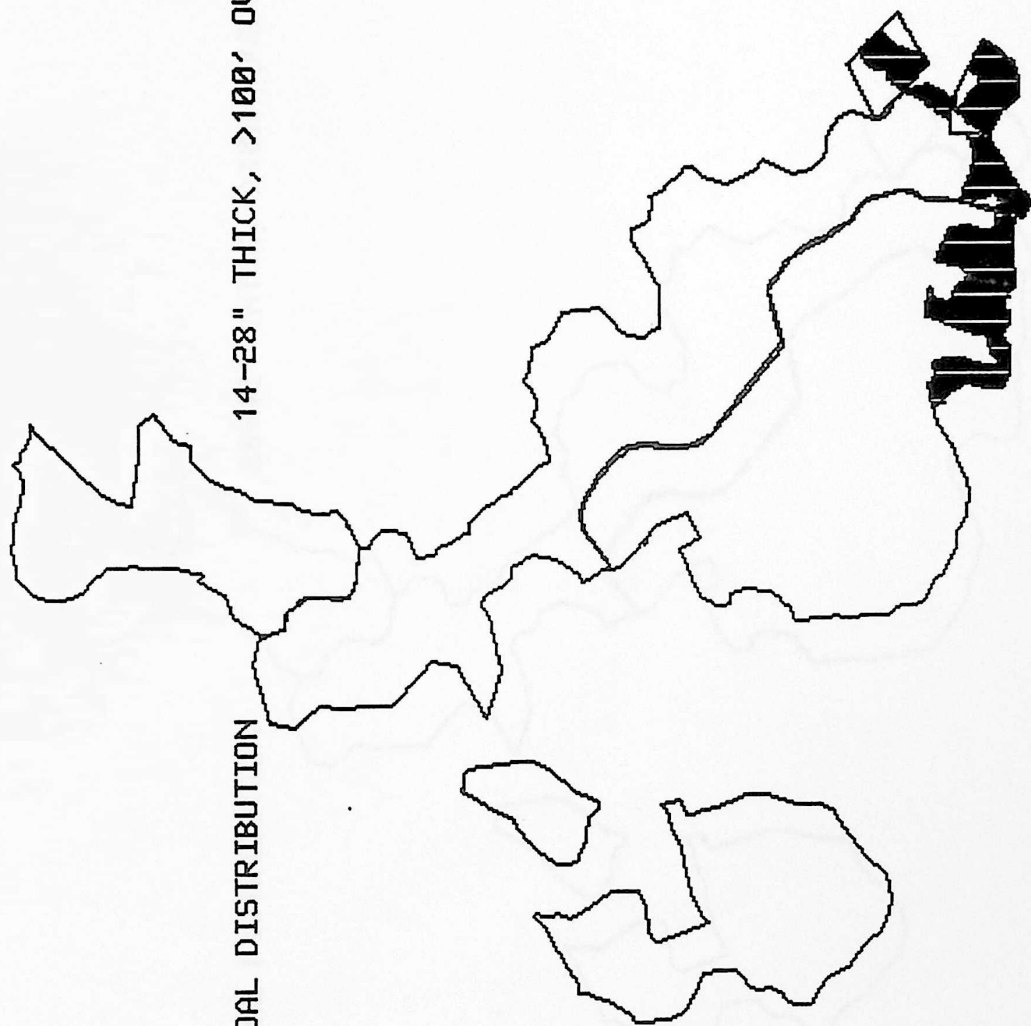
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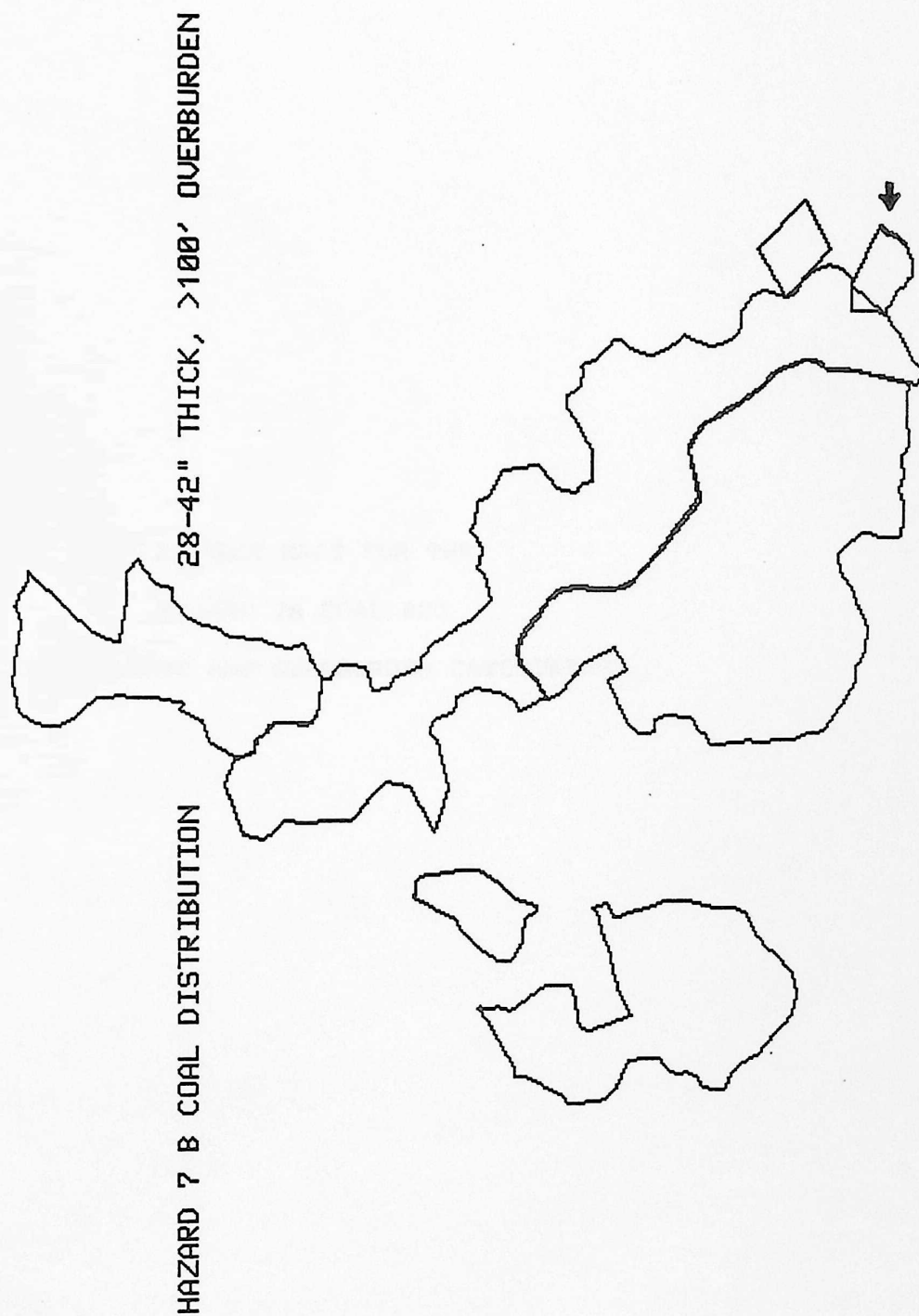
HAZARD 7 B COAL DISTRIBUTION



14-28" THICK, >100' OVERBURDEN

HAZARD 7 B COAL DISTRIBUTION

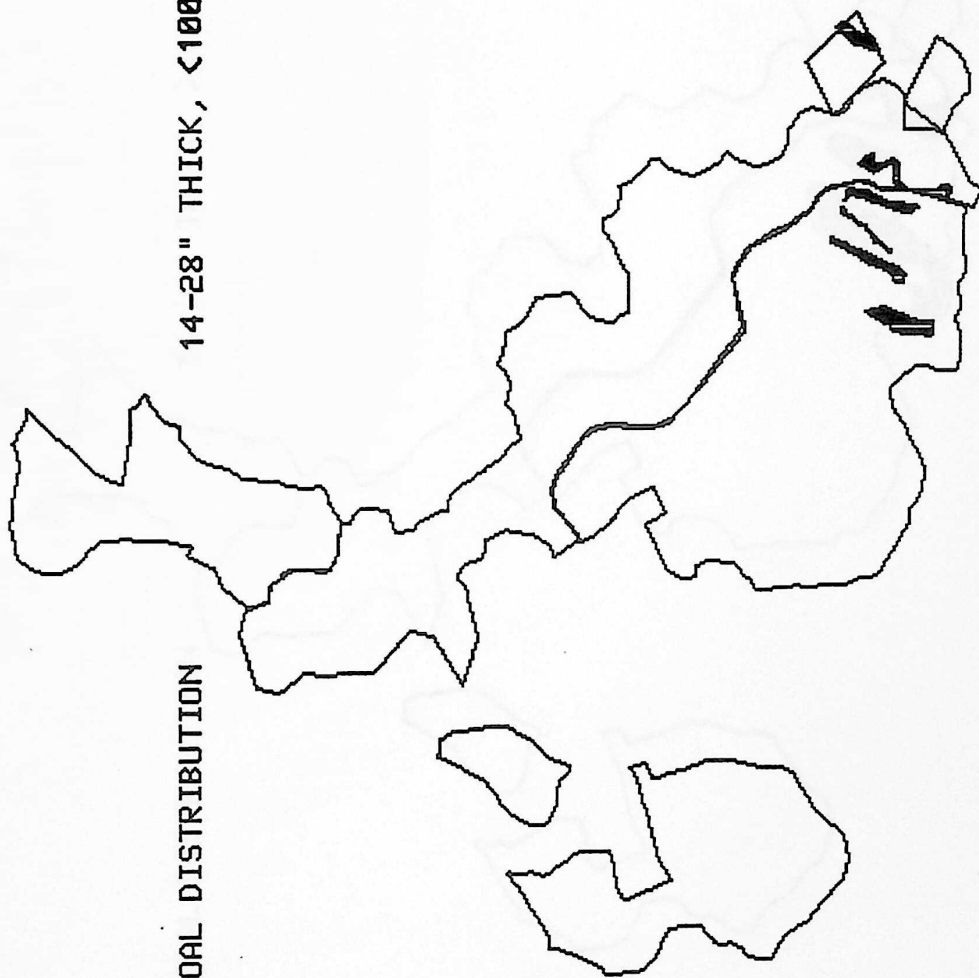




RESOURCE MAPS FOR THE
HAZARD 7A COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

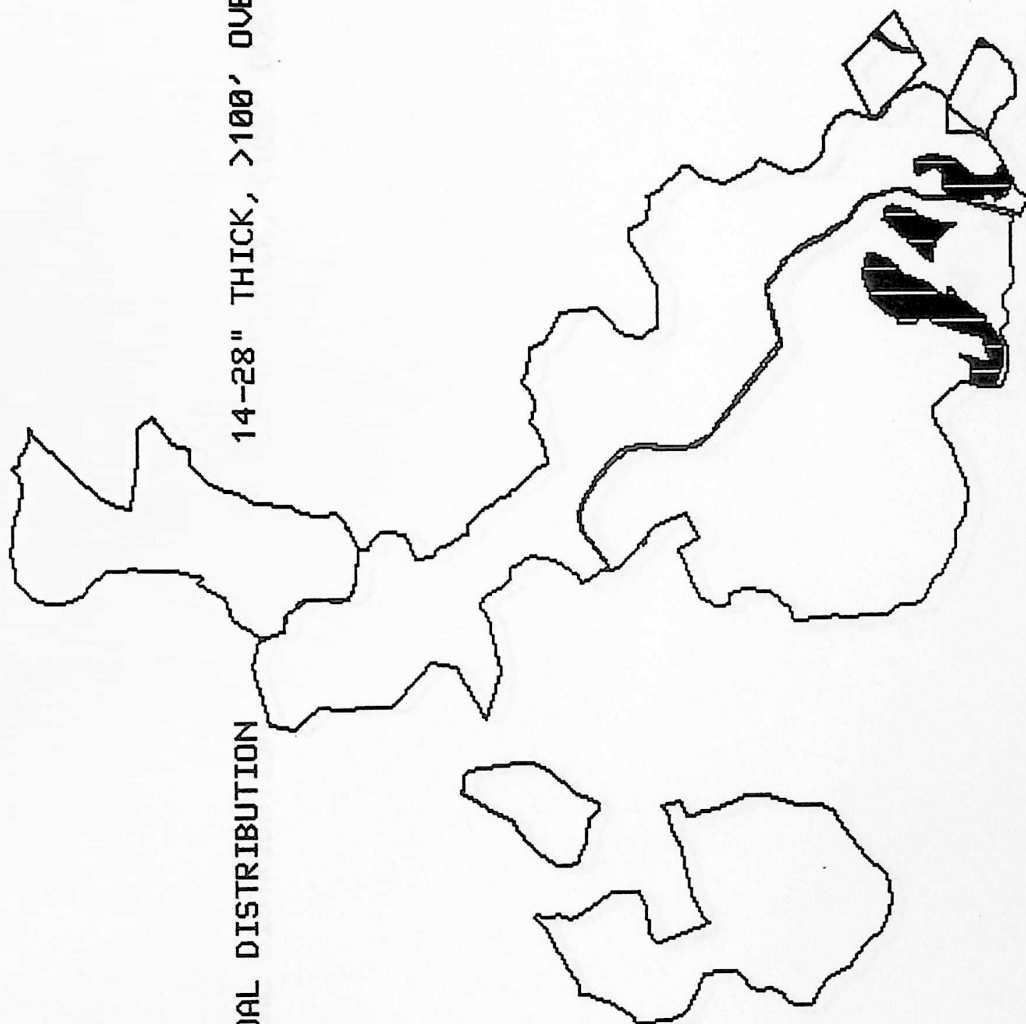
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HAZARD 7 A COAL DISTRIBUTION



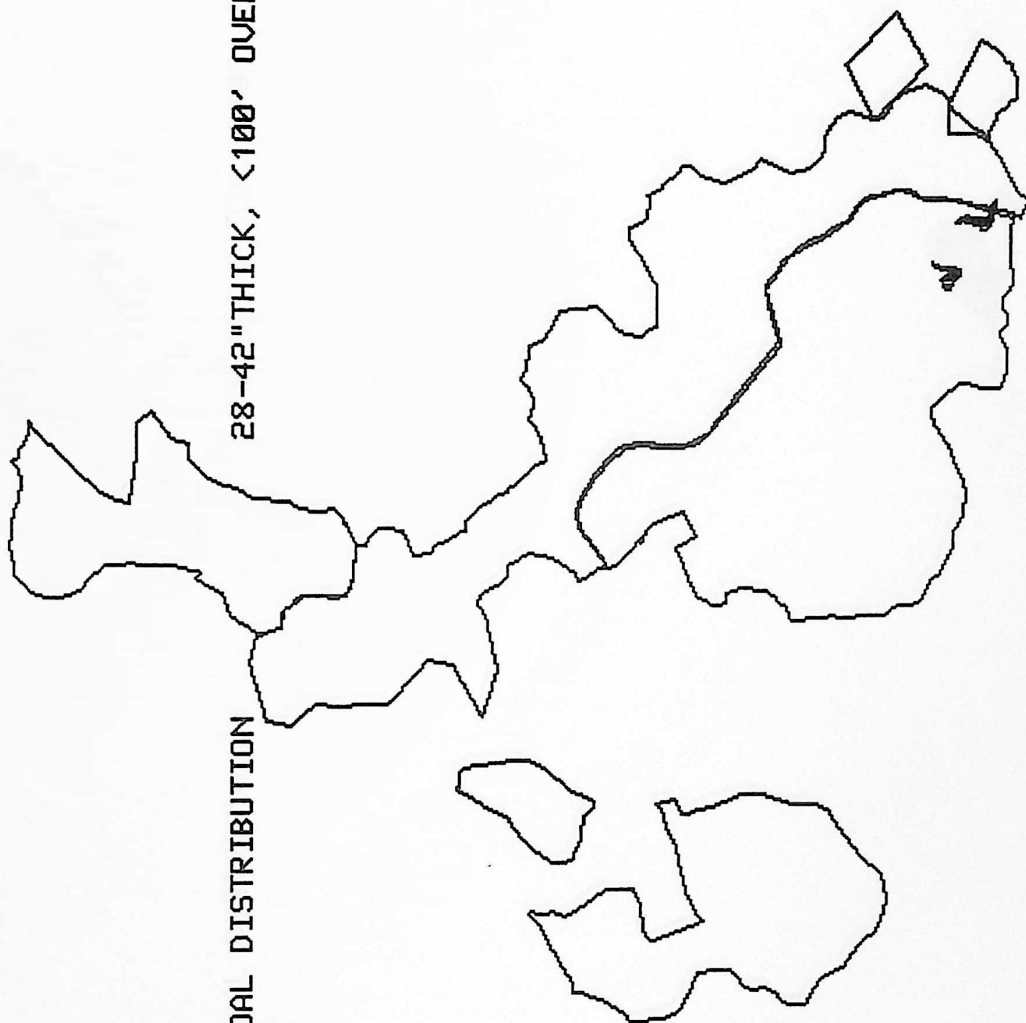
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HAZARD ? A COAL DISTRIBUTION



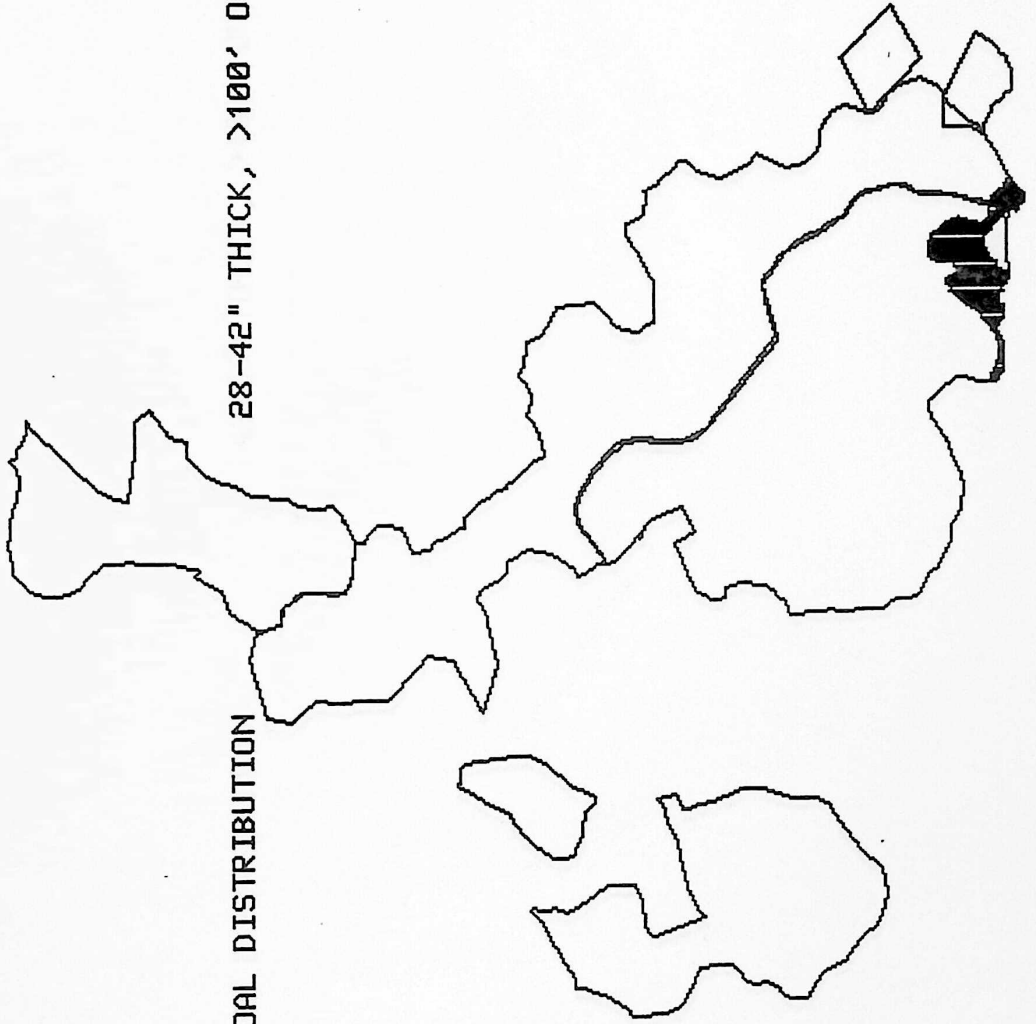
28-42" THICK, <100' OVERBURDEN

HAZARD 7 A COAL DISTRIBUTION



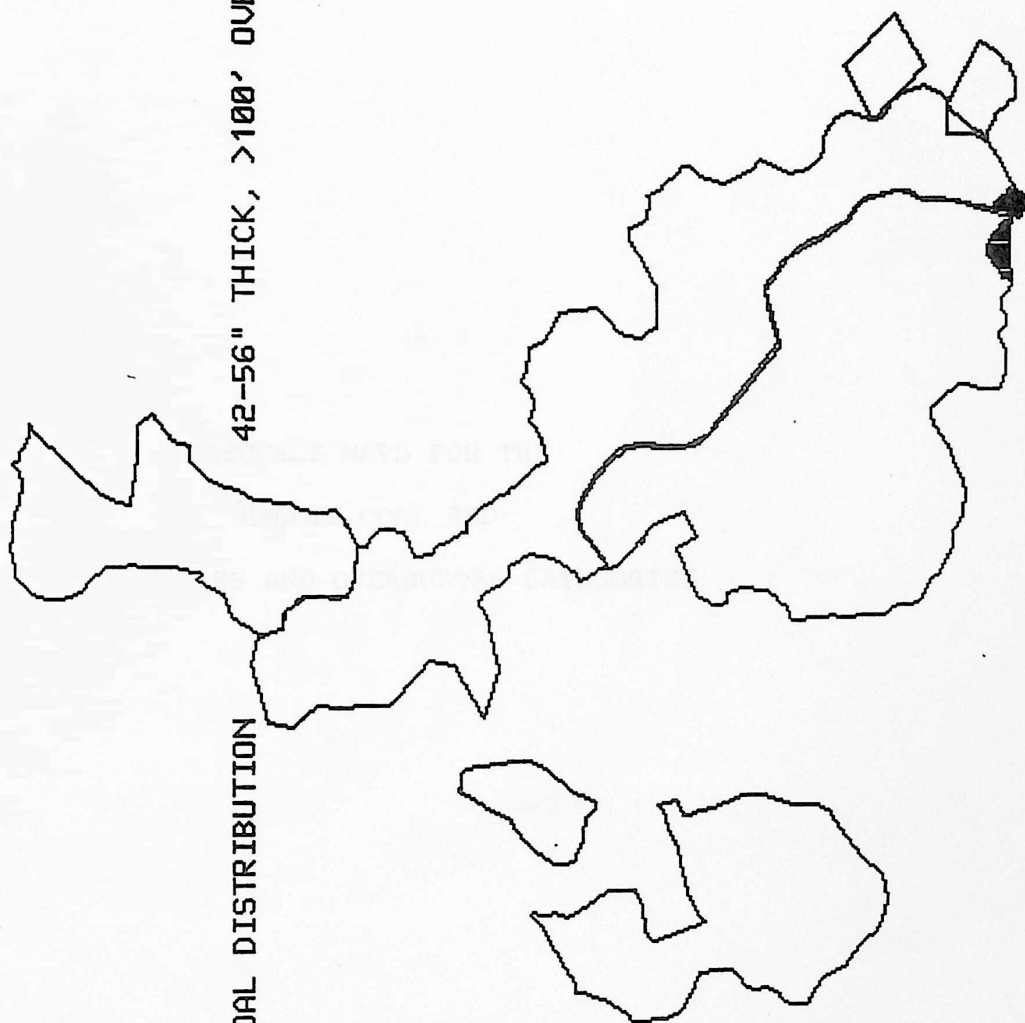
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HAZARD 7 A COAL DISTRIBUTION

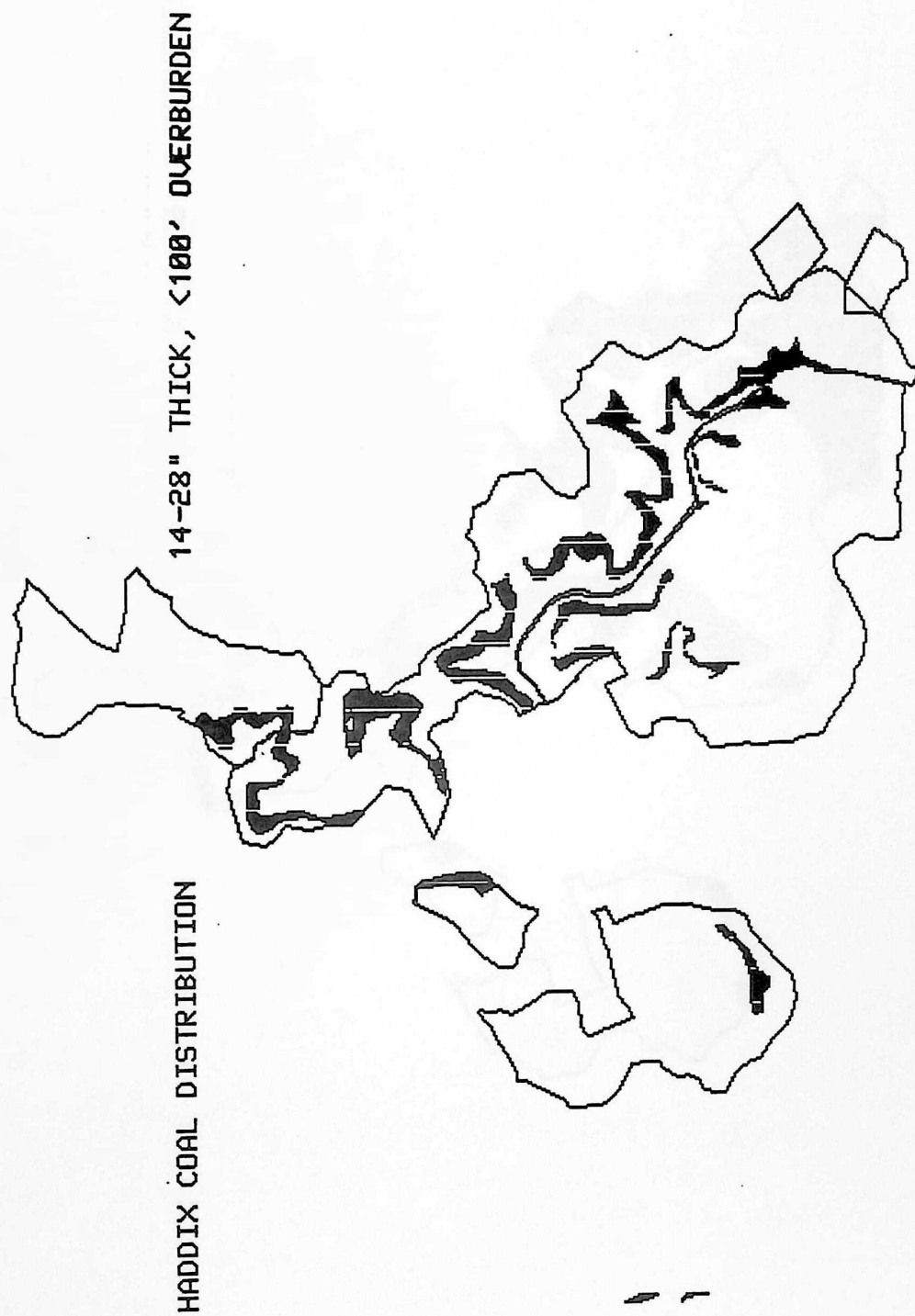


42-56" THICK, >100' OVERBURDEN

HAZARD ? A COAL DISTRIBUTION

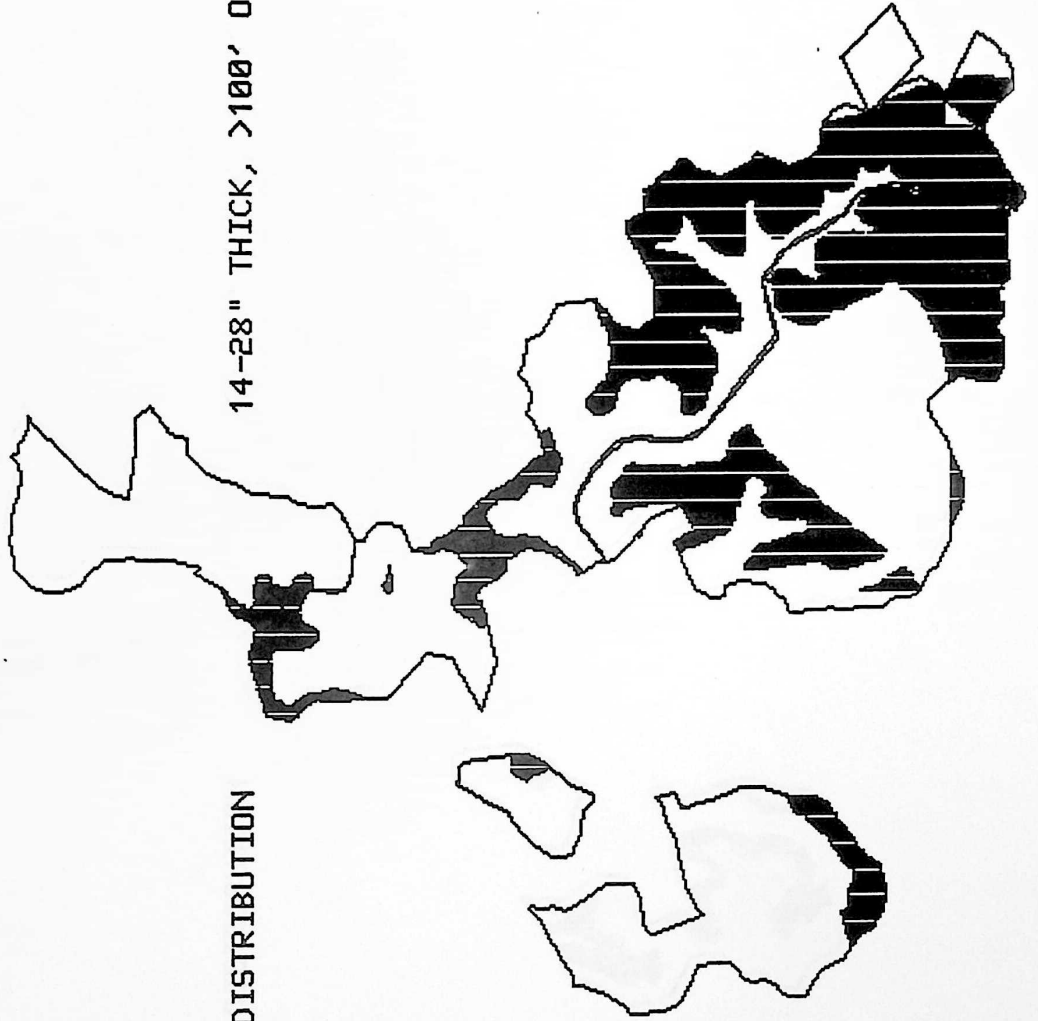


RESOURCE MAPS FOR THE
HADDIX COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES



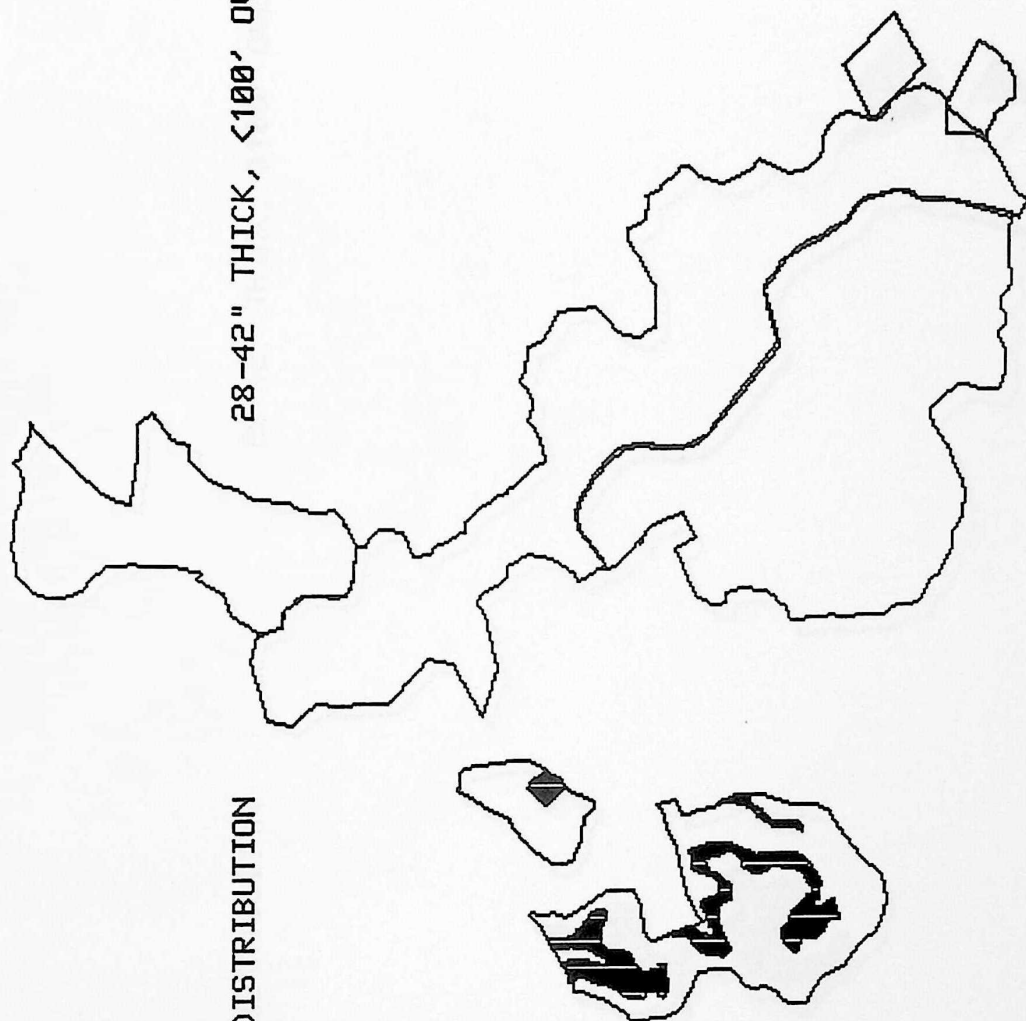
14-28" THICK, >100' OVERBURDEN

HADDIX COAL DISTRIBUTION



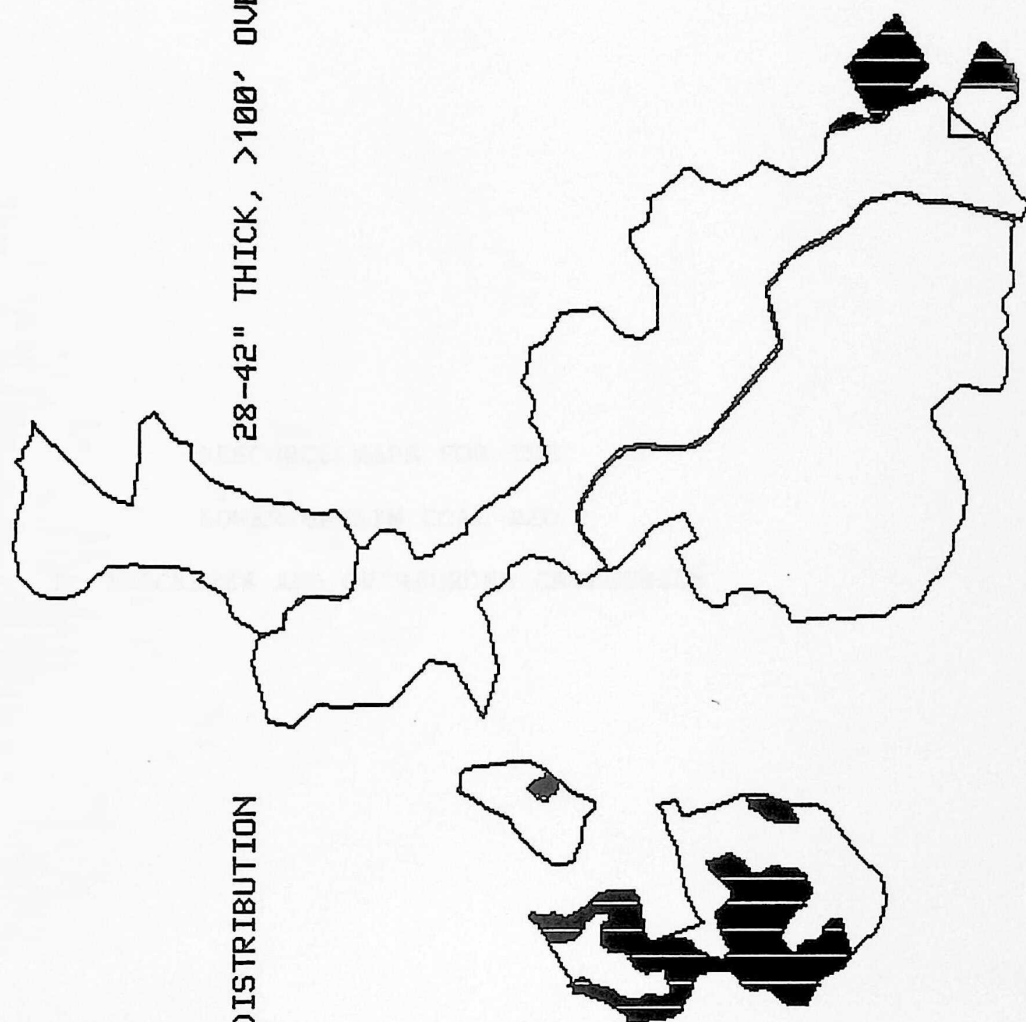
HADDIX COAL DISTRIBUTION

28-42" THICK, <100' OVERBURDEN



28-42" THICK, >100' OVERBURDEN

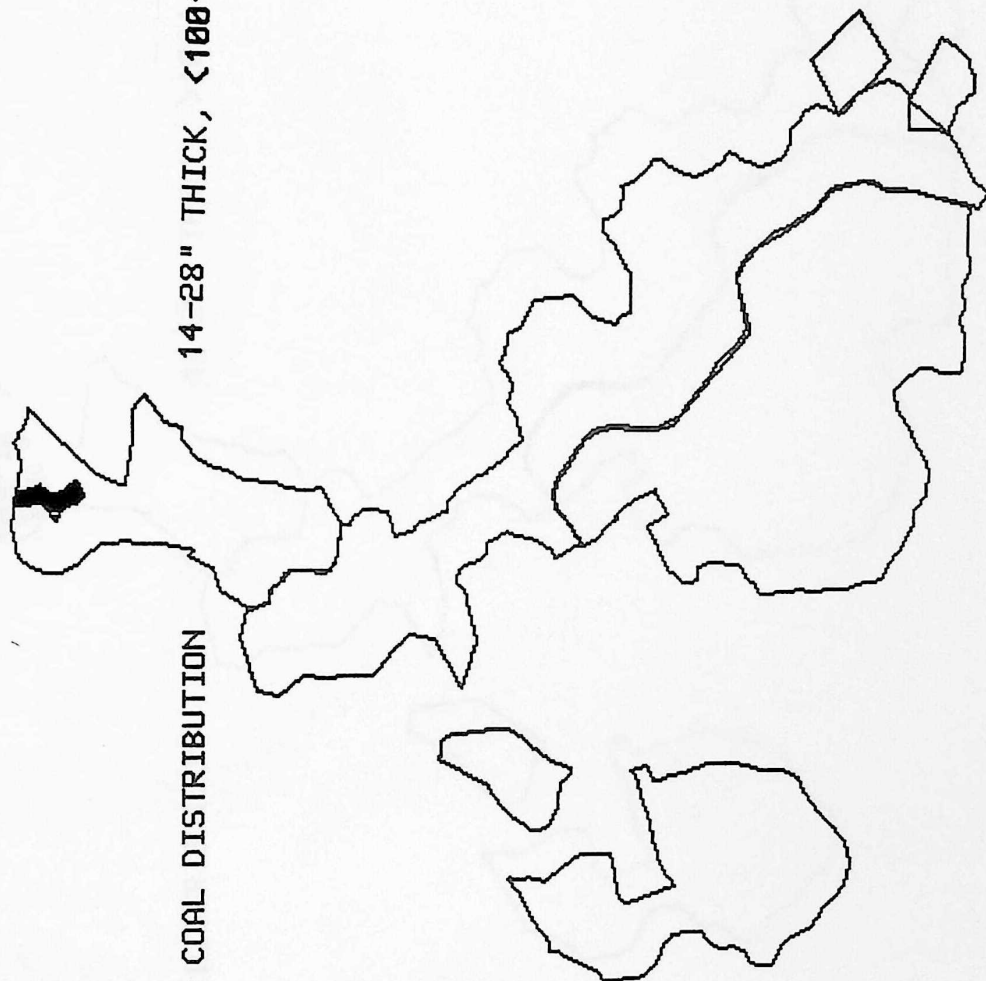
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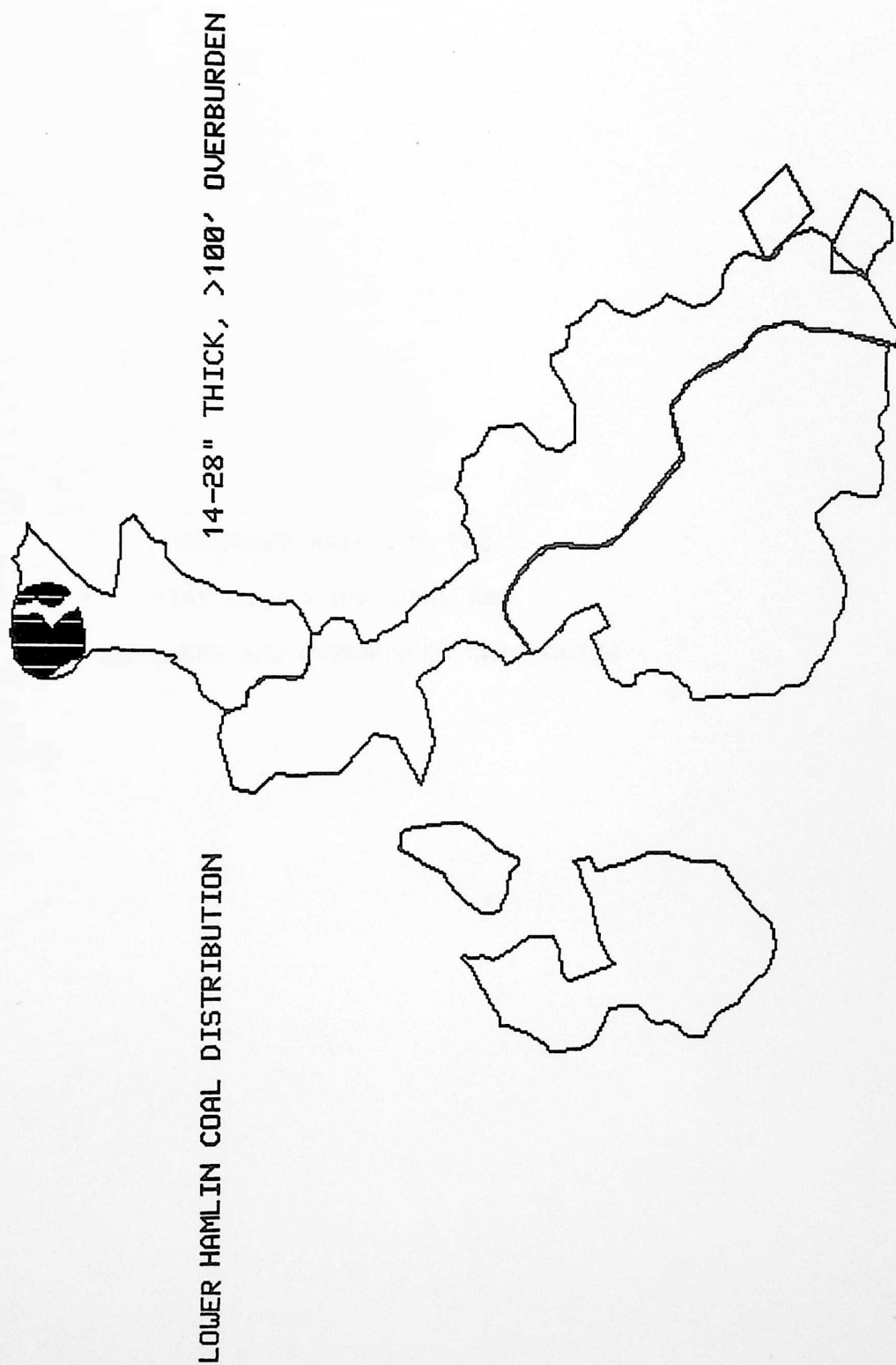


RESOURCE MAPS FOR THE
LOWER HAMLIN COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

14-28" THICK, <100' OVERBURDEN

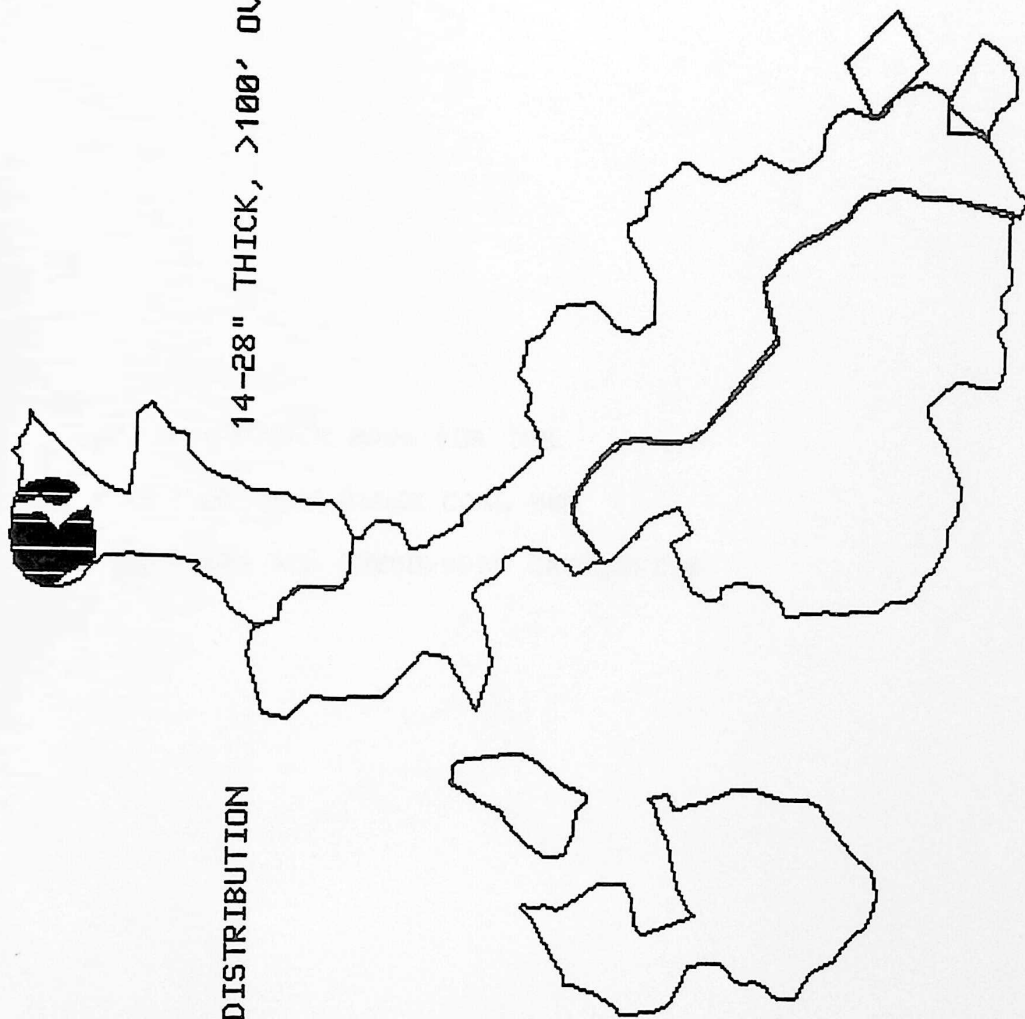
LOWER HAMLIN COAL DISTRIBUTION





14-28" THICK, >100' OVERBURDEN

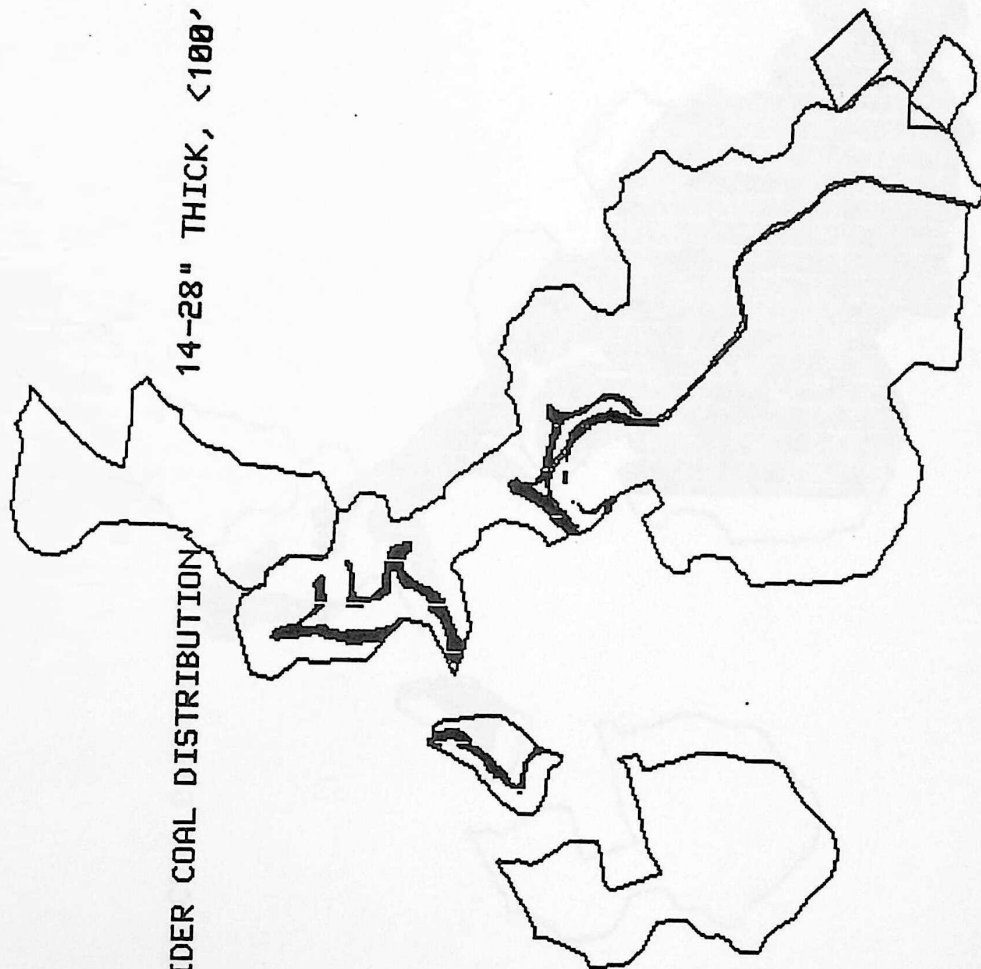
LOWER HAMLIN COAL DISTRIBUTION



RESOURCE MAPS FOR THE
FIRE CLAY RIDER COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

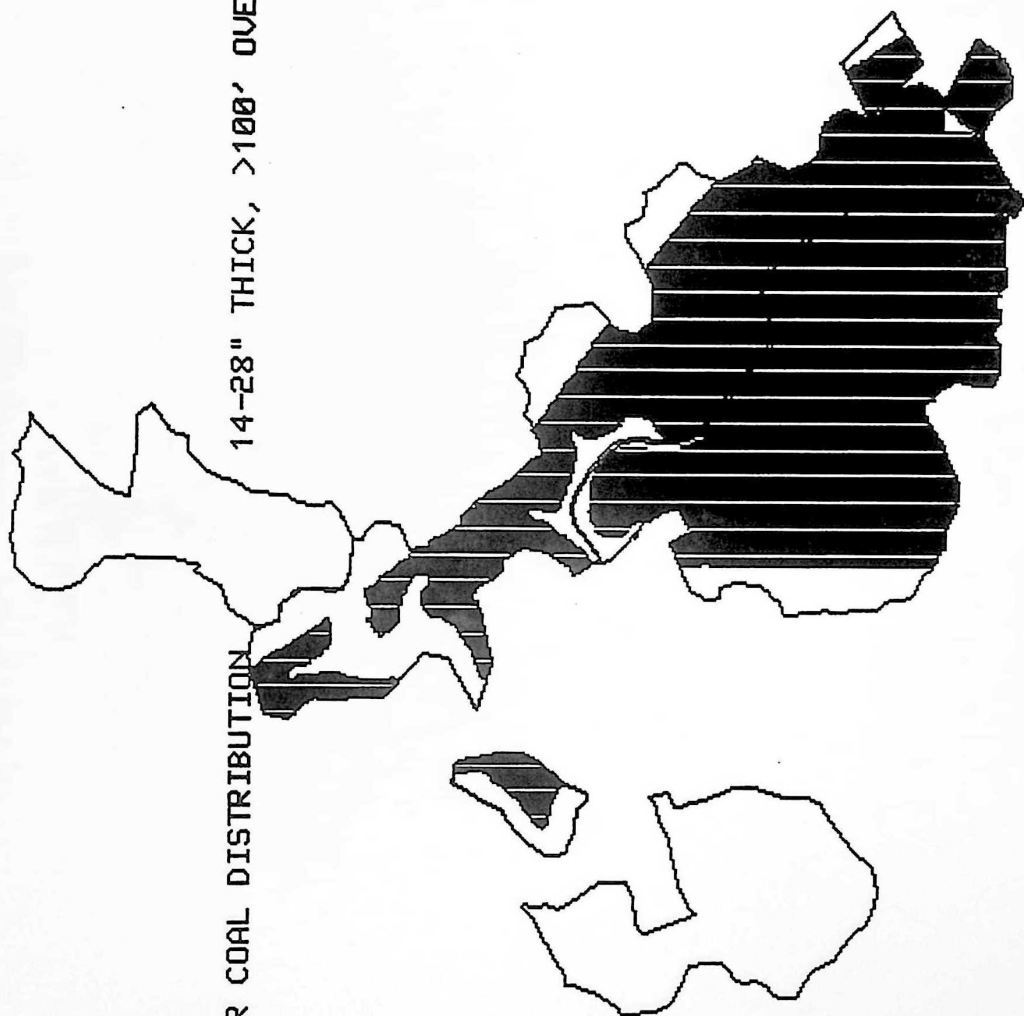
FIRE CLAY RIDER COAL DISTRIBUTION

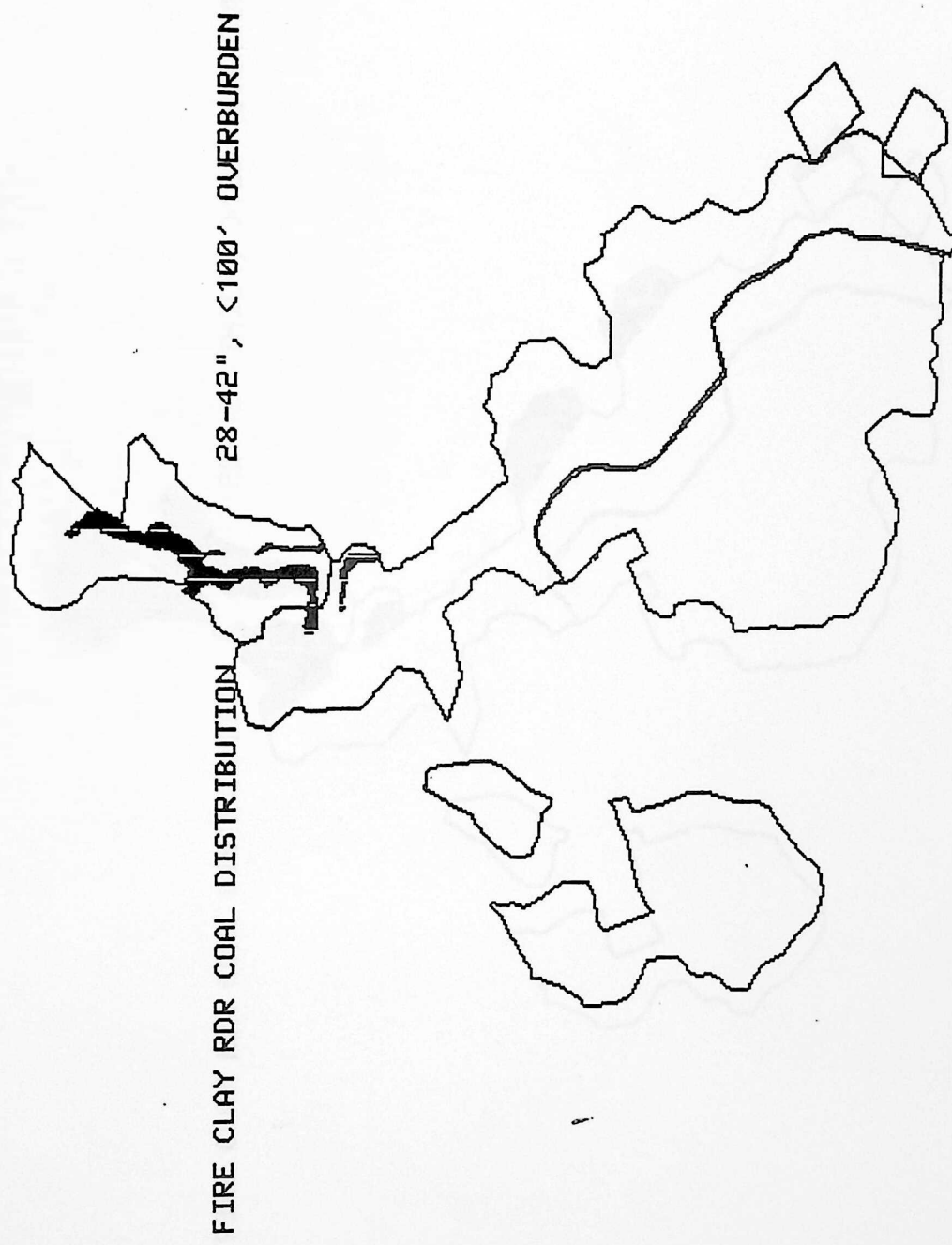
14-28" THICK, <100' OVERBURDEN

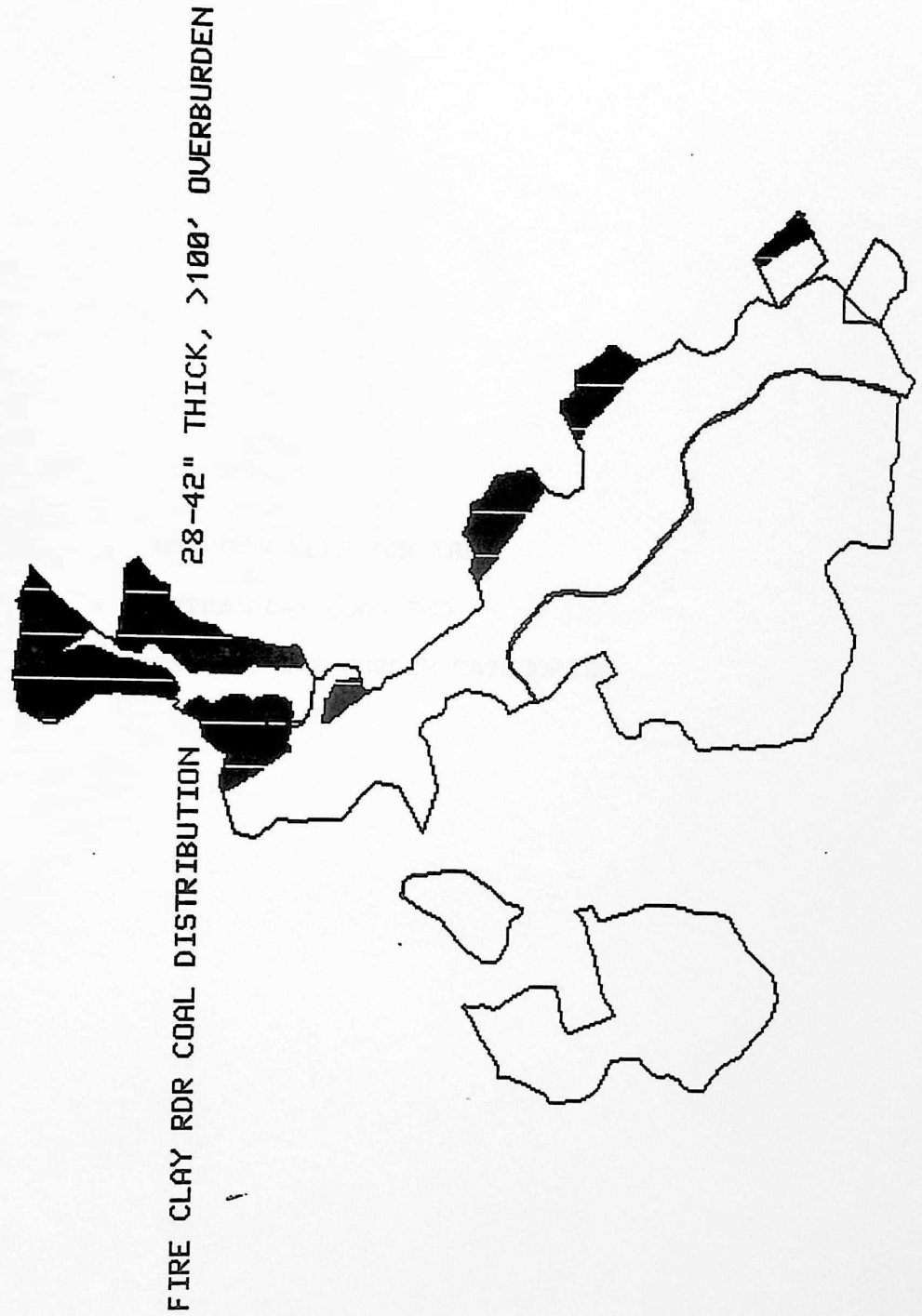


FIRE CLAY RDR COAL DISTRIBUTION

14-28" THICK, >100' OVERBURDEN



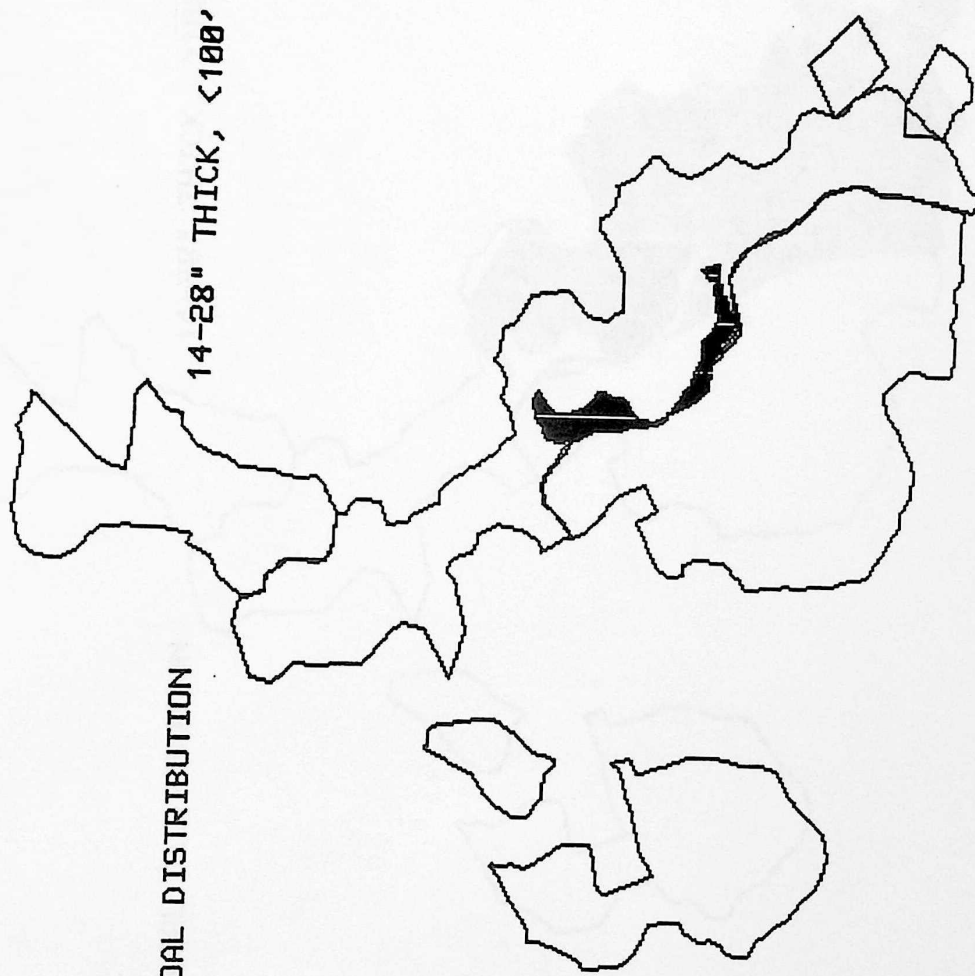




RESOURCE MAPS FOR THE
FIRE CLAY COAL BED
BY THICKNESS AND OVERBURDEN CATEGORIES

FIRE CLAY COAL DISTRIBUTION

14-28" THICK, <100' OVERBURDEN



14-28" THICK, >100' OVERBURDEN

FIRE CLAY COAL DISTRIBUTION

