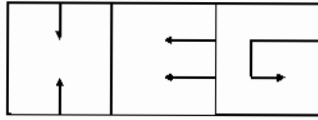


Howard



Engineering & Geology, Inc.

P.O. Box 271 • 2550 W Hwy 72, Suite 1 • Harlan, Ky 40831 • Phone/Fax: (606) 573-6924 • Email dcaudill@howardeng-geo.com

October 1, 2008

Linda Fischer
Division of Permits, DNR
#2 Hudson Hollow Complex
Frankfort, KY 40601

Attn: Linda Fischer

RE: Bell County Coal Corporation
#807-5223 Original
2nd Technical Review

Dear Linda:

In response to the second technical review letter, dated September 5,, 2008 we have made the following corrections to the above referenced application.

- 1) The requested map showing permit boundaries has been provided.
- 2) MRP Map:
 - a) A darker font has been applied to the groundwater users dwellings.
 - b) Groundwater users 4, 5, 6, 7, 8, 9, and S6 have been shown on the map.
 - c) Ownership of the power line has been shown.
 - d) All existing underground workings have been shown.
- 3) Item 4.4, 8.6 and 21.9: All previous and currently permitted areas have been listed.
- 4) Item 8.5: The chart has been completed for the single area bond.
- 5) Item 8.6: 807-5223 is claiming exclusive rights and will completely bond the overlapped area. After this permit is issued Appolo Fuels intends to apply for a bond release for the overlapped area.
- 6) Item 11.5: Item 11.5 has been revised to correctly show the roads as proposed permanent facilities.
- 7) Item 12.2: The mine management areas are broken up by drainage and location and are separate and not one 6.00 acre section. A detail map of the mine management has been included.
- 8) Item 15.2:

- b) The NP/PA values have been shown on the geologic information sheets. However as requested we have included the same information on the geologic sections.
- c) The alternate topsoil has been shown on the geologic sections.
- 9) Item 15.6: The latitudes and longitudes have been corrected for DH-12-07 and DH-13-07 as requested.
- 10) Item 15.7: The latitude and longitude has been corrected as requested.
- 11) Item 16.1: The requested groundwater users survey information for AF2 through AF47 have been provided as requested.
- 12) Item 16.3: The sixth sample for GW2 has been provided.
- 13) Item 21.11: Attachment 21.11.A list the existing species of vegetation found in the pre-mining investigation of the mine site prior to mining. Along with an evaluation of how the proposed reclamation will perform. Autumn Olive is found within the proposed permit site and is listed correctly in the attachment and **will not be removed** from the attachment. Autumn Olive is not proposed in the vegetation information provided in Item 22.2.
- 14) Item 23.1: The SCS soil map has been provided as requested.
- 15) Item 23.2: The Item has been marked yes and the certification by a qualified soil scientist has been provided as requested.
- 16) Item 25.1 and 26.3: The requested cross-sections showing the remaining material have been provided as requested.
- 17) Item 25.3:
 - a) All cross-sections location lines have been shown and labeled on the plan view drawing.
 - b) All cross-section from the site plan have been provided and all diversions and highways have been shown where applicable.
 - c) Cross-sections of the mine management areas have been provided as requested.
- 18) Item 26.3: Section A-A' has been labeled on the side hill fill plan view.
- 19) Item 30.3, 30.4 and 30.5: These narratives have been corrected to indicate all applicable water monitoring points.
- 20) Item 30.5:
 - a) The latitude and longitude for GW 1 has been corrected as requested.
 - b) The latitude and longitude for GW 14 has been corrected as requested.
- 21) Item 32.3: All diversion ditch designs have been provided as requested.
- 22) Item 33.1:
 - a) Item 11.5 has been corrected to match Item 33.1.A.

- b) A culvert has been added to the typical cross-section shown on the road profile drawings.
- 23) Item 16.1: The ground water users that you have requested have been re-surveyed and the information has been updated and provided as requested.
- 24) Item 35.1:
- a) Portions of the rail way have been removed in the last five years and the locations of the existing rail-ways have been updated on the MRP map. Also the ownership of the rail-way has been updated on the MRP map. Subsidence protection for the rail-way has been provided on the MRP where applicable.
 - b) The roads in question have been addressed on the MRp map and in Attachment 35.1.A of this application.
 - c) The requested information has been provided in Attachment 35.1.A of this application.
- 25) Item 26: The location of section A-A' has been provided as requested on the site plan map.
- 26) Pond 1: The requested information has been provided in Attachment 31.3.A of this application. The exact acreage on which alternate sediment control is requested has been provided in Attachment 31.1.A of this application.

Sincerely,



Timothy Messer
Howard Engineering and Geology, Inc.



**ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR NATURAL RESOURCES**

Steven L. Beshear
Governor

Division of Mine Permits
2 Hudson Hollow
Frankfort, Kentucky 40601
Phone (502) 564-2320
Fax (502) 564-6764
www.minepermits.ky.gov

Leonard K. Peters
Secretary

Carl E. Campbell
Commissioner

September 5, 2008

TIM MESSER
HOWARD ENGINEERING & GEOLOGY
PO BOX 271
HARLAN KY 40831

RE: Permit Application No. 807-5223
Original
BELL COUNTY COAL CORPORATION

Dear Mr. Messer:

The Division of Mine Permits has completed the second technical review of the referenced permit application. Effective the date of this letter, this application has been placed in the "Technically Withdrawn" (TWW) status. The following deficiencies have been identified from the review:

1. Supplemental Map: Clearly show and label the permit boundaries (surface, auger and underground) of 807-5157, 807-0305, 807-8005, 807-9000 (include the outlines of the combined refuse fills), 807-0263, 807-7008, 807-5109, 807-0306 and 807-5179.
2. MRP Map:
 - a) Please use a darker font for groundwater users and dwellings.
 - b) Show groundwater users 4, 5, 7, 8, 9 and S6 on the map.
 - c) Show ownership of the powerline.
 - d) Show all underground works.

3. Items 4.4, 8.6 and 21.9: List all previously and currently permitted areas in these narratives.
4. Item 8.5: Complete the chart for the single area bond.
5. Item 8.6: Discuss whether 807-5223 is claiming exclusive rights or if the overlapped area will be bonded and permitted on both permits.
6. Item 11.5: The narrative in Item 12.2 indicates that Haulroads A and B are to be permanent, but this is not requested in the chart.
7. Item 12.2: The narrative indicates that alternate sediment control will be used for the mine management areas. There are 6.0 acres of mine management area, which is more than generally allowed for alternate sediment control. Correct.
8. Item 15.2:
 - a) Provide at least two more geologic sampling points for the remainder of the underground area. The two points provided at/near the face-up are inadequate for 6,500 acres of underground.
 - b) Show NP/PA values on the geologic cross-section.
 - c) Show alternate topsoil on the geologic cross-section.
9. Item 15.6: Correct the latitude and longitude for DH-12-07 to 36°35'39" and 83°46'09" and DH-13-07 to 36°35'36" and 83°46'10".
10. Item 15.7: Correct the longitude for DH-12-07 to 83°46'09" and the latitude for DH-13-07 to 36°35'36" to match Item 15.2.
11. Item 16.1: Provide ground water user survey information on groundwater users AF2 through AF13 and AF44 through AF47 shown on the MRP map.
12. Item 16.3: Provide the sixth sample for ground water monitoring point GW2.
13. Item 21.11: Due to the invasiveness of Autumn Olive, remove this species from the narrative and replace with a native species.
14. Item 23.1: Provide the SCS soils map with the proposed permit area identified.
15. Item 23.2: This item should be marked yes and the certification by a qualified soil scientist provided.

16. Items 25.1 and 26.3: The narratives appear to indicate that there will material left in the fill area after reclaiming the mining area. If that is the case the applicant will need to provide during mining cross-sections and after mining sections for the temporary fill and the after mining spoil storage area.
17. Item 25.3:
 - a) Ensure that all cross-sections are shown and labeled on the site plan.
 - b) Ensure that all cross-sections from the site plan are provided and show all facilities such as freshwater diversions, highways, etc. are shown.
 - c) Provide cross-sections of the mine management areas showing pre-, during and post-mining groundlines.
18. Item 26.3: Label section A-A' on the side hill fill plan view.
19. Items 30.3, 30.4 and 30.5: GW2 is listed in one narrative and GW14 in the other. List all groundwater monitoring points.
20. Item 30.5:
 - a) Correct the latitude and longitude for GW 1 to 36°35'35" and 83°51'54" to match the rest of the application.
 - b) Correct the latitude and longitude for GW14 to 36°35'30" and 83°46'50" to match the rest of the application.
21. Item 32.3: Provide all diversions proposed, including road diversions and diversions to the ponds, as well as their designs.
22. Item 33.1:
 - a) This narrative indicates that all roads are to be permanent, but Item 11.5 indicates only Haulroads A and B are to be permanent. Correct.
 - b) Show a culvert in the typical road cross-sections.

Subsidence – Larry Peterson

23. Item 16.1: The applicant is required in 405 KAR 8:040, Section 26(4)d, to provide a survey of the quality and quantity of each water supply that can be affected by subsidence. The additional ground water user inventory data provided now shows there are ground water users located adjacent to the proposed underground acreage that could be affected by subsidence. The

source of water for ground water users S12, S13, and S14 are springs located above the underground acreage. Ground water user S11 is adjacent to the mining acreage and located south of Stony Fork between the underground mine and the stream. Ground water users 7A, 8A, and 9A, located adjacent to underground acreage, has a well at a 175 foot depth that may have the coal seam being mined exposed in the well. The applicant must resurvey these ground water users to sample the water and provided greater details on the amount of use.

24. Item 35.1:
- a) The applicant has not address in the survey of structures the two railroad lines located above the proposed underground acreage.
 - b) The MRP map shows many sections of roads and the survey has not describe these roads to confirm whether they are public roads that need to be included in the subsidence control plan. Roads that are being question are the road in Cabin Hollow watershed, roads along Stony Fork leading to dwelling locate south of the stream, a road leading up to buildings in Martins Branch watershed, and roads in Clear Fork watersheds. Please describe the roads.
 - c) The states the "cut-of" elevation to protect the stream is 1560 feet as determine by the formula of "fifty (50) times the seam height plus 100 feet". Please report the actual footage below the stream to protect the stream.

Compliance – Danny Ballard

25. Item 26: Show the location of section A-A.
26. Pond 1: Discuss measures to protect the public on Route 186.

Show the exact acreage on which alternate sediment control is proposed. Include drawings. This should be listed in Item 11.5.

The deficiencies noted above must be corrected to comply with applicable State surface coal mining permitting laws and regulations [KRS 350 and 405 KAR].

To ensure timely processing of your application, the Division respectfully requests that the deficiencies be corrected and the application returned to this agency within 60 days of the date of this letter. Failure to do so could result in additional enforcement action by the Division of Mine Reclamation and Enforcement.

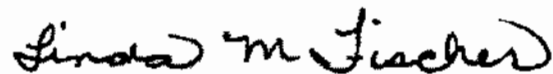
Please be advised that mining operations seeking new or modified coverage under the Coal KPDES General Permit must submit a Notice of Intent (NOI-CM) to the Division of Water. Please file the NOI-CM with the Division of Water as soon as possible in order to avoid potential delays in the processing and issuance of your SMCRA/DNR permit.

Please disregard if you have filed the NOI.

NOTE: If this application is in an electronic format, an entirely new MPA file must be resubmitted. If in paper format, the Regional Office and this office must be updated with the corrections upon resubmittal. [Refer to 405 KAR 8:010 Section 12(1)(c)]

If you have questions concerning this matter, please contact me at (502) 564-2320.

Sincerely,



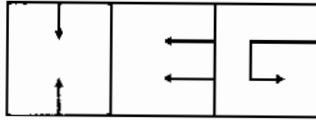
Linda Fischer, Supervisor
Division of Mine Permits

LF/jd

Enclosure: Application

c: File No. 807-5223 (e)
Middlesboro Regional Office (e)
Linda Fischer (e)
BILLY J REYNOLDS
BELL COUNTY COAL CORPORATION
PO BOX 290
MIDDLESBORO KY 40965

Howard



Engineering & Geology, Inc.

P.O. Box 271 • 2550 W. Hwy. 72, Suite 1 • Hartan, Ky 40831 • Phone/Fax: (606) 573-6924 • Email: dcaudill@howardeng-geo.com

May 16, 2008

Debra Collins
Division of Permits, DNR
#2 Hudson Hollow Complex
Frankfort, KY 40601

Attn: Debra Collins

RE: Bell County Coal Corporation
#807-5223 Original
1st Administrative Review

Dear Debra:

In response to the first technical review letter, dated January 9, 2008 we have made the following corrections to the above referenced application.

- 1) Item 4.3: The map has been corrected to indicate Kayjay and Fork Ridge quadrangle maps..
- 2) Item 4.4: There is no information to include for the underground mine referenced in item 11.3 as the mining was apparently conducted prior to any mining or mine permitting and regulatory laws. We have researched the available records and have not been able to ascertain any records for this mine. The workings are unsafe for inspection or survey and no physical attempts will be made to determine the extent of the previous workings. Portions of the mine workings are visible from the portal but the extent of the underground area is limited to approximately 100'. The mine appears to of been a house coal mine that would have been by a family or group of families for heating proposes and does not appear to extend for a large area.
- 3) Item 6.4: Premier is the name of the community according to the USGS topo map. There are only minimal houses in the area and there are no city or corporate limits or governing body. Item 6.4 is correct as marked.
- 4) Item 6.6: The area no difference between this application and the preliminary application. The yes box was inadvertently marked.
- 5) Item 9.1: As per our phone conversation the property owners and the property line are shown on the MRP map.
- 6) Item 11.1: Attachment 11.1. A has been included as requested.
- 7) Item 11.3: The surface disturbances associated with this proposed underground mining operation will not get any closer than the three hundred (300) feet limit as set forth by regulation. The coal seam rises in the area of the church and is above the church on the hillside.
- 8) Item 11.4: Site map Attachment 11.4 has been included, and labeled in this application as requested.
- 9) Item 13.1: The attachment has been included as requested.

- 10) Item 14.1: The attachment has been included.
- 11) Item 14.4: The attachment has been labeled.
- 12) Item 14.5: The attachment has been included.
- 13) Item 15.2: The geologic sampling location were shown on the map. We have added additional identifiers to the map.
- 14) Item 15.7): The coordinates have been corrected as requested.
- 15) Item 16.1: The ground water users have been included as requested.
- 16) Item 16.2: An additional groundwater monitoring point has been added to the permit application as requested. The point has been delineated as station GW-2
- 17) Item 17.4: As per our conversation on 5-19-08 another surface water point is not warranted for this application..
- 18) Item 17.5: Sample sheets and lab sheets have been provided.
- 19) Item 21.1: Adequate information has been provided as the area proposed for mining is steep mountain side it is not suited for a variety of land-uses.
- 20) Item 22.4: The requested information has been added to attachment 22.4.A of this application.
- 21) Item 23.3: The requested information has been added to attachment 23.3.A of this application.
- 22) Item 24.2: The requested statement has been added to Item 24.2 of this application.
- 23) Item 25.4: Attachment 25.4.A has been included in the application.
- 24) Item 26.3: As stated on the certification of design and by the statement in attachment 26.3 that all material will be used to backfill the mine site. A statement has been added to 26.3.A that the fill is temporary as requested.
- 25) Item 32.1: A site map has been provided in Item 11.4 and 32.2 that indicates the stream to be affected.
- 26) Item 35.1: A field reconnaissance of the area overlying the proposed underground mining area has been conducted and it has been found that all Utility lines have been relocated or removed from the property and the power line symbol has been removed from the MRP map.

MRP/ERI MAP

- 1) Topsoil and alternate material storage areas have been shown on the map.
- 2) There are no utility lines to be protected.
- 3) The coal seam is above the New Hope Church and the proposed surface disturbances have be keep at least 300' feet from the structure.
- 4) The roads have been designated as temporary.
- 5) The pond symbol has been show in the legend as it appears on the map.
- 6) The permit boundary for permits #807-5157, 807-5025, and 807-0305 have been shown on the MRP map.

- 7) Slope measurements have been shown on the MRP map.
- 8) The location of the conveyor has been labeled on the MRP map to better be seen.

If you have any questions or require any additional information please call our office.

Sincerely,

A handwritten signature in black ink that reads "Tim Messer". The signature is written in a cursive style and is followed by a long horizontal line that extends to the right.

Timothy Messer
Howard Engineering and Geology, Inc.

Howard Engineering & Geology, Inc.

P.O. Box 271, 2550 W Hwy 72, Suite 1

Harlan, KY 40831

E-Mail: tmesser@howardeng-geo.com

Phone: 606-573-6924

Fax: 606-573-9543

April 28, 2008

Department for Natural Resources
Division of Mining Permits
#2 Hudson Hollow Complex
U.S. 127 South
Frankfort, Kentucky 40601

RE: Bell County Coal Corporation
#807-5223, Preliminary Application

To Whom It May Concern:

We are submitting our "MPA-01 and MPA-04, Comprehensive Application" for the above referenced mining operation. The mining operation is located approximately 3.95 mile northwest from the junction of KY 186 and US. 25E in Bell County. This operation is further located on the Forkridge and Kayjay 7 ½ minute U.S.G.S. Quadrangle maps at Latitude 36°35'45" N and Longitude 83°45'54" W.

This permitting action is for a underground mine of two (2) splits of the Jellico coal seam. It will involve approximately 21.62 additional acres for surface facilities and approximately 6,500.00 acres of underground areas for a grand total of 6,521.62 acres.

Please contact me at our office if you have any questions.

Sincerely,



Tim Messer
Howard Engineering and Geology

RECEIVED
2008 APR 30 P 2:43
RECEIVED
MINE RECLAMATION & ENF
MIDDLETOWN OFFICE

TECHNICAL INFORMATION FOR A MINING PERMIT

This form supplies all technical information in regard to the mining and reclamation plan for the permit. It shall be filed in conjunction with MPA-01 for all original and amendment applications.

PERMIT NUMBER 807-5223

DSMRE ID NUMBER 000216

2008 AUG 14 P 12:47

3. Identification of Applicant/Engineer

3.1 Applicant Name Bell County Coal Corporation

3.2 Engineer T.C Howard Registration No. 15,317

Associated with Howard Engineering & Geology, Inc.

Address P.O. Box 271, 2550 West Highway 72, Suite 1

City Harlan State KY Zip 40831

Telephone No. (606)573-6924 FAX (606)573-9543

3.3 Indicate the name, address, and telephone number of the individual to whom all permit application correspondence including return of the application for correction or modification, is to be addressed. If such designation is not made, the cabinet will return the application only to the applicant. If such designation is changed at some future date, the applicant is responsible for notifying the cabinet.

Name Tim Messer c/o Howard Engineering & Geo. Telephone No. (606)573-6924

Address P.O. Box 271, 2550 West Highway 72, Suite 1

City Harlan State KY Zip 40831

4. Site Location Information

4.1 Name of proposed mine Jellico Underground Mine #1

Local Address Rt. 1, Box 290, Pruden Road, Middlesboro, KY 40965

4.2 Contact person at mine site B. J. Reynolds Title President

Telephone Number (606) 248-6404

4.3 County(ies) Bell Quadrangle(s) KayJay/Fork Ridge

Latitude 36-35-45 Longitude 83-45-54

Nearest named stream Bennetts Fork Nearest community Premier

4.4 Is any of the proposed mining area previously permitted or pending permitting under KRS 350?

YES [] NO. If "YES", list the permittee name, permit number, and current status of operations. If additional pages are necessary, identify as "Item 4.4 continued".

See Attachment 4.4.A

5. Application Information

5.1 Type of application Original [] Amendment No. _____

Bell County Coal Corporation
#807-5223, Comprehensive Application

Attachment 4.4A

Acreage Overlap Narrative

This operation will overlap permit #807-8023 currently held by Appolo Fuels, Inc.
Permit #807-8023 is currently inactive.

5.2 Type of Operation: (check all appropriate boxes)

- | | |
|---|--|
| <input type="checkbox"/> Surface Area (SA) | <input type="checkbox"/> Refuse Disposal (RD) |
| <input type="checkbox"/> Surface Contour (SC) | <input checked="" type="checkbox"/> Underground (UG) |
| <input type="checkbox"/> Surface Auger (SG) | <input type="checkbox"/> Processing Plant (PP) |
| <input type="checkbox"/> Surface Remining (SR) | <input type="checkbox"/> Haul Road Only (LO) |
| <input type="checkbox"/> Surface Refuse Recovery (RR) | <input type="checkbox"/> Load Out Only (LO) |
| <input type="checkbox"/> Steep Slope (SS) | <input type="checkbox"/> In-situ (IS) |
| <input type="checkbox"/> Surface Mountaintop (SM) | <input type="checkbox"/> Other _____ |

6. Advance Notification Information

6.1 Is proposed permit located within boundaries for which a governmental planning agency has jurisdiction to act with regard to land use, air, or water quality planning? YES NO. If "YES", provide agency name and correct mailing address:

Agency Name _____
 Mailing Address _____

6.2 Is proposed permit area located within boundaries of any sewage and/or water treatment authorities, water companies which provide sewage or water services to citizens in the area or the proposed permit, or have water sources, collection, treatment, or distribution facilities located in the area of the proposed permit? YES NO.

Authority/Company Name _____
 Mailing Address _____

6.3 Is proposed permit area located within the watershed of any U.S. Army Corps of Engineer projects? YES NO. If "YES", indicate below and provide one additional copy of the application:

- | | | |
|---------------------|--|--|
| Huntington District | <input type="checkbox"/> Dewey Lake | <input type="checkbox"/> Fishtrap Lake |
| | <input type="checkbox"/> Grayson Lake | <input type="checkbox"/> Paintsville Lake |
| | <input type="checkbox"/> Yatesville Lake | |
| Louisville District | <input type="checkbox"/> Buckhorn Lake | <input type="checkbox"/> Carr Fork Lake |
| | <input type="checkbox"/> Cave Run Lake | <input type="checkbox"/> Green River Watershed |
| Nashville District | <input type="checkbox"/> Lake Cumberland | <input type="checkbox"/> Laurel River Lake |
| | <input type="checkbox"/> Martin's Fork Watershed | <input type="checkbox"/> Lake Barkley |
| | <input type="checkbox"/> Dale Hollow Lake | <input type="checkbox"/> Middlesboro Flood Control Project Watershed |

6.4 Is proposed permit area located within the official limits of any town, city or municipality? YES NO. If "YES", provide name and county:

Town/City Name _____ County _____

6.5 Was any of the data presented in this application prepared/provided as a result of a Small Operator Assistance Program (SOAP) grant?
 YES NO. If "YES", provide SOAP identification number _____.

6.6 Is the proposed permit boundary and acreage under this application the same as proposed under the corresponding "preliminary" permit application?
 YES NO. If "NO", describe differences:

NOTE: If significant differences are determined to exist, another field walk by regional personnel may be required.

7. Permit Information

7.1 Each new original permit will be issued for a term of five (5) years. If an initial term in excess of five (5) years is required, provide the information stipulated by 405 KAR 8:010, Section 17 as "Attachment 7.1.A."
N/A, More than five (5) year permit term not requested

7.2 Provide the acreage associated with the following activities. If additional pages are necessary, identify as "Item 7.2 continued".

	Currently Permitted	Additions/ Deletions	Redesig- nations	Total Acreage
Mining or Face Up Areas	----	----	----	4.00
Roads	----	----	----	1.59 ^{*1}
Sediment Ponds	----	----	----	2.00
Spoil Storage Areas	----	----	----	4.00
Waste Disposal Areas	----	----	----	----
Facility and Processing Areas	----	----	----	----
Coal Stockpile & Loading Areas	----	----	----	2.50
Mine Management Area	----	----	----	6.00
Diversion Ditches	----	----	----	1.53
Total Surface Disturbance Area	----	----	----	21.62
Underground Areas	----	----	----	6,500.00
Auger/Highwall Mining Areas	----	----	----	----
Total Underground/Auger Area	----	----	----	6,500.00
Permit Area	----	----	----	6,521.62

*1 = 0.21 acres road "B" included in Coal Stockpile area.

NOTE: The first three columns are used for amendments only.

7.3 If this permit contains acreage in more than one county, name the counties affected and specify surface and underground acreage within each county. If incremental acreage fees are being used, provide a table indicating acreage per county, per increment as Attachment 7.3.A.

N/A - All acreage in Bell County only.

County	Total Surface Acreage	Total Underground Acreage

8. Bonding & Fees

- 8.1 Check the proposed bonding plan to be used:
 Single Area Incremental, with _____ total increments.
- 8.2 If incremental bonding is proposed, identify the increment(s) which will be initially bonded prior to permit issuance.

- 8.3 For incremental bonding submit an incremental bonding map to clearly identify the number and boundary of each increment.
N/A Single Area
- 8.4 Complete the following charts with acreage for each increment:
N/A

Increment						
Mining or Face Up Areas						
Roads						
Sediment Ponds						
Spoil Storage Area						
Waste Disposal Areas						
Facility and Processing Areas						
Coal Stockpile & Loading Areas						
Mine Management Areas						
Total Surface Disturbance Area						
Underground Areas						
Auger/Highwall Mining Areas						
Total Underground/Auger Area						
Permit Area						

8.5 Complete the following chart which details additional information about each increment.

Increment						
Prelaw Mined Acreage	0					
Alternate Topsoil Acreage	4.60					
Mulching Variance	0					
Prime Farmland Acreage	0					
Stream Channel Alternate Acreage	0					
Number of Off Bench Ponds	0					

If additional pages are necessary, duplicate this chart and identify as "Item 8.5 continued".

8.6 Provide a narrative describing all acreage overlaps. This includes double bonding and shared facilities (with identification of other permits involved). In addition, all overlaps shall be clearly identified on the map requested in Item 8.

See Attachment 8.6.A

8.7 Check the method of acreage fee payment to be used:
 Single Area Incremental

8.8 Permitting processing fee of \$375 is included.

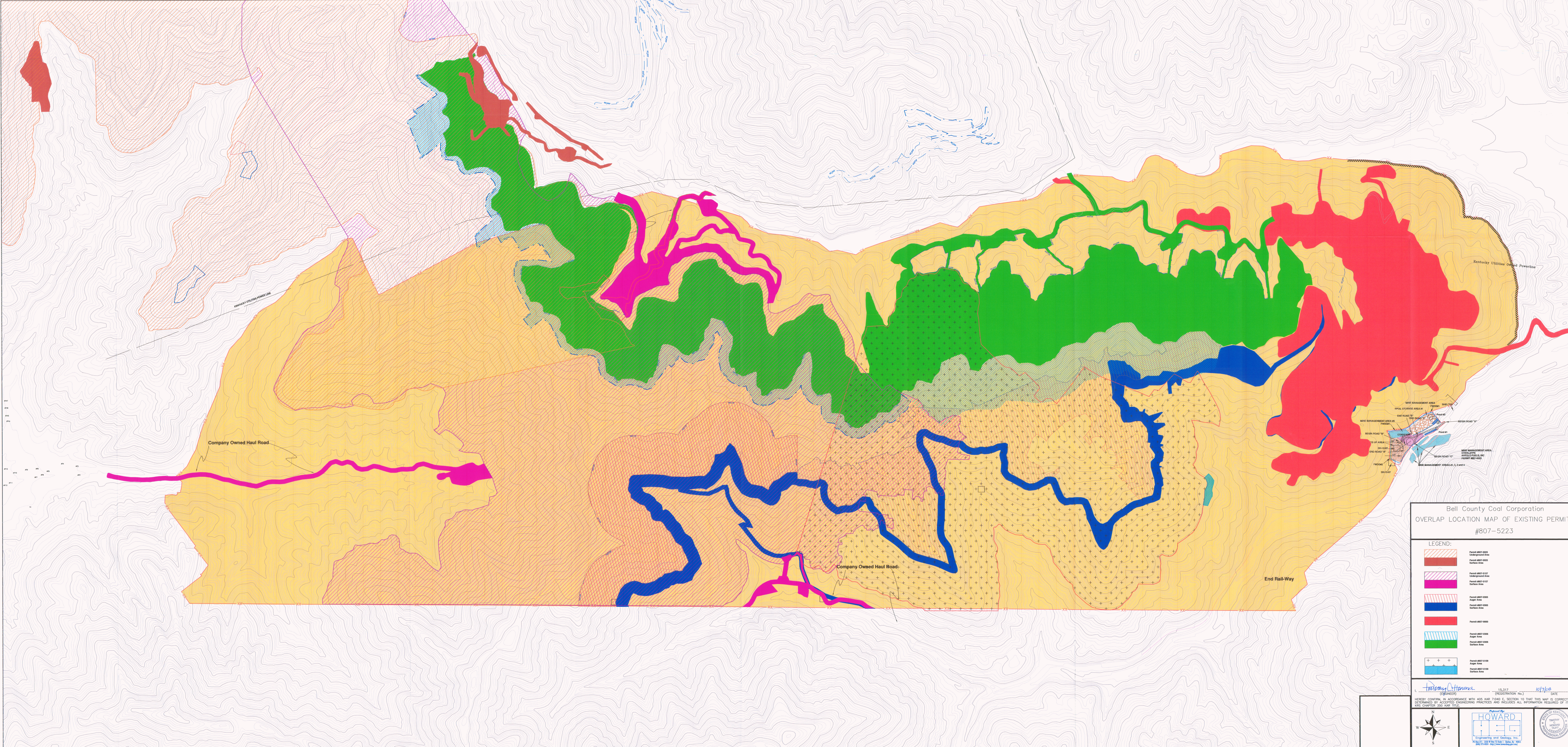
If applicable, indicate amount of acreage fees included:

Number of surface acres 21.62 X \$75 = \$1,650.00 acreage fee.

Acreage Overlap Narrative

The mine management areas designated as mine management areas #1, #2, #3 and #4 will overlap a former coal loading area permitted by Appolo Fuels, Inc permit #807-8023. The permit area is currently inactive. The proposed overlap will affect approximately 4.60 acres of surface area. The entire permit area included in permit #807-8023 will be permitted and bonded by this permit application.

Appolo Fuels, Inc. intends to apply for a bond release as soon as possible after issuance of this permit application.



Bell County Coal Corporation
 OVERLAP LOCATION MAP OF EXISTING PERMITS
 #807-5223

LEGEND:

	Permit #807-0003 Underground Area
	Permit #807-0005 Surface Area
	Permit #807-0107 Underground Area
	Permit #807-0107 Surface Area
	Permit #807-0205 Surface Area
	Permit #807-0206 Surface Area
	Permit #807-0209 Surface Area
	Permit #807-0206 Ridge Area
	Permit #807-0208 Surface Area
	Permit #807-0208 Surface Area
	Permit #807-0209 Surface Area
	Permit #807-0209 Surface Area

Anthony Ottaviano 15,317 10/7/08
 (ENGINEER) (REGISTRATION NO.) DATE

HEREBY CERTIFY IN ACCORDANCE WITH KRS 190.400, SECTION 10 THAT THIS MAP IS CORRECT AS DETERMINED BY ACCEPTED ENGINEERING PRACTICES AND INCLUDES ALL INFORMATION REQUIRED OF IT BY KRS CHAPTER 190.400 TITLE

HOWARD
 Engineering and Geology, Inc.
 1001 S. 10th Street, Suite 100
 Louisville, KY 40203
 (502) 582-1100

Professional Seal of Anthony Ottaviano, Registered Professional Engineer, No. 15,317, State of Kentucky.

8.9 Have credit acres been applied to the acreage fee amount? [] YES [X] NO.
 If "YES", list below the permit number, permittee name, acreage and amount.
 Attach copies of the bond release forms showing that those acreages were not
 disturbed. Identify attached documents as "Attachment 8.9.A, 8.9.B" etc.

If additional pages are necessary, identify as "Item 8.9 continued".

PERMIT NUMBER	PERMITTEE NAME	UNDISTURBED ACREAGE	RATE PER ACRE	TOTAL

Total acreage fee credit \$ _____

8.10 If permittee name is different from applicant, submit a letter from the
 permittee granting the credit acres to the applicant.

N/A

8.11 Based upon all surface acres total to be disturbed under the proposed permit,
 provide an estimate of costs of reclamation. Attach detailed supporting
 calculations as "Attachment 8.11.A".

See Attachment 8.11.A

9. Right of Entry

9.1 For all properties to be permitted by this application, complete the following
 chart for all surface and mineral owners. In the case of surface owners of severed
 estates which overlie underground works, but no surface disturbance is proposed,
 list n/a for type of document, grantor of rights, and date.

OWNER	TYPE OF DOCUMENT	GRANTOR OF RIGHTS	EXECUTION DATE	ACREAGE
Bell County Coal Corporation	Lease	J.M. Huber Corporation	9/01/87	5,600
Bell County Coal Corporation	Lease	J.M. Huber Corporation	6/01/96	6,200
BLC Properties, LLC	Deed	J.M. Huber Corporation	7/05/01	10,000+
Ataya Hardwoods, LLC	Deed (Surface)	BLC Properties, LLC	7/01/03	10,000+
WPP, LLC	Deed (Mineral)	BLC Properties, LLC	1/02/04	10,000+
Bell County Coal Corporation	Lease Assignment	Ataya Hardwoods, LLC	7/01/03	10,000+
Bell County Coal Corporation	Lease Assignment	WPP, LLC	1/02/04	10,000+
Bell County Coal Corporation	Lease Assignment	Appolo Fuels, Inc.	1/02/08	5000+

ATTACHMENT 8.11.A

RECLAMATION COST ESTIMATE

A) COST FOR DISTRIBUTION OF TOPSOIL OR ALTERNATE MATERIAL

(Estimated cost \$0.50/yd.³)

$$= \frac{0.5' \text{ (depth)} \times (21.62 \text{ ac.}) \times (43,560 \text{ sq. ft./ac.}) (\$0.50/\text{yd.}^3)}{27 \text{ sq.ft./yd.}^3}$$

$$= \$ 8,720.07$$

B) COST FOR BACKFILLING AND GRADING (Based on \$2.00/yd.³)

$$= \$1.00/\text{yd.}^3 \times (186,070 \text{ yds.}^3)$$

$$= \$ 186,070.00$$

C) COST OF REVEGETATION

- 1) Seedbed preparation will include scarifying the area to be planted. It is estimated that it will take approximately one hour per acre to prepare the seedbed for planting.

$$= 21.62 \text{ ac.} \times \$50.00/\text{hr.} (1 \text{ hr./ac.})$$

$$= \$ 1081.00$$

- 2) Seeding, Estimated @ \$ 80.00/acre

$$= 21.62 \text{ ac./} \times \$80.00/\text{ac.}$$

$$= \$ 1,729.60$$

- 3) Mulching, estimated @ \$0.03/lb.

$$= 21.62 \text{ ac.} \times (3000 \text{ lb./ac.}) \times (\$0.03/\text{lb.})$$

$$= \$ 1,945.80$$

- 4) Lime, estimated @ 400 lbs./ac. @ \$ 8.50/ton

$$= 21.62 \text{ ac.} \times (400 \text{ lbs./ac.}) / (1 \text{ ton}/2000 \text{ lbs.}) \times (\$8.50/\text{ton})$$

$$= \$ 36.75$$

- 5) Fertilization estimated @ 300 lb./ac. @ \$289.00/ton

$$= 21.62 \text{ ac.} \times (300 \text{ lbs./ac.}) / (1 \text{ ton}/2000 \text{ lbs.}) \times (\$289.00/\text{ton})$$

$$= \$ 937.23$$

- 6) Tree planting estimated @ \$200.00/1,000 trees

$$= 21.67 \text{ ac.} \times (\$200.00/1000 \text{ trees}) \times (450 \text{ trees/ac.})$$

$$= \$ 1,945.80$$

ATTACHMENT 8.11.A

TOTAL REVEGETATION COST: \$ 7,676.18

D) COST FOR WATER MONITORING (Based on five (5) year plan)
(Liability @ cost of \$10.00/sample)

- 1) Cost for monitoring sedimentation structures
= One (2) discharge points x \$10.00/sample x 60 samples = \$ 1,200.00
- 2) Cost for monitoring ground and surface water based on quarterly monitoring
for five (5) years.
= 4/year x 5 years x \$10.00/sample x 6 sites = \$ 1,200.00

TOTAL MONITORING COST = \$ 2,400.00

E) COST FOR POND INSPECTIONS five (5) growing seasons at \$40.00 per pond/per
quarter

= \$1,600.00

F) COST FOR POND REMOVAL

= \$1,000.00/Pond x 2 ponds = \$2,000.00

G) COST FOR MAINTENANCE OF RECLAMATION AREAS (Estimated at
\$ 300.00/ac. per year for five (5) years

= @ 21.62 ac/ x (\$300.00/ac./yr.) x (5 years)
= \$ 32,430.00

TOTAL RECLAMATION COST: \$ 240,896.25

PERMIT NUMBER 807-5223

9.2 Explain the legal rights claimed by the applicant for the proposed permit area:

The rights claimed by the applicant for the proposed permit area are based on a sale of property from J.M. Huber Corporation to BLC Properties, LLC (7/5/01) to Ataya Hardwoods, LLC (7/1/03) and WPP, LLC (1/2/04) and a lease assignments to Bell County Coal Corporation dated 7/1/03 and 1/2/04. and a lease assignment from Appolo Fuels, Inc. to Bell County Coal Corporation. By virtue of the afore noted leases Bell County Coal Corporation claims the legal right to ingress and egress and to mine by both surface and underground methods the properties as further described in the afore noted leases. Copies of the lease described above are on file at the corporate office of Bell County Coal Corporation and are not available for review or comment by the public.

9.3 Are any rights to enter and mine the area, as claimed by the applicant, subject to any pending litigation? [] YES [X] NO

9.4 Have the private surface and mineral estates been severed for any parcel of land within the proposed permit area? [X] YES [] NO. If "YES", and the applicant proposes to extract coal by surface mining methods, one (1) of the following items shall be provided as part of this application:

- (a) Notarized copy of the letter or a lease document from the surface owner(s) consenting to the use of surface mining methods to extract coal within the proposed permit area; or
- (b) Notarized copy of the document of conveyance which originally severed the private surface and mineral estates and also expressly grants or reserves the right to extract coal by surface mining methods; or
- (c) Notarized copy of a judicial order which expressly grants or reserves the right to extract coal by surface mining methods.

Is the order subject to pending litigation? [] YES [X] NO

Documents submitted in response to this requirement shall be identified as "Attachments 9.4.A., 9.4.B.", etc.

N/A Underground Coal Extraction Method

9.5 Describe any interest, options or pending bids on interest held or made by the applicant for lands which are contiguous to the proposed permit area. If additional pages are needed, identify as "Item 9.5 continued". N/A

9.6 Is the proposed permit area within or adjacent to any lands where a federal agency owns either the surface or mineral rights? [] YES [X] NO. If "YES", list the agency controlling such lands. Describe the location and boundaries of these lands with respect to the proposed permit area. If additional pages are needed, identify as "Item 9.6 continued".

Agency

Address () Telephone Number

PERMIT NUMBER 807-5223**10. Notice of Intention to Mine**

10.1 List the name of the newspaper of largest circulation in each county in which the proposed operation will be located.

COUNTY	NEWSPAPER
<i>Bell</i>	<i>Middlesboro Daily News</i>

10.2 Provide on a separate page immediately following this section the language of the "Notice of Intention to Mine" to be advertised in the newspaper(s) listed in Item 10.1 and identify as "Attachment 10.2.A.". In accordance with 405 KAR 8:030, or 8:040, a copy of each of the four newspaper advertisements or an affidavit from the newspaper editor(s) including a copy of the final advertisement shall be submitted to the department not later than 15 days after the date of the final advertisement. NOTE: The cabinet cannot complete the final processing and issuance of a mining permit unless and until all advertising requirements have been properly fulfilled by the applicant. Failure to submit accurate newspaper advertisements in a timely manner will result in the delayed issuance of a permit.

See Attachment 10.2.A

11. Areas Designated Unsuitable for Mining & Requests for Variances

NOTE: Only those waivers and variances identified in this section will be considered for approval by the cabinet.

11.1 Is any part of the proposed permit area: within lands designated by the state as unsuitable for mining; under study for designation as such; within an area with special conditions as a result of a lands unsuitable study. If entire permit area is not designated unsuitable and not currently under study for such designation, check here [XX]. Attach DSMRE clearance letter as "Attachment 11.1.A."

See Attachment 11.1.A

11.2 Indicate if proposed surface mining and reclamation activities will occur on, or are adjacent to: national park system; national or state forest lands; national system of trails; national wilderness preservation system; wild and scenic rivers system, including "study" rivers; state wild rivers established pursuant to KRS 146; national recreation areas; public wildlife management area; and/or places listed in or eligible for listing in the National Register of Historic Places. If not, check here [XX].

NOTICE OF INTENTION TO MINE

PURSUANT TO APPLICATION NUMBER 807-5223

- 1) In accordance with KRS 350.055, notice is hereby given that Bell County Coal Corporation, Rt. 1 Box 290, Pruden Road, Middlesboro, Kentucky, 40965, has applied for a permit for an underground mining operation located 0.00 mile of Premier in Bell County. The proposed operation will disturb 21.62 surface acres and will underlie 6,500.00 acres, and the total area within the permit boundary will be 6,521.62 acres.
- 2) The proposed operation is approximately 3.95 miles northwest from Ky. 186 junction with US. 25E and located 0.01 miles north of Bennetts Fork. The latitude is 36-35-45 N. The longitude is 83-45-54 W.
- 3) The proposed operation is located on the Kayjay and Forkridge U.S.G.S. 7 ½ minute quadrangle maps. The surface area to be disturbed is owned by, Appolo Fuels, Inc. The operation will underlie land owned by Appolo Fuels, Inc and Corrigan TLP LLC C/O Molpus Woodlands Group LLC..
- 4) The application has been filed for public inspection at the Department for Surface Mining Reclamation and Enforcement's Middlesboro Regional Office, 1804 East Cumberland Avenue, Middlesboro, Kentucky 40965. Written comments, objections, or request for a permit conference must be filed with the Director, Division of Permits, #2 Hudson Hollow, U.S. 127 South, Frankfort, Kentucky 40601

(NOTE TO PUBLISHER: 4th and final advertisement to include this additional paragraph)

This is the final advertisement of this application. All comments, objections or request for a permit conference must be received within thirty days of today's date.



ENVIRONMENTAL AND PUBLIC PROTECTION CABINET
DEPARTMENT FOR NATURAL RESOURCES

Steven L. Beshear
Governor

Division of Mine Permits
2 Hudson Hollow
Frankfort, Kentucky 40601
Phone (502) 564-2320
Fax (502) 564-6764
www.minepermits.ky.gov

Robert D. Vance
Secretary

Susan C. Bush
Commissioner

April 23, 2008

T.C. HOWARD
HOWARD ENGINEERING & GEOLOGY
PO BOX 271
HARLAN KY 40831

RE: Bell County Coal Corporation
Application # 807-5223, NW

Dear Mr. Howard:

The Division of Mine Permits has conducted the critical resources review of the above referenced application. Attached are the Division's findings, listed by application item, describing the issues that must be addressed. The findings for each application item are summarized below.

- 11.1 Areas Designated Unsuitable for Mining: None identified
- 12.2 General Description of Mining and Reclamation Operations: BMPs recommended;
Stream Restoration Plan and a Subsidence Protection Plan
- 13.1 Cultural or Historic Resources: Archaeological survey not required
- 14.1 Fish and Wildlife Information: T/E species identified
Blackside dace – *Phoxinus cumberlandensis*
- 14.4 Fish and Wildlife Survey: None required
- 21.11 Fish and Wildlife Enhancement Plan: Required

These attachments and supporting documentation must be incorporated into the appropriate sections of the comprehensive application. Significant changes from the preliminary application or to the mine plan may require additional environmental review.

If you have any questions concerning this matter, please contact the review biologist, Nashisha Henderson, or archaeologist, Rose Moore, Critical Resources Review Section, at (502) 564-2320.

Sincerely,

Susan Wind, Supervisor
Critical Resources Review Section/
Small Operator Assistance Program/
401 WQC
Division of Mine Permits

Enclosure to Applicant

c: Rose Moore (e)
Nashisha Henderson (e)
Donna M. Neary, SHPO
Mike Hardin, KDFWR
Lee Andrews, USFWS
Permit File – w/enclosure Linda Fischer (e)

Bell County Coal Corporation
Application No. 807-5223, NW
April 15, 2008

Application Item 11.1: Lands Unsuitable for Mining

1. As of this date, there are no lands in the proposed permit area designated unsuitable for surface coal mining or under study for such designation, as provided in 405 KAR Chapter 24.
2. The proposed permit area does not fall within an area with special conditions as a result of a lands unsuitable study.
3. The proposed permit area is not located within a U.S. Army Corps of Engineers project area.
4. Based on information available to the Department, there are no federal lands within or adjacent to the proposed permit area.
5. Please be advised that mining operations seeking new or modified coverage under the Coal KPDES General Permit must submit a Notice of Intent (NOI-CM) to the Division of Water. Please file the NOI-CM with the Division of Water as soon as possible in order to avoid potential delays in the processing and issuance of your SMCRA/DNR permit.
6. The proposed permit area may include an in-stream discharge and will require a Section 401 WQC from the Commonwealth of Kentucky, and a 404 Permit from the U.S. Army Corp of Engineers. As of February 1, 2007, Department for Natural Resources – Division of Mine Permits (DNR/DMP) will be reviewing and issuing the 401 certifications. Applications received prior to February 1, 2007 will be reviewed and issued by the Department for Environmental Protection – Division of Water. Applications should be submitted as soon as possible to DNR/DEP in order to expedite review.
7. There are three AMD sites located within 5 miles of the permit site.

11.3 Indicate if the proposed permit area is within: 500' of known abandoned or active underground mines; 300' of a public park, public building, school, church, community or institutional building; 300' of an occupied dwelling; 100' of the outside right-of-way line of a public road; 100' of a stream; 100' of a cemetery, or prehistoric burial ground. If not, check here .

11.4 For each item checked in items 11.2 and 11.3 above, attach appropriate maps to identify the location and boundaries of the lands or facilities referenced. These attachments shall be identified as "Attachment 11.2.A." and "Attachment 11.3.A." respectively. Any required waiver documentation such as land owner consent or approval of appropriate state or federal agencies shall be attached. These attachments shall be identified as "Attachment 11.4.A., 11.4.B.", etc. Any engineering designs for Item 11.3 shall be submitted in other appropriate sections of this application.

See MRP map.

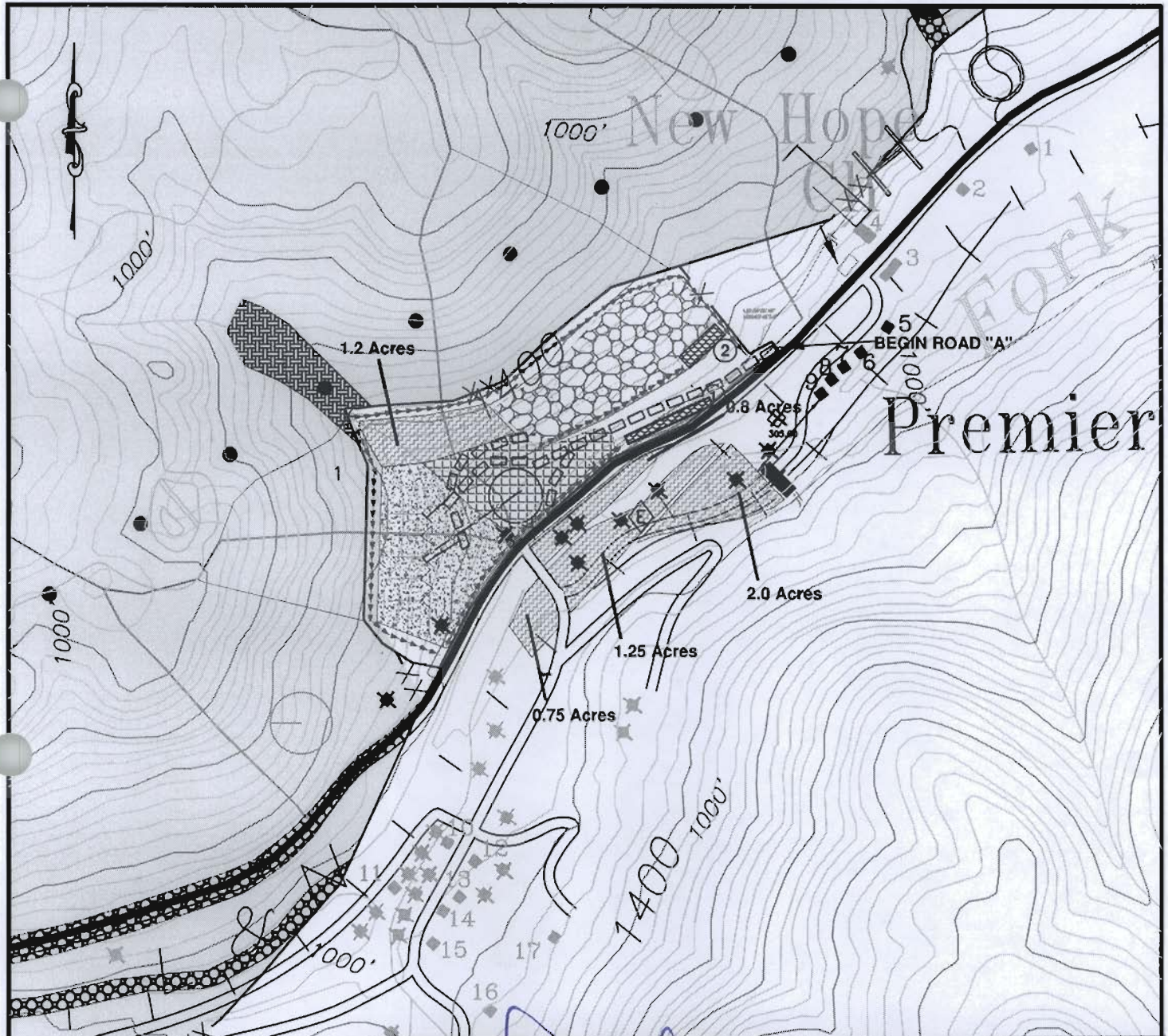
11.5 Indicate below all waivers and variances to be requested for the proposed operation. The acreage (or facility designation) affected should be provided as requested. Those variances which have been granted in previous applications to this permit should be marked with an [x] while those proposed or expanded as part of this application should be marked with an [*]. The documentation necessary to approve each variance requested as part of this application shall be submitted in the appropriate sections of this application.

- Post mining land use change
- Alternate topsoil material for 4.60 acres
- Permanent pond # _____
- AOC variance: remaining for _____ acres
- AOC variance: steep slope for _____ acres
- AOC variance: mountaintop removal for _____ acres
- Alternate contemporaneous reclamation standards
- Alternate contemporaneous reclamation standards for joint surface and underground operations
- Mulching variance
- Permanent road(s) # A, B & C
- Culvert spacing variance for roads # A, B & C
- Grade variance for roads # _____

OTHERS: [*] Waiver for surface disturbance within 0' of Unnamed tributary of Bennetts Fork and 10' of Bennetts Fork [*] Waiver for surface disturbance within 500' of Abandoned Underground Mines, [*] Prime Farmland Negative Determination, [*] Waiver for mining within 100' of public road, [*] Waiver for Alternate Sediment Control

11.6 If valid existing rights are claimed for any part of the proposed permit area identified in 11.1, 11.2, or 11.3, submit the required information as "Attachment 11.6.A".

N/A



Bosworth
Sch

I, Timothy C. Howard, P.E. No. 15,317

Date: 10/14/08

hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
Mine Management Areas

Scale: 1" = 500 Page No. 1 of 1

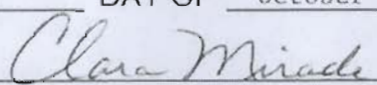
Prepared by:
Howard Engineering & Geology, Inc.

ATTACHMENT 11.5.A1

I, Albey Brock, being the duly elected County Judge Executive of Bell County, Kentucky, in which highway 186 is located as depicted in Bell County Coal Corporations permit #807-5223, do hereby grant a waiver for Bell County Coal Corporation, to construct and utilize mining related facilities within 100' feet of highway 186 as shown on the MRP map included in the permit application .

Signed: , Date: 10-16-08
Judge Executive, Bell County, Kentucky

SUBSCRIBED AND SWORN TO BEFORE
ME THIS THE 16th DAY OF October, 2008

NOTARY PUBLIC, 
MY COMMISSION EXPIRES, 4-15-09

PERMIT NUMBER 807-522312 General Description of Mining and Reclamation Operations

12.1 Indicate the types of facilities to be constructed/utilized:

- Sediment ponds, no. 2
 Fresh water ponds, no. _____
 Levees, _____ ft.
 Water treatment facilities
 Coal haulroads
 Access roads
 Conveyors, _____ ft.
 Rail loading facilities
 Coal refuse fills
 Coal slurry impoundments
 Coal stockpiles
 Excess spoil fills, no. 1
 Hard rock/durable rock fills, no. _____
 Deep mine entries, no. _____
 Coal processing facilities
 Mine management and/or support areas
 Loading facilities
 Other _____

12.2 Provide a narrative description, identified as "Attachment 12.2.A.", of each phase of the proposed surface and underground mining operation. Include the anticipated starting and termination dates of each phase and/or increment, major equipment to be utilized, acreage affected in each phase, and the total acreage affected over the life of this permit. the narrative should describe the location and mitigation plans for any utility lines which will be encountered. If this application is an amendment, describe any changes to the mining plan proposed for the currently permitted area.

See Attachment 12.2.A

12.3 Describe the plan for maximizing resource recovery. Provide as Attachment 12.3.A.

See Attachment 12.3.A

13. Cultural or Historic Resources

13.1 List and describe any cultural or historic resources listed, or eligible for listing, on the National Register of Historic Places and any known archaeological sites within or adjacent to the proposed permit area. Provide under separate cover a description of the measures to be taken to mitigate adverse impacts to these sites and a map showing their location.

See Attachment 13.1.A

ATTACHMENT 12.2.A

The surface disturbances proposed in this application will affect approximately 21.62 acres of surface area and approximately 6,500.00 acres of area overlying the proposed underground workings. The proposed operation will be located near the community of Premier in Bell County. The New disturbances will be located on the Fork Ridge and Middlesboro South 7 ½ minute quadrangle maps at Latitude 36-35-45 N and Longitude 83-45-54 W.

This proposed operation will conduct underground mining of the Jellico coal seam. The proposed mining activities will involve the construction of one mine face-up area, coal stockpile area, mine management area, spoil storage area, two (2) sediment ponds and permanent access haul roads "A", "B" and "C". The mine site will be excavated in a box cut method to access the coal seam. The spoil removed from the mine site excavation will be stored in the spoil storage area. The areas will be cleared of all herbaceous materials and the materials will be burned and disposed of according to local and state laws.

Sediment control will be provided by excavating the sediment ponds prior to the construction of any other mine related facilities. Silt fence and straw bales shall be used for sediment control during the construction of the sediment ponds. The ponds proposed in this application are temporary. Once the ponds have been constructed to design the other mine related facilities will be constructed. Road "A" will be constructed to the proposed mine face-up location. Road "B" will be constructed from road "A" to the proposed spoil storage area. Roads A, B and C will be permanent roads. Spoil material will be excavated from the proposed face-up area and transported to the temporary spoil storage location. The temporary spoil storage area is located on an existing level bench. The existing bench is of an unknown origin. Field cross-sections have been provided in

ATTACHMENT 12.2.A

Item 25 and 26 which demonstrate the configuration of the area and its ability to accept the spoil material excavated from the proposed mine face-up area. Once the coal has been exposed in the mine face-up area it will be loaded into trucks and removed from the face-up area. Safety benches have been included in the design of the face-up area to provide added protection to the integrity of the mine face-up area during construction and during continuous mining operations.

After the creation of the mine face-up area the coal stockpile area will be created by cut and fill grading the area proposed for coal storage and leveling the area to the elevation proposed in the mine site design detail drawing provided behind this Attachment 12.2.A.

The mine management areas will be graded where necessary to provided the intended use. Gravel will be applied to the mine management area to provide an adequate surface for the intended use of the mine management areas. The proposed mine management areas will be used for maintenance, employee parking, equipment storage and maintenance, supply storage and for power stations if necessary. Silt fence and or straw bales will be utilized for sediment control of the mine management areas. **The** mine management areas total greater than 1.0 acres when combined however these area are separated in the field, and as the sediment runoff from these areas will be minute the engineer is confident that silt fence and straw bales will be adequate sediment control for the mine management areas. Additionally the mine management area located to the east of the mine face-up was routed to sediment pond #1in its design.

The proposed mining operation will begin upon the issuance of the comprehensive permit application.

The mining proposed in this application will be within 500' form existing

ATTACHMENT 12.2.A

underground workings in the Jellico coal seam. It is unknown when the workings were mined. The workings were mined prior to the permitting process and no permit numbers are available. Mine maps have not been located, however it does not appear that the mine was very deep and may have been what is typically called a "house coal mine" in which local people mine coal for personal use in their homes. No attempts will be made to map the mine as the conditions are unsafe for entrance. The mine workings in the Buckeye Springs coal seam is over 724' vertically from the workings proposed in this application. No adverse affects are anticipated as a result of the workings in either the Jellico or the Buckeye Springs coal seam.

The following equipment may be used for the construction of the mine site:

- 1) Bulldozer
- 2) End Loader
- 3) Drill
- 4) Haul Back Trucks
- 5) Backhoe
- 6) Excavator

Additional unlisted equipment may be utilized at the discretion of the operator.

The conveyor will be erected by pouring concrete footers for the support towers and the beltline structure will be bolted to the towers. A head drive will be installed for a drive system. Once mining has been completed the conveyor will be disassembled and removed from the mine prior to reclamation of the mine site. The conveyor will be used elsewhere by the company, sold to another company for use or sold for scrap. After all mining related activities the mine site will be reclaimed.

The seam to be mined is below drainage and out-crop protection barrier will not be required.



I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/7/03
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.



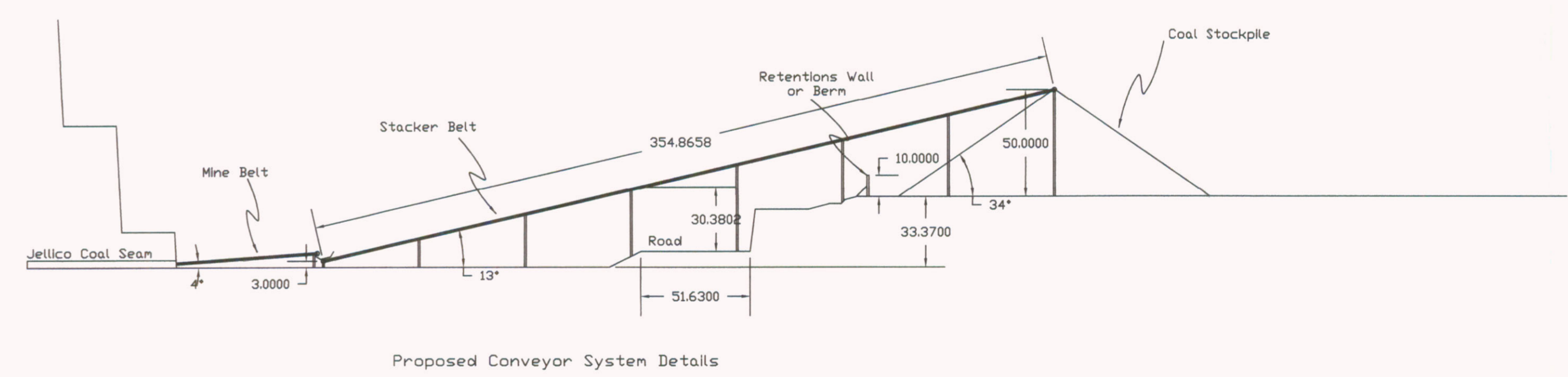
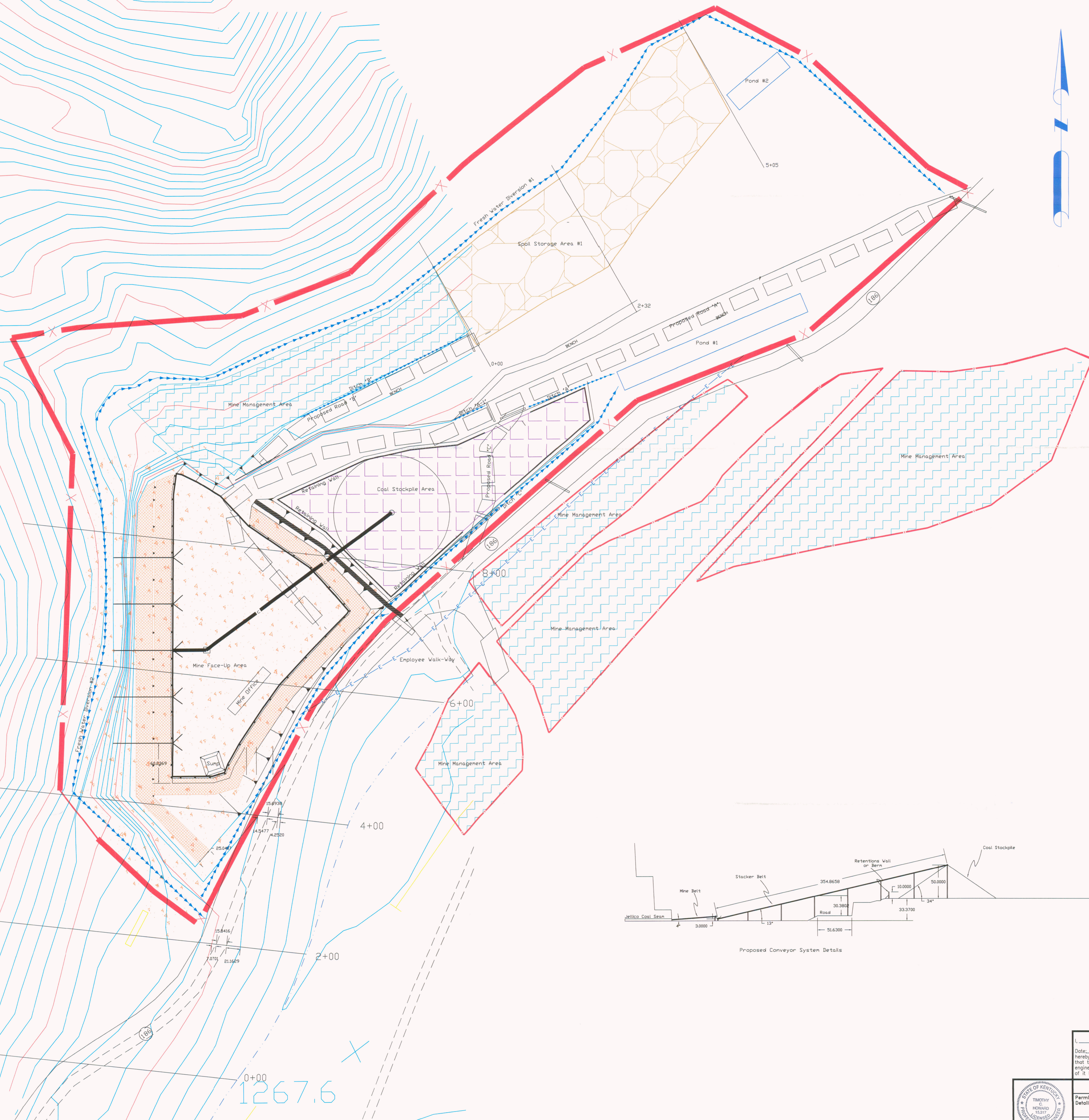
Bell County Coal Corporation

Permit No. 807-5223
 Mine Management Areas

Scale: 1" = 500

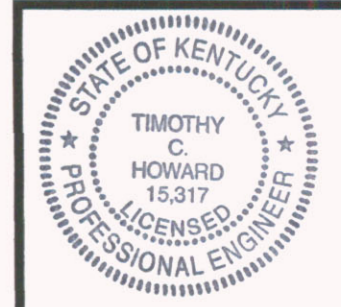
Page No. 1 of 1

Prepared by:
 Howard Engineering & Geology, Inc.



I, Timothy Howard, P.E. No. 15,317
Date: 10/1/08

hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation
Permit No. 807-5223
Detailed Site Plan View Drawing

Scale: 1" = 50' Page No. 1 of 1
Prepared by: Howard Engineering & Geology, Inc.

Bell County Coal Corporation
Application No. 807-5223, NW
April 15, 2008

Application Item 12.2: General Description of Mining and Reclamation Operations

1. The proposed permit may result in impacts on aquatic resources. The Division recommends the use of Best Management Practices (BMPs) to aid in sediment control. BMPs may include, but are not limited to, any of the following, singly or in combination:

- Basins
- Diversion ditches
- Filter strips
- Land grading and reshaping
- Maintenance of a 100' buffer zone along streams
- Minimization of surface disturbance
- Mulching
- Placement of rip-rap
- Rapid revegetation, especially along stream banks
- Rock check dams
- Silt fences
- Straw bale barriers
- Stream bank stabilization
- Sumps
- Work in periods of no or low flow or dry weather

The narrative description of mining operations (Attachment 12.2.A) provided in the comprehensive application should specify what BMPs will be implemented.

2. The applicant must provide a stream-flow monitoring plan and a contingency plan for UT's of Stoney Fork, Slickrock Branch, Bennett Fork Shade Branch, Marsee Branch and Clear Fork. This plan must include enough background flow data to show seasonality of stream flow.

Monitoring should be conducted on a monthly basis, and increase in frequency as the mining progresses closer to the critical areas of influence surrounding the stream. Flow monitoring is usually conducted for a year after the mining has moved away from the stream. Along with flow information, stream areas, and associated riparian areas should be inspected for evidence of subsidence.

The contingency plan must include those measures to be taken to return stream flow to pre-mining flow rates, should flow be affected by subsidence.

The applicant may forego these requirements by providing a subsidence protection plan for the stream(s) mentioned above.

Bell County Coal Corporation
Application No. 807-5223, NW
April 15, 2008

Application Item 12.2: General Description of Mining and Reclamation Operations (Continued)

3. The proposed permit may temporarily affect intermittent or perennial stream segment(s) of Bennett Fork. The Division recommends that the applicant include a **stream restoration plan** as an attachment to Application Item 31.6. Restoration should strive to reconstruct the pre-mining conditions of the natural stream. The plan must, at a minimum, describe the following pre-disturbance stream parameters and propose measures to reconstruct them: substrate characterization, channel slope and width, riffle-pool ratios, run-bend ratios, water depth, average flow, and riparian vegetation. Profile, plan, and cross-sectional views of the pre-mining and the restored stream channel must also be included.

The applicant must include a copy of the restoration plan in the comprehensive application and submit **one (1) copy under separate cover** to the following address: Critical Resources Review Section, Division of Mine Permits, #2 Hudson Hollow, Frankfort, Kentucky 40601.

ATTACHMENT 12.3.A

In order to maximize resource recovery once this permit has been issued modern mining equipment shall be utilized to extract the coal to the fullest extent allowed. An anticipated 70% - 80% recovery will be used for all areas not restricted by subsidence control. Areas restricted to by subsidence control will be limited to 50% recovery. All reserves that are economically feasible to extract under this permit application will be mined.

Bell County Coal Corporation
Application No. 807-5223, NW
April 23, 2008

Application Item 13.1: Cultural or Historic Resources

The Division of Mine Permits has received comments from the State Historic Preservation Officer (SHPO) concerning the potential for archaeological resources within the proposed permit area. A portion of the mine management overlaps an active operation and the remainder is to be located on slope without rock overhangs. There are no known archaeological sites or National Register properties above the proposed underground mining area. A copy of the SHPO comments is attached for your information and use.

The Division of Mine Permits has considered these comments and has determined that the proposed operation will not impact any archaeological resources that are eligible for or listed in the National Register of Historic Places. **Therefore, an archaeological survey of the proposed permit area will not be required.**



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Marcheta Sparrow
Secretary

Donna M. Neary
Executive Director and
State Historic Preservation Officer

April 16, 2008

Ms. Susan Wind, Supervisor
Critical Resources Review Section
DSMRE/Division of Permits
#2 Hudson Hollow Complex
U.S. 127 South
Frankfort, Kentucky 40601

Re: Bell County Coal Company
Application # 807-5223, NW
Bell County

Dear Ms. Wind:

Thank you for your letter of March 18, 2008 (received March 24, 2008) concerning the above referenced project. Our review of this application indicates that an archaeological survey should not be required. In accordance with 36CFR Part 800.4 (d) of the Advisory Council's revised regulations our finding is that there are No Historic Properties Present within the undertaking's area of potential impact. Therefore, we have no further comments and DSMRE's responsibility for consultation with the Kentucky State Historic Preservation Officer under the Section 106 review process for this individual permit is fulfilled.

Should you have any questions, feel free to contact Charles Hockensmith of my staff at 564-7005.

Sincerely,

Donna M. Neary, Executive Director
Kentucky Heritage Council and
State Historic Preservation Officer

DMN:cdh

14. Fish and Wildlife Information

14.1 Has any threatened or endangered species or the critical habitat of such species been identified within or adjacent to the proposed permit area?
[] YES [XX] NO. If "No", attach DSMRE documentation to verify this determination. Identify as "Attachment 14.1.A".

See Attachment 14.1.A

14.2 If the answer to 14.1 is "YES" or a threatened or endangered species or critical habitat has been reported within or adjacent to the proposed permit area, list the species involved and provide a map identifying its location relative to the proposed permit area. Identify as "Attachment 14.2.A".

N/A

14.3 Will any "wetland" area be impacted by the proposed operation?

[] YES [XX] NO.

If "YES", provide acreage of wetland, and delineate its boundaries on the ERI Map.

Acreage of wetland N/A

14.4 Provide as "Attachment 14.4.A", the results of any fish and wildlife survey conducted for the proposed area, or other studies required by DSMRE.

See Attachment 14.4.A

14.5 Provide a description of the measures which will be taken to avoid or minimize adverse impacts to wetland areas, important fish and wildlife species, the critical habitat of such species, or other species protected by state or federal law. If additional pages are needed, identify as "Item 14.5 continued".

See Attachment 14.5.A

15. Geologic Information

15.1 Provide the information requested below concerning the coal seam(s) to be mined:

USGS Name	Thickness (inches)	% Total Sulfur	% Pryite Sulfur	Elevation
<u>Jellico</u>	<u>36"- 42"</u>	<u><1.00</u>	<u></u>	<u>+1240' avg.</u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>
<u></u>	<u></u>	<u></u>	<u></u>	<u></u>

15.2 Provide a description of the geology within the proposed permit area down to and including the stratum immediately below the lowest coal seam to be mined. The description shall include the structural geology, lithology, thickness and chemical characteristics of the overburden strata which will be removed and strata which may be impacted in areas overlying underground works. Include the results of the baseline geologic sampling program on cabinet approved forms and all appropriate drill logs, stratigraphic columns, cross sections, geochemical lab results and other information on which the description is based. Submit description and related information as "Attachment 15.2.A, 15.2.B", etc.

See Attachment 15.2.A

Bell County Coal Corporation
Application No. 807-5223, NW
April 15, 2008

Application Item 14.1: Fish and Wildlife Information

1. The Division's review of the Kentucky State Nature Preserves Commission's Natural Heritage Database indicates that occurrences of state/federally designated threatened or endangered species **have been recorded** within or adjacent to the proposed permit area. Please refer to Attachment 14.4 for information on any site-specific resource information that is required in the permit application to satisfy 405 KAR 8:030/040, Section 20. For additional assistance, please contact:

United States Fish & Wildlife Service
Kentucky Ecological Services Field Office
330 West Broadway, Room 266
Frankfort, KY 40601
(502) 695-0468

Federally listed species:

Blackside dace

Phoxinus Cumberlandensis

Bell County Coal Corporation
Application No. 807-5223, NW
April 15, 2008

Application Item 14.4: Fish and Wildlife Survey

Based upon the Division's environmental review, it has been determined that the proposed mine operation will not adversely impact any of the resources referenced in 405 KAR 8:030/040, Section 20 (a-c). Therefore, surveys for site-specific fish and wildlife resource information **will not be required** in this application.

There are Blackside dace located within 5 miles of the proposed mining activities. The Blackside dace are located within separate watersheds and will not be impacted.

**A SPRING PORTAL SURVEY FOR THE FEDERALLY
ENDANGERED INDIANA BAT (*MYOTIS SODALIS*) AT A
PROPOSED MINING OPERATION NEAR PREMIER,
BELL COUNTY, KENTUCKY
(DSMRE APPLICATION #807-5223)**

APRIL 2008

Prepared for:
BELL COUNTY COAL CORPORATION
RTE. 1 Box 290 Pruden Road
MIDDLESBORO, KY 40965

Howard Engineering & Geology, Inc.
Harlan, Kentucky

Prepared by:
Robert R. Kiser
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P.O. Box 271
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1.0 INTRODUCTION

During permitting activities to mine coal, Bell County Coal Corporation chose to conduct a spring portal survey to assess the status of the federally endangered Indiana bat (*Myotis sodalis*) in an abandoned portal at the proposed mine site (DSMRE Permit Application #807-5223). The U.S. Department of the Interior, Fish and Wildlife Service (USFWS) Kentucky Field Office considers abandoned mine portals as potential winter habitat for the species.

2.0 PROJECT LOCATION

The proposed permit by Bell County Coal Corporation is just west southwest of the community of Premier in Bell County. The proposed permit is going to be an underground operation in the Jellico coal seam. The proposed permit is in an Unnamed Tributary to Bennett's Fork along State Route 186. There is going to be one temporary hollow fill and two (2) sediment control ponds associated with this operation. This fill will be in the Unnamed Tributary. All surface disturbance for the mining operation will take place between 1240 and 1400 feet elevation. The proposed permit covers 21.62 surface acres and 6,500 underground acres. The project area is located in Bell County, Kentucky and is on the Forkridge and Middlesboro South 7.5 minute USGS quadrangle maps.

3.0 INDIANA BAT DISTRIBUTION AND ECOLOGY

The USFWS listed the Indiana bat as endangered on March 11, 1967. However, the Indiana bat did not receive any protection until the Endangered Species Act (ESA) was instated in 1973 (Public Law 93-205). Several years following it's listing, a group of biologists (i.e., the recovery team) developed an Indiana bat recovery plan which outlines habitat requirements, critical habitat, potential causes for declines, and recovery objectives. The recovery plan was reviewed and published by the USFWS in 1983. This plan was revised in October 1996 and again in April 2007.

The current total population of Indiana bats, as of November 2006 is estimated at 457,374 individuals (USFWS, 2007). Long-term detailed documentation of population changes are lacking in most areas, although Indiana is an exception (Johnson et al., 2001). Summer habitat losses (USFWS, 1999) and winter disturbance are believed to have contributed to the decline. Indiana bats are "tree bats" in the summer and "cave bats" in winter. A detailed life history is provided in the USFWS Revised Indiana Bat Recovery Plan (2007), Brack (1983), and LaVal and LaVal (1980).

As of 2006, the USFWS had records of extant winter populations at approximately 281 hibernacula in 19 states (USFWS, 2007). The winter range of the Indiana bat is restricted to regions of well-developed limestone caverns, which serve as hibernacula. Most hibernacula are in caves, but abandoned mines are sometimes used. Brack (3D/I 1996) documented a population of nearly 9,300 Indiana bats hibernating in a limestone mine in Preble County, Ohio. There are large populations of Indiana bats in only a few caves; most hibernacula contain only a few bats. More than 90% of the estimated range-wide population hibernates in only five states,

Including; Indiana (45.2%), Missouri (14.2%), Kentucky (13.6%), Illinois (9.7%), and New York (9.1%) (USFWS, 2007). In 2005, the ten most populous hibernacula collectively contained 71.6% of range-wide population. Currently, there are a total of 23 Priority 1 hibernacula in seven states: Illinois (n=1), Indiana (n=7), Kentucky (n=5), Missouri (n=6), New York (n=2), Tennessee (n=1), and West Virginia (n=1) (USFWS, 2007).

Priority 1 hibernacula are essential to the recovery and long-term conservation of the species. These hibernacula typically have (1) a current and/or historic observed winter population \geq 10,000 Indiana bats and (2) currently have suitable and stable microclimates and are not considered "ecological traps".

The estimated winter population of Indiana bats in Kentucky, as of 2005, is estimated at 62,380 individuals (USFWS, 2007). Since 1980, Kentucky's population has decreased by approximately 40,000 individuals, declining from 102,200 to 62,380 bats. Kentucky currently has 74 extant hibernacula located in 25 different counties.

Spring use of coal mines by the Indiana bat in Virginia (Little et al., 2001), and autumn use in Ohio (Brack and Little, 2001) and Kentucky (Kiser et al., 1999) have been documented. This use may be associated with autumn swarming, winter hibernation, spring staging, or seasonal migration, or it may represent use by vagrants.

Indiana bats hibernate from mid-November to mid-April. Hibernating Indiana bats usually form dense clusters on cave ceilings in portions of the cave where winter temperatures are 4-8°C (39-46°F). Clusters are not sexually segregated.

Female Indiana bats leave hibernacula earlier in spring (beginning in mid-April) than do males (peak of departure in early May). This part of spring activity is referred to as staging. Some males remain near hibernacula throughout the summer, while others migrate to distant areas (Whitaker and Brack, 2001). When female Indiana bats emerge from hibernation, they migrate up to several hundred miles to maternity colonies. However, there is some evidence in Kentucky and Tennessee (J. Kiser unpublished data) that some females from smaller hibernacula may not migrate to form maternity colonies. Females form nursery colonies under exfoliating bark of dead trees, or living trees such as shagbark hickory (*Carya ovata*) in upland or riparian forests. A single maternity colony typically consists of 25 to 100 adult females. During a study in Indiana, Kiser et al. (1998) documented 384 individuals at a maternity colony in a dead cottonwood (*Populus deltoides*). Maternity colonies have been found in many species of trees, indicating that it is the tree form, not the tree species, that is important for roosts. Some of the species of trees in which roosts have been documented include slippery elm (*Ulmus rubra*), American elm (*U. americana*), cottonwood, northern red oak (*Quercus rubra*), post oak (*Q. stellata*), white oak (*Q. alba*), shingle oak (*Q. imbricaria*), sassafras (*Sassafras albidum*), sugar maple (*Acer saccharum*), silver maple (*A. saccharinum*), green ash (*Fraxinus pennsylvanica*), and bitternut hickory (*Carya cordiformis*).

Since Indiana bat roosts typically are located in dead or dying trees, they are often ephemeral. Roost trees may be habitable for one to several years, depending on the species and condition of the tree (Callahan et al., 1997). In addition, a single colony of bats moves among roosts

within a season. Therefore, numerous suitable roosts may be needed to support a single nursery colony (Kurta et al. 1993). It is not known how many alternate roosts are required to support a colony within a particular area, but large tracts of mature forest containing large, mature trees increases the probability that suitable roost trees are present. Indiana bats exhibit strong site fidelity to summer roosting and foraging areas, returning to the same area year after year.

Reproductive phenology is likely dependent upon seasonal temperatures and the thermal character of the roost (Brack, 1983; Humphrey et al., 1977). Like many other bats, Indiana bats are thermal conformists (Henshaw, 1965), with prenatal, neonatal, and juvenile development heavily dependent upon ambient temperatures (Racey, 1982; Tuttle, 1975). Cooler summer temperatures associated with latitude or altitude likely affect reproductive success and therefore the summer distribution of the species (Brack et al., 2001).

Females are pregnant when they arrive at maternity roosts. Fecundity of the species is low; females produce only one young per year. Parturition typically occurs between late June and early July. Lactating females have been caught from 11 June to 29 July in Indiana, from 26 June to 22 July in Iowa, and between 11 June and 6 July in Missouri (Brack, 1983; Clark et al., 1987; Humphrey et al., 1977; LaVal and LaVal, 1980). Juveniles become volant between early July and early August.

Indiana bats may travel several miles to forage. For example, studies have documented individuals from maternity colonies that traveled 2.5 miles in Illinois (Gardner et al., 1991), and summer males traveling 3.1 miles in Missouri (LaVal and LaVal, 1980). Brack (1983) observed foraging light-tagged bats within two miles of caves used during the autumn swarming period.

Indiana bats forage in upland and floodplain forest (Brack, 1983; Humphrey et al., 1977; LaVal et al., 1977; LaVal and LaVal, 1980; Gardner et al., 1991). Foraging activity is concentrated around the foliage of tree crowns, and although the bats may forage in other areas, it is quantitatively and qualitatively less important (Brack, 1983). Indiana bats often use stream corridors and other linear woodland openings as flight corridors from roosts to foraging areas. Brack and LaVal (1985) referred to the Indiana bat as a selective opportunist that often eats similar types of prey when they are readily available. However, components of the diet do vary by habitat, geographic location, season, and sex or age of the bat (Brack and LaVal, 1985; Brack, 1983; Belwood, 1979). In Missouri, Brack and LaVal (1985) noted that terrestrial-based insects eaten, including flies (Order Diptera), caddisflies (Order Trichoptera), and stoneflies (Order Plecoptera), was small and may be influenced by the lunar cycle.

Indiana bats begin to arrive at hibernacula in August and engage in a behavior referred to as swarming (Cope and Humphrey, 1977). Early during autumn swarming, bats visit hibernacula at night, but may day-roost in woodlands (Kiser and Elliott, 1996). Roost trees used during the autumn range from 4.7 to 26.4 inches in diameter at breast height (dbh) and occur in forested, semi-forested, and open habitats (Kiser and Elliott, 1996). As the season progresses more bats roost in hibernacula caves. Males become active near the entrances to hibernacula in mid-August. Females begin arriving in late August, and by September, numbers of swarming females peak, although males may still be more common since males frequent the swarming

site more than females. By late September, many females are hibernating; males remain active until early November (Kiser and Elliott, 1996), apparently in an effort to breed late-arriving females. Swarming chronology is likely influenced by temperature and precipitation.

Swarming is an important part of the Indiana bat's life cycle. This is when most copulation occurs (Hall, 1962), although Richter et al. (1993) postulated that males lacking sufficient fat to survive winter hibernation may remain active, seeking opportunities to mate, well into the winter in a final effort to reproduce before they die. Females store sperm through winter hibernation, and fertilization is delayed until spring (Wimsatt, 1944). It is not known whether juvenile females mate their first autumn. Limited mating may occur in spring (Hall, 1962).

4.0 INDIANA BAT HABITAT EVALUATION

A site visit was conducted on 28 March 2008 by Robert R. Kiser, a biologist from Howard Engineering & Geology. The proposed mine site was evaluated for potential Indiana bat winter habitat. Three (3) abandoned mine portals were found during this evaluation. A Phase 1 Habitat Assessment was completed for all three portals. Most of the proposed mine site consists of 8 to 20 inch dbh mixed mesophytic woods. The over-story was dominated by sycamore (*Platanus occidentalis*), tuliptree (*Liriodendron tulipifera*), northern red oak (*Quercus rubra*), and American beech (*Fagus grandifolia*). The understory consisted mostly of alder (*Alnus serrulata*), redbud (*Cercis canadensis*), black locust (*Robinia pseudo-acacia*), dogwood (*Cornus florida*), and sweet birch (*Betula lenta*). The majority of the proposed surface disturbance area can be classified as previously disturbed.

5.0 METHODS

Since the presence of Indiana bats cannot be assumed for abandoned mine portals, it was determined that the portals would need to be surveyed to determine if the structures are used by bats during the winter. A single portal was deemed to need to be surveyed as a result of the Phase 1 Habitat Assessment.

The portal was surveyed for three (3) nights a week for three (3) weeks. This survey effort began April 1, 2008. The portal was surveyed using both mist nets and anabat. A one (1) pole high net set with a, 10-foot net was placed across the portal entrance at dusk of each night and was monitored for five (5) hours. An anabat system was deployed at the portal concurrently with netting. All bat calls recorded during the survey effort were screened by filters produced by USFWS Kentucky Field Office to determine if any Indiana bat calls were recorded.

To insure compliance with weather conditions outlined in the Indiana Bat Survey Guidance for The Commonwealth of Kentucky (Table 1), temperature, percent cloud cover, wind, and rainfall were monitored and recorded hourly while survey efforts were taking place.

Table 1. Portal Survey Guidelines.

<ol style="list-style-type: none">1. Conduct a Phase 1 Habitat Assessment.<ol style="list-style-type: none">a. Opening should be at least one (1) foot in diameter or larger.b. The passage should continue for at least 100 feet.c. Some airflow, either in or out, should exist.d. Entrances that are flooded or prone to flooding, collapsed, or otherwise inaccessible to bats should be excluded from consideration.e. Openings that have occurred within the past 12 months due to creation or subsidence can be excluded from consideration, provided the applicant provides a written description and photographs.f. Vertical passages should be at least two (2) feet in diameter with some airflow.g. This assessment shall include all entrances or openings that will be directly or indirectly impacted by the proposed project.2. Spring portal surveys must take place between April 1 and April 21 and prior to any tree clearing.3. Spring portal surveys must take place for three (3) nights per week for three (3) weeks.4. Netting at portals is in addition to any summer habitat mist netting that is required.5. Acoustical sampling equipment must be deployed at the closest suitable location to the entrance and should follow the techniques described in the Acoustical Sampling guidance for Summer Habitat Surveys.6. The mist net sampling period should begin at sunset and continue until the temperature falls below 10° C (50° F) or for at least five (5) hours each night, whichever comes first. During this time, nets should be monitored for captured bats on 10-minute intervals to minimize the number of bats that escape the nets. If temperatures fall below 10° C during the first 2.5 hours, the survey must be postponed until acceptable temperatures are maintained.7. If temperatures are maintained and bat activity or captures increase during the survey or if six (6) or more bats were captured during the last hour of monitoring, the survey effort must continue until activity declines or fewer than six (6) bats are captured per hour.8. Weather Conditions: net only if the following weather conditions are met:<ol style="list-style-type: none">a. No precipitation or fog.b. Temperatures $\geq 10^{\circ}$ C for a couple of nights in a row including the survey time.c. No strong winds.9. Nets should be constructed of the finest, lowest visibility mesh commercially available (2-ply, 50-denier nylon) with a mesh size of approximately 1.5 inches.10. The capture of an Indiana bat during a portal survey will result in a requirement that the applicant complete three (3) additional nights of netting per week for three (3) additional weeks.

6.0 RESULTS

The weather fell within the netting parameters as outlined by the USFWS (2007). Nighttime temperatures experienced while netting ranged from a high of 70° F to a low of 50° F (Table 2). Nighttime skies ranged from clear to cloudy. Wind had no effect on surveys and ranged between 0 and 1-3 (calm to light) on the Beaufort Wind Scale.

Table 2. Temperature and rainfall for week prior to and during mist net surveys at portal within the boundary of the proposed mining operation near Premier, Bell County, Kentucky, 25 March through 19 April.

Date	2000	2200	0100	Daily High*	Daily Low*	Rainfall (inches)
25 March	-	-	-	57 ° F	20 ° F	0
26 March	-	-	-	69 ° F	49 ° F	0
27 March	-	-	-	73 ° F	50 ° F	0
28 March	-	-	-	68 ° F	40 ° F	0.06
29 March	-	-	-	59 ° F	48 ° F	0.02
30 March	-	-	-	72 ° F	46 ° F	0
31 March	-	-	-	66 ° F	50 ° F	0.35
1 April	65 ° F	61 ° F	58 ° F	72 ° F	51 ° F	0.1
2 April	57 ° F	54 ° F	50 ° F	59 ° F	34 ° F	0
3 April	-	-	-	57 ° F	44 ° F	1.24
4 April	-	-	-	60 ° F	48 ° F	1.12
5 April	-	-	-	50 ° F	43 ° F	0.02
6 April	63 ° F	60 ° F	57 ° F	72 ° F	46 ° F	0
7 April	69 ° F	64 ° F	60 ° F	82 ° F	54 ° F	0
8 April	70 ° F	65 ° F	59 ° F	81 ° F	45 ° F	0
9 April	62 ° F	59 ° F	57 ° F	70 ° F	52 ° F	0.06
10 April	-	-	-	85 ° F	47 ° F	0
11 April	-	-	-	78 ° F	58 ° F	1.04
12 April	-	-	-	64 ° F	45 ° F	0
13 April	-	-	-	47 ° F	37 ° F	0.01
14 April	-	-	-	43 ° F	35 ° F	0.01
15 April	-	-	-	60 ° F	29 ° F	0
16 April	-	-	-	72 ° F	32 ° F	0
17 April	67 ° F	61 ° F	55 ° F	77 ° F	39 ° F	0
18 April	70 ° F	65 ° F	60 ° F	79 ° F	44 ° F	0
19 April	60 ° F	57 ° F	53 ° F	67 ° F	50 ° F	0.14

- Rainfall data, daily high and low temperatures were obtained from internet at wunderground.com.
- Represents dates with no survey activity, so onsite temperatures were not recorded.

One portal was surveyed for three (3) nights per week for three (3) weeks resulting in nine (9) net nights of effort. The portal that was surveyed was approximately 3 feet high by 15 feet wide. It was a horizontal opening with a stable entrance and ceiling. This portal had slight airflow coming out. See map for portal location.

The area around the portal was second growth forest. The forest around this net site consists of 6" – 18" dbh trees. Sycamore (*Platanus occidentalis*), tuliptree (*Liriodendron tulipifera*), sugar maple (*Acer saccharum*), American beech (*Fagus grandifolia*), n. red oak (*Quercus rubra*), and wild cherry (*Prunus serrotina*) compose the canopy trees at this location. The understory is composed of sweet birch (*Betula lenta*), flowering dogwood (*Cornis florida*), redbud (*Cercis canadensis*), and saplings of canopy species.

No endangered bats were captured.

Mist netting activities at the portal resulted in the capture of no bats.

7.0 DISCUSSION

The Phase 1 Habitat Evaluation of the portal determined that the portal was potential habitat for the endangered Indiana bat. Netting efforts provided no evidence that they use the portals during the fall and winter. Based upon the known presence of the Indiana bat in the region and the apparent absence of the Indiana bat at the portal, a May Affect – Not Likely to Adversely Affect determination is anticipated from the U.S. Fish and Wildlife Service. Results from this survey should satisfy Indiana bat portal requirements as outlined in USFWS's Indiana Bat Survey Guidance for The Commonwealth of Kentucky.

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U.S. Fish and Wildlife Service. 2007. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. Ft. Snelling, Minnesota, 258 pp.

Whitaker, J.O., and V. Brack Jr. 2001. *Myotis sodalis* in Indiana. (A. Kurta ed.) Proceedings of a symposium on The Indiana Bat: Biology and Management of an Endangered Species. Lexington, Kentucky, March 2001.

Wimsatt, W. 1944. Further studies on the survival of spermatozoa in the female reproductive tract of the bat. *Anatomical Record*, 88:193-204.

Appendix A

Photos

Surveyed Portal



ATTACHMENT 14.5.A

As a part of this application in order to protect endangered species we are conducting mist net and portal survey of the proposed permit area and the adjacent areas. There are not wet-lands within the proposed permit area. Additionally a stream survey has been conducted and no endangered species have been identified.

ATTACHMENT 15.2.A

GEOLOGIC DESCRIPTION

The coal bed to be extracted in this proposed amendment application is identified on the Kayjay and Fork Ridge 7 1/2 Minute U.S.G.S. geologic quadrangles as the Bennetts Fork (Hance coal bed) the local seam name is the Jellico coal seam.

The Jellico seam lies in the Catron Formation of the Breathitt group. This formation also contains the many other coal zones. The formation is comprised of a series of siltstones, sandstones, shales, and coals.

Based on the pre-mining geologic sampling program, the structural geology within the proposed permit area down to the Jellico seam is predominately gray shales or gray sandy shales with the sporadic occurrence of sandstone. The strata underlying the Poplar Lick seam is also predominately gray shales or gray sandy shale.

Analysis of the pre-mining geologic samples of the overlying and underlying strata does not indicate the potential for producing acidic drainage conditions from the proposed underground mining associated with this application.

STRUCTURAL GEOLOGY

Regionally, the proposed area lies in the southwest portion of the Middlesboro Syncline. More locally, the strata and coal beds to be impacted by this operation are influenced by the southern limb of the smaller syncline within the Middlesboro Syncline located to the northwest of the proposed permit area. No known major faulting or fracturing exists in the permit area.

CHEMICAL CHARACTERISTICS

As can be seen on the subsequent pages, the results of the geological testing have determined that no potentially acidic strata will be impacted by this proposed application.

The mining activity proposed in this application will consist of underground mining of the Jellico coal seam. This operation is located near the community of Middlesboro in Bell county in an un-named tributary to Bennetts Fork on the Fork Ridge 7 1/2 Minute U.S.G.S. Map at Latitude 36°35'45"N and Longitude 83°45'54"W. The mining activity will include a surface disturbance of 21.62 acres and 6,500.00 acres of underground mining area for a total permit area of 6,521.62 acres.

ATTACHMENT 15.2.A

It is proposed to use two existing (2) core drill holes for geologic sample sites for the mining activities proposed in this application. The coordinates and a description of these sites are as follows:

DH-12-07	Core	Lat. 36° 35' 39" N (4,053,221) Long. 83° 46' 09" W (252,273) Elevation 1332'
DH-13-07	Core	Lat. 36° 35' 36" N (4,053,130) Long. 83° 46' 10" W (252,245) Elevation 1342'

As part of this application we are proposing two geologic sample sites to represent the mining area. These sites are identified as DH-12-07 and DH-13-07. The location of these geologic sample sites are detailed on the combination E.R.I.- M.R.P. map. Samples will be collected from the strata which will be from the top of the cut to ten (10') foot below the lowest coal seam to be mined.

The following vertical sampling specifications will apply to samples collected at each of these sites:

- 1) Litho logic units or strata which are suspected acid producers and all coal seams, rider seams and partings which are greater than 0.5 feet thick but less than one foot thick will be sampled at one representative location within the litho logic unit. Suspected acid producers and all coal seams, rider seams and partings which are less than 0.5 feet thick and any non-acid producing strata which are less than one foot thick can be grouped with the next lower unit.
- 2) Strata which range in thickness from one to five feet should be sampled twice at appropriate intervals within the litho logic unit.
- 3) Strata which range in thickness from 5 to 10 feet should be sampled twice at appropriate intervals within the litho logic unit.

Laboratory analysis of geologic sample has been performed by Appalachian Field Services Company; P.O. Box 373; Baxter, Kentucky 40806. The following parameters will be tested using

ATTACHMENT 15.2.A

the method listed:

<u>PARAMETER</u>	<u>METHOD</u>
Ph	#3.2.2
Neutralization Potential	#3.2.3
Total Sulfur	#3.2.4
Maximum Potential Acidity	#3.2.4**

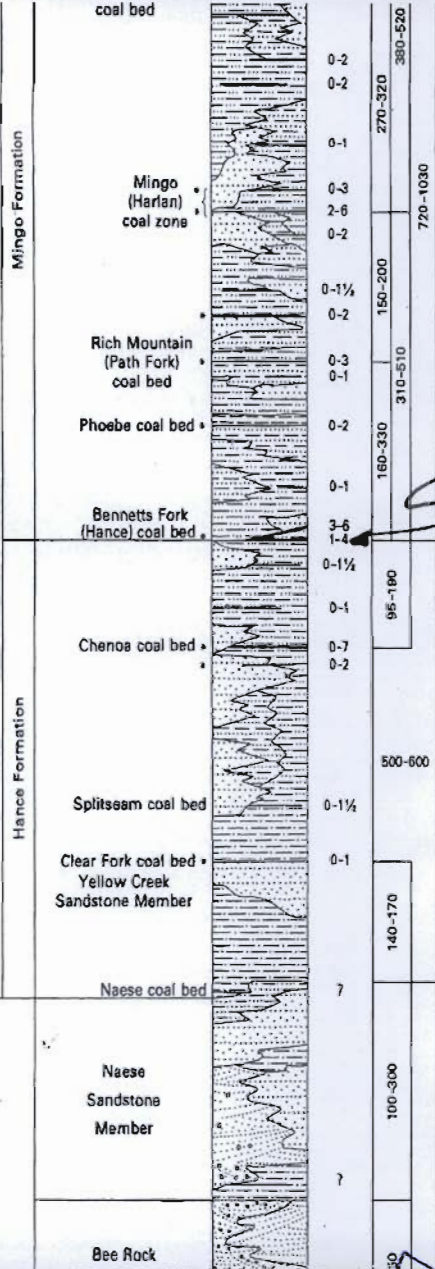
*EPA Publication #EPA-600/2-78-054,
"Field and Laboratory Methods Applicable
to Overburdens and Minesoil"

**Determined stoichiometrically from %
Total Sulfur Determination

Individual samples collected within each litho logic unit will be composite and then analyzed to produce a representative acidity or neutralization for the entire litho logic unit. Each coal seam will be analyzed for total sulfur only.

P E N N S Y L V A N I A N

Lower and Middl
Breathitt



weathers blocky. Sandstone, generally light- to medium-gray, weathers light to pale brown; chiefly very fine grained, mostly quartz with minor amounts of feldspar, rock fragments, mica, and ferromagnesian minerals; commonly 11 percent matrix of clay and silt; commonly in small- and medium-scale sets of low-angle, thin crossbeds. Beds 10 feet thick of fine- to medium-grained sandstone occur locally above and below Mingo coal zone; these sandstone are most conspicuous just west and north of Middlesboro where they underlie broad benches; in the area of Pi Branch of Little Clear Creek and northward, upper sandstone is resistant and commonly forms cliffs. Claystone, d medium-gray, weathers yellowish gray to pale orange; commonly occurs above coal beds and is as much as 1 thick and very carbonaceous above the Phoebe seam. Buckeye Spring coal bed contains a black carbonaceous sandstone parting 2 to 6 inches thick that is commonly called "jackrock" because of its density and hardness; parting should not be confused with flint-clay parting of Fire Clay (Dean, Wallins Creek) coal bed, which is pr equivalent to a coal bed in upper part of Stray coal zone of this area. Mingo coal beds could not be found east o Clear Creek and north of Phoebe Branch; in that area, position of lower Mingo seam is placed at base of per cliff-forming sandstone. The Mingo seams are more generally known in the mapped area by the name "Mason' mines near Davisburg; however, this name also has been applied in geologic reports to the east to certain coal b the Hance Formation; to avoid confusion, "Mason" is not used in this report. The Bennets Fork coal bed is locally Jellico; the Jellico seems north of Pine Mountain are more likely equivalent to the Mingo or to other coal beds h; the section. Position of Bennets Fork coal bed in much of Clear Creek area is uncertain due to poor exposures and structure.

Mingo Formation is named from Mingo Mountains in extreme southeastern part of mapped area by Ashley and (1906, p. 38), who defined the formation as extending from base of Poplar Lick coal bed to base of Bennets For bed. This usage is considered to have precedence over other practices in the area of this report. To the east, in ad Middlesboro North quadrangle (Englund and others, 1964) and Middlesboro South quadrangle (Englund, 1964), of Mingo Formation is placed at base of Harlan coal bed (Mingo of this report), as was defined by Ashley and (1906, p. 38) in the Black Mountain area near Harlan, Ky.

JELICO SEAM

Siltstone, sandstone, claystone, and coal: Siltstone, clayey to sandy, generally medium-gray, generally we moderate to light brown; slightly micaceous and carbonaceous, mostly planar to wavy laminated; slightly commonly weathers blocky; sparse marine fossils found locally above Chenoa seam. Sandstone, generally li medium-gray, weathers light gray to pale brown; mostly very fine grained; composed principally of quartz with amounts of rock fragments, feldspar, mica, and dark mineral grains; clayey silty matrix makes up about 20 per rock; commonly in small- and medium-scale sets of low-angle thin crossbeds. Yellow Creek Sandstone M contains some fine- and medium-grained, moderately well-sorted quartzose sandstone. Claystone, generally d medium-gray, commonly silty, carbonaceous; generally laminated, mostly moderately fissile; brown-weathering siderite concretions and thin lenses, especially common in shale below Yellow Creek Sand Member. Coal is mostly in thin interbeds with claystone or mudstone, locally grades to carbonaceous discontinuous. Chenoa coal bed may be equivalent to Mason coal bed of Middlesboro South quadrangle (Eng 1964a). Basal contact poorly exposed, probably gradational with underlying unit.

Mingo and Hance Formations, undivided: Shale, siltstone, sandstone, and coal; descriptions as above, exce rock has been macrobrecciated and shattered; generally not resistant; in fault blocks in Middlesboro basin, w described by Englund and Roen (1962) as a meteorite impact scar.

Sandstone, siltstone, and coal: Sandstone, generally light-gray to yellowish-gray, commonly weathers brown; most and medium grained, moderately well sorted, quartzose; some coarse grains and quartz pebbles as much as an diameter near base, decrease in abundance eastward; large-scale sets of low- and high-angle crossbeds. Silt clayey to sandy, generally medium- to olive-gray, weathers moderate to light brown and olive gray; planar to laminated. Member grades upward and eastward into siltstone and silty sandstone in thin beds and in sma medium-scale sets of mostly low-angle crossbeds.

Sandstone, conglomeratic sandstone, and siltstone: Sandstone, generally light-gray to yellowish-gray, mostly fin medium-grained, moderately well-sorted, some well-sorted coarse-grained sandstone; quartzose; abundant pebbles as much as an inch in diameter near base and generally scattered throughout; large-scale sets of cross locally in middle part sandstone is fine grained, silty, and grades to medium-gray siltstone. Unit forms cliffs a slopes. Basal contact sharp and unconformable. Member is equivalent to uppermost part of "sandstone membe Middlesboro North quadrangle (Englund and others, 1964).

Sandstone, claystone, and coal: Sandstone, silty to shaly, medium- to dark-gray, fine-grained; some pebbly que sandstone light- to yellowish-gray; generally in small-scale sets of low-angle thin crossbeds. Claystone, dark- to

I, Timothy C. Howard, P.E. No. 15,317

Date: 4/29/08
hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.

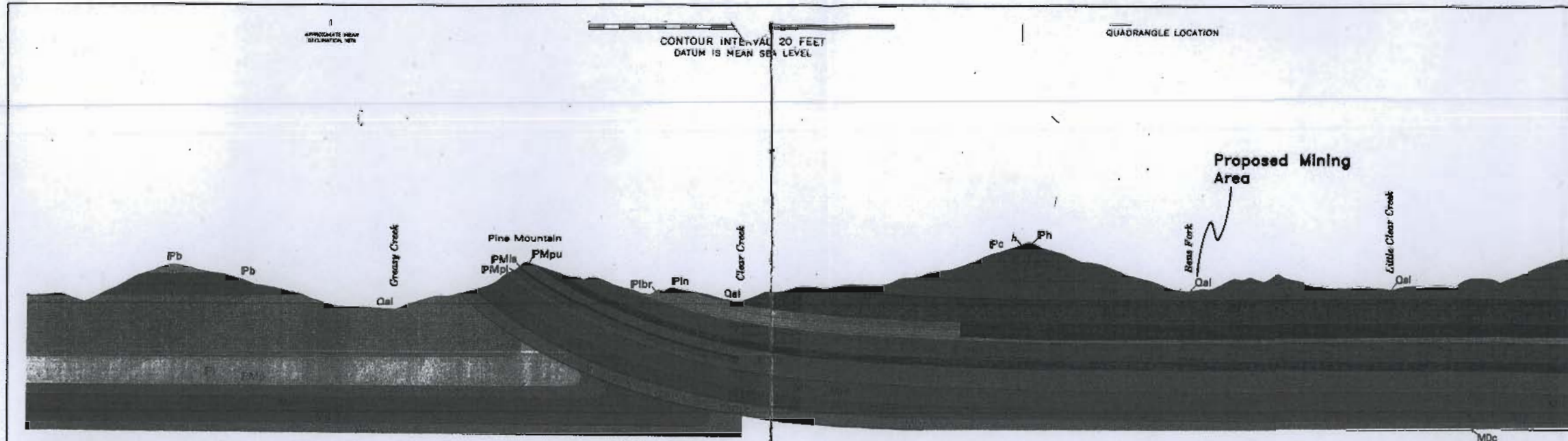


Bell County Coal Corporation

Permit No. 807-5223
Geologic Setting Map

Scale: As-Shown Page No. 1 of 1

Prepared by:
Howard Engineering & Geology, Inc.



EXAGGERATION
 Vertical position of base of Breathitt Formation and thickness
 of formations mostly based on drill-hole data in adjacent
 area supplied by Freeman (1951, p. 222)

OF THE KAYJAY QUADRANGLE AND PART OF THE FORK RIDGE QUADRANGLE, BELL AND KNOX COUNTIES, KEN

By
Charles L. Rice and Edwin K. Maughan
 1978



I, Timothy C. Howard, P.E. No. 15,317
 Date: 4/24/08
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation
 Permit No. 807-5223, Comprehensive Application
 Geologic Setting Map
 Scale: 1" = 2000' Page No. 1 of 1
 Prepared by
Howard Engineering & Geology, Inc.

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Fork Ridge & Middlesboro South
2. Latitude

3	6	3	5	3	9
---	---	---	---	---	---
3. Longitude

8	3	4	6	0	9
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	5	2	2	7	3
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	3	2	2	1
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same (Last), (First) (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

1	2	-	0	7		
---	---	---	---	---	--	--
15. Date (month, day, year)

1	2	1	4	0	7
---	---	---	---	---	---
16. Driller's or Sampler's Name Layne Christensen (Last), (First) (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--7; Geophysical log = 8;
Highwall =9; Other= 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

1	3	3	3
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

	1	3	2
--	---	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard (Last), David (First), W. (Int.) P.G.#50 (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH 12 - 07)

SAMPLED BY : H.E.G.
SAMPLE DATE : 03/14/2008
REPORT DATE : 04/17/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	8.19	15.16	0.060	1.88	124	96.03	51.00'
2	NONE	7.81	12.63	0.052	1.63	543	96.30	14.00'
3	NONE	8.42	5.56	0.054	1.69	124	95.99	5.20'
4	NONE	7.99	9.60	0.055	1.72	543	95.74	6.80'
5	NONE	8.56	9.10	0.062	1.94	124	95.47	0.40'
5A				1.389	PYRITIC % 0.691	020		2.30'
6	NONE	8.36	16.67	0.059	1.84	124	96.31	14.30'
6A				1.101	PYRITIC % 0.417	020		2.00'
7	NONE	8.34	7.58	0.049	1.53	124	96.10	2.10'
8	NONE	8.36	16.67	0.053	1.66	300	95.74	4.00'
9	SLIGHT	8.64	69.20	0.067	2.09	540	95.88	11.00'

SUBMITTED BY :

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Fork Ridge & Middlesboro South
2. Latitude

3	6	3	5	3	6
---	---	---	---	---	---
3. Longitude

8	3	4	6	1	0
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	5	2	2	4	5
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	3	1	3	0
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same (Last) _____, _____ (First) _____ (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

1	3	-	0	7		
---	---	---	---	---	--	--
15. Date (month, day, year)

1	2	1	4	0	7
---	---	---	---	---	---
16. Driller's or Sampler's Name Layne Christensen (Last) _____, _____ (First) _____ (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger = 7; Geophysical log = 8;
Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

1	3	4	3
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

	1	6	0
--	---	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard (Last) _____, David (First) _____, W. (Int.) _____ P.G.#50 (Title)

GEOLOGICAL INFORMATION SHEET

Attachment 15 2.A

(Please Print or Type)

Hole Number 1 3 - 0 7 UTM Zone 1 7 Quadrangle Fork Ridge & Middlesboro South

Latitude 3 6 3 5 3 6 UTM E Coordinate 2 5 2 2 4 5

Longitude 8 3 4 6 1 0 UTM N Coordinate 4 0 5 3 1 3 0

Driller or Sampler Layne Christensen , _____ Date 1 2 1 4 0 7

(Last) (First) (Int.)

Type: Core Chip Highwall Auger G-log Other _____

Unit of Measurement: Feet & Inches, Feet & Tenths, Metric

DRILLER LOG SHEET

(Please Print or Type)

Page 2 of 2 pages.

Rock Codes	Unit Thickness	Cumulative Thickness	NP	PA	SDI	Comments
001	1.20'	1.20'				Top Soil/Native Soil
001	33.80'	35.00'				Subsoil/Alternate Topsoil
124	3.00'	38.00'	16.76	2.81	95.08	Dark Gray Shale
004	7.00'	45.00'				Core Lost
124	45.60'	90.60'	8.58	2.44	95.47	Dark Gray Shale
540	13.80'	104.40'	18.94	2.34	95.69	Gray Sandstone
020	0.20'	104.60'				Coal (Jellico Seam)
124	0.50'	105.10'	1.50	1.66	95.14	Dark Gray Shale
020	2.30'	107.40'				Coal (Jellico Seam)
124	1.70'	109.10'	2.59	1.94	95.79	Dark Gray Shale
540	6.30'	115.40'	17.30	1.69	95.10	Gray Sandstone
124	0.90'	116.30'	4.77	1.94	95.20	Dark Gray Shale
020	2.70'	119.00'				Coal (Jellico Seam)
300	11.00'	130.00'	14.58	2.38	95.38	Sandy Shale
124	4.50'	134.50'	8.58	1.50	94.83	Dark Gray Shale
020	1.70'	136.20'				Coal (Jellico Seam)
300	23.80'	160.00'	10.22	1.88	95.24	Sandy Shale



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH 13 - 07)

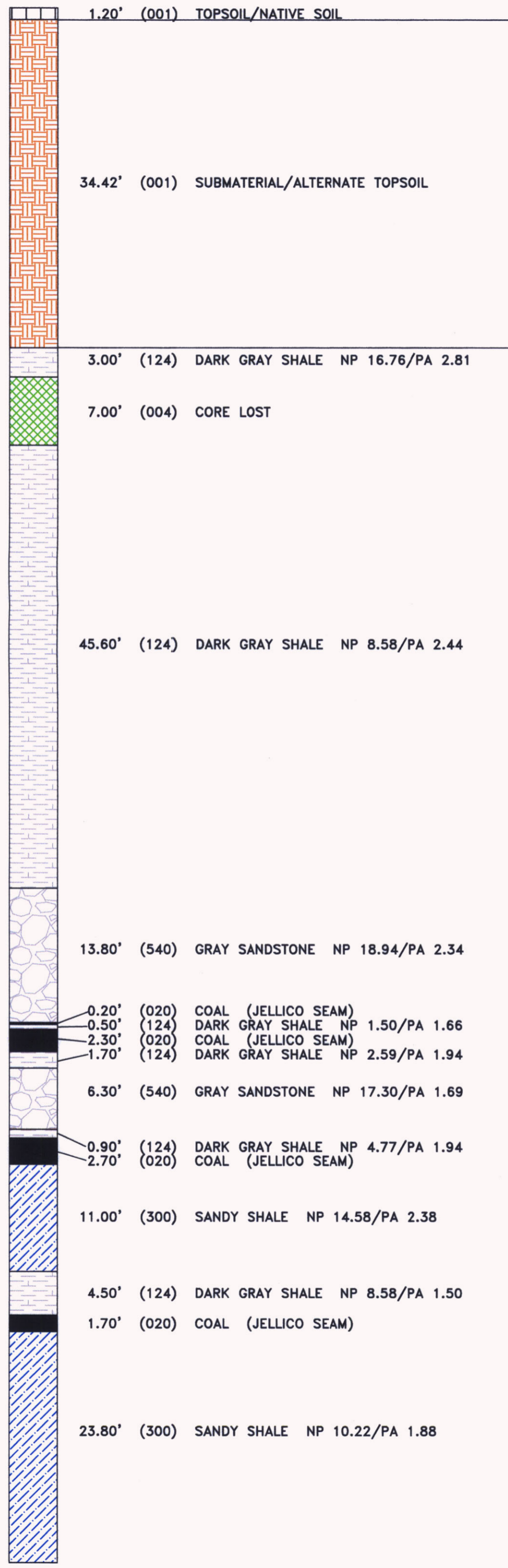
SAMPLED BY : H.E.G.
SAMPLE DATE : 03/14/2008
REPORT DATE : 04/17/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	7.89	16.76	0.090	2.81	124	95.08	3.00'
2	NONE	7.91	8.58	0.078	2.44	124	95.47	45.60'
3	NONE	7.39	18.94	0.075	2.34	540	95.69	13.80'
4	NONE	8.42	1.50	0.053	1.66	124	95.14	0.50'
5	NONE	7.96	2.59	0.062	1.94	124	95.79	1.70'
6	NONE	7.45	17.30	0.054	1.69	540	95.10	6.30'
7	NONE	8.41	4.77	0.062	1.94	124	95.20	0.90'
8	NONE	7.95	14.58	0.076	2.38	300	95.38	11.00'
9	NONE	8.52	8.58	0.048	1.50	124	94.83	4.50'
10	NONE	7.81	10.22	0.060	1.88	300	95.24	23.80'

SUBMITTED BY : 

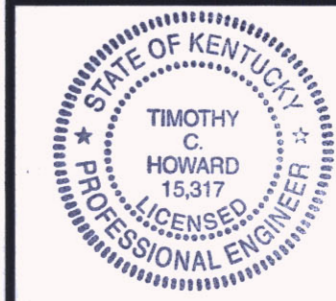
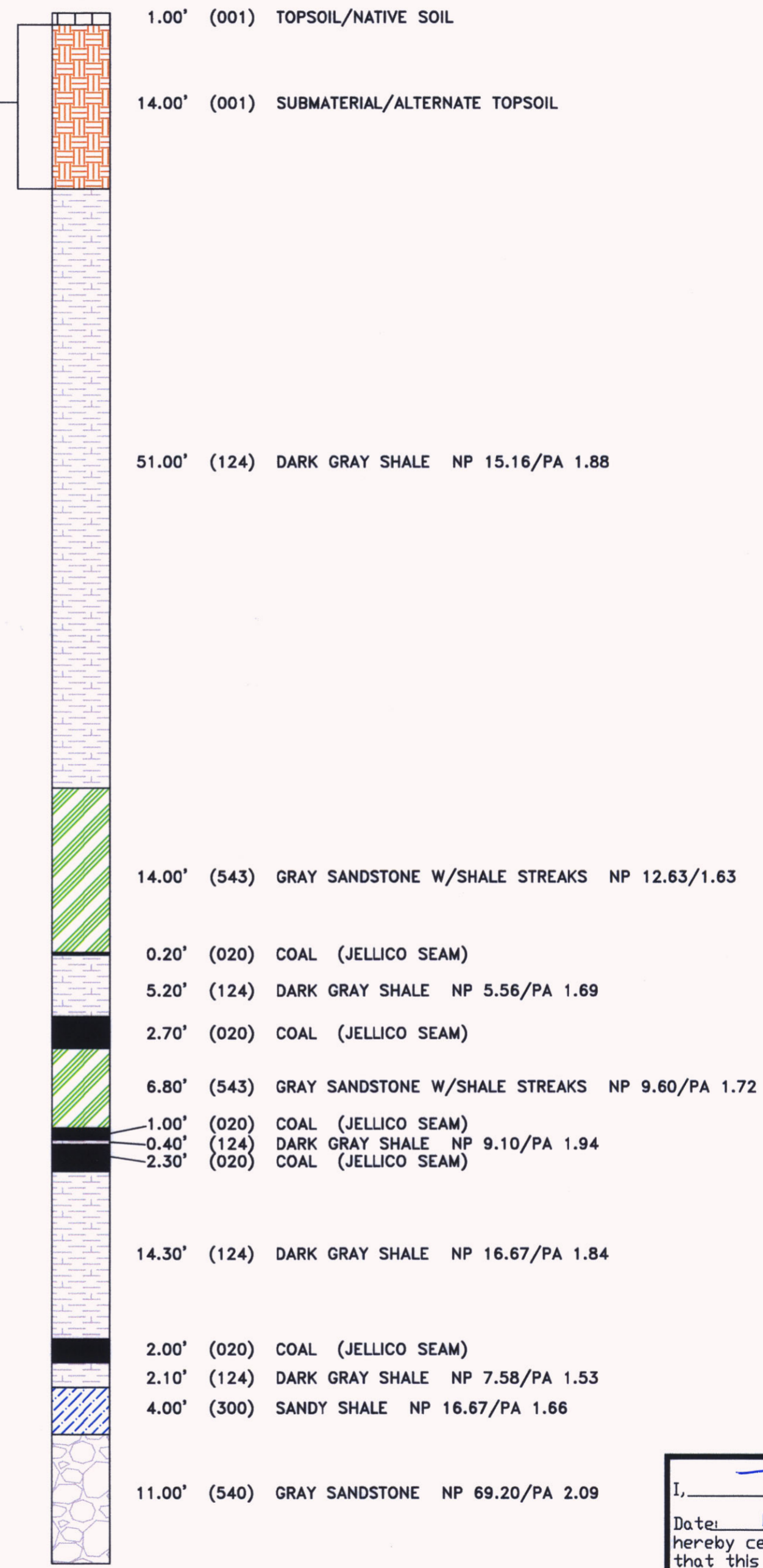
1345'
1340'
1330'
1320'
1310'
1300'
1290'
1280'
1270'
1260'
1250'
1240'
1230'
1220'
1210'
1200'
1190'
1180'

#13-07



ALTERNATE TOPSOIL

#DH-12-07



I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/7/08
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.

Bell County Coal Corporation

Permit No. 807-5223
 Geologic Samples DH-12-07 & DH-13-07
 Attachment 15.2

Scale: 1" = 10' Page No. 1 of 1

Prepared by
Howard Engineering & Geology, Inc.

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Kayjay & Forkridge
2. Latitude

3	6	3	5	0	7
---	---	---	---	---	---
3. Longitude

8	3	5	0	0	0
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	4	6	5	0	2
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	2	4	0	2
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same (Last) _____, _____ (First) _____ (Int.) _____
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

1	0	-	0	1		
---	---	---	---	---	--	--
15. Date (month, day, year)

0	9	2	5	0	8
---	---	---	---	---	---
16. Driller's or Sampler's Name _____ (Last) _____, _____ (First) _____ (Int.) _____
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--7, Geophysical log = 8;
Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

2	6	4	8
---	---	---	---

F

19. Top of hole determination

T

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

		5	0
--	--	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard _____, David _____ W. P.G.#50
(Last) (First) (Int.) (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH - 10 - 01)

SAMPLED BY : H.E.G.
SAMPLE DATE : 09/25/2008
REPORT DATE : 10/07/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	8.74	21.64	0.108	3.38	124	95.30	0.00' - 5.00'
2	NONE	8.25	18.85	0.065	2.03	124	95.43	5.00' - 10.00'
3	NONE	8.52	17.45	0.074	2.31	124	94.06	10.00' - 15.00'
4	NONE	8.43	20.24	0.089	2.78	124	94.53	15.00' - 17.07'
						020		2.00'
5	NONE	8.89	34.19	0.082	2.56	540	95.23	19.70' - 21.00'
						020		1.00'
6	NONE	8.24	37.91	0.058	1.81	540	95.53	22.00' - 22.80'
7	NONE	8.52	23.96	0.070	2.19	124	94.26	22.80' - 26.70'
8	NONE	7.16	15.59	0.051	1.59	114	95.14	26.70' - 27.00'
						020		1.20'
9	NONE	8.05	17.92	0.068	2.13	124	95.02	28.20' - 29.60'
10	NONE	8.36	30.01	0.110	3.44	300	95.14	29.60' - 33.20'
11	NONE	8.81	28.15	0.067	2.09	540	95.25	33.20' - 50.00'

SUBMITTED BY :

1210'
1200'
1190'
1180'
1170'
1160'
1150'

#DH-10-01

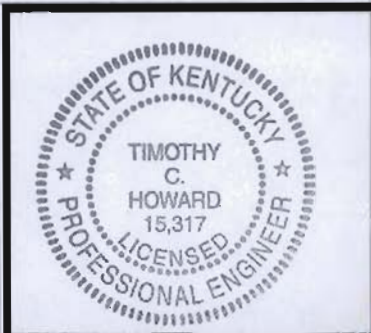


17.70' (124) DARK GRAY SHALE NP 20.24/PA 2.78

2.00' (020) COAL (JELICO SEAM)
1.30' (540) GRAY SANDSTONE NP 34.19/PA 2.56
1.00' (020) COAL (JELICO SEAM)
0.80' (540) GRAY SANDSTONE NP 37.91/PA 1.81
3.90' (124) DARK GRAY SHALE NP 23.96/PA 2.19
0.30' (114) BLACK SHALE NP 15.59/PA 1.59
1.20' (020) COAL (JELICO SEAM)
1.40' (124) DARK GRAY SHALE NP 17.92/PA 2.13
3.60' (300) SANDY SHALE NP 30.01/PA 3.44

16.80' (540) GRAY SANDSTONE NP 28.15/PA 2.09

I, Timothy C. Howard, P.E. No. 15,317
Date: 10/7/08
hereby certify in accordance with 405 KAR 7:040, Section 10,
that this document is correct as determined by accepted
engineering practices and includes all information required
of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
Geologic Samples DH-10-01
Attachment 15.2

Scale: 1" = 10' Page No. 1 of 1

Prepared by
Howard Engineering & Geology, Inc.

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Kayjay & Forkridge
2. Latitude

3	6	3	6	3	5
---	---	---	---	---	---
3. Longitude

8	3	4	9	4	1
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	4	7	0	5	4
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	5	1	0	1
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same _____, _____
(Last) (First) (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

0	3	-	0	4		
---	---	---	---	---	--	--
15. Date (month, day, year)

0	9	2	5	0	8
---	---	---	---	---	---
16. Driller's or Sampler's Name _____, _____
(Last) (First) (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--7; Geophysical log = 8;
Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

1	7	8	4
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

		5	0
--	--	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard _____, David _____, W. _____ P.G.#50
(Last) (First) (Int.) (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH - 03 - 04)

SAMPLED BY : H.E.G.
SAMPLE DATE : 09/25/2008
REPORT DATE : 10/07/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	7.41	26.08	0.090	2.81	300 020	93.45	0.00' - 22.10' 2.70'
2	NONE	8.54	15.16	0.086	2.69	300 020	94.46	24.80' - 26.20' 0.60'
3	NONE	7.48	16.72	0.107	3.34	300	91.22	26.80' - 34.80'
4	NONE	8.72	28.68	0.066	2.06	540	96.01	34.80' - 49.80'

SUBMITTED BY :

1230'

#DH-03-04

1220'

1210'

1200'

1190'

1180'

1170'



22.10' (300) SANDY SHALE NP 26.08/PA 2.81

2.70' (020) COAL (JELICO SEAM)
 1.40' (300) SANDY SHALE NP 15.16/PA 2.69
 0.60' (020) COAL (JELICO SEAM)

8.00' (300) SANDY SHALE NP 16.72/PA 3.34

15.00' (540) GRAY SANDSTONE NP 28.68/PA 2.06

I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/7/08
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
 Geologic Samples DH-03-04
 Attachment 15.2

Scale: 1" = 10'

Page No. 1 of 1

Prepared by:
Howard Engineering & Geology, Inc.

GEOLOGICAL INFORMATION FORM

(Please print or type all responses)

1. Quadrangle Name Kayjay & Forkridge
2. Latitude

3	6	3	5	3	2
---	---	---	---	---	---
3. Longitude

8	3	4	8	1	2
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	4	9	2	1	0
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	3	0	9	5
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same
(Last) (First) (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

0	7	-	0	8		
---	---	---	---	---	--	--
15. Date (month, day, year)

0	9	2	5	0	8
---	---	---	---	---	---
16. Driller's or Sampler's Name _____
(Last) (First) (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--Z, Geophysical log = 8;
Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

2	2	0	7
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

		3	0
--	--	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard _____ David _____ W. _____ P.G.#50 _____
(Last) (First) (Int.) (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH - 07 - 08)

SAMPLED BY : H.E.G.
SAMPLE DATE : 09/25/2008
REPORT DATE : 10/07/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	8.30	19.84	0.071	2.22	124	94.04	0.00' - 2.20'
2	NONE	8.81	29.20	0.065	2.03	540	94.86	2.20' - 10.30'
						020		0.20'
3	NONE	8.87	10.48	0.075	2.34	124	92.26	10.30' - 12.70'
						020		2.30'
4	NONE	8.69	12.56	0.079	2.47	300	93.69	15.00' - 17.10'
						020		1.60'
5	NONE	7.74	8.40	0.051	1.59	540	95.01	18.70' - 30.00'

SUBMITTED BY : 

1210'
1200'
1190'
1180'
1170'

#DH-07-08



2.20' (124) DARK GRAY SHALE NP 19.84/PA 2.22
 8.10' (540) GRAY SANDSTONE NP 29.20/PA 2.03
 0.20' (020) COAL (JELICO SEAM)
 2.20' (124) DARK GRAY SHALE NP 10.48/PA 2.34
 2.30' (020) COAL (JELICO SEAM)
 2.10' (300) SANDY SHALE NP 12.56/PA 2.47
 1.60' (020) COAL (JELICO SEAM)
 11.30' (543) GRAY SANDSTONE/SHALE STREAKS
 NP 8.40/PA 1.59

I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/7/08
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
 Geologic Samples: DH-07-08
 Attachment 15.2

Scale: 1" = 10' Page No. 1 of 1

Prepared by: Howard Engineering & Geology, Inc.

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Kayjay & Forkridge
2. Latitude

3	6	3	5	0	7
---	---	---	---	---	---
3. Longitude

8	3	4	8	5	9
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	4	8	0	1	9
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	2	3	5	8
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same _____, _____
(Last) (First) (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

0	8	-	0	8		
---	---	---	---	---	--	--
15. Date (month, day, year)

0	9	2	5	0	8
---	---	---	---	---	---
16. Driller's or Sampler's Name _____, _____
(Last) (First) (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--7; Geophysical log = 8;
Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

1	8	0	5
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

		2	5
--	--	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard _____, David _____ W. _____ P.G.#50
(Last) (First) (Int.) (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH - 08 - 08)

SAMPLED BY : H.E.G.
SAMPLE DATE : 09/25/2008
REPORT DATE : 10/07/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	8.77	17.23	0.102	3.19	300	93.13	0.00' - 8.40'
2	NONE	8.81	15.80	0.071	2.22	540	95.21	8.40' - 10.90'
3	NONE	8.40	31.48	0.166	5.19	124	96.32	10.90' - 11.20'
						020		1.60'
4	NONE	8.27	22.93	0.066	2.06	124	95.88	12.80' - 15.00'
5	NONE	8.72	38.60	0.096	3.00	540	95.78	15.00' - 25.00'

SUBMITTED BY : 

1210'
1200'
1190'
1180'
1170'

#DH-08-08



8.40'	(300)	SANDY SHALE	NP 17.23/PA 3.19
2.50'	(540)	GRAY SANDSTONE	NP 15.80/PA 2.22
0.30'	(124)	DARK GRAY SHALE	NP 31.48/PA 5.19
1.60'	(020)	COAL (JELICO SEAM)	
2.20'	(124)	DARK GRAY SHALE	NP 22.93/PA 2.06
10.00'	(540)	GRAY SANDSTONE	NP 38.60/PA 3.00

I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/7/08
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
 Geologic Samples DH-08-08
 Attachment 15.2

Scale: 1" = 10' Page No. 1 of 1

Prepared by:
Howard Engineering & Geology, Inc.

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Kayjay & Forkridge
2. Latitude

3	6	3	6	1	3
---	---	---	---	---	---
3. Longitude

8	3	4	8	0	3
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	4	9	4	7	0
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	4	3	5	2
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same _____, _____
(Last) (First) (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

1	1	-	0	8		
---	---	---	---	---	--	--
15. Date (month, day, year)

0	9	2	5	0	8
---	---	---	---	---	---
16. Driller's or Sampler's Name _____, _____
(Last) (First) (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--7, Geophysical log = 8; Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

2	2	9	0
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T; Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

		3	3
--	--	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard _____, David _____, W. _____
(Last) (First) (Int.) P.G.#50 (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH - 11 - 08)

SAMPLED BY : H.E.G.
SAMPLE DATE : 09/25/2008
REPORT DATE : 10/07/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	8.87	9.63	0.070	2.19	124	94.63	0.00' - 10.00'
2	NONE	7.94	31.95	0.076	2.38	300	95.37	10.00' - 17.80'
						020		1.70'
3	NONE	8.78	16.75	0.074	2.31	124	93.85	19.50' - 21.70'
						020		1.70'
4	NONE	7.65	19.13	0.042	1.31	540	95.16	23.40' - 35.00'

SUBMITTED BY : 

1150'

#DH-11-08

1140'

10.00' (124) DARK GRAY SHALE NP 9.63/PA 2.19

1130'

7.80' (300) SANDY SHALE NP 31.95/PA 2.38

1.70' (020) COAL (JELICO SEAM)

2.20' (124) DARK GRAY SHALE NP 16.75/NP 2.31

1.70' (020) COAL (JELICO SEAM)

1120'

11.60' (540) GRAY SANDSTONE NP 19.13/PA 1.31

1110'

1100'

I, Timothy C. Howard, P.E. No. 15,317

Date: 10/7/08
hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
Geologic Samples DH-11-08
Attachment 15.2

Scale: 1" = 10' Page No. 1 of 1

Prepared by: **Howard Engineering & Geology, Inc.**

GEOLOGICAL INFORMATION FORM*(Please print or type all responses)*

1. Quadrangle Name Kayjay & Forkridge
2. Latitude

3	6	3	6	0	8
---	---	---	---	---	---
3. Longitude

8	3	4	8	5	2
---	---	---	---	---	---
4. UTM Zone (Eastern Kentucky = 17, Western Kentucky = 16)

1	7
---	---
5. UTM Easting coordinate

2	4	8	2	4	8
---	---	---	---	---	---
6. UTM Northing coordinate

4	0	5	4	2	3	3
---	---	---	---	---	---	---
7. Quadrangle Scale

1

1 / 24,000 = 1, 1 / 62,000 = 2, 1 / 125,000 = 3, Other = 4, Explain _____
8. State Identification Code Number

2	1
---	---

(Use Federal Information Processing Standards Code (FIPS). The FIPS number for Kentucky is 21; additional surrounding states may be found on the last page of this form.)
9. County Code Number (refer to county number list on the last page of this form)

0	0	7
---	---	---
10. Coal Company Name Bell County Coal Corporation
11. Operator's Name Same _____, _____, _____
(Last) (First) (Int.)
12. Permit Number

8	0	7	-	5	2	2	3
---	---	---	---	---	---	---	---
13. SOAP Identification Number

--	--	--	--	--	--	--	--
14. Hole Number

1	2	-	0	8		
---	---	---	---	---	--	--
15. Date (month, day, year)

0	9	2	5	0	8
---	---	---	---	---	---
16. Driller's or Sampler's Name _____, _____, _____
(Last) (First) (Int.)
17. Type of Sample

	5
--	---

Core = 5; Chip = 6; Auger--7, Geophysical log = 8;
Highwall = 9; Other = 10 - Explain _____
18. Top of hole elevation (round to nearest unit of measurement and indicate units used*)

2	1	2	0
---	---	---	---

F

19. Top of hole determination

S

(Barometer = B; Survey = S; Hand Level = H; Topo = T;
Other = 0 - Explain: _____)
20. Cumulative thickness of the sample (round to nearest unit of measurement and indicate units used*)

		5	8
--	--	---	---

F

21. Name of geologist or engineer responsible for preparing this form (last, first, middle initial and title)
Howard David W. P.G.#50
(Last) (First) (Int.) (Title)



Appalachian Field Services Company Inc.
P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223, (DH - 12 - 08)

SAMPLED BY : H.E.G.
SAMPLE DATE : 09/25/2008
REPORT DATE : 10/07/2008

SAMPLE #	FIZZ RATING	PASTE pH	NEUTRALIZATION POTENTIAL	TOTAL SULFUR %	POTENTIAL ACIDITY	CODE	SDI % RETAINED	THICKNESS INTERVAL
1	NONE	8.67	21.44	0.068	2.13	300	95.75	0.00' - 27.50'
2	NONE	7.85	18.08	0.089	2.78	124	95.77	27.50' - 28.30'
						020		1.90'
3	NONE	7.82	24.80	0.069	2.16	300	95.22	30.20' - 34.10'
						020		1.60'
4	NONE	7.94	18.64	0.087	2.72	124	94.92	35.70' - 37.40'
5	NONE	8.76	37.12	0.078	2.44	540	95.67	37.40' - 57.50'

SUBMITTED BY : 

#DH-12-08

1190'
1180'
1170'
1160'
1150'
1140'
1130'



27.50' (300) SANDY SHALE NP 21.44/PA 2.13

0.80' (124) DARK GRAY SHALE NP 18.08/PA 2.78
1.90' (020) COAL (JELICO SEAM)

3.90' (300) SANDY SHALE NP 24.80/PA 2.16

1.60' (020) COAL (JELICO SEAM)

1.70' (124) DARK GRAY SHALE NP 18.64/PA 2.72

20.10' (540) GRAY SANDSTONE NP 37.12/PA 2.44

I, Timothy C. Howard, P.E. No. 15,317

Date: 10/7/08
hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
Geologic Samples DH-12-08
Attachment 15.2

Scale: 1" = 10'

Page No. 1 of 1

Prepared by:
Howard Engineering & Geology, Inc.

15.3 Do aquifers exist within the proposed permit area below the lowest coal seam to be mined, which may be adversely affected by the mining operation?
 [] YES [XX] NO. If "YES", describe the structural geology, lithology and thickness of each stratum from the lowest coal seam to be mined to such aquifers. Submit description and related information as "Attachment 15.3.A".

15.4 Describe all aquifers located within and adjacent to the proposed permit area which the mining operation may adversely impact. Identify the description as "Attachment 15.4.A". At a minimum, the description shall include, for each aquifer, the following information:

<u>Aquifers within the permit area</u>	<u>Aquifers adjacent to the permit area</u>
(a) aquifer identification,	(a) approximate areal extent
(b) top elevation,	(b) approximate thickness
(c) lithology,	(c) aquifer identification, and
(d) thickness,	(d) number of users
(e) areal extent,	
(f) number of users, and	
(g) structural geology	

Correlate this information with the cross-section required in Item 15.2.
N/A, No Aquifers present with the permit area, permit area below drainage.

15.5 Provide, as "Attachment 15.5.A", a volume weighted acid-base account of all overburden strata to be removed by the proposed mining operation.

See Attachment 15.5.A

15.6 Describe the sampling program used for collection of premining geologic data within the proposed permit area. The description shall identify; (a) method of sample collection; (b) vertical sampling frequency; (c) parameters tested; (d) laboratory methods used, and (e) name of laboratory. Submit the description as "Attachment 15.6.A".

See Attachment 15.6.A.

15.7 Provide the following information for each geologic sampling location. If additional pages are needed, identify as "Item 15.7 continued".

Site No.	Type (core, rotary, etc.)	Surface Elevation	Total Depth	Latitude	Longitude
DH-12-07	Core	1332'	105.91'	36°35'39"	83°46'09"
DH-13-07	Core	1342'	135.30	36°35'36"	83°46'10"
DH-10-01	Core	2648'	1510'	36°35'07"	83°50'00"
DH-03-04	Core	1783.7'	698'	36°36'35"	83°49'41"
DH-07-08	Core	2207.3'	1105'	36°35'32"	83°48'12"
DH-08-08	Core	1804.6'	670'	36°35'07"	83°48'59"
DH-11-08	Core	2290'	1225'	36°36'13"	83°48'03"
DH-12-08	Core	2120'	980'	36°36'08"	83°48'52"

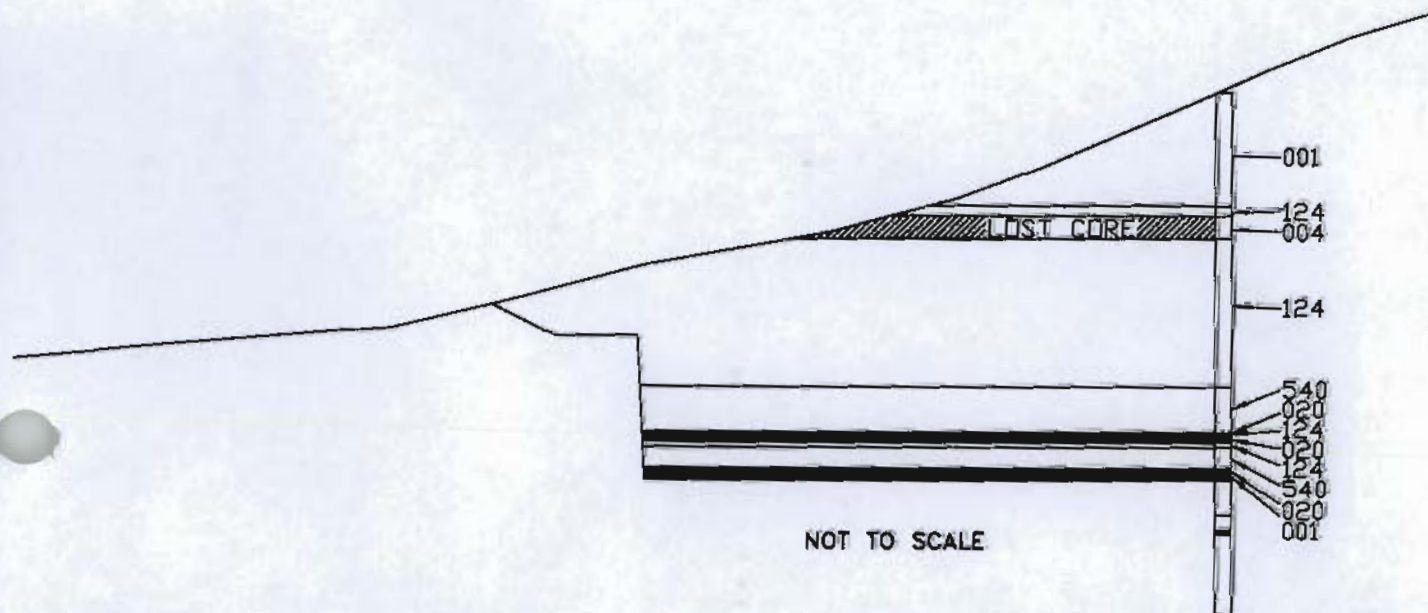
NOTE: Show the location of each geologic sampling site on the ERI Map.

DH 13-07

SAMPLE #	THICKNESS	AREA (SQ.FT.)	N.P.	AREA X N.P.	P.A.	AREA X P.A.
1	3.00'	277.1	16.76	4,644.20	2.81	778.65
2	45.60'	8,380.6	8.58	71,905.55	2.44	20,448.66
3	13.80'	2,396.3	18.94	45,385.92	2.34	5,607.34
-	COAL +	-	-	-	-	-
4	0.50'	86.6	1.50	129.90	1.66	143.76
-	COAL +	-	-	-	-	-
5	1.70'	294.3	2.59	762.28	1.94	570.94
6	6.30'	1,089.3	17.30	18,844.89	1.69	1,840.92
7	0.90'	155.5	4.77	741.74	1.94	301.67
-	COAL +	-	-	-	-	-
TOTAL		12,679.7		142,414.48		29,691.94

+ COAL REMOVED VOLUME WEIGHED N.P. 142,414.48
 VOLUME WEIGHED P.A. 29,691.94

N.P. : P.A. = 4.80 : 1



I, <u>Timothy C. Howard</u> , P.E. No. 15,317 Date: <u>4/24/08</u>	
hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.	
Bell County Coal Corporation	
Permit No. 807-5223 Acid Base Accounting Attachment 15.5.A	
Scale: None	Page No. 1 of 1
Prepared by: <u>Howard Engineering & Geology, Inc.</u>	

ATTACHMENT 15.6.A

GEOLOGIC SAMPLING DESCRIPTION

It is proposed to use two existing (8) core drill holes for geologic sample sites for the mining activities proposed in this application. The coordinates and a description of these sites are as follows:

DH-12-07	Core	Lat. 36° 35' 39" N (4,053,221) Long. 83° 46' 09" W (252,297) Elevation 1332'
DH-13-07	Core	Lat. 36° 35' 36" N (4,053,099) Long. 83° 46' 10" W (252,244) Elevation 1342'
DH-10-01	Core	Lat. 36° 35' 07" N (4,052,402) Long. 83° 50' 00" W (246,502)
DH-03-04	Core	Lat. 36° 36' 35" N (4,055,101) Long. 83° 49' 41" W (247,054)
DH-07-08	Core	Lat. 36° 35' 32" N (4,053,094) Long. 83° 48' 12" W (249,209)
DH-08-08	Core	Lat. 36° 35' 07" N (4,052,358) Long. 83° 48' 59" W (248,018)
DH-11-08	Core	Lat. 36° 36' 13" N (4,054,351) Long. 83° 48' 03" W (249,470)
DH-12-08	Core	Lat. 36° 36' 08" N (4,054,233) Long. 83° 48' 52" W (248,247)

As part of this application we are proposing two geologic sample sites to represent the mining face-up area. These sites are identified as DH-12-07 and DH-13-07. The location of these geologic sample sites are detailed on the combination E.R.I.- M.R.P. map. Samples will be

ATTACHMENT 15.6.A

collected from the strata which will be from the top of the cut to ten (10') foot below the lowest coal seam to be mined. Additionally we are providing six (6) additional core holes that we will provide a minimum of 10 feet above and 10' feet below the coal seam.

The following vertical sampling specifications will apply to samples collected at each of these sites:

- 1) Litho logic units or strata which are suspected acid producers and all coal seams, rider seams and partings which are greater than 0.5 feet thick but less than one foot thick will be sampled at one representative location within the litho logic unit. Suspected acid producers and all coal seams, rider seams and partings which are less than 0.5 feet thick and any non-acid producing strata which are less than one foot thick can be grouped with the next lower unit.
- 2) Strata which range in thickness from one to five feet should be sampled twice at appropriate intervals within the litho logic unit.
- 3) Strata which range in thickness from 5 to 10 feet should be sampled twice at appropriate intervals within the litho logic unit.

Laboratory analysis of geologic sample has been performed by Appalachian Field Services Company; P.O. Box 373; Baxter, Kentucky 40806. The following parameters will be tested using the method listed:

<u>PARAMETER</u>	<u>METHOD</u>
Ph	#3.2.2
Neutralization Potential	#3.2.3
Total Sulfur	#3.2.4
Maximum Potential Acidity	#3.2.4**

*EPA Publication #EPA-600/2-78-054,
"Field and Laboratory Methods Applicable
to Overburdens and Minesoil"

**Determined stoichiometrically from %
Total Sulfur Determination

Individual samples collected within each litho logic unit will be composite and then analyzed to produce a representative acidity or neutralization for the entire litho logic unit. Each coal seam

ATTACHMENT 15.6.A

will be analyzed for total sulfur only.

PERMIT NUMBER 807-5223

16. Ground Water

- 16.1 Provide the results of the ground water inventory conducted for the proposed permit and adjacent areas. The inventory shall identify wells, springs, underground mines, or other similar ground water supply facilities which are currently being used, have been used in the past, or have a potential to be used. For each supply source, describe the location, ownership, type of use and where possible other relevant information such as the depths and diameters of wells, approximate rate of usage, pumpage or discharge. Provide results as "Attachment 16.1.A".
See Attachment 16.1.A.
- 16.2 Describe the premining ground water monitoring program used to determine the seasonal variations in ground water quality and quantity for all aquifers and water transmitting zones. At a minimum, six months of data shall be collected. The description shall identify the location and construction specifications of each monitoring point used, parameters tested, and laboratory methods used. Submit the description as "Attachment 16.2.A".
See Attachment 16.2.A.
- 16.3 On approved cabinet forms submit the results of the premining ground water monitoring program. Original or notarized copies of all laboratory analyses shall be provided. Submit this information as "Attachment 16.3.A".
See Attachment 16.3.A.

17. Surface Water

17.1 Major Watershed(s) Affected:

- | | |
|--|---|
| <input type="checkbox"/> Big Sandy River (BS) | <input type="checkbox"/> Mississippi River (MS) |
| <input checked="" type="checkbox"/> Cumberland River, Upper (CU) | <input type="checkbox"/> Ohio River (OH) |
| <input type="checkbox"/> Cumberland River, Lower (CL) | <input type="checkbox"/> Salt River (ST) |
| <input type="checkbox"/> Green River (GR) | <input type="checkbox"/> Tennessee River (TN) |
| <input type="checkbox"/> Kentucky River (KY) | <input type="checkbox"/> Tradewater River (TW) |
| <input type="checkbox"/> Licking River (LC) | <input type="checkbox"/> Tygarts Creek (TG) |
| <input type="checkbox"/> Little Sandy River (LS) | |

- 17.2 Identify on the environmental resources map and provide a narrative description of the immediate watershed(s) receiving discharge from the proposed permit area. Describe any existing facilities or conditions within the watershed(s) (e.g. existing mining operations, abandoned surface or underground mines, logging operations, oil or gas exploration sites or wells, etc.) which may contribute to surface water pollution. Provide the description as "Attachment 17.2.A". On the ERI map, indicate the location of any existing discharges resulting from such facilities or activities.
See Attachment 17.2.A

- 17.3 Provide as "Attachment 17.3.A", the results of the surface water user inventory for the proposed permit and adjacent areas. This inventory shall identify the name of the surface water boundary being used as a water supply source, the location, drainage area, ownership, type of usage, and where possible, other relevant information such as the rate of withdrawal and seasonal variation.
See Attachment 17.3.A

ATTACHMENT 16.1.A

GROUND WATER USERS

A ground water users inventory has been conducted by Bell County Coal Corporation as part of their permit 807-5157 which involved the underground mining of an underlying coal seam in the same area known as the Buckeye Springs seam. As such, the information is relevant to the mining area proposed per this amendment and the results of the inventory are provided on the following pages as part of this attachment. The users are identified by corresponding number on the MRP/ERI map provided with this application.

ATTACHMENT 16.1.A

GROUND WATER USER INVENTORY

A ground water users inventory has been conducted and it was determined that there are no ground water users within ½ mile of the proposed permit area. All users designated with an AF# are on a municipal water supply provided by the city of Clairfield

SAMPLE IDENTIFICATION :

BELL COUNTY COAL CORPORAT

PERMIT NUMBER : 807 - 5223

Appalachian Field Services Company Inc.

P.O. Box 373

Baxter, Kentucky 40806

Telephone (606) 573-0521

SAMPLED BY : R.B. JONES

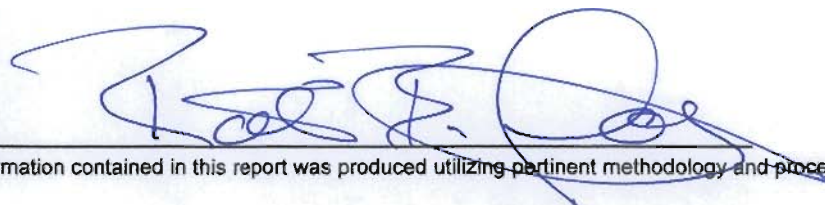
SAMPLE DATE : 09/17/2008

REPORT DATE : 09/19/2008

SAMPLE I.D. pH AC ALK Fe Mn COND. SO4 T° C

MAP # 7A, TAMMY UPTON	8.03	14	232	0.06	0.07	517	5	17
MAP # S-10, TILDA NASH	6.93	38	92	0.78	0.10	304	76	17
MAP # S-11, ROBERT NASH	6.50	18	32	0.55	0.08	482	194	19
MAP # S-13, CHESTER NASH	6.03	32	14	0.11	0.06	1044	233	22

SUBMITTED BY :



I hereby certify that the information contained in this report was produced utilizing pertinent methodology and procedures in accordance with ASTM and EPA guidelines.



Appalachian Field Services Company Inc.
 P.O. Box 373
 Baxter, Kentucky 40806
 Telephone (606) 573-0521

APPOLO FUELS INC. GROUNDWATER USERS SURVEY, PERMIT # 807 - 5223 01/2008

MAP NO.	USER NAME	WATER SOURCE	ELEV.	WATER LEVEL	TOTAL DEPTH	GAL. / DAY	AQUIFER ELEV.	AQUIFER TYPE	QUALITY
1	KIM GOLEY, RENTAL	MUNICIPAL	1248	N/A	N/A	N/A	N/A	N/A	N/A
2	KIM GOLEY, RENTAL	MUNICIPAL	1255	NA	NA	NA	NA	NA	N/A
3	W. POCAHONTAS	MUNICIPAL	1264	N/A	N/A	N/A	N/A	N/A	N/A
4	BENNETTS FK. CHURCH	MUNICIPAL	1268	N/A	N/A	N/A	N/A	N/A	N/A
5	VACANT	N/A	1285	N/A	N/A	N/A	N/A	N/A	N/A
6	EDNA GORDON	MUNICIPAL	1290	N/A	N/A	N/A	N/A	N/A	N/A
7	JAMES SMITH	MUNICIPAL	1290	N/A	N/A	N/A	N/A	N/A	N/A
8	BILLY SMITH	MUNICIPAL	1290	N/A	N/A	N/A	N/A	N/A	N/A
9	VACANT	N/A	1290	N/A	N/A	N/A	N/A	N/A	N/A
10	DOROTHY BARKS	WELL	1294	N/A	N/A	450	N/A	N/A	FE
11	DONNIE FUSON	SPRING	1289	N/A	N/A	450	N/A	ALLUVIAL	POTABLE
12	NOT AT HOME	WELL	1591	N/A	N/A	N/A	N/A	N/A	N/A
13	VACANT	N/A	1306	N/A	N/A	N/A	N/A	N/A	N/A
14	NOT AT HOME	N/A	1306	N/A	N/A	N/A	N/A	N/A	N/A
15	ANNE WILSON	WELL	1312	N/A	N/A	450	N/A	N/A	FE, H2S
16	KARA WILSON	WELL	1354	N/A	N/A	750	N/A	N/A	FE, H2S
17	NOT AT HOME	WELL	1387	N/A	N/A	150	N/A	N/A	N/A
18	NEW HOPE BAPTIST	SPRING	1360	N/A	N/A	50	N/A	ALLUVIAL	POTABLE

Ground Water Users Inventory

#807-5332

MAP REF.	NAME OF USER	WATER SOURCE	Elev.	WATER LEVEL	TOTAL DEPTH	GAL./DAY	AQUIFER ELEV.	AQUIFER TYPE
7A	Don Upton	Carlos Wilder, Well	1345'	N/A	175'	900	1168	Stress Rel. Frac.
8A	Carlos Wilder	Well	1343'	N/A	175'	450	1168	Stress Rel. Frac.
9A	Joe Brown	Carlos Wilder, Well	1342'	N/A	175'	300	1168	Stress Rel. Frac.
10A	Joyce Gibson	Well	1331'	N/A	N/A	450	N/A	N/A
11A	Wayne Reid	Joyce Gibson Well	1334'	N/A	N/A	150	N/A	N/A
12A	Not at Home	Unknown	1591'	N/A	N/A	300	N/A	N/A
13A	Not At Home	Well	1309'	N/A	N/A	N/A	N/A	N/A
14A	J. Partin	Well	1367'	N/A	N/A	450	N/A	Alluvial
15A	Elmer Upton	Well	1380'	N/A	500'	300	880	Stress Rel. Frac.
S18	Richardson Chapel Missionary Baptist Church	unknown	1550'	N/A	unknown	unknown	unknown	unknown
S19	Monarch Church of God	unknown	1530'	N/A	unknown	unknown	unknown	unknown

GROUND WATER USAGE SURVEY

USER: Carlos Stephens **53**

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: well

LOCATION OF SOURCE: beside house owned by Mickey Webb

DEPTH OF WELL: 125'

DIAMETER OF WELL: 5"

DEPTH OF CASING: n/a

DATE DRILLED: 1950 - 1960

TYPE USE: Domestic

STATIC WATER LEVEL: N/A

YIELD OF WELL: GPM unknown

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES:

SURFACE ELEVATION AT WELL SITE: 1760'

WATER QUALITY: tested as pure water

TYPE TREATMENT: none

ESTIMATE WATER USAGE: 100 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS: Same well as Mickey Webb

GROUND WATER USAGE SURVEY

USER: Mickey Webb 34

DATE: 7/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: well

LOCATION OF SOURCE: beside house at Capito

DEPTH OF WELL: 125'

DIAMETER OF WELL: 5"

DEPTH OF CASING: n/a

DATE DRILLED: 1950 - 1960

TYPE USE: Domestic

STATIC WATER LEVEL: n/a

YIELD OF WELL: supplies three houses

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES:

SURFACE ELEVATION AT WELL SITE: 1760'

WATER QUALITY: Water has been tested and reported to be pure.

TYPE TREATMENT: none

ESTIMATE WATER USAGE: 100 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS:

GROUND WATER USAGE SURVEY

#5

USER: Felix Whithead SS

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: Well

LOCATION OF SOURCE: approximately 100 yards north of house

DEPTH OF WELL: 200'+

DIAMETER OF WELL: 6"

DEPTH OF CASING: n/a

DATE DRILLED: 1960 - 1965

TYPE USE: Domestic

STATIC WATER LEVEL: 1700' elevation

YIELD OF WELL: n/a

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES:

SURFACE ELEVATION AT WELL SITE: 1750'

WATER QUALITY: water has iron in it

TYPE TREATMENT: no treatment

ESTIMATE WATER USAGE: 50 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS: Uses Hazel Warwick's well.

GROUND WATER USAGE SURVEY

USER: Hazel Warwick **SL6**

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: well

LOCATION OF SOURCE: approximately 100 yards north of house

DEPTH OF WELL: 200' +

DIAMETER OF WELL: 6"

DEPTH OF CASING: n/a

DATE DRILLED: 1960 - 1965

TYPE USE: domestic

STATIC WATER LEVEL: 1700'

YIELD OF WELL: n/a

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES:

SURFACE ELEVATION AT WELL SITE: 1760'

WATER QUALITY: has iron in water

TYPE TREATMENT: salt treatment filter

ESTIMATE WATER USAGE: 100 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS: well drilled for sawmill sometime in sixties

GROUND WATER USAGE SURVEY

#10

USE: _____ John Henry Nash **S10**

DATE: _____ 07/31/92

SURVEY TEAM: _____ David Evans

TYPE SOURCE: _____ well

LOCATION OF SOURCE: _____ beside house

DEPTH OF WELL: _____ 12'

DIAMETER OF WELL: _____ 2'

DEPTH OF CASING: _____ hand dug; rock casing to bottom

DATE DRILLED: _____ 1955

TYPE USE: _____ domestic

STATIC WATER LEVEL: _____ 1528' (elevation)

YIELD OF WELL: _____ enough for two families

NAME OF AQUIFER: _____ Mingo Formation

LOCATION OF WATER YIELD ZONES: _____

SURFACE ELEVATION AT WELL SITE: _____ 1540'

WATER QUALITY: _____ good

TYPE TREATMENT: _____ none

ESTIMATE WATER USAGE: _____ 75 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS:

GROUND WATER USAGE SURVEY

USER: Robert Eugene Nash SII

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: well

LOCATION OF SOURCE: beside house of John Henry Nash

DEPTH OF WELL: 12'

DIAMETER OF WELL: 2'

DEPTH OF CASING: 12' (rock casing)

DATE DRILLED: 1955

TYPE USE: domestic

STATIC WATER LEVEL: 1528' (elevation)

YIELD OF WELL: supplies two families

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES: _____

SURFACE ELEVATION AT WELL SITE: 1540'

WATER QUALITY: good water

TYPE TREATMENT: none

ESTIMATE WATER USAGE: 100' gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS: Uses John Henry Nash's well

GROUND WATER USAGE SURVEY

*12

USER: William Wilson **S12**

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: Spring

LOCATION OF SOURCE: 100+ yards south of house

DEPTH OF WELL: n/a

DIAMETER OF WELL: n/a

DEPTH OF CASING: n/a

DATE DRILLED: n/a

TYPE USE: domestic

STATIC WATER LEVEL: 1620' (elevation)

YIELD OF WELL: supplies one family

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES:

SURFACE ELEVATION AT WELL SITE: 1620'

WATER QUALITY: no iron or sulfur

TYPE TREATMENT: none

ESTIMATE WATER USAGE: 25 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS: Spring is getting low

GROUND WATER USAGE SURVEY

#13

UL: Chester Nash 513

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: spring

LOCATION OF SOURCE: south of house approximately 1/2 mile

DEPTH OF WELL: n/a

DIAMETER OF WELL: n/a

DEPTH OF CASING: n/a

DATE DRILLED: n/a

TYPE USE: domestic

STATIC WATER LEVEL: 1900' (elevation)

YIELD OF WELL: n/a

NO. OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES: _____

SURFACE ELEVATION AT WELL SITE: 1900'

WATER QUALITY: sulfur in water

TYPE TREATMENT: none

ESTIMATE WATER USAGE: 30 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS:

GROUND WATER USAGE SURVEY

#14

USL _____ Johnny Lawson **514**

DATE: _____ 07/31/92

SURVEY TEAM: _____ David Evans

TYPE SOURCE: _____ Spring

LOCATION OF SOURCE: _____ approximately 100' northeast of house

DEPTH OF WELL: _____ n/a

DIAMETER OF WELL: _____ n/a

DEPTH OF CASING: _____ n/a

DATE DRILLED: _____ n/a

TYPE USE: _____ domestic

STATIC WATER LEVEL: _____ 1520'

YIELD OF WELL: _____ run 3/4" pipe all the time

NAME OF AQUIFER: _____ Mingo Formation

LOCATION OF WATER YIELD ZONES: _____

SURFACE ELEVATION AT WELL SITE: _____ 1520'

WATER QUALITY: _____ good drinking water - no sulfur or iron

TYPE TREATMENT: _____ none

ESTIMATE WATER USAGE: _____ 40 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS:

GROUND WATER USAGE SURVEY

USER: Thomas Lee Upton *SIS*
 DATE: 07/31/92
 SURVEY TEAM: David Evans
 TYPE SOURCE: Mason Coal Seam
 LOCATION OF SOURCE: northwest of trailer
 DEPTH OF WELL: n/a
 DIAMETER OF WELL: n/a
 DEPTH OF CASING: n/a
 DATE DRILLED: n/a
 TYPE USE: domestic
 STATIC WATER LEVEL: 1600'
 YIELD OF WELL: enough to supply one family
 NAME OF AQUIFER: Mingo Formation
 LOCATION OF WATER YIELD ZONES:
 SURFACE ELEVATION AT WELL SITE: 1600'
 WATER QUALITY: good taste
 TYPE TREATMENT: no treatment
 ESTIMATE WATER USAGE: 50 gallons per day
 SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS:

GROUND WATER USAGE SURVEY

#16

USE: Danny Collins 516

DATE: 07/31/92

SURVEY TEAM: David Evans

TYPE SOURCE: spring

LOCATION OF SOURCE: 800' upstream from house (southwest)

DEPTH OF WELL: n/a

DIAMETER OF WELL: n/a

DEPTH OF CASING: n/a

DATE DRILLED: n/a

TYPE USE: domestic

STATIC WATER LEVEL: 1500' (elevation)

YIELD OF WELL: enough for constant supply

NAME OF AQUIFER: Mingo Formation

LOCATION OF WATER YIELD ZONES: _____

SURFACE ELEVATION AT WELL SITE: 1500'

WATER QUALITY: good water

TYPE TREATMENT: none

ESTIMATE WATER USAGE: 100 gallons per day

SITE LOCATION: UP DIP, DOWN DIP, ABOVE OR BELOW COAL SEAM

COMMENTS: Spring is on south side of Stony Fork about
200' south of stream. Spring is in sandstone
formation.

ATTACHMENT 16.2.A

PREMINING GROUNDWATER MONITORING PROGRAM

The pre-mining groundwater monitoring program will consists of monitoring data from ground water points STA1, GW1, GW14, and GW501. These monitoring locations have been delineated combination MRP/ERI Map.

STA1	Lat. 36° 36' 52" N (4,055,697) Long. 83° 49' 55" W (246,810)
GW1	Lat. 36° 35' 35" N (4,053,347) Long. 83° 51' 54" W (243,793)
GW14	Lat. 36° 35' 30" N (4,052,973) Long. 83° 46' 50" W (251,245)
GW501	Lat. 36° 34' 48" N (4,051,725) Long. 83° 47' 54" W (249,617)
GW2	Lat. 36 -36'-46" N (4,055,323) Long. 83 - 46' -59" W (251,090)

Six sets of quarterly data will be submitted. These points are currently being sampled as part of the during mining groundwater monitoring program for permits #807-5025, #807-5157 and # 807-0305.

Parameters tested and methodology utilized are as follows:

<u>Parameters</u>	<u>Method</u>
Depth	
pH	423
Acidity	402
Alkalinity	403
Dissolved iron	303
Dissolved manganese	303
Total sulfate	426 C

Bell County Coal Corporation
#807-5223, Comprehensive Application

ATTACHMENT 16.2.A

Specific Conductance	205
Total dissolved solids	209B
Temperature	

Type of Report:

Premining

During Mining/Reclamation

Other

STATION INFORMATION

PERMIT #: 807-5223 STATION #: STA1 SOAP PERMITTEE #: N/A

*COUNTY #: 007 BASIN #: 02 QUAD NAME: Fork Ridge & Middlesboro South

STATION TYPE (check): [01] Spring [XX] Well [] Old Mine
 [02] Stream [05] Sediment Pond / Influent Works Portal
 [03] Lake [06] Sediment Pond / Discharge

FOR WELLS ONLY

DEPTH (ft): 125 CASING DIAMETER (in): 8 AQUIFER DESCRIPTION: Mason Coal Seam
TOP OF AQUIFER (MSL): 1600 AQUIFER THICKNESS (ft): 1.5 TOP OF WELL ELEV. (MSL): 1760

WATERSHED DESCRIPTION: Wooded-Past Mining Activity DRAINAGE AREA (ac.): _____

LATITUDE (DMS): 36-36-52 LONGITUDE (DMS): 83-49-55

UTM ZONE: 17 16 West of 84° Longitude UTM EASTING: 246,810 UTM NORTHING: 4,055,697
17 East of 84° Latitude

LOCAL STREAM NAME: Stoney Fork

COAL COMPANY NAME: Bell County Coal Corporation

COLLECTING FIRM NAME: Cumberland Valley Engineering, Inc.; PO Box 1710, Harlan, KY 40831

ANALYZING FIRM NAME: Cumberland Valley Engineering, Inc.; PO Box 1710, Harlan, KY 40831

COMMENTS: _____

SAMPLE DATA

PERMIT # 807-5223 STATION # STA1

SAMPLE No. [1]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	05/19/06	16		390	7.50	0	169			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	194		0.10		0.10					

COMMENT:

SAMPLE No. [2]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	07/12/06	18		900	7.50	0	175			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	42		0.10		0.10					

COMMENT:

SAMPLE No. [3]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	10/23/06	17		350	7.7	0	266			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	123		0.10		0.10					

COMMENT:

SAMPLE DATA

PERMIT # 807-5223 STATION # STA1

SAMPLE No. [4]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	02/13/07	10		210	8.00	0	201			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	61		0.10		0.10					

COMMENT:

SAMPLE No. [5]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	06/20/07	16		300	8.00	0	211			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	126		0.10		0.10					

COMMENT:

SAMPLE No. [6]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	08/06/07	14		300	8.10	0	128			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	95		0.10		0.10					

COMMENT:



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Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00448	Lab NUMBER: 88396
PERMIT NUMBER: 807-5025-STA1	SPRING
SAMPLE DATE: 5/19/2006	
SAMPLE TIME: 15:45	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

pH	7.5	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	169.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	390.000	µMHOS/CM
SULFATES	194.000	mg/L S ₀₄
TEMPERATURE	16.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Terri Adkins



Cumberland Valley Engineering, Inc.

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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00448

Lab NUMBER: 88947

PERMIT NUMBER: 807-5025-STA1

SPRING

SAMPLE DATE: 7/12/2006

SAMPLE TIME: 16:30

COLLECTED BY: P. TAYLOR

REPORT OF WATER ANALYSIS

pH	7.5	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	175.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	900.000	µMHOS/CM
SULFATES	42.000	mg/L SO ₄
TEMPERATURE	18.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jenni Adkins



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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00448	Lab NUMBER: 90230
PERMIT NUMBER: 807-5025-STA1	SPRING
SAMPLE DATE: 10/23/2006	
SAMPLE TIME: 14:20	
COLLECTED BY: K. CLARK	

REPORT OF WATER ANALYSIS

	pH	7.7	std units
	TOTAL ACIDITY	0	mg/L as CaCO ₃
	TOTAL ALKALINITY	266.000	mg/L as CaCO ₃
	DISSOLVED IRON	0.100	mg/L Fe
	DISSOLVED MANGANESE	0.100	mg/L Mn
	SPECIFIC CONDUCTANCE	350.000	µMHOS/CM
	SULFATES	123.000	mg/L S ₀₄
	TEMPERATURE	17.000	Deg. C.

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By: Terri Adkins



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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00448

Lab NUMBER: 91693

PERMIT NUMBER: 807-5025-STA1

SPRING

SAMPLE DATE: 2/13/2007

SAMPLE TIME: 14:00

COLLECTED BY: P. TAYLOR

REPORT OF WATER ANALYSIS

pH	8.0	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	201.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	210.000	µMHOS/CM
SULFATES	61.000	mg/L S ₀₄
TEMPERATURE	10.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00448	Lab NUMBER: 93221
PERMIT NUMBER: 807-5025-STA1	SPRING
SAMPLE DATE: 6/20/2007	
SAMPLE TIME: 13:15	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

	pH	8.0	std units
	TOTAL ACIDITY	0	mg/L as CaCO ₃
	TOTAL ALKALINITY	211.000	mg/L as CaCO ₃
	DISSOLVED IRON	0.100	mg/L Fe
	DISSOLVED MANGANESE	0.100	mg/L Mn
	SPECIFIC CONDUCTANCE	300.000	µMHOS/CM
	SULFATES	126.000	mg/L S ₀₄
	TEMPERATURE	16.000	Deg. C.

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By: Jenni Adkins



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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00448	Lab NUMBER: 93864
PERMIT NUMBER: 807-5025-STA1	SPRING
SAMPLE DATE: 8/6/2007	
SAMPLE TIME: 13:25	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

pH	8.1	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	128.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	300.000	µMHOS/CM
SULFATES	95.000	mg/L S ₀₄
TEMPERATURE	14.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jenni Adkins

Type of Report:
 Premining
 During Mining/Reclamation
 Other

STATION INFORMATION

PERMIT #: 807-5223 STATION #: GW1 SOAP PERMITTEE #: N/A

*COUNTY #: 007 BASIN #: 02 QUAD NAME: Fork Ridge & Middlesboro South

STATION TYPE (check): [01] Spring [XX] Well [] Old Mine
[02] Stream [05] Sediment Pond / Influent Works Portal
[03] Lake [06] Sediment Pond / Discharge

FOR WELLS ONLY
DEPTH (ft): 55 CASING DIAMETER (in): 8" AQUIFER DESCRIPTION: _____
TOP OF AQUIFER (MSL): ~1440 AQUIFER THICKNESS (ft): 150 TOP OF WELL ELEV. (MSL): ~1460

WATERSHED DESCRIPTION: Wooded-Previously Mined DRAINAGE AREA (ac.): _____

LATITUDE (DMS): 36-35-35 LONGITUDE (DMS): 83-51-54

UTM ZONE: 17 16 West of 84° Longitude UTM EASTING: 246,810 UTM NORTHING: 4,055,697
17 East of 84° Latitude

LOCAL STREAM NAME: Clear Fork

COAL COMPANY NAME: Bell County Coal Corporation

COLLECTING FIRM NAME: Cumberland Valley Engineering, Inc.; PO Box 1710, Harlan, KY 40831

ANALYZING FIRM NAME: Cumberland Valley Engineering, Inc.; PO Box 1710, Harlan, KY 40831

COMMENTS: _____

SAMPLE DATA

PERMIT # 807-5223 STATION # GW1

SAMPLE No. [1]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	06/13/06	15		440	8.20	0	96			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	185		0.10		0.10		20			

COMMENT:

SAMPLE No. [2]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	08/09/06	16		900	7.60	0	197			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	345		0.10		0.10		30			

COMMENT:

SAMPLE No. [3]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	10/23/06	10		300	7.3	0	238			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	98		0.10		0.10		10			

COMMENT:

SAMPLE DATA

PERMIT # 807-5223 STATION # GW1

SAMPLE No. [4]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	04/18/07	14		320	6.90	0	137			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	29		0.10		0.10		5			

COMMENT:

SAMPLE No. [5]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	08/06/07	17		500	7.70	0	204			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	327		0.10		0.10		5			

COMMENT:

SAMPLE No. [6]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	12/26/07	14		750	8.00	0	121			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	263		0.10		0.10		25			

COMMENT:



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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00465	Lab NUMBER: 88610
PERMIT NUMBER: 807-5025-GW-1	WELL
SAMPLE DATE: 6/13/2006	
SAMPLE TIME: 17:00	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	20	feet
pH	8.2	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	96.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	440.000	µMHOS/CM
SULFATES	185.000	mg/L S ₀₄
TEMPERATURE	15.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Terri Adkins



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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00465	Lab NUMBER: 89295
PERMIT NUMBER: 807-5025-GW-1	WELL
SAMPLE DATE: 8/9/2006	
SAMPLE TIME: 11:10	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	30	feet
pH	7.6	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	197.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	900.000	µMHOS/CM
SULFATES	345.000	mg/L S ₀₄
TEMPERATURE	16.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jenni Adkins



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BELL COUNTY COAL CORPORATION

ROUTE 1, BOX 290

MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00465

Lab NUMBER: 90242

PERMIT NUMBER: 807-5025-GW-1

WELL

SAMPLE DATE: 10/23/2006

SAMPLE TIME: 17:20

COLLECTED BY: K. CLARK

REPORT OF WATER ANALYSIS

DEPTH TO WATER	10	feet
pH	7.3	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	238.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	300.000	µMHOS/CM
SULFATES	98.000	mg/L SO ₄
TEMPERATURE	10.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jeri Adkins



Cumberland Valley Engineering, Inc.

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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00465	Lab NUMBER: 92447
PERMIT NUMBER: 807-5025-GW-1	WELL
SAMPLE DATE: 4/18/2007	
SAMPLE TIME: 04:08	
COLLECTED BY: K. CLARK	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	5	feet
pH	6.9	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	137.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	320.000	µMHOS/CM
SULFATES	29.000	mg/L SO ₄
TEMPERATURE	14.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jenni Adkins



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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00465	Lab NUMBER: 93874
PERMIT NUMBER: 807-5025-GW-1	WELL
SAMPLE DATE: 8/6/2007	
SAMPLE TIME: 15:30	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	5	feet
pH	7.7	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	204.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	500.000	µMHOS/CM
SULFATES	327.000	mg/L S04
TEMPERATURE	17.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Serri Adkins



Cumberland Valley Engineering, Inc.

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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00465	Lab NUMBER: 95511
PERMIT NUMBER: 807-5025-GW-1	WELL
SAMPLE DATE: 12/26/2007	
SAMPLE TIME: 14:30	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	25	feet
pH	8.0	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	121.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	750.000	µMHOS/CM
SULFATES	263.000	mg/L S ₀₄
TEMPERATURE	14.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Terri Atkins

Type of Report:
 Premining
 During Mining/Reclamation
 Other

STATION INFORMATION

PERMIT #: 807-5223 STATION #: GW14 SOAP PERMITTEE #: N/A
 *COUNTY #: 007 BASIN #: 02 QUAD NAME: Fork Ridge & Middlesboro South
 STATION TYPE (check): Spring [04] Well [] Old Mine
 Stream [05] Sediment Pond / Influent Works Portal
 Lake [06] Sediment Pond / Discharge

FOR WELLS ONLY
 DEPTH (ft): _____ CASING DIAMETER (in): _____ AQUIFER DESCRIPTION: _____
 TOP OF AQUIFER (MSL): _____ AQUIFER THICKNESS (ft): _____ TOP OF WELL ELEV. (MSL): _____

WATERSHED DESCRIPTION: Forest Land DRAINAGE AREA (ac.): _____
 LATITUDE (DMS): 36-35-30 LONGITUDE (DMS): 83-46-50
 UTM ZONE: 17 16 West of 84° Longitude UTM EASTING: 251,246 UTM NORTHING: 4,052,976
 17 East of 84° Latitude

LOCAL STREAM NAME: Shade Branch
 COAL COMPANY NAME: Bell County Coal Corporation
 COLLECTING FIRM NAME: Technical Water Laboratories, Inc., PO Box 309, Bledsoe, KY 40810
 ANALYZING FIRM NAME: Technical Water Laboratories, Inc., PO Box 309, Bledsoe, KY 40810
 COMMENTS: _____

SAMPLE No. [1]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	11/20/06		2.88		7.00	0	100.05		326	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	49		0.67		0.18					

COMMENT:

SAMPLE No. [2]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	02/11/07		2.05		7.00	0	101.20		340	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	63		0.25		0.10					

COMMENT:

SAMPLE No. [3]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	04/13/07		ND							

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

PERMIT # 807-5223

SATION # GW14

SAMPLING STA

SAMPLE No. [4]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	09/15/07		ND							

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE										

COMMENT:

SAMPLE No. [5]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	11/08/07		ND							

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

SAMPLE No. [6]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	12/05/07		ND							

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

SAMI DATA
 PERMIT # 807-5223 STATION # GW14

SAMPLE No. [7]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	01/18/08		1.10		6.90	0	71.22		409	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	36		1.40		0.18					

COMMENT:

SAMPLE No. [8]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE										

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

SAMPLE No. [9]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE										

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT: _____

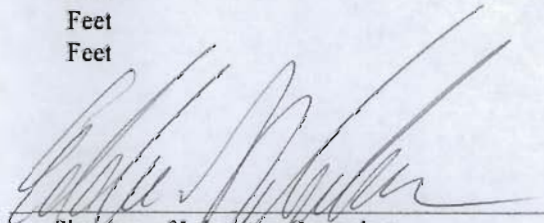
TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW14
Lab# 16
Date Sampled: 01-18-2008
Date Analyzed: 01-18-2008
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	6.90		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	71.22	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	1.40	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.18	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	409	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	36	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	1.0	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW14
Lab# 16
Date Sampled: 11-20-2006
Date Analyzed: 11-20-2006
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.00		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	100.05	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	0.67	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.18	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	326	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	49	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	2.88	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor

TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW14
Lab# 16
Date Sampled: 02-11-2007
Date Analyzed: 02-11-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.00		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	101.20	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	0.25	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.10	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	340	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	63	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	2.05	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.



Signature of Laboratory Supervisor

TECHNICAL WATER LABORATORIES, INC.

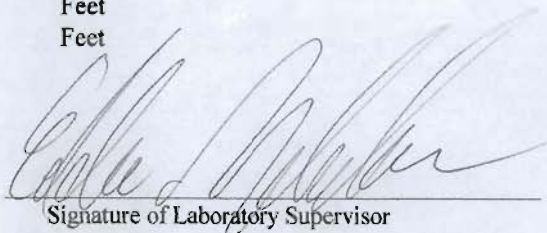
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW14
Lab# 16
Date Sampled: 04-13-2007
Date Analyzed: 04-13-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH			
Acidity to pH 8.3		Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5		Mg/L	
Total Iron		Mg/L	
Dissolved Iron		Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates		Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	ND	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

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Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW14
Lab# 16
Date Sampled: 09-15-2007
Date Analyzed: 09-15-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH			
Acidity to pH 8.3		Mg/L	*with hot peroxide
Alkalinity to pH 4.5		Mg/L	treatment
Total Iron		Mg/L	
Dissolved Iron		Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates		Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	ND	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

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Procedures and are correct and accurate to
The best of my knowledge.



Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW14
Lab# 16
Date Sampled: 11-08-2007
Date Analyzed: 11-08-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH			
Acidity to pH 8.3		Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5		Mg/L	treatment
Total Iron		Mg/L	
Dissolved Iron		Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates		Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	ND	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with
Acceptable analytical methods and
Procedures and are correct and accurate to
The best of my knowledge.


Signature of Laboratory Supervisor

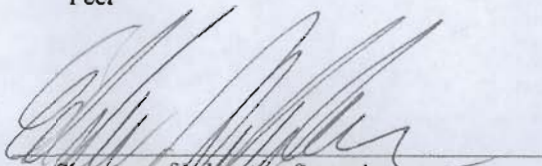
TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW 14
Lab# 16
Date Sampled: 12-05-2007
Date Analyzed: 12-05-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH			
Acidity to pH 8.3		Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5		Mg/L	treatment
Total Iron		Mg/L	
Dissolved Iron		Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates		Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)		CFS	
Depth to Water	ND	Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor

Type of Report:
 Premining
 During Mining/Reclamation
 Other

STATION INFORMATION

PERMIT #: 807-5223 STATION #: Well No. 501 SOAP PERMITTEE #: N/A
 *COUNTY #: 007 BASIN #: 02 QUAD NAME: Fork Ridge & Middlesboro South
 STATION TYPE (check): [01] Spring [XX] Well [] Old Mine
 [02] Stream [05] Sediment Pond / Influent Works Portal
 [03] Lake [06] Sediment Pond / Discharge

FOR WELLS ONLY
 DEPTH (ft): 60' CASING DIAMETER (in): 6" AQUIFER DESCRIPTION: Mingo Formation
 TOP OF AQUIFER (MSL): _____ AQUIFER THICKNESS (ft): _____ TOP OF WELL ELEV. (MSL): _____

WATERSHED DESCRIPTION: Steep Slopes/Previously Mines DRAINAGE AREA (ac.): _____
 LATITUDE (DMS): 36-34-48 LONGITUDE (DMS): 83-47-54
 UTM ZONE: 17 **16 West of 84° Longitude** UTM EASTING: 249,617 UTM NORTHING: 4,051,725
17 East of 84° Latitude
 LOCAL STREAM NAME: Bennetts Fork
 COAL COMPANY NAME: Bell County Coal Corporation
 COLLECTING FIRM NAME: Cumberland Valley Engineering, Inc. PO Box 1710, Harlan, KY 40831
 ANALYZING FIRM NAME: Cumberland Valley Engineering, Inc. PO Box 1710, Harlan, KY 40831
 COMMENTS: _____

PERMIT # 807-5223

STATION # Well No. 501

SAMPLE TA

SAMPLE No. [1]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	10/23/06	10		325	7.30	0	173			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	103		0.10		0.10		30			

COMMENT:

SAMPLE No. [2]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	02/20/07	8		300	8.10	0	207			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	97		0.10		0.10		15			

COMMENT:

SAMPLE No. [3]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	04/18/07	15		200	7.30	0	181			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	27		0.10		0.10		7			

COMMENT:

PERM # 807-5223

STATION # Well No. 501

SAMPL DATA

SAMPLE No. [4]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	07/10/07	16		250	7.10	0	201			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	99		0.10		0.10		8			

COMMENT:

SAMPLE No. [5]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	12/26/07	14		700	8.10	0	191			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	135		0.10		0.10		40			

COMMENT:

SAMPLE No. [6]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	02/07/08	7		1000	7.90	0	95			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	209		0.10		0.10		50			

COMMENT:



Cumberland Valley Engineering, Inc.

P.O. Box 1710, 107 North Cumberland Avenue
Harlan, Kentucky 40831
Office (606) 573-6836 C Laboratory (606) 573-6836
Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00461	Lab NUMBER: 90244
PERMIT NUMBER: 807-5157-501	WELL
SAMPLE DATE: 10/23/2006	
SAMPLE TIME: 08:10	
COLLECTED BY: K. CLARK	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	30	feet
pH	7.3	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	173.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	325.000	µMHOS/CM
SULFATES	103.000	mg/L SO ₄
TEMPERATURE	10.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: 



Cumberland Valley Engineering, Inc.

P.O. Box 1710, 107 North Cumberland Avenue
Harlan, Kentucky 40831
Office (606) 573-6836 C Laboratory (606) 573-6836
Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00461	Lab NUMBER: 91807
PERMIT NUMBER: 807-5157-501	WELL
SAMPLE DATE: 2/20/2007	
SAMPLE TIME: 09:30	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	15	feet
pH	8.1	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	207.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	300.000	µMHOS/CM
SULFATES	97.000	mg/L SO ₄
TEMPERATURE	8.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: *Joe Freeman*



Cumberland Valley Engineering, Inc.

P.O. Box 1710, 107 North Cumberland Avenue
Harlan, Kentucky 40831
Office (606) 573-6836 C Laboratory (606) 573-6836
Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00461	Lab NUMBER: 92438
PERMIT NUMBER: 807-5157-501	WELL
SAMPLE DATE: 4/18/2007	
SAMPLE TIME: 10:26	
COLLECTED BY: K. CLARK	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	7	feet
pH	7.3	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	181.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	200.000	µMHOS/CM
SULFATES	27.000	mg/L SO ₄
TEMPERATURE	15.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: *J. Freeman*



Cumberland Valley Engineering, Inc.

P.O. Box 1710, 107 North Cumberland Avenue
Harlan, Kentucky 40831
Office (606) 573-6836 C Laboratory (606) 573-6836
Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00461	Lab NUMBER: 94513
PERMIT NUMBER: 807-5157-501	WELL
SAMPLE DATE: 7/10/2007	
SAMPLE TIME: 12:49	
COLLECTED BY: K. CLARK	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	8	feet
pH	7.1	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	201.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	250.000	µMHOS/CM
SULFATES	99.000	mg/L S04
TEMPERATURE	16.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Joe Freeman



Cumberland Valley Engineering, Inc.

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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00461	Lab NUMBER: 95492
PERMIT NUMBER: 807-5157-501	WELL
SAMPLE DATE: 12/26/2007	
SAMPLE TIME: 12:10	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	40	feet
pH	8.1	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	191.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	700.000	µMHOS/CM
SULFATES	135.000	mg/L SO ₄
TEMPERATURE	14.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: *J. Freeman*



Cumberland Valley Engineering, Inc.

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Harlan, Kentucky 40831
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Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 00461	Lab NUMBER: 96111
PERMIT NUMBER: 807-5157-501	WELL
SAMPLE DATE: 2/7/2008	
SAMPLE TIME: 08:50	
COLLECTED BY: P. TAYLOR	

REPORT OF WATER ANALYSIS

DEPTH TO WATER	50	feet
pH	7.9	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	95.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	1000.000	µMHOS/CM
SULFATES	209.000	mg/L S04
TEMPERATURE	7.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: 

Type of Report:
 Premining
 During Mining/Reclamation
 Other

STATION INFORMATION

PERMIT #: 807-5223 STATION #: GW2 SOAP PERMITTEE #: N/A
 *COUNTY #: 007 BASIN #: 02 QUAD NAME: Fork Ridge & Middlesboro South
 STATION TYPE (check): [01] Spring [XX] Well [] Old Mine
 [02] Stream [05] Sediment Pond / Influent Works Portal
 [03] Lake [06] Sediment Pond / Discharge

FOR WELLS ONLY
 DEPTH (ft): _____ CASING DIAMETER (in): _____ AQUIFER DESCRIPTION: _____
 TOP OF AQUIFER (MSL): _____ AQUIFER THICKNESS (ft): _____ TOP OF WELL ELEV. (MSL): _____

WATERSHED DESCRIPTION: Steep Slopes/Previously Mines DRAINAGE AREA (ac.): _____
 LATITUDE (DMS): 36-36-46 LONGITUDE (DMS): 83-46-59
 UTM ZONE: 17 16 West of 84° Longitude UTM EASTING: 251,090 UTM NORTHING: 4,055,323
17 East of 84° Latitude
 LOCAL STREAM NAME: Stoney Fork
 COAL COMPANY NAME: Bell County Coal Corporation
 COLLECTING FIRM NAME: Technical Water Laboratories, Inc., PO Box 309, Bledsoe, KY 40810
 ANALYZING FIRM NAME: Technical Water Laboratories, Inc., PO Box 309, Bledsoe, KY 40810
 COMMENTS: _____

PERMIT # 807-5223

STATION # GW2

SAMPL TA

SAMPLE No. [1]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	11/20/06				6.90	0	75.90		454	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	63		0.90		0.51					

COMMENT:

SAMPLE No. [2]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	02/11/07				7.30	0	82.10		410	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	40		0.96		0.75					

COMMENT:

SAMPLE No. [3]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	04/13/07				6.90	0	70.18		488	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	64		1.70		0.65					

COMMENT:

SAMPLE No. [4]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	09/15/07				6.90	0	75.60		410	

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	46		1.65		0.10					

COMMENT:

SAMPLE No. [5]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	11/08/07		ND							

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

SAMPLE No. [6]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	07/09/08	18	1	450	6.80	0	83			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	86		0.100		0.100					

COMMENT:

PERMIT # 807-5223

STATION # GW2

SAMPLING DATE

SAMPLE No. [7]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	07/31/08	18	1	400	7.10	0	93			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	69		0.100		0.100					

COMMENT:

SAMPLE No. [8]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	08/12/08	17	1	375	7.0	0	54			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	88		0.100		0.100					

COMMENT:

SAMPLE No. [9]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	08/22/08	18	1	500	6.90	0	73			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	123		0.100		0.100					

COMMENT:

SAMPLE No. [10]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	09/03/08	18	1	400	7.20	0	69.00			

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	70		0.100		0.100					

COMMENT:

SAMPLE No. [11]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE										

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

SAMPLE No. [12]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (gpm)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE										

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE										

COMMENT:

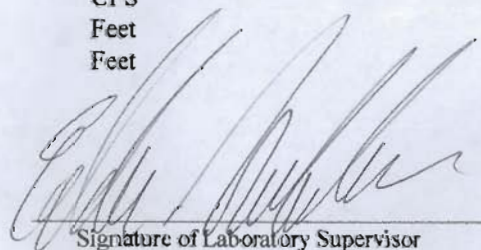
TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW*2 *Trm*
Lab# 16
Date Sampled: 11-20-2006
Date Analyzed: 11-20-2006
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	6.90		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	75.90	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	0.90	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.51	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	454	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	63	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.



Signature of Laboratory Supervisor

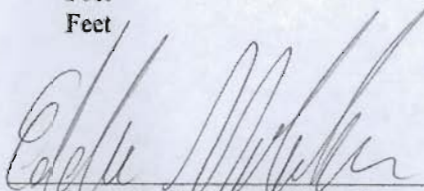
TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW#2 ~~Two~~
Lab# 16
Date Sampled: 02-11-2007
Date Analyzed: 02-11-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.30		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	82.10	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	0.96	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.75	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	410	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	40	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.



Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW ~~2.7~~
Lab# 16
Date Sampled: 04-13-2007
Date Analyzed: 04-13-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	6.90		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	70.18	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	1.70	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.65	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	488	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	64	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.



Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW *H2 Turn*
Lab# 16
Date Sampled: 09-15-2007
Date Analyzed: 09-15-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	6.90		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	75.60	Mg/L	
Total Iron		Mg/L	
Dissolved Iron	1.65	Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese	0.10	Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids	410	Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	46	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-0305 & 807-5223 GW ~~2 L~~ **Truck**
Lab# 16
Date Sampled: 11-08-2007
Date Analyzed: 11-08-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH			
Acidity to pH 8.3		Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5		Mg/L	
Total Iron		Mg/L	
Dissolved Iron		Mg/L	
Total Manganese		Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids		Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates		Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance		Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)	ND	GPM	
Flow Rate (Cfs)		CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.



Signature of Laboratory Supervisor



Cumberland Valley Engineering, Inc.

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BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 01457	Lab NUMBER: 98782
PERMIT NUMBER: 807-0364-GW2	WELL
SAMPLE DATE: 9/3/2008	
SAMPLE TIME: 09:30	
COLLECTED BY: J. MINIARD	

REPORT OF WATER ANALYSIS

FLOW	1	gal/min.
pH	7.2	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	69.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	400.000	µMHOS/CM
SULFATES	70.000	mg/L S ₀₄
TEMPERATURE	18.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jenni Adams



Cumberland Valley Engineering, Inc.

P.O. Box 1710, 107 North Cumberland Avenue
Harlan, Kentucky 40831
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Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 01457	Lab NUMBER: 98779
PERMIT NUMBER: 807-0364-GW2	WELL
SAMPLE DATE: 8/22/2008	
SAMPLE TIME: 12:00	
COLLECTED BY: J. MINIARD	

REPORT OF WATER ANALYSIS

FLOW	1	gal/min.
pH	6.9	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	73.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	500.000	µMHOS/CM
SULFATES	123.000	mg/L S04
TEMPERATURE	17.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Terri Adkins



Cumberland Valley Engineering, Inc.

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Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 01457	Lab NUMBER: 98778
PERMIT NUMBER: 807-0364-GW2	WELL
SAMPLE DATE: 8/12/2008	
SAMPLE TIME: 09:00	
COLLECTED BY: J. MINIARD	

REPORT OF WATER ANALYSIS

FLOW	1	gal/min.
pH	7.0	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	54.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	375.000	µMHOS/CM
SULFATES	88.000	mg/L S04
TEMPERATURE	17.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Terri Adkins



Cumberland Valley Engineering, Inc.

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Harlan, Kentucky 40831
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Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 01457	Lab NUMBER: 98781
PERMIT NUMBER: 807-0364-GW2	WELL
SAMPLE DATE: 7/31/2008	
SAMPLE TIME: 08:00	
COLLECTED BY: J. MINIARD	

REPORT OF WATER ANALYSIS

FLOW	1	gal/min.
pH	7.1	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	93.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	400.000	µMHOS/CM
SULFATES	69.000	mg/L S04
TEMPERATURE	18.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Jeri Adk



Cumberland Valley Engineering, Inc.

P.O. Box 1710, 107 North Cumberland Avenue
Harlan, Kentucky 40831
Office (606) 573-6836 C Laboratory (606) 573-6836
Fax (606) 573-4735

BELL COUNTY COAL CORPORATION
ROUTE 1, BOX 290
MIDDLESBORO, KY 40965

SAMPLE ID NUMBER: 01457	Lab NUMBER: 98780
PERMIT NUMBER: 807-0364-GW2	WELL
SAMPLE DATE: 7/9/2008	
SAMPLE TIME: 01:00	
COLLECTED BY: J. MINIARD	

REPORT OF WATER ANALYSIS

FLOW	1	gal/min.
pH	6.8	std units
TOTAL ACIDITY	0	mg/L as CaCO ₃
TOTAL ALKALINITY	83.000	mg/L as CaCO ₃
DISSOLVED IRON	0.100	mg/L Fe
DISSOLVED MANGANESE	0.100	mg/L Mn
SPECIFIC CONDUCTANCE	450.000	µMHOS/CM
SULFATES	86.000	mg/L S04
TEMPERATURE	18.000	Deg. C.

I CERTIFY THE ABOVE RESULTS WERE OBTAINED BY USING ACCEPTED ANALYTICAL PROCEDURES AS PRESCRIBED IN STANDARD METHODS AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE BELIEF

By: Terri Adams

ATTACHMENT 17.2.A

The following watersheds will be disturbed by the proposed operation:

Watershed Designation	Watershed Name	Drainage Area	1st Order Watershed	Type of Disturbance
A	Unnamed Tributary of Bennetts Fork	15.00 ac.	No	New, Significant (Remining)
B	Unnamed Tributary of Bennetts Fork	168.00 ac.	Yes	New, Significant (Remining)
C	Unnamed Tributary of Bennetts Fork	59.00 ac.	No	New, Significant (Remining)

Surface water quality within the aforementioned watershed appears good and does not appear to be adversely affected by previous logging or mining activities in the area of the proposed operation. It is believed the proposed operation will not result in a negative impact to existing water quality.

ATTACHMENT 17.3.A

As a part of the new surface disturbances which are proposed as a part of this application, we have conducted a Surface Water User Survey. As a result of the users survey it has been determined that there are no surface water users within the survey area for this permit application. All residents are supplied by the local municipal water service.

- 17.4 Describe the premining surface water monitoring program used to determine the seasonal variations in surface water quality and quantity. At a minimum, six months of data shall be collected. The description shall identify the location of each monitoring point, parameters tested, and laboratory methods used. Submit the description as "Attachment 17.4.A".
See Attachment 17.4.A.
- 17.5 On cabinet approved forms submit the results of the premining surface water monitoring program. Original or notarized copies of all laboratory analyses shall be provided. Submit this information as "Attachment 17.5.A".
See Attachment 17.5.A

18. Determination of Probable Hydrologic Consequences

- 18.1 Provide as "Attachment 18.1.A", a determination of the probable hydrologic consequences (PHC) which the proposed mining operation will have on both surface water and ground water systems within the proposed permit area and adjacent areas. The contents of the determination shall conform to the requirements of 405 KAR 8:030, Section 32 (surface mine) or 405 KAR 8:040, section 32 (underground mine).
See Attachment 18.1.A.
- 18.2 Provide as "Attachment 18.2.A", a detailed description of the protective measures to be taken as part of the mining and reclamation operations to ensure compliance with 405 KAR 16:060 Sections, 1, 2, 3, 4, 5, 6, 8, 9, 12, and 405 KAR 16:080 (surface mine) or 405 KAR 18:060, Sections 1, 2, 3, 4, 5, 7, and 405 KAR 18:080 (underground mine). Detailed designs of protective measures shall be presented in other pertinent sections of this application.
See Attachment 18.2.A.

19. Alternate Water Supply Information

- 19.1 Describe the extent to which the proposed mining activities may approximately result in the contamination, diminution, or interruption of underground or surface sources of water within the proposed permit or adjacent areas which are used for domestic, agricultural, industrial or other beneficial uses. This description shall be noted as "Attachment 19.1.A".
See Attachment 19.1.A.
- 19.2 If contamination, diminution, or interruption may result, identify and describe the adequacy of the alternate source of water supply that could be developed. Provide this information as "Attachment 19.2.A". NOTE: The submission of the information required in Attachment 19.2.A is optional for underground mine applicants.
See Attachment 19.2.A.

ATTACHMENT 17.4.A

PREMINING SURFACE WATER MONITORING PROGRAM

The pre-mining surface water monitoring program will consists of monitoring from Site #8 located in Hignite Creek as shown on the MRP/ERI Map.

BF1 Lat. 36° 35' 43" N (4,053,332.90)
Long. 83° 45' 52" W (252,699.15)

Six sets of data will be submitted. This point is currently being sampled as a part of the during mining surface water monitoring program for permits 807-0331 and 807-0301.

Parameters tested and methodology utilized are as follows:

<u>Parameters</u>	<u>Method</u>
Flow	Flow estimation meter
pH	SM 423*
Acidity	SM 402*
Alkalinity	SM 403*
Total Iron	SM 303A*
Total Manganese	SM 303A*
Sulfate	SM 426C*
Total Suspended Solids	SM 209C*
Specific Conductance	SM 205*
Temperature	SM 212*

* Standard methods for the examination of water and wastewater, 16th edition, 1985.

Type of Report:
 Premining
 During Mining/Reclamation
 Other

STATION INFORMATION

PERMIT #: 807-5223 STATION #: BF1 SOAP PERMITTEE #: N/A

*COUNTY #: 007 BASIN #: 02 QUAD NAME: Fork Ridge & Middlesboro South

STATION TYPE (check): [01] Spring [04] Well [] Old Mine
 Stream [05] Sediment Pond / Influent Works Portal
[03] Lake [06] Sediment Pond / Discharge

FOR WELLS ONLY
DEPTH (ft): _____ CASING DIAMETER (in): _____ AQUIFER DESCRIPTION: _____
TOP OF AQUIFER (MSL): _____ AQUIFER THICKNESS (ft): _____ TOP OF WELL ELEV. (MSL): _____

WATERSHED DESCRIPTION: Wooded-Previously Mined DRAINAGE AREA (ac.): _____

LATITUDE (DMS): 36-35-43 LONGITUDE (DMS): 83-45-52

UTM ZONE: 17 **16 West of 84° Longitude** UTM EASTING: 252,699 UTM NORTHING: 4,053,333
17 East of 84° Latitude

LOCAL STREAM NAME: Bennetts Fork

COAL COMPANY NAME: Bell County Coal Corporation

COLLECTING FIRM NAME: Technical Water Laboratories, Inc.; PO Box 309, Bledsoe, KY 40810

ANALYZING FIRM NAME: Technical Water Laboratories, Inc.; PO Box 309, Bledsoe, KY 40810

COMMENTS: _____

PERMIT # 807-5223 STATION # BF1

SAMPLE No. [1]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	09/11/06		2.0	359	7.90	0	115.05	12		

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	34			0.89		0.10				

COMMENT:

SAMPLE No. [2]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	12/11/06		2.0	310	7.70	0	110.85	8		

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	36			0.90		0.14				

COMMENT:

SAMPLE No. [3]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	02/27/07		1.50	318	7.90	0	120.59	10		

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	42			1.15		0.26				

COMMENT:

PERMIT # 807-5223

STATION # BF1

SAMPLE TA

SAMPLE No. [4]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	04/30/07		1.80	390	7.80	0	119.40	10		

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to water (ft)			
VALUE	67			1.82		0.50				

COMMENT:

SAMPLE No. [5]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	07/03/07		1.10	305	7.70	0	120.55	12		

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	39			1.90		0.66				

COMMENT:

SAMPLE No. [6]

PARAMETER	DATE MM/DD/YY	TEMP(C)	DISCHARGE (cfs)	CONDUCTIVITY	pH, (Std. Units)	ACIDITY mg/l	ALKALINITY	TSS mg/l	TDS mg/l	SETT. SOLIDS ml/l
VALUE	10/11/07		0.80	310	7.70	0	119.10	11		

PARAMETER	SO ₄ Diss mg/l	O ₂ Diss mg/l	Fe, Diss mg/l	Fe, Total mg/l	Mn, Diss mg/l	Mn, Total mg/l	Depth to Water (ft)			
VALUE	47			1.18		0.64				

COMMENT:


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-8023 & 807-5223 ~~SW-22~~ **BF1 Turn**
Lab# 16
Date Sampled: 09-11-2006
Date Analyzed: 09-11-2006
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.90		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	115.05	Mg/L	
Total Iron	0.89	Mg/L	
Dissolved Iron		Mg/L	
Total Manganese	0.10	Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids	12	Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	34	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance	359	Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)	2.0	CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-8023 & 807-5223 ~~SW2A~~ **BF1 TMM**
Lab# 16
Date Sampled: 12-11-2006
Date Analyzed: 12-11-2006
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.70		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	110.86	Mg/L	
Total Iron	0.90	Mg/L	
Dissolved Iron		Mg/L	
Total Manganese	0.14	Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids	8	Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	36	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance	310	Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)	2.0	CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.



Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-8023 & 807-5223 ~~SW-2A~~ BF 1 TWR
Lab# 16
Date Sampled: 02-27-2007
Date Analyzed: 02-27-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.90		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	120.59	Mg/L	
Total Iron	1.15	Mg/L	
Dissolved Iron		Mg/L	
Total Manganese	0.26	Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids	10	Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	42	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance	318	Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)	1.50	CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-8023 & 807-5223 ~~SW2A~~ BF 1 TWA
Lab# 16
Date Sampled: 04-30-2007
Date Analyzed: 04-30-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.80		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	119.40	Mg/L	
Total Iron	1.82	Mg/L	
Dissolved Iron		Mg/L	
Total Manganese	0.50	Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids	10	Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	67	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance	390	Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)	1.80	CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-8023 & 807-5223 **SW3A BF 1 TUM**
Lab# 16
Date Sampled: 07-03-2007
Date Analyzed: 07-03-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.70		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	120.55	Mg/L	
Total Iron	1.90	Mg/L	
Dissolved Iron		Mg/L	
Total Manganese	0.66	Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids	12	Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	39	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance	305	Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)	1.10	CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


*Signature of Laboratory Supervisor


TECHNICAL WATER LABORATORIES, INC.
P.O. Box 309 Bledsoe, KY 40810 (606) 558-5079 Fax (606)558-5565

SAMPLE ANALYSIS RESULTS

Tested for (Company Name): Appolo Fuels, Inc.
Sample ID: 807-8023 & 807-5223 SW 2A
Lab# 16
Date Sampled: 10-11-2007
Date Analyzed: 10-11-2007
Sampled By: Appolo Fuels, Inc.

Parameter	Value	Units	Remarks
PH	7.70		
Acidity to pH 8.3	0	Mg/L	*with hot peroxide treatment
Alkalinity to pH 4.5	119.10	Mg/L	
Total Iron	1.18	Mg/L	
Dissolved Iron		Mg/L	
Total Manganese	0.64	Mg/L	
Dissolved Manganese		Mg/L	
Total Suspended Solids	11	Mg/L	
Total Dissolved Solids		Mg/L	
Settleable Solids		Mg/L	
Total Solids		Mg/L	
Sulfates	47	Mg/L	
Calcium		Mg/L	
Nitrates		Mg/L	
Nitrogen (Ammonia)		Mg/L	
Bicarbonate		Mg/L	
Sodium		Mg/L	
Potassium		Mg/L	
Chloride		Mg/L	
Temperature		degrees F	
Turbidity			
Specific Conductance	310	Michromhos/CM	
Dissolved Oxygen		Mg/L	
Hardness		Mg/L	
Flow Rate (Gpm)		GPM	
Flow Rate (Cfs)	0.80	CFS	
Depth to Water		Feet	
Well Depth		Feet	

All tests are conducted in accordance with Acceptable analytical methods and Procedures and are correct and accurate to The best of my knowledge.


Signature of Laboratory Supervisor

ATTACHMENT 18.1.A

PROBABLE HYDROLOGIC CONSEQUENCE DETERMINATION

The proposed mining associated with this permit will have no adverse affects to the existing hydrologic balance. Pre-law mining and logging has occurred within and adjacent to the proposed permit area. This in itself has effected a gradual change in the surface and ground water systems resulting in their present states. Due to the previous mining, remaining pre-law sites, and relatively small area of surface disturbance proposed per this permit, no perceptible effects to the existing balance is anticipated. Following are supporting discussions which address required specifics for both surface and ground water.

SURFACE WATER

1) PEAK DISCHARGE RATES, EMPHASIZING FLOODING POTENTIAL:

Peak discharge rates are expected to increase slightly from disturbed areas which have not re-established vegetation. These increases will be temporary until such time that vegetation is re-established. The disturbed areas will are small when compared to the total watershed area. Likewise, the increase in discharge rates will be comparatively small, thus presenting no increase in flooding potential.

2) SETTLEABLE SOLIDS AT PEAK DISCHARGE:

Small increases of settleable solids at peak discharges are also anticipated from disturbed areas prior to revegetation. These settleable solids will be controlled by the sediment ponds located as shown on the MRP Map. After mining, reclamation, and vegetation re-establishment, settleable solids concentrations should return to near pre-mining levels.

3) LOW-FLOW DISCHARGE RATES, EMPHASIZING THE POTENTIAL FOR WATER SUPPLY DIMINUTION:

Low-flow discharge rates during-mining are expected to be somewhat less than those existing prior to mining. This is primarily due to routing of run-off into the sedimentation pond and subsequent retention time.

4) SUSPENDED SOLIDS AT LOW FLOW:

Suspended solids are expected to increase temporarily from areas which have been cleared and grubbed. Implementation of the sediment structures will prevent the discharge of unacceptable levels. After mining/reclamation operations are completed

ATTACHMENT 18.1.A

and revegetation is substantial, concentrations are expected to return closely to pre-mining levels.

/5) PH, AT LOW FLOW, EMPHASIZING THE POTENTIAL FOR ACID DRAINAGE CONDITIONS:

Baseline hydrologic data indicates no acidity or associated problems. Also, as supported by the included baseline geologic data, neither the overburden nor the coal seam to be mined indicate a cumulative potential to produce acid mine drainage.

Based on the previous discussions, it is felt that the mining as proposed per this permit will have no detrimental impact to surface water. However, in-stream during-mining monitoring of Bennetts Fork at the location shown on the MRP Map and ERI Map as point #BF1 will allow identification and correction of any adverse effects, should they occur.

GROUNDWATER

1) WATER QUANTITY, EMPHASIZING WATER LEVELS/POTENTIAL WATER SUPPLY DIMINUTION FOR EXISTING USERS/DEWATERING OF POTENTIAL AQUIFERS:

Fracturing is the method of groundwater recharge and transmittal, and fracturing will not be diminished by this operation. Consequently water quantity should not be affected.

2) PH, EMPHASIZING THE POTENTIAL FOR ACID DRAINAGE CONDITIONS:

As shown by the baseline geologic and surface/ground water data, there are currently no acidity problems present, and no cumulative potential to produce acid drainage conditions are indicated. As a result, any infiltration will have no detrimental effect to the ground water regime.

Based on the previous discussions, it is felt that the mining proposed per this permit will have no adverse impacts to the ground water system. However, during-mining monitoring of ground water points GW-1, STA1, GW-14 and GW-501, will allow identification and correction of any adverse effects, should they occur.

ATTACHMENT 18.2.A

The activities proposed in this application should not have any effects on the surface waters. However, the following will be implemented as preventive measures to prevent any adverse effects on surface waters:

- 1) Surface runoff from above the permit areas and from the permit areas will be routed into fresh water diversion ditches to prevent excessive erosion.
- 2) The surface of the permit areas will be sloped and graded, to the extent possible, to enhance sheet flow and reduce flow velocity of the surface runoff to reduce rill and gully erosion and to prevent excessive erosion of the permit areas.
- 3) Each diversion ditch will be properly maintained to meet the performance standards.
- 4) All surface runoff will be routed into an approved sediment control device such that the discharge from the structure will meet all applicable effluent performance standards.
- 5) According to the geologic information, toxic strata will not be encountered during the proposed operations.
- 6) All roads will be maintained with crushed limestone or other durable material.
- 7) All mine sites will be graded to promote drainage and prevent ponding of water which might create toxic or acid drainage.

ATTACHMENT 19.1.A

A survey was conducted on surface and ground water users located within a watershed five (5) times the drainage area affected by the mining operation. This study revealed that the area has no domestic, agricultural, commercial, or industrial users of surface water. The proposed operation in this area will not result in the contamination, diminution or interruption of water within the watershed. The nearest groundwater users from the permit area are obtaining their supplies from a municipal water system. Therefore, mining of this area will have no impact.

ATTACHMENT 19.2.A

It is not anticipated that the activities proposed in this application will have any adverse effects on any surface or ground sources of water. However, since mining activities are proposed, it is possible that surface water or groundwater sources could possibly be affected. The company will comply with all requirements as set forth by KDSMRE in 405 KAR 18:060, Section 12 (2)(a).

The following sources of water could be developed to replace any source of water which might be adversely affected by operation:

- 1) Cisterns: Individual residences could be provided with cisterns of adequate capacity to provide ample water supply. There is adequate rainfall within this area to allow the use of cisterns.
- 2) Deep Wells: The existing wells or new wells could be drilled to lower depths. The casings in these wells could be extended and the outside of the well casing could be grouted to seal off any water from seeping down into the well.
- 3) Public Water System: A public water system could be developed to provide water to the residents of this area.
- 4) A chemical treatment system to clarify contaminated water could be provided for any source of water which might be adversely affected by this operation.
- 5) Stream channels could be cleaned in the event of heavy sedimentation or reconstructed in the event of cracks to enhance the surface water flow of the watershed.

20. Prime Farmland Investigation

20.1 Based upon the applicant's review of relevant information and the performance of an on-site investigation of the permit area, the applicant proposes a negative determination on 21.62 acres of this permit. This request is based upon the following:

21.62 acres should not be considered prime farmland due to the slope being greater than 10% or the soil is very rocky, or the area floods during a growing season more than once every two years thus reducing crop yields, etc. Documentation demonstrating this assertion is submitted as Attachment 20.1.A.

See Attachment 20.1.A

_____ acres should not be considered prime farmland as it has not been historically used as cropland. The standard departmental surface owner and third party affidavits are submitted as "Attachment 20.1.B and 20.1.C". Applicant should provide a narrative explaining why the acreage as not been farmed. This narrative should reference the history of nearby and adjacent lands.

_____ acres should not be considered prime farmland as demonstrated by the following U.S. Soil Conservation Service statement. The land designated on the USGS topographic map attached to permit application no. _____ has

- no prime farmland soils
- some prime farmland soils
- all prime farmland soils

Name _____ Title _____

Signature _____ Date _____

20.2 For applicants claiming an exemption from prime farmland reconstruction submit proper documentation as "Attachment 20.2.A" to demonstrate that a permit has been obtained prior to August 3, 1977, or that the other requirements of 405 KAR 8:050, Section 3, have been met.

N/A

20.3 Identify the acreage of prime farmland acreage to be restored. Provide as "Attachment 20.3.A" the prime farmland restoration plan.

N/A

21. Land Use Information

21.1 Describe the capability of the proposed permit area, before any mining, to support a variety of land uses. Consideration shall be given to soil and foundation, topography, vegetative cover and hydrology. Submit as "Attachment 21.1.A".

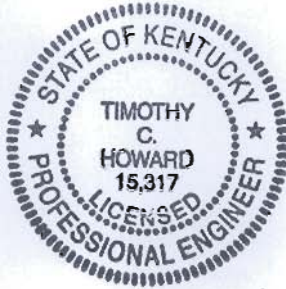
See Attachment 21.1.A

ATTACHMENT 20.1.A

Based on the U.S.G.S. topographical map, and field investigation the areas proposed by this original permit application are located on slopes greater than ten (10%) percent.



Signature, Timothy C. Howard, P.E.



ATTACHMENT 21.1.A

The land use of this site prior to mining activity was forestry. The land is not suited to any other type of land use. The relatively steep slopes of the land, along with lack of access to the site, prevented the development of any type of land use including cropland, recreational, water resources, residential or industrial/commercial.

21.2 Provide an estimate of the permit area's potential productivity expressed in average of food, fiber, forage, or wood products. Provide as "Attachment 21.2.A".

See Attachment 21.2.A

21.3 Describe the existing uses of the lands adjacent to the proposed permit areas and identify any local land use classifications of the proposed permit area. Submit as "Attachment 21.3.A".

See Attachment 21.3.A

21.4 Describe the consideration which has been given to making the proposed postmining activities consistent with surface owner plans and applicable state and local land use plans and programs. Submit as "Attachment 21.4.A".

See Attachment 21.4.A

21.5 Attach copies of the comments concerning the proposed postmining land use from legal or equitable owner of record of the surface area to be affected. Also, attach any comments from federal, state, and local government agencies which would have to initiate, implement, approve, or authorize the proposed land use following reclamation. Submit as "Attachment 21.5.A, 21.5.B" etc.

See Attachment 21.5.A

21.6 Indicate existing land uses within the proposed permit area:

<input type="checkbox"/> Forestland (40) _____ ac.	<input type="checkbox"/> Developed Water Resources (53) _____ ac.
<input type="checkbox"/> Pastureland (20) _____ ac.	<input type="checkbox"/> Residential (11) _____ ac.
<input type="checkbox"/> Cropland (21) _____ ac.	<input type="checkbox"/> Industrial/Commercial (13) _____ ac.
<input type="checkbox"/> Fish and Wildlife (01) _____ ac.	<input type="checkbox"/> Undeveloped (60) _____ ac.
<input type="checkbox"/> Recreation (02) _____ ac.	
<input checked="" type="checkbox"/> Mined Lands (30) <u>21.62</u> ac.	

Clearly delineate on the Environmental Resources Map, the boundaries of each land use checked above.

21.7 If active coal mining is being conducted within the proposed permit area or if previous mining has been conducted within the proposed permit area, provide the following information: If not applicable, check here [].

Premining Land Use(s)	Acres
<u>Undeveloped Forest</u>	<u>21.62</u>
_____	_____
_____	_____
_____	_____

21.8 If any land use (other than mining) has been in existence less than five years prior to the date of this application, describe the historic land use. Submit this description as "Attachment 21.8.A". If not applicable, check here [XX].

21.9 If previous mining has occurred within the proposed permit area, describe the type of mining used, coal seam or other strata mined, area extent of such mining, and approximate dates of the disturbances. Submit as "Attachment 21.9.A". All areas of prior disturbance shall be shown on the MRP Map. If not applicable, check here [].

See Attachment 21.9.A

ATTACHMENT 21.2.A

As the pre-mine land use of the site is Forestry, the productivity and average yield of the area will be discussed as woodland. The following information was obtained from the Soil Conservation Service in the "Soil Survey of Bell and Harlan Counties, Kentucky", December 1992.

We present the following discussion concerning Woodland Management and Productivity.

Soils vary in their ability to produce trees. Available water capacity and depth of the root zone have major effects on tree growth. Fertility and texture also influence tree growth. Elevation, aspect, and climate determine the kinds of trees that can grow on a site. Elevation and aspect are of particular importance in mountainous areas.

This soil survey can be used by woodland managers planning ways to increase the productivity of forest land. Some soils respond better to applications of fertilizer than others, and some are more susceptible to landslides and erosion after roads are built and timber is harvested. Table 8 summarizes the forestry information and rates the soils for a number of factors to be considered in management. Slight, moderate, and severe are used to indicate the degree of the major soil limitations to be considered in forest management.

Ratings of the erosion hazard indicate the probability that damage may occur if site preparation of harvesting activities expose the soil. The risk is slight if no particular preventive measures are needed under ordinary conditions; moderate if erosion-control measures are needed for particular silvicultural activities; and severe if special precautions are needed to control erosion for most silvicultural activities. Ratings of moderate or severe indicate the need for construction of higher standard roads, additional maintenance roads, additional care in planning harvesting and reforestation activities, or the use of special equipment.

Ratings of equipment limitation indicate limits on the use of forest management equipment, year-round or seasonal, because of such soil characteristics as slope, wetness, stoniness, or susceptibility of the surface layer to compaction. As slope gradient and length increase, it becomes more difficult to use wheeled equipment. On the steeper slopes, tracked equipment is needed. On the steepest slopes, even tracked equipment cannot be operated and more sophisticated systems are needed. The rating is slight if equipment use is restricted by soil wetness for less than 2 months and if

ATTACHMENT 21.2.A

special equipment is not needed. The rating is moderate if slopes are so steep that wheeled equipment cannot be operated safely across the slope, if wetness restricts equipment use from 2 to 6 months per year, if stoniness restricts the use of ground-based equipment, or if special equipment is needed to prevent or minimize compaction. The ratings is severe if slopes are so steep that tracked equipment cannot be operated safely across the slopes, if wetness restricts equipment use of more than 6 months per year, if stoniness restricts the use of ground-based equipment, or if special equipment is needed to prevent or minimize compaction. Ratings of moderate or severe indicate a need to choose the most suitable equipment and to carefully plan the timing of harvesting and other management activities.

Ratings of seedling mortality refer to the probability of the death of naturally occurring or properly planted seedlings of good stock in periods of normal rainfall, as influenced by kinds of soil or topographic features. Seedling mortality is caused primarily by too much water or too little water. The factors used in rating a soil for seedling mortality are texture of the surface layer, depth to a seasonal high water table and the length of the period when the water table is high, rock fragments in the surface layer, rooting depth, and the aspect of the slope. The mortality rate generally is highest on soils that have a sandy or clayey surface layer. The risk is slight if, after site preparation, expected mortality is less than 25 percent; moderate if expected mortality is between 25 and 50 percent; and severe if expected mortality exceeds 50 percent. Rating of moderate or severe indicate that it may be necessary to use containerized or larger than usual planting stock or to make special site preparations, such as bedding, furrowing, installing a surface drainage system, and providing artificial shade for seedlings. Reinforcement planting is often needed if the risk is moderate or severe.

Ratings of plant competition indicate the likelihood of the growth or invasion of undesirable plants. Plant competition is more severe on the more productive soils, on poorly drained soils, and on soils having a restricted root zone that holds moisture. The risk is slight if competition from undesirable plants hinders adequate natural or artificial reforestation but does not necessitate intensive site preparation and maintenance. The risk is moderate if competition from undesirable plants hinders natural or artificial reforestation to the extent that intensive site preparation and maintenance are needed. The risk is severe if competition from undesirable plants prevents adequate natural or

ATTACHMENT 21.2.A

artificial reforestation unless the site is intensively prepared and maintained. A moderate or severe rating indicates the need for site preparation to ensure the development of an adequately stocked stand. Managers must plan site preparation measures to ensure reforestation without delays.

The potential productivity of common trees on a soil is expressed as a site index and a volume number. Common trees are listed in the order of their observed general occurrence. Generally, only two or three tree species dominate. The first tree listed for each soil is the indicator species for that soil. An indicator species is a tree that is common in the area and that is generally the most productive on a given soil.

The site index is determined by taking height measurements and determining the age of selected trees within stands of given species. This index is the average height, in feet, that the trees attain in a specified number of years. This index applies to fully stocked, even-aged, unmanaged stands. The site indices in table 8 are based on regional studies.

The volume is the yield likely to be produced by the most important trees expressed in cubic feet per acre per year calculated at the age of culmination of mean annual increment.

Trees to plant are those that are used for reforestation or, under suitable conditions, natural regeneration. They are suited to the soils and can produce a commercial wood crop. The desired product, topographic position (such as a low, wet area), and personal preference are three factors among many that can influence the choice of trees for use in reforestation.

Bell and Harlan Counties are in the mixed mesophytic forest region of the eastern deciduous forest. Steep mountain slopes make up about 90 percent of the survey area and, except for areas recently surface mined for coal, are forested. Maple, beech, yellow poplar, oak, and hickory are the dominant tree species.

Much of the forest land is owned by large corporations, which are primarily interested in the coal resources. Some of the forest land is in small private holdings. The Kentucky Ridge State Forest and the Kentenia State Forest, which make up a total of about 16,000 acres, are managed for multiple uses. Almost 16,000 acres of forest land is in the Cumberland Gap National Historical Park, Kingdom Come State Park, and Pine Mountain State Park. Other forest land owned by state, federal, and local

ATTACHMENT 21.2.A

agencies makes up about 4,000 acres. Most of the publicly owned forest land is in the Helechawa-Alticrest-Varilla general soil map unit. Currently, three large sawmills operate in the survey area. Tree products, such as rough-sawn boards, mine props, shims, and blocking, are cut at several small mills. Mine props and fuel wood are cut by many landowners. Markets are insufficient for much of the low-quality hardwood.

FOREST SPECIES

The presettlement forest of the survey area was a mixed mesophytic deciduous forest, which flourished particularly in the higher mountains, in regard to number of tree species, size of trees, and variety of forest types. In the present-day mixed mesophytic forest association, several species generally are in a stand of trees. The most common species are sugar maple, yellow poplar, black locust, yellow buckeye, and basswood. Other species are northern red oak, red maple, white oak, chestnut oak, cucumbertree, American beech, eastern hemlock, black cherry, birch, magnolia, and hickory. The mixed mesophytic forest covers almost all of the Highsplint-Cloverlick-Guyandotte general soil map unit. It is on cool slopes and in coves.

Oak forests are in the drier areas, such as the south-and west-facing sides of mountains and the tops of mountains. The most common species are chestnut oak, scarlet oak, white oak, red maple, blackgum, and hickory. Oak-pine forests on Pine and Cumberland Mountains are also in the drier areas. Pitch pine, Virginia pine, and shortleaf pine are mixed with the oaks.

SOIL AND TREE RELATIONSHIPS

A knowledge of soils helps to provide a basic understanding of the distribution of tree species on the landscape and tree growth. Some of these relationships are readily recognized. For example, yellow poplar grow well on deep or very deep, moist soils and scarlet oak or pine is common where the rooting depth is restricted or the moisture supply is limited. The soil serves as a reservoir for moisture, provides an anchor for roots, and supplies most of the available nutrients. Soil properties that directly or indirectly affect these growth requirements include organic matter content, reaction, fertility, drainage, texture, structure, depth, and landscape position. Elevation and aspect are of particular importance in mountainous areas. The available water capacity is primarily influenced by texture, organic matter content, rooting depth, and content of rock fragments. In the survey area, available water capacity is a limitation

ATTACHMENT 21.2.A

affecting tree growth only in the shallow soils, such as Totz soils, because of the fairly even and abundant summer rainfall. Changing the physical limitations of the soils is difficult, but timber stand improvement and thinning are useful in management.

All of the soils in the survey area, except for the shallowest ones, provide an adequate anchor for tree roots. The susceptibility to windthrow, or the uprooting of trees by the wind, is not a major management concern on most soils.

The available supply of nutrients affects tree growth. Mineral horizons in the soil are important. Mineralization of the humus releases nitrogen and other nutrients to plants. Calcium, magnesium, and potassium are held within the humus. Very small amounts of these nutrients are made available by the weathering of clay and silt particles. Most of the soils in the uplands have been leached and have only small amounts of nutrients below the surface layer. Where the surface layer is thin, as in Shelocta and Gilpin soils, careful management is needed during site preparation to ensure that the surface layer is not removed or degraded. The living plant community is part of the nutrient reservoir. The decomposition of leaves, stems, and other organic material recycles the nutrients that have accumulated in the forest ecosystem. Fire, excessive trampling by livestock, and erosion can result in the loss of these nutrients. Forest management should include prevention of wildfires and protection from overgrazing. Aspect and landscape position influence the amount of available sunlight, air drainage, soil temperature, and moisture retention. North- and east-facing slopes, or cool slopes, are better suited to tree growth than south- and west-facing slopes, or warm slopes. Differences in site index values can be as much as 10 feet. Most of the soils on cool slopes have an A horizon that is thicker and has more humus and clay than that of the soils on warm slopes. Examples of soils on cool slopes are Cloverlick, Cutshin, Guyandotte, and Kimper. These soils have a slightly higher capacity hold water and a much higher capacity to hold nutrients than the soils on warm slopes. The mean annual soil temperature is about 2 degrees F lower on the cool slopes. The difference in temperature is most prevalent during the dormant season. Because less sunlight falls on the canopy in areas of the cool slopes, the air temperature in the canopy and the transpiration rate are lower and less water is needed.

Soils on the lower slopes may receive additional water because of internal waterflow. On the very steep uplands, much of the water movement during periods of

ATTACHMENT 21.2.A

saturation occurs as lateral flow within the subsoil.

Soil and air temperatures are lower on the upper slopes than on the lower slopes. The temperature decreases is about 1 degree F per 550-foot change in elevation. The soils at the base of warm slopes and the soils on the adjacent cool slopes are similar, probably because of the shading effect of the ridge and possibly because of air drainage. These similar soils are mapped together.

Nutrients, water, and landscape position largely determine which tree species grows on a particular soil. For example, sugar maple-basswood forest is on soils that have the highest fertility levels and a high moisture content. Beech grows on soils that have a high moisture content and intermediate fertility levels. Chestnut oak-red maple forest is on soils that have low fertility levels and a low moisture content. Scarlet oak-pine forest is on soils that have very low fertility levels and a very low moisture content.

ATTACHMENT 21.3.A

The existing uses of the land adjacent to this mining area consist of second growth forestland. The second growth forestland are areas that were once cut for timber but have since reforested.

There are no local land use classifications of the proposed permit area. The area to be disturbed is a second growth forestland.

ATTACHMENT 21.4.A

The plans for establishing the post-mining land use of Forestland are consistent with the wishes of the landowners and are compatible with adjacent land uses. Surrounding lands are a combination of forestland and other Wildlife Habitats. The proposed uses do not conflict with any local, state or federal land use policy or plan and do not require approval by any local, federal or land management agency.

Postmining Land Use Comments

TO: Permit Review Section
Division of Permits, DSMRE
Frankfort, Kentucky 40601

RE: Bell County Coal Corporation
Postmining Land Use Request
Permit No. 807-5223

To whom it may concern:

We, the undersigned, being the owners of property which is within the permitted or proposed boundary, hereby request for and on behalf of ourselves, our heirs, personal representatives, successors and assigns that the property be left after mining, whenever possible, in a level plateau or gently rolling contour. The postmining land use of forestland would be desirable, and that all roads constructed during the mining process are left as access to the property.

This is in accordance with our plans for development and would render this area compatible with other properties in the vicinity, which is the subject of similar development. We consent to the postmining land use of forestland, with permanent roads, and agree to provide sufficient management after the operators' bond is released to assure the proposed postmining land use remains practical and reasonable. This request, as signed and issued, shall remain in effect for any future revisions or other permitting actions taken by the applicant for this application.

Appolo Fuels, Inc.

Gary Ascher 7/29/08
Date

Subscribed and sworn to before me this the 29th day of July, 2008.

Notary Public [Signature] My Commission Expires: 2-13-10

ATTACHMENT 21.9.A

Surface disturbances associated with underground mining activities in the Jellico seam have occurred within the coal stockpile area proposed by this application. The mining was conducted prior to the onset of permits and permit numbers so no permit numbers or mine names are available for this area. Additionally surface disturbances have occurred within the proposed mine management areas located on the south side of Bennetts Fork. These disturbances were created as a part of Appolo Fuels, Inc. permit #807-8023. Permit #807-8023 is currently active and was permitted as a load out area.

21.10 Indicate the proposed postmining land use(s) of the permit area:

<input checked="" type="checkbox"/> Forestland (40) <u>21.62</u> ac.	<input type="checkbox"/> Developed Water Resources (53) _____ ac.
<input type="checkbox"/> Pastureland (20) _____ ac.	<input type="checkbox"/> Residential (11) _____ ac.
<input type="checkbox"/> Cropland (21) _____ ac.	<input type="checkbox"/> Industrial/Commercial (13) _____ ac.
<input type="checkbox"/> Fish and Wildlife (01) _____ ac.	<input type="checkbox"/> Undeveloped (60) _____ ac.
<input type="checkbox"/> Recreation (02) _____ ac.	
<input type="checkbox"/> Mined Lands (30) _____ ac.	

21.11 Describe how the proposed postmining land use(s) will be achieved and identify any necessary support or management activities which will be used. Submit as "Attachment 21.11.A".

See Attachment 21.11.A

21.12 If the proposed postmining land use(s) represent a change from the existing or premining land use(s), provide the following information:

- (a) A discussion of the feasibility, i.e. suitability, capability, cost effectiveness of the proposed postmining land use(s). Submit as "Attachment 21.12.A".
- (b) A schedule for achieving the proposed postmining land use(s). Submit as "Attachment 21.12.B".
- (c) A discussion of how the proposed postmining land use(s) will be achieved within a reasonable time frame. Submit as "Attachment 21.12.C".
- (d) A separate map showing the proposed postmining land use(s). Submit as "Attachment 21.12.D".

If section 21.12 is not applicable, check here .

22. Vegetation Information

22.1 Provide as "Attachment 22.1.A", a map and narrative description of the existing vegetative types and plant communities within the proposed permit and any proposed reference area. This description shall include adequate information to predict the potential success for re-establishing vegetation on the proposed permit area.

See Attachment 22.1.A

Bell County Coal Corporation
Application No. 807-5223, NW
April 15, 2008

Application Item 21.11: Fish and Wildlife Enhancement Plan

Based on the Division's environmental review, it has been determined that the application **will** require a fish and wildlife enhancement plan, as specified in 405 KAR 8:030/040, Section 36(1). This plan must be submitted as an attachment to application item 21.11.

ATTACHMENT 21.11.A

Upon completion of all coal mining activities, the support activities, all non-permanent facilities will be removed. Any and all disturbed areas will be graded to drain and will be vegetated with a variety of grasses, legumes and trees identified in the chart in Item 22.2.

Final grade will be established by minimize tractor traffic which minimizes compaction which will maximize the sites quality as forest area. Grading will be conducted to minimize compaction but to insure stability, as much organic debris will remain, an occasional small depression, hill, gully, mound, rock or rock pile or woody debris will remain in order to establish a more diverse native forest area.

The proposed post-mining land use of Forestland will be achieved by planting the variety of vegetation listed in Item 22.2 of this application. Additional plantings will be made as necessary to insure that the site has an adequate stand of forage material. Much natural reforestation will occur on the permit area because of its close proximity to other heavily forested areas. All areas adjacent to the permit area currently support many vegetative species.

The revegetation plans proposed for this area is highly suitable for populations of white-tailed deer, turkey, rabbit, fox, squirrel and will also attract other species including ruffed grouse and some small furbearers and non-game birds. Although it is anticipated that the ponds located within the permit boundary will be removed in the future, the adjacent areas contain perennial streams with significant flow that will provide a water source for wildlife. Most of the animal species mentioned above do not require a daily source of open water; their water requirements can easily be provided by dew and succulent plants.

In order to attract and maintain deer populations, an area must provide adequate food sources. Deer feed on a variety of fruits, mast and fungi, browse on woody material, and graze grasses and forbs. The area described in this application and the heavily-forested adjacent areas will provide sources of all these vegetative species. Adequate mast is provided by various types of oak, beech and hickory trees, all of which will be found within or adjacent to the permit area. Fruit sources are provided by other various tree and shrub species, including dogwood and autumn olives. Browse material is provided by various species of pine, maple, poplar and locust trees. As with the mast sources, these species will be found within or adjacent to the permit area.

There will be grassy areas within the permit boundary that contain grasses and forbs

ATTACHMENT 21.11.A

that can provide grazing material for the deer and other herbivores. These species include ladino clover and orchard grass. These same species provide forage and cover material for other wildlife species.

ATTACHMENT 22.1.A

EXISTING VEGETATIVE TYPES

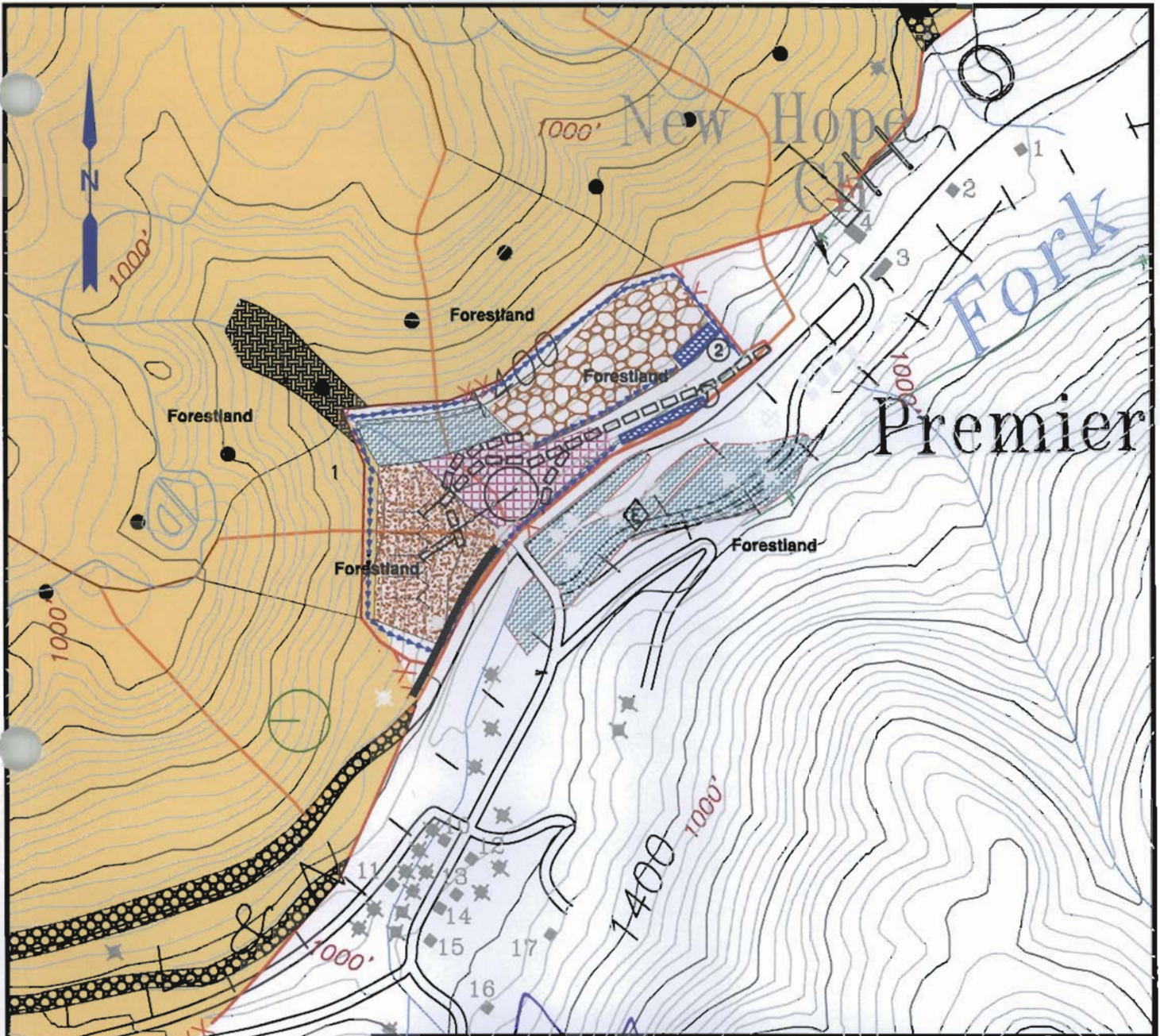
Vegetative types within the proposed surface disturbance area for this application consists basically of second and third growth deciduous forest. These forested areas are generally comprised of the following species:

- Tulip Poplar
- White Oak
- Chestnut Oak
- Red Oak
- Shagbark Hickory
- Slickbark Hickory
- Maple
- Beech
- Birch
- Black Locust

Pre-law areas in the vicinity of this application include the following species:

- Mountain Laurel
- Rhodendron
- American Elder
- Sassafrass
- Ironwoods
- White Pine
- Autumn Olive
- Black Locust
- Birch

Similar areas in the general locale have historically responded well to re-establishment of vegetation with the addition of nutrients and proper management. This is also supported by the occurrence of natural revegetation on pre-law disturbed areas with no nutrients or management of any kind. Consequently, the potential for re-establishing vegetation on the proposed permit area is expected to be extremely good.

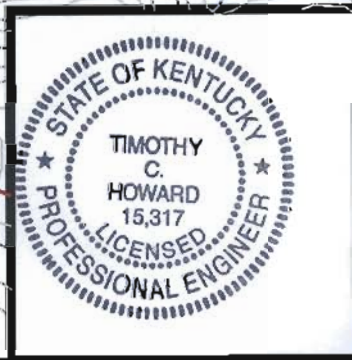


Bosworth
Sch

I, Timothy Howard, P.E. No. 15,317

Date: 8/13/08

hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation

Permit No. 807-5223
Attachment 22.1.A
Existing Land-Use & Vegetation Type

Scale: 1" = 500

Page No. 1 of 1

Prepared by:
Howard Engineering & Geology, Inc.

22.2 Complete the following table to describe the plan for revegetating the proposed permit area. If additional pages are necessary, identify as "Item 22.2 continued".

Proposed Postmining Land Use <u>Forestland</u>	Rate per Acre	Acreage	Planting Dates
Permanent Grass: Orchard Grass Redtop	3# 5#	19.68*	Spring Feb-June Fall Aug-Nov
Legumes: Korean and/or Kobe Lespedeza Ladino Clover	3-5# 3-5#	19.68*	Spring Feb-June Fall Aug-Nov
Trees: Black Locust/White Pine White Ash Silver Maple White Oak	50 100 100 100	19.68*	Nov-April
Temporary Plants: Annual Rye	4#	19.68*	Spring Feb-June Fall Aug-Nov
Mulch: Straw, Hay or Hydro Mulch	1.5 Tons	19.68*	As needed
Small Grains: N/A			

* = 1.94 acres of permanent roads.

22.3 Are alternate soil stabilizers in lieu of mulch being requested?
 YES NO. If "YES", justify this proposal, identify acreage for which this variance is requested and describe the nature of the soil stabilizer. Provide as "Attachment 23.3.A".

22.4 Provide as "Attachment 22.4.A", detailed description of:

- (a) The methods to be used in planting, seeding and mulching, including irrigation, pest and disease control measures.
- (b) The measures to be used to determine the success of revegetation as required by 405 KAR 16:200 and 405 KAR 18:200.
- (c) The soil testing plan for evaluating the results of topsoil handling and reclamation procedures related to revegetation.
See Attachment 22.4.A

ATTACHMENT 22.4.A-C

Revegetation Information

A

As the mining activity proposed in this application is completed, final grade will be established on the backfilled areas of the mine bench. The site will be backfilled with spoil from the spoil storage area to complete reclamation of the mine site. The areas mined as a part of this application will be backfilled completely eliminating any created highwall. Alternate topsoil material will be the final layer of spoil material. The alternate topsoil will be spread over the site in uniform thickness and care will be taken to prevent unnecessary compaction of the alternate topsoil. The alternate topsoil will be scarified prior to the area being revegetated with a variety of species.

The following methods to be implemented in regards to growth medium for trees and shrubs are recommended by D.N.R.'s RAM #124:

The best available growth medium on the permit area should be placed on the surface to depth of at least four feet, thus accommodating the needs of deeply rooted trees. Growth media with low to moderate levels of soluble salts, an Equilibrium pH of 5.0 to 7.0, low pyritic sulfur content, and texture conducive to proper drainage are preferred. However, for those sites where the best available material varies from the above recommendation, an equilibrium pH as low as 4.5 or as high as 8.0 is acceptable, so long as species tolerant of those conditions are selected and utilized. Seed mixtures to be used for revegetation are described in Item 22.2. These seed mixtures will contain one annual or short-lived perennial species for quick cover and erosion control. The mixture will also contain long-lived perennial legumes and grasses for permanent cover.

ATTACHMENT 22.4.A-C

These perennial species will replace the annual plants as they die out. The perennial legumes are nitrogen fixers and help to eliminate the need to refertilize the area with additional nitrogen. All seed to be used during reclamation will be pre-inoculated prior to purchase.

Seed mixtures will be applied using the direct seeding method. A hydroseeder may be utilized in the seeding process. The hydroseeder will be loaded with enough seed and water to cover one acre at a time to ensure proper coverage of the area to be reclaimed. In addition to the fertilizer to be mixed with the seed/water mixture, hydrated or agricultural lime will be added to prevent killing the inoculating bacterium in the seed.

The tree species will be planted using a hand dibble. A two (2) foot area around the seedlings will be cleared to enhance the seedling ability to survive.

After the area has been seeded, the area will be mulched. The mulch material on the areas of 10% or greater will consist of straw or hay which will be applied at a rate of 1.5 tons per acre. This mulch material will be applied by hand or by a device that chops and blows the material into place. Alternate mulch that may be used is wood fiber that would be applied at a rate of 1,000 lbs. per acre and may be applied by using a hydroseeder. During backfill operations the areas shall be graded to allow for natural irrigation for the backfill areas.

B

The referenced methods as outlined in TRM#21 which references the administrative KAR 16:200 Section (6) (1) (a) relating to revegetation of mine sites. This information shall be utilized to determine the success of revegetation as compared to the following standards. Areas planted only in herbaceous species shall sustain a vegetative ground cover of 80% (with 90% statistical confidence) for the last 3 years of

ATTACHMENT 22.4.A-C

the 5-year liability period. Also, areas planted with a mixture of herbaceous and woody species shall sustain an herbaceous ground cover of at least eighty (80) percent with a statistical confidence of ninety (90) percent, with no sign of significant erosion as set forth in 405 KAR 16:190, Section 6. Each species of woody plants (trees or trees and shrubs) shall be at least 300 plants per acre with a statistical confidence of ninety (90) percent, with tree (not shrub) species comprising at least seventy-five (75) percent of the total stock, shall be achieved on at least seventy (70) percent of the area stocked. Tree seedling survival shall be enhanced by planting seedlings during the first possible planting season following seeding of the grass species listed in Item 22.2. Stocking density of woody plants shall be at least 300 plants per acre.

C

As detailed in Attachment 23.1.A of this application, alternate topsoil material would be placed at the sites indicated on the Mining and Reclamation Plan Map. This alternate topsoil material would be a blending of all salvaged topsoil and other suitable materials generated during the mining operation. Sixty (60) days prior to the completion of mining, the alternate topsoil will be tested again to determine what nutrients should be applied to the redistributed topsoil. Soil sampling would be conducted in general accordance with the procedures outlined in U.S. AGR-41 "Sampling Surface Mine Lands Before and After Mining" by Evangelou and Barnhisel. Soil testing would be conducted by an independent laboratory using the methods outlined in "Field and Laboratory Methods Applicable to Overburdens and Minesoils", by A.A. Sobek et al March 1978. (EPA report 600/2-78-054).

23. Soil Resources Information

- 23.1 Is soil survey information for the proposed permit area available from the U.S. Soil Conservation Service? YES [] NO. If "YES", use the appropriate information to provide a description of existing soils that will be disturbed within the proposed permit area.
See Attachment 23.1.A
- 23.2 Does the applicant propose to use selected overburden materials as a supplement or substitute for topsoil? YES [] NO. IF "YES", provide the following information:
See Attachment 23.2.A
- (a) A geologic cross section of the proposed permit area identifying the proposed alternate material(s) to be used. Submit as "Attachment 23.2.A".
See Attachment 23.2.A
- (b) The results of chemical and physical analyses of the existing soils and the proposed alternate materials conducted in accordance with 405 KAR 16:050. Submit as "Attachment 23.2.B".
See Attachment 23.2.B
- (c) Certification by a qualified soil scientist or agronomist that the alternate material is equal to, or more suitable than, the existing topsoil. Submit as "Attachment 23.2.C".
See Attachment 23.2.
- 23.3 Describe, as "Attachment 23.3.A", how topsoil or alternate topsoil materials will be removed, stored, stabilized, protected, and redistributed in the proposed permit area. Indicate on the MRP Map where topsoil and/or alternate topsoil stockpiles will be located.
See Attachment 23.3.A

24. Surface Blasting Plan

- 24.1 Is surface blasting proposed for the permit area? YES [] NO.
- 24.2 Will blasting be conducted within 1000' of any building used as a dwelling, public building, school, church, commercial, community, or institutional building? YES [] NO. If "YES", submit as "Attachment 24.2.A", an anticipated blast design prepared and signed by a certified blaster with this application, or at a time prior to the blasting operation. If the design will be submitted after permit issuance, the design shall be provided thirty days prior to the anticipated blasting and such blasting may not be initiated until DSMRE approval is obtained. **The anticipate blast design shall be submitted 30 days prior to the anticipated blast. Blasting shall not be initiated until DNR approval is obtained**
- 24.3 Will blasting be conducted within 500' of an active or abandoned underground mine? YES [] NO. If "YES", attach the appropriate MSHA Blasting Approval Form as "Attachment 24.3.A".
 Inactive abandoned underground mine
- 24.4 Describe in "Attachment 24.4.A", the blast warning, all-clear signals and site access control procedures to be used. Also, describe how all persons within one-half mile of the areas affected by surface operations or facilities will be notified of the meaning of the blast signals.
See Attachment 24.4.A

ATTACHMENT 23.1.A

As part of this attachment we will identify and describe the general soil map units which are located within the permit area described in this application. Information provided in this attachment was obtained from the Soil Conservation Service in the "Soil Survey of Bell and Harlan Counties, Kentucky", issued December, 1992.

The soil types located in the proposed permit area are the Udorthents-Urban land complex, Udorthents Urban land complex, Dumps, mine; tailings; and tipples, Shelocta-Highsplint complex, Fairpoint and Bethesda soils, Cloverlick-Guyandotte complex and Shelocta-Kimper-Cloverlick complex. A description of these soils is as follows:

FbF - Fairpoint and Bethesda soils, 20 to 70 percent slopes. These very deep, well drained, steep areas have been surface mined for coal. Some have been altered by highway construction or other extensive earthmoving. The dominant slopes are 20 to 70 percent, but many areas have a narrow bench where the slopes are 0 to 20 percent. Stones and boulders cover about 0.01 to 3.0 percent of the surface in some areas. Most areas are long and narrow or are irregular in shape. They are 10 to 200 acres in size.

In a typical area, about 80 percent of the acreage is the Fairpoint soil, the Bethesda soil, or both and 20 percent is contrasting inclusions. Individual areas of each soil are large enough to be mapped separately. Because of the percent and predicted use, however, the soil were mapped as one unit. Many areas contain both soils, but some contain only one of the soils.

Typically, the Fairpoint soil has a surface layer of dark gray and dark grayish brown very channery silt loam about 11 inches thick. The substratum to a depth of about 60 inches is dark gray and dark grayish brown very channery silt loam. In some areas the substratum contains 15 to 35 percent rock fragments. In other areas the surface layer contains more clay or more sand.

Typically, the Bethesda soil has a surface layer of yellowish brown very channery loam about 5 inches thick. The subsurface layer is grayish brown very channery silt loam about 7 inches thick. The substratum to a depth of about 60 inches is yellowish brown very channery silt loam or extremely channery silt loam. In some areas the substratum contains 15 to 35 percent rock fragments. In other areas the surface layer contains more clay or more sand. These soils are low in natural fertility and in organic matter

ATTACHMENT 23.1.A

content. Permeability is moderately slow. The available water capacity is moderate. The depth to bedrock is 60 inches or more.

Included in this map unit are small areas of soils that have not been disturbed by surface mining. Also included are shallow, loamy soils in surface-mined areas; ponded or seepy areas; soils that have a Ph of 3.0 to 3.6; and rock escarpments, mine dumps, and water. Included areas make up about 20 percent of the unit.

Most areas have been smoothed and seeded to various grasses, legumes, and trees. A few areas were not planted but have reverted to various grasses, forbs, and trees. A few areas are used as pasture. These soils generally are unsuited to cultivated crops, such as corn and soybeans. The main limitations are the slope and the rock fragments in the surface layer.

These soils are suited to grasses and legumes. They are best suited to forage species that are tolerant of drought and a wide range of acidity. Tall fescue and sericea lespedeza have been grown successfully. In most area the Ph ranges from 4.8 to 6.5, but in places it is as low as 3.6 or as high as 7.5. Where a higher Ph is desired, lime can be added. Most areas require 2 to 5 tons of lime to raise the Ph to about 6.5. The amount to be applied should be based on the results of soil tests and the quality of the lime. The supply of phosphorus generally is very low. This nutrient commonly is needed for successful seeding.

Potassium levels generally are low or medium and commonly are adequate for cover mixtures. Other limitations affecting grasses and legumes are the slope, compacted layers, and a high content of rock fragments.

These soils are suited to trees. Productivity is moderate. In an average stand that is fully stocked, loblolly pine on the Fairpoint soil can reach a height of about 74 feet in 50 years. On the Bethesda soil, a similar stand can reach a height of 69 feet. The hazard of erosion, the equipment limitation, and plant competition are the major concerns in managing woodland. Seedling mortality is an additional concern on the warm slopes. Erosion is

ATTACHMENT 23.1.A

a hazard along logging pads and trails. A protective plant cover is needed. Seeding herbaceous species along with the tree species helps to control erosion. Mulching with straw or processed wood fiber also helps to control erosion. Because of the slope, hand seeding or special seeding equipment may be needed. In many areas the seed, fertilizer, and mulch are applied as a slurry. The tree species suitable for seeding are black locust, eastern white pine, loblolly pine, yellow poplar, and white oak.

The potential for openland wildlife habitat is very poor. The habitat can be improved by providing food, cover, water, nesting areas, and den sites. Rows of trees and shrubs can break up large open areas. Mixtures of grasses and legumes can be planted for food and cover. The habitat in areas of native plants can be improved by disking and applying fertilizer. Shallow water areas can be established. Also, seasonal pools can be established in depressions. Brush piles or other nesting sites are needed.

These soils generally are unsuited to urban development because of the slope and the hazards of uneven setting, landslides, and slumps.

CgF-Cloverlick-Guyandotte-Highsplint complex, 35 to 75 percent slopes, very stony. These deep and very deep, well drained soils are on the cool slopes on mountainsides. The elevations range from about 3,000 feet near the mountain crest to 1,400 feet along the base of the mountain. The higher elevations have more snow and ice during the winter than the lower elevations and may receive more rainfall during the summer. The downward slope of the mountain is nearly linear, except where broken by small cliffs or benches. Only a slight flattening of the slope occurs near the top and bottom of the mountain. Across the mountain the slope is distinctly corrugated. Small streams in the grooves commonly begin near the mountain crest and run almost to the base of the mountain before joining other streams. In most places the streams are about 300 to 600 feet apart. Areas between the streams are characterized by sharp-crested ribs that have fairly smooth slopes. Stones and boulders generally cover about 0.1 to 15.0 percent of the surface.

ATTACHMENT 23.1.A

They cover as much as 70 percent of the surface, however, in some ravines and in areas below some cliffs. In places, sandstone layers form cliffs. Most areas are nearly rectangular and range from about 60 to 2,500 acres in size.

In a typical area, the composition of this soil complex is as follows:

Cloverlick and similar soils--45 percent; **Guyandotte and similar soils**--20 percent; **Highsplint and similar soils**--20 percent; and **contrasting inclusions**--15 percent. The soils in this unit occur as areas so closely intermingled that they could be separated as the scale selected for mapping.

Typically, the **Cloverlick soil** has a surface layer of very dark gray gravelly loam about 6 inches thick. The subsoil extends to a depth of about 70 inches. The upper part is brown and yellowish brown gravelly loam, the next part is yellowish brown gravelly loam, and lower part is yellowish brown very flaggy loam. In some areas the subsoil contains 20 to 35 percent rock fragments.

Typically, the **Guyandotte soil** has a surface layer of very channery loam about 17 inches thick. This layer is very dark grayish brown in the upper part and dark brown in the lower part. The upper part of the subsoil is dark yellowish brown very channery loam. The lower part to a depth of about 61 inches is yellowish brown very channery loam. In some areas the subsoil contains 20 to 35 percent rock fragments.

Typically, the **Highsplint soil** has a surface layer of very dark grayish brown very channery loam about 3 inches thick. The subsoil to a depth of about 60 inches is yellowish brown very channery loam. In some areas the subsoil contains 20 to 35 percent rock fragments.

These soils are low in natural fertility. The organic matter content is high in the Cloverlick and Guyandotte soils and moderate in the Highsplint soil. The available water capacity is moderate in all three soils. The number of roots decreases gradually with increasing depth, and there are few roots below a depths of about 18 inches. Permeability is moderate or moderately rapid in the Cloverlick and Guyandotte soils and moderate or moderately rapid in the Highsplint soil. The depth to bedrock is 48 to more than 60 inches in the Cloverlick and Highsplint soils and 60 inches or more in the Guyandotte soil.

ATTACHMENT 23.1.A

Most areas are used as woodland. A few areas adjacent to the stream valleys have been cleared and are used as unimproved pasture.

The hazard of erosion, the equipment limitation, and plant competition are the major concerns in managing woodland. Erosion is a hazard along haul roads and skid trails. This hazard can be reduced by establishing a grade of less than 10 percent along the roads and trails and by limiting the area of surface disturbance to 10 percent or less. Permanent access roads can be protected by water breaks, culverts, and gravel. Because of slope, crawler tractors or other specialized equipment generally is needed.

The potential for woodland wildlife habitat is good. The habitat can be maintained or improved by providing food, cover, nesting areas, and den sites. Brushy thickets can be established by clearing small areas in large tracts of mature woodland. Food plots or areas of green browse can be established along logging roads and trails. The habitat in areas of native plants can be improved by disking and applying fertilizer. Den trees should not be harvested. Brush piles or other nesting sites are needed. These soils generally are unsuitable for cultivated crops, pasture, and building site development because of the slope.

HsF-Highsplint-Cloverlick-Guyandotte complex, 35 to 75 percent slopes, very stoney. These deep and very deep, well drained very steep soils are on the south-and west-facing sides of mountains. The elevations range from about 3,000 feet near the mountain crest to 1,400 feet along the base of the mountain. The higher elevations have more snow and ice during the winter than the lower elevations and may receive more rainfall during the summer. The downward slope of the mountain is nearly linear, except where broken by small cliffs or benches. Only a slight flattening of the slopes occurs near the top and bottom of the mountain. Across the mountain the slope is distinctly corrugated. Small streams in the grooves commonly begin near the mountain before joining other streams. In most places the streams are 300 to 600 feet apart. Areas between the streams are characterized by sharp-crested ribs that have fairly smooth slopes. Stones and boulders generally cover 0.1 to 15.0 percent of the surface, but they cover as much as 70 percent of the surface in some ravines and in areas below cliffs. Most areas are nearly rectangular and range from about 60 to 2,500 acres in size. In a typical area the composition is as follows: High Splint and similar soils -53 percent; Cloverlick and similar soils-17 percent;

ATTACHMENT 23.1.A

Guyandotte and similar soils-10 percent; and contrasting inclusions-20 percent. The soils in this unit occur as areas so closely intermingled that they could not be separated at the scale selected for mapping. These soils are generally unsuitable for cultivated crops, pasture, and building site development because of the slope. The capability subclass is Vlle.

SmF-Shelocta-Kimper-Cutshin complex, 20 to 55 percent slopes, very stoney.

These deep and very deep, well drained, steep and very deep soils are on ridgetops, mountain crest, and the upper side slopes in the mountains. In most areas the elevations range from 2,500 to 3,500 feet and are about 1,000 to 2,000 feet above the valley floor. The higher elevation have more snow and ice during the winter than the lower elevations and may receive more rainfall during the summer. Knolls and gaps are along the crest of the ridges. Steep-sided ravines near the head of drainageways incise the ridges. In places all that remains of the ridge is a sharp-crested ridgeline. Stones and boulders cover about 0.1 to 15.0 percent of the surface. Most areas are long and narrow and range in size from 40 to 1,600 acres in size. In a typical area the composition is as follows: Shelocta and similar soils-35 percent; Kimper and similar soils-25 percent; Cutshin and similar soils-15 percent; and contrasting inclusion-25 percent. The shelocta soil is throughout this map unit. Most areas of the Cutshin and Kimper soils are on north- and east-facing slopes and at the head of drainageways. In places, they are on the summits. The soils in this unit occur as areas so closely intermingled that they could not be separated at the scale selected for mapping. These soils are generally unsuitable for cultivated crops, pasture, and building site development because of the slope.

The capability subclass is Vlle.

ATTACHMENT 23.3.A

After the vegetation has been removed and properly disposed of, topsoil and alternate topsoil material will be removed as a separate operation as each is encountered during the mining operation. If the topsoil is insufficient in depth, poor quality or unrecoverable it will not be recovered. The alternate material will be used separately or in combination with the topsoil material after final grading by evenly distributing these materials over the re-graded area. The topsoil or alternate material will be stockpiled in a large enough quantity to cover the area to be reclaimed on the permitted area. Stockpiled materials which are to be stored for a considerable length of time will be seeded to establish a protective vegetative cover. Water will be diverted around the material using small berms or small drainage control ditches. All re-graded areas to receive topsoil and alternate topsoil material shall be scarified prior to redistribution of the material to prevent slippage and to insure root penetration. All areas covered with topsoil and alternate topsoil will be seeded and mulched as quickly as possible in accordance with the re-vegetation plan. The topsoil sample locations have been shown on the included location and columns map. The topsoil ranges from 2 to 4 inches in the sample locations and through-out the proposed permit area. The alternate material ranges from 14 to 34 feet in depth and is of adequate quality for a substitute growth media.

Howard D. York, Jr.
P.O. Box 1309
Harlan, Kentucky 40831

June 5, 2008

Division of Permits, DSMRE
Management Support Branch
Work Area B41
#2 Hudson Hollow Complex
Frankfort, Kentucky 40601

RE: Bell County Coal Corporation
Alternate Topsoil

Sample: #807-5223
Samples #1 & #2

Dear Sir:

I do hereby certify that the analysis performed by Appalachian Field Services Company, P.O. Box 373, Baxter, Kentucky 40806, on existing topsoil and alternate topsoil materials indicate the following:

- 1) Physical examination of the mine area revealed that the topsoil exists in an insufficient quantity on the permit area to cover the spoil and sustain adequate vegetation.
- 2) The alternate material analyzed was the best available material to use as alternate topsoil material.
- 3) Chemical analysis of the alternate material indicates that with the addition of 60 lbs/ac. of K20 and the lime required on the soil analysis that the alternate material will be of equal quality to the existing topsoil sampled.

It is my recommendation that the alternate materials be used as a substitute material or in combination with the topsoil in the post mining land use.

Respectfully submitted,

Howard D. York, Jr.
Howard D. York, Jr., Soil Scientist
P.O. Box 1309
Harlan, Kentucky 40831



Appalachian Field Services Company

P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223
(DH 13 - 07, SAMPLE SITE, # 2)
(NATIVE TOPSOIL)

SAMPLED BY : H.E.G.

SAMPLE DATE : 03/14/2008

REPORT DATE : 05/02/2008

PARAMETER		RESULT	
SOIL / WATER pH		5.54	STD. UNITS
BUFFER pH		6.52	STD. UNITS
LIME REQUIREMENT	(67% RNV AGLIME to pH 6.80)	4.0	TONS / ACRE CaCO ₃
LIME REQUIREMENT	(HYDRATED LIME to pH 6.80)	2.7	TONS / ACRE CaCO ₃
POTASSIUM		130	POUNDS/ACRE
PHOSPHORUS		60	POUNDS/ACRE
CLAY		11.49	PERCENT
SILT		22.97	PERCENT
SAND		65.54	PERCENT
COARSE FRAGMENTS		12.82	PERCENT
NEUTRALIZATION POTENTIAL		10.40	TONS/CaCO ₃
POTENTIAL ACIDITY		3.94	TONS/CaCO ₃
NET NP / PA		6.46	TONS/CaCO ₃

SUBMITTED BY :



Appalachian Field Services Company

P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION
PERMIT NUMBER : 807 - 5223
(DH 13 - 07, SAMPLE SITE, # 2)
(SUBSOIL, ALTERNATE TOPSOIL MATERIAL)

SAMPLED BY : H.E.G.

SAMPLE DATE : 03/14/2008

REPORT DATE : 05/02/2008

PARAMETER		RESULT	
SOIL / WATER pH		3.70	STD. UNITS
BUFFER pH		5.86	STD. UNITS
LIME REQUIREMENT	(67% RNV AGLIME to pH 6.80)	7.0	TONS / ACRE CaCO3
LIME REQUIREMENT	(HYDRATED LIME to pH 6.80)	4.7	TONS / ACRE CaCO3
POTASSIUM		48	POUNDS/ACRE
PHOSPHORUS		70	POUNDS/ACRE
CLAY		19.25	PERCENT
SILT		23.18	PERCENT
SAND		57.57	PERCENT
COARSE FRAGMENTS		15.20	PERCENT
NEUTRALIZATION POTENTIAL		2.70	TONS/CaCO3
POTENTIAL ACIDITY		4.83	TONS/CaCO3
NET NP / PA		- 2.13	TONS/CaCO3

SUBMITTED BY :



Appalachian Field Services Company

P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION

PERMIT NUMBER : 807 - 5223
(DH 12 - 07, SAMPLE SITE, # 1)
(NATIVE TOPSOIL)

SAMPLED BY : H.E.G.

SAMPLE DATE : 03/14/2008

REPORT DATE : 05/02/2008

PARAMETER		RESULT	
SOIL / WATER pH		5.62	STD. UNITS
BUFFER pH		6.72	STD. UNITS
LIME REQUIREMENT	(67% RNV AGLIME to pH 6.80)	3.0	TONS / ACRE CaCO ₃
LIME REQUIREMENT	(HYDRATED LIME to pH 6.80)	2.0	TONS / ACRE CaCO ₃
POTASSIUM		70	POUNDS/ACRE
PHOSPHORUS		92	POUNDS/ACRE
CLAY		16.21	PERCENT
SILT		22.13	PERCENT
SAND		61.66	PERCENT
COARSE FRAGMENTS		11.59	PERCENT
NEUTRALIZATION POTENTIAL		8.75	TONS/CaCO ₃
POTENTIAL ACIDITY		4.29	TONS/CaCO ₃
NET NP / PA		4.46	TONS/CaCO ₃

SUBMITTED BY :



Appalachian Field Services Company

P.O. Box 373
Baxter, Kentucky 40806
Telephone (606) 573-0521

SAMPLE IDENTIFICATION : BELL COUNTY COAL CORPORATION
PERMIT NUMBER : 807 - 5223
(DH 12 - 07, SAMPLE SITE, # 1)
(SUBSOIL, ALTERNATE TOPSOIL MATERIAL)

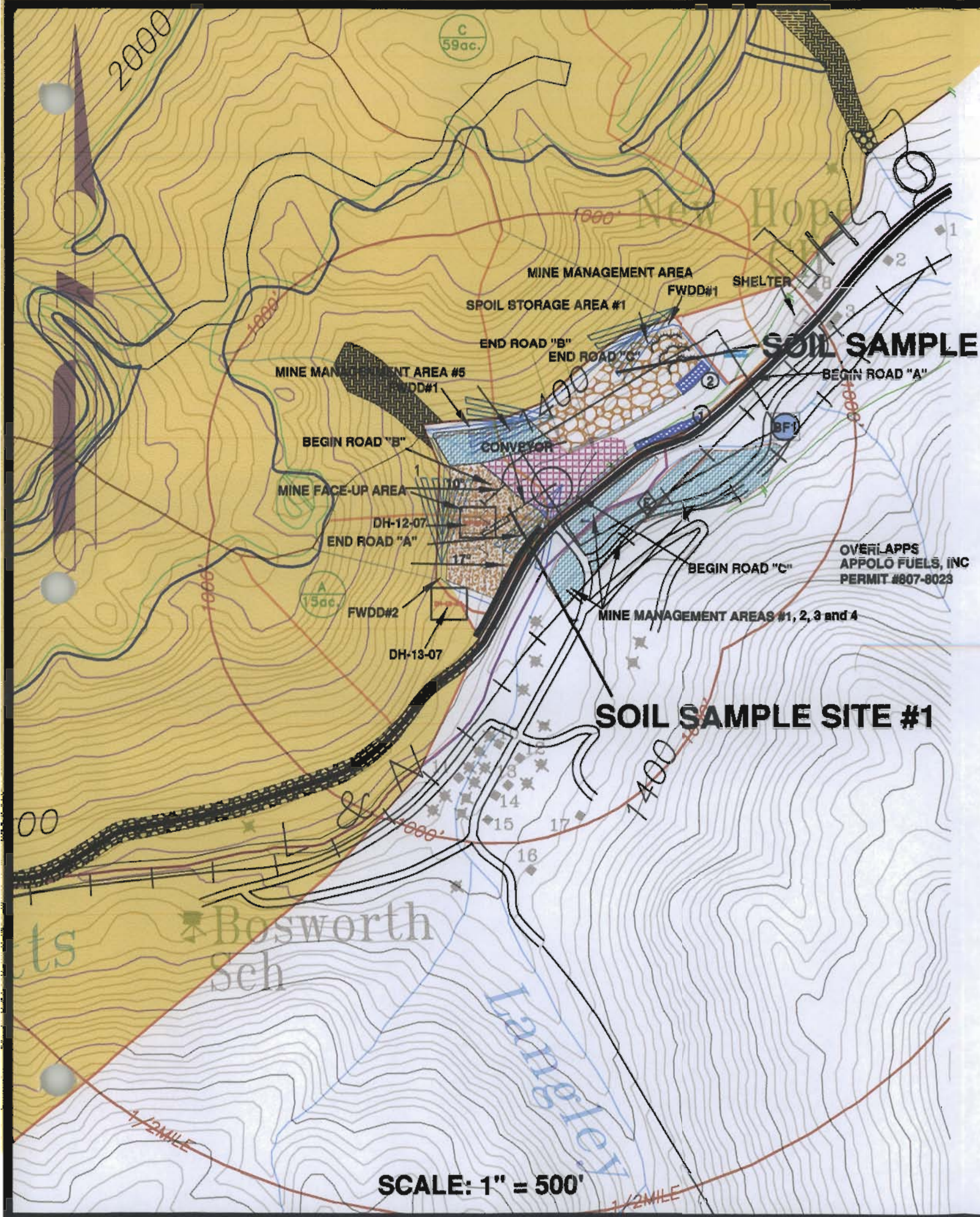
SAMPLED BY : H.E.G.

SAMPLE DATE : 03/14/2008

REPORT DATE : 05/02/2008

PARAMETER		RESULT	
SOIL / WATER pH		3.98	STD. UNITS
BUFFER pH		6.45	STD. UNITS
LIME REQUIREMENT	(67% RNV AGLIME to pH 6.80)	5.0	TONS / ACRE CaCO ₃
LIME REQUIREMENT	(HYDRATED LIME to pH 6.80)	3.3	TONS / ACRE CaCO ₃
POTASSIUM		60	POUNDS/ACRE
PHOSPHORUS		85	POUNDS/ACRE
CLAY		17.75	PERCENT
SILT		21.30	PERCENT
SAND		60.95	PERCENT
COARSE FRAGMENTS		8.53	PERCENT
NEUTRALIZATION POTENTIAL		5.45	TONS/CaCO ₃
POTENTIAL ACIDITY		6.95	TONS/CaCO ₃
NET NP / PA		- 1.50	TONS/CaCO ₃

SUBMITTED BY :



SAMPLE #1



NOT TO SCALE

SAMPLE #2



NOT TO SCALE

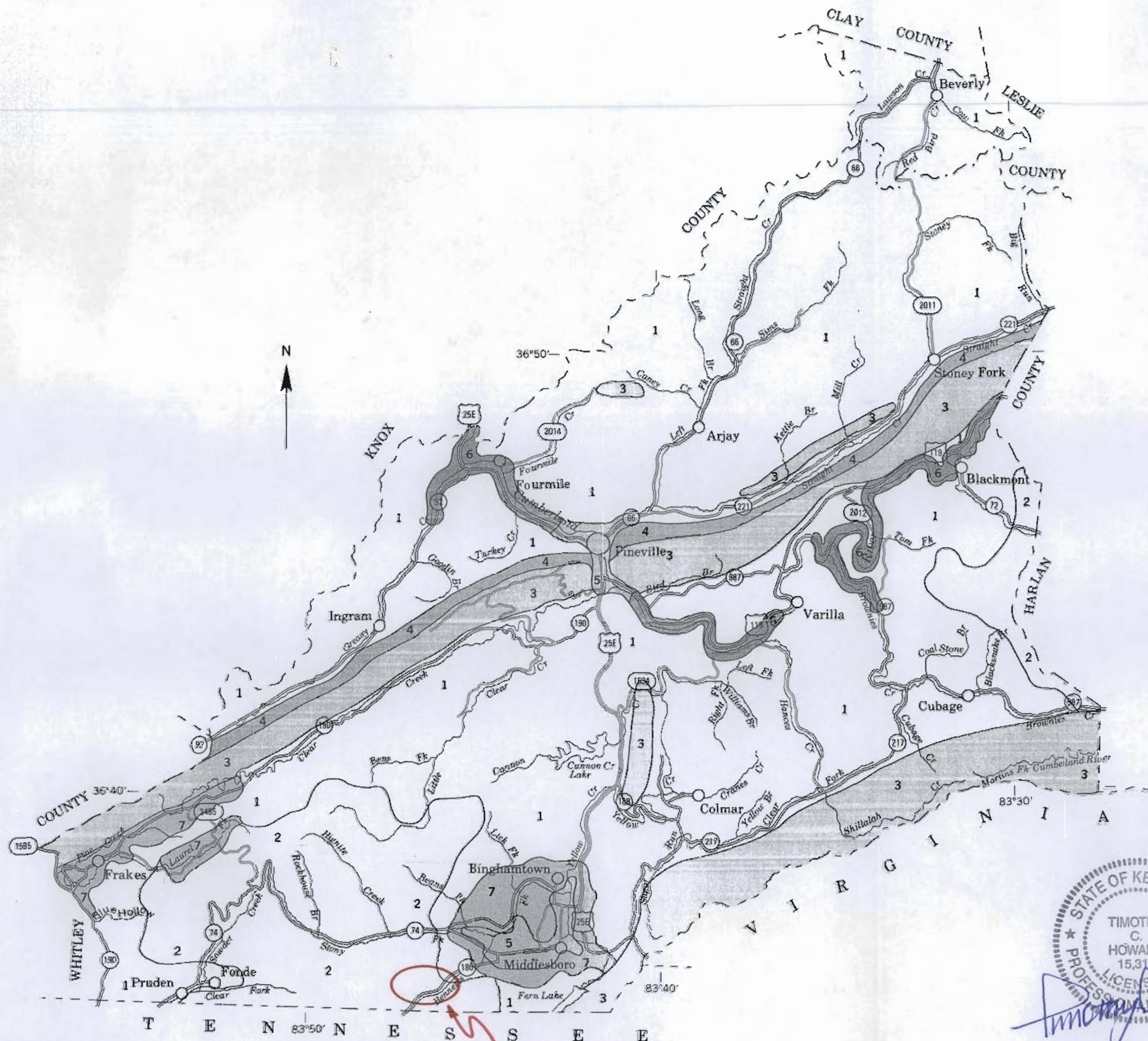
Timothy C. Howard 15,317 6/2/08
 (ENGINEER) (REGISTRATION No.) DATE

HEREBY CONFIRM, IN ACCORDANCE WITH 405 KAR 7:040 E, SECTION 10 THAT THIS MAP IS CORRECT AS DETERMINED BY ACCEPTED ENGINEERING PRACTICES AND INCLUDES ALL INFORMATION REQUIRED OF IT BY KRS CHAPTER 360 KAR TITLE.



Prepared By
HOWARD

 Engineering and Geology, Inc.



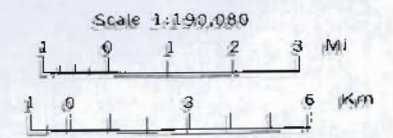
SOIL LEGEND

- 1 STEEP AND VERY STEEP, WELL DRAINED SOILS THAT HAVE A LOAMY SUBSOIL; ON MOUNTAINS
SHELOCTA-GILPIN-KIMPER: Very deep to moderately deep soils that have a loamy subsoil; in mountainous areas with relief of 600 to 1,200 feet
- 2 HIGHSPLINT-CLOVERLICK-GUYANDOTTE: Deep and very deep soils that have a gravelly or channery, loamy subsoil; in mountainous areas with relief of 1,200 to 2,200 feet
- 3 STEEP AND VERY STEEP, WELL DRAINED AND SOMEWHAT EXCESSIVELY DRAINED SOILS THAT HAVE A LOAMY SUBSOIL; ON MOUNTAINS
HELECHAWA-ALTICREST-VARILLA: Steep and very steep, very deep to moderately deep, somewhat excessively drained soils; on mountains
- 4 KIMPER-SHELOCTA-VARILLA: Very steep, deep and very deep, well drained and somewhat excessively drained soils; on mountains
- 5 NEARLY LEVEL, WELL DRAINED SOILS THAT HAVE A LOAMY SUBSOIL; ON FLOOD FLAIN
UDORTHENTS-SHELBIANA-URBAN LAND: Urban land and very deep, well drained soils
- 6 SHELBIANA: Very deep, well drained soils that are subject to flooding
- 7 SLOPING TO STEEP, WELL DRAINED SOILS THAT HAVE A LOAMY SUBSOIL; ON HILLS
SHELOCTA-GILPIN: Very deep to moderately deep soils; on hills with relief of 80 to 240 feet

Compiled 1991

UNITED STATES DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
KENTUCKY AGRICULTURAL EXPERIMENT STATION
KENTUCKY NATURAL RESOURCES AND ENVIRONMENTAL PROTECTION CABINET
UNITED STATES DEPARTMENT OF AGRICULTURE FOREST SERVICE

GENERAL SOIL MAP BELL COUNTY, KENTUCKY



area outlined on this map consists of
than one kind of soil. The map is thus
it for general planning rather than a basis
decisions on the use of specific tracts.

PERMIT AREA

ATTACHMENT 24.4.A

The "Blast Warning Signal" shall consist of three (3) long blasts of a siren (5) five minutes prior to the detonation. The "Blast Signal" shall consist of three (3) short blasts of a siren (1) minute prior to the blast. The "All Clear Signal" shall consist of a prolonged blast of a siren following the inspection of the blast site. The Warning and All Clear Signals will be audible within 1/2 mile of the detonation point.

An authorized company representative will prohibit access to the Blast Site at least (10) ten minutes prior to each detonation. All roads which lead to or are situated near the Blast Site will remain closed until the All Clear Signal is given. Flagmen will be placed approximately ¼ mile from the permit area east and west on hwy 186. These flagmen will stop traffic along hwy 186 approximately five (5) minutes prior to any blasting within the permit area. Traffic will be allowed to resume normal flow after the all clear signal has been given.

Any residence located within 1/2 mile of areas affected by surface operations or facilities will be notified in writing that blasting activity is going to be conducted.

- 24.5 Does the proposed surface mining operation include blasting operations using more than five (5) pounds of explosives? [] YES [] NO. If "YES", submit a sample copy of the blasting schedule to be published in a newspaper of general circulation in the locality of the blasting operation. Describe the procedure for circulating the schedule to the DSMRE regional office, local governments, public utilities, and to each resident within a one-half mile of areas affected by surface operations or facilities in accordance with 405 KAR 16:120, Section 3. Submit as "Attachment 24.5.A".
See Attachment 24.5.A
- 24.6 Describe how all residents within one-half mile of areas affected by surface operations or facilities will be informed about the procedure for requesting a preblast survey, and the procedures for recording and reporting to DSMRE the results of any requested preblast surveys. Submit this description as "Attachment 24.6.A".
See Attachment 24.6.A
- 24.7 Describe the procedures to be used for ensuring that airblasts are controlled in accordance with 405 KAR 16:120 or 18:120. Submit description as "Attachment 24.7.A".
See Attachment 24.7.A
- 24.8 Describe the procedures to be used to control flyrock and how prevention of adverse impacts of blasting will be ensured in accordance with 405 KAR 16:120 or 18:120. Submit this description as "Attachment 24.8.A".
See Attachment 24.8.A
- 24.9 Will blast monitoring equipment be utilized in lieu of the scaled distance equations presented in Appendix C of 405 KAR 16:120 or 405 KAR 18:120? [] YES [] NO. If "YES", provide a description of the types, capabilities, sensitivities and locations of the equipment proposed for use. Submit this description as "Attachment 24.9.A".

25. Backfilling and Grading Plan

- 25.1 Describe the methods to be used for backfilling and grading the proposed permit area, including soil stabilization and compaction practices. Provide a map and appropriate cross sections to illustrate and define the proposed postmining configuration of the permit area. If cross sections are used identify the location of the cross sections on the MRP map or other appropriate map. Provide this information as "Attachment 25.1.A".
See Attachment 25.1.A
- 25.2 Is a variance requested from approximate original contour requirements for any portion of the proposed permit area? [] YES [] NO. If "YES", provide as "Attachment 25.2.A", the following information:
- (a) A complete description, including location, of the area(s) for which a variance is requested.
 - (b) A detailed explanation of how the applicant meets the "criteria for approval" under one or more of the following regulations: (1) 405 KAR 8:050, Section 4, mountaintop removal; (2) 405 KAR 8:050, Section 6, steep slopes; (3) 405 KAR 16:190, Section 4, thin overburden; (4) 405 KAR 16:190, Section 5, thick overburden; (5) 405 KAR 16:190, Section 7, remining.

ATTACHMENT 24.5.A

ATTACHMENT 24.5.A

PUBLIC NOTICE OF BLASTING SCHEDULE

Bell County Coal Corporation., RTE. 1 Box 290 Pruden Road
Middlesboro, Kentucky 40965, Phone: (606)248-6404, shall conduct blasting on its
6,521.00 acre permit #807-5223 located in Bell County. Said operation is located
approximately 2.95 miles southwest of US. 25E's junction with Ky. 186. It is located
approximately 0.00 miles of Premier KY, Latitude: 36 degrees-35'-45"; Longitude: 83
degrees-45'-54".

Blasting will be conducted each day, Monday through
Saturday between the hours of sunrise and sunset. This schedule will be in effect
after issuance of the permit on _____ and will continue until
termination of excavation of the mine site. Any major alterations of this blasting
schedule will be published. Unscheduled blasting may occur in emergency situations
where rain, lightning, or other atmospheric conditions or the safety of the operator or
public requires unscheduled detonation. Blasting will not be conducted before
sunrise or after sunset except during emergency situations.

Control of the blasting area will be maintained by
blocking access roads to the area 10 minutes prior to the blast. Post detonation
access to the blasting area will be allowed only after inspection and determination that
no hazards exist.

The "Blast Warning Signal" shall consist of three (3) long blasts of a siren (5)
five minutes prior to the detonation. The "Blast Signal" shall consist of three (3)
short blasts of a siren (1) minute prior to the blast. The "All Clear Signal" shall
consist of a prolonged blast of a siren following the inspection of the blast site. The
Warning and All Clear Signals will be audible within 1/2 mile of the detonation point.

The following notice is published pursuant to 30 CFR
715.19, Surface Mining Reclamation and Enforcement Provisions, and KRS 350 and
the regulations relating thereto.

ATTACHMENT 24.5.A

The blasting schedule shall be published at least ten days, but not more than thirty days before beginning a blasting program in which blasts that use more than five pounds of explosives or blasting agent are detonated. The schedule shall be republished and redistributed by mail at least every twelve months.

Copies of this schedule will be distributed by mail to the DSMRE Regional Office, Local Government and Public Utilities and by mail or delivered to each residence within one-half mile of the permit area described in the schedule.

ATTACHMENT 24.6.A

At least thirty (30) days prior to the initiation of blasting, any resident or owners of dwellings located within 1/2 mile of the blast site will be notified in writing of how to request a Pre-Blast Survey. This notification will be written and will either be hand delivered or will be mailed. Any resident or owner of a dwelling within the 1/2 mile area will be provided with a copy of the "Notice of Blasting" provided in Attachment 24.5.A of this application.

Upon notification that a Pre-Blast Survey has been requested, a Pre-Blast Survey will be conducted on the dwellings and structures for which the request was made. The survey shall determine the condition of the dwelling or structure and document any pre-blasting damage and other physical conditions that could reasonably be affected by the blasting. Structures such as pipelines, cables, transmission lines and cisterns, wells and other water may be limited to surface condition and readily available data unless additional data are specifically requested by the Cabinet. If a structure is renovated, modified or added too subsequent to a pre-blast survey, then, upon request a survey of such additions and renovations shall be performed.

A written report of the survey shall be promptly prepared and signed by the person who conducted the survey. The report may include recommendations of any special conditions or proposed adjustments to the blasting procedure which should be incorporated into the blasting plan to prevent damage. If the resident or structure owner or his representative accompanies the surveyor, the report shall contain the name of such person. Copies of the report shall be promptly provided to the person requesting the survey and to the Cabinet. If the person requesting the survey disagrees with the results of the survey, he or she may submit, in writing to both the permittee and the Cabinet, a detailed description of the specific areas of disagreement. The Cabinet may require additional measures to ensure that adequate and accurate information is included in the pre-blast survey and to ensure compliance with the requirements of this regulation.

ATTACHMENT 24.6.A

Any surveys requested more than ten (10) days before the planned initiation of blasting shall be completed by the permittee before the initiation of blasting.

Attachment 24.6.B

Notification of Blasting and Right to Request A Pre-Blast Survey

Dear Resident,

Your home, school, church, shop or other manmade structure is located within ½ mile of the surface mining permit #807-5223 of Bell County Coal Coporation. The mining operation is located in the Premier area of Middlesboro in Bell County. The latitude is 36°35'45" N. The longitude is 83°45'54" W.

Federal and state laws and regulations (405 KAR 16:102/18:120, Section 2) require that the permittee notify residents or owners of any manmade structures within ½ mile of the permit area of their right to request a pre-blasting survey of the structure. This survey is conducted at no charge to the resident/owner and it is done at the resident's/owner's convenience.

It is not expected that the blasting will cause any problems or damage. However, a pre-blasting survey is offered and conducted for the protection of the resident's/owner's property. The survey will determine and document the existing condition of the structure(s), and any physical factors that could reasonably be affected by the blasting. If wells are used for the water supply, a water sample may be taken and included with the survey. In addition, the permittee should be notified (by the resident/owner) if any changes are made to the structure so the survey can be updated.

Upon completion of the survey, the original copy will be on file at the mine office, one copy will be sent to the regional office of the Kentucky Department for Natural Resources (DNR), and one copy will be sent to the resident/owner. If the resident/owner disagrees with the results of the survey, he can notify (in writing) both the permittee and DNR. You can request the survey by writing either:

Bell County Coal Corporation
Rt. 1 box 290, Pruden Road
Middlesboro, Kentucky 40965
606-848-1857

,or

Department for Natural Resources
Division of Field Services
1804 Cumberland Avenue
Middlesboro, Kentucky 40965
606-248-6166

PLEASE INCLUDE YOUR NAME, ADDRESS, AND TELEPHONE NUMBER IN THE REQUEST ALONG WITH PERMIT NO. **807-5223**

These blasting operations will begin upon issuance of the permit and will be conducted Monday through Saturday from sunrise to sunset. All access roads to these blast areas will be barricaded

Attachment 24.6.B

not less than ten (10) minutes prior to each blast.

The blasting signals will consist of a **Warning Signal**, a one (1) minute series of long blasts from a siren five (5) minutes prior to each blast. A **Blast Signal** of short blasts from a siren one (1) minute prior to the blast. An **All Clear Signal** of a prolonged blast from a siren following the inspection of the blast area. These blast signals will be audible within ½ mile of the blasting area.

Blasting may be conducted at times different from those announced in the blasting schedule when emergency situations arise where rain, lightening or other atmospheric conditions or the safety of the operation or the public requires unscheduled detonation. In the event of an emergency situation should arise, the aforementioned precautions and procedures will be followed.

Airblast Monitoring

Airblasts shall be controlled so that they do not exceed the values specified in the table below at any dwelling; school; church; or commercial community or institutional building; outside the permit area unless such structures are owned by the permittee and are not leased to another person. The leasee may sign a wavier relieving the permittee from meeting the airblast limitations. The permittee shall conduct periodic monitoring at least three (3) consecutive blasts during the period from January through June and three (3) times from July through December, to ensure compliance with the airblast standards.

AIRBLAST LIMITATIONS

Lower frequency limit of measuring system in Hz (+3dB)	Maximum level in dB
2 Hz or lower-flat response.....	133 peak
6 Hz or lower-flat response.....	129 peak

Equipment: Airblast monitoring will be conducted with a seismograph equipped with sound level meter. The meter shall have a flat frequency response of at least 200 Hz at the upper end.

Procedure: Airblast monitoring will be conducted periodically during blasting hours. Monitoring will be conducted on all shots detonated in a period whether the shots occur singularly or consecutively. Results of the monitoring will be recorded on the blasting log and made part of the blasting record and kept for a period of five (5) years and supplied to the cabinet upon request.

Location: At the nearest residence to each individual blast, or as requested by DMRE.

Flyrock - Blasting

Flyrock, including blasted material traveling along the ground, will be controlled by proper blast design and proper blasting techniques being conducted by a certified blaster. Flyrock will not be cast outside of the permit boundary.

All blasting shall be conducted to prevent injury to persons, damage to public and private properties outside the permit area, adverse impacts on any underground mine within 500', changes in the courses, channels, and availability of surface waters outside the permit area, and alterations of the groundwater flow systems and ground water availability outside the permit area.

Measures taken to ensure compliance of the blasting operation include:

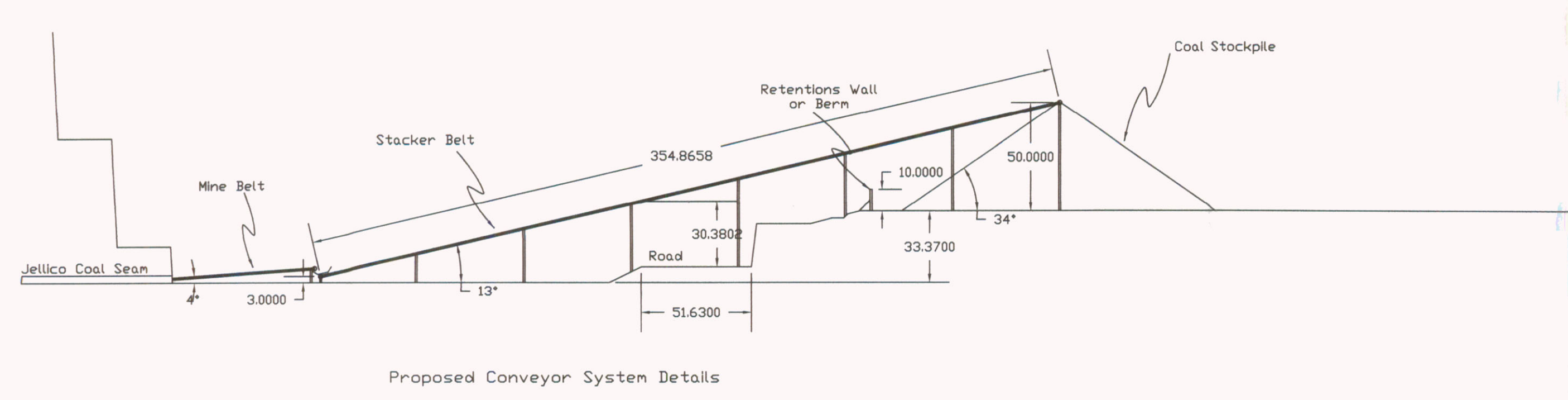
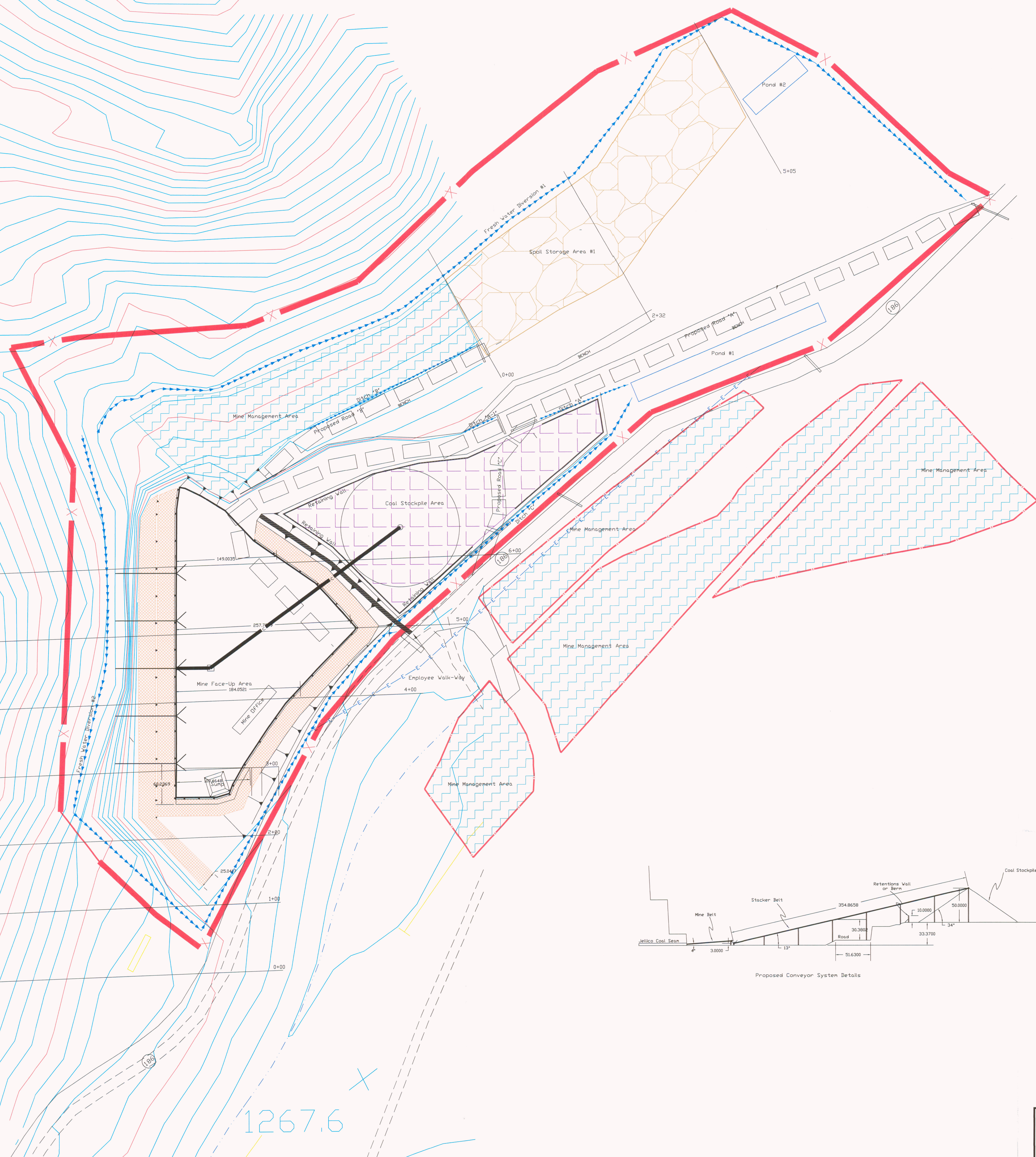
1. All blasting will be conducted by a certified blaster. The driller will keep a log of each hole drilled at a minimum the log will include the depth, diameter, burden and spacing, slant of each hole along with the hardness and thickness and any voids or any anomalies encountered. The blaster will review the drillers log prior to loading holes and will make the drillers log a permanent part of the blast record. In addition to reviewing the drillers log the blaster shall inspect the condition of all holes prior to loading with explosives. The blaster shall be in control of all blasting and in charge of all determinations necessary to ensure a safe detonation. This includes but is not limited to determination of the bounds of the blast area and safety zones, location and identification of all structures to be protected and all measures necessary to protect structures and people, drilling patterns and patterns and blast orientation, blast design, blast hole loading, determination of delay timing, and time of detonation.

2. Explosives shall only be placed in solid competent rock material.
3. The certified blaster in charge shall determine the overall condition of the high-wall, checking for the presence of overhangs, irregularities and toe, back-breaks, voids, wearthing and variations in the local geology prior to designing and loading all blasts in order to control flyrock and preventing adverse impacts of blasting
4. Following the blast design and utilizing the scale distance equation.
5. Notifying the public through the newspaper advertisement.
6. Notifying the residents within ½ mile of pre-blast survey, blasting signals.
7. Notifying utilities and local government.
8. Controlling access to blasting area.
9. Maintaining a safety berm below the blasting area to prevent rock trundling.
10. Posting signs regarding blasting and signals.
11. Following the blasting precautions when encountering old works.
12. Following the communication plan between the driller and blaster, if different.
13. Following all state and federal regulations regarding storage, handling and detonation of explosive.
14. All lines and blasting caps and connections will be checked at a minimum two times by the blasting personnel to insure that all procedures and connections have been properly applied prior to the blast.
15. A thorough examination of the blasting site shall be conducted by the blasting personnel to ensure that all charges have detonated prior to sounding the all clear signal.

16. All log book shall be maintained to insure proper application of the blasting procedures stated in this blasting design.
17. A safety bench shall be maintained on the outside of the blasting area. This bench shall be cleared prior to each subsequent blast.
18. All drilled holes that are determined not to be suitable for blasting shall be stemmed or backfilled to the full extent possible prior to any blast detonation in the immediate area.
19. The permittee will provide the certified blaster with a complete copy of the of the approved blast plan contained in the permit package. Anytime a new certified blaster is placed in charge he will also receive a copy of the complete blasting plan.
20. All roads leading to or located within 1000' feet of the blast area will be blocked by flagmen prior to the detonation and will remain closed until the all clear signal has been given.
21. Blasting will not be conducted during the times in which school buses are normally in the area. The certified blaster will be responsible for acquiring the times of the buses in the area.
22. The proposed protection method for the two wooden pole power-line support structures to the south which are within 1000' feet of the proposed blasting will be monitoring with a seismograph to ensure that the peak particle velocity limits of 4 inches per second.
23. The permit boundary of #807-9000 is shown on the MRP map. The refuse storage area permitted by #807-9000 is a dry coarse refuse fill and does not require protection from the blasting proposed in this application. There are no other slurry dams/impoundments within the vicinity of the proposed blasting

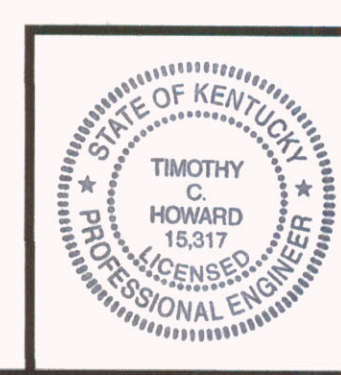
ATTACHMENT 25.1.A

Backfilling of the deep mine face-up will be accomplished using all required spoil from the spoil storage area. Due to swell, approximately 18,069.99 cubic yards of material will be left after backfilling and grading of the mine sites. This remaining material will be spread over the permit area and used to cover any areas that require reclamation. This excess material will be seeded to prevent erosion and to establish a vegetative cover. The mine face-up will be backfilled according to the attached cross-sections. The backfill material will be compacted as the material is placed via tracking by the placement equipment. Soil stabilization procedures will include scarification of the regraded material to promote seed growth and minimize erosion. The backfill configuration indicated on the cross-sections provided on the following pages as part of this attachment will ensure a long term minimum stability factor of safety of 1.3.



_____, P.E. No. 15,317
Date: 10/1/10

I hereby certify in accordance with 405 KAR 7:040, Section 10, that this document is correct as determined by accepted engineering practices and includes all information required of it by Chapter 350 and KAR Title 405.

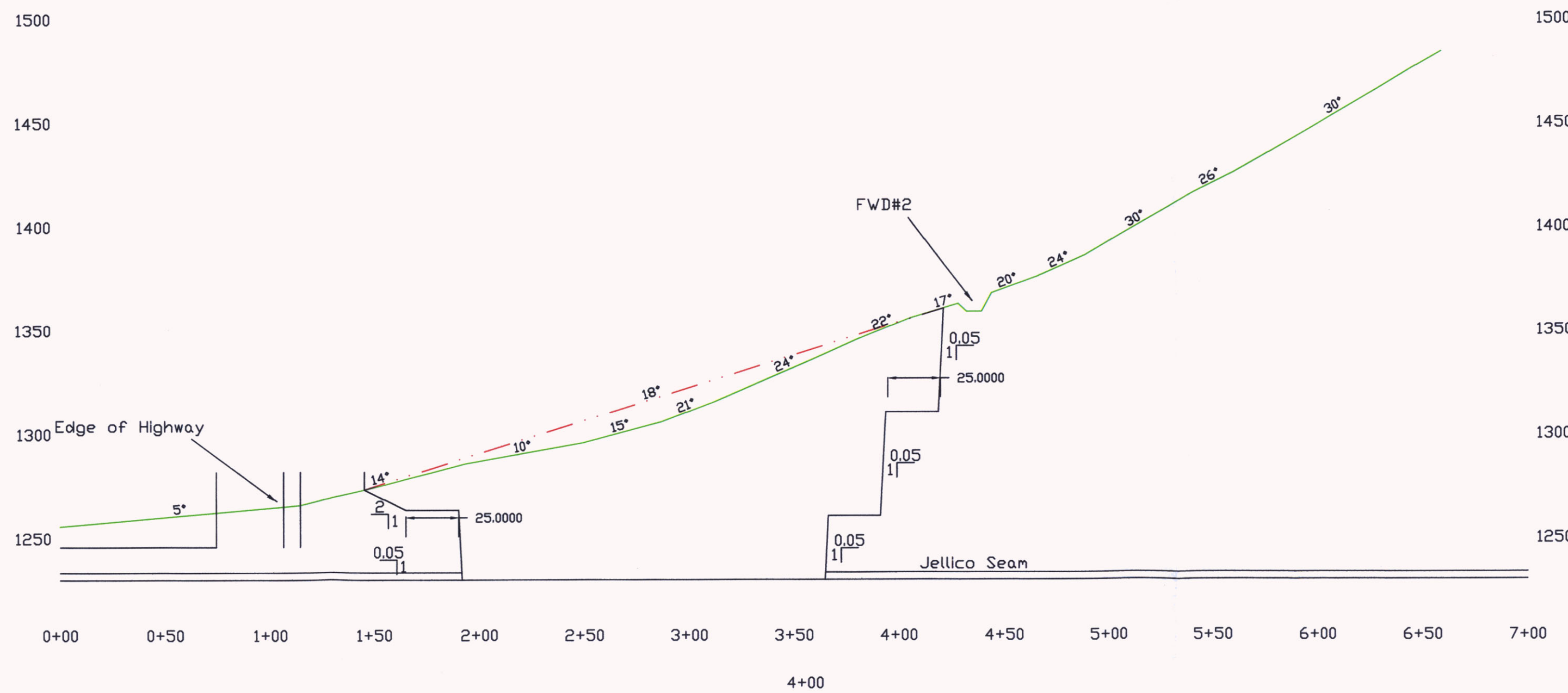
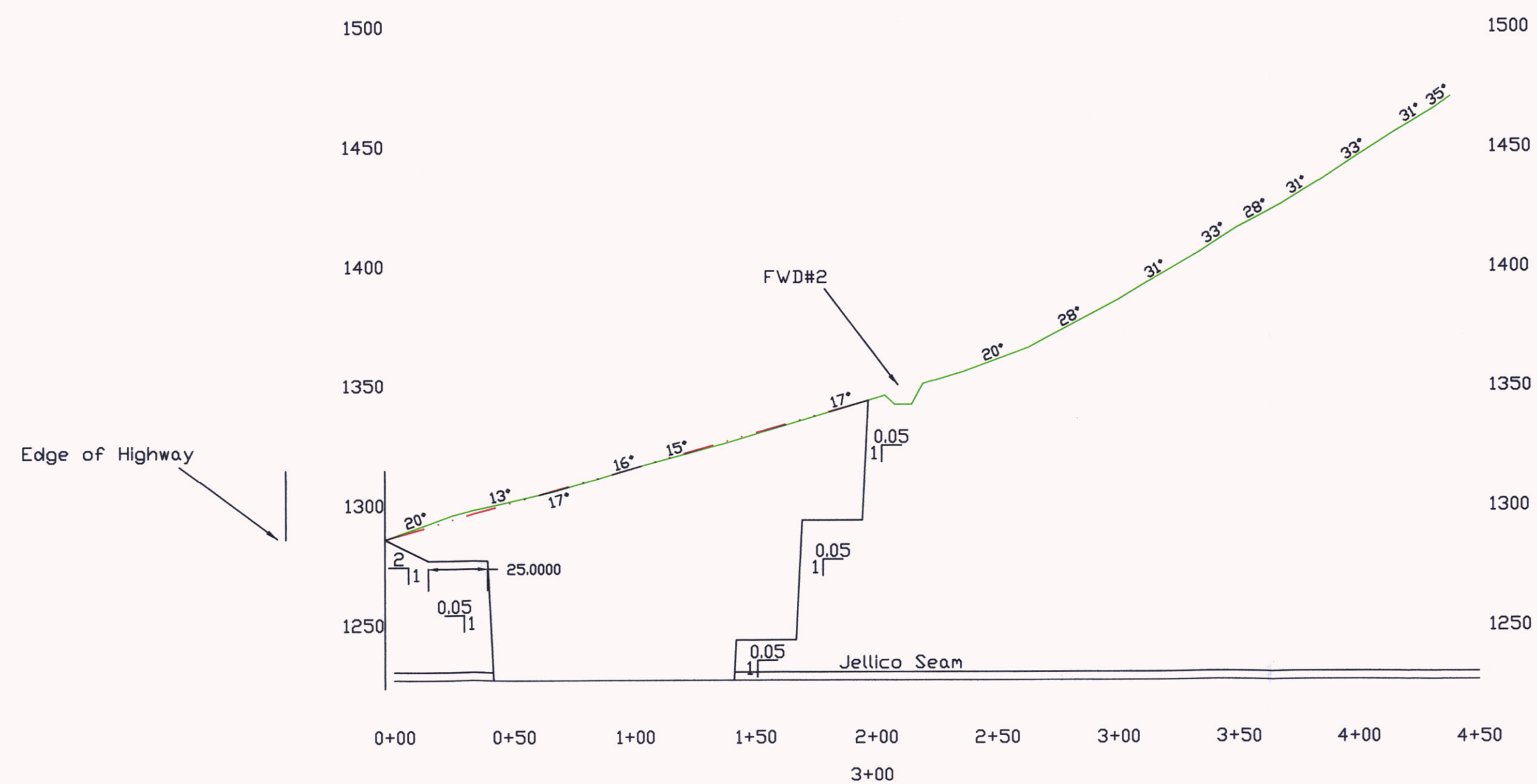
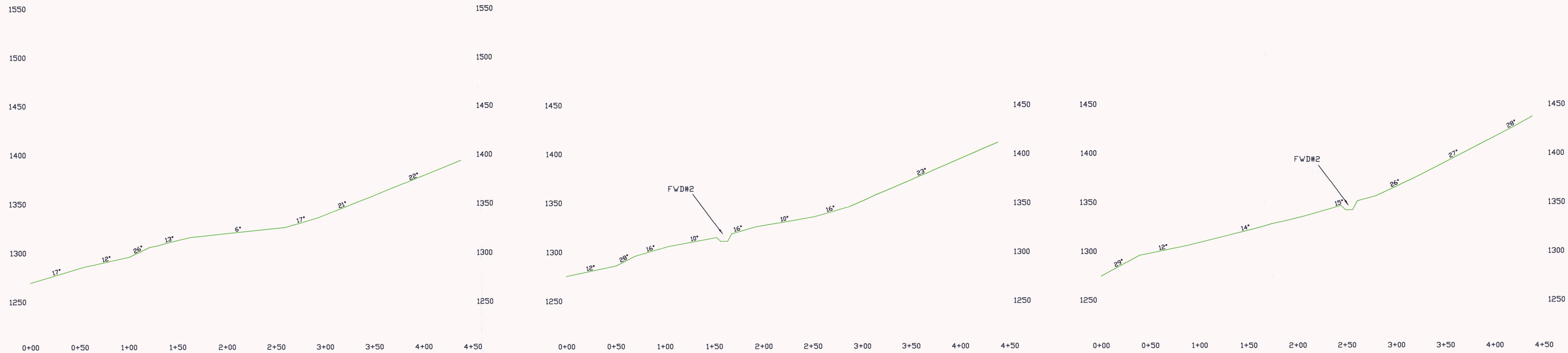


Bell County Coal Corporation

Permit No. 807-5223
Detailed Site Plan View Drawing

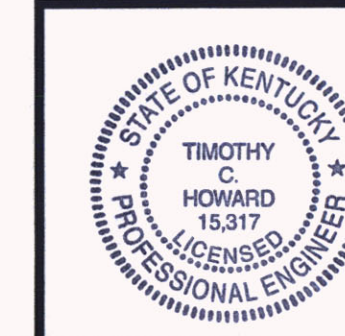
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Prepared by:
Howard Engineering & Geology, Inc.

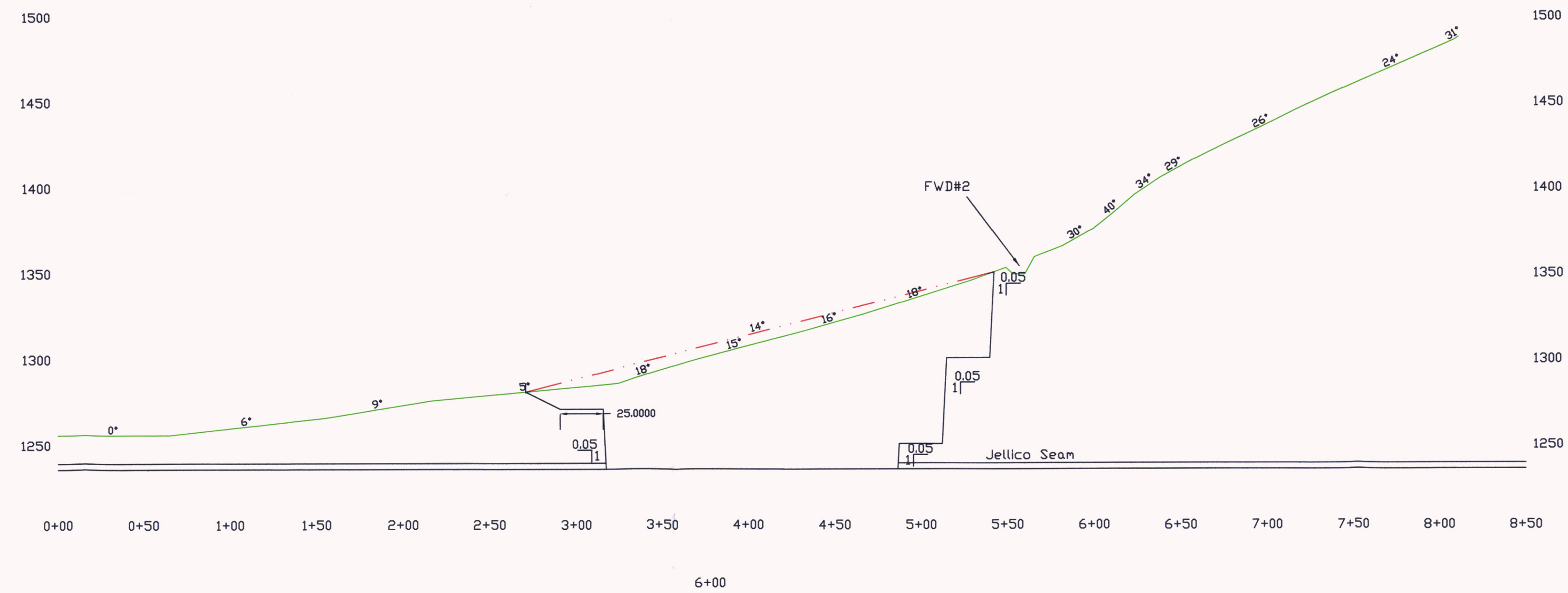
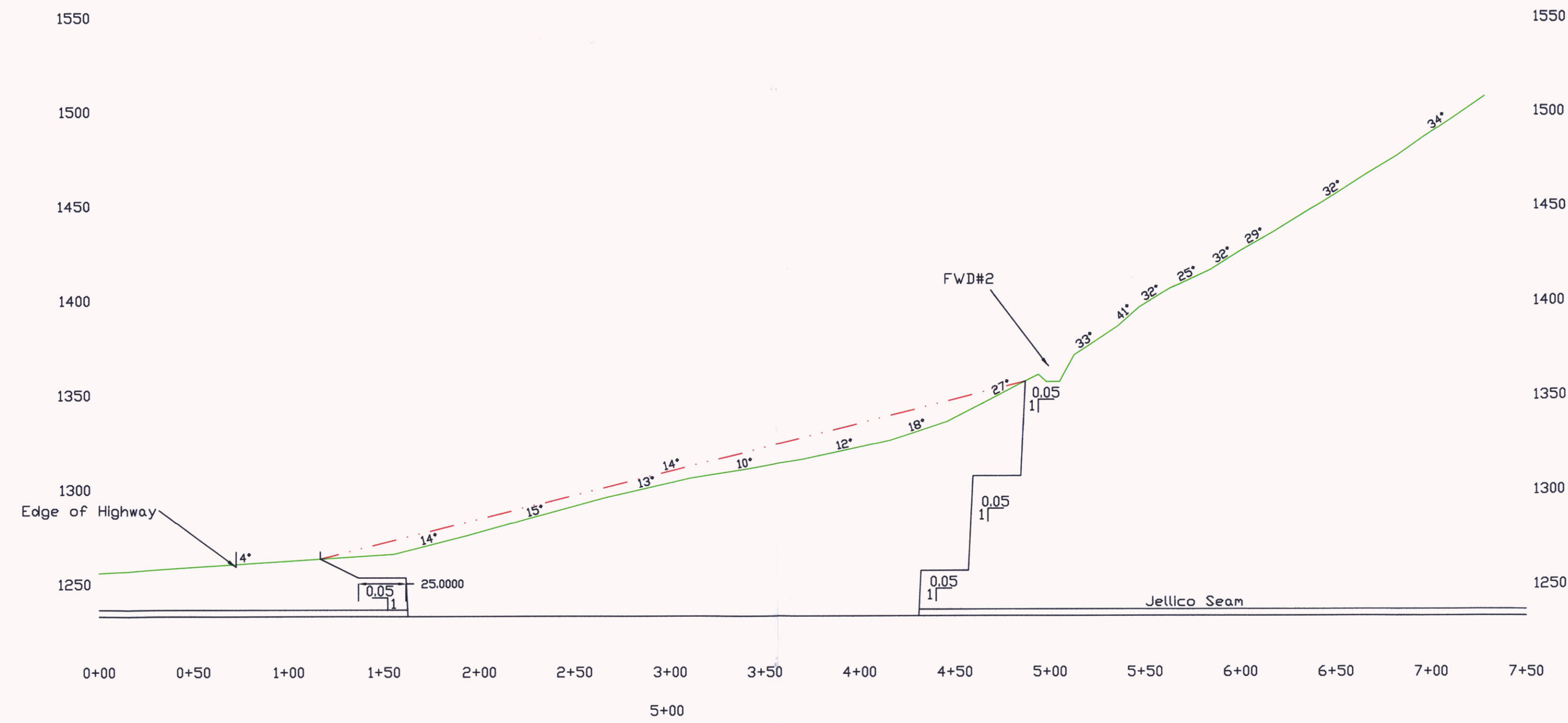




Pre-Mining =
 During-Mining =
 Post-Mining =

I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/14/08
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.

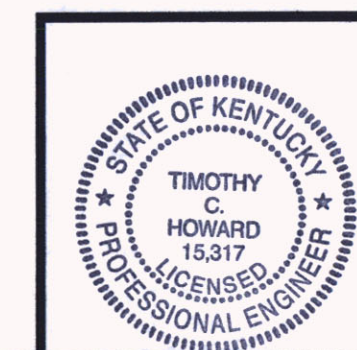


Bell County Coal Corporation
 Permit No. 807-5223
 Proposed Mining Area Cross-sections
 Scale: 1" = 50' Page No. 1 of 2
 Prepared by:
 Howard Engineering & Geology, Inc.



Pre-Mining = 
 During-Mining = 
 Post-Mining = 

I, Timothy C. Howard, P.E. No. 15,317
 Date: 10/14/06
 hereby certify in accordance with 405 KAR 7:040, Section 10,
 that this document is correct as determined by accepted
 engineering practices and includes all information required
 of it by Chapter 350 and KAR Title 405.



Bell County Coal Corporation
 Permit No. 807-5223
 Proposed Mining Area Cross-sections
 Scale: 1" = 50' Page No. 2 of 2
 Prepared by:
Howard Engineering & Geology, Inc.