#3742

BEAIRD MINING & MINERALS CO., INC.

CANE CREEK MINE

WALKER COUNTY, ALABAMA

HYDROLOGY AND GEOLOGY

ATTACHMENT II-E, II-F, & II-G

TAKEN FROM
P-3742
ASMC PERMIT FILE

Prepared By:
C & C ENGINEERING CO., INC.
ENGINEERING & LAND SURVEYING
(P.O. Box 1908) 345 20th Street
Jasper, Alabama 35501
Phone 205-384-3350 Fax 205-384-3360

RECEIVED
SURFACE MINING
COMMISSION
JUN 1994

City & County

C & C ENGINEERING CO., INC.

P.O. Box 1908 • Jasper, Alabama 35502
205/384-3350 • FAX 205/384-3360

Civil Engineering
& Land Surveying

Beaird Mining & Minerals Co., Inc.
Cane Creek Mine
Attachment IIE, IIF, & IIG

Certification Statement:

I, Lanny E. Nelson, a qualified Professional Engineer as defined in Section 880-X-2-.06 of the regulations of the Alabama Surface Mining Commission, hereby certify that the geologic and hydrologic information including all maps, plans, and cross-sections included in the answers to part IIE, IIF and IIG of this application were prepared by C & C Engineering Co., Inc., under my direct supervision, and that the information included therein is true and correct to the best of my knowledge and belief.

C & C Engineering Co., Inc.

Lanny E. Nelson, P.E.
Al. Reg. No. 15291

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BEAIRD MINING & MINERALS CO., INC.
CANE CREEK MINE
ATTACHMENT II - E

GEOLOGY (880-X-8E-.06(2))

Geologic Description of the Permit and Adjacent Area:

Beaird Mining and Minerals Co., Inc.'s Cane Creek Mine is located in Walker County, Alabama, west of the town of Cordova, Alabama. The mine site is located in Section 36, Township 14 South, Range 7 West; Section 31, Township 14 South, Range 6 West; Section 1, Township 15 South, Range 7 West; Sections 5 and 6, Township 15 South, Range 6 West, Cordova Quadrangle. (See attached Mine Site Location Map). The proposed mine site will occupy approximately 447 acres of which approximately 426 acres will be mining acres. This mine site is located within the upper part of the Pottsville Formation of the Cumberland Plateau section of the Appalachian Plateaus Physiographic Province Geologic Map of Alabama dated 1989. The upper Pottsville is characterized as the following: Interbedded dark-gray shale, siltstone, medium-gray sandstone, and coal in cyclic sequences. The upper Pottsville includes all the coal bearing strata above the lowest laterally continuing coal, the Black Creek Coal. The coal beds have been divided into seven (7) coal groups, these are, in ascending order, the Black Creek, Mary Lee, Pratt, Cobb, Gwin and Brookwood Coal groups. The coal groups generally include 2 to 6 coal beds in an interval of 50 to 300 feet. These coals are interbedded with shales, siltstones, and prominent sandstones. These sandstone members include, in descending order: The Razburg Sandstone Member, Camp Branch Sandstone Member, Lick Creek sandstone Member and the Bermen Sandstone Member.

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CANE CREEK MINE
ATTACHMENT II - E

The proposed mine site is located in the Warrior Coal Field. The Warrior Coal Basin is a homocline which plunges gently to the southwest. Rate of plunge varies but averages approximately 50 feet per mile. The mine site is located in the North Central part of the productive coal field.

The most common geologic features in the Warrior Basin are folds and faults. The faults generally tend to be normal faults with a dominate northwest-southeast orientation. Locally, theie Anticline lies in a long narrow valley approximately northeast of the eastern boundary of the permit area. The axis of the Arkadelphia Syncline lies approximately seven miles northeast of the northern boundary of the permit area. Local strike coincides with regional strike, approximately North 54 degrees West. Dip is to the southwest, approximately one and one-half degrees. Large, parallel normal faults treading North 30 degrees West, with the southwest side downthron, are evident in this region, however, none have been mapped locally within the permitted area. Two sites of joints are present within the area. East varies from the vertical less than five degrees and has a spacing of six to ten feet. They lie at 45 degrees to the regional strike, treading North 0 degrees East and North 90 degrees East. Refer to the attached Major Structures Map, which was taken from "Depositional setting of the Pottsville Formation in the Black Warrior Basin".

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CANE CREEK MINE
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GEOCHEMISTRY

The rocks outcropping within the permit area belong to the upper Pottsville Formation and consist of clastic sediments of a deltaic environment. Generally the coals of the Warrior Coal Field are separated by monotonous sequences of blue-gray fossiliferous shale, sandstones, siltstones, and underclays. All drill holes available at this site showed similar cyclothymic beds of shales, sandstones and siltstones.

Beaird Mining & Minerals Co., Inc. drilled overburden wells, OB1A, OB1B, OB1C, and groundwater monitoring wells, MW-1, MW-2, MW-3 to describe the lithology and water quality and quantity within the permit area. Samples were taken and logged in the field by personnel of Environmental Engineering Services, Inc. The samples were taken to Environmental Engineering Services, Inc. laboratory for analysis.

The Total Sulfur average of the overburden in combined holes OB-1A, OB-1B,and OB-1C, above the Mary Lee coal seam, excluding the New Castle was, .0869, Neutralization Potential was 16.461 and the average Maximum Potential Acidity was 2.716. This yields an average Acid Base Account of 13.745. The overall acid base account of the entire permit area, and interburdens are not acid forming and show high neutralizing potential. The overburden samples and data collected from drill holes OB-1 A-C and lithology of MW-1, MW-2, MW-3 exists throughout the entire permit area. For a breakdown of the chemical analysis of the overburden materials see the attached overburden analysis reports for OB-1 A-C.

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Sulfur Content of the Coal:

The sulfur content of the target coal is 2.08%.

Coal Seam(s) Information:

The coal seams to be recovered at this mine site are located within the Mary Lee Coal Group in the Warrior Coal Field. Based on drilling results by Beaird Mining and Minerals Co., Inc. there are two (2) mineable seams, the New Castle and Mary Lee. The New Castle seam outcrops within the permit area at approximately 370 feet MSL; the Mary Lee seam outcrops within the permit area approximately 340 feet MSL. In addition a seam of fire clay present directly below the Mary Lee Coal Seam will also be recovered. The strike of the coal seams within the proposed permit area is 54 degrees Northwest and the dip is to the southwest approximately one and one-half degrees. The elevations of all drill holes were obtained by altimeter correlated to topo-graphic B.M.'s.

For a map showing the outcrop location, elevation and locations of drill holes and other sample sites, with respect to the proposed permit area, see the attached Hydro/Geo Map. For detailed geologic description refer to the attached Lithologic and Cross-Section Drawing.

Sampling and Analytical Data:

Samples from overburden hole, OB-1 A-C, were collected by personnel of Environmental Engineering Services, Inc. Overburden samples were taken from OB-1 A-C by catching chips in a clean shovel as they were blown from the hole. Samples were taken every five (5) feet or change

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in lithology, cataloged, and stored in quart sized plastic zip-lock type bags for additional inspection and testing. In order to avoid unrealistically high Total Sulfur readings in the samples immediately over and underlying the coal seams, care was taken not to include coal dust in them. Chemical analysis, including Paste pH, Total Sulfur, and Neutralization Potential were conducted by Auburn University, Soils Testing Laboratory in accordance with ASTM Guidelines.

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ENVIRONMENTAL ENGINEERING SERVICES, INC.
245 WEST 20 TH STREET JASPER, ALALABAMA 35501 (205) 384-5562

OVERBURDEN ANALYSIS:

COMPANY NAME: BEAIRD MINING & MINERALS CO. INC. COLLECTED DATE 6/2/93

MINE NAME: CANE CREEK MINE ANALYZED DATE: 6/15/93 THRU 7/14/93

DRILL HOLE #: 081 A-C

-All analysis performed according to EPA standards.

INTERVAL	PASTE pH	% SULFUR	MAX. POT. *ACIDITY	NEUT. *POT.	*ACCOUNT	ACID FORMING ?
0-5	4.9	0.0157	0.491	Trace	-0.491	NO
5-10	4.9	0.0076	0.238	Trace	-0.238	NO
10-15	4.9	0.0080	0.250	Trace	-0.250	NO
15-20	5.2	0.0037	0.116	Trace	-0.116	NO
20-25	5.4	0.0043	0.134	1.500	1.366	NO
25-30	5.8	0.0039	0.122	3.000	2.878	NO
30-35	5.8	0.0566	1.769	1.500	-0.269	NO
35-40	6.6	0.1210	3.781	3.800	0.019	NO
40-45	7.5	0.1093	3.400	4.300	0.900	NO
45-50	7.5	0.2546	7.955	4.000	-3.955	NO
50-55	7.7	0.1750	5.469	Trace	-5.469	NO
55-60	7.8	0.1191	3.722	Trace	-3.722	NO
60-65	8.1	0.0765	2.391	7.500	5.109	NO
65-70	8.4	0.0494	1.544	9.500	7.956	NO
70-75	8.6	0.0533	1.666	19.800	18.134	NO
75-80	8.5	0.0668	2.713	6.000	3.286	NO
80-85	8.8	0.0510	1.594	12.800	11.206	NO
85-90	8.6	0.0934	2.919	0.500	-2.419	NO
90-95	8.5	0.1009	3.153	20.3	17.147	NO
95-100	8.8	0.0773	2.416	1.5	-0.916	NO
100-105	8.1	0.0943	2.947	12.3	9.353	NO
105-110	8.2	0.0401	1.253	96.8	95.547	NO
110-115	8.5	0.0947	2.959	24.5	21.541	NO
115-120	8.5	0.0953	2.978	26.8	25.822	NO
120-125	8.4	0.1210	3.781	21.5	17.719	NO
125-130	8.5	0.1330	4.156	28.3	24.144	NO
130-135	8.4	0.1300	4.063	27.8	23.738	NO
135-140	8.5	0.1001	3.128	29.3	26.172	NO
140-145	7.8	0.0930	2.906	28.8	25.894	NO
145-150	8.4	0.0834	2.606	23.3	20.694	NO
150-155	8.7	0.0714	2.231	29.8	27.569	NO
155-160	8.9	0.0955	2.984	49.5	46.516	NO
160-165	8.7	0.1013	3.166	20.3	17.134	NO
165-170	7.9	0.3205	10.016	23.5	13.484	NO
170-175	8.6	0.1426	4.456	22.8	18.344	NO
175-180	8.6	0.0454	1.419	13.8	12.381	NO
180-185	8.9	0.0409	1.278	16.5	15.222	NO
185-190	8.9	0.0562	1.756	28.8	27.044	NO
190-195	8.8	0.1058	3.306	38.5	35.194	NO
195-200	8.4	0.0898	2.806	12	9.194	NO
200-202	8.5	0.0418	1.306	12	10.694	NO
**AVERAGE	8.43	0.0869	2.715	16.4610	13.746	NO

*Calculatd in tons CaCO3 per 100 tons of material

**Averages do not include coal seams to be mined or intervals below lowest seam.

Auburn University

Auburn University, Alabama 36849-5411

College of Agriculture and

Agricultural Experiment Station System

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Department of Agronomy and Soils
Telephone: 844-3958
Area Code 205

Reply: Soil Testing Laboratory
Auburn University
Auburn University, AL 36849-5411

Environmental Engineering Services, Inc.

July 14, 1993

SAMPLE I.D.: Environmental Engineering's soil samples (41)
LAB I.D. : 33185 - 33227
ANALYSIS : SPECIAL MINE PACKAGE
INCLUDES : Multi-Sulfur, Organic Matter, NO_3- N, Alkalinity, & Particle Size

SPECIAL MINE PACKAGE

PARTICLE SIZE ANALYSIS:

Lab No.	PARTICLE SIZE SAND	SILT	CLAY	TEXTURAL CLASS	H_2O AVAIL. cm/cm
	%				
33185	33.75	41.25	25	LOAM	0.16
33186	32.5	55	12.5	SILT LOAM	0.16
33187	26.25	61.25	12.5	SILT LOAM	0.18
33188	21.25	63.75	15	SILT LOAM	0.19
33189	21.25	63.75	15	SILT LOAM	0.19
33190	30	57.5	12.5	SILT LOAM	0.17
33191	50	40	10	LOAM	0.12
33192	68.75	23.75	7.5	SANDY LOAM	0.07
33193	56.25	36.25	7.5	SANDY LOAM	0.10
33194	66.25	26.25	7.5	SANDY LOAM	0.08
33195	55	37.5	7.5	SANDY LOAM	0.11
33196	61.25	31.25	7.5	SANDY LOAM	0.09
33197	73.75	18.75	7.5	SANDY LOAM	0.06
33198	77.5	15	7.5	LOAMY SAND	0.05
33199	75	17.5	7.5	SANDY LOAM	0.06
33200	70	20	10	SANDY LOAM	0.07
33201	77.5	15	7.5	LOAMY SAND	0.05
33202	75	17.5	7.5	SANDY LOAM	0.06
33203	78.75	13.75	7.5	LOAMY SAND	0.05
33204	73.75	18.75	7.5	SANDY LOAM	0.06
33205	57.5	32.5	10	SANDY LOAM	0.10
33206	73.75	18.75	7.5	SANDY LOAM	0.06
33207	71.25	21.25	7.5	SANDY LOAM	0.07
33208	75	17.5	7.5	SANDY LOAM	0.06
33209	80	12.5	7.5	LOAMY SAND	0.05
33210	75	20	5	LOAMY SAND	0.06
33211	70	25	5	SANDY LOAM	0.07

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Environmental Engineering Services, Inc.

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PARTICLE SIZE ANALYSIS:

Lab No.	PARTICLE SIZE SAND	SILT	CLAY	TEXTURAL CLASS	H_2O AVAIL. cm/cm
	%				
33212	77.5	17.5	5	LOAMY SAND	0.05
33215	72.5	22.5	5	SANDY LOAM	0.06
33216	82.5	17.5	0	LOAMY SAND	0.04
33217	75	22.5	2.5	LOAMY SAND	0.06
33218	80	17.5	2.5	LOAMY SAND	0.05
33219	82.5	15	2.5	LOAMY SAND	0.04
33220	77.5	20	2.5	LOAMY SAND	0.05
33221	72.5	22.5	5	SANDY LOAM	0.06
33222	77.5	20	2.5	LOAMY SAND	0.05
33223	81.25	16.25	2.5	LOAMY SAND	0.04
33224	81.25	16.25	2.5	LOAMY SAND	0.04
33225	83.75	13.75	2.5	LOAMY SAND	0.04
33226	83.75	13.75	2.5	LOAMY SAND	0.04
33227	82.5	15	2.5	LOAMY SAND	0.04

Lab No.	NO_3- N ppm	O.M. -- % --	Neutralizing Potential Tons $CaCO_3$/1000 Tons
33185	1.40	0.2	Trace
33186	0.56	0.1	Trace
33187	0.48	0.1	Trace
33188	0.56	0.1	Trace
33189	0.68	0.1	1.5
33190	0.48	0.1	3.0
33191	0.56	0.2	1.5
33192	1.48	0.5	3.8
33193	1.40	0.5	4.3
33194	0.68	0.7	4.0
33195	0.56	1.1	Trace
33196	0.68	0.7	Trace
33197	0.48	0.4	7.5
33198	0.80	0.3	9.5
33199	0.68	0.4	19.8
33200	0.80	0.5	6.0
33201	0.80	0.3	12.8

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Environmental Engineering Services, Inc.

July 14, 1993

SAMPLE I.D.: Environmental Engineering's soil samples (41)
LAB I.D.1.04 : 33185 - 33227

SPECIAL MINE PACKAGE

Lab No.	NO_3- N ppm	O.M. -- % --	Neutralizing Potential Tons $CaCO_3$/1000 Tons
33202	0.56	0.6	0.5
33203	0.48	0.4	20.3
33204	0.92	0.5	1.5
33205	0.80	0.7	12.3
33206	0.80	0.3	96.8
33207	0.68	0.6	24.5
33208	1.60	0.5	28.8
33209	1.04	0.4	21.5
33210	0.56	0.5	28.3
33211	0.48	0.5	27.8
33212	1.04	0.6	29.3
33215	1.16	0.7	28.8
33216	1.40	0.4	23.3
33217	1.60	0.6	29.8
33218	1.16	0.7	49.5
33219	1.28	0.6	20.3
33220	0.92	0.7	23.5
33221	1.28	1.0	22.8
33222	1.04	0.6	13.8
33223	0.68	0.6	16.5
33224	0.48	0.6	28.8
33225	1.40	0.5	28.5
33226	4.48	0.6	12.0
33227	2.08	0.7	12.0

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MULTIPLE SULFUR ANALYSES:

Lab No.	READINGS 1st	2nd	3rd	4th	READINGS Avg.
33185	0.0152	0.0152	0.0152	0.0172	0.0157
33186	0.0016	0.0092	0.0088	0.0108	0.0076
33187	0.0084	0.0092	0.0084	0.0060	0.0080
33188	0.0020	0.0040	0.0040	0.0048	0.0037
33189	0.0048	0.0044	0.0024	0.0056	0.0043
33190	0.0032	0.0052	0.0040	0.0032	0.0039
33191	0.0584	0.0584	0.0544	0.0552	0.0566
33192	0.1252	0.1060	0.1212	0.1316	0.1210
33193	0.0960	0.1048	0.1044	0.1300	0.1088

Environmental Engineering Services, Inc.

July 14, 1993

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LAB I.D.1.04 : 33185 - 33227

SPECIAL MINE PACKAGE

MULTIPLE SULFUR ANALYSES:

Lab No.	READINGS 1st	2nd	3rd	4th	READINGS Avg.
33194	0.2476	0.2532	0.2516	0.2660	0.2546
33195	0.1448	0.1784	0.2072	0.1696	0.1750
33196	0.1140	0.1228	0.1176	0.1220	0.1191
33197	0.0740	0.0788	0.0788	0.0744	0.0765
33198	0.0484	0.0484	0.0448	0.0560	0.0494
33199	0.0620	0.0456	0.0512	0.0544	0.0533
33200	0.0860	0.0816	0.0904	0.0892	0.0868
33201	0.0492	0.0560	0.0516	0.0472	0.0510
33202	0.0892	0.0900	0.0984	0.0960	0.0934
33203	0.1036	0.0924	0.0976	0.1100	0.1009
33204	0.0704	0.0784	0.0796	0.0808	0.0773
33205	0.1008	0.0920	0.0940	0.0904	0.0943
33206	0.0376	0.0352	0.0436	0.0440	0.0401
33207	0.0932	0.0964	0.0896	0.0996	0.0947
33208	0.1344	0.0692	0.0896	0.0880	0.0953
33209	0.1004	0.1204	0.1224	0.1408	0.1210
33210	0.1248	0.1208	0.1576	0.1288	0.1330
33211	0.1272	0.1332	0.1324	0.1272	0.1300
33212	0.0932	0.0988	0.1028	0.1056	0.1001
33215	0.1008	0.0980	0.0952	0.0780	0.0930
33216	0.0784	0.0956	0.0868	0.0728	0.0834
33217	0.0684	0.0684	0.0764	0.0724	0.0714
33218	0.0836	0.0816	0.1108	0.1060	0.0955
33219	0.0960	0.0952	0.1028	0.1112	0.1013
33220	0.3344	0.4500	0.2036	0.2940	0.3205
33221	0.1804	0.1276	0.1372	0.1252	0.1426
33222	0.0352	0.0488	0.0400	0.0576	0.0454
33223	0.0464	0.0324	0.0424	0.0424	0.0409
33224	0.0500	0.0548	0.0656	0.0544	0.0562
33225	0.1116	0.1040	0.0916	0.1160	0.1058
33226	0.0836	0.0900	0.0904	0.0952	0.0898
33227	0.0468	0.0400	0.0436	0.0368	0.0418

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REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

NAME ENVIRONMENTAL ENG. SERV.
ADDRESS PO BOX 1908
CITY JASPER, AL 35502

COUNTY WALKER
DISTRICT 1
DATE 6/15/93

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N	P_2O_5	K_2O Pounds Per Acre
33185	OB1 0-5	SURFACE MINE REVEG	4	4.9	VL 0	L 60	H 200	***	3.5	60	100	100

COMMENT NO: 224
SOIL ACIDITY (LOW PH) CAN BE CORRECTED WITH EITHER DOLOMITIC OR CALCITIC LIME.

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33186	OB1 5-10	SURFACE MINE REVEG	4	4.9	VL 30	L 60	L 50	***	3.0	60	100	100

COMMENT NO: 221
BOTH SOIL ACIDITY AND LOW MAGNESIUM CAN BE CORRECTED BY APPLYING DOLOMITIC LIME AT THE RECOMMENDED RATE.

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33187	OB1 10-15	SURFACE MINE REVEG	4	4.9	VL 30	M 70	H 150	***	3.0	60	100	50

COMMENT NO: 224
SOIL ACIDITY (LOW PH) CAN BE CORRECTED WITH EITHER DOLOMITIC OR CALCITIC LIME.

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APPROVED

REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

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NAME ENVIRONMENTAL ENG. SERV.
ADDRESS PO BOX 1908
CITY JASPER, AL 35502

COUNTY WALKER
DISTRICT 1
DATE 6/15/93

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33188	0B1 15-20	SURFACE MINE REVEG	4	5.2	VL 50	H 90	H 1420	***	2.0	60	100	0

COMMENT NO: 224
SOIL ACIDITY (LOW PH) CAN BE CORRECTED WITH EITHER DOLOMITIC OR CALCITIC LIME.

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33189	0B1 20-25	SURFACE MINE REVEG	4	5.4	L 60	H 90	H 1910	***	2.0	60	80	0

COMMENT NO: 224
SOIL ACIDITY (LOW PH) CAN BE CORRECTED WITH EITHER DOLOMITIC OR CALCITIC LIME.

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33190	0B1 25-30	SURFACE MINE REVEG	4	5.8	L 60	H 80	H 2270	***	0.0	60	80	40

REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

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P-3742
ASMC PERMIT FILE

NAME ENVIRONMENTAL ENG. SERV.
ADDRESS PO BOX 1908
CITY JASPER, AL 35502

COUNTY WALKER
DISTRICT 1
DATE 6/15/93

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33191	OB1 30-35	SURFACE MINE REVEG	4	5.8	VL 40	M 80	H 1640	***	0.0	60	100	50
	COMMENT NO: 5 FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.											
33192	OB1 35-40	SURFACE MINE REVEG	4	6.6	VL 10	H 90	H 1040	***	0.0	60	100	0
	COMMENT NO: 5 FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.											
33193	OB1 40-45	SURFACE MINE REVEG	4	7.5	VL 20	M 70	H 1100	***	0.0	60	100	50
	COMMENT NO: 5 FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.											
33194	OB1 45-50	SURFACE MINE REVEG	4	7.5	VL 20	M 70	H 810	***	0.0	60	100	50

REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

TAKEN FROM P-3742 ASMC PERMIT FILE

NAME ENVIRONMENTAL ENG. SERV.
ADDRESS PO BOX 1908
CITY JASPER, AL 35502

COUNTY WALKER
DISTRICT 1
DATE 6/15/93

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33195	OB1 50-55	SURFACE MINE REVEG	4	7.7	VL 20	H 100	H 850	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33196	OB1 55-60	SURFACE MINE REVEG	4	7.8	VL 10	H 100	H 730	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33197	OB1 60-65	SURFACE MINE REVEG	4	8.1	VL 20	M 80	H 670	***	0.0	60	100	50

COMMENT NO:
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33198	OB1 65-70	SURFACE MINE REVEG	4	8.4	VL 10	M 70	H 480	***	0.0	60	100	50

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SOIL TESTING LABORATORY
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COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33199	OB1 70-75	SURFACE MINE REVEG	4	8.6	VL 20	M 80	H 520	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33200	OB1 75-80	SURFACE MINE REVEG	4	8.5	VL 20	H 110	H 780	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33201	OB1 80-85	SURFACE MINE REVEG	4	8.8	VL 20	M 80	H 540	***	0.0	60	100	50

COMMENT NO:
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33202	OB1 85-90	SURFACE MINE REVEG	4	8.6	VL 10	H 100	H 700	***	0.0	60	100	0

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AUBURN UNIVERSITY
SOIL TESTING LABORATORY
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COUNTY WALKER
DISTRICT 1
DATE 6/15/93

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33203	0B1 90-95	SURFACE MINE REVEG	4	8.5	VL 10	M 80	H 580	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33204	0B1 95-100	SURFACE MINE REVEG	4	8.8	VL 20	H 100	H 610	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33205	0B1 100-105	SURFACE MINE REVEG	4	8.1	VL 10	H 90	H 1170	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33206	0B1 105-110	SURFACE MINE REVEG	4	8.2	VL 20	M 80	H 910	***	0.0	60	100	50

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COUNTY WALKER
DISTRICT 1
DATE 6/15/93

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33207	0B1 110-115	SURFACE MINE REVEG	4	8.3	VL 10	M 80	H 630	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33208	0B1 115-120	SURFACE MINE REVEG	4	8.5	VL 10	H 90	H 690	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33209	0B1 120-125	SURFACE MINE REVEG	4	8.4	VL 0	H 90	H 670	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33210	0B1 125-130	SURFACE MINE REVEG	4	8.5	VL 0	H 90	H 670	***	0.0	60	100	0

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COUNTY WALKER
DISTRICT 1
DATE 6/15/93

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

LAB NO.	SAMPLE	CROP	SOIL GROUP	SOIL TEST RESULTS pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	RECOMMENDATIONS LIMESTONE Tons/Acre	N Pounds Per Acre	P_2O_5 Pounds Per Acre	K_2O Pounds Per Acre
33211	OB1 130-135	SURFACE MINE REVEG	4	8.4	VL 10	H 90	H 680	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33212	OB1 135-140	SURFACE MINE REVEG	4	8.5	VL 10	H 110	H 740	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33215	OB1 140-145	SURFACE MINE REVEG	4	7.8	VL 20	H 120	H 760	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

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P-3742
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REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

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COUNTY WALKER
DISTRICT 1
DATE 6/15/93

LAB NO.	SAMPLE	CROP	SOIL GROUP	pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	LIMESTONE Tons/Acre	N	P_2O_5	K_2O
				SOIL TEST RESULTS					RECOMMENDATIONS	Pounds Per Acre		
33216	OB1 145-150	SURFACE MINE REVEG	4	8.4	VL 0	H 90	H 600	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33217	OB1 150-155	SURFACE MINE REVEG	4	8.7	VL 10	H 110	H 650	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33218	OB1 155-160	SURFACE MINE REVEG	4	8.9	VL 20	H 110	H 1010	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33219	OB1 160-165	SURFACE MINE REVEG	4	8.7	VL 10	H 110	H 690	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

ALABAMA STATE OFFICE OF SURFACE MINING COMMISSION

REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

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ASMC PERMIT FILE

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COUNTY WALKER
DISTRICT 1
DATE 6/15/93

LAB NO.	SAMPLE	CROP	SOIL GROUP	pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	LIMESTONE Tons/Acre	N	P_2O_5	K_2O
				SOIL TEST RESULTS					RECOMMENDATIONS	Pounds Per Acre		
3322D	OB1 165-170	SURFACE MINE REVEG	4	7.9	VL 0	H 130	H 800	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33221	OB1 170-174	SURFACE MINE REVEG	4	8.6	VL 10	H 140	H 850	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33222	OB1 175-180	SURFACE MINE REVEG	4	8.6	VL 0	H 100	H 610	***	0.0	60	100	0

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33223	OB1 180-185	SURFACE MINE REVEG	4	8.9	VL 0	M 80	H 550	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

REPORT ON SOIL TESTS
AUBURN UNIVERSITY
SOIL TESTING LABORATORY
AUBURN UNIVERSITY, AL 36849-5411

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DISTRICT 1
DATE 6/15/93

LAB NO.	SAMPLE	CROP	SOIL GROUP	pH	P Phosphorus	K Potassium	Mg Magnesium	Ca Calcium	LIMESTONE Tons/Acre	N	P_2O_5	K_2O
				SOIL TEST RESULTS					RECOMMENDATIONS	Pounds Per Acre		
33224	0B1 185-190	SURFACE MINE REVEG	4	8.9	VL 10	M 80	H 710	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33225	0B1 190-195	SURFACE MINE REVEG	4	8.8	VL 10	M 80	H 710	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33226	0B1 195-200	SURFACE MINE REVEG	4	8.4	VL 0	M 70	H 600	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

33227	0B1 200-202	SURFACE MINE REVEG	4	8.5	VL 0	M 80	H 600	***	0.0	60	100	50

COMMENT NO: 5
FOR PERENNIAL WINTER GRASS PASTURE, APPLY N, P, AND K AS RECOMMENDED BY SEPTEMBER 1. REPEAT N APPLICATION IN FEBRUARY.

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AUBURN UNIVERSITY
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COUNTY WALKER
DISTRICT 1
DATE 6/15/93

FINAL COMMENT:
AS A PRECAUTIONARY MEASURE, CONSIDER APPLYING 10 LB. SULFUR PER ACRE PER YEAR. MIXED FERTILIZERS OFTEN CONTAIN ENOUGH SULFUR TO SUPPLY THIS AMOUNT.

THE NUMBER OF SAMPLES PROCESSED IN THIS REPORT IS 41
FOR FURTHER INFORMATION CALL YOUR COUNTY AGENT: (205)221-3392

TAKEN FROM
P-3742
ASMC Permit FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

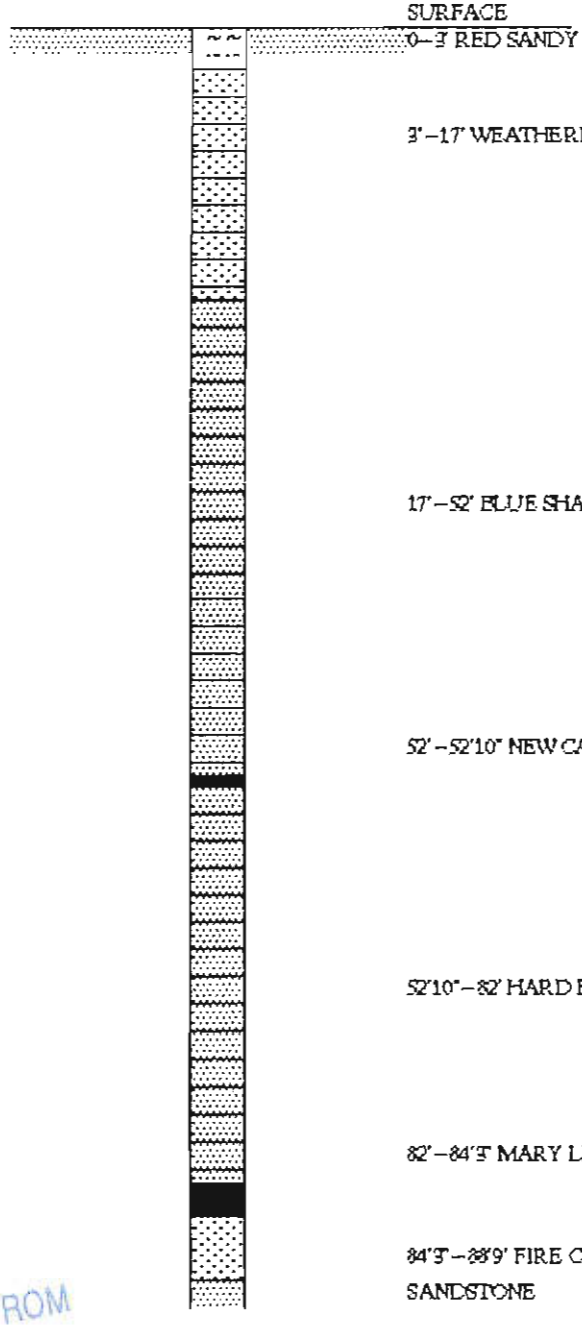
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-8 #2 SURFACE ELEVATION:



SURFACE

0-3' RED SANDY CLAY

3'-17' WEATHERED SHALE

17'-52' BLUE SHALE

52'-52'10" NEW CASTLE COAL 10"

52'10"-82' HARD BLUE SHALE

82'-84'3" MARY LEE COAL 27"

84'3"-88'9' FIRE CLAY 54"

SANDSTONE

TAKEN FROM
P-3742
ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

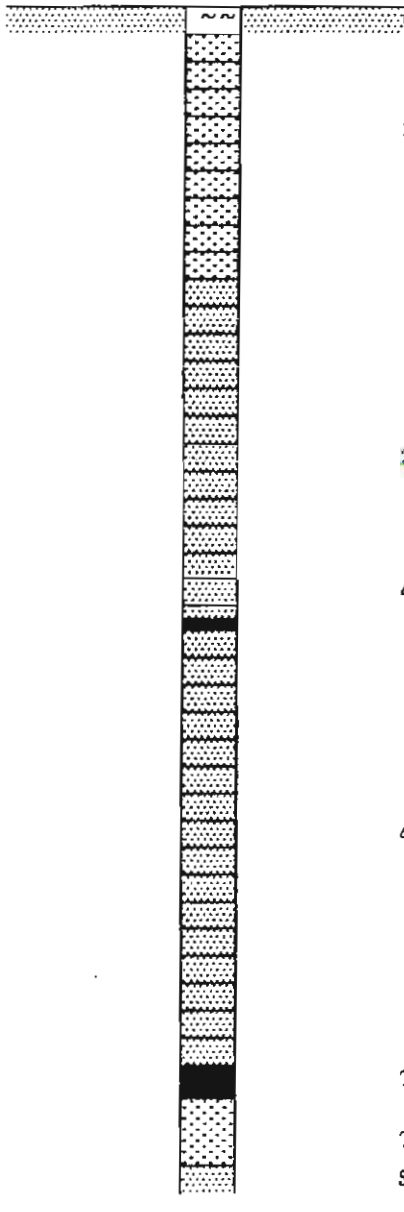
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-3 #1 SURFACE ELEVATION



SURFACE

0–2' RED SANDY CLAY

2'–20' WEATHERED SHALE

20'–43' BLUE SHALE

43'–43'10" NEW CASTLE COAL 10"

43'10"–76' HARD BLUE SHALE

76'–78'4" MARY LEE COAL 28"

78'4"–83' FIRE CLAY 56"

SANDSTONE

RECEIVED SURFACE MINING COMMISSION

TAKEN FROM P-3742 ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

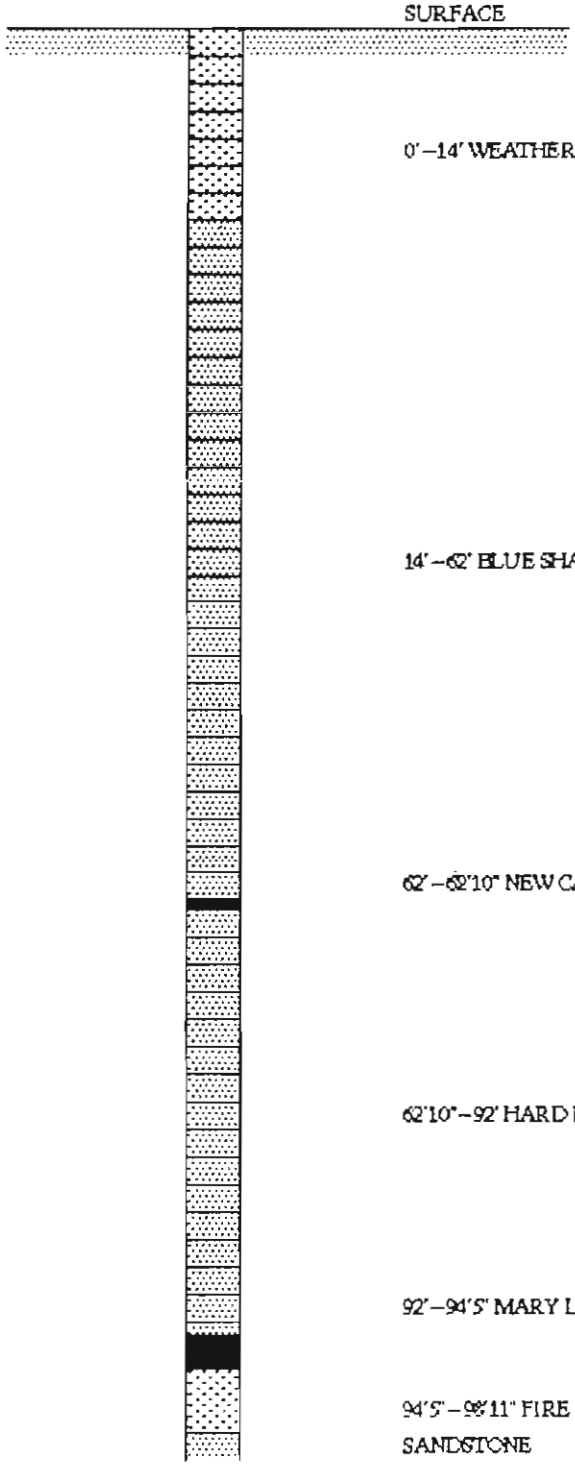
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-3 #3 SURFACE ELEVATION:



SURFACE

0'–14' WEATHERED SHALE

14'–62' BLUE SHALE

62'–62'10" NEW CASTLE COAL 10"

62'10"–92' HARD BLUE SHALE

92'–94'5" MARY LEE COAL 29"

94'5"–98'11" FIRE CLAY 54"

SANDSTONE

TAKEN FROM
P-2742
ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

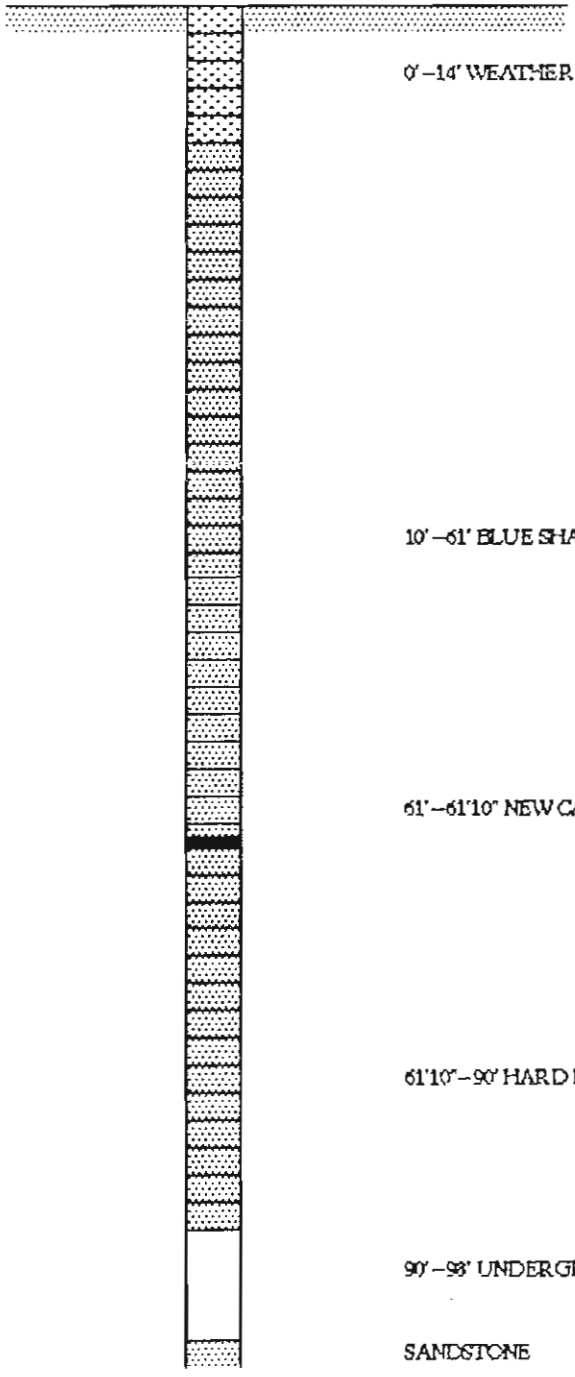
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-8 #4 SURFACE ELEVATION:



SURFACE

0' – 14' WEATHERED SHALE

10' – 61' BLUE SHALE

61' – 61'10" NEW CASTLE COAL 10"

61'10" – 90' HARD BLUE SHALE

90' – 98' UNDERGROUND MINE (NO COAL OR CLAY)

SANDSTONE

TAKEN FROM
P-3742
ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

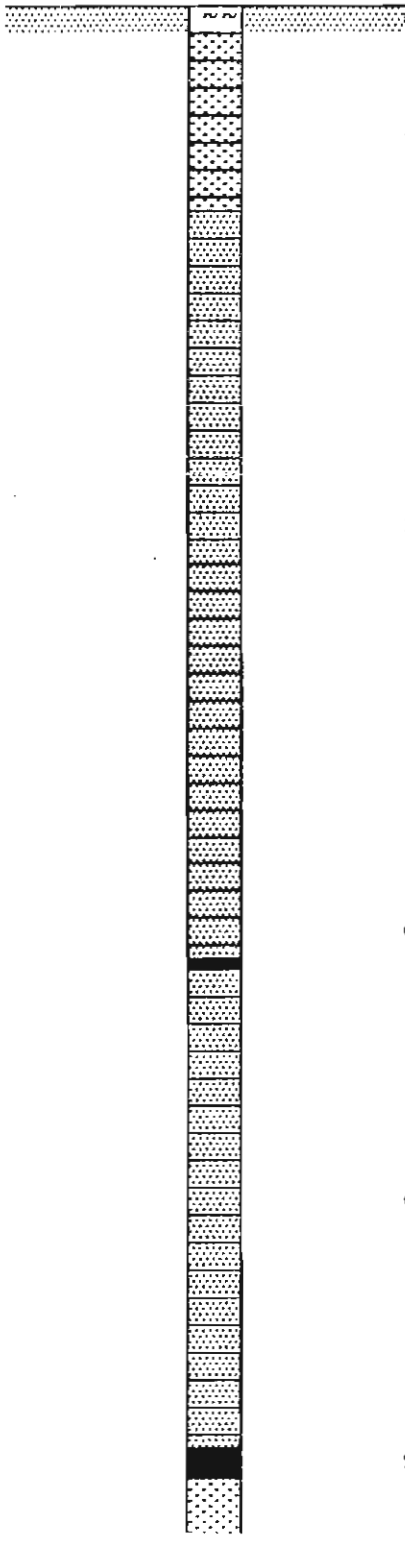
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-3 #5 SURFACE ELEVATION:



SURFACE

0-1' RED SANDY CLAY

1'-13' WEATHERED SHALE

13'-68' BLUE SHALE

68'-68'10" NEW CASTLE COAL 10"

68'10"-98' HARD BLUE SHALE

98'-100'3" MARY LEE COAL 27"

100'3"-104'6" FIRECLAY 54"

RECEIVED SURFACE MINING COMMISSION 1994

TAKEN FROM P-3742 ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

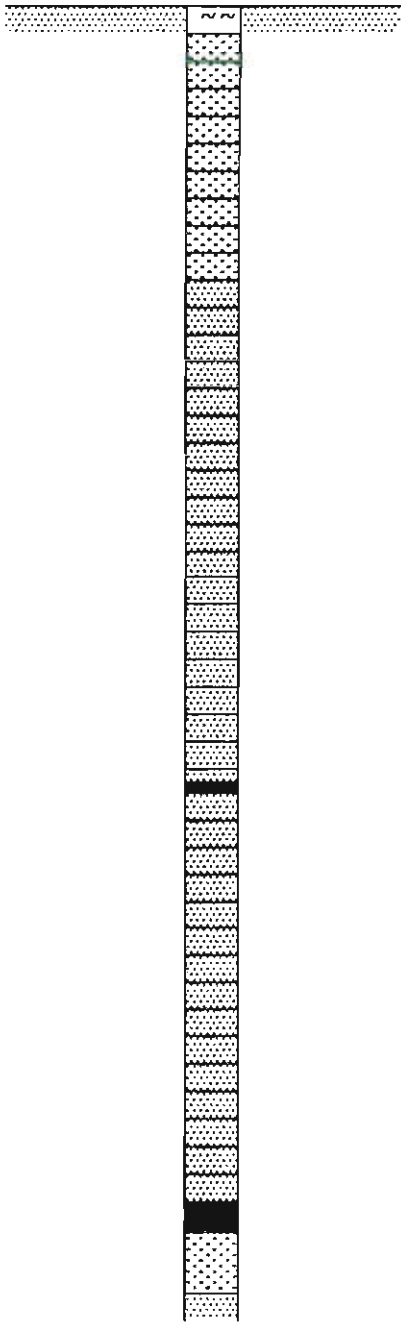
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-8 #6 SURFACE ELEVATION:



SURFACE

0–1' RED SANDY CLAY

1'–16' WEATHERED SHALE

16'–53' BLUE SHALE

53'–53'10" NEW CASTLE COAL 10"

53'10"–84' HARD BLUE SHALE

84'–86'3" MARY LEE COAL 27"

86'3"–90'8" FIRECLAY 53"

SANDSTONE

RECEIVED SURFACE MINING COMPANY 1994

TAKEN FROM P-3742 ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

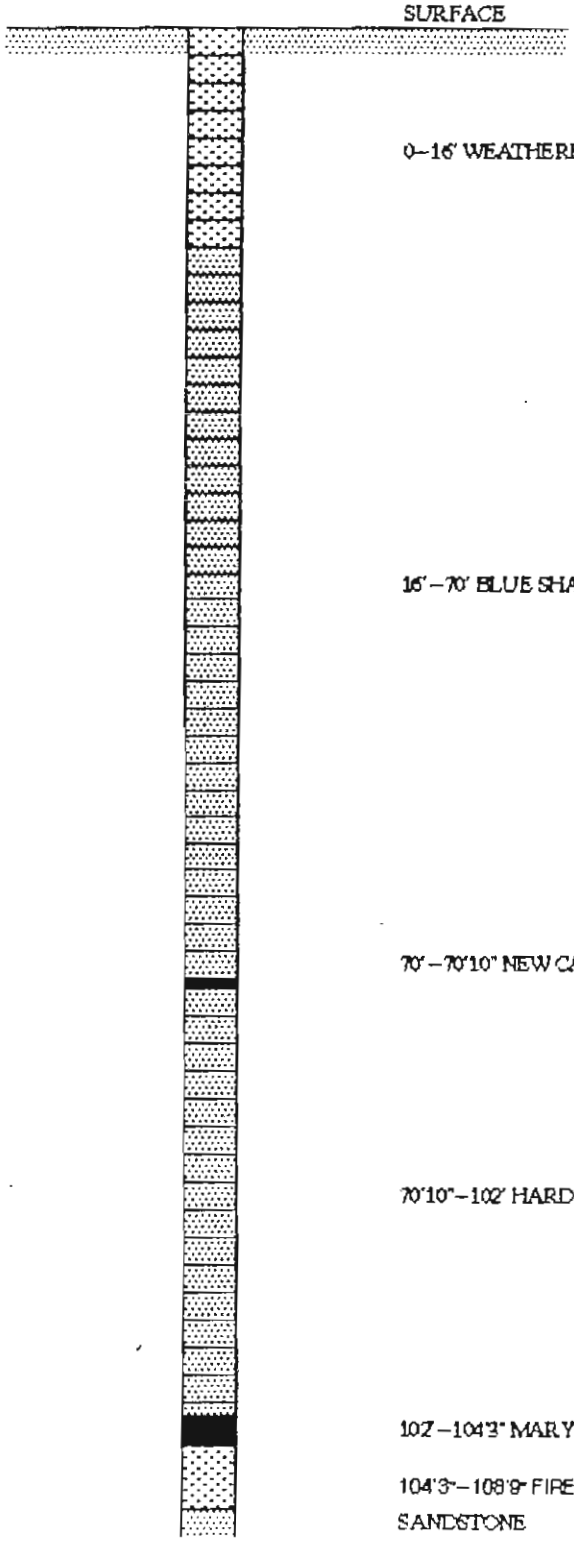
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-8 #7 SURFACE ELEVATION:



SURFACE

0–16' WEATHERED SHALE

16' – 70' BLUE SHALE

70' – 70'10" NEW CASTLE COAL 10"

70'10" – 102' HARD BLUE SHALE

102' – 104'3" MARY LEE COAL 27"

104'3" – 108'9" FIRECLAY 54"

SANDSTONE

TAKEN FROM
P-3742
ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

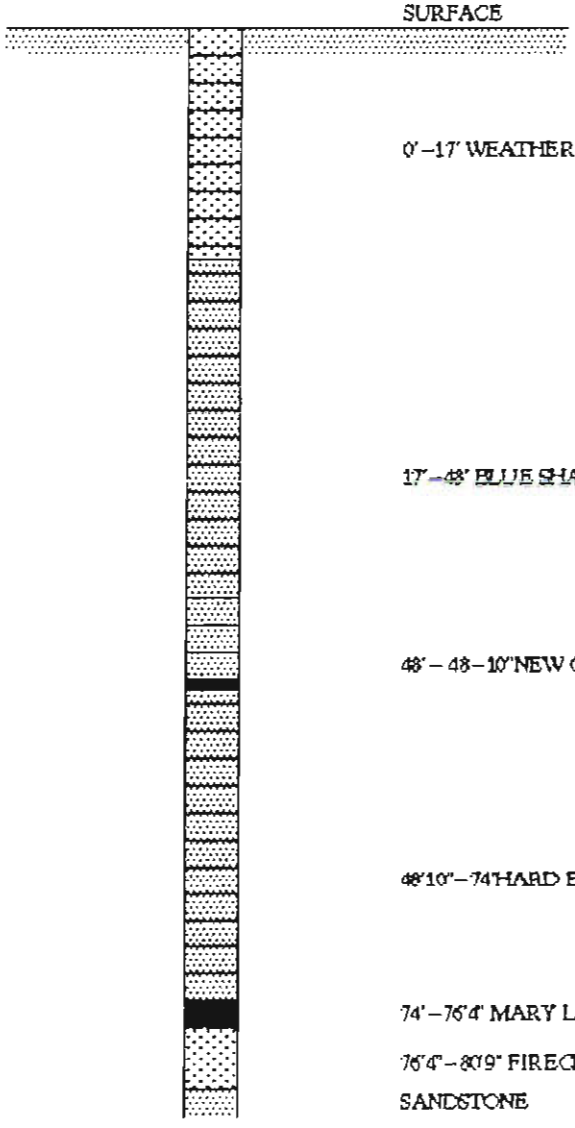
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64 – 16 #1 SURFACE ELEVATION:



SURFACE

0' – 17' WEATHERED SHALE

17' – 48' BLUE SHALE

48' – 48 – 10" NEW CASTLE COAL 10"

48'10" – 74' HARD BLUE SHALE

74' – 76'4" MARY LEE COAL 28"

76'4" – 80'9" FIRECLAY

SANDSTONE

TAKEN FROM
P-3742
ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

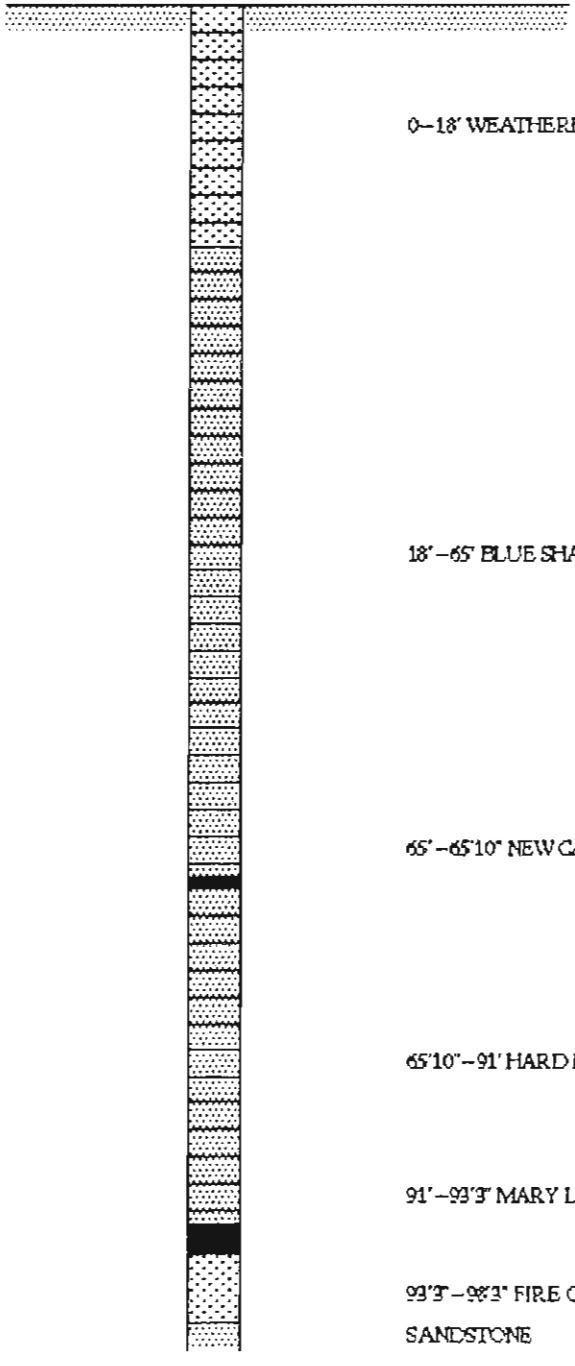
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-16 #2 SURFACE ELEVATION:



SURFACE

0–18' WEATHERED SHALE

18'–65' BLUE SHALE

65'–65'10" NEW CASTLE COAL 10"

65'10"–91' HARD BLUE SHALE

91'–93'3" MARY LEE COAL 27"

93'3"–98'3" FIRE CLAY 56"

SANDSTONE

RECEIVED SURFACE MINING COMMISSION

TAKEN FROM P-37 #2 ASMC PERMIT FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

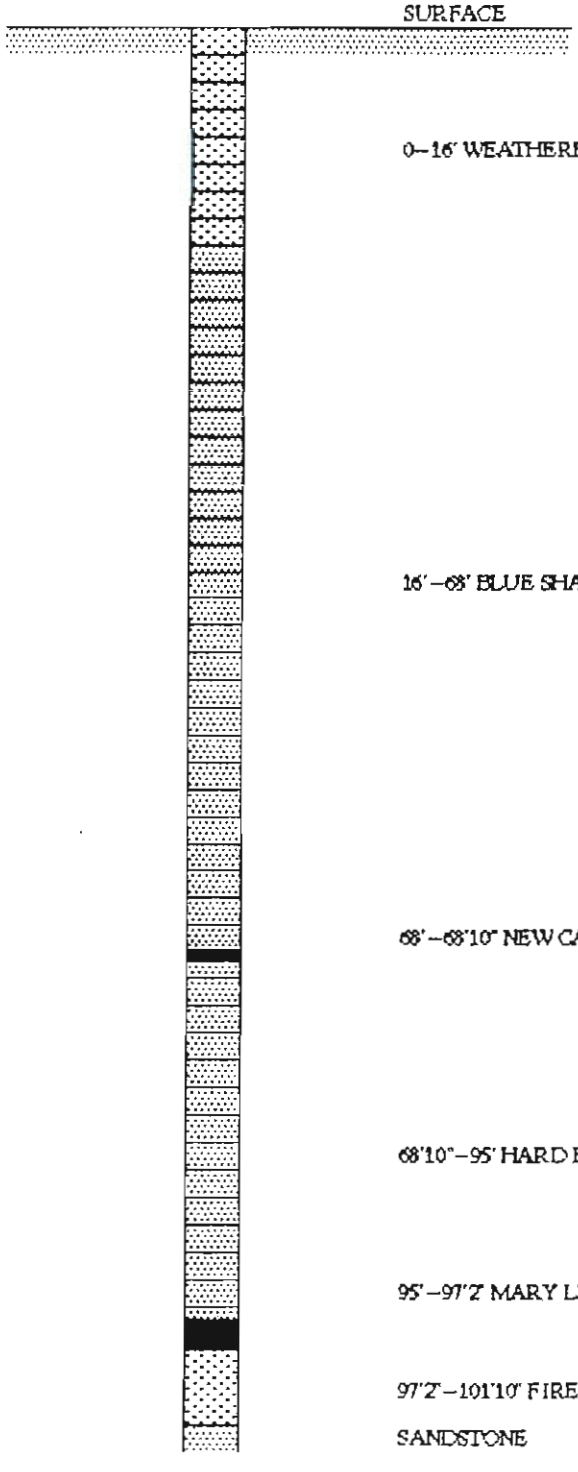
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-16 #3 SURFACE ELEVATION:



TAKEN FROM
P-3742
ASMC Permit FILE

ENVIRONMENTAL ENGINEERING SERVICES, INC.

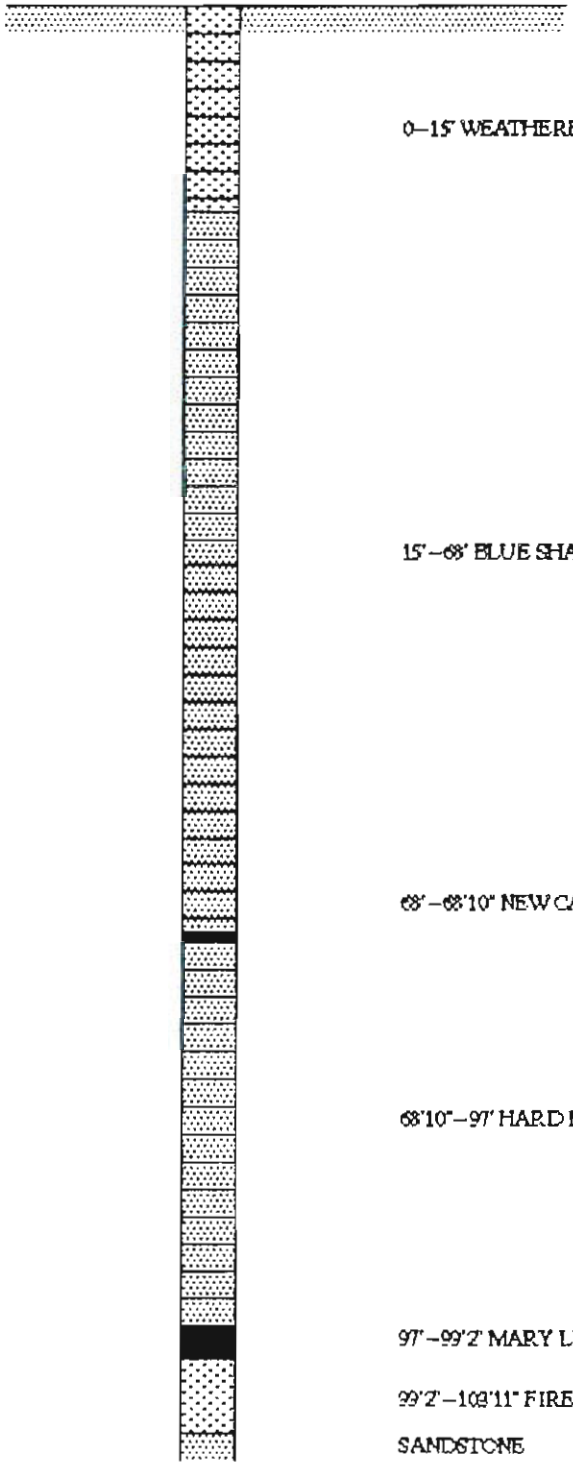
345 West 20th Street Jasper, Alabama 35501

Phone (205) 384 - 5582 Fax (205) 384 - 3360

COMPANY: BEAIRD MINING & MINERALS CO., INC.

MINE: CANE CREEK MINE

DRILL HOLE NO.: 64-16 #4 SURFACE ELEVATION:



SURFACE

0–15' WEATHERED SHALE

15'–68' BLUE SHALE

68'–68'10" NEW CASTLE COAL 10"

68'10"–97' HARD BLUE SHALE

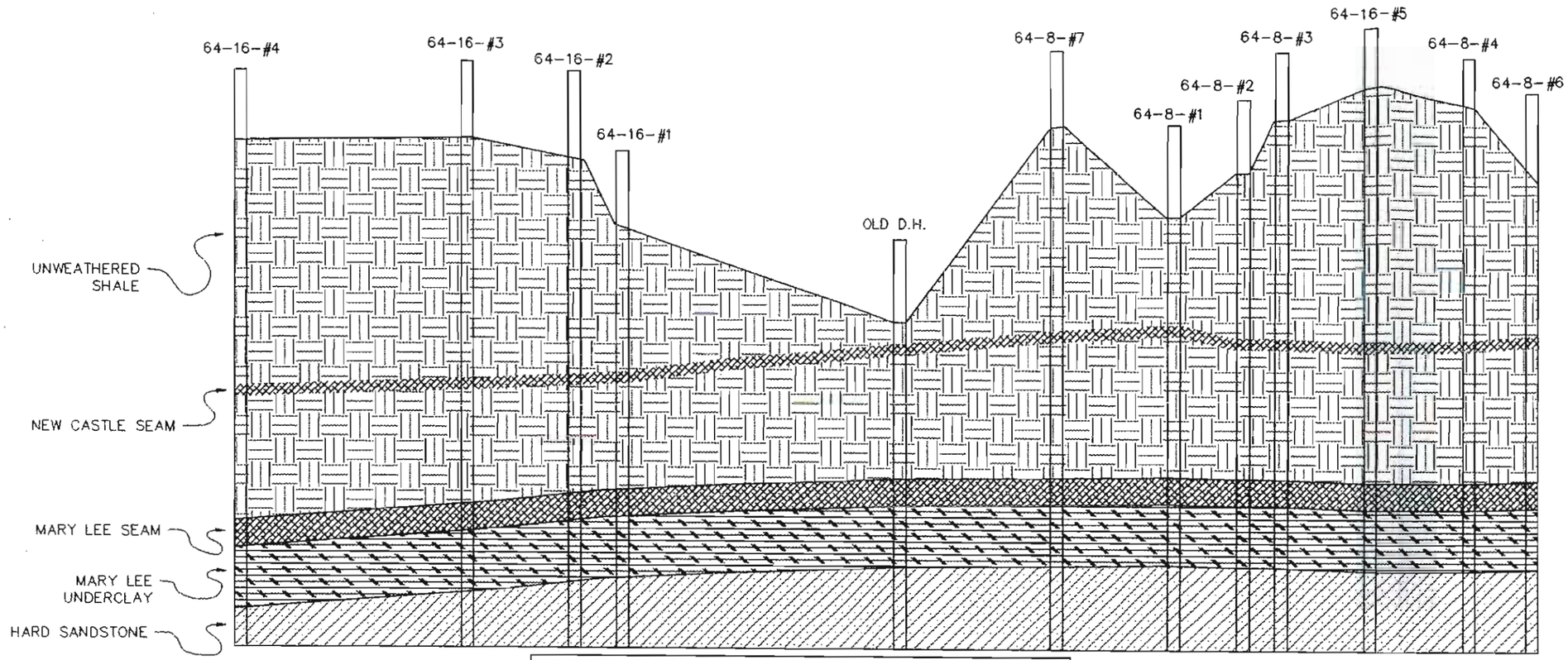
97'–99'2' MARY LEE COAL 26"

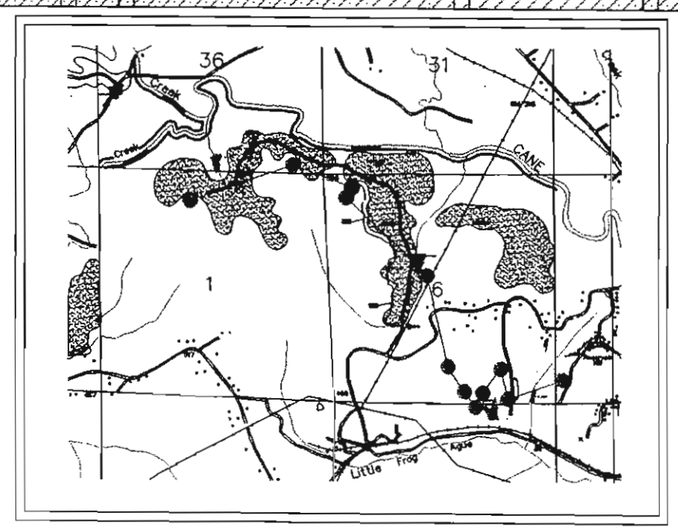
99'2'–102'11" FIRE CLAY 57"

SANDSTONE

RECEIVED SURFACE MINING COMMISSION

TAKEN FROM P-3742 ASMC PERMIT FILE





Prepared By:
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PROJECT
CROSS-SECTION
BEARD MINING & MINERALS CO., INC.
CANE CREEK MINE

RECEIVED
SURFACE MINING
COMMISSION
MAY 1994
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P-3742
ASMC PERMIT FILE