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Central Heating Plant Economic Evaluation Program, Volume 4: Coalfield Properties Information Data Management Program

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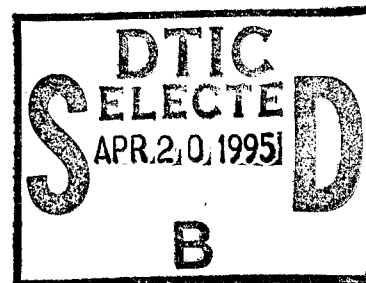
Public Law has directed the Department of Defense (DOD) to rehabilitate and convert its existing domestic power plants to burn more coal. Other Federal legislation requires DOD to use the most economic fuel for any new heating system.

This five-volume report discusses the Central Heating Plant Economic Evaluation Program (CHPECON), a computer program for screening potential new and retrofit steam/power generation facilities.

Volume 1 is the Technical Reference.
Volume 2 is the User's Manual.
Volume 3 is the Military Base Weather Information Data Management Program.
Volume 4 is the Coalfield Properties Information Data Management Program.
Volume 5 is the Emission Regulations Data Management Program.

CHPECON provides screening criteria to evaluate competing combustion technologies using coal, gas, or oil; detailed conceptual facility design information; budgetary facility costs; and economic measures of project acceptability including total life cycle costs and leveled cost of service.

The program provides sufficient flexibility to vary critical design and operating parameters to determine project sensitivity and parametric evaluation.



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Foreword

This study was conducted for the Assistant Chief of Staff for Installation Management (ACS(IM)), Directorate of Facilities and Housing under the Coal Conversion Studies Program, which is administered by the Energy Policy Directorate of the Office of the Assistant Secretary of Defense, Production & Logistics, Energy Policy (OASD P&L/EP). Millard Carr is the Program Manager. Funding was provided under Military Interdepartmental Purchase Request (MIPR) No. W56HZV89-AC-01; Work Units "Coal Conversion Strategies for DOD" and "Enhancement of Existing Models," dated 20 November 1989. The technical monitor was Qaiser Toor, DAIM-FDF-U.

The work was performed by the Fuels and Power Systems Team (FEP), Energy and Utility Systems Division (FE) of the Infrastructure Laboratory (FL), U.S. Army Construction Engineering Research Laboratories (USACERL). Special acknowledgment is given to Lee Thurber, Rama Katz, and Mei-Yi Feng, CECER-FE for their efforts in organizing technical materials. Dr. David M. Joncich is Chief, CECER-FE, and Alan Moore is Acting Chief, CECER-FL. The USACERL technical editor was Gloria J. Wienke, Information Management Office.

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Contents

SF 298	1
Foreword	2
List of Figures and Tables	4
1 Introduction	5
Background	5
Objective	5
Approach	5
Report Organization	7
System Requirements	7
Scope	7
Mode of Technology Transfer	8
2 The COALFIELD Program	9
Introduction	9
Information Review	9
3 Information Editing	13
4 Program and Data Listing	16
5 Program and Data Installation	19
6 Running COALFIELD	20
Metric Conversion Table	20
Appendix A: Program Listing	A-1
Appendix B: United States Geological Survey Coal Properties Data Listing	B-1
DISTRIBUTION	

List of Figures and Tables

Figures

1	Screen display for detailed view of coal field information	10
2	Example of coal field information printout	11
3	Screen display for condensed view of coal field information	12

Tables

1	Summary of error checking on entered data	14
2	Structure for data base file COALFIEL.DBF	16

1 Introduction

Background

The fiscal year (FY) 1986 Defense Appropriation Act (Public Law [PL]-99-190) Section 8110 directed the Department of Defense (DOD) to implement the rehabilitation and conversion of central heating plants to coal firing. The target set by this act was 1.6 million short tons* of coal per year above the 1985 consumption level by 1994. The language further stated that 300,000 tons of this amount should be anthracite coal. The purpose of this Section was to offset decreasing anthracite coal use in Germany resulting from U.S. Army, Europe (USAREUR) installations connecting to district heating systems. The FY 1987 Defense Authorization Act (PL-99-661, Section 1205) also directed that the primary fuel source in any new heating system be the most life cycle cost effective. To assist in complying with these acts, the U.S. Army Center for Public Works (USACPW) requested that the U.S. Army Construction Engineering Research Laboratories (USACERL) provide technical studies and support for the Army's Coal Conversion Program.

Objective

The objective of this project is to develop a series of screening and life cycle cost estimating computer models to determine when and where specific coal combustion technologies can be economically implemented at Army central heating plants.

Approach

The approach for providing Coal Conversion Program support has been to develop tools useful for long range utility planning and for evaluating both the technical and economic feasibility of conversion. Cost estimating methods have been developed for building new coal, gas, or oil plants, and for retrofitting existing plants to coal firing capability. Supporting data bases have been developed covering installation-specific data (heating plant inventory, building inventory, weather data, energy usage),

* A metric conversion table is on page 20.

environmental regulations, coal supply information, and combustion equipment performance. The plant sizes examined in the model range from 50,000 to 600,000 pounds per hour (lb/hr) with individual boiler sizes from 20,000 to 200,000 lb/hr of steam or high temperature hot water (HTHW). The program is divided into two parts: the preliminary screening model and the detailed cost model. The screening model is used to initially evaluate each plant site and boiler technology option to produce a list of the promising locations and technology options. The screening model contains five distinct sections for evaluating new heating plants, retrofit heating plants, cogeneration facilities (in base-managed and third-party-managed forms), and consolidation of existing multiple boiler plants.

The new heating plant screening model is used to determine if a new coal fired heating plant can be built to replace an existing steam plant (150 pounds per square inch gauge [psig] saturated steam or equivalent hot water or 250 psig saturated steam). The boiler technology options include: stoker, bubbling fluidized bed, circulating fluidized bed, coal/water slurry, coal/oil slurry, natural gas, and #2 and #6 fuel oils.

The retrofit screening model is used to determine if the existing boilers can be retrofitted to fire coal or low-British thermal unit (Btu) gas supplied from a gasifier. The boiler options include: coal-water slurry, coal-oil slurry, micronized coal, slagging coal, bubbling fluidized bed, and stoker, as well as gasification.

The cogeneration screening model is used to determine if a new cogeneration steam plant is a feasible alternative for a military base heating plant. Medium pressure (600 psig, 750 °F) or high pressure (1300 psig, 1000 °F) plants can be analyzed. The boiler types considered are stoker, coal-oil slurry, coal-water slurry, bubbling fluidized bed, and circulating fluidized bed.

The consolidation screening model is used to determine if the military base should consolidate several individual heating plants into one main heating plant. This section assesses whether the steam distribution density is sufficient to consider consolidation as a practical option.

After the screening model has been executed, the user has the option to quit or to restart another screening model (for another option) or to continue to obtain a cost estimate for the selected facility. The costing model contains sections for a new heating plant, retrofit heating plant, cogeneration facility (base and third party), and consolidated facility.

The costing model provides conceptual facility design, capital installed costs of the conceptual facility, operational and maintenance costs over the life of the conceptual facility, and life cycle costs.

Report Organization

This report discusses the Central Heating Plant Economic Evaluation Program (CHPECON) and is divided into the following five volumes:

Central Heating Plant Economic Evaluation Program, Volume 1: Technical Reference.

Central Heating Plant Economic Evaluation Program, Volume 2: User's Manual

Central Heating Plant Economic Evaluation Program, Volume 3: Military Base Weather Information Data Management Program

Central Heating Plant Economic Evaluation Program, Volume 4: Coalfield Properties Information Data Management Program.

Central Heating Plant Economic Evaluation Program, Volume 5: Emission Regulation Data Management Program

System Requirements

CHPECON was developed using an 80286 personal computer with 640K memory, and was run using MS-DOS 3.3. The models should operate satisfactorily on 8088/80286/80386 processors with MS-DOS 2.0 and above. The program is written in dBase III Plus compatible language with some extensions. To provide the necessary speed and compactness, the program is distributed in compiled form using Nantucket's Clipper and allows stand-alone operation without requiring additional utilities.*

Scope

The purpose of this work is to investigate the feasibility of conversion of Army central heating plants to coal firing. The models developed are generally applicable to industrial or large commercial facilities. The economic evaluation program for screening and life cycle costs will serve as a tool to select and rank potential Army sites for coal conversion.

* dBASE III Plus is a registered trademark of Ashton-Tate, and Clipper is a registered trademark of Nantucket Software.

Mode of Technology Transfer

The CHPECON program may be obtained by contacting the USACERL Fuels and Power Systems Team at 1-800-872-2375, extension 5551. The program will be transferred to Major Army Command Headquarters for further distribution. It is recommended that availability of this program and the information presented in this report be disseminated in a Public Works Technical Bulletin.

2 The COALFIELD Program

Introduction

This data base program for coal field properties was developed to support an overall program for studying coal usage at continental U.S. Army bases. The program, COALFIELD, is written in dBASE III Plus and can be used as a stand-alone program or can be merged with the overall Central Heating Plant Economic Evaluation (CHPECON) program. The stand-alone capability of COALFIELD eliminates the need to reinstall all the CHPECON program files when updating the coal field properties files. In support of CHPECON, COALFIELD maintains the file from which the coal program draws its information about coal fields. In use, this file is scanned for suitability with the user-selected technology (e.g., type of coal, range of hemispherical temperatures), and for locations within a specified distance from a base.

The United States Geological Survey (USGS) was the source of the coal properties data. The original sample size consisted of over 6000 entries. Noncoal entries were deleted from this set, as were entries that were incomplete. An additional pass through the data was required to eliminate those entries that were outside the range of consideration for this research. Duplicate entries (defined as the same latitude and longitude) were then eliminated. The resulting database has over 2400 entries from among 31 states.

Information Review

Figure 1 shows the standard display for the coal fields properties program. All the information used by the CHPECON program pertinent to a coal field is contained on one screen divided into logical sections. The area within the box is the coal field information. The area below the box is for the menu prompts and display of program messages. The information is accessed and updated through this menu. To select an option, press the capitalized letter in the option description.

Edit field <E> permits editing of the displayed coal field.

Coal field location		Last changed: 09/01/88	
State: TN - Tennessee		Location: PETROLEUMS ENERGY SERV INC	
County: MARION		Lat: 35°17'42"	Long: 85°32'15"
Proximate Analysis			
Moisture: 3.50 % (as delivered)			
---(dry basis)---			
Fixed Carbon: 64.70 %	Volatile: 26.30 %	Ash: 9.00 %	
Ultimate Analysis -- (dry basis)			
Carbon: 78.10 %	Hydrogen: 4.70 %	Nitrogen: 1.60 %	
Sulfur: 0.60 %	Oxygen: 6.00 %		
Miscellaneous			
Gross Calorific Value (dry): 13750 Btu/lb		Rank: B	
Hemispherical Temperature: 2804 °F (H=1/4W, reducing)			
Hardgrove Grindability Index: 0.0		Free Swelling Index: 4.5	
Code Number: W193643			
Note:			
Edit field / Add field / move Forward / move Backward			
Delete field / change Views / Print field list / Quit			
Option (E/A/F/B/D/V/P/Q) « »			

Figure 1. Screen display for detailed view of coal field information.

Add field <A> adds a blank field entry, then goes to the editing subroutine to allow entering the correct values for a new coal field.

Move Forward <F> displays the next coal field (as if flipping through a card file) until the end is reached.

**Move Backward ** displays the previous coal field (moving toward the beginning of the file) until the first entry is reached. The entries in the file are arranged by state.

Delete field <D> causes the field currently displayed to be eliminated from the file. The information that was entered is lost. As a check, you are asked to confirm the decision to delete a coal field.

Change Views <V> switches to a display that shows less information about an individual field but allows many fields to be displayed at one time. This is discussed in detail below.

Print a field list <P> allows you to print entries from the coalfield data base. Selecting this option brings up another prompt, asking if you want to print the displayed entry, the entries for a single state, all entries, or quit and return to the main screen without printing. If you request printing of the displayed field or all fields, the program begins printing. If you request to print by state, the program asks for the name or abbreviation of the state. After answering the

prompt for the state, the program begins printing. An example of the printed information is shown in Figure 2.

Quit <Q> returns you to the previous menu, if the program was run as part of the overall program set, or returns to the operating system, if the program was run as a separate module.

Changing the view from the detailed display of the coal field information brings up a display showing many coal field entries per screen, but less information about each coal field. An example of the display is presented in Figure 3. The menu options are the same as for the detailed display; however, they work somewhat differently.

"Editing a field <E>" requires you to first indicate which entry should be edited out of the list displayed, then proceeds as before. Use the up- and down-arrow keys on the

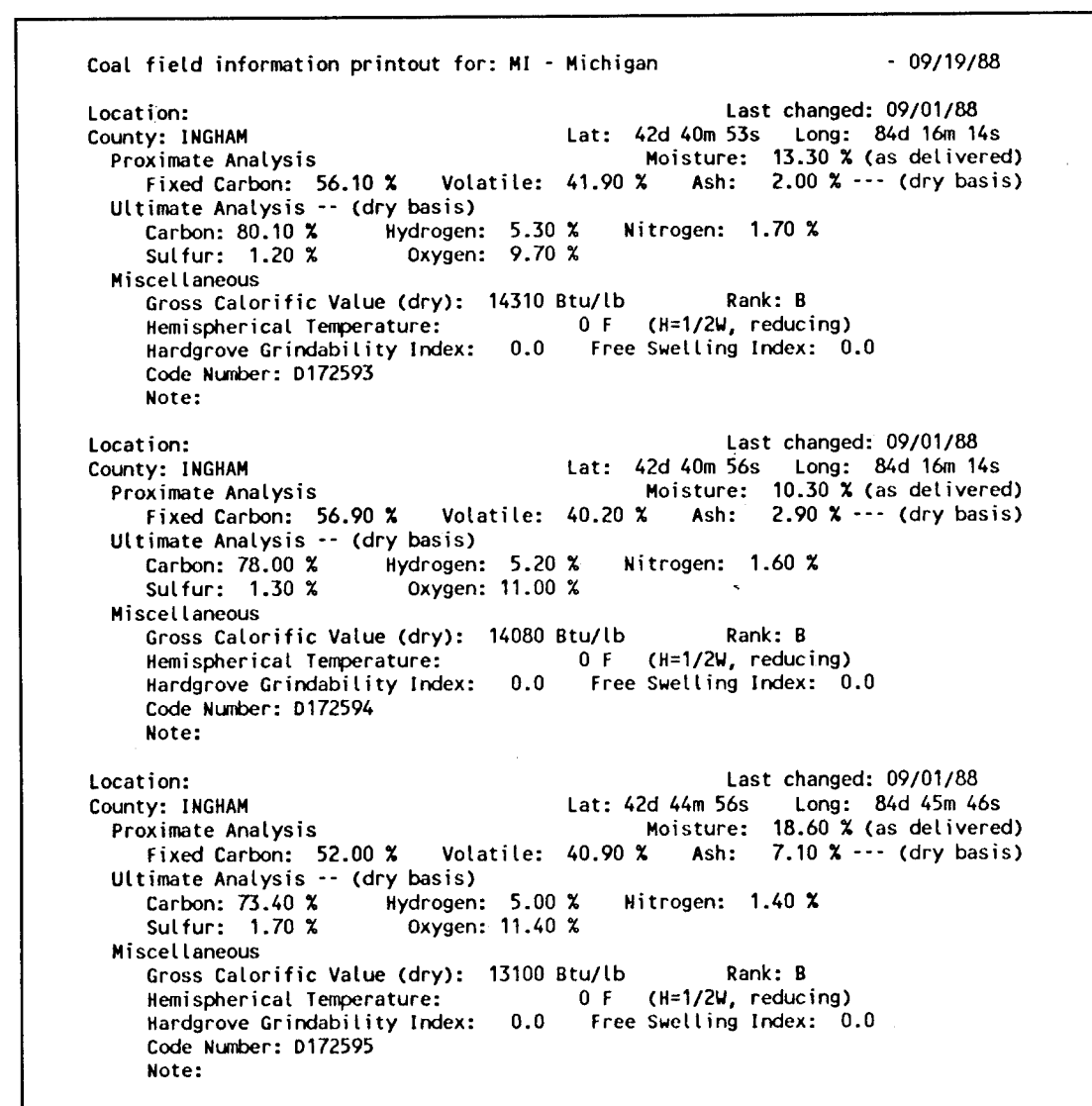


Figure 2. Example of coal field information printout.

Coal Field Information Management Program			09/20/88
Condensed View of Coal Fields			
State	Rank	County	Location
PA	B	ELK	STRIP MINE
PA	B	ELK	STRIP MINE
TN	B	MARION	ALLEN COAL CO
TN	B	GRUNDY	FOUR SEASONS COAL CO
TN	B	MARION	PETROLEUMS ENERGY SERV INC
TN	B	BLEDSON	PIONEER COAL CO
TN	B	SEQUITZ	SOUTHERN ENERGY RES CO
TN	B	BLEDSON	LUCKY CUMBERLAND COAL CO
TN	B	BLEDSON	LAMB CREEK COAL CO
TN	B	BLEDSON	SAUNDERS COAL CO
TN	L	LAUDERDALE	STATE PRISON FARM
TN	B	ANDERSON	JACKSON MINING CO
TN	B	MORGAN	G&B COAL CO

Edit field / Add field / move Forward / move Backward
 Delete field / change Views / Print field list / Quit
 Option (E/A/F/B/D/V/P/Q) « »

Figure 3. Screen display for condensed view of coal field information.

cursor keypad, then press "E" when the pointer is at the desired field. You can also quit from the editing pointer display back to the main menu. "Adding <A>" is the same in that a blank entry is created, then the program switches to editing the blank entry to place the information in the file.

Moving "Forward <F>" and "Backward " moves up or down one screen at a time; since many coal fields are displayed, this allows quicker movement through the file.

"Deleting a field <D>" requires you to first indicate which entry should be deleted. Deleting in this view also requires a confirmation, as did deleting in the detailed view. "Changing Views <V>" in this view moves you back to the detailed view.

"Print a field list <P>" is the same as before, as is Quit <Q>".

3 Information Editing

The information displayed in the detailed view (Figure 1) is divided into logical sections within the box. The first section is the coal field's location. The location field should contain the actual name of the mine (preferred) or a description of the type of site. The last changed date is displayed, but is not directly changed. When a field's data is edited, or when it is first added, the last changed date is automatically updated to the current date in the computer system's clock. The latitude displayed is the north (assumed) latitude of the coal field in the format $DDD^{\circ}MM'SS''$, where DDD is in degrees, MM is in minutes, SS is in seconds. The longitude displayed is the west (assumed) longitude of the coal field in the same $DDD^{\circ}MM'SS''$ format.

The next boxed-in area of the detailed view contains the coal's proximate analysis. The moisture fraction of the coal is for the coal as delivered, in percent, from the proximate analysis laboratory results. The next three values are for the coal on a dry basis, as noted on the screen. The values, in percent, are for the fractions of fixed carbon, volatiles, and ash in the coal. The total of these three values must equal 100 percent. If the sum of the values does not equal 100 percent, a message is displayed on the right side of the screen. If you ignored this, the program displays a message that it cannot proceed when the data screen is completed, instead of the prompt for whether the information entered should be accepted.

The next boxed-in area is for the ultimate analysis of the coal, on a dry basis. The values, in percent, are for the fractions of carbon, hydrogen, nitrogen, sulfur, and oxygen in the coal. These five values and the ash value should total 100 percent. In the same manner as the proximate analysis, if the values do not equal 100 percent, a message is displayed on the right side of the screen. If this message is ignored, the program stops at the end of the entries with the longer message that the ultimate analysis values do not total 100 percent. It is possible that both the proximate and ultimate totals will not equal 100 percent due to an erroneous ash value entry.

The values in the miscellaneous box describe the coal in more general terms. The gross calorific value (heating value on a dry basis) is in Btu/lb of coal. The expected range is from 5,000 to 20,000 Btu/lb. The rank is the general type of coal. Acceptable values to the program are: B (bituminous), SB (sub-bituminous), L (lignite), A (anthracite), and SA (semi-anthracite). The program continues to prompt until one of

these values is entered. The hemispherical temperature is the value defined by height = $(0.5) \times (\text{width})$ in a reducing environment, in degrees Fahrenheit. Acceptable values are from 1000 to 3500 °F. The Hardgrove Grindability Index has an acceptable value range of from 20 to 120. The Free Swelling Index has an acceptable value range of from 0 to 9. The code number is a unique number given to the entry for later identification; it is alphanumeric, with a check made on the uniqueness of the entry. In the case of the original data, the code number is the USGS number assigned to the entry. The note contains any additional information that should be recorded about the coal field. For example, the note could indicate that this coal field is the one used by a certain base, or that the reserves of the coal field are limited. Anything that may be useful in deciding to use a coal field should be placed in the note space.

For some of the information about a coal field, a value of 0 can be entered instead of a value in the expected range. This has been provided for the times when some of the values are not yet known. However, the proximate analysis, the gross calorific values, and the latitude and longitude must be entered. Table 1 summarizes the error checking in the program.

Table 1. Summary of error checking on entered data.

Information	Acceptable Values
State	Must be one of the 50 states.
Location	No error checking implemented. Can be a blank entry.
County	No error checking implemented. Can be a blank entry.
Latitude	The latitude must be in the format DDD°MM'SS", where DDD is in degrees, MM is in minutes, SS is in seconds. DDD must be in the range from 25 to 72. MM and SS must be a value of 00 to 59, inclusive.
Longitude	The longitude must be in the format DDD°MM'SS", where DDD is in degrees, MM is in minutes, SS is in seconds. DDD must be in the range from 63 to 172°. MM and SS must be a value of 00 to 59, inclusive.
Moisture	Moisture fraction of the coal should be in the range of 0 to 60 percent, inclusive.
Fixed Carbon	Fraction of fixed carbon in the coal must be in the range of 20 to 99 percent, inclusive. Total of fixed carbon, volatiles, and ash must equal 100 percent.
Volatiles	Fraction of volatiles in the coal must be in the range of 0 to 60 percent, inclusive. Total of fixed carbon, volatiles, and ash must equal 100 percent.
Ash	Fraction of ash in the coal must be in the range of 0 to 50 percent, inclusive. Total of fixed carbon, volatiles, and ash must equal 100 percent.
Carbon	Fraction of carbon can have a value from 20 to 99 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.

Information	Acceptable Values
Hydrogen	Fraction of hydrogen can have a value from 0 to 30 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Sulfur	Fraction of sulfur can have a value from 0 to 20 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Oxygen	Fraction of oxygen can have a value from 0 to 50 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Nitrogen	Fraction of nitrogen can have a value from 0 to 30 percent, inclusive. Total of carbon, hydrogen, sulfur, oxygen, nitrogen (ultimate analysis), and ash from proximate analysis must equal 100 percent.
Gross Calorific Value	Heating value must be in the range of 5,000 to 20,000 Btu/lb, inclusive.
Rank	The rank, or type, of the coal must be one of the following five values: B = bituminous SB = sub-bituminous L = lignite A = anthracite SA = semi-anthracite
Hemispher. Tempera- ture	Hemispherical temperature of the coal (defined as height = 0.5 x width) is in the range of 1000 to 3500 °F, inclusive, or 0 if no value is known.
Hardgrove Grindability Index	The index must be in the range of 20 to 120, inclusive, or 0 if no value is known.
Free Swelling Index	The index must be in the range of 0 to 9, inclusive, with 0 either a real value or representative of no value know.
Code Number	The code number must be a unique entry in the data base. It cannot be a blank entry.
Note	No error checking implemented. Can be a blank entry.

4 Program and Data Listing

The listing of the program segments is contained in Appendix A of this report. A listing of the information stored in the coal field data base from the USGS data is contained in Appendix B of this report. The file structure of COALFIEL.DBF is shown in Table 2. The individual data base fields are updated through the coal field information screen, as described earlier.

Two data base fields used by CHPECON have been added that specifically require storing information about coal fields. SLCTD (selected) is a logical field that is set TRUE or FALSE based on whether the coal field has been selected by CHPECON based on the distance it is from the military base that is being studied. DIST FROM is the distance in miles that the coal field is from the military base. This value is displayed as part of the acceptable coal fields display when you are given the opportunity to review before selecting one coal field for use of its properties in the emissions and technology analysis of CHPECON.

Table 2. Structure for data base file COALFIEL.DBF.

Field	Field Name*	Field Type	Field Width	Decimal Width
1	State	Character	2	
2	County	Character	23	
3	Location	Character	30	
4	Last Chg	Date	8	
5	Latitude	Numeric	7	
6	Longitude	Numeric	7	
7	Moisture	Numeric	6	2
8	Volatile	Numeric	6	2
9	Fixed Crbn	Numeric	6	2
10	Ash	Numeric	6	2
11	Rank	Character	5	
12	HHv Dry	Numeric	6	
13	Hrdgrv Grd	Numeric	5	1
14	Free Swell	Numeric	4	1

15	Aft S	Numeric	5	
16	Carbon	Numeric	5	2
17	Hydrogen	Numeric	5	2
18	Sulfur	Numeric	5	2
19	Oxygen	Numeric	5	2
20	Nitrogen	Numeric	5	2
21	Code No	Character	20	
22	Cmmnt	Character	65	
23	Slctd	Logical	1	
24	Dist From	Numeric	5	

*Field	Description
Location	Either the name of the mine or a description of the type of mine.
County	County in which the coal field is located.
Code Number	A unique number given to the entry for later identification. (In the case of the original date, this is the USGS number assigned to the entry.)
Latitude	The north latitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Longitude	The west longitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Rank	The rank, or type, of the coal: B = bituminous SB = sub-bituminous L = lignite A = anthracite SA = semi-anthracite
Htg Val	Heating value of the dry coal in Btu/lb.
Last Chg	Date the entry was last changed.
Moisture	Moisture fraction of the coal as delivered, in percent, from the proximate analysis.
Volatiles	Fraction of volatiles in the coal on a dry basis, in percent, from the proximate analysis.
Fixed Carbon	Fraction of fixed carbon in the coal on a dry basis, in percent, from the proximate analysis.
Ash	Fraction of ash in the coal on a dry basis, in percent, from the proximate analysis.
Carbon	Fraction of carbon in the coal on a dry basis, in percent, from the ultimate analysis.
Hydrogen	Fraction of hydrogen in the coal on a dry basis, in percent, from the ultimate analysis.

*Field	Description
Sulfur	Fraction of sulfur in the coal on a dry basis, in percent, from the ultimate analysis.
Oxygen	Fraction of oxygen in the coal on a dry basis, in percent, from the ultimate analysis.
Nitrogen	Fraction of nitrogen in the coal on a dry basis, in percent, from the ultimate analysis.
Hardgrove	Hardgrove grindability index of the coal.
Free Swell	Free swelling index of the coal.
Hemi Temp	Hemispherical temperature of the coal, in °F; defined as the softening temperature at which $H=1/2W$

5 Program and Data Installation

The stand-alone nature of COALFIELD requires that it be installed as an independent entity before use, even if it will be used only as part of CHPECON. One disk contains the programs and empty data files for COALFIELD. The installation consists of copying the disks to a suitable subdirectory on a hard disk of the computer that will be used. When the COALFIELD program is run, it will automatically create the index files it needs. However, at this point the index files will be blank.

The COALFIELD data base itself is larger than a standard 360k floppy disk when it contains the information generated in this project. Because of this, an additional program has been provided that manages the process of handling small files that will fit on 360k floppies, called COALBLD. COALBLD is a standalone program with a menu of three options:

Adding to COALFIEL.DBF will cause COALBLD to look for data files named COALFL##.DBF, where ## can vary from 1 to 99. COALFIEL.DBF can be optionally cleared (previous information removed) before adding, and index files are rebuilt if any additions are made. COALBLD will use the data structure of the first data file that is found to create COALBLD.DBF if COALFIEL.DBF is not initially present. COALBLD will look only in the current drive/directory for COALFIEL.DBF and COALFL##.DBF.

Splitting COALFIEL.DBF will produce the small data files that are looked for by COALBLD during the adding process. COALBLD will inform you if it cannot find COALFIEL.DBF. It will erase any previous small data files, leaving only the current ones on the directory.

Quitting will end COALBLD.

To use COALBLD to place all available data into the COALFIEL.DBF data base file, first copy all available disks to the directory where COALFIELD is installed. Then start COALBLD and select the adding option. To split the COALFIEL.DBF apart, start COALBLD and select the splitting option. The individual files can then be copied to floppies or other media for transfer to another system.

6 Running COALFIELD

To run COALFIELD as a stand-alone program, you must know the program's environment.

1. If run under dBASE III or a compatible interpreter (like FoxBase*), start dBASE, then enter the command **DO COALFIEL**, and press the <RETURN> key.
2. If run as a compiled program (like Clipper**), from the DOS prompt (or similar), enter the command **COALFIEL**, and press the <RETURN> key.

Exiting the program will return you to the level that called it—the dot prompt if in dBASE or FoxBase, and the DOS prompt if in Clipper.

Metric Conversion Table

1 in.	=	25.4 mm
1 sq in	=	6.452 cm ²
1 psi	=	6.89 kPa
1 psi	=	89.300 g/cm ²
1 lb	=	0.453 kg
1 lb/hr	=	0.126 g/s
1 cu ft	=	0.028 m ³
1 sq ft	=	0.093 m ²
°F	=	(°C + 17.78) × 1.8
1 Btu/lb	=	0.556 cal/g
1 ton	=	907.185 kg

* FoxBase is a registered trademark of Fox Software, Inc.

** Clipper is a registered trademark of Nantucket Software.

Appendix A: Program Listing

01-11-89 15:00:00 CHKSTAT2.PRG
Wed 01-11-89 15:15:18

Pg 1
of 6
1-50

```
*****
*- CHKSTAT2.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- attempt to decipher state entry, detailed analysis
*****
*
* convert state entry to upper case, set up length and flag
st=UPPER(LTRIM(TRIM(st)))
stln=LEN(st)
stlst=""
stn=""
ok=.f.

* if entry is two characters,
* check to see if it is proper state abbreviation
+---IF stln=2
|   DO idstate
+---ENDIF

* if state found, stlst has name, routine can return from here
+---IF LEN(stlst)>0
|   stn=st
|   ok=.t.
|   RETURN
+---ENDIF

* if length is 0 (no entry), set name to special code
+---IF stln=0
|   stlst="--,--"
|   ok=.t.
+---ENDIF

* if nothing has been found, try matching
* first letters of entry with state names
+---DO WHILE .NOT. ok
|
|   +---IF 'ALABAMA'=st
|   |   stlst=stlst+', Alabama'
|   |   stn='AL'
|   +---ENDIF
|   +---IF 'ALASKA'=st
|   |   stlst=stlst+', Alaska'
|   |   stn='AK'
|   +---ENDIF
|   +---IF 'ARKANSAS'=st
|   |   stlst=stlst+', Arkansas'
```

01-11-89 15:00:00 CHKSTAT2.PRG
Wed 01-11-89 15:15:18

Pg 2
of 6
51-100

```
| | stn='AR'  
| +---ENDIF  
| +---IF 'ARIZONA'=st  
| | stlist=stlist+', Arizona'  
| | stn='AZ'  
| +---ENDIF  
| +---IF 'CALIFORNIA'=st  
| | stlist=stlist+', California'  
| | stn='CA'  
| +---ENDIF  
| +---IF 'COLORADO'=st  
| | stlist=stlist+', Colorado'  
| | stn='CO'  
| +---ENDIF  
| +---IF 'CONNECTICUT'=st  
| | stlist=stlist+', Connecticut'  
| | stn='CT'  
| +---ENDIF  
| +---IF 'DELAWARE'=st  
| | stlist=stlist+', Delaware'  
| | stn='DE'  
| +---ENDIF  
| +---IF 'DISTRICT OF COLUMBIA'=st  
| | stlist=stlist+', District of Columbia'  
| | stn='DC'  
| +---ENDIF  
| +---IF 'FLORIDA'=st  
| | stlist=stlist+', Florida'  
| | stn='FL'  
| +---ENDIF  
| +---IF 'GEORGIA'=st  
| | stlist=stlist+', Georgia'  
| | stn='GA'  
| +---ENDIF  
| +---IF 'HAWAII'=st  
| | stlist=stlist+', Hawaii'  
| | stn='HI'  
| +---ENDIF  
| +---IF 'IDAHO'=st  
| | stlist=stlist+', Idaho'  
| | stn='ID'  
| +---ENDIF  
| +---IF 'ILLINOIS'=st  
| | stlist=stlist+', Illinois'  
| | stn='IL'  
| +---ENDIF  
| +---IF 'INDIANA'=st  
| | stlist=stlist+', Indiana'  
| | stn='IN'  
| +---ENDIF
```

```
| +---IF 'IOWA'=st
| | stlst=stlst+', Iowa'
| | stn='IA'
| +---ENDIF
| +---IF 'KANSAS'=st
| | stlst=stlst+', Kansas'
| | stn='KS'
| +---ENDIF
| +---IF 'KENTUCKY'=st
| | stlst=stlst+', Kentucky'
| | stn='KY'
| +---ENDIF
| +---IF 'LOUISIANA'=st
| | stlst=stlst+', Louisiana'
| | stn='LA'
| +---ENDIF
| +---IF 'MAINE'=st
| | stlst=stlst+', Maine'
| | stn='ME'
| +---ENDIF
| +---IF 'MARYLAND'=st
| | stlst=stlst+', Maryland'
| | stn='MD'
| +---ENDIF
| +---IF 'MASSACHUSETTS'=st
| | stlst=stlst+', Massachusetts'
| | stn='MA'
| +---ENDIF
| +---IF 'MICHIGAN'=st
| | stlst=stlst+', Michigan'
| | stn='MI'
| +---ENDIF
| +---IF 'MINNESOTA'=st
| | stlst=stlst+', Minnesota'
| | stn='MN'
| +---ENDIF
| +---IF 'MISSISSIPPI'=st
| | stlst=stlst+', Mississippi'
| | stn='MS'
| +---ENDIF
| +---IF 'MISSOURI'=st
| | stlst=stlst+', Missouri'
| | stn='MO'
| +---ENDIF
| +---IF 'MONTANA'=st
| | stlst=stlst+', Montana'
| | stn='MT'
| +---ENDIF
| +---IF 'NEBRASKA'=st
| | stlst=stlst+', Nebraska'
```

```
|      stn='NE'  
| +---ENDIF  
| +---IF 'NEVADA'=st  
| |      stlst=stlst+', Nevada'  
| |      stn='NV'  
| +---ENDIF  
| +---IF 'NEW HAMPSHIRE'=st  
| |      stlst=stlst+', New Hampshire'  
| |      stn='NH'  
| +---ENDIF  
| +---IF 'NEW JERSEY'=st  
| |      stlst=stlst+', New Jersey'  
| |      stn='NJ'  
| +---ENDIF  
| +---IF 'NEW MEXICO'=st  
| |      stlst=stlst+', New Mexico'  
| |      stn='NM'  
| +---ENDIF  
| +---IF 'NEW YORK'=st  
| |      stlst=stlst+', New York'  
| |      stn='NY'  
| +---ENDIF  
| +---IF 'NORTH CAROLINA'=st  
| |      stlst=stlst+', North Carolina'  
| |      stn='NC'  
| +---ENDIF  
| +---IF 'NORTH DAKOTA'=st  
| |      stlst=stlst+', North Dakota'  
| |      stn='ND'  
| +---ENDIF  
| +---IF 'OHIO'=st  
| |      stlst=stlst+', Ohio'  
| |      stn='OH'  
| +---ENDIF  
| +---IF 'OKLAHOMA'=st  
| |      stlst=stlst+', Oklahoma'  
| |      stn='OK'  
| +---ENDIF  
| +---IF 'ORECON'=st  
| |      stlst=stlst+', Oregon'  
| |      stn='OR'  
| +---ENDIF  
| +---IF 'PENNSYLVANIA'=st  
| |      stlst=stlst+', Pennsylvania'  
| |      stn='PA'  
| +---ENDIF  
| +---IF 'RHODE ISLAND'=st  
| |      stlst=stlst+', Rhode Island'  
| |      stn='RI'  
| +---ENDIF
```

01-11-89 15:00:00 CHKSTAT2.PRG
Wed 01-11-89 15:15:18

Pg 5
of 6
201-250

```
| +---IF 'SOUTH CAROLINA'=st  
| | stlst=stlst+', South Carolina'  
| | stn='SC'  
| +---ENDIF  
| +---IF 'SOUTH DAKOTA'=st  
| | stlst=stlst+', South Dakota'  
| | stn='SD'  
| +---ENDIF  
| +---IF 'TEXAS'=st  
| | stlst=stlst+', Texas'  
| | stn='TX'  
| +---ENDIF  
| +---IF 'TENNESSEE'=st  
| | stlst=stlst+', Tennessee'  
| | stn='TN'  
| +---ENDIF  
| +---IF 'UNITED STATES'=st  
| | stlst=stlst+', United States'  
| | stn='US'  
| +---ENDIF  
| +---IF 'UTAH'=st  
| | stlst=stlst+', Utah'  
| | stn='UT'  
| +---ENDIF  
| +---IF 'VERMONT'=st  
| | stlst=stlst+', Vermont'  
| | stn='VT'  
| +---ENDIF  
| +---IF 'VIRGINIA'=st  
| | stlst=stlst+', Virginia'  
| | stn='VA'  
| +---ENDIF  
| +---IF 'WASHINGTON'=st  
| | stlst=stlst+', Washington'  
| | stn='WA'  
| +---ENDIF  
| +---IF 'WEST VIRGINIA'=st  
| | stlst=stlst+', West Virginia'  
| | stn='WV'  
| +---ENDIF  
| +---IF 'WISCONSIN'=st  
| | stlst=stlst+', Wisconsin'  
| | stn='WI'  
| +---ENDIF  
| +---IF 'WYOMING'=st  
| | stlst=stlst+', Wyoming'  
| | stn='WY'  
| +---ENDIF
```

| * if stlst is empty, take off last character of entry to see if it matches

01-11-89 15:00:00 CHKSTAT2.PRG
Wed 01-11-89 15:15:18

Pg 6
of 6
251-273

```
|  +---IF LEN(stlst)=0
|  |      st=SUBSTR(st,1,LEN(st)-1)
|  |      stln=LEN(st)
|  |
|  * if all entry characters removed, set special code, and exit do-while
|  |  +---IF stln=0
|  |  |      ok=.t.
|  |  |      stlst="--,--"
|  |  +---ENDIF
|  |
|  * if stlst has possible names, set ok to true (for ok to leave do-while)
|  +---ELSE
|  |      ok=.t.
|  +---ENDIF
|
|  * end of search for possible matches with state names
+---ENDDO
```

```
    * strip off first two characters to eliminate leading ',
    stlst=SUBSTR(stlst,3)
    st=stn
```

RETURN

01-11-89 15:00:00 CHKSTATE.PRG
Wed 01-11-89 15:15:01

Pg 1
of 1
1-39

```
*****
*- CHKSTATE.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
*- attempt to decipher state entry
*****
*
stn=""
DO chkstat2

* if ',' is found in list, more than one state name is present
* need to print additional help message
+--IF AT(", ", stlst)>0
|   st=""
|   ok=.f.
|   @ 23,1 CLEAR TO 24,78
|
|   * if special code found, then say that no match found
|   +--IF stlst=","--
|   |   @ 23,2 SAY "No match found for the name"
|   |   @ 24,2 SAY "Please check your spelling"
|   |
|   * if regular names are present, display them as possible matches
|   \+--ELSE
|   |   @ 23,2 SAY "Enter the name more completely. Possible matches are:"
|   |   @ 24,2 SAY SUBSTR(stlst,1,76)
|   |
|   +--ENDIF
|
|   * stlst contains only one state name, so it must be a match
+--ELSE
|   * set st to value found when matching entry
|   st=stn
+--ENDIF

* return to called routine
RETURN
```

```
*****
* COALBLD.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* build database on coal fields from txt file
*****
*
CLEAR
CLEAR ALL
SET TALK OFF
SET CONSOLE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0

* loop to process user requests
ans=" "
+--DO WHILE ans<> "Q"
|   CLEAR
|   @ 1,0 TO 3,79
|   @ 2,3 SAY "COALBLD database building routine"
|   @ 2,69 SAY DATE()
|   @ 8,15 SAY "Add to COALFIELD database"
|   @ 10,15 SAY "Split COALFIELD database into smaller files"
|   @ 12,15 SAY "Quit COALBUILD program"
|   @ 15,15 SAY "Option (A/S/Q) " + CHR(174) + " " + CHR(175)
|   ans=" "
|   +--DO WHILE AT (ans, "ASQ")=0
|   |   ans=" "
|   |   @ 15,32 GET ans PICTURE "!"
|   |   READ
|   +--ENDDO
|
|=====
| * section for quitting
|
| +--IF ans="Q"
| |   LOOP
| +--ENDIF
|
|=====
| * section for adding to coalfiel.dbf from smaller files
|
| +--IF ans="A"
| |   @ 5,0 CLEAR
| |   @ 8,10 SAY "Adding to the COALFIELD database"
| |   +--IF FILE ("coalfiel.dbf")
```

```
| | | USE coalfiel
| | | +---IF RECCOUNT(>)>0
| | | | @ 12,10 SAY "The COALFIELD database has " ;
| | | | +LTRIM(STR(RECCOUNT(>))) + " entries in it."
| | | | ok=.f.
| | | | @ 14,10 SAY "Do you want to clear them before ";
| | | | +"adding? (Y/N)" GET ok PICTURE "Y"
| | | | READ
| | | | +---IF ok
| | | | | ok=.f.
| | | | | @ 16,10 SAY "Are you sure? (Y/N)" GET ok PICTURE "Y"
| | | | | READ
| | | | +---ENDIF
| | |
| * if COALFIEL is to be cleared, zap it, then recreate index files
| | | +---IF ok
| | | | SET SAFETY OFF
| | | | ZAP
| | | | INDEX ON state TO coalfiel
| | | | INDEX ON code_no TO coalcode
| | | | SET SAFETY ON
| | | | CLOSE DATABASES
| | | | @ 18,10 SAY "COALFIED database cleared."
| | | +---ENDIF
| | |
| * let user know COALFIEL has no entries in it
| | | +---ELSE
| | | | @ 16,10 SAY "The COALFIELD database has no entries."
| | | +---ENDIF
| | |
| * let user know COALFIEL was not present and will be created, if it can
| | | +---ELSE
| | | | @ 12,10 SAY "COALFIEL database file not present. "
| | | | @ 14,10 SAY "It will be built from the first data file."
| | | +---ENDIF
| | |
| * wait before clearing screen display
| | | ky=" "
| | | @ 22,10 SAY "Press any key to continue..." GET ky
| | | READ
| | |
| * check with user to make sure he is ready to add
| | | @ 5,0 CLEAR
| | | ok=.f.
| | | @ 8,10 SAY "Ready to add to COALFIEL? (Y/N)" GET ok PICTURE "Y"
| | | READ
| | | +---IF .NOT. ok
| | | | LOOP
| | | +---ENDIF
```

```
| * loop through possible file names
| |   @ 10,10 SAY "Searching for COALFIEL data files"
| |   i=1
| |   fc=0
| |   fnd=.f.
| |   +---DO WHILE i<100
| | |   fl="COALFL" +LTRIM(STR(i)) +".DBF"
| | |   @ 12,10 SAY "Looking for " +fl +
| | |   +---IF FILE(fl)
| | | |   fc=fc+1
| | | |   @ 12,10 SAY "Found " +fl +". Adding to COALFIEL."
| | | |   fnd=.t.
| | |   +---IF FILE("coalfiel.dbf")
| | | |   USE coalfiel
| | | |   APPEND FROM &fl
| | |   +---ELSE
| | | |   USE &fl
| | | |   COPY TO coalfiel
| | |   +---ENDIF
| | |   CLOSE DATABASES
| | |   +---ENDIF
| | |   i=i+1
| |   +---ENDDO
|
| * announce to user total files found, then reindex COALFIEL
| |   +---IF fc>0
| | |   @ 14,10 SAY LTRIM(STR(fc)) +" files found."
| | |
| | |   @ 16,10 SAY "Updating index files for COALFIEL."
| | |   @ 17,14 SAY "Indexing coal fields by state"
| | |   USE coalfiel
| | |   SET SAFETY OFF
| | |   INDEX ON state TO coalfiel
| | |   SET SAFETY ON
| | |   @ ROW(),COL() SAY " - done"
| | |
| | |   @ 18,14 SAY "Indexing coal fields by code number"
| | |   SET SAFETY OFF
| | |   INDEX ON code_no TO coalcode
| | |   SET SAFETY ON
| | |   CLOSE DATABASES
| | |   @ ROW(),COL() SAY " - done"
| |
| * let user know that no files were found
| |   +---ELSE
| | |   @ 14,10 SAY "No files found."
| |   +---ENDIF
```

```
| * wait before clearing screen display
| |   ky=" "
| |   @ 22,10 SAY "Press any key to continue..." GET ky
| |   READ
| |   LOOP
| |   +---ENDIF
|
| * =====
| * section for splitting up coalfiel.dbf into smaller files
|
| |   +---IF ans="S"
| | |   @ 5,0 CLEAR
| | |
| | * let user know that COALFIEL was not found, and cannot be split
| | |   +---IF .NOT. FILE("coalfiel.dbf")
| | | |   @ 5,0 CLEAR
| | | |   @ 10,10 SAY "COALFIEL.DBF database file was not found."
| | | |   @ 12,10 SAY "The file must be present to split it " ;
| | | |   + "into smaller data files."
| | |
| | * wait before clearing screen display
| | |   ky=" "
| | |   @ 22,10 SAY "Press any key to continue..." GET ky
| | |   READ
| | |   LOOP
| | |   +---ENDIF
| |
| * proceed with splitting up, if everything is ready
| |   @ 5,0 CLEAR
| |   ok=.f.
| |   @ 8,10 SAY "Ready to split COALFIEL? (Y/N)" GET ok PICTURE "Y"
| |   READ
| |   +---IF .NOT. ok
| | |   LOOP
| | |   +---ENDIF
| |
| * loop to split up COALFIEL.dbf into smaller files (700 records each)
| |   @ 8,10 SAY "Splitting COALFIELD database into smaller files."
| |   i=1
| |   USE coalfiel
| |   +---DO WHILE i<100 .AND. .NOT. EOF()
| | |   fl="COALFL" +LTRIM(STR(i)) +".DBF"
| | |   @ 12,10 SAY "Creating " +fl +". "
| | |   SET SAFETY OFF
| | |   COPY NEXT 700 TO &fl
| | |   SET SAFETY ON
| | |   +---IF .NOT. EOF()
| | | |   SKIP
| | | |   +---ENDIF
| | |
```

01-11-89 15:00:00 COALBLD.PRG
Wed 01-11-89 15:16:01

Pg 5
of 5
201-225

```
| | | i=i+1
| | +---ENDDO
| | CLOSE DATABASES
| | @ 14,10 SAY LTRIM(STR(i-1)) +" files created."
| |
| * erase any remaining old data files
| | +---DO WHILE i<100
| | | fl="COALFL" +LTRIM(STR(i)) +".DBF"
| | | +---IF FILE(fl)
| | | | ERASE &fl
| | | +---ENDIF
| | | i=i+1
| | +---ENDDO
| |
| * wait before clearing screen display
| | ky=" "
| | @ 22,10 SAY "Press any key to continue..." GET ky
| | READ
| | +---ENDIF
|
+---ENDDO

CLEAR ALL
SET TALK ON
RETURN
```

01-11-89 15:00:00 COALFIEL.PRG
Wed 01-11-89 15:16:38

Pg 1
of 2
1-50

```
*****
* COALFIEL.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* update database on coal fields
*****
```

```
*
* reset colors to desired values if necessary
SET TALK OFF
DO setcolor
CLEAR ALL
SET BELL OFF
SET CONSOLE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0
ON ESCAPE
```

```
@ 6,0 SAY ''
```

```
TEXT
```

```
'      @@@@@@      @@@@@@      @@@@      @      @@@@@@@@      @@@@@@      @@@@@@@@      @      @@@@@@@@
'      @      @      @      @      @      @      @      @      @      @      @      @      @      @
'      @      @      @      @      @      @      @      @      @      @      @      @      @      @
'      @      @      @      @      @      @      @@@@@@@@      @      @@@@@@@@      @      @      @
'      @      @      @      @@@@@@@@@@      @      @      @      @      @      @      @      @
'      @      @      @      @      @      @      @      @      @      @      @      @      @      @
'      @@@@@@      @@@@@@      @      @      @@@@@@@@      @      @@@@@@      @@@@@@@@      @@@@@@@@      @@@@@@@@
```

```
ENDTEXT
```

```
@ 4,0 TO 16,79 double
```

```
* define operating environment
DO dbenvrn
```

```
* check for index file for coal fields
indxnd= ( FILE("coalfiel"+ending) ) .AND. ( FILE("coalcode"+ending) )
indxnd= indxnd .AND. ( FILE("coaldist"+ending) )
```

```
!--IF .NOT. indxnd
```

```
|      @ 17,15 SAY "Index files were not found on startup"
|      @ 18,15 SAY "Please wait while they are created"
```

```
|      +--IF .NOT. clipper
```

```
|      |      ON ESCAPE abt=.t.
```

```
|      +--ENDIF
```

```
|      @ ROW()+1,15 SAY "Indexing coal fields by state"
```

```
|      USE coalfiel
```

```
|      SET SAFETY OFF
```

```
|      INDEX ON state TO coalfiel
```

```
|      SET SAFETY ON
```

01-11-89 15:00:00 COALFIEL.PRG
Wed 01-11-89 15:16:38

Pg 2
of 2
51-93

```
|      @ ROW(),COL() SAY " - done"
|
|      @ ROW()+1,15 SAY "Indexing coal fields by code number"
|      SET SAFETY OFF
|      INDEX ON code_no TO coalcode
|      SET SAFETY ON
|      @ ROW(),COL() SAY " - done"
|
|      @ ROW()+1,15 SAY "Indexing coal fields by distance value"
|      SET SAFETY OFF
|      INDEX ON dist_from TO coaldist
|      SET SAFETY ON
|      CLOSE DATABASES
|      @ ROW(),COL() SAY " - done"
|
|      +---IF NOT clipper
|      |      ON ESCAPE
|      +---ENDIF
|
+---ENDIF

      * clear key entries
      c=1
+---DO WHILE c<>0
|      c=INKEY()
+---ENDDO

      * print message to continue
      @ 24,20 SAY "Press any key to continue..."

      * wait for key press
      c=0
+---DO WHILE c=0
|      c=INKEY()
+---ENDDO

      * run main coalfield routine
      DO coalfld0

      CLEAR ALL
      CLEAR
      SET TALK ON
      RETURN
```

```
*****
* COALFLD0.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* update database on coal fields
*****
*
```

```
USE coalfiel INDEX coalfiel, coalcode
SET DELETED ON
GO top
lv=.t.
ans=" "
currec=0
lstrec=0
* loop through options until done.
+--DO WHILE ans<>"Q"
|
| * display coal field screen
|   DO coalscr
|
| * ask for option
|   @ 22,10 SAY "Edit field / Add field / move Forward / move Backward"
|   @ 23,10 SAY "Delete field / change Views / Print field list / Quit"
|   @ 24,10 SAY "Option (E/A/F/B/D/V/P/Q)      " +CHR(174) + " " +CHR(175)
|   ans=" "
|   +--DO WHILE AT(ans,"EAFBDVPQ")=0
|   |   ans=" "
|   |   @ 24,40 GET ans PICTURE "!"
|   |   READ
|   +--ENDDO
|
| * to move forward
|   +--IF ans="F"
|   |   +--IF lv
|   |   |   +--IF .NOT. EOF()
|   |   |   |   SKIP
|   |   |   +--IF EOF()
|   |   |   |   GO BOTTOM
|   |   |   +--ENDIF
|   |   +--ENDIF
|   |   +--ELSE
|   |   |   +--IF .NOT. EOF()
|   |   |   |   SKIP 13
|   |   |   +--IF EOF()
|   |   |   |   GO top
|   |   |   +--ENDIF
|   |   +--ENDIF
|   |
```

```

| | | +---ENDIF
| | | +---ENDIF
|
| * to move backward
| | +---IF ans="B"
| | | +---IF lv
| | | | +---IF .NOT. EOF()
| | | | | SKIP -1
| | | | | +---IF BOF()
| | | | | | GO top
| | | | | +---ENDIF
| | | | +---ENDIF
| | | +---ELSE
| | | | +---IF .NOT. EOF()
| | | | | SKIP -13
| | | | | +---IF BOF()
| | | | | | GO BOTTOM
| | | | | +---ENDIF
| | | | +---ENDIF
| | | +---ENDIF
| | +---ENDIF
|
| +---IF ans="D"
| | +---IF .NOT. lv
| | | i=7
| | | @ i,0 SAY " "
| | | ans="+"
| | | @ 22,0 CLEAR
| | | @ 22,5 SAY CHR(24) +CHR(25) +" to move indicator / Delete ";
| | | +"indicated base / Quit without deleting"
| | | @ 23,5 SAY "Option (" +CHR(24) +"/" +CHR(25) +"/D/Q) ";
| | | +CHR(174) +" " +CHR(175)
| | | cq=1
| | | ans=" "
| | | +---DO WHILE ans<>"D" .AND. ans<>"Q"
| | | | @ i,0 SAY CHR(175)+CHR(175)+CHR(175)
| | | | +---IF cq>0
| | | | | sq=" "
| | | | | @ 23,27 GET sq
| | | | | CLEAR GETS
| | | | | @ 23,27 SAY ""
| | | | | cq=0
| | | | +---ENDIF
| | | | +---DO WHILE AT( CHR(cq), "DdQq"+CHR(5)+CHR(24) )=0
| | | | | cq=INKEY()
| | | | +---ENDDO
| | | | +---DO CASE
| | | | | CASE cq=5
| | | | | | sq=CHR(24)
| | | | | CASE cq=24

```

```
| | | | |      sq=CHR(25)
| | | | |      CASE cq=68 .OR. cq=100
| | | | |      sq="D"
| | | | |      ans="D"
| | | | |      CASE cq=81 .OR. cq=113
| | | | |      sq="Q"
| | | | |      ans="Q"
| | | | |      +---ENDCASE
| | | | |      @ 23,27 GET sq
| | | | |      CLEAR GETS
| | | | |      +---IF cq=68 .OR. cq=100 .OR. cq=81 .OR. cq=113
| | | | |      |      LOOP
| | | | |      +---ENDIF
| | | | |      +---IF cq=24
| | | | |      |      +---IF RECNO()<>lstrec
| | | | |      |      |      @ i,0 SAY "    "
| | | | |      |      |      i=i+1
| | | | |      |      |      SKIP
| | | | |      |      +---ENDIF
| | | | |      +---ENDIF
| | | | |      +---IF cq=5
| | | | |      |      +---IF RECNO()<>currec
| | | | |      |      |      @ i,0 SAY "    "
| | | | |      |      |      i=i-1
| | | | |      |      |      SKIP -1
| | | | |      |      +---ENDIF
| | | | |      +---ENDIF
| | | | |      +---ENDDO
| | | | |      currec=RECNO()
| | | | |      +---ENDIF
| | | | |      @ 22,0 CLEAR
|
| * if user wanted to quit from deleting, loop to end
| | | | |      +---IF ans="Q"
| | | | |      |      ans=" "
| | | | |      |      LOOP
| | | | |      +---ENDIF
|
| * check with user whether to delete
| | | | |      +---IF .NOT. EOF()
| | | | |      |      ok=.f.
| | | | |      |      @ 22,15 SAY "Delete this coalfield? (Y/N)" GET ok PICTURE "Y"
| | | | |      |      READ
| | | | |      |      +---IF ok
| | | | |      |      |      @ 23,15 SAY "Are you sure? (Y/N)" GET ok PICTURE "Y"
| | | | |      |      |      READ
| | | | |      |      +---ENDIF
| | | | |      |      +---IF ok
| | | | |      |      |      DELETE
| | | | |      |      |      SKIP
```

```
| | | | +---IF EOF()  
| | | | | GO top  
| | | | +---ENDIF  
| | | +---ENDIF  
| | +---ELSE  
| | | @ 22,15 SAY "A coalfield must be present to be deleted."  
| | | ans=" "  
| | | @ 23,15 SAY "Press any key to continue..." GET ans  
| | | READ  
| | | ans="+"  
| | +---ENDIF  
| +---ENDIF  
  
| +---IF ans="V"  
| | lv =IIF( lv, .f., .t.)  
| +---ENDIF  
  
| +---IF ans="P"  
| | DO coalprt  
| | ans="+"  
| +---ENDIF  
  
| * if adding record is wanted  
| +---IF ans="A"  
| | APPEND BLANK  
| * set up to edit blank record  
| | ans="E"  
| | lv=.t.  
| +---ENDIF  
  
| +---IF ans="E"  
| | +---IF .NOT. lv  
| | | i=7  
| | | @ i,0 SAY " "  
| | | ans="+"  
| | | @ 20,0 CLEAR  
| | | @ 22,5 SAY CHR(24) +CHR(25) +" to move indicator / Edit ";  
| | | +"indicated base / Quit without editing"  
| | | @ 23,5 SAY "Option (" +CHR(24) +"/" +CHR(25) +"/E/Q) ";  
| | | +CHR(174) +" " +CHR(175)  
| | | cq=1  
| | | ans=" "  
| | +---DO WHILE ans<>"E" .AND. ans<>"Q"  
| | | @ i,0 SAY CHR(175)+CHR(175)+CHR(175)  
| | | +---IF cq>0  
| | | | sq=" "  
| | | | @ 23,27 GET sq  
| | | | CLEAR GETS  
| | | | @ 23,27 SAY ""  
| | | | cq=0
```

```

| | | | +---ENDIF
| | | | +---DO WHILE AT( CHR(cq),"EeQq"+CHR(5)+CHR(24) )=0
| | | | |   cq=INKEY()
| | | | +---ENDDO
| | | | +---DO CASE
| | | | |   CASE cq=5
| | | | |   |   sq=CHR(24)
| | | | |   CASE cq=24
| | | | |   |   sq=CHR(25)
| | | | |   CASE cq=69 .OR. cq=101
| | | | |   |   sq="E"
| | | | |   |   ans="E"
| | | | |   CASE cq=81 .OR. cq=113
| | | | |   |   sq="Q"
| | | | |   |   ans="Q"
| | | | +---ENDCASE
| | | |   @ 23,27 GET sq
| | | |   CLEAR GETS
| | | | +---IF cq=69 .OR. cq=101 .OR. cq=81 .OR. cq=113
| | | | |   LOOP
| | | | +---ENDIF
| | | | +---IF cq=24
| | | | |   +---IF RECNO(<>|strec
| | | | |   |   @ i,0 SAY " "
| | | | |   |   i=i+1
| | | | |   |   SKIP
| | | | |   +---ENDIF
| | | | +---ENDIF
| | | | +---IF cq=5
| | | | |   +---IF RECNO(<>|currec
| | | | |   |   @ i,0 SAY " "
| | | | |   |   i=i-1
| | | | |   |   SKIP -1
| | | | |   +---ENDIF
| | | | +---ENDIF
| | | | +---ENDDO
| | | |   currec=RECNO()
| | | | +---ENDIF
|
| * if user wants to quit out of editing, loop to bottom
| | +---IF ans="Q"
| | |   ans=" "
| | |   LOOP
| | +---ENDIF
|
| * otherwise, proceed with editing
| | lv=.t.
| | ans="C"
| | ok=.f.
| | redraw=.t.

```

```
| |      ttlmsg=.f.  
| |      q=5  
| |      lst=5  
| |      nxt=5  
| |      REPLACE last_chg WITH DATE()  
| |      +--DO WHILE ans="C"  
| |      |  
| |      * display coal field database screen if necessary  
| |      |      +--IF redraw  
| |      |      |      DO coalscr  
| |      |      |      redraw=.f.  
| |      |      +--ENDIF  
| |      |  
| |      * clear screen message area  
| |      |      @ 22,0 CLEAR  
| |      |  
| |      * process entry based on value of q (pointer)  
| |      |      +--DO CASE  
| |      |      |  
| |      *          CASE q=1  
| |      * @ 24,1 clear to 24,78  
| |      * @ 24,2 say 'prompt'  
| |      * ok=.f.  
| |      * do while .not. ok  
| |      * @ \,\ get \ picture ''  
| |      * read  
| |      * ok=.t.  
| |      * enddo  
| |      * lst=  
| |      * nxt=  
| |      |  
| |      * enter state  
| |      |      CASE q=5  
| |      |      |      @ 24,1 CLEAR TO 24,78  
| |      |      |      @ 23,2 SAY 'Enter two-letter state abbreviation or name'  
| |      |      |      ok=.f.  
| |      |      |      +--DO WHILE .NOT. ok  
| |      |      |      |      st=state+SPACE(18)  
| |      |      |      |      stlst=""  
| |      |      |      |      @ 3,10 GET st PICTURE "XXXXXXXXXXXXXXXXXXXXX"  
| |      |      |      |      READ  
| |      |      |      |      rdky=READKEY()  
| |      |      |      |      +--IF rdky=12 .OR. rdky=268  
| |      |      |      |      |      ok=.t.  
| |      |      |      |      |      st=""  
| |      |      |      |      +--ELSE  
| |      |      |      |      |      DO chkstate  
| |      |      |      |      +--ENDIF  
| |      |      |      +--ENDDO  
| |      |      +--IF rdky=12 .OR. rdky=268
```

```

| | | | | st=state
| | | | | DO idstate
| | | | | +---ELSE
| | | | | | REPLACE state WITH st
| | | | | +---ENDIF
| | | | | st=st + " - " + stlst
| | | | | @ 3,10 GET st
| | | | | CLEAR GETS
| | | | | lst=5
| | | | | nxt=10
| | | | |
| * enter location
| | | | | CASE q=10
| | | | | @ 23,2 SAY 'Enter location of coal'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 3,47 GET location
| | | | | | READ
| | | | | | ok=.t.
| | | | | +---ENDDO
| | | | | lst=5
| | | | | nxt=15
| | | | |
| * enter county
| | | | | CASE q=15
| | | | | @ 23,2 SAY 'Enter county in which field is located'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 4,11 GET county
| | | | | | READ
| | | | | | ok=.t.
| | | | | +---ENDDO
| | | | | lst=10
| | | | | nxt=20
| | | | |
| * get latitude of coal field
| | | | | CASE q=20
| | | | | @ 23,2 SAY 'Enter north latitude of field (dddmss)'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | clat=STR(latitude,7)
| | | | | | lat_1 =VAL( SUBSTR(clat,1,3) )
| | | | | | lat_2 =VAL( SUBSTR(clat,4,2) )
| | | | | | lat_3 =VAL( SUBSTR(clat,6,2) )
| | | | | | @ 4,47 GET lat_1 PICTURE "###"
| | | | | | @ 4,51 GET lat_2 PICTURE "##"
| | | | | | @ 4,54 GET lat_3 PICTURE "##"
| | | | | | READ
| | | | | | ok= lat_1>24 .AND. lat_1<73
| | | | | | ok= ok .AND. lat_2>-1 .AND. lat_2<60

```

Pg 8
of 16
351-400

Λ-26

```
| | | | CASE q=30
| | | | @ 23,2 SAY 'Enter Proximate Analysis, wt %, moisture of coal'
| | | | ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | | @ 7,15 GET MOISTURE
| | | | | READ
| | | | | ok=( moisture>=0 .AND. moisture<=60 ) .OR. ;
| | | | | READKEY()=12 .OR. READKEY()=268
| | | | | +--IF .NOT. ok
| | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | @ 24,2 SAY "Value should be between 0% and 60%"
| | | | | +--ENDIF
| | | | +---ENDDO
| | | | | Ist=25
| | | | | nxt=35
| | | |
| | | | * get fixed carbon component of coal sample
| | | | CASE q=35
| | | | | @ 23,2 SAY 'Enter Proximate Analysis (wt %) ' ;
| | | | | + 'of Fixed Carbon on a dry basis'
| | | | | +---IF ttmsg
| | | | | | @ 24,2 SAY "Volatile, Fixed Carbon, and Ash ";
| | | | | | + "values should total 100 %. Please check."
| | | | | +---ENDIF
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 9,19 GET FIXED_CRBN
| | | | | | READ
| | | | | | ok=( fixed_crbn>=20 .AND. fixed_crbn<=99 ) .OR. ;
| | | | | | READKEY()=12 .OR. READKEY()=268
| | | | | | +---IF .NOT. ok
| | | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | | @ 24,2 SAY "Value should be between 20% and 99%"
| | | | | | +---ENDIF
| | | | | +---ENDDO
| | | | | | Ist=30
| | | | | | nxt=40
| | | |
| | | | * get volatile component of coal sample
| | | | CASE q=40
| | | | | @ 23,2 SAY "Enter Proximate Analysis (wt %) ";
| | | | | + " of Volatiles on a dry basis"
| | | | | +---IF ttmsg
| | | | | | @ 24,2 SAY "Volatiles, Fixed Carbon, and Ash ";
| | | | | | + "values should total 100 %. Please check."
| | | | | +---ENDIF
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 9,41 GET VOLATILE
| | | | | | READ
```

Pg 10
of 16
451-500

A-28

```
| | | | CASE q=55
| | | |   @ 23,2 SAY 'Enter hydrogen (%) on a dry basis'
| | | |   ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | |   @ 12,36 GET hydrogen
| | | | |   READ
| | | | |   ok=( hydrogen>=0 .AND. hydrogen<=30 ) .OR. ;
| | | | |   READKEY()=12 .OR. READKEY()=268
| | | | +--IF .NOT. ok
| | | | |   @ 23,1 CLEAR TO 24,78
| | | | |   @ 23,2 SAY "Value should be between 0% and 30%"
| | | | +--ENDIF
| | | | +--ENDDO
| | | |   lst=50
| | | |   nxt=60
| | | |
| | | | * get nitrogen (ultimate analysis)
| | | |   CASE q=60
| | | |   @ 23,2 SAY 'Enter nitrogen (%) on a dry basis'
| | | |   ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | |   @ 12, 57 GET nitrogen
| | | | |   READ
| | | | |   ok=( nitrogen>=0 .AND. nitrogen<=30 ) .OR. ;
| | | | |   READKEY()=12 .OR. READKEY()=268
| | | | +--IF .NOT. ok
| | | | |   @ 24,1 CLEAR TO 24,78
| | | | |   @ 24,2 SAY "Value should be between 0% and 30%"
| | | | +--ENDIF
| | | | +--ENDDO
| | | |   lst=55
| | | |   nxt=62
| | | |
| | | | * get sulfur (ultimate analysis)
| | | |   CASE q=62
| | | |   @ 23,2 SAY 'Enter sulfur (%) on a dry basis'
| | | |   ok=.f.
| | | | +--DO WHILE .NOT. ok
| | | | |   @ 13,13 GET sulfur
| | | | |   READ
| | | | |   ok=( sulfur>=0 .AND. sulfur<=20 ) .OR. ;
| | | | |   READKEY()=12 .OR. READKEY()=268
| | | | +--IF .NOT. ok
| | | | |   @ 24,1 CLEAR TO 24,78
| | | | |   @ 24,2 SAY "Value should be between 0% and 20%"
| | | | +--ENDIF
| | | | +--ENDDO
| | | |   lst=60
| | | |   nxt=64
```

```
| * get oxygen (ultimate analysis)
| | | | | CASE q=64
| | | | | @ 23,2 SAY 'Enter oxygen (%) on a dry basis'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 13,36 GET oxygen
| | | | | | READ
| | | | | | ok=( oxygen>=0 .AND. oxygen<=50 ) .OR. ;
| | | | | | READKEY()=12 .OR. READKEY()=268
| | | | | | +---IF .NOT. ok
| | | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | | @ 24,2 SAY "Value should be between 0% and 50%"
| | | | | | +---ENDIF
| | | | | +---ENDDO
| | | | | lst=62
| | | | | nxt=66
|
| * get gross calorific value
| | | | | CASE q=66
| | | | | @ 23,2 SAY 'Enter Gross Calorific Value (dry)'
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 16,34 GET hlv_dry
| | | | | | READ
| | | | | | ok=( hlv_dry>=5000 .AND. hlv_dry<=20000 ) .OR. ;
| | | | | | READKEY()=12 .OR. READKEY()=268 .OR. hlv_dry=0
| | | | | | +---IF .NOT. ok
| | | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | | @ 24,2 SAY "Value should be between 5000 ";
| | | | | | | + "and 20000 Btu/lb"
| | | | | | +---ENDIF
| | | | | +---ENDDO
| | | | | lst=64
| | | | | nxt=70
|
| * get rank of coal sample
| | | | | CASE q=70
| | | | | @ 22,2 SAY "Enter Rank of coal field -- Bituminous ";
| | | | | +"/ Sub-Bituminous / Lignite / "
| | | | | @ 23,6 SAY "Anthracite / Semi-Anthracite -- (B/SB/L/A/SA)"
| | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | @ 16,62 GET rank PICTURE "!!!!!"
| | | | | | READ
| | | | | | crank=LTRIM(TRIM(rank))
| | | | | | REPLACE rank WITH crank
| | | | | | crank="|" +crank +"|"
| | | | | | ok= crank $ " |B| |SB| |L| |A| |SA| " .OR. ;
| | | | | | READKEY()=12
| | | | | | +---IF .NOT. ok
```

A-31

```
| | | | | READKEY()=12 .OR. READKEY()=268
| | | | | +---IF .NOT. ok
| | | | | | @ 24,1 CLEAR TO 24,78
| | | | | | @ 24,2 SAY "Value should be between 0 and 9"
| | | | | +---ENDIF
| | | | | +---ENDDO
| | | | | | 1st=80
| | | | | | nxt=90
| | | | |
| | | | | * get the code number for the coal
| | | | | CASE q=90
| | | | | | @ 23,2 SAY 'Enter the Code Number for the coal'
| | | | | | ok=.f.
| | | | | | mcode_no=code_no
| | | | | +---DO WHILE .NOT. ok
| | | | | | mcode_no=SUBSTR(mcode_no+REPLICATE(" ",20),1,20)
| | | | | | @ 19,18 GET mcode_no
| | | | | | READ
| | | | | | mcode_no=UPPER(LTRIM(mcode_no))
| | | | |
| | | | | * check to see that the code number is unique
| | | | | +---IF LEN(TRIM(mcode_no))>0
| | | | | | rc=RECNO()
| | | | | | SET ORDER TO 2
| | | | | | SEEK mcode_no
| | | | | +---IF rc=RECNO() .OR. EOF()
| | | | | | ok=.t.
| | | | | +---ELSE
| | | | | | | @ 24,0
| | | | | | | @ 24,2 SAY "Code number must be unique. ";
| | | | | | | + "Your entry is a duplicate."
| | | | | +---ENDIF
| | | | | | SET ORDER TO 1
| | | | | | GOTO rc
| | | | | +---ELSE
| | | | | | | @ 24,0
| | | | | | | @ 24,2 SAY "Code number must not be blank."
| | | | | +---ENDIF
| | | | | +---ENDDO
| | | | | | 1st=85
| | | | | | nxt=95
| | | | |
| | | | | * get any notes/comments
| | | | | CASE q=95
| | | | | | @ 24,2 SAY "Enter any pertinent comments"
| | | | | | ok=.f.
| | | | | +---DO WHILE .NOT. ok
| | | | | | | @ 20,11 GET cmmnt
| | | | | | | READ
| | | | | | | ok=.t.
```

```

| | | | +---ENDDO
| | | |     lst=90
| | | |     nxt=101
| | | |
| | | | +---ENDCASE
| | | |
| * find out what key was used to finish entry
| | | |     rdky=READKEY()
| | | |     rdky =IIF( rdky>255, rdky-256, rdky)
| | | |
| * if key was <Up arrow> or <Pg Up>, go to last (previous entry)
| | | |     +---IF rdky=4 .OR. rdky=6
| | | | |         q=lst
| * otherwise, go to next entry
| | | |     +---ELSE
| | | | |         q=nxt
| | | |     +---ENDIF
| | | |
| * if <ESC> key was hit, set q to ask whether they are done
| | | |     +---IF rdky=12
| | | | |         q=101
| | | |     +---ENDIF
| | | |
| * check to see if volatile+fixed carbon+ash = 100%
| | | |     ttlprox =volatile +fixed_crbn +ash
| | | |     +---IF ttlprox<>0
| | | | |         cttlprox =STR(ttlprox,7,2)
| | | | |         +---IF cttlprox<>" 100.00"
| | | | | |             @ 9,68 SAY "not = 100%"
| | | | |         +---ELSE
| | | | | |             @ 9,68 SAY "          "
| | | | |         +---ENDIF
| | | |     +---ENDIF
| | | |
| * check to see if ultimate analysis + ash = 100%
| | | |     ttlult =oxygen +sulfur +nitrogen +hydrogen +carbon
| | | |     +---IF ttlult<>0
| | | | |         cttlult =STR(ttlult+ash,7,2)
| | | | |         +---IF cttlult<>" 100.00"
| | | | | |             @ 12,68 SAY "not = 100%"
| | | | |         +---ELSE
| | | | | |             @ 12,68 SAY "          "
| | | | |         +---ENDIF
| | | |     +---ENDIF
| | | |
| * if done with entries, make sure proximate and ultimate equal 100%
| | | |     @ 22,0 CLEAR
| | | |     +---IF q>100
| | | | |         +---IF cttlprox<>" 100.00"
| | | | | |             @ 22,5 SAY "Proximate analysis (volatiles, fixed ";

```

01-11-89 15:06:18 COALFLD0.PRG
Wed 01-11-89 15:16:53

```
|      |      |      |          + "carbon, ash) must total 100%"  
|      |      |      |              q=5  
|      |      |      |      +---ENDIF  
|      |      |      |      +---IF cttlult<>" 100.00"  
|      |      |      |          @ 23,5 SAY "Ultimate analysis + ash must total 100%"  
|      |      |      |              q=5  
|      |      |      |      +---ENDIF  
|      |      |      |      +---IF q=5  
|      |      |      |          @ 24,5 SAY "Press any key to continue..."  
|      |      |      |          +---DO WHILE INKEY()=0  
|      |      |      |              +---ENDDO  
|      |      |      |      +---ENDIF  
|      |      |      |      +---ENDIF  
  
| * if done with entries (q>100), ask to accept, change again, or quit.  
|      |      |      |      +---IF q>100  
|      |      |      |          @ 22,0 CLEAR  
|      |      |      |          @ 22,5 SAY "Accept and store / Change values    ";  
|      |      |      |          +CHR(174) +"   "+CHR(175)  
|      |      |      |          ans=""  
|      |      |      |      +---DO WHILE AT(ans,"AC")=0  
|      |      |      |          |       ans=""  
|      |      |      |          |       @ 22,41 GET ans PICTURE "! "  
|      |      |      |          |       READ  
|      |      |      |      +---ENDDO  
  
| * if operator wants to change again, set q to start at beginning  
|      |      |      |      +---IF ans="C"  
|      |      |      |          |       q=5  
|      |      |      |      +---ENDIF  
  
| * end of checking whether done  
|      |      |      |      +---ENDIF  
  
| * end of loop for entering coal field information  
|      |      |      |      +---ENDDO  
  
| * end of if statement for editing  
|      |      |      |      +---ENDIF  
  
| * end of do-while for reviewing/editing/adding entries  
+---ENDDO
```

```
*****
* COALPRT.PRG -- Last update 10/25/88
* Copyright (C) 1988 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* printout of coal field information
*****
*
* check to see if any records present
+--IF RECCOUNT()=0
|   @ 22,0 CLEAR
|   @ 22,10 SAY "At least one field must be in file to select print option."
|   ans=" "
|   @ 23,10 SAY "Press any key to continue..." GET ans
|   READ
|   ans=" "
|   RETURN
+--ENDIF

* if running stand-alone, values won't be defined
+--IF TYPE("topmgn")="U"
|   topmgn=0
+--ENDIF
+--IF TYPE("btmmgn")="U"
|   btmmgn=58
+--ENDIF
+--IF TYPE("lftmgn")="U"
|   lftmgn=0
+--ENDIF

* store current record being display so it isn't lost
rc=RECNO()

* set up variables
stlst=''
pg=0

* find out from user how many fields to print
@ 22,0 CLEAR
@ 22,4 SAY "Print field that is Displayed, fields for one State, ";
+"All fields, or"
@ 23,4 SAY "Quit (cancel print) -- Option ( D / S / A / Q )      ";
+CHR(174) +" " +CHR(175)
ans=" "
+--DO WHILE AT(ans,"DSAQ")=0
|   ans=" "
|   @ 23,58 GET ans PICTURE "!"
|   READ
```

+++ENDDO

* if quit is selected, just return without changing a thing

```
+++IF ans="Q"
|   ans=" "
|   RETURN
+++ENDIF
```

* ask questions to see what state to print

```
+++IF ans="S"
|   @ 22,0 CLEAR TO 24,79
|   @ 22,5 SAY "Enter state for coal information printout:"
|
|   * get verified state entry
|   st=SPACE(20)
|   ok=.f.
|   +--DO WHILE .NOT. ok
|   |   st=SPACE(20)
|   |   stlst=""
|   |   @ 22,48 GET st PICTURE "XXXXXXXXXXXXXXXXXXXXX"
|   |   READ
|   |   rdky=READKEY()
|   |   +--IF rdky=12
|   |   |   RETURN
|   |   +--ENDIF
|   |   +--IF LEN(TRIM(st))>0
|   |   |   DO chkstate
|   |   +--ENDIF
|   +--ENDDO
|   mst=TRIM(st)
+++ENDIF
```

* if single state wanted, go to first entry

```
+++IF ans="S"
|   SEEK mst
+++ENDIF
```

* if all fields to be printed, go to top of file

```
+++IF ans="A"
|   GO top
+++ENDIF
```

* set escape off to be able to trap it with inkey statement

```
SET ESCAPE OFF
abt=.f.
```

* print message about printing information

```
@ 22,0 CLEAR
@ 23,10 SAY "Printing in progress. Press <ESC> to quit early..."
```

01-11-89 15:00:00 COALPRT.PRC
Wed 01-11-89 15:18:52

Pg 3
of 5
101-150

```
* set up printer
SET MARGIN TO lftmgn
SET DEVICE TO PRINT
prevst=""

* loop for printing coal information
+--DO WHILE .NOT. EOF() .AND. .NOT. abt
|
| * first check for keys pressed
|   c=1
| * loop until no more keys present
|   +--DO WHILE c<>0
|     |   c=INKEY()
| * if key pressed was escape, then set flag to abort early
|     |   +---IF c=27
|     |     |   abt=.t.
|     |   +---ENDIF
|   +---ENDDO
|
| * if abort flag set, jump to bottom of loop
|   +---IF abt
|     |   LOOP
|   +---ENDIF
|
| * advance to next page for a new state
|   +---IF prevst<>state
|     |   st=state
|     |   DO chkstate
|     |   hdg="Coal field information printout for: " +state + " - ";
|     |   +stlst
|     |   pg=pg+1
|     |   @ topmgn,0 SAY hdg
|     |   @ PROW(),60 SAY "Page " +LTRIM(STR(pg))
|     |   prevst=state
|   +---ENDIF
|
| * if at the bottom of the page, skip to the next one
|   +---IF pg=0 .OR. PROW()+14>btmmgn
|     |   pg=pg+1
|     |   @ topmgn,0 SAY hdg
|     |   @ PROW(),60 SAY "Page " +LTRIM(STR(pg))
|   +---ENDIF
|
| * print the entry
|   @ PROW()+2,0 SAY "Location: " +location
|   @ PROW(),56 SAY "Last changed: " +DTC(last_chg)
|   @ PROW()+1,0 SAY "County: "+county
|   @ PROW(),42 SAY "Lat:"
|   cl=STR(latitude,7)
|   @ PROW(),47 SAY SUBSTR(cl,1,3) + "d " +SUBSTR(cl,4,2) + "m " ;
```

```
|      +SUBSTR(cl,6,2) +"s"  
|      @ PROW(),62 SAY "Long:"  
|      cl=STR(longitude,7)  
|      @ PROW(),68 SAY SUBSTR(cl,1,3) +"d " +SUBSTR(cl,4,2) +"m " ;  
|      +SUBSTR( cl,6,2) +"s"  
|      @ PROW()+1,2 SAY "Proximate Analysis"  
|      @ PROW(),49 SAY "Moisture:"  
|      @ PROW(),59 SAY moisture  
|      @ PROW(),66 SAY "% (as delivered)"  
|      @ PROW()+1,5 SAY "Fixed Carbon:"  
|      @ PROW(),19 SAY fixed_crbn  
|      @ PROW(),26 SAY "% Volatile:"  
|      @ PROW(),41 SAY volatile  
|      @ PROW(),48 SAY "% Ash:"  
|      @ PROW(),58 SAY ash  
|      @ PROW(),65 SAY "% --- (dry basis)"  
|      @ PROW()+1,2 SAY "Ultimate Analysis -- (dry basis)"  
|      @ PROW()+1,5 SAY "Carbon:"  
|      @ PROW(),13 SAY carbon  
|      @ PROW(),19 SAY "%"  
|      @ PROW(),26 SAY "Hydrogen:"  
|      @ PROW(),36 SAY hydrogen  
|      @ PROW(),42 SAY "%"  
|      @ PROW(),47 SAY "Nitrogen:"  
|      @ PROW(),57 SAY nitrogen  
|      @ PROW(),63 SAY "%"  
|      @ PROW()+1,5 SAY "Sulfur:"  
|      @ PROW(),13 SAY sulfur  
|      @ PROW(),19 SAY "%"  
|      @ PROW(),28 SAY "Oxygen:"  
|      @ PROW(),36 SAY oxygen  
|      @ PROW(),42 SAY "%"  
|      @ PROW()+1,2 SAY "Miscellaneous"  
|      @ PROW()+1,5 SAY "Gross Calorific Value (dry):"  
|      @ PROW(),34 SAY HHV_dry  
|      @ PROW(),41 SAY "Btu/lb"  
|      @ PROW(),56 SAY "Rank:"  
|      @ PROW(),62 SAY RANK  
|      @ PROW()+1,5 SAY "Hemispherical Temperature:"  
|      @ PROW(),39 SAY aft_s  
|      @ PROW(),45 SAY "F (H=1/2W, reducing)"  
|      @ PROW()+1,5 SAY "Hardgrove Grindability Index:"  
|      @ PROW(),35 SAY HRDGRV_GRD  
|      @ PROW(),44 SAY "Free Swelling Index:"  
|      @ PROW(),65 SAY FREE_SWELL  
|      @ PROW()+1,5 SAY "Code Number:"  
|      @ PROW(),18 SAY CODE_NO  
|      @ PROW()+1,5 SAY "Note:"  
|      @ PROW(),11 SAY cmmnt
```

01-11-89 15:00:00 COALPRT.PRG
Wed 01-11-89 15:18:52

Pg 5
of 5
201-230

```
| * skip to next entry
|   SKIP
|
| * if only one state wanted, check to see if a new state has shown up
|   +---IF ans="S"
| * if skip has moved to a new state, go to bottom, then one past for
| * hitting the EOF (end-of-file)
|   |   +---IF mst<>state
|   |   |       GO BOTTOM
|   |   |       SKIP
|   |   +---ENDIF
|   +---ENDIF
|
| * if only the displayed field is wanted, skip to bottom
|   +---IF ans="D"
|   |       GO BOTTOM
|   |       SKIP
|   +---ENDIF
|
+---ENDDO

* go back to original record being displayed
GOTO rc

* move back to top of page, and reset values back to normal
EJECT
SET ESCAPE ON
SET DEVICE TO SCREEN
SET MARGIN TO 0
RETURN
```

```
*****
* COALSCR.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
* written expressly for CERL
*****
* screen drawing for coal fields
*****
*
```

```
* display long view of coal field
+--IF lv
|
|   CLEAR
|   @ 1,0 TO 21,79 double
|   @ 5,1 TO 5,78 DOUBLE
|   @ 10,1 TO 10,78 DOUBLE
|   @ 14,1 TO 14,78 DOUBLE
|   @ 8,1 TO 8,7
|   @ 8,21 TO 8,78
|   @ 2,2 SAY "Coal field location"
|   @ 2,54 SAY "Last changed: "
|   @ 3,3 SAY "State:"
|   @ 3,37 SAY "Location:"
|   @ 4,3 SAY "County:"
|   @ 4,42 SAY [Lat:    ] +CHR(248) +[ '  " ]
|   @ 4,61 SAY [Long:   ] +CHR(248) +[ '  " ]
|   @ 6,2 SAY "Proximate Analysis"
|   @ 7,5 SAY "Moisture:      % (as delivered)"
|   @ 8,8 SAY "( dry basis )"
|   @ 9,5 SAY "Fixed Carbon:"
|   @ 9,26 SAY "%    Volatile:"
|   @ 9,48 SAY "%    Ash:"
|   @ 9,65 SAY "%"
|   @ 11,2 SAY "Ultimate Analysis -- (dry basis)"
|   @ 12,5 SAY "Carbon:      %"
|   @ 12,26 SAY "Hydrogen:    %"
|   @ 12,47 SAY "Nitrogen:    %"
|   @ 13,5 SAY "Sulfur:      %"
|   @ 13,28 SAY "Oxygen:      %"
|   @ 15,2 SAY "Miscellaneous"
|   @ 16,5 SAY "Gross Calorific Value (dry):      Btu/lb"
|   @ 16,56 SAY "Rank:"
|   @ 17,5 SAY "Hemispherical Temperature:      " ;
|   +CHR(248) +"F (H=" +CHR(171) +"W, reducing)"
|   @ 18,5 SAY "Hardgrove Grindability Index:"
|   @ 18,44 SAY "Free Swelling Index:"
|   @ 19,5 SAY "Code Number:"
|   @ 20,5 SAY "Note:"
|
| * display values only if present
```

```
|  +---IF .NOT. EOF()
|  |      @ 2,68 SAY last_chg
|  |      st=state
|  |      stlst=""
|  |      DO idstate
|  |      st=st+" - "+stlst
|  |      @ 3,10 GET st
|  |      @ 3,47 GET location
|  |      @ 4,11 GET county
|  |      clat=STR(latitude,7)
|  |      lat_1=SUBSTR(clat,1,3)
|  |      lat_2=SUBSTR(clat,4,2)
|  |      lat_3=SUBSTR(clat,6,2)
|  |      @ 4,47 GET lat_1
|  |      @ 4,51 GET lat_2
|  |      @ 4,54 GET lat_3
|  |      clong=STR(longitude,7)
|  |      clo_1=SUBSTR(clong,1,3)
|  |      clo_2=SUBSTR(clong,4,2)
|  |      clo_3=SUBSTR(clong,6,2)
|  |      @ 4,67 GET clo_1
|  |      @ 4,71 GET clo_2
|  |      @ 4,74 GET clo_3
|  |      @ 7,15 GET moisture
|  |      @ 9,19 GET fixed_crbn
|  |      @ 9,41 GET volatile
|  |      @ 9,58 GET ash
|  |      @ 12,13 GET carbon
|  |      @ 12,36 GET hydrogen
|  |      @ 12,57 GET nitrogen
|  |      @ 13,13 GET sulfur
|  |      @ 13,36 GET oxygen
|  |      @ 16,34 GET HHV_dry
|  |      @ 16,62 GET RANK
|  |      @ 17,32 GET aft_s
|  |      @ 18,35 GET HRDCRV_GRD
|  |      @ 18,65 GET FREE_SWELL
|  |      @ 19,18 GET CODE_NO
|  |      @ 20,11 GET cmmnt
|  |      CLEAR GETS
|  |      currec=RECNO()
|  +---ELSE
|  |      currec=0
|  +---ENDIF
|
|  * display short view of coal fields
+---ELSE
|      CLEAR
|      @ 1,0 TO 4,79 double
|      @ 2,3 SAY "Coal Field Information Management Program"
```

01-11-89 15:00:00 COALSCR.PRG
Wed 01-11-89 15:19:27

Pg 3
of 3
101-125

```
|      @ 3,3 SAY "Condensed View of Coal Fields"
|      @ 2,69 SAY DATE()
|      @ 6,2 SAY "State   Rank   County           Location"
|      +---IF .NOT. EOF()
|      |      currec=RECNO()
|      |      i=7
|      |      +---DO WHILE .NOT. EOF() .AND. i<20
|      |      |      @ i,3 GET state
|      |      |      @ i,10 GET rank
|      |      |      @ i,18 GET county
|      |      |      @ i,44 GET location
|      |      |      CLEAR GETS
|      |      |      i=i+1
|      |      |      lstrec=RECNO()
|      |      |      SKIP
|      |      +---ENDDO
|      |      GOTO currec
|      +---ELSE
|      |      currec=0
|      +---ENDIF
|      @ 21,0 TO 21,79 double
+---ENDIF

RETURN
```

01-11-89 15:00:00 DBENVRN.PRG
Wed 01-11-89 15:19:49

Pg 1
of 1
1-40

```
*****
* DBENVRN.PRG -- Last update 01/11/89
* Copyright (C) 1988,1989 -- John A. Kinast
* All Rights Reserved
*****
* define database environment for the system
*****
*
PUBLIC fox, clipper, ending

* define ending of index files based on operating environment
ending=""

* fox is .t. if run under FoxBASE+, otherwise .f.
+--IF fox
|   ending=".IDX"
+--ENDIF

* clipper is .t. if run under Clipper, otherwise .f.
+--IF clipper
|
| * function returns index file ending based on how program has been linked.
| * returns ".NDX" if ndx.obj was linked to produce dBASE III+
| *   compatible index files
| * returns ".NTX" if ndx.obj not linked, which results in standard
| *   Clipper index files
|   ending=indexext()
|
| * readexit function with .t. as parameter sets Clipper to use
| * up-arrow and down-arrow keys to exit from variable READS
|   c=readexit(.t.)
+--ENDIF

* if nothing was assigned by other two routines, it must be running
* under dBASE III+, meaning ".NDX" (standard index) files used
+--IF LEN(ending)=0
|   ending=".NDX"
+--ENDIF

RETURN
```

01-11-89 15:00:00 IDSTATE.PRG
Wed 01-11-89 15:19:58

Pg 1
of 3
1-50

```
*****
*- IDSTATE.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*- written for CERL
*****
```

```
*- using st, get state name
*****
```

```
* convert state entry to upper case, set up length and flag
st=UPPER(LTRIM(TRIM(st)))
stlst=""
```

```
+--DO CASE
```

```
| CASE st='AL'
|   stlst='Alabama'
| CASE st='AK'
|   stlst='Alaska'
| CASE st='AR'
|   stlst='Arkansas'
| CASE st='AZ'
|   stlst='Arizona'
| CASE st='CA'
|   stlst='California'
| CASE st='CO'
|   stlst='Colorado'
| CASE st='CT'
|   stlst='Connecticut'
| CASE st='DC'
|   stlst='District of Columbia'
| CASE st='DE'
|   stlst='Delaware'
| CASE st='FL'
|   stlst='Florida'
| CASE st='GA'
|   stlst='Georgia'
| CASE st='HI'
|   stlst='Hawaii'
| CASE st='ID'
|   stlst='Idaho'
| CASE st='IL'
|   stlst='Illinois'
| CASE st='IN'
|   stlst='Indiana'
| CASE st='IA'
|   stlst='Iowa'
| CASE st='KS'
|   stlst='Kansas'
| CASE st='KY'
|   stlst='Kentucky'
```

01-11-89 15:00:00 IDSTATE.PRG
Wed 01-11-89 15:19:58

Pg 2
of 3
51-100

```
| CASE st='LA'  
|   stlst='Louisiana'  
| CASE st='ME'  
|   stlst='Maine'  
| CASE st='MD'  
|   stlst='Maryland'  
| CASE st='MA'  
|   stlst='Massachusetts'  
| CASE st='MI'  
|   stlst='Michigan'  
| CASE st='MN'  
|   stlst='Minnesota'  
| CASE st='MS'  
|   stlst='Mississippi'  
| CASE st='MO'  
|   stlst='Missouri'  
| CASE st='MT'  
|   stlst='Montana'  
| CASE st='NE'  
|   stlst='Nebraska'  
| CASE st='NV'  
|   stlst='Nevada'  
| CASE st='NH'  
|   stlst='New Hampshire'  
| CASE st='NJ'  
|   stlst='New Jersey'  
| CASE st='NM'  
|   stlst='New Mexico'  
| CASE st='NY'  
|   stlst='New York'  
| CASE st='NC'  
|   stlst='North Carolina'  
| CASE st='ND'  
|   stlst='North Dakota'  
| CASE st='OH'  
|   stlst='Ohio'  
| CASE st='OK'  
|   stlst='Oklahoma'  
| CASE st='OR'  
|   stlst='Oregon'  
| CASE st='PA'  
|   stlst='Pennsylvania'  
| CASE st='RI'  
|   stlst='Rhode Island'  
| CASE st='SC'  
|   stlst='South Carolina'  
| CASE st='SD'  
|   stlst='South Dakota'  
| CASE st='TX'  
|   stlst='Texas'
```

01-11-89 15:00:00 IDSTATE.PRG
Wed 01-11-89 15:19:58

Pg 3
of 3
101-120

```
| CASE st='TN'  
|   stlst='Tennessee'  
| CASE st='US'  
|   stlst='United States'  
| CASE st='UT'  
|   stlst='Utah'  
| CASE st='VT'  
|   stlst='Vermont'  
| CASE st='VA'  
|   stlst='Virginia'  
| CASE st='WA'  
|   stlst='Washington'  
| CASE st='WV'  
|   stlst='West Virginia'  
| CASE st='WI'  
|   stlst='Wisconsin'  
| CASE st='WY'  
|   stlst='Wyoming'  
+--ENDCASE  
RETURN
```

01-11-89 15:00:00 SETCOLOR.PRG
Wed 01-11-89 15:20:18

Pg 1
Of 1
1-23

```
*****
*- SETCOLOR.PRG -- Last Update 01/11/89
*- Copyright (c) 1988,1989 by John A. Kinast
*- All Rights Reserved
*****
*- routine to set colors based on database entry
*****
*
* reset colors to desired values if necessary
+--IF FILE("colors.dbf")
|   USE colors
|   +--IF RECCOUNT(>)>0
|   |   c_lf=TRIM(lf g)
|   |   c_lb=TRIM(lb g)
|   |   c_hf=TRIM(hf g)
|   |   c_hb=TRIM(hb g)
|   |   c_bd=TRIM(br dr)
|   |   SET COLOR TO &c_lf./&c_lb., &c_hf./&c_hb., &c_bd
|   +--ENDIF
+--ENDIF
RELEASE ALL LIKE c_??
CLEAR
RETURN
```

Appendix B: United States Geological Survey Coal Properties Data Listing

Coal Field Information Printout for AK - Alaska	B-5
Coal Field Information Printout for AL - Alabama	B-11
Coal Field Information Printout for AR - Arkansas	B-17
Coal Field Information Printout for AZ - Arizona	B-21
Coal Field Information Printout for CO - Colorado	B-25
Coal Field Information Printout for GA - Georgia	B-31
Coal Field Information Printout for IA - Iowa	B-37
Coal Field Information Printout for ID - Idaho	B-41
Coal Field Information Printout for IL - Illinois	B-45
Coal Field Information Printout for IN - Indiana	B-49
Coal Field Information Printout for KS - Kansas	B-57
Coal Field Information Printout for KY - Kentucky	B-61
Coal Field Information Printout for MD - Maryland	B-93
Coal Field Information Printout for MI - Michigan	B-97
Coal Field Information Printout for MO - Missouri	B-101
Coal Field Information Printout for MS - Mississippi	B-107
Coal Field Information Printout for MT - Montana	B-111
Coal Field Information Printout for ND - North Dakota	B-117
Coal Field Information Printout for NE - Nebraska	B-127
Coal Field Information Printout for NM - New Mexico	B-131
Coal Field Information Printout for NV - Nevada	B-135
Coal Field Information Printout for OH - Ohio	B-139
Coal Field Information Printout for OK - Oklahoma	B-147
Coal Field Information Printout for PA - Pennsylvania	B-153
Coal Field Information Printout for TN - Tennessee	B-163
Coal Field Information Printout for TX - Texas	B-169
Coal Field Information Printout for UT - Utah	B-173
Coal Field Information Printout for VA - Virginia	B-179
Coal Field Information Printout for WA - Washington	B-203
Coal Field Information Printout for WV - West Virginia	B-207
Coal Field Information Printout for WY - Wyoming	B-239

<u>Table Title</u>	<u>Description</u>
Location	Either the name of the mine or a description of the type of mine.
County	County in which the coal field is located.
Code Number	A unique number given to the entry for later identification. (In the case of the original data, the United States Geological Survey number assigned to the entry.)
Latitude	The north latitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Longitude	The west longitude of the coal field in the format DDDMMSS, where DDD is in degrees, MM is in minutes, SS is in seconds.
Rank	The rank, or type, of the coal: B = bituminous SB = sub-bituminous L = lignite A = anthracite SA = semi-anthracite
Htg Val	Heating value of the dry coal in Btu/lb.
Last Chg	Date the entry was last changed.
Moisture	Moisture fraction of the coal as delivered, in percent, from the proximate analysis.
Volatiles	Fraction of volatiles in the coal on a dry basis, in percent, from the proximate analysis.
Fxd Crbn	Fraction of fixed carbon in the coal on a dry basis, in percent, from the proximate analysis.
Ash	Fraction of ash in the coal on a dry basis, in percent, from the proximate analysis.
Carbon	Fraction of carbon in the coal on a dry basis, in percent, from the ultimate analysis.
Hydrogen	Fraction of hydrogen in the coal on a dry basis, in percent, from the ultimate analysis.
Sulfur	Fraction of sulfur in the coal on a dry basis, in percent, from the ultimate analysis.
Oxygen	Fraction of oxygen in the coal on a dry basis, in percent, from the ultimate analysis.
Nitrogen	Fraction of nitrogen in the coal on a dry basis, in percent, from the ultimate analysis.
Hardgrove	Hardgrove grindability index of the coal.
Free Swell	Free swelling index of the coal.
Hemi Temp	Hemispherical temperature of the coal, in °F; defined as the softening temperature at which $H = 1/2 W$

Coal Field Information Printout for

AK - Alaska

Coal Field Information Printout for: AK - Alaska

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
4.10	34.80	47.20		BRISTOL BAY BOROUGH	18.00	62.90	4.60	D177647	0.30	554603	1603845	B	10810	09/01/88
										13.50	0.70		0.0	2804
2.30	32.90	37.60		BRISTOL BAY BOROUGH	29.50	53.60	4.10	D177644	1.10	561557	1584203	B	9340	09/01/88
										11.20	0.50		1.0	2687
11.00	43.20	30.40		KENAI PENINSULA BOROUGH	26.40	51.00	4.50	D169228	0.40	594500	1510000	SB	8870	09/01/88
										16.70	1.00		0.0	0
18.90	51.40	40.80		KENAI PENINSULA BOROUGH	7.80	62.00	5.20	D178773	0.40	600024	1513722	SB	10580	09/01/88
										23.20	1.40		0.0	2354
23.40	54.10	39.60		KENAI PENINSULA BOROUGH	6.30	60.30	5.20	D178628	1.70	600153	1514015	SB	10220	09/01/88
										25.30	1.20		0.0	1913
26.50	41.40	33.30		KENAI PENINSULA BOROUGH	25.30	50.00	4.30	D178629	0.30	600339	1513914	SB	8600	09/01/88
										19.10	1.00		0.0	2138
21.60	50.10	39.80		KENAI PENINSULA BOROUGH	10.10	61.10	5.10	D178775	0.40	600403	1513846	SB	10600	09/01/88
										22.40	0.90		0.0	2075
20.70	46.00	37.20		KENAI PENINSULA BOROUGH	16.80	56.30	4.80	D178774	0.40	600417	1513828	SB	9810	09/01/88
										20.80	0.90		0.0	2228
20.20	43.00	27.20		KENAI PENINSULA BOROUGH	29.80	47.70	4.10	D178777	0.40	601211	1512603	SB	8260	09/01/88
										17.10	0.90		0.0	2183
25.10	40.10	30.00		KENAI PENINSULA BOROUGH	29.90	47.20	4.20	D178778	0.40	601229	1512534	SB	8240	09/01/88
										17.50	0.80		0.0	2120
21.10	46.50	44.60		KENAI PENINSULA BOROUGH	8.90	63.00	5.00	D178635	0.10	611100	1513530	SB	10720	09/01/88
										21.90	1.10		0.0	2228
19.90	44.20	38.70		KENAI PENINSULA BOROUGH	17.10	57.50	4.70	D178631	0.10	611710	1514447	SB	9860	09/01/88
										19.90	0.70		0.0	2417
30.80	56.20	37.90		MATANUSKA-SUSITNA	5.90	64.90	5.70	D179395	0.10	622348	1512420	SB	11490	09/01/88
										22.70	0.70		0.0	2282
18.00	44.10	42.10		NO BOROUGH	13.80	60.90	4.60	D177642	1.10	633917	1454638	SB	10340	09/01/88
										18.70	0.90		0.0	2300
USIBELLI COAL MINE				NO BOROUGH	16.00	57.20	4.50	D186043	0.30	635410	1485616	SB	9850	09/01/88
23.80	47.40	36.60								21.20	0.80		0.0	2408
USIBELLI COAL MINE				NO BOROUGH	13.30	62.60	5.00	D179396	0.40	635456	1483902	SB	11000	09/01/88
24.00	46.80	39.90								17.60	1.10		0.0	2354

Coal Field Information Printout for: AK - Alaska

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
USIBELLI COAL MINE	19.40	45.40	28.70	NO BOROUGH	52.50	4.30	0.40	635500	1483846	SB	9140	09/01/88
								15.90	1.00		0.0	2282
USIBELLI COAL MINE	24.00	47.30	43.90	NO BOROUGH	64.50	4.90	0.30	635509	1484000	SB	11130	09/01/88
								20.40	1.10		0.0	0
USIBELLI COAL MINE	29.70	47.90	40.40	NO BOROUGH	61.10	4.80	0.30	635605	1483922	SB	10430	09/01/88
								21.20	0.90		0.0	2273
USIBELLI COAL MINE	23.40	49.30	41.40	NO BOROUGH	63.00	5.10	0.30	635622	1483942	SB	10760	09/01/88
								21.40	0.90		0.0	2183
	32.70	48.40	37.90	NO BOROUGH	58.00	4.40	0.10	635812	1484500	SB	9600	09/01/88
								23.10	0.70		0.0	2111
USIBELLI COAL MINE	28.50	50.30	39.40	NO BOROUGH	61.80	4.70	1.00	635836	1471622	SB	10600	09/01/88
								21.20	1.00		0.0	2417
	12.80	14.70	55.50	NORTH SLOPE BOROUGH	57.00	2.70	1.50	680947	1655922	B	9550	09/01/88
								8.10	0.90		0.0	2732
	16.10	11.20	82.10	NORTH SLOPE BOROUGH	84.10	3.40	0.60	682413	1655730	B	13870	09/01/88
								4.00	1.20		0.0	2597
	6.70	40.80	55.70	NORTH SLOPE BOROUGH	77.80	5.00	0.20	692024	1603040	B	13560	09/01/88
								11.90	1.60		0.5	2246
	6.10	37.40	55.10	NORTH SLOPE BOROUGH	75.40	5.00	0.20	692040	1602555	B	13270	09/01/88
								10.00	1.90		1.5	2354
	12.80	36.40	55.20	NORTH SLOPE BOROUGH	69.30	4.30	0.20	692044	1602808	B	11660	09/01/88
								15.70	2.10		0.0	2300
	18.90	34.60	59.90	NORTH SLOPE BOROUGH	72.50	4.10	0.50	692140	1611410	B	12070	09/01/88
								15.90	1.50		0.0	2192
	5.20	34.50	49.80	NORTH SLOPE BOROUGH	69.30	4.60	0.30	692142	1612725	B	12040	09/01/88
								9.00	1.10		0.5	2426
	6.50	37.40	56.40	NORTH SLOPE BOROUGH	76.80	5.10	0.30	692154	1602145	B	13500	09/01/88
								10.00	1.60		2.0	2192
	20.90	36.70	58.50	NORTH SLOPE BOROUGH	71.10	4.10	0.30	692200	1611450	B	11770	09/01/88
								18.20	1.50		0.0	2354
	8.70	35.60	60.60	NORTH SLOPE BOROUGH	78.10	4.70	0.30	692256	1612322	B	13450	09/01/88
								11.50	1.60		0.5	2300

Coal Field Information Printout for: AK - Alaska

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp

NORTH SLOPE BOROUGH												
22.60	36.80	59.50	3.70	71.90	4.10	0.30	692308	18.10	1.90	0.0	11890	09/01/88

NORTH SLOPE BOROUGH												
25.50	42.30	51.50	6.20	68.60	4.00	0.30	692310	19.00	1.90	0.0	11180	09/01/88

NO BOROUGH												
9.70	37.20	59.60	3.20	74.30	4.50	0.20	692535	16.10	1.70	0.0	12620	09/01/88

NORTH SLOPE BOROUGH												
14.10	36.00	61.20	2.80	73.50	4.30	0.30	692617	17.50	1.60	0.0	12270	09/01/88

NORTH SLOPE BOROUGH												
13.90	35.10	61.30	3.60	73.90	4.40	0.30	692648	16.30	1.50	0.0	12370	09/01/88

NORTH SLOPE BOROUGH												
5.00	26.30	34.50	39.20	48.50	3.60	0.40	692708	7.20	1.10	0.0	8580	09/01/88

NORTH SLOPE BOROUGH												
11.90	34.10	63.30	2.60	76.90	4.60	0.30	692758	13.80	1.80	0.0	13080	09/01/88

NORTH SLOPE BOROUGH												
8.40	37.40	57.80	4.80	77.50	4.90	0.30	692832	11.00	1.50	0.5	13480	09/01/88

NORTH SLOPE BOROUGH												
5.70	42.50	40.90	16.60	53.80	4.40	0.20	693143	23.50	1.50	8900	0.0	2561

Coal Field Information Printout for

AL - Alabama

Coal Field Information Printout for: AL - Alabama

Location	County		Code Number		Latitude		Longitude		Rank	Htg Val		Last Chg
	Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Free Swell	Hemi Temp	
43.60		37.80	24.10	38.10	41.90	3.60	4.10	315919	880716	L	6860	09/01/88
50.10		37.40	27.90	34.70	45.20	3.30	3.20	320301	881243	L	7600	09/01/88
50.70		37.50	37.50	25.00	52.50	3.60	2.80	320353	873629	L	8860	09/01/88
49.60		41.80	28.40	29.80	47.80	3.50	6.00	320419	881336	L	8270	09/01/88
52.50		41.30	47.50	11.20	63.10	4.10	4.60	320524	873734	L	10460	09/01/88
52.40		40.50	41.20	18.30	57.10	3.90	4.00	320716	874125	L	9560	09/01/88
48.00		35.70	30.60	33.70	41.10	3.20	5.60	320742	881856	L	6880	09/01/88
36.50		42.30	31.70	26.00	47.60	3.50	5.20	320855	881608	L	7910	09/01/88
49.50		40.20	37.20	22.60	52.30	3.80	5.10	320926	874513	L	8910	09/01/88
49.60		44.80	43.10	12.10	59.90	4.30	4.20	320959	875218	L	10320	09/01/88
46.10		42.10	34.90	23.00	54.10	4.00	3.90	322156	881704	L	9200	09/01/88
ALAND	1.30	36.90	59.70	3.40	82.00	5.40	1.50	331608	872343	B	14720	09/01/88
IN-SITU GAS DDH	0.60	26.40	68.30	5.30	82.20	5.10	2.90	332441	870636	B	14760	09/01/88
0.90		25.20	69.40	5.40	82.90	5.00	1.10	333259	870538	B	14680	09/01/88
1.70		30.60	45.10	24.30	61.40	4.30	1.90	333630	873630	B	11060	09/01/88
1.10		30.00	62.70	7.30	79.60	5.10	1.40	333802	865020	B	14260	09/01/88

Coal Field Information Printout for: AL - Alabama

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
1.20	34.60	56.60	WALKER	8.80	77.70	2.10	333815	871054	B	13910	09/01/88
							4.80	1.40		9.0	2399
1.40	31.00	50.80	WALKER	18.20	68.10	1.60	333823	871113	B	12210	09/01/88
							6.00	1.30		8.5	2804
0.90	30.30	57.00	JEFFERSON	12.70	74.20	3.10	333900	870810	B	13380	09/01/88
							3.80	1.30		9.0	2309
5.30	30.50	58.30	JEFFERSON	11.20	70.80	1.00	333923	865830	B	12220	09/01/88
							11.70	1.10		1.0	2183
1.40	28.70	57.70	WALKER	13.60	73.10	1.80	333925	870830	B	13030	09/01/88
							5.30	1.40		8.5	2804
1.70	33.70	52.20	WALKER	14.10	72.20	1.80	333939	870830	B	13020	09/01/88
							5.70	1.10		9.0	2678
2.50	30.10	53.90	WALKER	16.00	70.00	0.90	333940	871250	B	12470	09/01/88
							7.10	1.20		7.5	2912
1.50	37.60	56.50	WALKER	5.90	78.30	2.00	334133	871115	B	14190	09/01/88
							7.00	1.50		8.5	2273
1.90	33.60	52.70	WALKER	13.70	71.40	1.50	334138	871720	B	12730	09/01/88
							6.90	1.60		4.5	2804
1.80	32.30	48.40	WALKER	19.30	65.90	1.30	334215	871740	B	11810	09/01/88
							7.60	1.20		4.5	2912
1.70	34.90	57.40	WALKER	7.70	77.40	1.60	334226	871105	B	13870	09/01/88
							6.90	0.90		7.5	2534
1.80	27.30	51.90	WALKER	20.80	65.00	1.80	334226	871125	B	11560	09/01/88
							7.10	0.80		3.0	2912
2.40	31.80	52.10	WALKER	16.10	68.90	0.90	334558	871435	B	12280	09/01/88
							7.80	1.60		1.5	2912
2.30	26.90	58.10	WALKER	15.00	69.50	0.60	334634	871007	B	12420	09/01/88
							9.30	0.90		2.0	2912
1.80	33.00	58.10	WALKER	8.90	75.20	2.40	334709	870212	B	13440	09/01/88
							7.00	1.30		6.0	2183
1.90	37.60	52.50	WALKER	9.90	74.20	1.50	334714	871022	B	13390	09/01/88
							7.50	1.70		5.0	2696

Coal Field Information Printout for: AL - Alabama

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.80	31.20	55.80	13.00	WALKER	72.30	0.40	W191290	4.80	334720	871022	B	12750	09/01/88
									7.90	1.60		1.5	2912
1.70	33.30	56.20	10.50	WALKER	72.70	3.80	W188919	5.20	334732	870146	B	13150	09/01/88
									6.60	1.20		4.0	2084
1.70	33.40	57.10	9.50	WALKER	73.50	4.10	W188923	5.30	334733	870144	B	13340	09/01/88
									6.20	1.40		4.5	2048
2.40	29.30	57.40	13.30	WALKER	71.50	0.50	W188920	4.70	334757	871110	B	12600	09/01/88
									9.00	1.00		1.5	2912
2.40	40.40	51.90	7.70	FAYETTE	75.10	2.00	W191071	5.50	335025	873540	B	13620	09/01/88
									8.30	1.40		5.0	2156
PATTON MINE													
2.20	36.90	58.80	4.30	CULLMAN	79.90	0.70	W193938	5.10	335835	870455	B	14310	09/01/88
									8.20	1.80		5.5	2804
2.70	21.60	74.60	3.80	CHEROKEE	85.90	1.30	W215453	4.30	342804	853252	B	14940	09/01/88
									3.10	1.60		8.0	2102
1.50	22.10	72.50	5.40	CHEROKEE	83.20	0.80	W199996	4.40	342848	853208	B	14750	09/01/88
									4.80	1.40		8.5	2561
1.70	19.60	71.00	9.40	CHEROKEE	79.90	0.90	W199995	4.40	342940	853237	B	13960	09/01/88
									3.90	1.50		8.0	2759
1.20	19.70	78.30	2.00	DE KALB	87.60	0.60	W199992	4.50	343204	853241	B	15340	09/01/88
									3.80	1.50		4.5	2543
7.90	23.70	69.00	7.30	DE KALB	74.40	0.50	W199993	3.50	343234	853249	B	12160	09/01/88
									13.00	1.30		0.0	2804
1.30	20.50	75.90	3.60	DE KALB	86.70	0.90	W199994	4.30	343238	853203	B	15050	09/01/88
									2.90	1.60		8.5	2408
2.50	21.90	62.30	15.80	DE KALB	73.20	2.00	W215452	4.00	343845	853328	B	12870	09/01/88
									3.80	1.20		7.0	2678
1.80	23.80	67.50	8.70	JACKSON	80.70	0.70	W212568	4.60	345326	853621	B	14080	09/01/88
									3.90	1.40		7.5	2750

Coal Field Information Printout for

AR - Arkansas

Coal Field Information Printout for: AR - Arkansas

Location		County		Code Number			Latitude	Longitude	Rank	Htg Val	Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
40.80	48.30	39.40	12.30	62.90	D176395	4.50	0.50	335601	925845	L	10570	09/01/88
								19.00	0.80		0.0	2129
42.00	49.60	43.80	6.60	66.10	D176394	5.10	1.70	340030	925615	L	11260	09/01/88
								19.60	0.90		0.0	2138
39.10	42.20	26.40	31.40	48.20	D176393	4.40	1.10	342012	924652	L	8640	09/01/88
								14.40	0.50		0.0	2912
STATE ROAD 35												
57.00	53.30	27.90	18.80	54.00	D176398	4.30	0.50	342843	923220	L	9120	09/01/88
								21.50	0.90		0.0	2912
55.00	47.50	34.70	17.80	55.30	D176396	4.20	1.30	343402	922330	L	8960	09/01/88
								20.50	0.90		0.0	2912
35.50	40.00	21.90	38.10	41.30	D176391	3.80	0.80	343940	921616	L	7130	09/01/88
								15.40	0.60		0.0	2912
4.40	22.60	70.00	7.40	82.20	D175925	4.50	0.80	345458	942356	B	14320	09/01/88
								3.40	1.70		8.0	2183
9.70	27.10	68.50	4.40	77.90	D175924	3.50	0.70	350002	942100	B	12770	09/01/88
								11.90	1.60		0.0	2246
2.90	21.70	72.20	6.10	84.50	D175926	4.30	0.80	350103	914201	B	14580	09/01/88
								2.70	1.60		9.0	2192
2.30	21.10	70.50	8.40	82.00	D175927	4.20	1.20	350103	941201	B	14310	09/01/88
								2.60	1.60		9.0	2111
3.10	19.30	74.60	6.10	84.80	D175922	4.40	0.60	350514	941635	B	14670	09/01/88
								2.30	1.80		9.0	2084
SUGARLOAF STRIP												
7.40	19.40	74.60	6.00	80.80	D179988	3.90	0.60	351008	941937	B	13640	09/01/88
								7.00	1.70		0.0	2363
EAST SIDE US HIGHWAY 71												
4.60	22.60	75.00	2.40	86.60	D176061	4.30	0.80	351118	941708	B	14830	09/01/88
								4.10	1.80		0.5	2246
RHODES EXCAVAT STRIP												
3.10	17.30	81.00	1.70	87.80	D179994	4.50	0.90	351700	935930	B	15210	09/01/88
								3.20	1.90		2.0	2192
4.30	18.30	78.80	2.90	87.20	D175928	4.30	0.60	351845	934305	B	14950	09/01/88
								3.20	1.80		0.5	2138
TITAN STRIP												
3.50	16.80	78.70	4.50	85.30	D179995	4.30	1.70	351918	934353	B	14860	09/01/88
								2.60	1.60		9.0	2246

Coal Field Information Printout for: AR - Arkansas

Location		County			Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
1.30	20.70	72.10	FRANKLIN	7.20	82.80	D175929	352010	935556	B	14480	09/01/88
							0.60	1.60		9.0	2246
3.60	15.00	74.00	LOGAN	11.00	80.30	D176060	352020	933122	B	13640	09/01/88
							2.20	1.70		0.5	2129
GARLAND STRIP	18.90	74.20	FRANKLIN	6.90	82.50	D179993	352035	935558	B	14460	09/01/88
							1.20	1.60		9.0	2534
3.50	16.00	76.70	FRANKLIN	7.30	82.70	D175921	352522	935701	B	14350	09/01/88
							2.90	1.70		7.0	2417
3.30	14.40	82.50	JOHNSON	3.10	88.90	D175920	352705	933510	B	15070	09/01/88
							1.60	1.80		0.5	2192
TITAN STRIP	11.20	80.90	JOHNSON	7.90	83.20	D179991	352742	932240	B	14220	09/01/88
							2.50	1.60		0.5	2471
ENERGY DEV CO STRIP	12.60	78.00	JOHNSON	9.40	81.00	D179992	353010	932143	B	14000	09/01/88
							0.10	1.50		0.5	2480
2.70	19.30	77.70	FRANKLIN	3.00	88.10	D175919	353038	934350	B	15180	09/01/88
							1.70	2.00		9.0	2363
B AND D CO STRIP	16.30	67.60	FRANKLIN	16.10	74.10	D179989	353115	934545	B	12910	09/01/88
							3.10	1.50		4.0	2912
PEABODY STRIP	16.30	79.30	JOHNSON	4.40	86.80	D179990	353143	944043	B	14940	09/01/88
							2.30	1.70		7.0	2120
9.60	15.70	77.20	JOHNSON	7.10	83.90	D175918	353310	932915	B	14370	09/01/88
							2.30	1.80		4.0	2246
JACK LEE MINE	18.30	78.40	JOHNSON	3.30	86.90	D176059	353330	933807	B	14990	09/01/88
							3.00	1.90		5.0	2138
HOLE NO 31	40.10	20.40	POINSETT	39.50	41.80	D186849	353450	904210	L	7400	09/01/88
							13.60	0.60		0.0	2408
HOLE NO 24	38.70	27.70	POINSETT	33.60	44.20	D177850	353525	904200	L	7570	09/01/88
							16.60	0.90		0.0	2408
HOLE NO 27	46.40	32.30	POINSETT	21.30	52.80	D186853	353540	903945	L	9250	09/01/88
							15.30	0.70		0.0	2039
HOLE NO 68	33.60	32.20	CRAIGHEAD	34.20	45.90	D186855	354930	904630	L	7660	09/01/88
							14.10	0.70		0.0	2300

Coal Field Information Printout for

AZ - Arizona

Coal Field Information Printout for: AZ - Arizona

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Oxygen	Latitude	Longitude	Rank	Free Swell	Htg Val	Last Chg
BLACK MESA STRIP MINE	10.40	46.00	51.00	NAVAJO	3.00	75.10	5.30	D164637	0.40	362230	1102230	1.20	SB	13170	0.0	09/01/88
										15.00				0.0	0.0	0
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	D179814	0.40	362831	1102438	1.10	SB	12380	0.0	09/01/88
										14.10				0.0	0.0	2345
	10.20	45.90	48.90	NAVAJO	5.20	73.20	5.30	D176231	0.30	362831	1102445	1.20	SB	12770	0.5	09/01/88
										14.80				0.0	0.0	2174
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	D179816	0.40	362840	1102430	1.10	SB	12380	0.0	09/01/88
										14.10				0.0	0.0	2345
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	D179817	0.40	362842	1102430	1.10	SB	12380	0.0	09/01/88
										14.10				0.0	0.0	2345
	10.80	42.60	48.50	NAVAJO	8.90	70.30	5.20	D179818	0.40	362843	1102420	1.10	SB	12380	0.0	09/01/88
										14.10				0.0	0.0	2345
	8.60	43.80	46.20	NAVAJO	10.00	69.10	4.90	D176235	0.50	362931	1102352	1.20	SB	11940	0.0	09/01/88
										14.30				0.0	0.0	2174
	9.30	44.20	50.00	NAVAJO	5.80	73.00	5.10	D176227	0.40	363204	1102506	1.30	SB	12750	0.0	09/01/88
										14.40				0.0	0.0	2156
	9.30	44.20	50.00	NAVAJO	5.80	73.00	5.10	D176229	0.40	363209	1102508	1.30	SB	12750	0.0	09/01/88
										14.40				0.0	0.0	2156
	10.60	42.80	47.00	NAVAJO	10.20	68.80	4.90	D176225	0.60	363228	1102531	1.30	SB	12050	0.0	09/01/88
										14.20				0.0	0.0	2300
	10.80	43.50	49.50	NAVAJO	7.00	71.60	5.20	D179812	0.80	363241	1102437	1.20	SB	12590	0.0	09/01/88
										14.20				0.0	0.0	2291
	9.30	45.00	45.60	NAVAJO	9.40	70.00	5.10	D176226	0.60	363242	1102446	1.20	SB	12240	0.5	09/01/88
										13.70				0.0	0.0	2201
	11.70	38.80	48.60	NAVAJO	12.60	66.90	4.80	D179809	0.60	363250	1102456	1.20	SB	11730	0.0	09/01/88
										13.90				0.0	0.0	2399
	12.10	42.20	49.70	NAVAJO	8.10	70.30	5.00	D179825	0.60	363317	1102408	1.30	SB	12230	0.0	09/01/88
										14.70				0.0	0.0	2192

Coal Field Information Printout for

CO - Colorado

Coal Field Information Printout for: CO - Colorado

Location		County		Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
LAS ANIMAS											
1.20	27.30	47.10	25.60	63.30	4.30	0.90	370815	1044820	B	11250	09/01/88 2570
LAS ANIMAS											
1.40	24.90	47.10	28.00	60.80	4.20	0.40	371025	1044820	B	10800	09/01/88 2804
LAS ANIMAS											
0.90	17.40	55.20	27.40	62.90	2.70	0.80	371100	1044700	B	10260	09/01/88 2354
LA PLATA											
3.10	33.00	49.20	17.80	67.30	4.70	0.70	371505	1080720	B	12030	09/01/88 2804
LA PLATA											
3.40	35.90	54.10	10.00	73.50	5.10	0.70	371552	1080820	B	13150	09/01/88 2804
HUERFANO											
7.50	40.00	48.00	12.00	69.50	5.00	0.80	374237	1045427	B	12300	09/01/88 2714
FREMONT											
CORLEY MINE 7.50	40.50	48.30	11.20	69.20	4.70	1.20	381850	1050845	B	12060	09/01/88 2516
FREMONT											
TWIN PINES MINE 8.90	40.50	49.70	9.80	70.90	4.50	0.50	382020	1051056	B	12180	09/01/88 2282
GUNNISON											
HOLE NO SOM-68 6.10	38.00	49.20	12.80	66.20	5.10	1.40	385105	1072542	B	11880	09/01/88 2282
GUNNISON											
HOLE NO MG-7 8.60	38.10	58.50	3.40	74.70	5.30	0.70	385123	1072730	B	12980	09/01/88 2075
GUNNISON											
HOLE NO SOM-66 6.30	35.80	49.50	14.70	65.60	4.80	1.00	385203	1072602	B	11360	09/01/88 2417
GUNNISON											
HOLE NO MG-11 4.70	35.80	48.60	15.60	66.20	5.10	0.60	385236	1072816	B	11640	09/01/88 2732
GUNNISON											
HOLE NO SOM-53 4.30	32.30	48.00	19.70	62.30	4.40	0.50	385311	1072532	B	10880	09/01/88 2804
GUNNISON											
HOLE NO SOM-39 5.80	38.10	57.50	4.40	74.80	5.50	0.60	385354	1072716	B	13140	09/01/88 2453
GUNNISON											
3.20	38.90	53.60	7.50	75.40	5.10	0.60	385540	1072804	B	13570	09/01/88 2471
GUNNISON											
4.50	37.70	56.30	6.00	76.00	5.40	0.50	385541	1072656	B	13640	09/01/88 2552

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Oxygen	Latitude	Longitude	Rank	Free Swell	Htg Val	Last Chg
5.30	37.30	55.40	55.40	GUNNISON	7.30	75.20	5.20	D184652	0.60	10.10	385557	1072442	B	13400	2.0	09/01/88
5.10	31.40	44.00	44.00	MESA	24.60	58.80	4.10	D180095	1.30	9.90	390821	1081834	B	10360	1.0	09/01/88
5.50	37.50	50.00	50.00	MESA	12.50	70.00	4.60	D184655	0.60	10.70	390835	1081847	B	12330	1.0	09/01/88
0.80	22.90	69.50	69.50	PITKIN	7.60	82.70	4.70	D184637	0.50	2.60	391118	1072039	B	14620	9.0	09/01/88
33.20	43.30	39.20	39.20	ELBERT	17.50	55.70	3.90	D169431	0.40	21.50	391547	1041656	L	9070	0.0	09/01/88
4.00	40.90	52.90	52.90	GARFIELD	6.20	73.40	5.20	D184636	1.60	11.70	392408	1071916	B	13130	0.0	09/01/88
35.00	39.70	39.20	39.20	ADAMS	21.10	56.00	4.30	D173470	0.50	17.20	394718	1044145	L	9460	0.0	09/01/88
32.90	36.20	38.20	38.20	ADAMS	25.60	52.90	4.10	D177499	0.60	15.90	394727	1044050	L	8960	0.0	09/01/88
6.90	38.10	53.30	53.30	RIO BLANCO	8.60	71.90	4.90	D186088	0.50	12.60	400103	1084445	B	12590	0.0	09/01/88
22.30	41.10	53.40	53.40	WELD	5.50	72.20	4.90	D173488	0.50	15.40	400245	1045900	SB	12480	0.0	09/01/88
10.20	38.40	44.20	44.20	RIO BLANCO	17.40	64.40	4.40	D186078	0.70	11.70	400336	1084150	B	11310	0.0	09/01/88
9.50	34.10	39.50	39.50	RIO BLANCO	26.40	56.40	3.80	D186090	0.60	11.70	400550	1083920	B	9830	0.0	09/01/88
23.80	32.40	41.00	41.00	RIO BLANCO	26.60	55.20	3.90	D186096	0.70	12.40	400932	1074530	B	9600	0.0	09/01/88
12.10	38.20	51.90	51.90	RIO BLANCO	9.90	70.70	4.70	D186086	0.50	12.70	400932	1084136	B	12320	0.0	09/01/88
17.10	37.20	45.10	45.10	MOFFAT	17.70	62.30	4.20	D186083	0.50	14.00	401328	1084955	B	10710	0.0	09/01/88
15.20	35.60	50.10	50.10	MOFFAT	14.30	65.50	4.40	D186091	0.40	13.90	401504	1075216	B	11290	0.0	09/01/88

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
APEX MINE				ROUTT									
7.80	40.80	47.20	12.00			66.70	4.80	0.80	401800	1070158	B	11740	09/01/88
									14.10	1.60		0.5	2579
DH NO 2				ROUTT									
17.10	33.20	46.40	20.40			59.80	4.20	0.50	401811	1070630	B	10250	09/01/88
									14.10	1.00		0.0	2912
DH NO 1				ROUTT									
10.50	38.00	52.40	9.60			69.80	5.10	0.60	401824	1070705	B	12150	09/01/88
									13.90	1.00		0.5	2579
DH NO 5				ROUTT									
9.40	37.90	53.80	8.30			70.70	4.90	0.60	401838	1070547	B	12420	09/01/88
									14.60	0.90		0.5	2579
DH NO 3				ROUTT									
8.00	43.80	48.60	7.60			70.10	5.30	2.80	401907	1070613	B	12540	09/01/88
									12.70	1.50		0.5	2003
DH NO 4				ROUTT									
7.50	37.30	37.80	24.90			55.40	4.40	3.40	401920	1070501	B	10000	09/01/88
									10.70	1.20		0.5	2264
EDNA STRIP MINE				ROUTT									
6.40	40.90	55.90	3.20			75.90	5.10	0.60	402000	1065835	B	13290	09/01/88
									13.50	1.70		0.5	2192
ENERGY NO 1 STRIP MINE				ROUTT									
5.70	37.30	43.80	18.90			62.80	4.50	0.60	402035	1070315	B	11030	09/01/88
									11.60	1.60		0.5	2462
ENERGY NO 1A STRIP MINE				ROUTT									
7.00	41.00	50.80	8.20			71.10	5.00	0.60	402050	1070250	B	12430	09/01/88
									13.30	1.80		0.5	2417
8.20	37.30	54.50	8.20			72.70	4.90	0.50	402055	1070645	B	12900	09/01/88
									11.80	1.90		0.0	2462
ENERGY STRIP MINE NO 2				ROUTT									
10.40	43.50	51.90	4.60			74.10	5.00	0.60	402150	1071100	B	12940	09/01/88
									13.60	2.10		0.0	2138
8.20	38.80	54.20	7.00			73.50	5.10	0.40	402157	1070635	B	13080	09/01/88
									12.10	1.90		0.0	2804
10.80	39.10	41.60	19.30			62.00	4.10	2.50	402206	1070232	B	10990	09/01/88
									10.20	1.90		0.0	2147
10.30	40.10	49.00	10.90			68.40	4.60	1.90	402239	1070401	B	12140	09/01/88
									12.00	2.20		0.0	2111
9.80	39.80	53.00	7.20			72.70	5.00	2.00	402257	1070154	B	12950	09/01/88
									11.00	2.10		0.0	2012
ENERGY NO 3 STRIP MINE				ROUTT									
10.90	41.20	50.70	8.10			69.40	4.90	0.60	402500	1065930	B	12140	09/01/88
									15.30	1.70		0.0	2777

Coal Field Information Printout for: CO - Colorado

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
8.00	28.40	36.10	35.50	MOFFAT	35.50	47.80	3.30	0.70	402532 11.50	1074714 1.20	B	8150 0.0	09/01/88 2615
NO 2 STRIP MINE													
8.00	39.80	50.00	10.20	ROUTT	10.20	69.00	4.90	0.50	402615 13.70	1070715 1.70	B	12100 0.5	09/01/88 2741
12.00													
12.00	39.40	49.60	11.00	ROUTT	11.00	68.20	4.70	0.80	402740 13.60	1070310 1.70	B	12000 0.0	09/01/88 2804
25.20													
25.20	35.00	34.40	30.60	MOFFAT	30.60	45.00	2.40	0.30	403130 20.60	1073400 1.10	SB	6780 0.0	09/01/88 2804
GRIZZLY CREEK STRIP MINE													
17.80	38.90	45.20	15.90	JACKSON	15.90	60.80	4.40	1.20	403200 16.80	1062115 0.90	SB	10460 0.0	09/01/88 2516
GRIZZLY CREEK STRIP MINE													
14.50	34.30	28.90	36.80	JACKSON	36.80	44.20	3.50	0.70	403200 14.20	1062415 0.60	SB	7630 0.0	09/01/88 0
18.80													
18.80	37.10	44.40	18.50	MOFFAT	18.50	59.10	4.20	0.40	403420 16.00	1080300 1.80	SB	10070 0.0	09/01/88 2354
20.40													
20.40	39.80	53.30	6.90	MOFFAT	6.90	69.30	4.60	0.80	403500 17.30	1074600 1.10	SB	11760 0.0	09/01/88 2156
29.10													
29.10	36.50	39.90	23.60	MOFFAT	23.60	51.80	2.60	0.30	403530 20.90	1074930 0.80	SB	7830 0.0	09/01/88 2291
16.50													
16.50	45.50	38.80	15.70	MOFFAT	15.70	57.60	4.40	0.20	403600 21.40	1074200 0.70	SB	9810 0.0	09/01/88 0
13.50													
13.50	37.20	49.00	13.80	ROUTT	13.80	65.30	4.40	0.60	403620 14.60	1070654 1.30	B	11310 0.0	09/01/88 2552
CANADIAN STRIP MINE													
14.50	37.30	55.20	7.50	JACKSON	7.50	71.90	4.90	0.20	404127 14.30	1060656 1.20	SB	12550 0.0	09/01/88 2183
CANADIAN STRIP MINE													
12.80	42.80	51.40	5.80	JACKSON	5.80	72.30	5.10	0.80	404158 14.90	1060655 1.10	SB	12800 0.0	09/01/88 2300
MARR NO 1 STRIP MINE													
14.20	41.30	56.30	2.40	JACKSON	2.40	75.00	5.00	0.20	404255 16.20	1060656 1.20	SB	13150 0.0	09/01/88 2102
1.80													
1.80	35.70	42.70	21.60	MOFFAT	21.60	64.30	4.50	0.80	404500 7.70	1083730 1.10	B	11430 0.0	09/01/88 0

Coal Field Information Printout for

GA - Georgia

Coal Field Information Printout for: GA - Georgia

Location		County			Code Number		Latitude		Longitude		Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell			Hemi Temp
1.30	22.30	68.30	9.40	CHATTOGA	W199989	4.40	1.00	343137	852932	B		14040	09/01/88
								4.10	1.50			9.0	2804
1.60	20.80	76.10	3.10	CHATTOGA	W215456	4.60	1.10	343240	852942	B		15280	09/01/88
								1.60	1.60			8.0	2327
1.40	18.20	57.50	24.30	CHATTOGA	W218690	3.80	0.90	343330	852812	B		11510	09/01/88
								3.30	1.20			7.0	2561
1.30	19.50	78.20	2.30	CHATTOGA	W199974	4.10	0.70	343343	852921	B		15290	09/01/88
								2.80	1.60			8.0	2390
1.80	22.30	71.60	6.10	CHATTOGA	W212566	4.40	0.70	343357	852626	B		14430	09/01/88
								4.20	1.50			3.5	2210
2.80	22.40	64.60	13.00	CHATTOGA	W218691	4.00	1.10	343437	852803	B		12910	09/01/88
								5.30	1.30			1.0	2750
1.10	22.00	71.00	7.00	WALKER	W199975	3.90	2.50	343546	852917	B		14430	09/01/88
								4.10	1.50			8.0	2201
3.30	20.00	59.00	21.00	WALKER	W212567	3.80	1.80	343605	852517	B		11720	09/01/88
								4.80	1.00			3.5	2624
1.30	21.90	72.30	5.80	DADE	W199976	4.50	1.20	344054	852911	B		14660	09/01/88
								3.20	1.50			9.0	2489
1.40	20.40	67.10	12.50	DADE	W215454	4.20	1.00	344428	852912	B		13460	09/01/88
								3.80	1.20			6.5	2759
2.00	22.80	64.60	12.60	DADE	W209681	4.20	0.70	344631	853041	B		13160	09/01/88
								5.70	1.10			3.5	2597
1.50	18.30	47.00	34.70	DADE	W209682	3.30	1.30	344730	852845	B		9550	09/01/88
								4.60	0.70			1.0	2804
1.70	22.10	46.10	31.80	DADE	W209680	3.70	0.80	344756	853101	B		10100	09/01/88
								5.50	1.00			5.0	2804
1.90	26.20	57.20	16.60	DADE	W209679	4.30	1.10	344920	853022	B		12490	09/01/88
								5.60	1.00			7.0	2417
3.50	20.70	77.60	1.70	WALKER	W212565	4.30	0.50	344953	852632	B		15010	09/01/88
								4.50	1.70			1.0	2480
1.20	21.00	76.50	2.50	WALKER	W209684	4.70	0.50	344959	852546	B		15380	09/01/88
								3.30	1.70			9.0	2390

Coal Field Information Printout for: GA - Georgia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
1.10	22.00	75.80	2.20	DADE	86.80	W199986 4.70	0.80	345031 3.80	852648 1.70	B	15330 9.0	09/01/88 2381
1.50	20.70	67.80	11.50	DADE	74.80	W199984 4.70	4.50	345033 3.10	852645 1.40	B	13340 7.5	09/01/88 2210
1.30	20.80	76.10	3.10	DADE	87.30	W199983 4.50	0.60	345043 3.00	852712 1.50	B	15110 8.5	09/01/88 2804
1.10	20.60	76.50	2.90	WALKER	87.60	W212563 4.60	0.60	345049 2.60	852442 1.70	B	15200 7.5	09/01/88 2552
1.50	20.70	69.30	10.00	WALKER	79.90	W212564 4.30	1.50	345115 2.80	852625 1.50	B	13990 9.0	09/01/88 2696
1.30	20.70	71.80	7.50	WALKER	80.90	W199987 4.50	0.70	345158 4.90	852508 1.50	B	14340 7.0	09/01/88 2804
1.40	23.20	74.60	2.20	WALKER	86.50	W209683 4.60	0.50	345231 4.60	852518 1.60	B	15240 5.0	09/01/88 2507
1.50	21.20	76.70	2.10	WALKER	86.80	W199988 4.60	0.50	345330 4.40	852422 1.60	B	15210 7.0	09/01/88 2399
1.80	21.60	52.10	26.30	DADE	62.20	W209677 3.90	0.90	345440 5.80	853122 0.90	B	10950 6.0	09/01/88 2804
2.10	25.70	57.50	16.80	DADE	71.00	W209678 4.30	0.50	345639 6.00	853533 1.40	B	12450 2.0	09/01/88 2804
6.70	27.10	64.40	8.50	DADE	74.70	W199979 3.80	0.50	345653 11.10	853037 1.40	B	12490 0.0	09/01/88 2201
1.40	27.50	64.80	7.70	DADE	75.60	W199981 4.70	4.70	345655 5.90	853047 1.40	B	14080 9.0	09/01/88 2327
6.20	24.30	63.20	12.50	DADE	70.20	W199980 3.60	0.50	345702 11.80	853044 1.40	B	11880 0.0	09/01/88 2804
1.30	26.50	59.10	14.40	DADE	72.00	W218692 4.40	5.40	345714 2.60	853010 1.20	B	13030 8.5	09/01/88 2003
1.50	24.30	64.80	10.90	DADE	77.90	W199977 4.50	0.90	345756 4.40	853108 1.40	B	13680 9.0	09/01/88 2804
1.40	27.40	66.70	5.90	DADE	80.60	W199978 4.50	3.10	345804 4.40	853116 1.50	B	14470 9.0	09/01/88 2210

Coal Field Information Printout for: GA - Georgia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
1.50	28.40	69.10	2.50	DADE	85.90	5.00	0.50	34.5818	853356	B	15190	09/01/88
								4.50	1.60		9.0	2372

Coal Field Information Printout for

IA - Iowa

Coal Field Information Printout for: IA - Iowa

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
12.20	38.70	49.20	DAVIS	67.00	4.60	5.10	403750 10.40	922545 0.80	B	12110 1.0	09/01/88 2111
4.70	32.20	37.10	APPANOOSE	48.40	3.40	8.70	404242 7.90	925158 0.90	B	8890 0.5	09/01/88 2084
3.30	39.50	47.10	APPANOOSE	66.80	4.60	5.60	404315 8.40	923835 1.20	B	11900 1.0	09/01/88 2111
2.70	23.90	49.50	DAVIS	55.20	4.30	4.80	405254 8.20	921625 0.90	B	10300 1.0	09/01/88 2372
2.80	39.60	44.50	APPANOOSE	63.90	4.40	8.10	405322 6.60	923824 1.10	B	11760 1.0	09/01/88 2147
5.70	42.80	44.30	WAPELLO	68.40	4.50	3.90	405403 9.20	922439 1.10	B	11900 1.0	09/01/88 2129
4.30	36.80	38.30	JEFFERSON	51.80	4.00	9.90	405456 8.30	921040 1.10	B	9680 0.0	09/01/88 2012
12.50	44.60	45.80	WAPELLO	71.40	5.30	4.00	405950 8.80	923145 0.90	B	12890 1.5	09/01/88 1958
9.80	42.90	45.70	WAPELLO	69.50	4.90	6.30	410000 6.80	923000 1.10	B	12690 0.0	09/01/88 0
13.10	43.30	41.20	MONROE	64.90	4.50	4.40	410000 9.40	925230 1.30	B	11500 0.0	09/01/88 0
11.90	42.00	42.70	MONROE	65.30	4.70	4.10	410000 9.20	930000 1.40	B	11830 0.0	09/01/88 0
7.00	42.70	32.90	WAPELLO	57.70	4.10	5.70	410017 7.10	923715 1.00	B	10230 1.0	09/01/88 2516
13.60	43.90	45.30	WAPELLO	70.50	5.00	4.20	410154 8.50	923817 1.00	B	12700 1.5	09/01/88 2111
9.90	36.00	39.40	WAPELLO	56.00	4.00	9.00	410221 5.50	923107 0.90	B	10260 0.5	09/01/88 2138
14.00	31.70	42.30	WAPELLO	53.20	3.70	10.30	410238 5.80	923125 1.00	B	9500 0.0	09/01/88 2030
9.10	31.00	32.90	WAPELLO	37.80	2.70	21.10	410240 1.70	923645 0.60	B	7600 0.0	09/01/88 2237

Coal Field Information Printout for: IA - Iowa

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp

LOVILLA NO 2 MINE				MONROE			D186075		410310	923410	B	12110	09/01/88
16.20	40.30	44.30	44.30	15.40	67.50	3.80	4.30	3.80	7.60	1.40		1.0	2111

15.10	40.20	41.90	41.90	17.90	65.30	3.70	D186076		410310	930410	B	11630	09/01/88
							4.50	3.70	7.30	1.30		1.0	2156

17.00	38.70	48.20	48.20	13.10	68.40	6.10	D186062		410635	930950	B	12330	09/01/88
							4.40	6.10	6.60	1.40		1.0	2201

14.50	38.20	47.10	47.10	14.70	65.50	6.20	D166029		410730	924500	B	11890	09/01/88
							4.40	6.20	8.00	1.20		0.0	0

11.10	43.10	46.00	46.00	10.90	67.80	6.30	D176187		411029	923445	B	12260	09/01/88
							5.20	6.30	8.70	1.10		1.5	2084

15.40	39.60	44.90	44.90	15.50	64.10	8.40	D185602		411128	924515	B	11760	09/01/88
							4.50	8.40	6.60	0.90		1.0	2111

13.90	38.80	45.60	45.60	15.50	61.90	10.30	D185601		411135	924540	B	11490	09/01/88
							4.40	10.30	6.90	0.90		1.0	2255

13.00	43.40	44.20	44.20	12.40	68.80	5.40	D186066		411340	924720	B	12570	09/01/88
							4.90	5.40	7.60	0.90		1.0	2255

STAR MINE				MAHASKA			D186065		411340	924800	B	11310	09/01/88
13.10	39.80	42.70	42.70	17.50	61.90	7.90	4.40	7.90	7.30	1.00		1.0	2111

12.20	40.00	40.30	40.30	19.70	61.10	6.80	D186074		411445	923642	B	11090	09/01/88
							4.20	6.80	7.20	1.00		1.0	2111

15.60	42.20	45.40	45.40	12.40	68.40	4.50	D185603		411715	924438	B	12340	09/01/88
							4.70	4.50	8.80	1.20		1.0	2201

21.10	40.10	45.70	45.70	14.20	64.70	4.10	D185606		412615	930140	B	11470	09/01/88
							4.30	4.10	11.60	1.10		0.0	2102

14.50	41.80	40.40	40.40	17.80	63.20	2.90	D185611		412915	931225	B	10980	09/01/88
							4.30	2.90	10.70	1.10		2.0	2786

12.10	38.00	43.80	43.80	18.20	63.70	2.60	D166039		420000	930730	B	11290	09/01/88
							4.40	2.60	9.70	1.40		0.0	0

Coal Field Information Printout for

ID - Idaho

Location	Moisture	Volatiles	Fxd Crbn	County		Code Number		Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
				Ash		Carbon	Hydrogen					
COAL BANKS	8.80	38.60	30.30	CASSIA		46.60	4.20	2.50	1135908	L	8230	09/01/88
						31.10			0.90		0.0	2192
	20.70	39.70	31.30	ONYHEE		44.90	3.50	1.80	1164637	L	7390	09/01/88
									0.90		0.0	2408
BROWN BEAR MINE	3.30	36.40	50.70	TETON		69.60	5.20	0.50	1111822	B	12220	09/01/88
						12.90			0.90		0.0	2453
PINTAR MINE	4.40	38.60	51.00	TETON		69.80	4.90	0.60	1112008	B	12170	09/01/88
						10.40			1.60		0.0	2174

Coal Field Information Printout for

IL - Illinois

Coal Field Information Printout for: IL - Illinois

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
3.50	38.20	50.20	PERRY	11.60	58.40	4.90	380059	893312	B	12230	09/01/88
							10.10	1.00		1.0	2057
4.10	36.40	56.30	PERRY	7.30	72.30	4.80	380101	893305	B	12870	09/01/88
							10.70	1.10		1.5	1967
5.50	39.30	53.90	PERRY	6.80	72.70	5.10	380101	893307	B	13020	09/01/88
							10.80	1.00		1.0	1967
5.70	40.80	52.00	PERRY	7.20	73.30	5.10	380101	893309	B	13020	09/01/88
							10.10	1.30		2.5	2129
4.40	38.50	47.30	FRANKLIN	14.20	63.90	4.60	380206	885748	B	11960	09/01/88
							6.80	1.40		5.0	2129
4.70	40.20	51.10	FRANKLIN	8.70	73.40	5.20	380206	885754	B	13270	09/01/88
							8.30	1.60		4.5	2264
6.20	35.10	62.30	JEFFERSON	2.60	78.50	5.20	380850	890350	B	13940	09/01/88
							11.90	1.20		1.0	2156
5.60	40.40	51.10	MONTGOMERY	8.50	71.10	5.20	390502	892048	B	12660	09/01/88
							11.10	1.20		2.5	2129
8.10	40.40	51.00	MONTGOMERY	8.60	69.40	5.10	390505	892045	B	12320	09/01/88
							12.00	0.50		1.0	1823
6.40	43.70	46.80	MONTGOMERY	9.50	73.10	5.50	390505	892050	B	13290	09/01/88
							7.80	0.90		1.0	2129
4.10	36.70	53.20	JEFFERSON	10.10	71.00	4.90	390808	890930	B	12610	09/01/88
							10.20	1.10		1.0	2012
11.80	40.40	49.20	MACOUPIN	10.40	69.30	4.90	392839	894336	B	12340	09/01/88
							10.10	1.20		4.0	2066
4.20	38.60	55.20	FULTON	6.20	73.20	5.30	401730	902230	B	13220	09/01/88
							10.70	1.50		1.0	2057
2.80	38.20	51.40	FULTON	10.40	71.80	5.10	402600	900100	B	12860	09/01/88
							9.30	1.40		3.5	2255
3.10	38.60	54.70	PEORIA	6.70	73.90	5.20	404400	895640	B	13290	09/01/88
							7.50	1.20		4.5	2111
3.70	38.50	50.50	KNOX	11.00	67.90	4.90	410230	901345	B	12290	09/01/88
							10.20	1.10		1.0	1994

Coal Field Information Printout for

IN - Indiana

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	8.70	36.00	51.30	WARRICK	12.70	66.60	4.70	4.90	375738	872046	B	12000	09/01/88
									9.60	1.50		1.0	2048
STRIP	10.00	37.70	53.30	WARRICK	9.00	71.70	5.10	2.60	375739	872046	B	12810	09/01/88
									10.00	1.60		1.0	2246
WRIGHT MINE				WARRICK			D173482		375818	871504	B	13120	09/01/88
	10.80	42.60	49.20		8.20	72.80	5.20	3.30	9.00	1.50		0.0	0
STRIP	8.40	34.60	51.80	WARRICK	13.60	66.00	4.50	5.20	380047	871539	B	11790	09/01/88
									9.40	1.30		0.0	1994
STRIP	11.00	37.30	57.80	SPENCER	4.90	75.90	5.30	1.60	380102	865624	B	13440	09/01/88
									10.50	1.80		1.0	2228
STRIP	9.50	40.10	50.30	PERRY	9.60	70.00	5.00	5.90	380105	864000	B	12750	09/01/88
									8.20	1.30		1.5	2615
STRIP	8.10	39.30	50.80	PERRY	9.90	69.10	4.90	6.00	380105	864001	B	12630	09/01/88
									8.80	1.30		1.0	2507
CORUM PIT NO 1	12.70	41.00	55.80	SPENCER	3.20	72.60	4.90	1.80	380126	865812	B	13050	09/01/88
									16.60	0.90		0.0	1958
STRIP	8.50	40.80	51.90	SPENCER	7.30	71.00	5.20	4.20	380208	865732	B	12950	09/01/88
									11.20	1.10		1.0	1994
STRIP	7.80	38.90	53.60	SPENCER	7.50	70.70	5.10	4.60	380208	865733	B	12840	09/01/88
									10.70	1.40		1.0	2048
STRIP	9.80	36.40	56.30	SPENCER	7.30	70.80	4.90	4.30	380212	865731	B	12720	09/01/88
									11.10	1.60		1.0	2093
STRIP	10.70	35.50	57.60	SPENCER	6.90	72.30	5.10	4.50	380213	865731	B	12960	09/01/88
									10.10	1.10		1.0	2102
PAINTER PIT	5.70	40.60	51.10	SPENCER	8.30	68.30	5.10	6.20	380219	865708	B	12700	09/01/88
									11.10	1.00		1.0	2075
STRIP	9.70	38.20	48.70	WARRICK	13.10	67.00	4.80	4.10	380345	872511	B	12030	09/01/88
									9.40	1.60		1.0	2129
STRIP	9.60	38.50	49.30	WARRICK	12.20	68.20	4.80	4.40	380345	872512	B	12260	09/01/88
									8.90	1.50		1.0	2120
STRIP	7.80	38.70	52.80	WARRICK	8.50	71.70	4.90	3.50	380514	871544	B	12940	09/01/88
									9.90	1.50		3.5	2021

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp	
STRIP	8.20	39.00	51.20	WARRICK	69.90	W191045	5.00	3.70	380514	871545	B	12650	09/01/88
								10.10	1.50		2.0	2111	
STRIP	8.00	40.80	49.50	WARRICK	69.30	W191037	4.90	4.70	380516	871615	B	12610	09/01/88
								10.40	1.00		1.0	1931	
STRIP	9.00	39.30	51.20	WARRICK	70.20	W191058	5.20	4.20	380517	871615	B	12710	09/01/88
								9.80	1.10		2.0	1976	
MS NO 2 PIT	8.60	37.60	52.10	WARRICK	71.40	W193122	5.00	2.80	380534	871544	B	12830	09/01/88
								9.10	1.40		4.0	2327	
LYNNVILLE III PIT	14.60	33.70	59.60	WARRICK	75.40	W193124	4.80	1.10	380542	871403	B	13290	09/01/88
								10.10	1.90		1.0	2651	
STRIP	8.90	40.00	45.50	WARRICK	67.30	W191052	4.60	3.40	380654	872432	B	12000	09/01/88
								9.10	1.10		1.0	2273	
STRIP	10.60	36.20	47.50	WARRICK	63.50	W192625	4.40	5.30	380715	872102	B	11480	09/01/88
								9.00	1.50		1.0	2309	
STRIP	10.00	38.70	49.60	WARRICK	67.90	W192624	4.90	4.70	380716	872102	B	12230	09/01/88
								9.20	1.60		1.0	2408	
STRIP	9.40	40.80	49.80	WARRICK	70.80	W192626	4.90	3.60	380718	872057	B	12650	09/01/88
								9.80	1.50		1.0	2102	
NO 3 KAETZEL PIT	3.80	39.10	51.10	SPENCER	71.60	W194391	4.90	3.30	380744	865526	B	12920	09/01/88
								8.90	1.50		3.5	2147	
NO 3 KAETZEL PIT	3.80	40.30	51.70	SPENCER	73.90	W194392	5.00	2.80	380747	865526	B	13240	09/01/88
								8.80	1.50		4.0	2165	
STRIP	10.10	36.50	53.60	SPENCER	70.30	W191034	4.90	2.90	380835	865554	B	12600	09/01/88
								10.60	1.40		1.0	2111	
STRIP	15.90	35.90	56.30	SPENCER	71.40	W191037	4.70	0.80	380835	865555	B	12320	09/01/88
								13.90	1.40		0.0	2264	
STRIP	8.80	35.40	53.60	SPENCER	69.70	W191035	5.00	2.40	380847	865751	B	12490	09/01/88
								10.50	1.40		1.0	2291	
STRIP	8.40	35.40	50.70	SPENCER	67.60	W191036	4.80	2.40	380847	865752	B	12000	09/01/88
								10.00	1.30		1.0	2282	
LYNNVILLE MINE	11.30	39.70	47.60	WARRICK	69.50	D173487	4.80	3.80	381030	870735	B	12440	09/01/88
								7.80	1.40		0.0	0	

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	9.80	36.00	53.90	WARRICK	10.10	68.00	4.90	4.80	381352	871312	B	12230	09/01/88
									11.20	1.00		1.0	2084
LOHR PIT	9.50	36.60	56.30	PIKE	7.10	74.80	5.00	1.50	381356	871802	B	13040	09/01/88
									10.10	1.50		1.5	2138
STRIP	6.30	42.00	48.80	PIKE	9.20	69.80	5.30	4.50	381606	871736	B	12690	09/01/88
									10.00	1.20		4.0	1967
STRIP	8.00	44.20	46.90	PIKE	8.90	71.30	5.20	3.90	381810	870846	B	13000	09/01/88
									9.10	1.60		4.0	2012
STRIP	9.40	43.30	47.10	PIKE	9.60	70.20	5.00	4.60	381810	870847	B	12790	09/01/88
									9.10	1.50		1.0	1994
PIT NO 4	5.10	35.90	47.50	GIBSON	16.60	65.10	4.60	3.70	381855	872210	B	11680	09/01/88
									8.50	1.50		2.0	2426
PIT NO 4	6.20	39.70	46.80	GIBSON	13.50	66.60	4.70	5.10	381855	872220	B	12040	09/01/88
									8.60	1.50		3.0	2219
STRIP	9.70	45.20	46.50	PIKE	8.30	74.00	5.10	3.50	382006	871504	B	13230	09/01/88
									7.70	1.40		0.0	0
HOPF NO 2 PIT	2.10	39.80	46.30	DUBOIS	13.90	66.10	4.70	7.90	382038	870129	B	12240	09/01/88
									6.20	1.20		5.0	2156
HOPF NO 2 PIT	2.20	41.00	45.40	DUBOIS	13.60	66.90	4.80	6.50	382038	870130	B	12330	09/01/88
									7.00	1.20		5.0	2264
STRIP	6.70	35.20	56.40	PIKE	8.40	71.10	5.30	2.90	382109	870609	B	12790	09/01/88
									10.80	1.50		1.0	2156
STRIP	7.60	38.90	52.40	PIKE	8.70	70.70	5.10	3.90	382109	870610	B	12680	09/01/88
									10.10	1.50		1.0	2111
STRIP	10.00	33.20	59.10	PIKE	7.70	71.40	4.90	2.80	382210	871512	B	12690	09/01/88
									11.60	1.60		1.0	2219
STRIP	11.10	35.50	48.30	DUBOIS	16.20	67.00	4.50	3.30	382224	870058	B	12010	09/01/88
									7.70	1.30		1.0	2129
STRIP	9.70	35.90	55.40	DUBOIS	8.70	72.50	5.00	2.80	382225	870058	B	12960	09/01/88
									9.60	1.40		1.0	2507
STRIP	9.00	39.60	53.70	PIKE	6.70	74.20	5.30	1.50	382238	871405	B	13150	09/01/88
									11.20	1.10		1.0	2579

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Code Number	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
STRIP	9.20	37.80	53.30	8.90	PIKE	70.80	5.00	3.30	W191055	382239	871405	B	12600	09/01/88
										10.50	1.50		1.0	2057
STRIP	7.60	38.30	53.00	8.70	PIKE	71.20	5.40	3.70	W190532	382528	871236	B	12810	09/01/88
										9.90	1.10		1.5	2048
STRIP	16.20	39.10	58.50	2.40	CLAY	80.30	5.10	1.00	W192834	382530	870552	B	14180	09/01/88
										9.50	1.70		1.0	2354
R&H MINE	9.50	43.20	47.40	9.40	PIKE	71.40	5.00	5.90	D173483	382530	871642	B	12990	09/01/88
										7.00	1.30		0.0	0
REESE PIT	8.40	36.00	49.80	14.20	PIKE	68.70	4.90	1.50	W188932	382542	871658	B	12110	09/01/88
										9.20	1.50		1.5	2336
STRIP	11.10	38.90	56.90	4.20	MARTIN	75.60	4.90	4.10	W192629	383446	865235	B	13790	09/01/88
										9.70	1.50		1.0	2093
STRIP	12.10	36.60	46.30	17.10	MARTIN	65.90	4.70	1.10	W192628	383447	865235	B	11720	09/01/88
										9.80	1.40		1.0	2804
NEWELL PIT NO 1	11.20	40.90	49.80	9.30	KNOX	72.10	5.20	3.50	W188948	385327	871414	B	12960	09/01/88
										8.50	1.40		4.0	2129
STRIP	6.30	41.30	47.90	10.80	KNOX	70.80	4.70	3.40	D172303	385345	871455	B	12720	09/01/88
										9.00	1.30		0.0	0
STRIP	7.50	38.50	44.90	16.60	SULLIVAN	66.10	4.70	3.80	D172304	385720	871530	B	11920	09/01/88
										7.50	1.30		0.0	0
STRIP	6.50	46.50	46.50	7.00	GREENE	74.80	5.40	2.70	D172305	390250	870340	B	13670	09/01/88
										8.70	1.40		0.0	0
DUGGER	15.00	33.40	58.20	8.40	SULLIVAN	75.10	4.90	0.40	W193120	390349	872023	B	13200	09/01/88
										9.60	1.60		1.0	2804
STRIP	12.70	35.90	53.70	10.40	SULLIVAN	71.30	5.40	1.60	W191049	390447	871522	B	12760	09/01/88
										10.20	1.10		1.0	2399
STRIP	11.50	37.20	50.60	12.20	SULLIVAN	69.90	5.00	1.80	W191046	390447	871523	B	12440	09/01/88
										9.60	1.50		1.0	2381
JH&L COAL CO PIT NO 7	8.40	41.60	51.50	6.90	GREENE	72.40	5.20	2.90	W188946	390458	871250	B	13080	09/01/88
										11.20	1.40		1.5	2012
STRIP	8.80	36.30	54.60	9.10	SULLIVAN	74.80	4.80	0.40	D172309	390550	872010	B	13150	09/01/88
										9.30	1.60		0.0	0

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	9.70	39.40	50.30	GREENE	10.30	70.10	5.10	2.80	390654	871049	B	12600	09/01/88
									10.10	1.60		1.0	2084
STRIP	9.30	36.20	52.70	GREENE	11.10	69.30	4.60	3.10	390654	871050	B	12470	09/01/88
									10.70	1.20		1.0	2156
STRIP	6.30	41.00	47.50	SULLIVAN	11.50	70.60	4.90	2.70	390840	871940	B	12730	09/01/88
									8.90	1.40		0.0	0
STRIP	5.00	41.30	46.00	SULLIVAN	12.70	68.50	4.80	4.70	391135	871709	B	12480	09/01/88
									8.00	1.30		0.0	0
STRIP	13.80	36.20	53.50	SULLIVAN	10.30	69.90	4.70	3.80	391148	872106	B	12470	09/01/88
									9.80	1.50		1.0	2129
BIRDSONG MINE	5.70	42.30	48.30	SULLIVAN	9.40	71.80	5.30	3.90	391235	871439	B	13020	09/01/88
									8.30	1.30		4.0	2246
BIRDSONG MINE	4.60	44.90	46.10	SULLIVAN	9.00	71.80	4.80	3.40	391235	871440	B	13060	09/01/88
									9.70	1.30		5.0	2552
STRIP	9.10	35.80	56.10	CLAY	8.10	71.50	5.00	2.90	391245	871142	B	12810	09/01/88
									11.00	1.50		1.0	2057
STRIP	6.60	38.30	43.70	CLAY	18.00	65.50	4.60	2.50	391245	871210	B	11760	09/01/88
									8.00	1.40		0.0	0
PIT NO 2	13.90	33.30	57.10	OWEN	9.60	73.40	4.70	2.00	391434	870136	B	13010	09/01/88
									8.90	1.40		1.0	2246
STRIP	21.40	34.40	55.70	OWEN	9.90	68.80	4.10	0.50	391634	870205	B	11480	09/01/88
									15.60	1.10		0.0	2912
STRIP	5.70	37.90	53.20	OWEN	8.90	74.50	4.80	2.20	391655	865735	B	13170	09/01/88
									8.20	1.40		0.0	0
STRIP	15.60	32.10	57.70	OWEN	10.20	70.50	4.50	2.00	391710	865736	B	12380	09/01/88
									11.70	1.10		0.0	2678
BLUE HOLE NO 1 PIT	12.30	42.50	49.40	VIGO	8.10	73.30	5.40	3.10	392204	871627	B	13140	09/01/88
									8.70	1.40		2.5	2093
STRIP	15.60	36.50	57.80	CLAY	5.70	76.90	5.30	0.80	392407	870614	B	13640	09/01/88
									8.90	1.40		1.0	2912
STRIP	13.70	26.00	66.90	CLAY	7.10	75.40	4.70	1.00	392504	871400	B	13330	09/01/88
									10.80	1.00		1.5	2417

Coal Field Information Printout for: IN - Indiana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Free Swell	Htg Val	Last Chg
STRIP	16.10	35.90	58.60	CLAY	5.50	77.80	W19233	5.40	1.00	8.80	870552	B	13680	1.0	2768
STRIP	15.40	36.10	57.50	CLAY	6.40	76.60	W192632	5.10	0.90	9.50	870552	B	13630	1.0	2786
STRIP	12.00	35.00	49.50	CLAY	15.50	66.00	W190548	4.70	2.80	10.00	871150	B	11900	1.0	2597
TURNER PIT NO 1	13.00	42.30	49.70	CLAY	8.00	72.40	W188940	5.20	4.70	8.20	870922	B	13080	1.5	2084
STRIP	13.00	26.90	66.30	CLAY	6.80	74.80	W190544	4.90	1.60	10.60	870618	B	13360	2.0	2399
STRIP	13.10	37.10	55.80	CLAY	7.10	74.00	W190536	4.80	1.70	11.20	870613	B	13140	1.0	2201
UNIVERSAL SOUTH PIT NO 2	10.30	40.20	45.40	VIGO	14.40	66.30	W188950	4.90	4.20	9.00	872856	B	12080	2.5	2129
TURNER PIT	14.10	40.40	51.70	PARKE	7.90	74.20	W188938	5.30	2.20	9.00	870601	B	13130	1.0	2246
UNIVERSAL SOUTH PIT NO 2	10.80	36.00	41.60	VERMILLION	22.40	60.50	W188952	4.50	3.30	8.40	872951	B	10770	1.5	2138
BAIRD PT	10.00	39.10	49.50	VERMILLION	11.40	66.90	W193121	5.00	5.70	9.70	873017	B	12300	1.0	2057
STRIP	11.00	36.10	49.00	VERMILLION	14.90	63.80	W191059	4.60	5.40	10.40	873018	B	11560	1.0	1994
STRIP	11.60	36.10	50.90	VERMILLION	13.00	67.50	W191054	4.70	3.60	10.20	873019	B	12060	1.0	2066
STRIP	9.20	40.30	48.10	VERMILLION	11.60	66.90	W191043	5.20	4.80	10.20	873046	B	12160	1.0	1985
STRIP	13.30	39.60	45.30	FOUNTAIN	15.10	65.00	D172310	4.50	7.20	7.00	872455	B	12020	0.0	0

Coal Field Information Printout for

KS - Kansas

Coal Field Information Printout for: KS - Kansas

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp	
WILKINSON INC MINE	3.30	32.30	52.10	CHEROKEE	70.50	D176054	4.40	4.20	371500	944210	B	12470	09/01/88
												7.5	1976
WILKINSON INC MINE	3.30	32.30	52.10	CHEROKEE	70.50	D176053	4.40	4.20	371500	944212	B	12470	09/01/88
												7.5	1976
CLEMENS NO 25 MINE	2.30	34.20	44.30	CRAWFORD	59.00	D180069	3.90	12.60	372121	943910	B	11230	09/01/88
												7.5	2507
CLEMENS NO 25 MINE	2.50	34.80	44.90	CRAWFORD	61.50	D180071	4.50	10.50	372128	943902	B	11610	09/01/88
												8.5	2417
CLEMENS NO 25 MINE	3.90	36.00	50.20	CRAWFORD	68.50	D180073	4.60	7.00	372135	943845	B	12630	09/01/88
												9.0	2237
CLEMENS NO 25 MINE	1.70	35.90	46.60	CRAWFORD	65.80	D176050	4.50	8.40	372150	943908	B	12150	09/01/88
												6.0	2066
CLEMENS NO 25 MINE	1.70	35.90	46.60	CRAWFORD	65.80	D176051	4.50	8.40	372151	943908	B	12150	09/01/88
												6.0	2066
CLEMENS NO 25 MINE	1.70	35.90	46.60	CRAWFORD	65.80	D176052	4.50	8.40	372417	943908	B	12150	09/01/88
												6.0	2066
DELL LAMB MINE	5.50	38.50	44.10	WILSON	65.60	D176056	4.40	4.70	373009	953331	B	11810	09/01/88
												4.0	1976
DELL LAMB MINE	5.50	38.50	44.10	WILSON	65.60	D176055	4.40	4.70	373009	953333	B	11810	09/01/88
												4.0	1976
CLEMENS NO 22 MINE	1.90	36.90	44.50	CRAWFORD	66.70	D176045	4.60	5.20	373608	943955	B	11940	09/01/88
												6.0	1949
CLEMENS NO 22 MINE	2.20	38.80	48.10	CRAWFORD	71.90	D176046	4.90	3.50	373620	943955	B	12830	09/01/88
												7.5	2102
CLEMENS NO 22 MINE	2.20	38.80	48.10	CRAWFORD	71.90	D176047	4.90	3.50	373623	943955	B	12830	09/01/88
												7.5	2102
CLEMENS NO 22 MINE	2.60	36.20	51.30	CRAWFORD	72.10	D176048	4.80	4.80	373627	943955	B	12980	09/01/88
												8.0	1940
CLEMENS NO 22 MINE	2.60	36.20	51.30	CRAWFORD	72.10	D176049	4.80	4.80	373630	943955	B	12980	09/01/88
												8.0	1940
CLEMENS NO 22 MINE	2.60	36.80	44.00	CRAWFORD	67.10	D183115	4.50	3.90	373638	944010	B	12000	09/01/88
												8.5	2048

Coal Field Information Printout for: KS - Kansas

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
CLEMENS NO 22 MINE				CRAWFORD									
2.30	37.40	48.50		14.10	70.90		5.00	4.90	373640	944010	B	12990	09/01/88
									3.90	1.20		8.0	2264
BILLS COAL CO, FT SCOTT MINE				BOURBON									
3.50	37.90	47.90		14.20	69.70		4.90	4.80	374508	943737	B	12850	09/01/88
									5.30	1.10		9.0	2012
				FRANKLIN									
3.30	41.10	52.00		6.90	73.70		5.00	1.70	382743	952748	B	12980	09/01/88
									10.70	2.00		2.5	2102

Coal Field Information Printout for

KY - Kentucky

Coal Field Information Printout for: KY - Kentucky

Location		County			Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE			BELL		W208201		361114	833711	B	11500	09/01/88
2.10	31.80	46.10	22.10	64.40	4.80	0.70	6.20	1.80		5.0	2741
SURFACE MINE			BELL		W215409		363515	834523	B	13730	09/01/88
1.90	37.40	55.00	7.60	77.10	5.10	0.80	7.50	1.90		4.5	2678
SURFACE MINE			BELL		W215391		363600	834650	B	13320	09/01/88
1.80	37.80	51.20	11.00	73.30	5.20	2.50	6.30	1.70		5.0	2282
SURFACE MINE			BELL		W215390		363601	834648	B	14860	09/01/88
1.80	38.10	58.60	3.30	81.90	5.50	0.70	6.70	1.90		6.5	2687
SURFACE MINE			BELL		W215421		363603	834701	B	8480	09/01/88
2.10	28.30	32.20	39.50	47.70	3.70	0.90	7.00	1.20		1.0	2804
SURFACE MINE			BELL		W215389		363606	834700	B	14470	09/01/88
2.50	35.60	60.80	3.60	80.20	5.30	0.80	8.30	1.80		4.5	2723
SURFACE MINE			BELL		W215392		363610	834655	B	14340	09/01/88
2.30	38.50	56.50	5.00	79.90	5.40	1.20	6.50	2.00		6.0	2543
SURFACE MINE			BELL		W215423		363614	834659	B	12490	09/01/88
1.90	33.60	51.00	15.40	69.50	4.60	2.20	6.50	1.80		3.5	2480
SURFACE MINE			BELL		W215424		363614	834702	B	14530	09/01/88
1.80	39.60	56.70	3.70	80.00	5.60	0.70	8.00	2.00		4.0	2723
SURFACE MINE			BELL		W215425		363615	834704	B	14190	09/01/88
2.30	37.30	57.60	5.10	78.80	5.30	1.40	7.50	1.90		2.0	2147
SURFACE MINE			MCCREARY		W212495		363655	842509	B	14260	09/01/88
3.10	36.80	58.50	4.70	79.70	5.30	0.70	7.60	2.00		3.0	2498
SURFACE MINE			MCCREARY		W212495		363656	842513	B	13920	09/01/88
2.90	37.60	55.60	6.80	78.00	5.20	0.90	7.30	1.80		4.0	2804
UNDERGROUND MINE			BELL		W207897		363711	834916	B	11480	09/01/88
2.40	31.50	46.40	22.10	63.60	4.30	2.30	6.10	1.60		5.0	2633
UNDERGROUND MINE			BELL		W207866		363729	834913	B	13030	09/01/88
2.50	33.90	53.70	12.40	73.70	4.90	0.70	6.50	1.80		4.0	2696
SURFACE MINE			WHITLEY		W215397		363729	841158	B	14590	09/01/88
2.20	35.90	61.20	2.90	81.40	5.30	0.90	7.40	2.10		4.0	2138
UNDERGROUND MINE			BELL		W207814		363823	834851	B	13620	09/01/88
3.50	36.70	55.20	8.10	76.00	5.10	0.70	8.10	2.00		3.5	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE	3.60	34.10	45.40	BELL	20.50	65.00	W207900	0.60	363824	835037	B	11620	09/01/88
							4.50	0.60	8.10	1.30		1.5	2804
PORTAL				BELL			W207813		363825	834852	B	13630	09/01/88
	2.80	36.90	54.30		8.80	75.90	5.10	0.70	7.50	2.00		5.0	2804
UNDERGROUND MINE	3.00	37.10	58.30	BELL	4.60	79.70	W207812	0.60	363837	834826	B	14200	09/01/88
							5.20	0.60	8.00	1.90		5.0	2804
SURFACE MINE				BELL			W207899		363850	834907	B	9650	09/01/88
	2.80	28.50	38.80		32.70	54.00	3.80	0.80	7.40	1.30		1.0	2804
UNDERGROUND MINE	3.00	30.60	45.40	BELL	24.00	62.20	W207811	1.20	363857	834854	B	11080	09/01/88
							4.30	1.20	6.90	1.40		4.0	2660
SURFACE MINE				BELL			W215417		363947	834850	B	14020	09/01/88
	2.40	37.90	56.30		5.80	78.60	5.30	0.80	7.70	1.80		4.5	2804
SURFACE MINE				BELL			W215416		363948	834855	B	14520	09/01/88
	2.50	37.80	59.40		2.80	81.30	5.40	0.90	7.90	1.70		3.5	2768
SURFACE MINE				BELL			W208200		364114	833711	B	14750	09/01/88
	2.20	38.10	58.70		3.20	81.60	5.50	0.70	6.80	2.20		4.5	2444
DRILL CORE				WHITLEY			W212089		364114	841235	B	13470	09/01/88
	2.20	40.60	50.20		9.20	74.70	5.20	2.90	6.20	1.80		4.5	2192
UNDERGROUND MINE				BELL			W208057		364117	833436	B	12200	09/01/88
	2.20	35.80	45.90		18.30	66.30	4.80	2.70	6.00	1.90		7.0	2372
UNDERGROUND MINE				BELL			W208056		364117	833439	B	12110	09/01/88
	2.20	35.20	46.10		18.70	66.20	4.90	2.40	5.90	1.90		6.5	2507
UNDERGROUND MINE				BELL			W208058		364119	833654	B	12500	09/01/88
	2.20	32.90	49.90		17.20	69.50	4.80	1.10	5.60	1.80		7.0	2777
DRILL CORE				WHITLEY			W212090		364156	841100	B	13060	09/01/88
	2.10	40.40	47.80		11.80	72.10	5.10	2.60	6.70	1.70		3.0	2570
SURFACE MINE				BELL			W207901		364210	833422	B	14620	09/01/88
	2.40	38.50	57.60		3.90	81.10	5.50	0.70	6.60	2.20		7.0	2759
UNDERGROUND MINE				WHITLEY			W203625		364220	835701	B	11170	09/01/88
	2.30	30.60	45.60		23.80	63.30	4.10	0.80	6.40	1.60		1.0	2606
SURFACE MINE				BELL			W215404		364225	834520	B	14690	09/01/88
	2.10	36.60	61.40		2.00	83.30	5.30	0.70	6.70	2.00		4.5	2399

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	3.10	40.70	52.90	KNOX	6.40	77.80	W213937	0.70	36424.5	83533	B	13860	09/01/88
							5.30		7.80	2.00		4.0	2732
SURFACE MINE	7.30	39.80	57.30	WHITLEY	2.90	79.60	W213954	0.90	36424.5	840322	B	14030	09/01/88
							5.20		9.20	2.20		1.5	2327
SURFACE MINE	2.90	40.30	56.30	WHITLEY	3.40	79.60	W213953	2.20	364300	835737	B	14410	09/01/88
							5.40		7.20	2.20		4.5	2030
SURFACE MINE	3.30	37.30	50.40	WHITLEY	12.30	71.40	W213952	2.00	364304	835731	B	12670	09/01/88
							4.90		7.50	1.90		3.0	2030
UNDERGROUND MINE	6.40	38.60	59.80	KNOX	1.60	82.50	W213936	0.80	364310	835557	B	14620	09/01/88
							5.50		7.40	2.20		3.5	2264
SURFACE MINE	2.70	44.60	46.90	MCCREARY	8.50	73.40	W208217	4.30	364438	843634	B	13420	09/01/88
							5.30		7.10	1.40		5.0	2570
CONSTRUCTION SITE	2.00	39.40	57.30	BELL	3.30	81.30	W213023	1.60	364510	833345	B	14670	09/01/88
							5.40		5.90	2.50		8.0	2210
SURFACE MINE	3.80	34.50	55.10	BELL	10.40	74.30	W214779	0.70	364518	834547	B	13090	09/01/88
							4.70		8.10	1.80		1.5	2804
SURFACE MINE	2.00	37.70	55.80	BELL	6.50	78.80	W213022	2.00	364519	833229	B	14130	09/01/88
							5.30		5.50	1.90		7.5	2327
SURFACE MINE	4.60	38.70	52.40	BELL	8.90	74.70	W214780	1.00	364520	834545	B	13420	09/01/88
							5.00		8.60	1.80		1.0	2678
SURFACE MINE	3.60	38.70	57.60	BELL	3.70	81.90	W213944	0.90	364522	833228	B	14530	09/01/88
							5.30		6.20	2.00		6.5	2570
SURFACE MINE	1.60	35.90	52.80	BELL	11.30	73.20	W215419	3.40	364548	834317	B	13060	09/01/88
							4.80		5.60	1.70		3.5	2246
SURFACE MINE	2.40	34.70	54.30	BELL	11.00	71.90	W215420	2.70	364550	834323	B	13140	09/01/88
							4.90		7.70	1.80		3.5	2291
UNDERGROUND MINE	1.80	36.70	47.50	BELL	15.80	70.10	W213024	1.60	364606	833231	B	12590	09/01/88
							4.80		6.00	1.70		6.5	2723
UNDERGROUND MINE	2.40	37.30	59.00	BELL	3.70	80.70	W212762	0.90	364643	833843	B	14460	09/01/88
							5.20		7.60	1.90		4.0	2516
SURFACE MINE	2.20	38.90	57.80	BELL	3.30	81.20	W215439	0.70	364645	833731	B	14630	09/01/88
							5.40		7.10	2.30		5.0	2237

Coal Field Information Printout for: KY - Kentucky

Location		County			Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp

SURFACE MINE			BELL		W215408		364645	833922	B	13810	09/01/88
1.30	39.80	51.90	8.30	75.20	5.20	4.40	5.20	1.70		5.0	2111

SURFACE MINE			KNOX		W215398		364805	835621	B	14600	09/01/88
1.70	40.30	55.80	3.90	79.80	5.40	2.60	6.30	2.00		4.0	2012

SURFACE MINE			WHITLEY		W207985		364805	840333	B	14550	09/01/88
3.60	38.40	58.70	2.90	81.00	5.50	0.70	7.80	2.10		3.5	2201

UNDERGROUND MINE			HARLAN		W215429		364806	831212	B	13970	09/01/88
2.00	36.10	56.70	7.20	77.80	5.10	1.10	7.10	1.70		3.5	2552

SURFACE MINE			WHITLEY		W205325		364826	840517	B	14600	09/01/88
4.50	37.70	60.20	2.10	81.80	5.50	0.90	7.60	2.10		5.0	2417

SURFACE MINE			WHITLEY		W207984		364828	840523	B	14360	09/01/88
5.20	37.80	59.60	2.60	81.10	5.40	0.80	8.10	2.00		1.5	2048

UNDERGROUND MINE			HARLAN		W215431		364840	831312	B	12580	09/01/88
1.70	34.40	51.20	14.40	70.60	4.80	1.90	6.50	1.80		3.0	2552

SURFACE MINE			KNOX		W214263		364841	835234	B	14650	09/01/88
2.90	38.80	57.60	3.60	80.50	5.50	1.70	6.80	1.90		4.5	2120

PORTAL			HARLAN		W215430		364845	831221	B	14210	09/01/88
2.00	41.30	53.40	5.30	78.90	5.40	2.20	6.50	1.70		3.0	2156

SURFACE MINE			KNOX		W214264		364845	835239	B	14100	09/01/88
2.80	41.50	52.70	5.80	77.30	5.40	4.20	5.20	2.10		4.5	2300

SURFACE MINE			WAYNE		W212054		364859	843710	B	13400	09/01/88
2.40	41.70	49.30	9.00	73.90	5.30	3.20	7.10	1.50		5.5	2210

UNDERGROUND MINE			HARLAN		W215428		364934	831007	B	12600	09/01/88
2.60	34.30	52.10	13.60	71.30	4.70	1.00	7.80	1.60		2.5	2498

SURFACE MINE			KNOX		W213119		365005	835928	B	14560	09/01/88
2.80	39.50	57.00	3.50	79.80	5.40	1.90	7.50	1.90		3.5	2003

SURFACE MINE			MCCREARY		W214269		365005	842938	B	13800	09/01/88
5.80	35.30	58.80	5.90	78.00	5.10	1.00	8.20	1.80		4.0	2804

UNDERGROUND MINE			HARLAN		W215434		365006	831507	B	13450	09/01/88
2.90	34.60	56.90	8.50	76.30	4.80	1.40	7.40	1.60		2.5	2687

SURFACE MINE			MCCREARY		W214268		365006	842938	B	13250	09/01/88
4.50	38.00	52.60	9.40	74.00	5.10	1.70	8.00	1.80		5.0	2579

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	3.40	37.30	57.20	KNOX	5.50	78.60	W213120	0.80	365011 7.90	835942 1.90	B	14200 3.5	09/01/88 2273
SURFACE MINE	3.90	37.80	60.50	WHITLEY	1.70	83.10	W214772	0.70	365012 7.10	840455 2.00	B	14840 5.0	09/01/88 2417
SURFACE MINE	4.80	37.70	58.60	WHITLEY	3.70	81.00	W214775	1.00	365012 7.00	840500 2.00	B	14300 5.5	09/01/88 2678
UNDERGROUND MINE	2.10	35.60	55.70	HARLAN	8.70	76.00	W215433	1.40	365015 6.70	831659 2.10	B	13600 4.0	09/01/88 2723
UNDERGROUND MINE	2.30	31.60	54.90	HARLAN	13.50	73.00	W215432	0.70	365019 6.50	831706 1.70	B	12810 3.5	09/01/88 2804
UNDERGROUND MINE	2.90	36.30	52.20	MCCREARY	11.50	71.60	W212055	2.00	365039 8.10	842632 1.90	B	12710 3.5	09/01/88 2597
UNDERGROUND MINE	1.70	39.40	56.00	BELL	4.60	79.80	W215394	2.80	365049 5.50	833805 1.90	B	14500 6.0	09/01/88 2138
UNDERGROUND MINE	1.50	39.30	59.00	BELL	1.70	83.60	W215393	0.90	365053 6.10	833809 2.00	B	15080 4.5	09/01/88 2336
UNDERGROUND MINE	1.50	36.20	50.50	HARLAN	13.30	72.10	W211639	2.60	365123 5.50	831239 1.60	B	12900 6.0	09/01/88 2489
UNDERGROUND MINE	1.80	33.70	51.00	HARLAN	15.30	71.00	W211638	0.60	365125 6.70	831239 1.60	B	12490 2.0	09/01/88 2804
SURFACE MINE	9.10	34.70	59.70	WAYNE	5.60	78.60	W214257	1.30	365125 8.60	844214 1.30	B	13380 2.0	09/01/88 2336
ROAD CUT	3.20	42.10	53.50	KNOX	4.40	79.80	W213010	2.60	365158 6.00	835246 1.80	B	14340 4.0	09/01/88 2021
SURFACE MINE	2.20	39.80	56.80	BELL	3.40	81.30	W214791	1.00	365210 6.80	833727 1.90	B	14520 4.5	09/01/88 2678
PROSPECT	4.00	40.50	57.00	HARLAN	2.50	80.10	W214793	0.80	365229 9.50	830521 1.70	B	14080 2.0	09/01/88 2471
UNDERGROUND MINE	3.30	38.80	54.00	BELL	7.20	77.30	W215438	1.10	365233 7.30	833745 1.90	B	13970 4.0	09/01/88 2570
UNDERGROUND MINE	2.00	36.20	55.60	HARLAN	8.20	77.20	W215407	0.70	365238 7.30	831153 1.50	B	13790 4.0	09/01/88 2759

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash			Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	1.80	38.20	55.00	HARLAN	77.30	W215403	5.30	1.40	365243	832704	B	13950
					6.80			1.40	7.70	1.50	5.0	2696
SURFACE MINE	3.50	36.60	55.50	BELL	76.90	W215552	5.10	2.20	365247	833517	B	13680
					7.90			2.20	6.20	1.70	3.5	2201
UNDERGROUND MINE	1.70	35.50	54.50	HARLAN	75.70	W215406	4.90	0.90	365248	831112	B	13540
					10.00			0.90	6.90	1.60	6.0	2804
SURFACE MINE	2.40	37.30	53.90	BELL	75.50	W214788	5.00	1.60	365255	833801	B	13420
					8.80			1.60	7.30	1.80	5.5	2624
MINE PORTAL	2.00	38.90	54.00	HARLAN	77.30	W215427	5.40	2.60	365305	831202	B	13980
					7.10			2.60	5.90	1.70	4.0	2084
SURFACE MINE	3.80	38.50	55.10	MCCREARY	76.00	W208202	5.20	2.40	365308	842539	B	13770
					6.40			2.40	8.10	1.90	5.0	2084
SURFACE MINE	2.10	35.90	52.90	BELL	73.50	W214789	5.10	0.70	365309	833750	B	13140
					11.20			0.70	7.80	1.70	5.0	2804
UNDERGROUND MINE	3.90	37.40	53.80	HARLAN	75.70	W214792	5.00	0.90	365311	830502	B	13340
					8.80			0.90	8.10	1.50	3.0	2723
UNDERGROUND MINE	1.80	34.70	55.00	HARLAN	74.70	W215426	4.90	0.70	365311	830526	B	13490
					10.30			0.70	7.90	1.50	4.0	2660
SURFACE MINE	2.40	38.90	57.60	BELL	80.60	W214783	5.50	1.20	365311	833805	B	14400
					3.50			1.20	7.40	1.80	6.0	2138
SURFACE MINE	2.10	38.10	50.10	BELL	71.70	W214782	4.90	3.60	365312	833802	B	13000
					11.80			3.60	6.50	1.50	4.0	2183
SURFACE MINE	3.20	35.90	56.80	MCCREARY	76.20	W214781	5.00	1.60	365319	842423	B	13570
					7.30			1.60	8.10	1.80	5.0	2588
UNDERGROUND MINE	1.80	38.00	57.10	HARLAN	80.30	W215405	5.40	1.10	365321	830654	B	14320
					4.90			1.10	6.60	1.70	6.0	2804
ROAD CUT	3.20	39.70	57.90	KNOX	82.00	W212502	5.40	0.80	365333	835314	B	14680
								0.80	7.60	1.80	3.5	2318
SURFACE MINE	3.30	37.80	60.90	KNOX	83.30	W213118	5.50	0.60	365344	840215	B	14870
								0.60	7.40	1.90	3.5	2417
SURFACE MINE	5.70	37.70	57.80	BELL	80.50	W215550	5.30	0.90	365350	833336	B	14400
								0.90	7.20	1.60	5.0	2678

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	4.10	35.80	53.20	BELL	11.00	73.30	W215545	1.00	365354	833349	B	12990	09/01/88
							4.70		8.50	1.50		1.0	2804
SURFACE MINE	3.40	38.60	48.60	BELL	12.80	71.90	W215551	2.30	365401	833347	B	12940	09/01/88
							5.10		6.40	1.50		5.0	2516
SURFACE MINE	5.20	37.40	60.40	KNOX	2.20	81.90	W214773	0.60	365408	840333	B	14540	09/01/88
							5.30		8.00	2.00		3.5	2399
SURFACE MINE	3.10	37.80	60.50	KNOX	1.70	82.10	W205329	0.80	365414	835227	B	14590	09/01/88
							5.30		8.00	2.10		4.0	2210
SURFACE MINE	3.60	38.70	52.60	KNOX	8.70	73.50	W214778	5.00	365419	835518	B	13390	09/01/88
							4.80		6.10	1.90		4.0	2219
SURFACE MINE	3.30	39.80	55.20	KNOX	5.00	79.50	W205331	0.90	365424	835226	B	14330	09/01/88
							5.80		6.80	2.00		4.5	2570
SURFACE MINE	2.80	35.00	49.20	BELL	15.80	69.60	W215435	1.70	365438	833050	B	12430	09/01/88
							4.80		6.60	1.50		4.0	2759
ROAD CUT	3.10	40.50	47.00	KNOX	12.50	71.50	W213009	3.60	365457	835522	B	12920	09/01/88
							5.00		5.70	1.70		4.0	2093
SURFACE MINE	2.60	38.60	48.50	HARLAN	12.90	70.60	W215562	3.60	365521	832015	B	12860	09/01/88
							5.00		6.60	1.30		4.0	2219
SURFACE MINE	3.30	35.90	49.20	HARLAN	14.90	69.10	W215560	3.10	365522	832012	B	12450	09/01/88
							4.70		6.90	1.30		4.0	2561
SURFACE MINE	2.30	41.90	49.80	HARLAN	8.30	74.70	W215563	3.80	365522	832015	B	13620	09/01/88
							5.30		6.50	1.40		4.0	2084
UNDERGROUND MINE	2.10	39.20	53.40	BELL	7.40	77.10	W215437	2.40	365530	833216	B	14090	09/01/88
							5.30		6.00	1.80		5.5	2219
SURFACE MINE	2.20	37.60	52.50	KNOX	9.90	74.80	W214790	1.70	365549	833530	B	13330	09/01/88
							5.00		7.00	1.60		4.5	2507
SURFACE MINE	2.60	38.00	49.40	LESLIE	12.60	71.20	W214262	3.10	365718	833001	B	12890	09/01/88
							4.90		6.60	1.60		5.5	2273
SURFACE MINE	4.40	35.60	53.60	LESLIE	10.80	74.10	W213017	0.60	365759	831739	B	13110	09/01/88
							4.60		8.40	1.50		1.0	2759
SURFACE MINE	4.40	41.30	52.90	LESLIE	5.80	78.30	W213018	1.10	365800	831741	B	13900	09/01/88
							5.30		7.90	1.60		2.0	2228

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carboñ	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				LESLIE		W213117		365804	831713	B	12780	09/01/88
4.90	32.30	55.50	12.20		73.30	4.60	0.50	8.00	1.40		1.0	2804
SURFACE MINE				LESLIE		W213019		365804	831746	B	11290	09/01/88
3.20	35.20	42.90	21.90		63.20	4.50	1.70	7.30	1.40		1.5	2678
SURFACE MINE				LESLIE		W213116		365816	831745	B	13160	09/01/88
3.00	36.90	52.60	10.50		73.20	5.00	1.80	8.00	1.50		3.5	2624
SURFACE MINE				LESLIE		W213021		365817	831759	B	12180	09/01/88
3.40	38.20	46.30	15.50		68.20	4.70	2.20	8.10	1.30		5.5	2498
UNDERGROUND MINE				LESLIE		W213025		365846	831737	B	13190	09/01/88
2.40	37.40	51.70	10.90		73.90	5.10	1.60	6.60	1.90		5.5	2750
SURFACE MINE				LAUREL		W212091		365932	840309	B	14260	09/01/88
2.50	38.00	57.10	4.90		79.40	5.30	1.50	6.80	2.10		5.0	2480
DRILL CORE				KNOX		W213931		365958	835047	B	14120	09/01/88
2.90	39.30	55.50	5.20		78.60	5.40	2.00	6.80	2.00		4.5	2129
SURFACE MINE				LESLIE		W213125		370039	831618	B	11930	09/01/88
8.10	30.30	55.80	13.90		69.30	4.20	0.40	10.90	1.30		0.5	2804
SURFACE MINE				LAUREL		W215396		370044	840051	B	13880	09/01/88
1.70	37.40	54.00	8.60		75.80	5.10	3.80	5.10	1.60		6.0	2084
SURFACE MINE				LESLIE		W213123		370047	831557	B	13840	09/01/88
4.20	33.60	60.10	6.30		79.00	5.00	0.50	7.70	1.50		1.5	2516
UNDERGROUND MINE				CLAY		W213016		370053	833116	B	13170	09/01/88
2.20	35.40	53.50	11.10		73.70	4.80	1.50	7.30	1.60		6.5	2696
SURFACE MINE				LAUREL		W214777		370118	835807	B	13580	09/01/88
3.30	39.40	51.90	8.70		76.00	5.10	1.70	6.60	1.90		4.0	2228
				LESLIE		W189940		370142	832134	B	13970	09/01/88
1.20	39.00	54.70	6.30		77.00	5.40	4.00	6.40	0.90		5.0	2174
SURFACE MINE				CLAY		W213014		370153	833846	B	14300	09/01/88
2.60	38.80	56.20	5.00		80.60	5.30	0.60	6.80	1.70		5.0	2804
SURFACE MINE				CLAY		W213012		370154	833849	B	12870	09/01/88
2.90	37.30	49.80	12.90		72.10	5.00	1.70	6.70	1.60		5.5	2372
SURFACE MINE				CLAY		W213013		370156	833844	B	11650	09/01/88
2.60	35.70	43.60	20.70		65.00	4.50	1.80	6.60	1.40		2.0	2687

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	4.40	32.50	55.00	CLAY	12.50	73.40	4.80	0.90	370158	833902	B	13000	09/01/88
									6.90	1.50		3.5	2804
SURFACE MINE	2.40	39.60	49.70	CLAY	10.70	74.30	5.00	1.30	370158	833904	B	13220	09/01/88
									6.90	1.80		5.5	2804
SURFACE MINE	2.80	35.70	56.90	CLAY	7.40	78.50	5.10	0.70	370227	833557	B	13990	09/01/88
									6.70	1.60		3.5	2804
SURFACE MINE	2.60	37.70	55.10	CLAY	7.20	77.30	5.20	1.00	370245	833649	B	13650	09/01/88
									7.50	1.80		5.0	2804
SURFACE MINE	2.70	33.60	52.90	LETCHER	13.50	73.30	4.90	1.00	370327	824420	B	13120	09/01/88
									5.80	1.50		7.0	2804
SURFACE MINE	2.30	33.10	51.50	LETCHER	15.40	71.30	4.80	1.40	370328	824420	B	12740	09/01/88
									5.60	1.50		7.5	2759
SURFACE MINE	2.60	33.80	54.40	LETCHER	11.80	74.60	4.90	1.60	370330	824425	B	13350	09/01/88
									5.50	1.60		7.5	2741
UNDERGROUND MINE	2.40	34.40	58.00	LETCHER	7.60	79.00	5.00	1.30	370331	824336	B	14090	09/01/88
									5.70	1.40		7.5	2660
	1.90	35.00	48.90	LESLIE	16.10	68.30	5.00	1.10	370334	832017	B	12250	09/01/88
									8.30	1.20		1.0	2759
	2.00	34.80	51.40	LESLIE	13.80	70.80	5.00	2.20	370335	832113	B	12610	09/01/88
									7.00	1.20		1.5	2912
UNDERGROUND MINE	2.10	36.40	56.20	PERRY	7.40	78.30	5.20	0.80	370615	830623	B	13880	09/01/88
									6.50	1.80		4.5	2759
DRILL CORE	2.70	37.20	56.10	LESLIE	6.70	77.90	5.30	0.60	370729	832043	B	13920	09/01/88
									7.90	1.60		3.0	2804
SURFACE MINE	5.40	40.60	53.00	LAUREL	6.40	77.10	5.20	1.40	370734	841428	B	13780	09/01/88
									8.30	1.60		4.0	2228
SURFACE MINE	4.30	39.20	56.20	LAUREL	4.60	79.10	5.50	1.50	370752	840901	B	14130	09/01/88
									7.10	2.20		5.0	2237
ROAD CUT	3.00	38.60	53.90	CLAY	7.50	75.20	5.20	1.90	370821	834608	B	13750	09/01/88
									8.40	1.80		2.5	2192
SURFACE MINE	3.80	34.70	51.70	LESLIE	13.60	71.30	4.70	1.30	370837	831548	B	12610	09/01/88
									7.70	1.40		2.5	2768

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	3.60	41.00	57.20	LAUREL	1.80	81.40	W212501	5.50	370841	841001	B	14480	09/01/88
								1.20	8.00	2.10		5.0	2273
SURFACE MINE	3.20	41.30	51.30	LAUREL	7.40	75.20	W207471	5.30	370844	840120	B	13780	09/01/88
								2.70	7.70	1.70		4.0	2237
SURFACE MINE	2.80	41.40	49.70	LAUREL	8.90	73.40	W212500	4.90	370845	840956	B	13360	09/01/88
								4.00	7.10	1.70		4.0	2120
SURFACE MINE	2.70	36.50	46.70	PERRY	16.80	66.60	W207898	4.60	370853	830827	B	12180	09/01/88
								5.50	5.20	1.30		5.0	2147
SURFACE MINE	3.50	40.60	52.90	LAUREL	6.50	75.10	W207469	5.40	370901	840117	B	13890	09/01/88
								4.40	6.70	1.90		4.0	2156
ROAD CUT	3.30	38.90	52.90	PULASKI	8.20	73.30	W210347	5.00	370921	841908	B	13260	09/01/88
								5.00	7.00	1.50		2.5	2111
SURFACE MINE	2.20	36.10	54.20	LETCHER	9.70	74.80	W209667	5.40	370923	825306	B	13480	09/01/88
								0.70	7.80	1.60		5.5	2804
ROAD CUT	3.20	39.20	53.50	PULASKI	7.30	74.00	W210346	5.30	370935	842025	B	13570	09/01/88
								2.40	9.20	1.80		4.5	2048
SURFACE MINE	2.40	32.90	51.60	LETCHER	15.50	71.10	W209674	4.70	371010	825735	B	12530	09/01/88
								0.70	6.60	1.40		1.5	2804
SURFACE MINE	2.40	32.60	57.70	LETCHER	9.70	75.20	W209671	4.80	371015	825815	B	13320	09/01/88
								1.00	7.80	1.50		3.0	2741
SURFACE MINE	2.10	35.20	50.20	LETCHER	14.60	70.10	W209673	5.00	371017	825815	B	12670	09/01/88
								0.80	8.00	1.50		4.0	2804
PROSPECT PIT	2.80	40.10	47.90	CLAY	12.00	71.90	W205327	5.40	371026	834223	B	13060	09/01/88
								3.00	5.80	1.90		4.5	2318
SURFACE MINE	2.80	36.10	54.10	CLAY	9.80	75.40	W214774	5.00	371039	835148	B	13460	09/01/88
								0.70	7.30	1.80		5.0	2804
SURFACE MINE	5.30	38.90	56.80	LAUREL	4.30	79.90	W213941	5.30	371039	841156	B	14260	09/01/88
								2.10	6.70	1.70		3.5	2039
SURFACE MINE	2.50	36.50	56.80	CLAY	6.70	78.00	W210294	5.30	371048	834709	B	13920	09/01/88
								0.70	7.50	1.80		4.5	2804
UNDERGROUND MINE	2.60	39.90	54.60	LETCHER	5.50	78.80	W208196	5.40	371053	824747	B	14210	09/01/88
								2.00	6.60	1.70		5.0	2624

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp	
UNDERGROUND MINE	3.30	39.80	50.30	LAUREL	70.90	5.10	W207468	371109	840416	B	13240	09/01/88
								8.00	1.70		3.0	2057
UNDERGROUND MINE	2.20	40.20	46.60	LESLIE	70.80	5.00	W213026	371137	832231	B	12780	09/01/88
								6.30	1.50		4.0	2462
SURFACE MINE	3.40	35.80	58.50	CLAY	79.10	5.10	W205337	371146	834442	B	14200	09/01/88
								7.70	1.90		5.5	2804
SURFACE MINE	3.80	38.80	55.00	LAUREL	77.50	5.70	W207464	371209	840216	B	13980	09/01/88
								7.10	1.90		3.5	2291
SURFACE MINE	5.80	36.20	59.00	LAUREL	76.30	4.70	W207466	371210	840020	B	13710	09/01/88
								11.60	1.90		1.0	2237
SURFACE MINE	2.30	38.60	55.50	LETCHER	78.60	5.30	W209668	371233	825053	B	14060	09/01/88
								7.70	1.70		5.0	2804
SURFACE MINE	10.60	36.80	59.30	LAUREL	73.00	4.60	W207465	371234	840254	B	12610	09/01/88
								15.90	1.90		0.0	2336
SURFACE MINE	3.10	36.30	54.20	LETCHER	74.60	5.10	W209669	371235	824726	B	13380	09/01/88
								8.20	1.80		4.5	2804
SURFACE MINE	3.90	38.30	58.20	LAUREL	76.70	5.40	W207463	371244	840154	B	14430	09/01/88
								11.60	2.00		5.0	2363
SURFACE MINE	2.20	38.70	53.10	PERRY	75.80	5.10	W212592	371257	831538	B	13610	09/01/88
								8.10	1.60		3.0	2570
UNDERGROUND MINE	2.00	32.70	47.60	LETCHER	66.40	4.50	W210261	371310	824617	B	11630	09/01/88
								7.30	1.40		3.5	2804
SURFACE MINE	5.20	40.10	55.30	CLAY	79.40	5.40	W214260	371312	835557	B	14270	09/01/88
								7.70	2.10		3.5	2804
SURFACE MINE	4.20	37.40	57.50	LAUREL	78.00	5.40	W207467	371318	840456	B	14060	09/01/88
								7.60	1.90		5.5	2318
UNDERGROUND MINE	2.30	35.90	56.70	PERRY	77.00	4.90	W212593	371321	831607	B	13670	09/01/88
								8.00	1.70		2.0	2804
UNDERGROUND MINE	4.10	38.90	56.80	CLAY	80.50	5.20	W205338	371330	834332	B	14570	09/01/88
								7.40	2.00		5.5	2804
SURFACE MINE	3.80	37.20	55.00	PERRY	76.60	5.30	W207447	371331	831126	B	13630	09/01/88
								8.00	1.60		2.0	2777

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
ROAD CUT	9.70	33.20	48.50	PERRY	18.30	62.70	W207456 4.20	1.00	371337 12.40	831114 1.40	B	10790 0.0	09/01/88 2102
ROAD CUT	4.90	36.50	51.90	LAUREL	11.60	71.70	W207462 5.10	1.20	371344 8.80	841247 1.60	B	12970 1.5	09/01/88 2804
SURFACE MINE	3.80	34.80	51.00	PERRY	14.20	70.00	W212591 4.50	0.60	371355 9.30	831721 1.40	B	12290 1.0	09/01/88 2804
ROAD CUT	2.70	38.20	43.90	PERRY	17.90	65.60	W207455 4.90	3.70	371359 6.60	831058 1.30	B	12020 5.0	09/01/88 2120
SURFACE MINE	3.70	31.30	56.90	PERRY	11.80	74.70	W207815 4.60	0.60	371413 7.00	831117 1.30	B	12970 1.0	09/01/88 2804
ROAD CUT	3.10	34.30	51.50	PERRY	14.20	70.70	W207454 4.70	0.50	371431 8.40	831104 1.50	B	12690 3.0	09/01/88 2804
UNDERGROUND MINE	2.30	36.60	60.00	PIKE	3.40	81.90	W209851 5.40	0.60	371512 7.20	823104 1.50	B	14730 6.0	09/01/88 2471
ROAD CUT	2.70	37.70	54.90	PERRY	7.40	76.80	W210313 5.20	0.90	371541 8.10	831206 1.60	B	13710 3.5	09/01/88 2804
UNDERGROUND MINE	1.90	30.30	52.70	PIKE	17.00	69.30	W210154 4.60	0.70	371618 7.00	823405 1.40	B	12210 3.0	09/01/88 2804
UNDERGROUND MINE	1.80	33.60	49.60	PIKE	16.80	69.00	W212595 4.70	1.00	371642 7.00	823031 1.50	B	12460 5.5	09/01/88 2750
ROAD CUT	3.30	36.10	54.50	PERRY	9.40	75.40	W211619 4.90	0.60	371708 8.10	831136 1.60	B	13370 1.5	09/01/88 2804
UNDERGROUND MINE	1.70	34.70	51.40	PIKE	13.90	72.60	W212594 4.90	0.80	371714 6.30	823147 1.50	B	12940 4.0	09/01/88 2804
SURFACE MINE	4.30	40.30	56.30	JACKSON	3.40	81.10	W213933 5.50	0.90	371718 7.30	840416 1.80	B	14560 5.0	09/01/88 2507
ROAD CUT	2.10	34.60	63.30	PIKE	2.10	83.30	W210161 5.40	0.70	371725 6.90	823302 1.60	B	14800 5.0	09/01/88 2561
ROAD CUT	1.80	36.70	58.00	PIKE	5.30	80.20	W210162 5.40	0.90	371727 6.70	823303 1.50	B	14330 7.0	09/01/88 2804
ROAD CUT	2.00	34.10	60.40	PIKE	5.50	80.10	W210163 5.10	0.80	371732 7.10	823306 1.40	B	14110 5.0	09/01/88 2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE	1.90	33.60	53.20	FLOYD	13.20	71.40	4.90	W215402	0.70	371733	824216	B	12930	09/01/88
										8.20	1.60		4.0	2741
PROSPECT PIT	4.10	33.70	46.80	OWSLEY	19.50	65.30	4.80	W205328	1.90	371735	833309	B	11660	09/01/88
										7.00	1.50		2.0	2804
SURFACE MINE	1.50	36.10	58.60	PIKE	5.30	80.10	5.10	W212068	0.90	371739	822513	B	14310	09/01/88
										7.00	1.60		7.0	2804
SURFACE MINE	1.70	32.20	55.10	PIKE		74.40	4.60	W212069	0.80	371740	822519	B	13100	09/01/88
										6.10	1.40		7.5	2804
DRILL CORE, HOLE NO 30	1.80	42.60	43.90	PERRY	13.50	70.30	5.30	W213934	2.80	371742	831218	B	12830	09/01/88
										6.50	1.60		4.0	2651
SURFACE MINE	6.70	35.90	61.70	LAUREL	2.40	82.40	5.10	W213942	0.70	371747	840702	B	14640	09/01/88
										7.60	1.80		3.0	2651
UNDERGROUND MINE	1.80	30.00	59.40	PIKE	10.60	76.20	4.70	W212281	0.40	371759	822548	B	13480	09/01/88
										6.70	1.40		3.5	2660
ROAD CUT	3.10	35.70	55.30	PERRY	9.00	76.10	5.00	W208431	0.60	371808	831133	B	13460	09/01/88
										7.60	1.70		3.0	2804
UNDERGROUND MINE	4.60	37.10	54.70	PERRY	8.20	76.30	5.10	W205339	0.80	371813	831228	B	13570	09/01/88
										7.80	1.80		3.0	2804
UNDERGROUND MINE	1.50	34.10	59.80	PIKE	6.10	80.40	5.10	W212282	0.70	371815	822535	B	14250	09/01/88
										6.30	1.40		7.5	2804
UNDERGROUND MINE	1.20	27.90	49.00	PIKE	23.10	64.20	4.20	W208061	2.50	371842	821842	B	11720	09/01/88
										4.70	1.30		5.0	2606
DRILL CORE, HOLE NO 30	1.40	43.60	52.10	PERRY	4.30	79.00	5.60	W214258	2.70	371842	831218	B	14280	09/01/88
										6.90	1.50		3.5	2039
SURFACE MINE	2.90	37.60	51.50	KNOTT	10.90	73.30	4.90	W205330	1.50	371846	830113	B	13150	09/01/88
										7.80	1.60		3.5	2552
SURFACE MINE	6.10	37.70	55.40	PERRY	6.90	76.80	5.30	W205323	0.70	371851	831623	B	13630	09/01/88
										8.60	1.70		3.0	2804
UNDERGROUND MINE	1.50	26.20	48.10	PIKE	25.70	63.60	4.10	W208062	0.70	371859	821805	B	11370	09/01/88
										4.50	1.40		6.0	2804
ROAD CUT	3.60	34.30	48.40	PERRY	17.30	65.50	4.60	W208063	3.60	371911	831004	B	12030	09/01/88
										7.40	1.60		4.5	2408

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				KNOTT								
4.40	36.90	52.20	10.90		73.30	5.20	0.60	371920	830304	B	13110	09/01/88
								8.30	1.70		2.5	2804
ROAD CUT				PERRY								
5.10	35.60	55.20	9.20		74.60	5.10	0.60	371927	830939	B	13380	09/01/88
								8.80	1.70		2.0	2804
ROAD CUT				PERRY								
4.00	36.50	53.30	10.20		74.00	5.00	0.70	371953	830937	B	13120	09/01/88
								8.40	1.70		1.5	2804
ROAD CUT				PERRY								
3.30	45.10	48.70	6.20		77.00	5.60	2.00	372008	830917	B	14000	09/01/88
								7.60	1.60		4.5	2102
UNDERGROUND MINE				PERRY								
6.00	38.10	52.20	9.70		73.90	5.10	0.50	372020	832313	B	12870	09/01/88
								8.90	1.90		1.0	2651
ROAD CUT				KNOTT								
2.10	33.70	50.50	15.80		69.60	4.80	1.20	372028	825902	B	12510	09/01/88
								7.20	1.40		4.5	2804
ROAD CUT				KNOTT								
2.00	40.20	51.90	7.90		76.80	5.50	0.60	372037	825905	B	13860	09/01/88
								7.50	1.70		5.5	2804
UNDERGROUND MINE				KNOTT								
1.80	37.80	51.60	10.60		75.30	5.30	0.70	372044	824708	B	13480	09/01/88
								6.70	1.40		4.0	2714
SURFACE MINE				PERRY								
4.00	33.70	46.60	19.70		66.00	4.60	0.60	372051	830856	B	11680	09/01/88
								7.50	1.60		1.0	2804
PORTAL				FLOYD								
3.40	34.40	56.10	9.50		75.10	4.90	0.80	372052	824302	B	13190	09/01/88
								8.20	1.50		1.5	2651
UNDERGROUND MINE				PIKE								
2.20	37.90	56.10	6.00		79.50	5.40	0.70	372104	823221	B	14320	09/01/88
								6.90	1.50		6.5	2597
SURFACE MINE				JACKSON								
4.70	38.00	59.80	2.20		82.10	5.40	0.80	372106	835535	B	14570	09/01/88
								7.70	1.80		4.0	2264
DRILL CORE, HOLE NO 40				PERRY								
2.10	43.90	50.10	6.00		77.00	5.50	3.00	372107	832022	B	13960	09/01/88
								6.70	1.80		4.0	2102
SURFACE MINE				PERRY								
5.30	33.90	52.80	13.30		71.30	4.70	0.70	372128	831733	B	12740	09/01/88
								8.50	1.50		1.5	2804
SURFACE MINE				PERRY								
6.20	36.00	52.90	11.10		72.10	4.80	0.70	372128	831739	B	12810	09/01/88
								9.70	1.60		1.0	2372
ROAD CUT				KNOTT								
1.80	35.40	45.00	19.60		66.10	4.60	1.00	372129	825901	B	11820	09/01/88
								7.30	1.40		3.5	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ROAD CUT				KNOTT		W208095		372131	825857	B	12700	09/01/88
3.20	37.50	48.80	13.70	71.10	5.10	1.40	7.00	1.70	4.5	2642		
ROAD CUT				KNOTT		W208206		372131	830145	B	10490	09/01/88
2.40	33.20	39.20	27.60	57.40	4.30	3.50	5.90	1.30	4.0	2651		
ROAD CUT				KNOTT		W208429		372138	825929	B	13250	09/01/88
3.00	36.70	52.70	10.60	73.90	5.00	1.90	7.10	1.50	5.5	2516		
SURFACE MINE				PERRY		W207991		372143	831721	B	11530	09/01/88
6.00	33.20	47.30	19.50	64.90	4.50	0.60	9.10	1.40	1.0	2804		
SURFACE MINE				PERRY		W207989		372143	831724	B	14280	09/01/88
5.30	39.00	58.10	2.90	79.80	5.40	1.10	9.00	1.80	4.0	2282		
SURFACE MINE				OWSLEY		W205324		372146	834415	B	13610	09/01/88
4.30	37.40	55.40	7.20	76.50	5.50	0.80	8.10	1.90	3.5	2804		
ROAD CUT				KNOTT		W208096		372153	825830	B	12050	09/01/88
2.70	40.00	42.20	17.80	65.90	4.90	3.30	6.60	1.50	4.5	2291		
ROAD CUT				KNOTT		W208066		372158	830624	B	9980	09/01/88
2.20	30.70	38.60	30.70	55.00	4.00	3.40	5.80	1.10	4.5	2723		
SURFACE MINE				BREATHITT		W205321		372201	832908	B	14130	09/01/88
4.40	39.60	56.70	3.70	79.80	5.70	0.70	8.10	2.00	4.5	2804		
ROAD CUT				KNOTT		W208205		372213	830354	B	10610	09/01/88
1.90	31.70	41.40	26.90	59.40	4.20	1.90	6.30	1.30	4.0	2777		
ROAD CUT				KNOTT		W208098		372219	825818	B	8490	09/01/88
1.60	27.20	33.00	39.80	47.50	3.50	3.00	5.30	0.90	1.0	2732		
UNDERGROUND MINE				FLOYD		W210317		372245	823948	B	13370	09/01/88
2.20	34.10	56.10	9.80	75.80	4.90	0.60	7.50	1.40	4.5	2804		
ROAD CUT				PIKE		W210164		372309	823325	B	13660	09/01/88
1.90	36.60	54.20	9.20	76.10	5.30	1.70	5.90	1.80	7.0	2309		
UNDERGROUND MINE				KNOTT		W210265		372328	824559	B	13740	09/01/88
2.70	35.70	56.90	7.40	77.80	5.20	0.90	7.30	1.40	3.5	2552		
SURFACE MINE				JACKSON		W207869		372334	835705	B	14660	09/01/88
6.00	38.80	58.90	2.30	81.30	5.50	0.60	8.50	1.80	3.5	2444		
DRILL CORE, HOLE NO 50				KNOTT		W215672		372344	830650	B	11970	09/01/88
2.90	34.90	46.40	18.70	67.20	4.60	1.10	6.80	1.60	3.5	2804		

Coal Field Information Printout for: KY - Kentucky

Location		County			Code Number		Latitude		Longitude		Htg Val		Last Chg																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Rank	Free Swell	Hemi Temp																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
SURFACE MINE	2.00	38.50	48.60	PERRY	W211684	4.90	2.40	372349	830934	B	12640	09/01/88	2777																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
ROAD CUT	2.40	38.70	49.00	KNOTT	71.30	W209501	3.20	372707	825356	B	12880	09/01/88
						5.20		6.20	1.80		4.5	2192
SURFACE MINE	2.20	32.20	44.90	PIKE	53.30	W210158	1.10	372711	822907	B	11370	09/01/88
						4.50		6.80	1.40		2.0	2597
SURFACE MINE	2.00	38.70	57.90	PIKE	81.10	W210157	1.30	372712	822906	B	14470	09/01/88
						5.40		7.10	1.70		5.0	2237
SURFACE MINE	1.60	42.60	48.30	PIKE	73.20	W210156	5.20	372715	822906	B	13550	09/01/88
						5.40		5.60	1.50		3.0	2093
SURFACE MINE	2.20	37.50	58.20	PIKE	80.50	W210155	0.80	372721	822848	B	14380	09/01/88
						5.40		7.30	1.70		5.0	2804
SURFACE MINE	3.30	35.70	58.30	FLOYD	78.50	W211692	0.60	372722	823522	B	13730	09/01/88
						4.90		8.30	1.70		1.5	2804
SURFACE MINE	2.60	42.00	48.40	BREATHITT	74.60	W211610	0.80	372750	831113	B	13510	09/01/88
						5.50		7.80	1.70		1.5	2804
	2.30	36.30	49.60	OWSLEY	70.30	W189756	1.40	372758	833252	B	12520	09/01/88
						5.10		7.80	1.30		3.0	2912
SURFACE MINE	3.00	38.00	56.80	OWSLEY	78.10	W209507	1.80	372807	833906	B	14140	09/01/88
						5.30		7.30	2.30		4.0	2842
ROAD CUT	4.20	38.60	56.50	FLOYD	79.10	W208101	0.70	372813	825105	B	14170	09/01/88
						5.40		8.10	1.80		5.0	2381
SURFACE MINE	2.70	34.60	57.90	PIKE	77.50	W212063	1.10	372821	820703	B	13590	09/01/88
						4.90		7.40	1.60		2.5	2444
ROAD CUT	2.50	42.40	48.20	FLOYD	75.20	W208100	0.70	372825	825058	B	13680	09/01/88
						5.50		7.60	1.60		1.5	2777
SURFACE MINE	5.70	39.40	56.20	PIKE	78.70	W212065	0.60	372832	820702	B	13570	09/01/88
						4.80		10.00	1.50		2.0	2246
SURFACE MINE	1.50	31.60	53.50	PIKE	72.40	W212066	1.00	372838	820716	B	12840	09/01/88
						4.50		5.80	1.40		6.0	2804
ROAD CUT	2.10	42.20	52.10	FLOYD	76.80	W209504	3.60	372851	825011	B	14060	09/01/88
						5.50		6.70	1.70		3.5	1994
SURFACE MINE	3.20	37.20	57.80	KNOTT	78.50	W210259	0.60	372855	830245	B	13750	09/01/88
						4.80		9.60	1.50		1.5	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	3.50	39.70	55.80	JACKSON	4.50	76.90	5.30	2.40	W210255	372901	835338	B	13930	09/01/88
UNDERGROUND MINE	1.60	34.50	55.20	PIKE	10.30	75.90	5.10	0.70	W208208	372903	822207	B	13490	09/01/88
SURFACE MINE	2.00	34.00	58.80	PIKE	7.20	80.40	5.00	0.70	W212059	372904	820435	B	14210	09/01/88
SURFACE MINE	1.30	35.50	60.70	PIKE	3.80	82.80	5.10	0.60	W212060	372904	820543	B	14740	09/01/88
SURFACE MINE	1.40	34.70	59.20	PIKE	6.10	80.60	5.20	0.60	W212061	372905	820527	B	14350	09/01/88
ROAD CUT	3.10	34.30	46.40	FLOYD	19.30	65.60	4.60	1.00	W208197	372915	824922	B	11650	09/01/88
ROAD CUT	3.30	40.00	49.20	FLOYD	10.80	72.10	5.20	1.10	W208104	372920	824922	B	13060	09/01/88
UNDERGROUND MINE	2.30	39.70	53.30	FLOYD	7.00	76.50	5.30	2.40	W210316	372953	824366	B	13770	09/01/88
SURFACE MINE	4.10	37.90	59.60	LEE	2.50	80.20	5.30	0.60	W211631	372959	834926	B	14150	09/01/88
CONGLETON BROS MINE	6.80	37.30	51.10	LEE	11.60	71.30	4.90	1.00	D176684	373000	834500	B	12710	09/01/88
SURFACE MINE	3.50	39.00	46.10	OWSLEY	14.90	68.30	4.90	4.10	W213949	373012	833512	B	12420	09/01/88
SURFACE MINE	3.60	36.00	53.00	BREATHITT	11.00	73.60	4.60	1.10	W211617	373035	830832	B	12760	09/01/88
SURFACE MINE	5.00	37.60	60.30	LEE	2.10	80.60	5.20	0.70	W210253	373035	834742	B	14250	09/01/88
UNDERGROUND MINE	2.50	37.90	52.50	FLOYD	9.60	74.30	5.10	1.30	W210315	373045	824219	B	13230	09/01/88
SURFACE MINE	1.80	32.70	62.10	PIKE	5.20	81.90	5.10	0.90	W210431	373054	820955	B	14460	09/01/88
PROSPECT	2.60	31.20	51.70	PIKE	17.10	69.60	4.40	0.70	W210430	373054	821022	B	12060	09/01/88

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
PROSPECT	1.40	36.10	57.10	PIKE	6.80	78.90	5.30	0.80	373055	821021	B	14120	09/01/88
									6.50	1.70		7.5	2804
PROSPECT	2.00	37.70	54.30	PIKE	8.00	77.90	5.30	1.60	373058	821021	B	13950	09/01/88
									5.30	1.90		7.5	2309
SURFACE MINE	2.00	45.20	48.50	PIKE	6.30	75.80	5.40	3.90	373115	823032	B	14010	09/01/88
									7.00	1.60		3.5	2147
SURFACE MINE	4.10	33.80	55.40	JACKSON	10.80	73.30	4.90	0.60	373115	840514	B	12900	09/01/88
									8.80	1.60		2.0	2804
SURFACE MINE	5.20	36.50	55.40	BREATHITT	8.10	76.00	5.10	0.70	373117	831140	B	13270	09/01/88
									8.50	1.60		1.0	2804
SURFACE MINE	2.70	37.60	58.60	PIKE	3.80	81.20	5.40	0.80	373118	823029	B	14340	09/01/88
									7.10	1.70		3.5	2777
SURFACE MINE	3.80	38.60	54.20	BREATHITT	7.20	77.20	5.00	0.70	373118	831117	B	13570	09/01/88
									8.40	1.50		1.5	2804
SURFACE MINE	3.70	36.10	53.80	BREATHITT	10.10	73.50	5.10	0.90	373120	831120	B	13070	09/01/88
									8.80	1.60		2.0	2804
ROAD CUT	3.00	40.70	49.60	FLOYD	9.70	72.40	5.10	5.90	373121	824735	B	13300	09/01/88
									5.40	1.50		3.0	2804
SURFACE MINE	3.70	37.70	54.50	BREATHITT	7.80	75.90	5.20	1.80	373122	831120	B	13410	09/01/88
									7.50	1.80		2.5	2606
SURFACE MINE	2.40	35.70	51.50	BREATHITT	12.80	71.90	4.70	1.50	373123	830533	B	12670	09/01/88
									7.70	1.40		1.0	2804
SURFACE MINE	3.60	41.70	51.50	OWSLEY	6.80	74.70	5.30	3.10	373139	833907	B	13490	09/01/88
									8.30	1.80		3.0	2102
UNDERGROUND MINE	3.30	33.20	47.00	FLOYD	19.80	65.40	4.60	1.90	373147	823852	B	11770	09/01/88
									7.10	1.20		4.5	2678
ROAD CUT	2.00	38.10	49.70	FLOYD	12.20	72.10	5.00	1.60	373203	824706	B	12970	09/01/88
									7.60	1.50		4.5	2741
UNDERGROUND MINE	3.60	34.80	50.40	FLOYD	14.80	69.60	4.80	0.80	373235	824021	B	12480	09/01/88
									8.50	1.50		3.5	2804
SURFACE MINE	3.30	37.50	56.10	BREATHITT	6.40	76.20	4.80	0.70	373236	830538	B	13390	09/01/88
									10.50	1.40		1.0	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	6.90	34.30	58.10	BREATHITT	7.60	71.50	4.40	0.60	373243	830543	B	12260	09/01/88
									14.40	1.50		0.5	2804
PROSPECT	3.60	43.20	49.40	BREATHITT	7.40	76.50	4.80	2.00	373245	831616	B	13690	09/01/88
									7.70	1.60		3.0	2714
ROAD CUT	2.80	40.80	50.20	FLOYD	9.00	74.60	5.30	1.10	373248	824624	B	13450	09/01/88
									8.10	1.90		4.5	2804
SURFACE MINE	4.10	35.60	47.70	FLOYD	16.70	67.20	4.60	2.20	373251	824252	B	12080	09/01/88
									7.70	1.60		4.5	2804
SURFACE MINE	3.40	38.00	53.40	BREATHITT	8.60	73.70	5.30	0.80	373259	831523	B	13250	09/01/88
									9.90	1.70		1.5	0
PORTAL	3.40	36.60	50.60	MAGOFFIN	12.80	71.50	4.80	1.00	373323	825650	B	12700	09/01/88
									8.60	1.30		0.0	0
CONSTRUCTION SITE	4.30	36.80	49.80	PIKE	13.40	71.10	4.50	1.20	373329	823347	B	12690	09/01/88
									8.40	1.40		1.5	2804
CONSTRUCTION SITE	5.70	37.70	56.40	PIKE	5.90	78.50	5.00	0.80	373330	823346	B	13860	09/01/88
									8.30	1.50		2.0	2804
CONSTRUCTION SITE	5.50	34.20	51.60	PIKE	14.20	70.70	4.70	0.90	373330	823348	B	12460	09/01/88
									8.20	1.30		1.5	2804
SURFACE MINE	3.40	36.30	49.70	BREATHITT	14.00	69.70	4.80	0.70	373403	831236	B	12470	09/01/88
									9.60	1.20		1.0	2804
SURFACE MINE	4.20	37.10	51.40	BREATHITT	11.50	71.70	4.80	0.70	373409	831242	B	12780	09/01/88
									9.80	1.50		1.0	2804
ROAD CUT	3.60	39.60	54.40	LEE	6.00	75.90	5.20	2.50	373424	834224	B	13660	09/01/88
									8.60	1.80		2.5	2057
SURFACE MINE	3.00	37.50	55.90	PIKE	6.60	77.50	5.00	0.60	373454	822537	B	13710	09/01/88
									8.80	1.50		2.0	2804
SURFACE MINE	3.60	36.10	60.20	PIKE	3.70	79.70	5.00	0.70	373459	822537	B	14070	09/01/88
									9.30	1.60		2.0	2759
ROAD CUT	5.10	38.30	57.60	LEE	4.10	77.70	5.30	0.60	373504	834201	B	13840	09/01/88
									10.50	1.80		1.0	2606
ROAD CUT	3.30	36.80	53.60	FLOYD	9.60	74.80	5.20	0.80	373510	824601	B	13380	09/01/88
									7.80	1.80		5.0	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ROAD CUT				FLOYD									
2.80	28.80	36.10	35.10			52.30	3.90	1.00	373513	824601	B	9200	09/01/88
									6.40	1.30		2.5	2804
ROAD CUT				FLOYD									
2.10	45.00	41.50	13.50			68.10	5.30	5.00	373513	824603	B	12730	09/01/88
									6.60	1.50		4.5	2633
UNDERGROUND MINE				FLOYD									
4.50	35.30	52.00	12.70			71.40	4.70	0.70	373536	824309	B	12580	09/01/88
									9.00	1.50		1.0	2804
SURFACE MINE				MAGOFFIN									
3.50	36.30	58.20	5.50			77.40	5.10	0.70	373540	825414	B	13590	09/01/88
									9.70	1.60		1.0	2804
SURFACE MINE				MAGOFFIN									
3.70	37.10	50.10	12.80			70.70	4.90	1.00	373606	830732	B	12520	09/01/88
									9.10	1.50		1.0	2804
UNDERGROUND MINE				PIKE									
1.90	35.30	54.00	10.70			75.00	5.10	0.50	373612	822230	B	13290	09/01/88
									7.50	1.20		3.0	2912
SURFACE MINE				MAGOFFIN									
5.80	35.70	54.40	9.90			74.10	5.00	0.70	373654	830722	B	12940	09/01/88
									8.80	1.50		1.0	2804
SURFACE MINE				MAGOFFIN									
3.50	35.10	51.70	13.20			71.70	4.70	0.80	373657	830105	B	12680	09/01/88
									8.10	1.50		1.5	2804
SURFACE MINE				MAGOFFIN									
3.70	36.30	49.90	13.80			69.70	4.60	3.50	373700	830107	B	12520	09/01/88
									7.00	1.40		1.5	2039
SURFACE MINE				MAGOFFIN									
4.60	40.40	56.10	3.50			80.20	5.40	0.80	373701	830110	B	14380	09/01/88
									8.40	1.70		3.0	2804
SURFACE MINE				MAGOFFIN									
3.40	37.00	44.60	18.40			65.20	4.70	3.80	373705	830110	B	11800	09/01/88
									6.60	1.30		3.0	2354
NICKEL CONSTR CO STRIP MINE				LEE									
15.70	37.20	44.30	18.50			63.70	4.60	2.50	373730	833730	B	11100	09/01/88
									9.20	1.50		3.0	2183
SURFACE MINE				BREATHITT									
5.20	38.40	59.90	1.70			81.80	5.50	0.70	373740	832723	B	14610	09/01/88
									8.50	1.80		3.5	2561
SURFACE MINE				WOLFE									
4.60	37.10	53.80	9.10			74.40	5.10	1.70	373744	832824	B	13340	09/01/88
									8.00	1.70		3.5	2660
SURFACE MINE				MAGOFFIN									
3.80	38.40	55.30	6.30			76.30	5.20	0.70	373754	825701	B	13620	09/01/88
									9.90	1.60		1.0	2804
SURFACE MINE				MAGOFFIN									
3.20	37.40	51.00	11.60			71.80	5.00	0.70	373759	825659	B	12870	09/01/88
									9.50	1.40		1.0	2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE				PIKE								
3.30	38.30	53.80	7.90		75.90	5.00	1.40	373806 8.30	822952 1.50	B	13430 2.5	09/01/88 2750
ROAD CUT				PIKE								
1.90	32.90	54.90	12.20		74.50	4.60	0.50	373845 6.70	821603 1.50	B	13140 3.0	09/01/88 2579
ROAD CUT				PIKE								
2.10	36.70	57.90	5.40		79.80	5.30	0.90	373849 6.90	821602 1.70	B	14200 5.5	09/01/88 2804
UNDERGROUND MINE				PIKE								
3.60	36.30	58.80	4.90		78.50	5.00	0.80	373924 9.20	822534 1.60	B	13750 1.5	09/01/88 2804
UNDERGROUND MINE				PIKE								
2.80	34.00	56.60	9.40		76.20	5.00	0.60	373927 7.20	822052 1.60	B	13470 2.5	09/01/88 2552
SURFACE MINE				MAGOFFIN								
3.30	36.80	49.50	13.70		69.60	4.90	1.00	373932 9.40	825931 1.40	B	12480 1.0	09/01/88 2804
SURFACE MINE				MAGOFFIN								
3.20	37.20	50.20	12.60		69.90	5.00	2.00	373933 9.10	825928 1.40	B	12610 1.5	09/01/88 2417
SURFACE MINE				WOLFE								
4.70	39.90	52.30	7.80		72.60	5.00	4.20	373958 8.60	833517 1.80	B	13230 3.0	09/01/88 2084
PORTAL				FLOYD								
3.60	39.90	50.80	9.30		70.70	5.10	2.30	374015 11.00	824523 1.60	B	12960 3.0	09/01/88 2264
ROAD CUT				PIKE								
1.80	39.70	48.90	11.40		71.20	5.00	5.90	374019 5.10	821653 1.40	B	13170 4.0	09/01/88 2156
SURFACE MINE				MAGOFFIN								
3.40	34.90	49.60	15.50		69.10	4.60	1.30	374019 8.00	831211 1.50	B	12140 1.0	09/01/88 2804
SURFACE MINE				MAGOFFIN								
3.50	43.60	48.50	7.90		74.50	5.40	2.00	374036 8.90	830334 1.30	B	13510 3.0	09/01/88 2606
UNDERGROUND MINE				FLOYD								
3.70	36.40	48.40	15.20		68.80	4.80	2.20	374038 7.50	824516 1.50	B	12430 4.5	09/01/88 2390
UNDERGROUND MINE				FLOYD								
3.80	38.30	45.90	15.80		68.00	4.90	2.90	374038 6.90	824517 1.50	B	12300 4.5	09/01/88 2246
SURFACE MINE				MAGOFFIN								
6.50	39.60	54.90	5.50		75.20	4.90	1.10	374040 11.70	830325 1.60	B	13350 1.0	09/01/88 2570
SURFACE MINE				FLOYD								
5.50	33.30	45.00	21.70		62.60	4.40	0.70	374147 9.30	834524 1.30	B	11160 1.5	09/01/88 2804

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
PROSPECT				WOLFE									
6.10	38.70	57.70	3.60	76.10	5.10	1.50	374219	833939	B	13300	2.0	2264	09/01/88
UNDERGROUND MINE				PIKE									
2.40	37.50	50.10	12.40	71.50	5.00	2.40	374226	822214	B	12860	4.0	2498	09/01/88
UNDERGROUND MINE				FLOYD									
5.00	33.10	50.90	16.00	68.30	4.40	1.10	374233	823758	B	12100	1.0	2804	09/01/88
UNDERGROUND MINE				FLOYD									
5.70	33.00	52.20	14.80	70.00	4.50	0.80	374233	823801	B	12310	4.5	2804	09/01/88
UNDERGROUND MINE				PIKE									
3.40	40.30	52.60	7.10	76.30	5.30	2.80	374244	822139	B	13780	4.0	2282	09/01/88
SURFACE MINE				MARTIN									
3.40	29.50	43.80	26.70	59.10	3.90	1.30	374252	823329	B	10300	1.5	2804	09/01/88
UNDERGROUND MINE				MARTIN									
3.40	36.10	54.90	9.00	74.30	4.70	1.10	374257	823721	B	13110	1.0	2804	09/01/88
SURFACE MINE				MARTIN									
3.70	34.80	52.40	12.80	70.80	4.70	1.10	374310	823302	B	12530	2.0	2804	09/01/88
SURFACE MINE				MARTIN									
3.00	38.60	57.00	4.40	78.60	5.10	0.60	374310	823447	B	13850	1.5	2804	09/01/88
SURFACE MINE				FLOYD									
3.50	41.30	53.90	4.80	78.80	5.40	0.60	374310	824042	B	13960	1.0	2912	09/01/88
SURFACE MINE				MARTIN									
3.50	35.90	48.40	15.70	68.60	4.30	2.30	374316	823155	B	12170	1.5	2543	09/01/88
UNDERGROUND MINE				MARTIN									
2.80	34.30	50.70	15.00	69.30	4.70	0.90	374316	823443	B	12240	1.0	2804	09/01/88
UNDERGROUND MINE				PIKE									
2.40	33.40	39.90	26.70	58.20	4.20	4.10	374335	822145	B	10640	4.5	2480	09/01/88
UNDERGROUND MINE				MARTIN									
2.10	37.70	54.30	8.00	75.90	5.20	1.20	374336	823049	B	13520	3.5	2696	09/01/88
CONSTRUCTION SITE				WOLFE									
4.90	36.00	55.40	8.60	73.50	5.00	1.10	374404	833336	B	13120	1.5	2804	09/01/88
AUGER MINE				MARTIN									
5.30	33.10	50.80	16.10	67.50	4.60	0.80	374444	822046	B	11930	1.5	2804	09/01/88

Coal Field Information Printout for: KY - Kentucky

Location		County			Code Number		Latitude		Longitude		Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp		
SURFACE MINE			MARTIN		W211635		374503	822918	B			12300	09/01/88
2.80	35.10	50.10	14.80	69.80	4.60	0.90	8.30	1.60				1.5	2804
PROSPECT			MARTIN		W208051		374504	822010	B			11230	09/01/88
10.70	31.20	53.00	15.80	65.10	4.00	0.70	13.10	1.30				0.0	2804
SURFACE MINE			MARTIN		W211687		374506	822727	B			13310	09/01/88
2.50	37.50	53.50	9.00	75.30	5.00	1.00	8.10	1.60				2.5	2804
PROSPECT			MARTIN		W208054		374520	822002	B			13400	09/01/88
4.20	37.70	52.80	9.50	74.80	5.00	0.70	8.30	1.70				3.5	2786
SURFACE MINE			MARTIN		W208050		374526	822000	B			12770	09/01/88
4.30	35.70	50.70	13.60	71.50	4.90	0.90	7.70	1.40				4.5	2804
PROSPECT			MARTIN		W208053		374526	822005	B			14440	09/01/88
5.00	36.90	60.00	3.10	80.30	5.30	0.70	8.90	1.70				3.0	2579
SURFACE MINE			MARTIN		W208055		374526	822011	B			12770	09/01/88
4.20	35.30	51.10	13.60	71.40	4.80	0.90	7.80	1.50				1.0	2804
SURFACE MINE			MARTIN		W212504		374529	823215	B			11820	09/01/88
4.10	34.20	49.50	16.30	67.80	4.40	1.10	9.00	1.40				1.5	2804
PROSPECT			MARTIN		W208052		374535	821954	B			10090	09/01/88
13.80	32.00	47.90	20.10	60.30	3.80	0.50	14.00	1.30				0.0	2804
SURFACE MINE			MARTIN		W210262		374546	823826	B			13450	09/01/88
3.70	37.60	56.30	6.10	76.60	4.90	1.40	9.50	1.50				1.5	2750
SURFACE MINE			MARTIN		W210263		374552	823839	B			10970	09/01/88
3.90	29.00	48.20	22.80	64.00	3.50	0.40	8.20	1.10				1.0	2804
SURFACE MINE			MARTIN		W211634		374554	822756	B			12840	09/01/88
3.00	35.40	53.00	11.60	73.00	4.60	0.60	8.80	1.40				1.5	2804
SURFACE MINE			MARTIN		W212596		374556	822315	B			13370	09/01/88
2.80	37.90	52.60	9.50	74.50	5.00	1.40	7.90	1.70				3.0	2804
SURFACE MINE			JOHNSON		W203623		374629	824059	B			13520	09/01/88
5.70	38.40	54.50	7.10	76.10	5.10	0.70	9.50	1.50				1.0	2660
SURFACE MINE			MARTIN		W205332		374640	823610	B			11730	09/01/88
5.70	33.00	48.50	18.50	66.60	4.70	0.60	8.10	1.50				1.0	2804
ROAD CUT			WOLFE		W210433		374717	832059	B			13790	09/01/88
3.70	40.60	54.90	4.50	77.00	5.30	2.10	9.20	1.90				1.5	2039

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	4.00	39.60	52.30	JOHNSON	8.10	75.20	W209895	1.00	374723 9.50	824258 1.10	B	13330 1.0	09/01/88 2912
SURFACE MINE	2.60	29.70	36.30	JOHNSON	34.00	52.40	W210293	1.80	374727 6.60	824302 1.20	B	9370 1.0	09/01/88 2804
UNDERGROUND MINE	1.90	37.20	54.90	MARTIN	7.90	76.80	W211637	1.80	374732 6.80	822123 1.70	B	13670 5.0	09/01/88 2480
SURFACE MINE	3.30	39.20	49.50	MORGAN	11.30	71.00	W210432	3.60	374732 7.10	831947 2.00	B	12820 3.0	09/01/88 2102
UNDERGROUND MINE	2.10	37.20	52.30	MARTIN	10.50	75.10	W211636	0.90	374749 6.90	822206 1.60	B	13230 4.0	09/01/88 2561
ROAD CUT	4.60	42.90	52.40	MORGAN	4.70	77.00	W213950	2.80	374815 8.40	832025 1.80	B	13800 4.5	09/01/88 2138
SURFACE MINE	3.50	35.20	59.40	MARTIN	5.40	77.60	W210501	0.80	374817 9.60	832220 1.60	B	13730 1.5	09/01/88 2804
PROSPECT	3.40	35.10	53.50	MARTIN	11.40	71.80	W210502	0.70	374823 9.90	823228 1.50	B	12590 1.0	09/01/88 2804
ROAD CUT	5.90	41.50	54.40	MORGAN	4.10	77.70	W213951	3.00	375020 8.40	831931 1.60	B	14020 4.5	09/01/88 2039
SURFACE MINE	5.10	35.60	50.50	MARTIN	13.90	69.80	W207982	0.90	375027 9.00	823451 1.50	B	12480 1.0	09/01/88 2804
SURFACE MINE	6.50	41.60	55.20	MORGAN	3.20	78.50	W209903	0.90	375101 10.20	831106 1.70	B	14030 1.5	09/01/88 2804
SURFACE MINE	4.20	32.90	44.10	MORGAN	23.00	60.30	W209905	3.00	375102 8.30	831115 1.10	B	10850 1.0	09/01/88 2579
SURFACE MINE	4.40	32.30	42.60	MORGAN	25.10	59.90	W209904	1.60	375104 7.90	831105 1.20	B	10610 1.0	09/01/88 2804
MINE FACE	10.20	32.40	42.40	JOHNSON	25.20	57.20	W205319	0.80	375255 11.30	824715 1.40	B	9970 0.0	09/01/88 2309
SURFACE MINE	4.00	35.30	49.00	MARTIN	15.70	68.80	W210029	0.50	375318 9.00	823555 1.40	B	12160 1.0	09/01/88 2804
UNDERGROUND MINE	5.80	39.10	51.00	JOHNSON	9.90	72.60	W205315	3.20	375321 7.30	825151 1.70	B	13060 2.0	09/01/88 2057

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	4.10	38.80	51.70	MARTIN	73.00	W210028 5.20	1.50	375323 9.40	823509 1.40	B	13070 1.0	09/01/88 2570
	4.90	37.90	54.20	LAWRENCE	74.40	W205318 5.20	0.60	375325 10.20	823555 1.70	B	13320 1.0	09/01/88 2804
12.30	31.60	52.80	15.60	LAWRENCE	64.30	D182462 3.90	0.60	375331 14.30	823846 1.30	B	10820 0.0	09/01/88 2804
SURFACE MINE	5.00	33.40	46.30	LAWRENCE	63.70	W207863 4.50	2.60	375350 7.60	823633 1.30	B	11310 1.5	09/01/88 2624
	4.90	30.10	55.60	LAWRENCE	69.80	D182463 4.50	0.80	375358 9.20	823907 1.40	B	12270 0.0	09/01/88 2804
SURFACE MINE	6.60	38.80	60.20	JOHNSON	81.90	W203634 5.40	0.60	375425 9.40	825611 1.70	B	14290 1.0	09/01/88 2453
	3.10	37.40	48.30	LAWRENCE	70.10	D171586 4.70	0.70	375445 8.80	824440 1.40	B	12360 0.0	09/01/88 0
2.30	33.00	30.90	36.10	LAWRENCE	46.90	D171593 3.50	6.60	375500 6.00	824345 0.90	B	8590 0.0	09/01/88 0
2.60	32.30	32.20	35.50	LAWRENCE	49.70	D171594 3.70	4.10	375505 6.00	824345 1.00	B	8850 0.0	09/01/88 0
MINE FACE	4.70	28.60	39.20	JOHNSON	54.30	W205316 3.90	0.80	375521 7.50	824842 1.30	B	9520 1.0	09/01/88 2804
	2.90	37.50	51.10	LAWRENCE	72.90	D171589 4.80	0.70	375550 8.80	824110 1.40	B	12840 0.0	09/01/88 0
SURFACE MINE	3.70	43.10	52.00	MORGAN	76.90	W203632 5.50	3.30	375609 7.80	825954 1.60	B	14070 4.0	09/01/88 2111
	2.40	33.90	32.40	LAWRENCE	50.50	D171595 3.80	5.30	375635 5.80	824030 0.90	B	9080 0.0	09/01/88 0
SURFACE MINE	4.50	39.50	52.40	MARTIN	75.00	W210026 5.20	0.90	375642 9.30	823401 1.50	B	13430 1.0	09/01/88 2804
	5.10	37.50	47.20	LAWRENCE	68.80	W213948 4.90	1.10	375644 8.40	823925 1.50	B	12200 1.5	09/01/88 2804
ROAD CUT	8.50	35.90	60.70	LAWRENCE	80.20	W213939 4.80	0.70	375654 9.40	823935 1.50	B	14130 1.5	09/01/88 2111

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Free Swell	Hemi Temp	Last Chg
SURFACE MINE	6.80	37.90	61.10	MORGAN	1.00	81.40	5.30	0.60	375702	825933	B	14260	1.0	2408	09/01/88
ROAD CUT	4.30	31.60	42.80	LAWRENCE	25.60	59.80	4.20	0.60	375703	823956	B	10470	1.0	2804	09/01/88
SURFACE MINE	5.20	36.50	50.40	LAWRENCE	13.10	70.70	5.10	1.90	375744	823335	B	12610	1.5	2507	09/01/88
SURFACE MINE	7.40	36.60	61.70	JOHNSON	1.70	81.10	4.70	0.60	375829	825540	B	13960	1.0	2714	09/01/88
SURFACE MINE	3.50	41.60	51.80	LAWRENCE	6.60	76.80	5.50	0.90	375917	824041	B	13750	1.0	2804	09/01/88
SURFACE MINE	4.50	35.80	59.30	LAWRENCE	4.90	78.30	4.70	0.70	375919	824043	B	13720	1.0	2804	09/01/88
	2.80	36.90	34.90	LAWRENCE	28.20	55.20	4.20	5.30	375920	823955	B	10020	0.0	0	09/01/88
SURFACE MINE	15.90	38.00	53.30	LAWRENCE	8.70	70.50	4.90	0.80	380010	823753	B	12060	0.0	2363	09/01/88
SURFACE MINE	4.70	41.70	51.40	MORGAN	6.90	74.50	5.30	2.80	380010	830343	B	13510	1.0	2192	09/01/88
SURFACE MINE	5.80	37.20	50.40	MORGAN	12.40	70.30	4.80	0.70	380011	830329	B	12460	1.0	2354	09/01/88
SURFACE MINE	6.00	31.10	41.20	MORGAN	27.70	55.90	4.00	1.20	380013	830329	B	9760	0.0	2804	09/01/88
SURFACE MINE	5.20	36.80	47.70	MORGAN	15.50	66.00	4.80	3.30	380024	830555	B	12010	2.0	2282	09/01/88
	5.20	39.00	55.40	LAWRENCE	5.60	77.00	5.30	0.70	380056	824623	B	13680	1.5	2732	09/01/88
SURFACE MINE	3.80	40.20	51.50	ELLIOTT	8.30	73.90	5.00	2.00	380117	830040	B	13470	1.0	2561	09/01/88
	2.90	38.10	54.80	LAWRENCE	7.10	76.60	5.10	0.80	380138	824818	B	13480	0.0	0	09/01/88
	4.40	38.00	48.50	LAWRENCE	13.50	71.10	4.90	0.60	380139	824819	B	12670	0.0	0	09/01/88

Coal Field Information Printout for: KY - Kentucky

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
5.50	40.50	47.30	12.20	LAWRENCE	D169556	5.00	1.90	380140	823430	B	12800	0.0	0	09/01/88	
SURFACE MINE															
4.80	37.90	49.60	12.50	ELLIOTT	W209894	4.80	4.60	380144	830624	B	12500	2.0	2012	09/01/88	
SURFACE MINE															
5.00	38.00	56.80	5.20	ELLIOTT	W210292	5.20	1.40	380146	830622	B	13700	1.0	2678	09/01/88	
4.20	39.50	44.20	16.30	LAWRENCE	D169557	4.70	1.90	380154	823449	B	11940	0.0	0	09/01/88	
SURFACE MINE															
7.40	35.10	53.00	11.90	LAWRENCE	W205334	5.10	0.80	380217	824219	B	12660	1.0	2804	09/01/88	
4.30	41.80	43.90	14.30	LAWRENCE	D174712	4.70	4.30	380254	823439	B	12060	0.3	2111	09/01/88	
5.30	40.80	41.60	17.60	LAWRENCE	D174721	4.10	6.70	380254	824223	B	11550	3.0	2093	09/01/88	
6.40	41.80	52.50	5.70	LAWRENCE	D174723	5.00	1.20	380259	824218	B	13480	1.5	2912	09/01/88	
6.30	39.10	52.40	8.50	LAWRENCE	D171581	5.00	1.40	380333	825234	B	13720	0.0	0	09/01/88	
SURFACE MINE															
6.30	36.10	46.80	17.10	ELLIOTT	W207115	4.80	2.60	380417	830634	B	11750	1.5	2417	09/01/88	
6.60	38.80	51.70	9.50	LAWRENCE	D168263	4.80	3.50	380450	824619	B	12880	0.0	0	09/01/88	
4.70	43.70	49.60	6.70	LAWRENCE	D168260	5.20	4.50	380507	824700	B	13450	0.0	0	09/01/88	
5.10	37.80	55.10	7.10	LAWRENCE	D174716	5.10	0.60	380517	824553	B	13510	2.0	2624	09/01/88	
7.20	38.80	52.10	9.10	LAWRENCE	D168264	4.80	3.40	380545	825310	B	13000	0.0	0	09/01/88	
4.60	41.00	51.10	7.90	LAWRENCE	D168261	5.00	3.80	380555	824645	B	13270	0.0	0	09/01/88	
ROAD CUT															
4.20	43.50	45.50	11.00	LAWRENCE	W208435	5.00	3.80	380904	823826	B	12860	4.0	2012	09/01/88	

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
ROAD CUT	4.60	30.60	37.00	LAWRENCE	32.40	48.40	W211189	6.20	381017	823753	B	8910	09/01/88
							3.70		8.20	1.10		1.5	2237
ROAD CUT	5.50	38.60	52.90	LAWRENCE	8.50	72.70	W208436	3.70	381212	823613	B	13220	09/01/88
							5.10		8.40	1.60		4.0	2021
SURFACE MINE	3.70	38.80	51.00	CARTER	10.20	72.80	W211192	0.80	381218	825730	B	12930	09/01/88
							5.10		9.50	1.60		1.0	2804
SURFACE MINE	5.40	35.30	46.50	BOYD	18.20	63.80	W203629	2.40	381852	824507	B	11380	09/01/88
							4.50		9.80	1.30		1.0	2804
SURFACE MINE	7.80	40.90	52.70	BOYD	6.40	74.80	W203628	1.00	381907	824520	B	13250	09/01/88
							5.00		11.20	1.60		1.0	2804
DRILL CORE	4.10	40.00	48.60	CARTER	11.40	59.40	W211623	3.00	382004	830008	B	12520	09/01/88
							4.90		9.60	1.70		1.0	2219
ROAD CUT	7.00	44.50	51.40	CARTER	4.10	75.90	W207808	2.20	382132	825224	B	13900	09/01/88
							5.50		10.60	1.70		4.0	2084
SURFACE MINE	9.10	35.00	47.20	BOYD	17.80	63.40	W207457	0.80	382147	824431	B	11100	09/01/88
							3.90		12.80	1.30		1.0	2804
ROAD CUT	6.90	40.80	44.60	BOYD	14.60	61.80	W207896	7.80	382209	824729	B	11890	09/01/88
							4.50		10.00	1.30		4.5	2102
SURFACE MINE	4.60	40.30	47.80	CARTER	11.90	67.30	W211191	6.10	382323	830559	B	12270	09/01/88
							4.80		8.30	1.60		1.5	2102
SURFACE MINE	6.60	38.70	55.90	CARTER	5.40	76.50	W211193	0.80	382324	830607	B	13480	09/01/88
							5.10		10.50	1.70		1.5	2804
SURFACE MINE	7.60	38.20	48.40	BOYD	13.40	67.90	W207816	2.40	382328	824417	B	12320	09/01/88
							4.80		10.10	1.40		2.5	2579
ROAD CUT	7.70	43.70	49.70	BOYD	6.60	73.90	W208199	2.80	382439	824013	B	13250	09/01/88
							5.10		10.10	1.50		3.0	2624
ROAD CUT	5.20	30.20	39.10	BOYD	30.70	54.30	W207458	2.70	382447	824234	B	9780	09/01/88
							3.80		7.30	1.20		1.0	2804
SURFACE MINE	10.10	40.00	55.20	GREENUP	4.80	72.80	W207107	0.90	382501	825108	B	13440	09/01/88
							4.90		14.90	1.70		1.0	2804
SURFACE MINE	4.70	38.80	38.60	GREENUP	22.60	59.80	W207106	3.70	382510	825107	B	10910	09/01/88
							4.50		8.20	1.20		2.5	2471

Coal Field Information Printout for: KY - Kentucky

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carlbn	Hydrog'i	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
SURFACE MINE	5.90	41.70	44.60	GREENUP	13.70	66.20	W207108	4.90	382548 8.00	825437 1.40	B	12300 1.0	09/01/88 2003
ROAD CUT	5.20	46.30	46.90	GREENUP	6.80	74.20	W207862	5.70	382839 9.80	825208 1.50	B	13520 3.0	09/01/88 2039
SURFACE MINE	6.00	33.50	51.10	GREENUP	15.40	68.10	W208434	4.60	383014 9.50	824055 1.50	B	11960 1.5	09/01/88 2804

Coal Field Information Printout for

MD - Maryland

Coal Field Information Printout for: MD - Maryland

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BUFFALO COAL CO NO 240	1.10	18.50	65.00	GARRETT	73.70	4.20	1.20	391833	792340	B	12830	09/01/88
								3.60	0.80		8.0	2912
BUFFALO COAL CO NO 240	3.50	20.40	64.70	GARRETT	72.70	3.90	0.40	391854	792315	B	12500	09/01/88
								6.50	1.60		1.5	2912
GRAFTON COAL CO NO 173	0.70	20.40	68.80	GARRETT	78.20	4.40	2.70	392209	791642	B	13740	09/01/88
								2.50	1.40		9.0	2183
GRAFTON COAL CO NO 211	1.00	16.90	68.30	GARRETT	75.70	4.00	1.00	392215	791722	B	13090	09/01/88
								3.10	1.40		7.5	2786
YIOGH TREE FARM NO 260	2.00	22.40	69.20	GARRETT	79.00	4.50	0.70	392406	792702	B	13750	09/01/88
								6.20	1.20		3.8	2912
ALLEGHENY MINING NO 255				GARRETT		W188872		392520	792558	B	11470	09/01/88
	2.10	25.00	53.80		65.90	4.20	0.50	7.10	1.10		1.0	2768
LAOC COAL CO NO 250	0.90	21.10	56.50	GARRETT	65.60	4.00	4.40	392750	792432	B	11640	09/01/88
								2.40	1.20		9.0	2129
BESSERMER IRON&COAL NO 196				ALLEGANY		W189013		393008	790114	B	14310	09/01/88
	1.40	19.30	73.90		82.20	4.40	1.30	3.60	1.70		7.5	2912
UNION COAL CO NO 15	1.50	21.50	65.50	ALLEGANY	75.70	4.00	1.00	393116	785935	B	12950	09/01/88
								4.70	1.60		1.5	2408
	2.90	21.30	57.20	GARRETT	67.50	4.00	2.30	393434	791730	B	11940	09/01/88
								3.60	1.10		8.0	2705
	1.30	23.60	67.60	GARRETT	79.60	4.80	2.60	393522	791713	B	14220	09/01/88
								2.80	1.40		9.0	2363
BURNHAM COAL CO NO 238	0.70	22.50	54.60	GARRETT	66.10	4.10	3.60	393522	791721	B	11800	09/01/88
								2.30	1.00		4.0	2156
WINNER BROS COAL CO NO 202	2.10	19.70	74.50	ALLEGANY	83.50	4.50	1.00	393556	785635	B	14610	09/01/88
								3.40	1.80		9.0	2777
WINNER BROS COAL CO NO 207				ALLEGANY		W189011		393615	785529	B	11050	09/01/88
	1.40	15.90	58.00		63.40	3.60	2.10	3.40	1.40		4.0	2579
	1.30	25.70	66.60	GARRETT	81.50	4.80	1.30	393628	791609	B	14500	09/01/88
								3.20	1.50		9.0	2804
WINNER BROS COAL CO NO 207	1.30	20.40	66.80	ALLEGANY	77.00	4.30	0.80	393635	785607	B	13500	09/01/88
								3.40	1.70		9.0	2912

Coal Field Information Printout for: MD - Maryland

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
1.50	27.60	64.10	8.30	79.60	W193857	2.80	393733	792735	B	14270	9.0	2048	09/01/88		
DELTA MINING CO NO 224															
0.70	21.70	64.40	13.90	75.80	W189007	1.40	394009	791119	B	13280	9.0	2759	09/01/88		
PONDEROSA COAL CO NO 243															
0.70	23.40	51.50	25.10	64.10	W189006	2.50	394027	792441	B	11300	7.5	2408	09/01/88		

Coal Field Information Printout for

MI - Michigan

Coal Field Information Printout for: MI - Michigan

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Oxygen	Longitude	Rank	Free Swell	Htg Val	Last Chg
13.30		41.90	56.10	INGHAM	2.00	80.10	5.30	1.20	424053	9.70	841614	B	14310	0.0	09/01/88
															0
10.30		40.20	56.90	INGHAM	2.90	78.00	5.20	1.30	424056	11.00	841614	B	14080	0.0	09/01/88
															0
18.60		40.90	52.00	INGHAM	7.10	73.40	5.00	1.70	424456	11.40	844546	B	13100	0.0	09/01/88
															0

Coal Field Information Printout for

MO - Missouri

Coal Field Information Printout for: MO - Missouri

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	2.30	36.00	42.50	BARTON	21.50	65.20	4.50	D174658	3.60	371312	943530	B	11720	09/01/88
										4.30	0.90		5.5	2408
	2.50	33.70	49.90	BARTON	16.40	66.90	4.60	D179880	7.50	372310	943420	B	12440	09/01/88
										3.40	1.20		9.0	2408
	2.40	32.40	49.30	BARTON	18.30	65.50	4.50	D179879	6.40	372310	943424	B	12140	09/01/88
										4.20	1.10		8.5	2534
	2.90	33.40	50.90	BARTON	15.70	68.40	4.70	D179877	5.30	372312	943424	B	12580	09/01/88
										4.80	1.10		7.5	2255
	2.30	36.00	42.50	BARTON	21.50	65.20	4.50	D174659	3.60	372312	943528	B	11720	09/01/88
										4.30	0.90		5.5	2408
	1.90	36.20	49.20	BARTON	14.60	70.60	4.80	D174660	4.60	372315	943515	B	12800	09/01/88
										4.30	1.10		8.0	2057
	6.20	34.90	47.40	VERNON	17.70	65.60	4.60	D179882	5.10	374227	942904	B	11980	09/01/88
										5.70	1.30		7.0	2102
	3.40	36.30	46.10	VERNON	17.60	67.60	4.50	D175940	3.10	374519	943005	B	12020	09/01/88
										6.10	1.10		8.0	2066
	3.40	36.30	46.10	VERNON	17.60	67.60	4.50	D175941	3.10	374519	943006	B	12020	09/01/88
										6.10	1.10		8.0	2066
	3.90	38.70	44.40	VERNON	16.90	67.30	4.60	D175942	5.60	374520	942936	B	12340	09/01/88
										4.50	1.10		7.5	1958
	3.90	38.70	44.40	VERNON	16.90	67.30	4.60	D175943	5.60	374520	942940	B	12340	09/01/88
										4.50	1.10		7.5	1958
	4.00	37.10	45.30	VERNON	17.60	66.60	4.60	D179886	5.30	374555	943634	B	12010	09/01/88
										4.70	1.20		6.0	2309
	5.30	37.70	44.10	VERNON	18.20	67.30	4.70	D179884	4.60	374558	943637	B	12270	09/01/88
										4.00	1.20		8.0	2264
	5.80	33.00	43.40	ST CLAIR	23.60	56.70	4.10	D179881	10.40	381155	934918	B	10700	09/01/88
										4.10	1.10		4.5	2138
	8.70	35.40	51.60	HENRY	13.00	71.20	4.70	D179981	3.40	381420	935708	B	12820	09/01/88
										6.60	1.10		5.5	2255
	7.70	34.80	48.60	HENRY	16.60	67.40	4.60	D179980	3.80	381420	935710	B	12240	09/01/88
										6.50	1.10		5.5	2273

Coal Field Information Printout for: MO - Missouri

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
8.20	32.40	46.50	21.10	HENRY	59.00	4.00	10.20	381422	935709	B	10880	09/01/88
								4.70	1.00		1.0	2129
7.70	33.50	47.30	19.20	HENRY	61.20	4.20	9.50	381422	935710	B	11350	09/01/88
								4.80	1.10		1.0	2471
POWER MINE				HENRY	63.70	4.40	9.10	381434	935743	B	11660	09/01/88
7.30	40.20	41.60	18.20					3.60	1.00		0.0	0
POWER MINE				HENRY	70.80	4.80	2.90	381437	935754	B	12860	09/01/88
7.80	43.20	44.50	12.30					8.10	1.10		0.0	0
POWER MINE				HENRY	61.70	4.20	3.50	381440	935809	B	10780	09/01/88
6.60	43.50	36.60	19.90					9.70	1.00		0.0	0
7.00	32.90	43.00	24.10	BATES	59.90	4.10	4.80	381744	943627	B	10880	09/01/88
								5.90	1.20		3.5	2111
6.40	33.50	41.60	24.90	BATES	61.10	4.00	4.30	381745	943627	B	10870	09/01/88
								4.50	1.20		2.5	2201
MIDWAY MINE				BATES	63.20	4.30	5.50	381855	94340	B	11450	09/01/88
7.10	37.70	42.40	19.90					6.00	1.10		4.0	2039
MIDWAY MINE				BATES	63.20	4.30	5.50	381858	943430	B	11450	09/01/88
7.10	37.70	42.40	19.90					6.00	1.10		4.0	2039
POWER MINE				HENRY	71.80	5.00	6.30	382210	935504	B	13220	09/01/88
10.50	42.50	49.60	7.90					7.80	1.20		0.0	0
10.00	35.80	46.00	18.20	HENRY	63.90	4.30	4.00	382249	935640	B	11370	09/01/88
								8.60	1.00		4.0	2246
9.10	32.80	43.00	24.20	HENRY	57.30	3.80	8.10	382250	935640	B	10360	09/01/88
								5.70	0.90		1.0	2021
8.80	40.40	53.50	6.10	HENRY	73.50	5.20	4.40	382625	934217	B	13370	09/01/88
								9.50	1.30		3.0	2183
8.90	39.70	51.30	9.00	HENRY	70.40	5.00	6.00	382625	934219	B	12870	09/01/88
								8.40	1.20		1.5	2111
TEBO MINE, PEABODY COAL CO				HENRY	70.50	4.90	6.00	382640	934138	B	12950	09/01/88
9.90	43.40	47.30	9.30					8.10	1.20		0.0	0
10.20	34.00	48.00	18.00	HOWARD	63.90	4.30	5.50	391147	922955	B	11460	09/01/88
								7.30	1.00		1.0	2309

Coal Field Information Printout for: MO - Missouri

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
8.30	37.30	47.10	15.60	HOWARD	66.30	4.30	5.50	391152	922855	B	11960	09/01/88
								7.20	1.10		1.0	2039
8.80	31.70	47.90	20.40	HOWARD	60.10	4.20	6.60	391420	923115	B	10900	09/01/88
								7.70	1.00		1.0	2129
11.20	33.80	54.60	11.60	HOWARD	58.10	4.60	6.10	391754	922647	B	12400	09/01/88
								8.50	1.10		1.0	2417
7.70	40.70	43.80	15.50	AUDRAIN	67.00	4.50	4.60	391950	914702	B	12080	09/01/88
								7.40	1.00		3.0	2201
10.50	39.80	45.00	15.20	RANDOLPH	55.40	4.50	5.90	392017	923518	B	11770	09/01/88
								7.90	1.10		0.0	0
11.20	38.70	48.80	12.50	RANDOLPH	66.40	4.70	6.00	392031	923452	B	12110	09/01/88
								9.30	1.10		1.0	2030
13.30	36.60	48.10	15.30	RANDOLPH	52.90	4.40	6.50	392032	923452	B	11270	09/01/88
								9.90	1.00		1.0	2066
BEE VEER MINE												
6.60	42.80	44.60	12.60	RANDOLPH	69.10	4.80	4.80	393122	923924	B	12370	09/01/88
								7.60	1.10		0.0	0
9.70	34.70	48.60	16.70	RANDOLPH	52.40	4.20	8.20	393123	924015	B	11420	09/01/88
								7.50	1.00		1.0	2012
9.30	46.20	43.40	10.40	MACON	70.60	5.00	4.20	393827	923007	B	12760	09/01/88
								8.70	1.10		0.0	0
BEE VEER MINE												
11.70	42.70	45.40	11.90	MACON	69.10	4.80	5.30	393945	923004	B	12380	09/01/88
								7.80	1.10		2.0	2012
BEE VEER MINE												
11.70	42.70	45.40	11.90	MACON	69.10	4.80	5.30	393946	923004	B	12380	09/01/88
								7.80	1.10		0.0	0
10.70	40.00	50.60	9.40	MACON	70.50	4.90	5.50	394016	922943	B	12820	09/01/88
								8.50	1.20		5.0	1994
10.60	41.90	46.80	11.30	MACON	70.20	4.90	3.80	394017	922943	B	12630	09/01/88
								8.60	1.20		3.5	2183
12.70	35.30	48.30	16.40	MACON	63.20	4.50	4.60	394017	922945	B	11390	09/01/88
								10.00	1.30		1.0	2066
11.10	35.80	47.70	16.50	MACON	62.70	4.30	6.20	394018	922945	B	11350	09/01/88
								9.10	1.20		1.0	2021

Coal Field Information Printout for: MO - Missouri

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbua	Code Number		Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
					Hydrogen	Sulfur					
14.70	32.20	46.00	ADAIR	57.10	D182624	9.10	401302	923923	B	10420	09/01/88
					3.80		7.30	0.90		0.0	2075
18.20	42.50	45.30	SULLIVAN	69.30	D172323	3.90	401922	925147	B	12470	09/01/88
					4.90		8.50	1.20		0.0	0
15.50	42.50	40.70	PUTNAM	63.90	D172329	3.70	402509	925328	B	11550	09/01/88
					4.50		10.00	1.10		0.0	0
17.00	44.00	42.50	PUTNAM	70.20	D172328	3.40	402740	924440	B	12270	09/01/88
					4.60		7.10	1.20		0.0	0
16.00	45.40	43.10	PUTNAM	70.50	D172327	3.90	402746	924440	B	12370	09/01/88
					4.80		8.10	1.20		0.0	0

Coal Field Information Printout for

MS - Mississippi

Coal Field Information Printout for: MS - Mississippi

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp

	49.60	49.60	38.30	LAUDERDALE	12.10	55.00	3.90	4.20	322401	883339	L	9110	09/01/88
									23.80	1.00		0.0	0

	51.30	49.50	44.80	LAUDERDALE	5.70	62.70	4.30	2.50	322421	883243	L	10550	09/01/88
									23.60	1.20		0.0	0

	44.80	42.70	33.70	SCOTT	23.60	53.40	4.20	2.40	322855	892300	L	9260	09/01/88
									15.70	0.70		0.0	0

	16.40	36.80	32.00	KEMPER	31.20	48.20	3.60	0.70	323610	883238	L	8110	09/01/88
									15.20	1.10		0.0	2678

	46.10	39.90	29.40	NESHOBA	30.70	46.40	3.50	6.90	324631	891256	L	8260	09/01/88
									11.50	1.00		0.0	2174

	47.00	48.60	32.70	NESHOBA	18.70	56.20	3.80	6.10	324804	891308	L	9800	09/01/88
									13.80	1.40		0.0	2210

	48.10	39.30	36.80	NESHOBA	33.90	52.00	3.60	1.10	325017	885515	L	8880	09/01/88
									18.30	1.10		0.0	2804

Coal Field Information Printout for

MT - Montana

Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
DECKER MINE, TIPPLE SAMPLE	20.60	39.80	54.70	BIG HORN	5.50	72.00	4.90	0.60	450000	1064500	SB	12440	09/01/88
									15.90	1.10		0.0	0
DECKER MINE	19.60	46.60	47.80	BIG HORN	5.60	71.10	5.00	0.50	450217	1064900	SB	12250	09/01/88
									16.60	1.20		0.0	2201
DECKER MINE	22.00	40.40	54.90	BIG HORN	4.70	72.00	4.90	0.50	450242	1064907	SB	12460	09/01/88
									16.60	1.30		0.0	2219
DECKER MINE	22.30	40.80	54.70	BIG HORN	4.50	72.20	5.20	0.40	450312	1065030	SB	12500	09/01/88
									16.70	1.00		0.0	2219
DECKER MINE	23.20	39.30	54.50	BIG HORN	6.20	69.60	4.70	1.40	450318	1065018	SB	12090	09/01/88
									16.90	1.20		0.0	2111
DECKER MINE	22.10	41.80	53.60	BIG HORN	4.60	72.50	5.10	0.40	450321	1065018	SB	12540	09/01/88
									16.40	1.00		0.0	2273
DECKER MINE	22.60	39.50	51.30	BIG HORN	9.20	67.80	4.60	1.40	450323	1065011	SB	11740	09/01/88
									16.00	1.00		0.0	2147
DECKER MINE	22.30	40.80	54.40	BIG HORN	4.80	72.30	5.00	0.50	450324	1065011	SB	12520	09/01/88
									16.40	1.00		0.0	2219
DECKER MINE	22.60	39.80	54.10	BIG HORN	6.10	70.20	4.60	1.30	450330	1065002	SB	12090	09/01/88
									16.80	1.00		0.0	2354
HOLE M75-38	35.20	39.50	51.40	POWDER RIVER	9.10	67.00	4.10	0.50	450340	1060749	SB	11180	09/01/88
									17.90	1.40		0.0	2147
BEAR CR EMRIA	32.70	42.80	47.70	POWDER RIVER	9.50	65.60	4.40	1.00	450344	1061036	SB	11250	09/01/88
									18.20	1.30		0.0	2057
BEAR CR EMRIA	30.80	41.20	50.60	POWDER RIVER	8.20	68.00	4.60	0.40	450400	1061050	SB	11500	09/01/88
									17.40	1.40		0.0	2111
BEAR CR EMRIA	30.60	42.10	52.30	POWDER RIVER	5.60	67.50	4.90	0.30	450401	1060947	SB	11330	09/01/88
									20.50	1.20		0.0	2471
OUTCROP	36.30	47.10	46.00	POWDER RIVER	6.90	60.80	3.20	0.80	450401	1062430	SB	9200	09/01/88
									26.90	1.40		0.0	2453
BEAR CR EMRIA	33.00	40.30	52.20	POWDER RIVER	7.50	67.80	4.50	0.40	450430	1061207	SB	11490	09/01/88
									18.30	1.50		0.0	2111
BEAR CR EMRIA	37.80	40.50	44.90	POWDER RIVER	14.60	62.20	4.30	1.10	450443	1061037	SB	10420	09/01/88
									16.70	1.10		0.0	2003

Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BEAR CR EMRIA	24.00	35.40	33.40	POWDER RIVER	31.20	43.70	3.50	5.70	450448	1061111	SB	7540	09/01/88
									15.00	0.90		0.0	2102
HOLE M75-35	32.00	41.00	51.50	POWDER RIVER	7.50	66.80	4.30	0.40	450449	1060451	SB	11200	09/01/88
									19.50	1.50		0.0	2228
BEAR CR EMRIA	32.50	42.70	48.90	POWDER RIVER	8.40	67.10	4.40	1.20	450513	1061113	SB	11400	09/01/88
									17.60	1.30		0.0	2228
BEAR CR EMRIA	32.10	42.90	43.80	POWDER RIVER	13.30	63.10	4.20	0.60	450527	1061055	SB	10720	09/01/88
									17.30	1.50		0.0	2111
HOLE M75-33	31.50	41.60	52.90	POWDER RIVER	5.50	68.90	4.50	0.30	450528	1060628	SB	11690	09/01/88
									19.30	1.50		0.0	2291
HOLE M75-20	31.70	40.30	53.80	POWDER RIVER	5.90	68.40	4.50	0.30	450546	1061433	SB	11610	09/01/88
									19.40	1.50		0.0	2192
BEAR CR EMRIA	31.90	45.40	46.40	POWDER RIVER	8.20	67.00	4.60	1.20	450556	1061207	SB	11390	09/01/88
									17.70	1.30		0.0	2147
BEAR CR EMRIA	28.80	43.10	48.60	POWDER RIVER	8.30	66.40	4.80	0.70	450604	1061211	SB	11260	09/01/88
									18.50	1.30		0.0	2156
HOLE M75-18	28.90	41.90	51.90	POWDER RIVER	6.20	68.80	4.90	0.40	450657	1061455	SB	11690	09/01/88
									18.30	1.40		0.0	2399
HOLE M75-13	29.90	40.90	52.80	POWDER RIVER	6.30	68.90	4.50	0.40	450812	1061139	SB	11650	09/01/88
									18.60	1.30		0.0	2246
HOLE M75-9	26.70	40.20	50.90	POWDER RIVER	8.90	66.30	4.70	0.30	450827	1061402	SB	11250	09/01/88
									18.60	1.20		0.0	2057
HOLE M75-16	30.40	42.00	51.70	POWDER RIVER	6.30	68.60	4.50	0.60	450839	1060851	SB	11580	09/01/88
									18.60	1.40		0.0	2435
OUTCROP	32.20	47.80	41.60	BIG HORN	10.60	58.90	3.30	0.40	451015	1063425	SB	8910	09/01/88
									25.50	1.30		0.0	2399
OUTCROP	38.80	47.50	42.50	ROSEBUD	10.00	59.20	3.60	0.30	451200	1063420	SB	9070	09/01/88
									25.80	1.10		0.0	2516
OUTCROP	26.20	45.70	48.70	POWDER RIVER	5.60	65.30	4.20	0.70	451317	1062938	SB	10850	09/01/88
									22.80	1.40		0.0	2138
OUTCROP	34.70	46.10	43.80	POWDER RIVER	10.10	59.00	3.30	0.90	451435	1062803	SB	9050	09/01/88
									25.20	1.50		0.0	2066

Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
OUTCROP	38.40	44.30	43.50	POWDER RIVER	12.20	57.80	3.00	D177821	0.80	451730	1062404	SB	8690	09/01/88
										24.90	1.30		0.0	2084
OUTCROP	34.20	46.50	45.30	POWDER RIVER	8.20	59.40	3.20	D177824	0.80	451803	1062727	SB	8950	09/01/88
										26.90	1.50		0.0	2183
OUTCROP	26.30	42.60	52.70	POWDER RIVER	4.70	68.60	4.40	D177823	0.40	452036	1062819	SB	11490	09/01/88
										20.70	1.20		0.0	1940
OUTCROP	34.70	46.40	45.20	POWDER RIVER	8.40	59.60	3.10	D177822	0.80	452059	1062912	SB	9000	09/01/88
										26.70	1.40		0.0	2156
	26.00	43.90	46.90	POWDER RIVER	9.20	65.20	4.90	D171967	0.30	453050	1060830	SB	11230	09/01/88
										19.30	1.10		0.0	0
	35.10	40.70	48.20	POWDER RIVER	11.10	66.70	4.60	D170203	0.30	453140	1060922	SB	11200	09/01/88
										16.20	1.10		0.0	0
	26.40	39.00	53.10	POWDER RIVER	7.90	69.70	4.40	D169481	0.50	453149	1061013	SB	11830	09/01/88
										16.30	1.20		0.0	0
	16.80	49.10	38.80	POWDER RIVER	12.10	58.00	4.60	D169031	0.40	453159	1060936	SB	9820	09/01/88
										23.60	1.30		0.0	0
	29.10	42.00	50.20	POWDER RIVER	7.80	68.50	4.70	D169477	0.30	453234	1060821	SB	11590	09/01/88
										17.70	1.00		0.0	0
	16.40	36.40	52.00	ROSEBUD	11.60	67.50	4.50	D163187	1.10	454852	1063652	SB	11630	09/01/88
										14.30	1.00		0.0	0
	20.70	39.00	52.20	ROSEBUD	8.80	69.60	4.80	D163181	0.80	454852	1063655	SB	12120	09/01/88
										15.00	1.00		0.0	0
	19.80	36.80	54.00	ROSEBUD	9.20	69.90	4.50	D163179	0.60	454856	1063655	SB	11910	09/01/88
										14.70	1.10		0.0	0
	25.50	36.40	50.30	ROSEBUD	13.30	64.80	4.30	D168919	4.20	455023	1064417	SB	11250	09/01/88
										12.50	0.90		0.0	0
	24.90	37.00	49.00	ROSEBUD	14.00	65.30	4.40	D168913	2.40	455149	1063526	SB	11230	09/01/88
										13.00	0.90		0.0	0
	26.40	39.30	48.30	ROSEBUD	12.40	66.50	4.70	D168917	0.70	455207	1064230	SB	11470	09/01/88
										14.70	1.00		0.0	0
ROSEBUD MINE, TIPPLE SAMPLE	15.80	36.50	48.30	ROSEBUD	15.20	64.80	4.40	D161321	4.20	455230	1063000	SB	11080	09/01/88
										10.40	1.00		0.0	0

Coal Field Information Printout for: MT - Montana

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	8.30	34.50	37.60	BROADWATER	27.90	47.40	D166183	2.60	455230	1113000	B	7100	09/01/88
								0.40	20.10	1.60		0.0	0
	25.50	35.60	51.20	ROSEBUD	13.20	62.90	D168915	4.10	455427	1063544	SB	11070	09/01/88
								5.60	13.30	0.90		0.0	0
	26.70	44.70	47.00	PRAIRIE	8.30	62.50	D169984	4.00	464500	1054500	SB	10110	09/01/88
								0.50	23.60	1.10		0.0	0
	3.60	31.30	61.70	JUDITH BASIN	7.00	71.80	D166181	3.90	464500	1095230	B	12180	09/01/88
								2.80	13.60	0.90		0.0	0
	34.50	37.60	51.10	RICHLAND	11.30	63.20	D165757	3.60	472230	1042150	L	10030	09/01/88
								0.30	20.50	1.10		0.0	0
	36.40	37.70	47.20	RICHLAND	15.10	60.00	D165763	4.00	472400	1042130	L	9620	09/01/88
								0.50	19.30	1.10		0.0	0
	15.80	38.40	27.30	MCCONE	34.30	41.70	D178789	2.40	473258	1061212	SB	6120	09/01/88
								1.50	19.10	1.00		0.0	2300
	23.60	39.70	36.10	GARFIELD	24.20	50.20	D178780	3.00	473431	1061725	SB	7640	09/01/88
								0.70	21.00	0.90		0.0	2057

Coal Field Information Printout for

ND - North Dakota

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	41.50	53.40	30.90	BOWMAN	15.70	50.60	3.10	2.70	460000	1030000	L	7560	09/01/88
									26.70	1.20		0.0	0
PEERLESS MINE	45.00	44.40	47.60	BOWMAN	8.00	64.80	4.50	1.30	461049	1030205	L	10930	09/01/88
									20.50	0.90		0.0	0
PEERLESS MINE	44.60	44.00	48.80	BOWMAN	7.20	65.50	4.60	1.30	461050	1030203	L	10990	09/01/88
									20.50	0.90		0.0	0
PEERLESS MINE	42.20	44.10	44.80	BOWMAN	11.10	63.30	4.50	1.00	461051	1030201	L	10690	09/01/88
									19.40	0.70		0.0	0
PEERLESS MINE	37.50	48.10	38.90	BOWMAN	13.00	62.80	4.90	1.60	461051	1030202	L	10820	09/01/88
									16.70	1.00		0.0	0
PEERLESS MINE	42.30	43.30	44.40	BOWMAN	12.30	61.70	4.50	3.10	461051	1030205	L	10540	09/01/88
									17.70	0.70		0.0	0
PEERLESS MINE	42.70	47.10	42.10	BOWMAN	10.80	64.00	4.80	1.60	461100	1030205	L	11030	09/01/88
									17.90	0.90		0.0	0
PEERLESS MINE	46.20	46.30	43.50	BOWMAN	10.20	62.90	4.20	1.70	461102	1030201	L	10370	09/01/88
									20.30	0.70		0.0	0
PEERLESS MINE	36.50	42.70	44.10	BOWMAN	13.20	60.80	4.00	4.60	461104	1030205	L	10310	09/01/88
									16.60	0.80		0.0	0
	29.50	37.90	35.00	ADAMS	27.10	49.60	3.60	3.40	461206	1020337	L	8300	09/01/88
									15.60	0.70		0.0	2003
	36.80	39.10	31.80	HETTINGER	29.10	47.70	3.50	1.90	461405	1022100	L	7720	09/01/88
									16.90	0.90		0.0	2228
	35.50	41.90	37.20	GRANT	20.90	55.80	4.10	1.60	462124	1014143	L	9370	09/01/88
									16.70	0.90		0.0	2147
	35.40	42.70	44.10	GRANT	13.20	61.60	4.30	2.30	462337	1015749	L	10440	09/01/88
									17.10	1.50		0.0	2102
	41.40	39.40	39.10	HETTINGER	21.50	54.70	4.30	3.10	462630	1025256	L	9480	09/01/88
									15.40	1.00		0.0	2003
	37.20	42.50	43.60	HETTINGER	13.90	61.70	4.20	3.00	462633	1023723	L	10640	09/01/88
									16.10	1.10		0.0	2111
	39.90	43.90	41.60	GOLDEN VALLEY	14.50	57.60	4.30	1.00	464632	1040050	L	9780	09/01/88
									21.90	0.70		0.0	2183

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
34.30	34.90	33.30	33.30	GOLDEN VALLEY	31.80	46.60	3.20	D196627	4.90	464713	1040120	L	7610	09/01/88
										12.70	0.80		0.0	2120
43.40	39.20	40.00	40.00	GOLDEN VALLEY	20.80	54.40	3.70	D196637	1.60	464907	1040130	L	8950	09/01/88
										18.60	0.90		0.0	2156
40.90	41.10	46.20	46.20	GOLDEN VALLEY	12.70	61.40	4.00	D196640	1.40	465045	1040145	L	10180	09/01/88
										19.70	0.80		0.0	2246
23.10	42.30	37.20	37.20	STARK	20.50	54.50	3.80	D173466	6.40	465126	1024125	L	9380	09/01/88
										14.00	0.80		0.0	0
41.10	43.00	41.60	41.60	STARK	15.40	57.40	3.50	D213999	4.40	465417	1030900	L	9760	09/01/88
										18.10	1.20		0.0	2021
43.70	41.00	46.70	46.70	STARK	12.30	62.00	3.60	D213997	1.10	465457	1030000	L	10380	09/01/88
										19.80	1.20		0.0	2030
44.80	43.50	45.60	45.60	STARK	10.90	62.90	4.00	D213994	1.40	465512	1030345	L	10570	09/01/88
										19.50	1.30		0.0	2174
39.00	38.70	37.00	37.00	STARK	24.30	53.20	3.60	D213996	2.80	465602	1030956	L	9030	09/01/88
										15.00	1.10		0.0	2039
40.40	40.10	36.10	36.10	STARK	23.80	52.00	3.70	D213988	4.40	465634	1030504	L	8880	09/01/88
										15.10	1.00		0.0	1877
45.10	42.80	46.80	46.80	STARK	10.40	63.20	4.20	D213991	0.90	465655	1030031	L	10610	09/01/88
										20.20	1.10		0.0	2228
42.60	47.00	43.40	43.40	STARK	9.60	63.40	4.80	D213983	0.70	465749	1030502	L	10830	09/01/88
										20.30	1.20		0.0	2291
45.00	42.20	47.30	47.30	STARK	10.50	62.80	4.20	D213985	0.90	465849	1030318	L	10430	09/01/88
										20.50	1.10		0.0	2138
37.80	40.40	45.80	45.80	GOLDEN VALLEY	13.80	61.00	3.90	D196635	1.00	470041	1040100	L	10050	09/01/88
										19.30	1.00		0.0	2156
39.20	46.60	42.40	42.40	GOLDEN VALLEY	11.00	62.00	4.80	D196629	1.50	470118	1040015	L	10680	09/01/88
										19.50	1.20		0.0	2291
CENTER MINE				OLIVER	8.10	65.30	4.30	D165568	0.80	470300	1011510	L	10780	09/01/88
34.20	41.50	50.40	50.40							20.40	1.10		0.0	0
CENTER MINE				OLIVER				D165570	0.40	470301	1011510	L	10870	09/01/88
33.20	44.20	49.20	49.20		6.60	65.20	4.4			22.40	1.00		0.0	0

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SOUTH BEULAH MINE				MERCER		D165572		470830	1014501	L	10330	09/01/88
29.80	41.50	46.10	12.40		60.40	4.30	3.10	19.10	0.70		0.0	0
SOUTH BEULAH MINE				MERCER		D165573		470830	1014502	L	11070	09/01/88
32.90	43.10	49.40	7.50		65.50	4.70	1.00	20.60	0.70		0.0	0
SOUTH BEULAH MINE				MERCER		D165574		470830	1014503	L	8970	09/01/88
28.40	37.00	40.80	22.20		56.20	3.40	1.50	15.70	1.00		0.0	0
SOUTH BEULAH MINE				MERCER		D165575		470830	1014504	L	8780	09/01/88
30.10	35.90	40.10	24.00		54.40	3.20	1.30	16.10	1.00		0.0	0
38.00	43.20	43.60	13.20	DUNN		D186054		471009	1025145	L	10490	09/01/88
					62.10	4.20	1.60	17.90	1.00		0.0	2228
40.20	44.30	45.20	10.50	OLIVER		D186053		471142	1014433	L	11030	09/01/88
					65.10	4.10	2.20	17.30	0.80		0.0	2354
33.60	44.10	45.40	16.50	OLIVER		D194035		471306	1012109	L	10530	09/01/88
					62.50	4.50	0.90	20.50	1.10		0.0	1994
30.00	41.90	50.50	7.60	MERCER		D175934		471439	1015338	L	10730	09/01/88
					64.50	4.10	0.30	22.50	1.00		0.0	2129
35.20	44.40	46.60	9.00	MERCER		D175938		471450	1014532	L	9880	09/01/88
					61.90	3.80	0.50	23.60	.20		0.0	2084
27.70	42.30	46.40	11.30	MERCER		D175936		471455	1015330	L	10550	09/01/88
					63.00	4.20	1.70	18.80	1.00		0.0	2147
INDIAN HEAD MINE				MERCER		D165578		471505	1014510	L	10620	09/01/88
30.70	42.30	48.80	8.90		64.00	4.00	0.70	21.40	1.00		0.0	0
INDIAN HEAD MINE				MERCER		D165576		471510	1014510	L	10170	09/01/88
31.10	38.80	46.50	14.70		61.80	3.70	1.00	17.80	1.00		0.0	0
27.50	39.40	49.20	11.40	MERCER		D175932		471517	1015412	L	10220	09/01/88
					62.50	4.10	0.40	20.80	0.80		0.0	2084
27.50	41.40	50.00	8.60	MERCER		D175930		471520	1015422	L	10620	09/01/88
					64.30	4.20	0.60	21.30	1.00		0.0	2129
INDIAN HEAD MINE				MERCER		D186051		471530	1015345	L	11090	09/01/88
34.60	44.20	47.80	8.00		65.80	4.40	0.50	20.40	0.90		0.0	2219
39.70	43.30	43.90	12.80	DUNN		D180016		471549	1023713	L	10200	09/01/88
					60.80	4.30	1.70	19.60	0.80		0.0	2255

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
GLENHAROLD MINE				MERCER		D165564				L		
34.60	44.60	48.80	6.60		65.40	4.50	0.80	471600	1011600		10950	09/01/88
								21.60	1.10		0.0	0
GLENHAROLD MINE				MERCER		D165565				L		
28.60	45.80	47.60	6.60		65.10	4.50	0.70	471601	1011600		10950	09/01/88
								22.00	1.10		0.0	0
GLENHAROLD MINE				MERCER		D165566				L		
26.60	44.30	49.00	6.70		65.00	4.60	0.80	471602	1011600		10870	09/01/88
								21.70	1.20		0.0	0
GLENHAROLD MINE				MERCER		D165567				L		
31.40	44.60	49.00	6.40		65.40	4.70	0.70	471603	1011600		10980	09/01/88
								21.60	1.20		0.0	0
				DUNN		D180008				L		
40.10	42.40	46.60	11.00		63.10	4.10	1.20	471613	1022911		10500	09/01/88
								19.80	0.80		0.0	2165
				MERCER		D186052				L		
38.70	44.90	46.80	8.30		65.40	4.60	1.00	471614	1013601		11170	09/01/88
								19.60	1.10		0.0	2417
				DUNN		D180014				L		
40.90	43.50	45.00	11.50		61.90	4.20	1.70	471615	1023246		10350	09/01/88
								19.90	0.80		0.0	2318
				DUNN		D180017				L		
40.00	43.80	43.70	12.50		60.90	4.10	2.00	471615	1023470		10190	09/01/88
								19.70	0.80		0.0	2381
				MERCER		D194029				L		
33.10	43.60	45.80	10.60		62.70	4.50	0.90	471640	1012538		10410	09/01/88
								20.30	1.00		0.0	2156
				MERCER		D221097				L		
33.60	42.60	47.80	9.60		65.10	4.60	0.90	471657	1014938		11160	09/01/88
								18.60	1.20		0.0	2264
				DUNN		D180009				L		
40.50	43.20	46.20	10.60		63.10	4.20	1.30	471706	1023323		10500	09/01/88
								20.00	0.80		0.0	2219
				DUNN		D180007				L		
37.90	43.00	44.60	12.40		61.40	4.20	1.80	471707	1022744		10240	09/01/88
								19.20	1.00		0.0	2174
				DUNN		D180011				L		
39.90	42.90	46.30	10.80		62.90	4.30	1.20	471707	1023516		10500	09/01/88
								20.00	0.80		0.0	2408
				DUNN		D180013				L		
34.60	41.30	40.80	17.90		56.80	3.90	2.00	471707	1023750		9470	09/01/88
								18.60	0.80		0.0	2156
				DUNN		D178498				L		
46.40	48.70	27.20	24.10		48.20	2.90	2.20	471708	1023311		7260	09/01/88
								21.70	0.90		0.0	2039
				DUNN		D179369				L		
42.70	42.10	43.60	14.30		61.30	4.30	2.40	471711	1023400		10310	09/01/88
								17.00	0.70		0.0	2246

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	36.00	44.20	28.00	MERCER	43.70	2.70	3.00	471718	1014822	L	6620	09/01/88
								21.60	1.20		0.0	2156
	42.00	41.90	42.90	DUNN	59.90	4.20	1.20	471732	1023302	L	10120	09/01/88
								18.60	0.90		0.0	2111
	36.10	34.10	34.90	DUNN	47.80	3.40	3.90	471733	1023454	L	8180	09/01/88
								13.60	0.30		0.0	2426
	41.00	43.10	47.70	DUNN	64.10	4.30	0.80	471745	1023015	L	10680	09/01/88
								20.80	0.80		0.0	2147
	43.20	42.80	41.50	DUNN	59.70	4.00	1.80	471745	1023403	L	9860	09/01/88
								18.10	0.70		0.0	2399
	47.00	45.30	44.70	DUNN	64.10	4.50	1.50	471750	1023517	L	10770	09/01/88
								19.10	0.80		0.0	2291
	37.80	44.10	45.60	DUNN	62.00	4.30	1.30	471758	1023645	L	10360	09/01/88
								21.10	1.00		0.0	2264
	28.70	35.20	41.00	MERCER	54.80	3.70	2.50	471759	1014856	L	9360	09/01/88
								14.10	1.10		0.0	2183
	43.10	48.10	43.60	DUNN	65.00	4.80	1.20	471800	1023215	L	11000	09/01/88
								20.00	0.70		0.0	2336
	40.10	43.20	43.60	DUNN	61.00	4.20	3.00	471800	1023322	L	10320	09/01/88
								17.80	0.80		0.0	2264
	45.40	43.20	47.30	DUNN	65.00	4.10	0.50	471803	1023229	L	10810	09/01/88
								20.00	0.90		0.0	2156
	47.40	42.40	45.80	DUNN	63.40	4.20	2.10	471813	1023130	L	10610	09/01/88
								17.20	1.30		0.0	2741
	44.40	44.10	46.20	DUNN	63.60	4.30	1.10	471813	1023442	L	10700	09/01/88
								20.40	0.90		0.0	2507
	43.80	47.80	44.00	DUNN	66.00	4.50	0.90	471822	1023515	L	11090	09/01/88
								19.50	0.90		0.0	2498
	46.60	42.30	46.80	DUNN	63.40	4.30	1.30	471826	1023403	L	10710	09/01/88
								19.20	0.90		0.0	2147
	40.30	43.70	47.10	MERCER	65.00	4.60	2.70	471848	1015137	L	11110	09/01/88
								17.70	0.80		0.0	2156

Coal Field Information Printout for: ND - North Dakota

Location Moisture	Volatiles	Fixed Crbn	County Ash	Carbon	Hydrogen	Code Number Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
38.40	42.70	47.10	MERCER	65.00	4.40	D196052 1.50	471850 18.10	1015234 0.80	L	10890 0.0	09/01/88 2210
37.90	41.40	47.30	DUNN	62.10	4.00	D180015 1.00	471852 20.60	1022743 1.00	L	10330 0.0	09/01/88 2246
44.00	46.80	38.60	DUNN	61.50	4.30	D180076 1.80	471852 16.90	1023459 0.90	L	10270 0.0	09/01/88 2381
44.30	47.00	40.60	DUNN	62.20	4.10	D180083 2.00	471859 18.40	1023413 0.90	L	10310 0.0	09/01/88 2327
44.70	46.10	45.60	DUNN	66.20	4.60	D180080 0.70	471913 19.30	1023516 0.90	L	10960 0.0	09/01/88 2516
39.60	41.20	47.40	MERCER	64.10	4.60	D196057 1.50	471914 17.40	1015045 1.00	L	10780 0.0	09/01/88 2156
36.50	41.30	47.50	MERCER	64.10	4.20	D194869 1.40	471920 18.20	1015400 0.90	L	10570 0.0	09/01/88 2156
35.70	40.90	44.60	MERCER	61.00	4.30	D196059 3.00	471924 16.40	1014940 0.80	L	10420 0.0	09/01/88 2111
27.60	35.90	37.30	MERCER	50.50	3.10	D194865 1.70	471940 17.10	1015214 0.80	L	8510 0.0	09/01/88 2093
34.30	40.00	45.80	MERCER	61.10	4.10	D196076 1.70	471940 18.10	1015259 0.80	L	10250 0.0	09/01/88 2048
40.30	42.40	45.20	DUNN	61.30	4.10	D180019 1.20	471944 20.20	1023400 0.80	L	10210 0.0	09/01/88 2219
40.70	43.70	46.50	DUNN	62.60	4.50	D180018 1.20	472034 21.10	1023243 0.80	L	10520 0.0	09/01/88 2318
35.70	42.10	46.40	MERCER	63.20	4.40	D194863 1.20	472115 18.90	1015052 0.80	L	10470 0.0	09/01/88 2291
34.50	41.20	47.50	MERCER	63.10	4.20	D194862 1.10	472126 19.40	1015225 0.90	L	10360 0.0	09/01/88 2030
36.60	39.90	47.30	MERCER	62.70	4.20	D194861 0.50	472215 18.90	1015115 0.90	L	10270 0.0	09/01/88 2129
38.10	42.30	44.90	MERCER	61.60	4.30	D196062 1.00	472216 19.30	1015232 1.00	L	10450 0.0	09/01/88 2102

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
31.70	39.50	44.80	15.70	MERCER	59.60	3.90	0.90	472309	1015145	L	9690	0.0	2129
37.60	40.70	42.20	17.10	MCKENZIE	58.60	3.90	2.40	472315	1035145	L	9790	0.0	1967
35.70	40.70	45.50	13.80	MERCER	61.80	4.10	2.20	472423	1014335	L	10100	0.0	2192
38.60	40.70	42.90	16.40	MCKENZIE	58.70	3.90	3.90	472620	1035730	L	9810	0.0	2057
42.10	43.00	45.40	11.60	MCKENZIE	61.30	4.20	1.60	473645	1035505	L	10340	0.0	2120
41.40	42.70	48.90	8.40	MCKENZIE	64.60	4.30	0.50	473705	1034640	L	10700	0.0	2129
30.30	35.20	34.00	10.80	MCLEAN	49.30	3.90	0.70	473847	1012000	L	8360	0.0	2246
31.20	35.50	33.70	30.80	MCLEAN	48.50	4.30	0.60	473853	1013757	L	8110	0.0	2318
41.90	43.20	41.10	15.70	MCKENZIE	59.00	4.00	2.10	474450	1025900	L	10140	0.0	1913
41.10	39.40	39.20	21.40	MCKENZIE	54.00	3.80	2.20	474745	1025630	L	9070	0.0	1931
40.20	42.10	48.40	9.50	MCLEAN	64.10	4.40	0.80	474830	1013805	L	10850	0.0	2183
VELVA STRIP MINE													
37.20	44.10	46.00	9.90	WARD	63.80	4.50	0.80	475231	1005731	L	10700	0.0	0
42.90	42.70	45.60	11.70	MCKENZIE	61.80	4.30	0.70	475602	1025510	L	10280	0.0	1913
37.80	43.40	47.80	8.80	WARD	64.80	4.30	0.50	480355	1011710	L	10760	0.0	2372
45.10	41.90	45.70	12.40	WILLIAMS	61.10	4.30	0.60	481032	1031022	L	10200	0.0	2210
40.80	46.10	39.00	14.90	WILLIAMS	58.70	4.00	3.90	481045	1031210	L	9880	0.0	2174

Coal Field Information Printout for: ND - North Dakota

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
43.50	42.60	42.20	42.20	WILLIAMS	15.20	60.40	D240991	2.30	481153	1034754	L	10430	09/01/88
									16.60	1.20		0.0	2183
46.80	43.60	43.70	43.70	WILLIAMS	12.70	62.30	D240980	2.20	481233	1031135	L	10510	09/01/88
									17.60	0.90		0.0	2390
43.00	42.70	46.40	46.40	WILLIAMS	10.90	63.60	D240982	0.70	481335	1030118	L	10550	09/01/88
									19.30	1.20		0.0	2273
44.10	44.30	44.10	44.10	WILLIAMS	11.60	62.80	D240986	2.60	481454	1033103	L	10590	09/01/88
									17.60	1.00		0.0	2444
40.60	41.50	43.60	43.60	WILLIAMS	14.90	60.20	D240989	1.50	481521	1034124	L	10040	09/01/88
									18.30	1.00		0.0	2237
41.70	36.90	40.70	40.70	WILLIAMS	22.40	54.50	D240983	0.60	481525	1033059	L	9060	09/01/88
									17.80	0.90		0.0	2318
43.60	44.80	47.80	47.80	WILLIAMS	7.40	66.80	D240976	0.90	481730	1030750	L	11260	09/01/88
									19.10	1.10		0.0	2543
45.70	40.00	44.70	44.70	WILLIAMS	15.30	60.60	D240974	1.20	481743	1030156	L	10030	09/01/88
									17.80	1.00		0.0	2228
45.30	42.80	50.80	50.80	WILLIAMS	6.40	66.50	D240973	0.40	482031	1030356	L	10800	09/01/88
									21.20	1.10		0.0	2543
24.10	40.60	48.50	48.50	BURKE	10.90	64.60	D165632	0.70	484500	1025230	L	10900	09/01/88
									18.20	1.20		0.0	0
39.20	39.60	45.90	45.90	BURKE	14.50	61.80	D210365	2.00	484825	1023401	L	10580	09/01/88
									16.50	1.00		0.0	2021
36.10	40.70	49.90	49.90	BURKE	9.40	66.30	D210366	0.60	485431	1024825	L	11260	09/01/88
									17.70	1.30		0.0	0

Coal Field Information Printout for

NE - Nebraska

Coal Field Information Printout for: NE - Nebraska

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
				RICHARDSON								
	35.20	45.00	32.30	22.70	47.20	2.80	1.50	400125	952124	B	6840	09/01/88
								24.40	1.40		0.0	2156
				RICHARDSON								
	20.50	39.00	36.20	24.80	48.60	3.70	7.20	400144	953546	B	8310	09/01/88
								14.30	1.40		0.0	1832
				PAWNEE								
	17.40	40.70	49.90	9.40	66.70	4.70	5.20	400237	960215	B	11720	09/01/88
								12.50	1.50		0.5	1949
				JOHNSON								
	35.70	40.60	46.20	13.20	59.80	3.20	2.20	402025	961120	B	9490	09/01/88
								20.20	1.40		0.0	2030
				OTOE								
	HOLE NO RM-1-CS							403730	960040	B	7790	09/01/88
	35.40	41.30	37.20	21.50	50.20	3.20	1.20	22.80	1.10		0.0	2048
				OTOE								
								403922	954904	B	7920	09/01/88
	31.20	36.50	34.90	28.60	48.90	3.50	2.00	15.80	1.20		0.0	2138

Coal Field Information Printout for

NM - New Mexico

Coal Field Information Printout for: NM - New Mexico

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
CAPITAN NO 2 MINE	1.20	29.40	45.40	LINCOLN	62.00	D179835	4.50	0.50	333300	1053520	B	11180
								6.70	1.10		2.0	2597
2.00	37.70	49.90	12.40	LINCOLN	70.90	D179833	5.10	0.60	334345	1054215	B	12690
								9.60	1.40		1.0	2417
12.40	41.30	39.00	19.70	LINCOLN	58.40	D179834	3.70	0.70	334350	1054220	B	9650
								16.40	1.10		0.0	2444
HOT SPOTS MINE	6.60	35.10	58.00	SOCORRO	71.90	D179837	4.60	0.50	341900	1072420	B	12370
								14.70	1.40		0.0	2291
8.40	34.80	29.50	35.70	SOCORRO	45.60	D184619	3.10	0.40	342042	1071525	SB	7480
								14.30	0.90		0.0	2552
10.80	38.10	50.20	11.70	CATRON	64.70	D184617	4.30	0.70	343317	1074935	SB	10900
								17.40	1.20		0.0	2804
SUNDANCE STRIP MINE	9.10	44.10	50.40	MCKINLEY	74.90	D183132	5.50	0.70	352735	1083815	SB	13330
								12.10	1.30		0.0	2561
CARBON COAL CO	12.00	43.90	50.10	MCKINLEY	73.50	D183133	5.30	0.50	353125	1084820	SB	13090
								13.30	1.40		0.0	2255
9.60	42.50	47.30	10.20	MCKINLEY	70.30	D176204	5.00	0.60	353732	1085930	SB	12370
								12.70	1.20		3.5	2408
MCKINLEY STRIP MINE	11.20	42.00	43.50	MCKINLEY	66.40	D183130	4.90	0.70	353745	1085955	SB	11810
								12.30	1.20		0.0	2714
17.40	36.60	47.40	16.00	SAN JUAN	65.40	D177043	4.80	0.60	361413	1080941	SB	11310
								11.70	1.50		0.0	2633
17.60	37.50	43.10	19.40	SAN JUAN	61.70	D178921	4.40	0.50	361433	1080820	SB	10830
								12.80	1.20		0.0	2795
28.10	34.90	37.00	28.10	SAN JUAN	49.30	D178919	3.20	0.80	361433	1080823	SB	7930
								17.30	1.30		0.0	2687
20.40	36.40	46.40	17.20	SAN JUAN	64.10	D177040	4.70	0.50	361438	1080941	SB	11140
								12.10	1.40		0.0	2624
21.70	37.80	41.60	20.60	SAN JUAN	60.90	D177047	4.60	0.50	361456	1080823	SB	10650
								12.30	1.10		0.0	2381
17.20	38.20	47.50	14.30	SAN JUAN	66.60	D178928	4.90	0.50	361456	1080931	SB	11710
								12.30	1.40		0.0	2408

Coal Field Information Printout for: NM - New Mexico

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
17.80	40.10	38.20	21.70	SAN JUAN	60.20	4.50	0.70	361505	1080931	SB	10660	0.0	09/01/88 2669
11.00	30.30	29.80	39.90	SAN JUAN	44.40	3.70	1.00	361537	1080931	SB	7830	0.0	09/01/88 2912
SOUTH HOSTEN PIT	11.50	34.20	46.10	SAN JUAN	61.70	4.30	0.60	363530	1082830	SB	10810	0.0	09/01/88 2912
BARBER-MATCHOTT PIT	8.00	36.00	36.00	SAN JUAN	55.30	4.00	0.80	363545	1082900	SB	9590	0.0	09/01/88 2534
SOUTH HOSTEN PIT	9.20	33.50	45.90	SAN JUAN	61.30	4.30	0.60	363610	1082815	SB	10660	0.0	09/01/88 2912
5.70	33.10	41.10	25.80	SAN JUAN	56.70	4.30	0.70	363730	1082230	SB	9950	0.0	09/01/88 0
2.50	32.00	44.60	23.40	COLFAX	63.50	4.50	0.60	364500	1043000	B	11920	0.0	09/01/88 0
2.20	34.00	46.40	19.60	COLFAX	67.20	4.60	0.50	364500	1045230	B	12080	0.0	09/01/88 0
1.50	36.90	55.90	7.20	COLFAX	78.60	5.30	0.40	364500	1055230	SB	14010	0.0	09/01/88 0
6.90	38.90	37.40	23.70	SAN JUAN	56.40	4.00	1.60	364500	1082230	SB	9650	0.0	09/01/88 0
SAN JUAN MINE	4.80	39.20	42.90	SAN JUAN	63.70	4.70	0.90	364600	1082530	SB	11300	0.5	09/01/88 2534
1.80	37.80	54.40	7.80	COLFAX	77.90	5.30	0.40	365230	1045230	B	13910	0.0	09/01/88 0
YORK CANYON MINE	1.70	34.80	50.40	COLFAX	71.40	4.90	0.50	365300	1045500	B	12740	8.0	09/01/88 2363

Coal Field Information Printout for

NV - Nevada

Coal Field Information Printout for: NV - Nevada

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
LEWIS MINE				LYON								
24.00	45.60	20.50	33.90		33.10	2.90	7.10	383040	1185450	L	5440	09/01/88
								22.20	0.80		0.0	2102
PANCAKE MINE				WHITE PINE								
7.90	34.10	52.50	13.40		65.00	3.80	2.40	392405	1154015	B	11090	09/01/88
								14.40	1.00		0.0	2282
PANCAKE MINE				WHITE PINE								
6.80	33.40	54.30	12.30		66.10	3.90	2.30	392405	1154021	B	11160	09/01/88
								14.40	1.00		0.0	0
PARIS MINE				WHITE PINE								
1.30	20.00	70.30	9.70		79.30	4.30	2.30	400200	1145400	B	13960	09/01/88
								2.70	1.70		3.0	2543

Coal Field Information Printout for

OH - Ohio

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
MEIGS NO 1 MINE	2.90	38.80	39.60	MEIGS	21.60	60.40	4.60	6.30	390332	821439	B	11000	09/01/88
									6.20	0.90		1.0	1949
MEIGS NO 3 MINE	4.60	38.60	38.30	VINTON	23.10	59.20	4.50	4.20	390413	822219	B	10550	09/01/88
									8.10	0.90		1.5	2282
MEIGS NO 3 MINE	4.40	43.40	42.50	VINTON	14.10	67.20	5.00	2.80	390414	822218	B	12230	09/01/88
									9.90	1.00		2.0	2282
MEIGS NO 2 MINE	5.40	39.30	45.70	MEIGS	15.00	66.10	5.00	3.10	390829	821734	B	11820	09/01/88
									9.70	1.10		1.5	2156
MEIGS NO 2 MINE	4.70	41.80	46.70	MEIGS	11.50	69.20	5.10	3.10	390829	821736	B	12530	09/01/88
									10.10	1.00		4.0	2147
CORE PPC 1	3.30	40.10	50.20	WASHINGTON	9.70	73.80	5.00	4.40	393408	812011	B	13550	09/01/88
									5.80	1.30		6.0	2138
PPC 3C	3.40	38.20	51.90	NOBLE	9.90	74.20	5.00	3.70	393556	811810	B	13410	09/01/88
									5.90	1.30		5.5	2129
PPC 2C	3.00	35.50	49.90	NOBLE	14.60	70.90	4.80	2.60	393642	811928	B	12710	09/01/88
									5.80	1.30		4.0	2138
R&F COAL, VARGO PIT	8.00	33.30	45.20	PERRY	21.50	60.50	4.00	4.10	393905	820836	B	10750	09/01/88
									8.80	1.10		1.5	2111
SUNNYHILL NO 4 MINE	5.80	32.70	37.80	PERRY	29.50	54.90	3.90	2.20	394040	821102	B	9670	09/01/88
									8.50	1.00		0.5	2651
SUNNYHILL NO 4 MINE	6.40	36.00	41.70	PERRY	22.30	59.10	4.20	6.30	394041	821100	B	10730	09/01/88
									7.00	1.10		1.0	2129
R&F COAL, VARGO PIT	2.60	35.30	41.40	PERRY	23.30	59.50	4.30	2.30	394224	820546	B	10550	09/01/88
									9.50	1.00		1.5	2678
NA COAL CORP, NO 7 MINE	2.00	40.00	46.60	MONROE	13.40	70.10	4.90	4.10	394230	805230	B	12690	09/01/88
									6.30	1.20		7.0	2093
NA COAL CORP, NO 7 MINE	1.00	39.90	48.10	MONROE	12.00	70.10	5.00	4.20	394340	805216	B	12710	09/01/88
									7.50	1.20		7.0	2093
NA COAL CORP, NO 4 MINE	2.00	41.70	47.10	MONROE	11.20	71.60	5.20	5.00	394740	805106	B	12970	09/01/88
									5.80	1.20		7.0	2093
NA COAL CORP, NO 4 MINE	2.00	44.10	46.90	MONROE	9.00	73.90	5.20	3.70	394740	805108	B	13360	09/01/88
									6.90	1.30		7.5	2093

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
NA COAL CORP, NO 1 MINE	2.00	41.90	47.40	MONROE	10.70	72.00	D173518	5.00	395047	805711	B	13020	09/01/88
								4.60	6.50	1.20		5.0	2030
NA COAL CORP, NO 1 MINE	2.00	42.60	47.60	MONROE	9.80	72.50	D173515	5.20	395047	805712	B	13140	09/01/88
								4.70	6.60	1.20		6.5	2048
NA COAL CORP, NO 5 MINE	2.10	43.30	46.10	BELMONT	10.60	71.30	D173517	5.10	395244	805224	B	13050	09/01/88
								5.20	6.60	1.20		6.0	2048
Y & O COAL, ALLISON	2.30	42.20	45.20	BELMONT	12.60	70.50	D173516	4.90	395334	805933	B	12800	09/01/88
								4.90	5.90	1.20		5.0	2048
Y & O COAL, ALLISON	2.20	42.00	48.20	BELMONT	9.80	73.00	D173510	5.00	395339	805934	B	13190	09/01/88
								4.40	6.60	1.20		6.5	2030
NA COAL CORP, NO 6 MINE	2.30	42.40	47.30	BELMONT	10.30	72.50	D173520	5.20	395458	805749	B	13160	09/01/88
								4.70	6.10	1.20		6.0	2039
NA COAL CORP, NO 6 MINE	2.30	42.30	46.90	BELMONT	10.80	71.60	D173521	5.00	395459	805749	B	13020	09/01/88
								5.20	6.20	1.20		5.0	2030
NA COAL CORP NO 3 MINE	1.60	42.60	46.60	BELMONT	10.80	72.10	W187048	5.10	395635	805458	B	13080	09/01/88
								4.60	6.30	1.10		7.0	2039
NA COAL CORP NO 3 MINE	1.80	38.40	49.00	BELMONT	12.60	69.90	W187049	5.00	395636	805505	B	12780	09/01/88
								5.70	5.70	1.10		5.5	2048
BOITCH PIT NO 2	5.00	42.90	53.30	MUSKINGUM	3.80	77.10	W190643	5.50	400050	815544	B	13710	09/01/88
								2.20	10.20	1.20		4.0	1967
R&F COAL, CONE PIT	1.90	37.30	44.70	BELMONT	18.00	64.90	W189065	4.70	400102	810106	B	11740	09/01/88
								3.10	8.10	1.20		4.5	2381
	1.80	39.00	48.70	BELMONT	12.30	70.20	W188929	4.90	400129	811130	B	12610	09/01/88
								3.10	8.20	1.30		5.5	2129
BOITCH PIT NO 1	5.00	44.30	49.00	MUSKINGUM	6.70	71.20	W190645	5.00	400130	815734	B	12890	09/01/88
								5.30	10.70	1.10		3.5	2372
CONSOL COAL CO 46A PIT	2.80	42.90	43.60	BELMONT	13.50	69.10	W188970	4.90	400244	811044	B	12440	09/01/88
								4.60	6.70	1.20		5.0	2084
CONSOL COAL CO MOUNTAINEER	2.80	39.80	50.80	BELMONT	9.40	72.00	W189002	5.00	400250	810507	B	13080	09/01/88
								3.10	9.30	1.20		6.0	2282
R&F COAL, VARGO PIT	2.20	30.20	41.70	BELMONT	28.10	57.00	W189052	3.80	400304	805805	B	10040	09/01/88
								3.00	7.20	0.90		1.0	2417

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SAGINAW MINE				BELMONT									
1.90	38.90	50.90	10.20			71.70	5.10	5.40	400327	805501	B	12970	09/01/88
									6.40	1.20		7.0	2003
SAGINAW MINE				BELMONT									
2.00	42.10	50.60	7.30			73.90	5.30	4.00	400327	805502	B	13500	09/01/88
									8.40	1.10		5.0	2057
R&F COAL, PIT 414				BELMONT									
2.90	34.90	42.80	22.30			61.60	4.30	2.40	400400	805943	B	11090	09/01/88
									8.30	1.10		3.0	2426
FAIRVIEW PIT				GUERNSEY									
2.90	39.40	49.10	11.50			70.20	4.90	3.40	400431	811610	B	12570	09/01/88
									6.70	1.30		8.5	2129
DOW MINING, REHM RO PIT				BELMONT									
2.20	32.30	43.70	24.00			60.00	4.50	2.50	400503	805152	B	10840	09/01/88
									8.10	0.90		4.5	2741
M&S MINING, BARTON PIT				BELMONT									
1.80	34.80	44.80	20.40			63.60	4.50	2.40	400524	805321	B	11410	09/01/88
									7.90	1.20		2.5	2570
R&F COAL, 331 PIT				BELMONT									
1.70	38.90	47.00	14.10			69.20	4.80	2.60	400554	805852	B	12330	09/01/88
									8.10	1.20		6.5	2129
CONSOL COAL CO 500				BELMONT									
2.70	43.10	46.70	10.20			70.40	5.10	4.50	400640	811235	B	12930	09/01/88
									8.60	1.20		6.0	2084
CONSOL COAL CO 550 PIT				BELMONT									
2.20	47.10	36.60	16.30			65.10	4.80	7.50	400640	811236	B	12020	09/01/88
									5.10	1.20		5.0	2030
CONSOL COAL CO FRANKLIN 25				BELMONT									
3.50	40.20	49.50	10.30			71.90	5.00	4.20	400846	810211	B	12920	09/01/88
									7.30	1.30		4.0	2084
SIMEO NO 7 MINE				MUSKINGUM									
5.10	48.30	48.30	3.40			77.40	5.50	3.10	400851	815246	B	14040	09/01/88
									9.10	1.50		4.0	2003
SIMCO NO 5 MINE				COSHOCTON									
2.70	44.60	48.90	6.50			72.50	5.20	4.40	400905	815004	B	13240	09/01/88
									10.20	1.20		4.5	2192
PEABODY-SIMCO SURFACE MINE				MUSKINGUM									
5.30	44.20	45.10	10.70			71.20	5.10	4.10	400909	814442	B	12800	09/01/88
									7.50	1.40		3.0	2192
DOW MINING, 250 PIT				BELMONT									
3.70	33.60	44.00	22.40			60.70	4.30	3.30	400949	805012	B	10980	09/01/88
									8.20	1.10		4.0	2192
SIMCO NO 5 MINE				COSHOCTON									
4.90	44.70	49.90	5.40			75.20	5.30	3.70	400951	815004	B	13540	09/01/88
									9.00	1.40		4.0	2030
R&F COAL, PAGE PIT				HARRISON									
2.40	38.40	50.80	10.80			71.60	5.10	3.00	401003	810032	B	12820	09/01/88
									8.20	1.30		4.5	2183

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
R&F COAL, PELTZ-MITCHELL PIT	3.00	36.10	45.70	JEFFERSON	18.20	62.70	4.60	5.30	401008	805100	B	11400	09/01/88
									8.40	0.80		6.0	2084
CONSOL COAL CO 46D PIT	3.00	41.30	47.90	HARRISON	10.80	72.20	5.30	2.90	401018	810145	B	13040	09/01/88
									7.40	1.40		4.0	2246
R&F COAL, VARGO PIT	4.00	36.90	47.60	JEFFERSON	15.50	66.60	4.60	4.80	401020	804517	B	12050	09/01/88
									7.10	1.40		5.0	2084
CONSOL COAL CO 46C PIT	4.00	40.80	49.80	HARRISON	9.40	73.20	5.30	2.10	401020	810405	B	13160	09/01/88
									8.50	1.50		4.0	2390
R&F COAL, GROSSKY PIT	7.30	34.80	45.80	JEFFERSON	19.40	63.10	4.30	1.10	401038	805144	B	11200	09/01/88
									11.00	1.10		0.5	2633
CONSOL COAL CO GEM OF EGYPT	3.10	36.20	53.40	HARRISON	10.40	72.50	4.90	2.00	401041	805838	B	12970	09/01/88
									8.90	1.30		4.0	2534
SIMCO NO 4 MINE	4.40	44.60	48.50	COSHOCTON	6.90	72.10	5.20	3.70	401200	814519	B	13160	09/01/88
									10.70	1.40		4.0	2084
SIMCO NO 4 MINE	4.00	46.70	47.80	COSHOCTON	5.50	73.40	5.50	4.20	401201	814519	B	13400	09/01/88
									10.00	1.40		6.5	2030
BROKEN ARO SURFACE MINE	6.90	40.00	51.90	COSHOCTON	8.10	73.50	5.10	2.80	401430	815904	B	13130	09/01/88
									9.20	1.30		4.0	1958
BROKEN ARO SURFACE MINE	5.70	44.80	44.40	COSHOCTON	10.80	69.70	5.10	5.60	401433	815904	B	12670	09/01/88
									7.60	1.20		4.5	2084
BROKEN ARO SURFACE MINE	5.50	45.00	49.60	COSHOCTON	5.40	75.30	5.10	4.10	401434	815904	B	13540	09/01/88
									8.70	1.40		4.0	2066
CONSOL COAL CO OAK PARK MINE	3.20	38.50	52.20	HARRISON	9.30	73.90	5.00	3.90	401438	810044	B	13160	09/01/88
									6.50	1.40		5.0	2066
CONSOL COAL CO OAK PARK MINE	3.50	40.80	50.50	HARRISON	8.70	74.50	5.20	3.40	401438	810046	B	13520	09/01/88
									6.60	1.60		3.5	2030
CONSOL COAL SILVER SPADE PIT	2.80	38.90	51.50	HARRISON	9.60	71.30	5.00	3.50	401531	810132	B	12980	09/01/88
									9.30	1.30		5.0	2111
CONSOL COAL ROSE VALLEY MINE	3.30	38.80	51.80	HARRISON	9.40	74.50	5.00	3.50	401538	805432	B	13200	09/01/88
									6.20	1.40		6.5	2138
CONSOL COAL ROSE VALLEY MINE	3.10	36.40	53.50	HARRISON	10.10	74.20	5.00	3.10	401539	805437	B	13140	09/01/88
									6.20	1.40		5.0	2183

Coal Field Information Printout for: OH - Ohio

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
CONSOL COAL ROSE VALLEY MINE	3.10	36.80	55.00	HARRISON	8.20	75.60	5.00	W188997	2.30	401644	805432	B	13510	09/01/88
										7.40	1.50		6.0	2192
Y & O COAL, NELMS NO 1 MINE	2.20	41.40	51.30	HARRISON	7.30	76.60	5.30	D173511	2.70	401823	805402	B	13750	09/01/88
										6.70	1.40		4.5	2183
Y & O COAL, NELMS NO 2 MINE	2.40	38.70	52.00	HARRISON	9.30	74.00	5.30	D173513	3.10	401958	805500	B	13430	09/01/88
										7.10	1.20		5.5	2138
CONSOL COAL ROSE VALLEY MINE	2.30	38.90	52.80	JEFFERSON	8.30	73.40	5.10	W188976	3.90	402200	804928	B	13380	09/01/88
										8.00	1.30		5.5	2102
NA COAL CORP JENSIE MINE	2.00	38.60	47.60	JEFFERSON	13.80	70.20	4.90	W187044	4.60	402608	804933	B	12650	09/01/88
										5.20	1.30		4.5	2039

Coal Field Information Printout for

OK - Oklahoma

Coal Field Information Printout for: OK - Oklahoma

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
4.90	21.80	66.00	12.20	LE FLORE	77.50	3.00	2.00	340946	944713	B	13240	4.5	2147
HEAVENER MINE													
1.00	22.20	69.20	8.60	LE FLORE	81.30	4.40	1.00	345252	943650	B	14280	9.0	2111
2.90	30.40	46.10	23.50	PITTSBURG	61.20	4.20	2.10	345415	953720	B	10980	1.5	2732
STAR NO 3 MINE													
1.90	39.70	49.20	11.10	PITTSBURG	71.50	4.90	5.90	345834	953657	B	13160	7.5	2156
GARLAND MINE													
2.60	31.60	63.80	4.60	HASKELL	82.10	5.00	1.60	350647	950730	B	14720	9.0	2066
1.90	31.10	61.70	7.20	HASKELL	79.20	5.10	1.60	350653	951908	B	14100	9.0	2039
3.00	19.00	74.70	6.30	LE FLORE	82.30	4.30	2.80	350855	945405	B	14310	8.0	2048
1.20	20.60	75.90	3.50	HASKELL	85.70	4.60	0.80	350928	945759	B	15040	9.0	2300
2.80	20.20	76.20	3.60	HASKELL	86.30	4.50	0.50	350955	945707	B	14980	9.0	2300
1.00	21.60	75.20	3.20	HASKELL	86.70	4.70	0.50	350958	945640	B	15080	9.0	2039
1.60	20.60	76.80	2.60	HASKELL	87.30	4.60	0.70	351000	945635	B	15210	9.0	2282
GARLAND NO 10 MINE													
3.50	18.80	72.60	8.60	LE FLORE	81.60	4.20	1.10	351010	944703	B	13890	7.5	2354
1.20	19.50	74.80	5.70	HASKELL	84.00	4.30	0.80	351120	950150	B	14490	6.0	2093
KEOTA COAL CO MINE													
1.80	25.20	64.40	10.40	HASKELL	78.20	4.60	1.60	351258	945700	B	13790	9.0	2408
HOYT MINE													
1.80	28.90	62.60	8.50	HASKELL	77.80	5.00	1.50	351545	951808	B	13940	2.5	2237
RIVER VALLEY MINERALS MINE													
1.90	29.00	67.60	3.40	MUSKOGEE	84.20	5.10	0.40	352135	951635	B	14890	0.0	2048

Coal Field Information Printout for: OK - Oklahoma

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
FORUM MINE															
1.00	29.80	61.90	8.30	77.90	D183429	4.80	4.50	352318	951355	B	14080	9.0	2219	09/01/88	
P&K POLLYANNA MINE															
6.10	37.40	58.90	3.70	79.40	D183425	5.00	1.90	352815	955727	B	14160	3.5	2111	09/01/88	
PORTER MINE															
2.60	39.60	55.50	4.90	78.60	D183441	5.40	3.30	355150	953135	B	14390	7.5	2246	09/01/88	
GABLES REDONDA MINE															
1.30	33.30	46.80	19.90	64.30	D183428	4.40	6.80	360552	953005	B	11890	6.0	2255	09/01/88	
MCNABB MINE															
4.30	32.10	62.90	5.00	80.20	D183443	5.10	0.50	361507	954022	B	14600	0.0	2561	09/01/88	
HEFNER&CO MINE															
2.50	37.00	52.60	10.40	71.80	D18445	5.06	5.90	363234	952155	B	13270	8.5	2156	09/01/88	
ROGERS															
5.70	34.40	57.80	7.80	77.70	D184624	5.10	0.50	363520	952914	B	13780	3.0	2408	09/01/88	
NOWATA															
5.70	35.40	59.50	5.10	79.70	D184622	5.30	0.60	363628	952628	B	14300	6.0	2381	09/01/88	
NOWATA															
2.70	43.40	51.30	5.30	77.60	D184627	5.50	3.40	363934	952645	B	14190	0.0	2318	09/01/88	
NOWATA															
2.90	44.50	48.80	6.70	76.30	D184632	5.30	3.30	363939	952527	B	14000	8.0	2345	09/01/88	
CRAIG															
3.20	44.30	48.90	6.80	75.00	D184629	5.40	4.80	364130	952208	B	13920	8.0	2201	09/01/88	
CRAIG															
3.00	45.80	49.10	5.10	77.90	D184630	5.50	3.10	364226	952213	B	14280	9.0	2363	09/01/88	
NOWATA															
2.80	43.90	50.40	5.70	77.40	D184626	5.50	3.30	364325	952640	B	14190	9.0	2156	09/01/88	
BILLS COAL CO PIT NO 2															
2.70	36.40	49.10	14.50	69.90	D183447	4.80	4.90	365339	951040	B	12740	8.5	2066	09/01/88	
4 STAR COAL AND MINING CO															
2.90	35.10	50.40	14.50	70.00	D183453	4.80	4.60	365422	951240	B	12760	8.5	2012	09/01/88	

Coal Field Information Printout for: OK - Oklahoma

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Free Swell	Hemi Temp	Last Chg
BILLS COAL CO PIT NO 5	3.00	35.80	48.20	CRAIG	16.00	68.70	4.70	D183449	4.60	365455	951202	B	12490	8.0	2102	09/01/88
LEONS COAL CO MINE	2.30	35.90	49.00	CRAIG	15.10	68.70	4.80	D183451	6.20	365552	950850	B	12670	8.5	2012	09/01/88
CUSTOM COAL CO MINE	2.90	38.20	53.10	CRAIG	8.70	75.30	5.10	D183444	3.30	365630	950755	B	13780	7.0	2111	09/01/88

Coal Field Information Printout for

PA - Pennsylvania

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP MINE, KELLEY ENTERPRISE	2.20	36.90	55.10	GREENE	8.00	77.90	5.20	W190575	394516	795652	B	13910	09/01/88
									5.90	1.60		8.0	2516
STRIP MINE, KELLEY ENTERPRISE	2.30	36.50	54.50	GREENE	9.00	77.10	5.20	W190576	394517	795652	B	13760	09/01/88
									6.40	1.60		8.5	2912
STRIP MINE, H&E COAL CO	1.70	40.40	47.10	GREENE	12.50	73.20	5.10	W190577	394540	800028	B	13150	09/01/88
									5.30	1.50		7.0	2516
STRIP MINE, PONTARERO COAL CO	11.80	36.10	54.50	FAYETTE	9.40	70.20	4.20	W190581	395109	795232	B	11970	09/01/88
									12.90	1.50		0.0	2516
PONTARERO & SONS COAL STRIP	7.00	31.20	50.20	FAYETTE	18.60	64.80	4.20	W189198	395110	795212	B	11260	09/01/88
									9.70	1.20		0.5	2912
PENN MINERAL CO STRIP MINE	1.40	36.10	50.60	FAYETTE	13.30	71.30	4.90	W189174	395936	795530	B	12850	09/01/88
									4.20	1.50		8.0	2084
STRIP MINE, PURCO COAL	2.60	28.60	64.40	FAYETTE	7.00	81.50	4.80	W190579	400307	792703	B	14430	09/01/88
									3.20	1.40		8.5	2246
STRIP MINE, PURCO COAL	2.40	29.00	62.70	FAYETTE	8.30	80.30	4.70	W190580	400310	792703	B	14220	09/01/88
									2.40	1.30		8.0	2246
STRIP MINE, ETNA EQUIPMENT	4.80	35.10	43.20	WASHINGTON	21.70	63.70	4.40	W190569	400354	800005	B	11310	09/01/88
									6.50	1.30		5.5	2192
KES ENTERPRISES STRIP MINE	1.20	36.20	47.30	WASHINGTON	16.50	68.10	4.70	W189178	400628	800450	B	12290	09/01/88
									5.80	1.50		7.0	2156
KES ENTERPRISES STRIP MINE	1.50	37.00	47.30	WASHINGTON	15.70	69.50	4.80	W189177	400634	800439	B	12500	09/01/88
									6.70	1.60		7.0	2678
STRIP MINE, ETNA EQUIPMENT	2.90	34.00	45.00	WASHINGTON	21.00	64.90	4.40	W190564	400710	795908	B	11700	09/01/88
									5.70	1.30		7.5	2192
STRIP MINE, TWILIGHT COAL CO	4.70	37.90	42.20	WASHINGTON	19.90	65.70	4.60	W190573	400846	800256	B	11860	09/01/88
									4.90	1.40		7.0	2246
ALICE ROBINSON STRIP MINE	2.10	29.90	63.20	WESTMORELAND	6.90	81.70	5.00	W189176	400920	792500	B	14350	09/01/88
									3.30	1.40		9.0	2192
STRIP MINE, TWILIGHT COAL CO	8.10	32.60	46.40	WASHINGTON	21.00	65.00	4.10	W190554	401013	800308	B	11410	09/01/88
									7.10	1.40		2.0	2192
STRIP MINE	2.00	35.60	54.60	ALLEGHENY	9.80	75.10	5.10	W206830	401510	795237	B	13480	09/01/88
									6.30	1.70		9.0	2399

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP MINE				ALLEGHENY				W209628		401540	795234	B	13010	09/01/88
2.10	33.80	53.40	12.80			72.30	4.90	2.60		5.90	1.50		8.5	2507
BOGONA MINING CO STRIP MINE				WASHINGTON				W189180		401940	803050	B	9980	09/01/88
3.30	30.80	40.30	28.90			56.10	3.90	3.30		6.60	1.20		3.0	2246
STRIP MINE, PENNWEIR CONST CO				WASHINGTON				W190556		402134	802938	B	10410	09/01/88
2.70	40.00	32.90	27.10			56.70	4.20	6.50		4.40	1.10		4.0	2084
STRIP MINE, PENNWEIR CONST CO				WASHINGTON				W190559		402137	802938	B	10340	09/01/88
3.40	37.20	35.10	27.70			56.70	4.10	4.10		6.30	1.10		5.5	2183
STRIP MINE, N CAMBRIA FUEL				WESTMORELAND				W190591		402139	792411	B	12140	09/01/88
1.10	32.60	47.60	19.80			67.60	4.40	6.00		1.20	1.00		8.0	2129
STRIP MINE, BOGONA MINING CO				WASHINGTON				W190562		402212	801822	B	12560	09/01/88
3.80	39.30	45.80	14.90			70.00	4.90	0.70		8.00	1.50		5.5	2912
MIDWAY COAL CO STRIP MINE				WASHINGTON				W189205		402257	801656	B	13510	09/01/88
2.90	39.00	53.00	8.00			75.10	5.10	2.30		8.10	1.40		6.0	2273
NEW FLORENCE NO 2 MINE				INDIANA				W206999		402258	790628	B	11860	09/01/88
1.90	21.50	55.80	22.70			66.40	4.10	3.90		1.70	1.20		9.0	2201
NEW FLORENCE NO 2 MINE				INDIANA				W206989		402304	790548	B	10770	09/01/88
1.70	19.80	50.60	29.60			60.50	3.80	3.70		1.30	1.10		9.0	2399
NEW FLORENCE NO 2 MINE				INDIANA				W206980		402354	790528	B	11960	09/01/88
2.00	21.10	56.90	22.00			67.40	4.30	2.20		2.90	1.20		9.0	2642
STRIP MINE				ALLEGHENY				W206444		402415	800723	B	13790	09/01/88
2.20	37.50	56.10	6.40			78.60	5.40	1.00		7.20	1.40		8.5	2714
				CAMBERIA				W207300		402446	784832	B	13840	09/01/88
2.90	20.30	68.30	11.40			79.40	4.50	1.60		1.70	1.40		9.0	2246
				CAMBERIA				W207304		402450	784817	B	13980	09/01/88
3.00	19.70	70.10	10.20			80.20	4.50	1.20		2.50	1.40		9.0	2516
				CAMBERIA				W207308		402454	784825	B	13330	09/01/88
2.50	19.10	66.60	14.30			76.00	4.30	0.90		3.10	1.40		9.0	2642
STRIP MINE				ALLEGHENY				W209632		402521	801711	B	12720	09/01/88
3.00	36.50	50.30	13.20			70.60	4.90	2.60		7.30	1.40		5.5	2228
STRIP MINE				ALLEGHENY				W209854		402529	801621	B	13640	09/01/88
2.70	39.00	53.30	7.70			75.40	5.10	2.10		8.20	1.50		5.0	2336

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP MINE	2.40	37.30	55.70	ALLEGHENY	7.00	77.00	5.10	1.30	402534	801418	B	13750	09/01/88
									8.00	1.60		6.0	2642
STRIP MINE	0.90	21.90	53.00	INDIANA	25.10	65.70	3.60	2.10	402740	790240	B	11440	09/01/88
									2.40	1.10		9.0	2804
HELEN MINE	0.70	26.30	58.60	INDIANA	15.10	72.70	4.50	3.80	402830	791332	B	13020	09/01/88
									2.70	1.20		9.0	2129
HOMER CITY NO 1	0.80	27.30	54.70	INDIANA	18.00	70.30	4.30	3.30	402830	791339	B	12500	09/01/88
									3.00	1.10		8.0	2183
HOMER CITY NO 1	1.00	26.00	60.40	INDIANA	13.60	75.30	4.50	2.40	402850	791304	B	13300	09/01/88
									3.10	1.10		9.0	2237
LUCERNE NO 6	0.90	23.90	61.30	INDIANA	14.80	73.70	4.50	1.80	402852	791251	B	13100	09/01/88
									3.90	1.30		9.0	2354
HELEN MINE	1.70	25.50	60.40	INDIANA	14.10	74.30	4.40	2.60	402853	791252	B	13300	09/01/88
									3.30	1.30		9.0	2228
HELEN MINE	1.20	24.60	58.10	INDIANA	17.30	71.80	4.30	2.40	402909	791406	B	12630	09/01/88
									3.00	1.20		9.0	2273
HOMER CITY NO 1	0.80	26.70	61.70	INDIANA	11.60	77.50	4.60	2.10	402910	791401	B	13550	09/01/88
									2.90	1.30		9.0	2156
HOMER CITY NO 1	1.30	25.80	65.00	INDIANA	9.20	78.00	4.60	2.80	402937	791326	B	13830	09/01/88
									4.30	1.10		9.0	2030
HELEN MINE	1.00	26.00	62.30	INDIANA	11.70	77.10	4.60	1.80	402950	791350	B	13590	09/01/88
									3.40	1.40		9.0	2462
HEAD COAL CO STRIP	2.80	27.70	62.30	INDIANA	10.00	77.90	4.90	2.90	403004	791010	B	13930	09/01/88
									2.90	1.40		9.0	2354
HEAD COAL CO STRIP	3.70	28.60	63.80	INDIANA	7.60	80.20	5.10	0.70	403004	791020	B	14230	09/01/88
									4.90	1.50		9.0	2102
HELEN MINE	1.10	25.90	62.30	INDIANA	11.80	77.60	4.50	0.90	403011	791347	B	13590	09/01/88
									3.80	1.40		9.0	2579
HOMER CITY NO 1	1.30	24.70	62.30	INDIANA	13.00	75.40	4.60	1.50	403013	791247	B	13370	09/01/88
									4.20	1.30		9.0	2390
STRIP MINE	1.10	29.40	57.80	INDIANA	12.80	73.10	4.60	6.40	403030	790720	B	13260	09/01/88
									1.70	1.40		8.5	2111

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
LUCERNE NO 6	0.80	29.00	59.90	INDIANA	76.80	4.60	2.20	403031	791458	B	13730	09/01/88
								3.90	1.40		9.0	2156
LUCERNE NO 6	0.90	29.10	61.60	INDIANA	78.90	4.80	2.00	403033	791454	B	14080	09/01/88
								3.70	1.30		7.5	2246
LUCERNE NO 6	1.00	28.50	58.90	INDIANA	75.50	4.60	1.90	403046	791422	B	13460	09/01/88
								4.20	1.20		8.0	2516
LUCERNE NO 6	1.50	26.30	61.80	INDIANA	76.40	4.50	2.00	403052	791324	B	13230	09/01/88
								4.00	1.20		8.0	2399
LUCERNE NO 6	0.90	20.60	58.40	INDIANA	69.20	3.90	1.00	403105	791302	B	12070	09/01/88
								3.80	1.10		3.5	2750
LUCERNE NO 6	1.30	23.00	59.20	INDIANA	71.10	4.20	0.70	403105	791303	B	12390	09/01/88
								4.90	1.30		8.5	2912
LUCERNE NO 6	1.00	19.40	53.00	INDIANA	63.00	3.60	1.00	403107	791302	B	11010	09/01/88
								3.70	1.10		1.0	2912
LUCERNE NO 6	1.00	24.60	51.90	INDIANA	65.30	4.10	2.30	403235	791318	B	11590	09/01/88
								3.70	1.10		8.5	2651
LUCERNE NO 6	0.80	19.50	42.10	INDIANA	50.70	3.10	4.50	403240	791400	B	9020	09/01/88
								2.60	0.70		1.0	2354
LUCERNE NO 6	1.10	29.20	57.60	INDIANA	74.90	4.50	2.40	403254	791434	B	13340	09/01/88
								3.70	1.30		9.0	2318
STRIP MINE, BRYAN CONST CO	1.60	38.90	50.90	ARMSTRONG	75.00	4.80	4.50	403332	792559	B	13630	09/01/88
								4.00	1.50		7.5	2066
	1.60	29.10	59.60	INDIANA	77.20	4.90	2.10	403627	790235	B	13710	09/01/88
								3.20	1.30		0.0	0
	1.30	28.10	57.20	INDIANA	71.60	4.40	7.60	403645	790332	B	12950	09/01/88
								0.50	1.20		0.0	0
	2.00	28.40	60.50	INDIANA	76.80	4.80	3.50	403647	790409	B	13800	09/01/88
								2.50	1.30		0.0	0
	1.70	29.80	59.80	INDIANA	77.70	4.70	2.70	403811	790332	B	13790	09/01/88
								3.20	1.30		0.0	0
	1.50	31.20	60.40	INDIANA	80.00	4.90	2.70	403821	790341	B	14470	09/01/88
								2.60	1.40		0.0	0

Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
L&E CONSTRUCTION													
1.70	33.80	55.70	10.50	ARMSTRONG	75.80	4.80	2.20	404112	791952	B	13600	9.0	2219
STRIP MINE, ROB COAL CO													
4.10	38.60	55.50	5.90	ARMSTRONG	79.90	5.20	2.60	404225	793645	B	14290	8.0	2093
FAWN MINE NO 91													
2.80	31.80	47.50	20.70	BUTLER	65.40	4.50	1.90	404311	794806	B	11730	8.5	2624
FAWN MINE NO 91													
3.10	31.20	47.90	20.90	BUTLER	66.30	4.60	1.30	404340	794804	B	11760	8.0	2651
COCHRAN&KELLER MINE													
1.70	33.20	54.90	11.90	ARMSTRONG	73.80	4.40	1.90	404404	792535	B	13190	9.0	2462
NICHOLSON RUN CO STRIP													
1.70	34.70	53.90	11.40	ARMSTRONG	73.60	5.00	2.30	404455	793620	B	13330	7.5	1949
ANDERSON CRK COAL&CLAY STRIP													
1.00	22.20	61.30	16.50	CLEARFIELD	69.70	4.10	6.90	404502	782301	B	12520	8.5	2084
ANDERSON CRK COAL&CLAY STRIP													
2.70	22.50	58.30	19.20	CLEARFIELD	69.90	4.30	2.20	404506	782307	B	12180	8.5	2669
NORTHUMBERLAND													
1.20	10.00	80.40	9.60	ARMSTRONG	83.10	3.20	0.80	404704	763702	A	13850	0.0	0
W HOUSER COAL CO STRIP MINE													
2.00	34.90	51.90	13.20	ARMSTRONG	71.10	5.00	2.80	404715	792930	B	12980	9.0	2354
W HOUSER COAL CO STRIP MINE													
2.10	35.10	49.80	15.10	ARMSTRONG	70.80	5.00	1.90	404748	793833	B	12700	8.5	2534
W HOUSER COAL CO STRIP MINE													
1.90	35.10	54.00	10.90	ARMSTRONG	74.70	5.10	1.80	404748	793834	B	13340	8.5	2462
BBS SURFACE MINE													
1.10	26.60	62.70	10.70	INDIANA	77.70	4.70	0.90	404808	785106	B	13700	8.5	2804
STRIP MINE													
1.40	36.80	49.50	13.70	ARMSTRONG	67.50	4.10	6.20	405144	793725	B	12350	8.0	2111
STRIP MINE													
1.70	36.70	54.00	9.30	ARMSTRONG	71.90	5.10	4.80	405144	793728	B	13080	8.0	2138

Coal Field Information Printout for: PA - Pennsylvania

Location		County		Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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STRIP MINE, SBP COAL CO	3.30	36.20	54.40	BUTLER	9.40	75.30	W190589	5.00	2.10	405158																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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Coal Field Information Printout for: PA - Pennsylvania

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	-Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
NASTASI COAL CO STRIP MINE	3.30	38.90	55.10	BUTLER	77.20	5.20	W189189	2.90	410542	794743	B	13740	09/01/88
									7.10	1.60		6.5	2246
NASTASI COAL CO STRIP MINE	2.60	41.50	48.40	BUTLER	74.20	5.40	W189213	2.90	410542	794746	B	13360	09/01/88
									5.90	1.50		7.5	2183
ALVIN GEARHART STRIP MINE	1.70	36.50	53.80	JEFFERSON	75.10	5.10	W189215	1.60	410555	791233	B	13540	09/01/88
									7.00	1.50		8.0	2534
ALVIN GEARHART STRIP MINE	2.70	35.30	61.50	JEFFERSON	81.40	5.30	W189202	1.10	410556	791233	B	14470	09/01/88
									7.40	1.60		7.5	2264
DEEP MINE	4.30	31.20	60.60	JEFFERSON	73.00	4.60	W188856	0.60	410812	785224	B	12500	09/01/88
									12.30	1.30		0.5	2678
STRIP MINE, STAHLMAN COAL CO	1.90	39.30	48.30	JEFFERSON	72.40	4.90	W190387	6.20	410816	791013	B	13180	09/01/88
									3.00	1.10		7.0	2066
LUCAS COAL CO STRIP MINE	1.10	34.20	39.40	BUTLER	56.50	4.30	W189195	7.40	410906	794409	B	10430	09/01/88
									4.40	1.00		4.5	2300
LUCAS COAL CO STRIP MINE	1.90	38.30	56.30	BUTLER	79.00	5.40	W189220	2.40	410906	794410	B	14250	09/01/88
									6.40	1.40		7.0	2138
CLARION REALTY STRIP MINE	2.00	36.20	38.20	VENANGO	56.00	4.00	W190595	13.30	411245	794104	B	10130	09/01/88
									0.30	0.80		5.5	2048
STRIP MINE	1.40	35.30	54.10	ELK	74.60	5.10	W188864	1.90	411706	784628	B	13410	09/01/88
									6.20	1.60		0.0	2174
STRIP MINE	1.00	38.20	53.60	ELK	76.20	5.30	W188863	3.10	411708	784629	B	13790	09/01/88
									5.60	1.60		0.0	2174
STRIP MINE	2.90	31.60	58.20	ELK	74.10	4.70	W188861	0.60	411935	784205	B	12920	09/01/88
									9.30	1.10		0.0	2516
STRIP MINE	1.60	30.60	57.00	ELK	72.50	4.70	W188862	0.50	411937	784204	B	12860	09/01/88
									8.50	1.40		0.0	2912

Coal Field Information Printout for

TN - Tennessee

Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ALLEN COAL CO	2.90	28.30	69.20	2.50	MARION	85.30	W193641	0.80	34.5959	853331	B	15280	09/01/88
							5.30		4.50	1.60		9.0	2435
FOUR SEASONS COAL CO	2.10	28.70	62.80	8.50	GRUNDY	77.80	W188906	0.50	351740	854405	B	13650	09/01/88
							5.10		6.80	1.30		3.5	2804
PETROLEUMS ENERGY SERV INC	3.50	26.30	64.70	9.00	MARION	78.10	W193643	0.60	351742	853215	B	13750	09/01/88
							4.70		6.00	1.60		4.5	2804
PIONEER COAL CO	1.30	32.60	57.40	10.00	BLEDSE	75.90	W188912	2.70	352842	851304	B	13650	09/01/88
							5.10		5.20	1.10		7.5	2084
SOUTHERN ENERGY RES CO	4.20	29.10	62.90	8.00	SEQUATCHIE	78.10	W193639	0.60	353012	853212	B	13850	09/01/88
							4.80		6.90	1.60		5.0	2804
LUCKY CUMBERLAND COAL CO	1.70	34.50	58.40	7.10	BLEDSE	78.00	W193634	3.40	353014	852219	B	14130	09/01/88
							5.00		5.10	1.40		8.5	2165
LAMB CREEK COAL CO	1.60	26.10	54.40	19.50	BLEDSE	68.00	W193645	1.00	353038	852017	B	12060	09/01/88
							4.30		5.90	1.30		4.0	2732
SAUNDERS COAL CO	2.00	27.80	64.90	7.30	BLEDSE	79.70	W193642	0.90	353041	852019	B	14140	09/01/88
							4.90		5.70	1.50		9.0	2804
STATE PRISON FARM	39.60	39.40	21.00	39.60	LAUDERDALE	42.50	W196654	1.50	353930	894500	L	7640	09/01/88
							3.80		12.30	0.30		0.0	2806
JACKSON MINING CO	1.80	35.20	55.00	9.80	ANDERSON	75.10	W193637	2.10	360326	842018	B	13560	09/01/88
							5.10		6.10	1.80		4.5	2606
G&B COAL CO	2.40	36.20	60.50	3.30	MORGAN	81.30	W188916	0.60	360618	842510	B	14410	09/01/88
							5.30		8.00	1.50		3.0	2444
MOUNTCO COAL CO	2.70	36.30	59.90	3.80	CAMPBELL	80.60	W193636	0.70	360735	842106	B	14390	09/01/88
							5.20		8.00	1.70		4.5	2408
DEEP HOLLOW COAL CO	1.70	36.60	58.40	5.00	ANDERSON	80.30	W188955	1.10	360739	841524	B	14190	09/01/88
							5.30		6.30	2.00		5.5	2399
LITTLE T COAL CO	4.00	36.80	59.70	3.50	ANDERSON	80.90	W193653	1.00	360821	842122	B	14400	09/01/88
							5.20		7.70	1.70		2.5	2264
LITTLE T COAL CO	2.50	34.40	49.70	15.90	ANDERSON	69.50	W193655	0.90	360845	842120	B	12410	09/01/88
							4.60		7.70	1.40		3.5	2804
H&B MINING CO	2.50	35.20	61.50	3.30	ANDERSON	81.30	W193638	0.60	360906	841811	B	14500	09/01/88
							5.40		7.80	1.60		3.5	2345

Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
J&M COAL CO	2.30	36.60	61.30	2.10	ANDERSON	82.90	W193649 5.50	0.90	360552 6.60	842020 2.00	B	14860 5.5	09/01/88 2408
H&W COAL CO	1.70	37.80	53.60	8.60	ANDERSON	73.50	W188917 5.20	3.70	361049 7.60	842136 1.40	B	13340 4.5	09/01/88 2075
PHILLIPS COAL CO	2.00	33.80	58.30	7.90	ANDERSON	77.00	W193657 5.30	1.70	361058 6.30	841720 1.80	B	13880 5.5	09/01/88 2543
CUMBERLAND COAL CORP	4.60	33.80	63.20	3.00	ANDERSON	81.20	W13658 5.30	0.80	361106 8.00	842416 1.70	B	14420 1.5	09/01/88 2444
PREMIUM COAL CO	2.60	39.70	57.70	2.60	ANDERSON	77.10	W193646 5.60	0.70	361108 11.80	842345 2.20	B	14590 4.5	09/01/88 2552
CUMBERLAND COAL CORP	2.30	38.10	49.90	12.00	SCOTT	72.10	W193659 5.00	2.90	361125 6.40	842355 1.60	B	13060 5.0	09/01/88 2354
QUEEN ANNE COAL CO	1.70	37.30	51.10	11.60	CAMPBELL	73.80	W188958 5.30	0.70	361138 6.80	841501 1.80	B	13100 4.5	09/01/88 2552
ALROSHA COAL CO	2.60	33.70	43.70	22.60	ANDERSON	61.10	W193648 4.40	5.30	361237 5.30	842137 1.30	B	11160 3.5	09/01/88 2426
ALROSHA COAL CO	1.80	35.00	55.80	9.20	ANDERSON	74.80	W193656 5.30	2.50	361238 6.50	842105 1.70	B	13580 6.0	09/01/88 2219
EARL&RICKY COAL CO	2.70	33.20	46.70	20.10	CAMPBELL	66.10	W188954 4.30	0.90	361252 7.20	842117 1.40	B	11490 1.5	09/01/88 2912
JIM POTTER COAL CO	0.70	22.30	58.60	19.10	CAMPBELL	69.20	W193651 4.40	4.50	361323 1.60	841930 1.20	B	12430 9.0	09/01/88 2210
P&M COAL CO	3.00	36.80	58.10	5.10	CAMPBELL	79.20	W188957 5.40	0.60	361552 8.20	841329 1.50	B	13950 1.5	09/01/88 2480
C R LEWIS COAL CO	2.20	34.50	52.20	13.30	MORGAN	71.10	W188909 5.10	1.50	361606 7.40	843718 1.60	B	12810 5.5	09/01/88 2552
MASH INC	2.60	33.50	49.90	16.60	SCOTT	65.50	W188910 4.60	4.70	361611 7.50	843103 1.10	B	11830 1.5	09/01/88 2138
CMC COAL CO	1.60	36.70	47.10	16.20	CAMPBELL	66.40	W188964 4.70	3.60	361709 7.60	841436 1.50	B	12060 4.0	09/01/88 2183
BLACK JEWEL COAL CO	1.50	39.70	54.90	5.40	SCOTT	79.00	W188915 5.50	2.70	361922 6.10	843450 1.30	B	14370 6.5	09/01/88 2291

Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
P&H EQUIP CO	3.90	36.40	53.60	FENTRESS	10.00	72.60	5.00	2.90	362405	845556	B	13140	09/01/88
									7.90	1.60		4.5	2525
P&H COAL CO	2.90	32.10	33.50	FENTRESS	34.40	51.50	3.90	1.60	362507	845856	B	9140	09/01/88
									7.70	0.90		1.0	2912
HELENWOOD EXCAVATING CO	2.20	35.70	59.50	SCOTT	4.80	79.10	5.50	1.40	362645	843303	B	14090	09/01/88
									7.80	1.40		5.0	2264
P&H EQUIP CO	2.90	34.40	62.60	CAMPBELL	3.00	80.70	5.60	0.90	362659	840718	B	14220	09/01/88
									8.50	1.30		1.5	2138
LEX MINING CO	3.00	39.40	55.10	CAMPBELL	5.50	76.30	5.50	2.70	362822	841122	B	13770	09/01/88
									8.60	1.40		5.0	2030
BIG H COAL CO	2.90	39.50	57.80	CAMPBELL	2.70	81.10	5.70	0.70	362840	841127	B	14370	09/01/88
									8.00	1.80		4.5	2318
DAN BRANCH COAL CO	3.00	39.80	55.70	CAMPBELL	4.50	78.40	5.30	2.30	362900	841654	B	14020	09/01/88
									7.40	2.10		5.5	2120
DAN BRANCH COAL CO	3.40	35.30	53.10	CAMPBELL	11.60	72.10	4.90	1.40	362930	841608	B	12740	09/01/88
									8.30	1.70		2.0	2552
FOUR LEAF COAL CO	2.30	38.00	60.40	CLAIBORNE	1.60	82.80	5.60	0.50	363102	835211	B	14790	09/01/88
									7.50	2.00		5.0	2624
METZLER COAL CO	4.40	34.50	62.60	CAMPBELL	2.90	79.50	5.20	1.70	363124	840847	B	14200	09/01/88
									8.70	2.00		2.5	2156
JAMES SPUR COAL CO	2.10	34.70	62.50	CLAIBORNE	2.80	81.90	5.50	0.80	363233	835346	B	14740	09/01/88
									7.20	1.80		5.0	2804
DUPONT SMITH COAL CO	3.60	36.60	60.00	CAMPBELL	3.40	79.60	5.40	0.90	363235	840327	B	14150	09/01/88
									9.00	1.70		3.0	2354
LONGWA INC	1.90	41.30	50.50	SCOTT	8.20	73.00	5.30	5.10	363235	842950	B	13430	09/01/88
									6.70	1.70		5.0	2084
BURL LAMBDIN COAL CO	2.50	38.50	58.10	CLAIBORNE	3.40	80.40	5.60	1.20	363249	835812	B	14380	09/01/88
									7.80	1.60		5.0	2102
THACKER COAL CO	2.40	35.20	62.10	CLAIBORNE	2.70	80.70	5.60	0.80	363320	835420	B	14520	09/01/88
									8.80	1.40		4.0	2687
M&K COAL CO	2.00	40.30	50.70	CAMPBELL	9.00	72.60	5.00	4.40	363349	841018	B	13150	09/01/88
									7.70	1.30		4.0	2120

Coal Field Information Printout for: TN - Tennessee

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SHATTUCK COAL CO	2.20	34.90	61.60	CLAIBORNE	80.50	5.50	1.30	363424	835720	B	14490	09/01/88
								7.90	1.30		6.0	2408
SAM COAL CO	2.40	37.20	60.40	CLAIBORNE	81.30	5.60	0.60	363437	834621	B	14680	09/01/88
								7.90	2.20		3.5	2651
SAM COAL CO	2.20	42.20	56.40	CLAIBORNE	82.50	5.60	0.60	363438	834620	B	14850	09/01/88
								7.90	2.00		5.0	2714
SAM COAL CO	2.20	39.20	59.20	CLAIBORNE	83.30	5.60	0.80	363443	834649	B	14950	09/01/88
								6.80	1.90		4.5	2606
DALE DAUGHERTY COAL CO	2.50	32.50	49.20	SCOTT	65.90	4.50	1.50	363533	841810	B	11800	09/01/88
								8.50	1.30		1.5	2777
ROSS COAL CO	3.00	36.50	58.00	SCOTT	74.00	5.00	5.30	363535	841800	B	13750	09/01/88
								8.70	1.50		3.0	2561

Coal Field Information Printout for

TX - Texas

Coal Field Information Printout for: TX - Texas

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
29.20	44.70	38.40	16.90	MILAM	59.10	4.60	1.40	303417	970216	L	10210	09/01/88
								16.70	1.30		0.0	2444
21.50	45.80	42.70	11.50	MILAM	64.30	4.90	1.10	303440	970206	L	11070	09/01/88
								16.90	1.30		0.0	2183
25.90	48.60	40.50	10.90	MILAM	64.50	5.00	1.30	303445	970155	L	11300	09/01/88
								17.10	1.20		0.0	2129
18.60	49.50	39.40	11.10	MILAM	64.10	5.00	1.20	303514	970201	L	11270	09/01/88
								17.40	1.20		0.0	2156
27.90	44.00	38.40	17.60	MILAM	58.80	4.60	1.40	303540	970156	L	10220	09/01/88
								16.50	1.10		0.0	2435
26.00	46.90	43.20	9.90	FREESTONE	64.10	4.70	0.90	314533	960859	L	10990	09/01/88
								19.20	1.20		0.0	2111
28.50	44.80	42.90	12.30	FREESTONE	64.40	4.70	0.80	314545	960917	L	10710	09/01/88
								16.70	1.10		0.0	2138
27.90	45.50	44.00	10.50	FREESTONE	65.00	4.90	1.00	314549	960921	L	11210	09/01/88
								17.50	1.10		0.0	2138
B-2 PIT	45.50	44.00	10.50	FREESTONE	65.00	4.90	1.00	314645	960936	L	11210	09/01/88
								17.50	1.10		0.0	2138
B-1 PIT	44.80	42.90	12.30	FREESTONE	64.40	4.70	0.80	314655	961006	L	10710	09/01/88
								16.70	1.10		0.0	2138
33.10	44.80	45.30	9.90	HARRISON	64.40	4.50	1.50	322424	942628	L	11060	09/01/88
								18.80	0.90		0.0	1976
31.90	42.80	41.30	15.90	HARRISON	59.70	4.30	1.50	322425	942627	L	10230	09/01/88
								17.40	1.20		0.0	2183
31.90	42.80	41.30	15.90	HARRISON	59.70	4.30	1.50	322427	942626	L	10230	09/01/88
								17.40	1.20		0.0	2183
29.60	41.20	35.80	23.00	TITUS	55.40	4.10	0.70	331105	950513	L	9450	09/01/88
								15.80	1.00		0.0	2210
29.60	41.20	35.80	23.00	TITUS	55.40	4.10	0.70	331105	950517	L	9450	09/01/88
								15.80	1.00		0.0	2210

Coal Field Information Printout for

Ut - Utah

Coal Field Information Printout for: UT - Utah

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
19.90	42.60	47.00	10.40	KANE		68.80	D169559	4.70	371500	1121500	B	11910	09/01/88
								1.70	13.20	1.20		0.0	0
20.60	40.10	50.60	9.30	KANE		68.70	D169765	4.80	371500	1122230	B	12000	09/01/88
								1.10	14.70	1.40		0.0	0
19.00	36.40	51.90	11.70	KANE		68.30	D183136	4.40	372220	1122040	B	11730	09/01/88
								0.60	13.80	1.20		0.0	2390
23.40	36.70	45.20	18.10	KANE		58.90	D183134	4.30	372455	1121215	B	10530	09/01/88
								4.60	12.90	1.20		0.0	2228
24.40	36.60	39.30	24.10	GARFIELD		56.70	D183137	4.10	373310	1120910	B	9830	09/01/88
								0.80	13.20	1.10		0.0	2804
25.90	36.00	50.20	13.80	GARFIELD		65.80	D183138	4.50	373320	1120855	B	11440	09/01/88
								2.20	12.50	1.20		0.0	2156
14.70	32.10	35.90	32.00	GARFIELD		51.50	D183139	3.80	375650	1105850	B	9040	09/01/88
								0.50	11.10	1.10		0.0	2804
9.50	38.70	50.60	10.70	GARFIELD		66.90	D178173	4.60	380706	1105758	B	11580	09/01/88
								0.80	16.20	0.80		0.0	2174
4.90	35.20	51.20	13.60	WAYNE		65.50	D178172	4.70	382828	1105440	B	11480	09/01/88
								2.70	12.20	1.30		0.0	2120
8.30	37.20	47.80	15.00	WAYNE		65.80	D183141	4.80	382910	1105430	B	11620	09/01/88
								1.70	11.40	1.30		0.0	2678
11.90	39.30	50.80	9.90	SEVIER		67.90	D178166	4.90	383340	1112705	B	11920	09/01/88
								2.60	13.80	0.90		0.0	2030
13.70	29.70	30.50	39.80	SEVIER		43.50	D178169	3.50	384220	1112800	B	7460	09/01/88
								0.70	12.00	0.50		0.0	0
EMERY MINE	3.20	40.70	50.10	EMERY		73.00	D175518	5.10	384615	1111505	B	12890	09/01/88
								1.20	10.30	1.20		1.0	2093
CONVULSION CANYON MINE	7.70	41.80	42.60	SEVIER		65.50	D174676	4.70	385456	1112500	B	11520	09/01/88
								0.90	12.10	1.20		0.0	2246
W AMER ENERGY CORP	5.40	40.80	47.60	GRAND		70.20	D173479	5.10	390225	1094335	B	12460	09/01/88
								0.70	10.80	1.60		0.0	0
4.30	41.00	50.50	8.50	EMERY		72.00	D176980	5.40	391136	1111310	B	12700	09/01/88
								0.60	12.20	1.30		1.0	2192

Coal Field Information Printout for: UT - Utah

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.30	45.30	46.70	8.00	EMERY	73.90	D176976	0.80	391719	1111420	B	13380	09/01/88
						5.90		10.60	0.80		1.0	2111
DESERET MINE												
5.20	44.60	48.10	7.30	EMERY	74.10	D174672	0.50	391905	1110603	B	13210	09/01/88
						5.30		11.30	1.50		1.5	2354
DESERET MINE												
3.10	43.50	46.70	9.80	EMERY	72.10	D180000	0.50	391907	1110605	B	13000	09/01/88
						5.40		10.80	1.40		1.0	2219
3.50	43.40	46.80	9.80	EMERY	72.00	D178171	0.50	391910	1110722	B	12910	09/01/88
						5.30		11.50	0.90		1.0	2192
WILLBERG MINE												
4.60	43.50	48.70	7.80	EMERY	73.80	D180005	0.50	391925	1110719	B	13270	09/01/88
						5.40		11.00	1.50		1.0	2372
3.20	39.70	44.40	15.90	EMERY	67.00	D178159	0.60	391940	1111126	B	12010	09/01/88
						5.10		10.30	1.10		1.5	2543
DEER CREEK MINE												
3.70	45.70	48.70	5.60	EMERY	76.20	D174669	0.50	392125	1110710	B	13780	09/01/88
						5.70		10.50	1.50		1.5	2129
3.00	45.40	43.80	10.80	EMERY	71.90	D178155	0.80	392210	1111320	B	12940	09/01/88
						5.70		9.50	1.30		1.0	2453
3.60	43.60	52.70	3.70	EMERY	77.00	D178149	0.60	392455	1111416	B	13970	09/01/88
						5.70		11.90	1.10		2.5	2129
CO-OP MINE												
6.10	47.70	46.10	6.20	EMERY	76.00	D174379	0.50	392505	1110705	B	13750	09/01/88
						5.60		10.30	1.40		2.5	2246
GENEVA MINE USSTEEL												
5.30	39.60	52.80	7.60	EMERY	75.30	D173474	1.10	392740	1102112	B	13440	09/01/88
						5.20		9.20	1.60		0.0	0
KING MINE												
4.80	48.80	44.90	6.30	EMERY	74.90	D174664	0.50	392750	1110100	B	13530	09/01/88
						5.40		11.40	1.50		2.0	2102
STAR POINT NO 1 MINE												
5.70	40.40	41.90	17.70	CARBON	64.50	D174666	0.70	393125	1110245	B	11540	09/01/88
						4.80		10.90	1.40		1.5	2408
SUNNYSIDE MINE NO 1												
3.00	40.20	54.10	5.70	CARBON	77.60	D173473	1.20	393540	1102325	B	13780	09/01/88
						5.30		8.60	1.60		0.0	0
4.90	47.80	44.40	7.80	CARBON	73.50	D174663	0.40	394128	1110320	B	13360	09/01/88
						5.80		11.00	1.50		1.5	2183
VALLEY CAMP MINE												
6.50	49.50	46.50	4.00	CARBON	75.70	D173472	0.70	394135	1110916	B	13550	09/01/88
						5.60		12.40	1.60		0.0	0

Coal Field Information Printout for: UT - Utah

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.20	36.90	55.00	8.10	CARBON	74.00	5.10	0.60	394201	1103645	B	12900	09/01/88
								11.40	0.80		1.0	2417

CARBON FUEL CO NO 3 MINE				CARBON	72.30	5.40	0.60	394244	1105351	B	13010	09/01/88
2.80	45.20	44.80	10.00					10.20	1.50		0.0	0

6.70	35.20	43.10	21.70	DAGGETT	56.80	3.40	0.50	405230	1094500	B	9240	09/01/88
								16.70	0.90		0.0	0

Coal Field Information Printout for

VA - Virginia

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE				LEE									
2.20	39.20	51.40	51.40	LEE	9.40	74.30	5.00	4.20	364644	830638	B	13370	09/01/88
									5.70	1.40		3.5	1994
DRILL CORE				LEE									
5.10	34.70	56.50	56.50	LEE	8.80	76.50	5.00	0.70	364905	830008	B	13580	09/01/88
									7.50	1.50		4.0	2804
DRILL CORE				LEE									
2.10	33.60	53.90	53.90	LEE	12.50	73.10	4.90	1.40	364918	825604	B	12950	09/01/88
									6.50	1.60		4.0	2696
DRILL CORE				LEE									
2.90	36.30	58.60	58.60	LEE	5.10	80.90	5.20	0.70	365011	825138	B	14400	09/01/88
									6.50	1.60		5.0	2399
UNDERGROUND MINE				LEE									
4.70	40.60	49.20	49.20	LEE	10.20	72.50	5.10	3.90	365012	825739	B	13200	09/01/88
									6.90	1.40		4.0	2030
DRILL CORE				LEE									
2.50	38.60	58.30	58.30	LEE	3.10	83.20	5.50	0.70	365113	825134	B	14850	09/01/88
									5.70	1.80		7.0	2606
DRILL CORE				SCOTT									
1.40	41.50	48.90	48.90	SCOTT	9.60	73.40	4.90	5.70	365117	823629	B	13660	09/01/88
									5.10	1.30		4.5	1958
SURFACE MINE				LEE									
3.40	37.30	57.90	57.90	LEE	4.80	80.40	5.40	0.60	365159	825533	B	14800	09/01/88
									7.20	1.60		5.5	2651
SURFACE MINE				WISE									
3.60	34.50	55.90	55.90	WISE	9.60	76.60	4.90	0.80	365300	824916	B	13580	09/01/88
									6.60	1.50		5.5	2804
UNDERGROUND				WISE									
3.40	35.50	55.00	55.00	WISE	9.50	76.70	5.20	0.70	365305	825203	B	13680	09/01/88
									6.50	1.40		5.5	2804
UNDERGROUND				WISE									
2.30	38.80	56.60	56.60	WISE	4.60	81.00	5.00	0.60	365331	825212	B	14530	09/01/88
									7.20	1.60		6.0	2804
UNDERGROUND				WISE									
2.00	33.00	50.60	50.60	WISE	16.40	70.80	4.80	0.80	365400	824739	B	12580	09/01/88
									5.70	1.50		6.0	2804
SURFACE MINE				WISE									
2.60	34.80	54.40	54.40	WISE	10.80	74.90	5.00	5.00	365411	822133	B	13700	09/01/88
									3.20	1.10		7.0	2192
SURFACE MINE				WISE									
1.50	33.40	51.40	51.40	WISE	15.20	72.10	4.60	1.20	365411	822140	B	12730	09/01/88
									5.50	1.40		6.0	2300
SURFACE MINE				WISE									
2.20	33.70	56.50	56.50	WISE	9.80	77.40	4.80	0.80	365422	822417	B	13780	09/01/88
									5.80	1.40		7.0	2678
UNDERGROUND				WISE									
1.50	33.60	53.80	53.80	WISE	12.60	74.50	4.90	1.20	365458	824949	B	13330	09/01/88
									5.20	1.60		6.0	2759

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE	3.60	22.20	66.60	WISE	11.20	76.50	W203384	4.90	365506	822054	B	13450	09/01/88
								0.90	5.00	1.50		6.5	2507
UNDERGROUND MINE	1.60	32.40	53.40	WISE	14.20	73.40	W215446	4.70	365520	822058	B	13000	09/01/88
								1.10	5.10	1.50		6.5	2678
SURFACE MINE	3.00	32.70	57.10	WISE	10.20	76.50	W192697	4.80	365527	822111	B	13530	09/01/88
								0.80	6.30	1.40		4.0	2309
SURFACE MINE	1.90	38.30	55.90	WISE	5.80	79.80	W198542	5.30	365542	824108	B	14240	09/01/88
								1.60	5.90	1.60		6.5	2183
SURFACE	3.30	32.90	50.60	WISE	16.50	70.60	W203385	4.70	365555	824238	B	12540	09/01/88
								0.80	6.10	1.30		6.5	2912
SURFACE MINE	2.80	36.30	60.50	WISE	3.20	83.50	W194855	5.30	365600	824847	B	14890	09/01/88
								0.60	5.90	1.50		8.5	2543
UNDERGROUND MINE	1.40	34.20	60.10	WISE	5.70	81.00	W214248	5.20	365615	824913	B	14410	09/01/88
								0.60	5.90	1.60		8.5	2804
UNDERGROUND MINE	1.70	32.60	58.20	WISE	9.20	77.70	W214244	4.90	365650	824815	B	13780	09/01/88
								0.50	6.20	1.50		8.0	2579
SURFACE	3.00	35.30	55.50	WISE	9.20	76.10	W202130	5.00	365652	824007	B	13800	09/01/88
								2.90	5.50	1.30		8.5	2300
SURFACE MINE	3.80	35.00	62.60	WISE	2.40	83.60	W194411	5.10	365653	823620	B	14990	09/01/88
								0.90	6.30	1.70		8.5	2156
SURFACE MINE	4.00	33.40	61.00	WISE	5.60	80.90	W200484	5.30	365707	823612	B	14400	09/01/88
								0.80	5.70	1.70		8.0	2912
SURFACE MINE	2.40	35.00	60.00	WISE	5.00	81.90	W196289	5.40	365709	823618	B	14700	09/01/88
								0.70	5.30	1.70		9.0	2651
UNDERGROUND MINE	1.60	33.20	58.70	WISE	8.10	78.40	W214247	5.00	365709	825023	B	13900	09/01/88
								0.80	6.10	1.60		8.0	2777
UNDERGROUND MINE	1.20	35.60	60.00	WISE	4.40	82.30	W214246	5.30	365714	824820	B	14690	09/01/88
								0.70	5.70	1.60		8.0	2723
SURFACE MINE	2.30	33.80	57.60	WISE	8.60	77.60	W191066	5.20	365715	823254	B	13920	09/01/88
								0.90	6.20	1.50		9.0	2732
SURFACE MINE	3.40	36.20	61.20	WISE	2.60	83.20	W191335	5.50	365715	823258	B	14760	09/01/88
								1.10	6.40	1.20		9.0	2129

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	3.70	36.20	58.60	WISE	5.20	79.90	5.50	2.20	365717	823256	B	14390	09/01/88
							W192603		5.70	1.50		9.0	2111
SURFACE MINE	3.90	36.20	58.10	WISE	5.70	80.00	5.30	1.10	365719	824217	B	14320	09/01/88
							W208044		6.30	1.60		9.0	2651
SURFACE MINE	1.30	38.70	57.10	WISE	4.20	82.10	5.50	0.50	365721	823628	B	14710	09/01/88
							W200486		6.00	1.70		6.5	2111
SURFACE	3.80	34.70	53.90	WISE	11.40	75.50	5.20	0.80	365722	824147	B	13500	09/01/88
							W203387		5.60	1.50		8.0	2912
SURFACE MINE	3.90	38.60	55.20	WISE	6.20	78.90	5.60	2.70	365723	824104	B	14310	09/01/88
							W196283		5.10	1.50		9.0	2219
UNDERGROUND	2.20	36.70	54.40	WISE	8.90	76.70	5.30	0.90	365734	825121	B	13830	09/01/88
							W205195		6.50	1.70		5.5	2804
UNDERGROUND MINE	1.20	31.70	54.30	RUSSELL	14.00	73.60	4.60	0.60	365741	821442	B	13000	09/01/88
							W192708		5.80	1.40		5.0	2345
SURFACE MINE	2.90	36.10	61.00	WISE	2.90	84.20	5.30	0.90	365759	823555	B	14920	09/01/88
							W199467		5.20	1.50		8.0	2237
SURFACE MINE	1.90	37.20	57.20	WISE	5.60	78.90	5.30	3.20	365806	824042	B	14390	09/01/88
							W191068		5.60	1.40		9.0	2102
SURFACE	3.90	35.80	57.60	WISE	6.60	80.30	5.20	0.90	365815	822424	B	14290	09/01/88
							W202129		5.50	1.50		8.5	2183
SURFACE MINE	3.60	32.60	54.40	WISE	13.00	74.50	4.90	0.90	365818	824139	B	13320	09/01/88
							W196284		5.40	1.30		7.5	2804
SURFACE MINE	2.90	34.20	57.40	WISE	8.40	78.30	5.10	0.60	365820	823219	B	14000	09/01/88
							W196288		6.10	1.50		9.0	2804
SURFACE MINE	1.30	35.70	57.90	WISE	6.40	80.30	5.60	0.60	365821	823942	B	14420	09/01/88
							W191065		5.40	1.70		9.0	2534
SURFACE MINE	1.50	34.00	54.10	WISE	11.90	75.50	5.00	1.20	365822	824017	B	13480	09/01/88
							W193663		5.00	1.40		5.5	2669
SURFACE MINE	2.40	30.90	56.40	WISE	12.70	73.20	5.00	2.40	365825	823234	B	13150	09/01/88
							W192599		5.30	1.40		8.5	2498
SURFACE MINE	2.00	33.30	59.90	WISE	6.80	79.20	5.20	1.50	365827	823227	B	14180	09/01/88
							W191064		5.80	1.50		9.0	2030

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				WISE								
2.30	33.20	59.80	7.00	WISE	77.20	5.30	0.90	365827	823234	B	14300	09/01/88
								7.90	1.70		9.0	2696
SURFACE MINE				WISE								
2.60	32.80	63.70	3.50	WISE	83.40	5.30	0.70	365828	823155	B	14870	09/01/88
								5.60	1.50		8.0	2642
SURFACE MINE				WISE								
4.30	33.80	61.10	5.10	WISE	81.30	5.40	1.10	365832	823926	B	14510	09/01/88
								5.40	1.70		9.0	2606
SURFACE MINE				WISE								
2.60	35.70	57.80	6.50	WISE	78.20	5.10	3.20	365837	823927	B	14140	09/01/88
								5.60	1.40		9.0	2147
UNDERGROUND MINE				WISE								
1.60	33.10	58.80	8.10	WISE	78.70	5.00	0.80	365838	824740	B	13940	09/01/88
								6.00	1.40		8.5	2804
UNDERGROUND MINE				WISE								
1.80	33.70	61.40	4.90	WISE	81.70	5.20	0.70	365841	824655	B	14420	09/01/88
								6.00	1.50		7.5	2642
UNDERGROUND MINE				RUSSELL								
1.60	28.60	55.00	16.40	RUSSELL	72.40	4.50	0.60	365845	821200	B	12710	09/01/88
								4.80	1.30		6.5	2552
SURFACE MINE				WISE								
3.80	34.10	62.10	3.80	WISE	83.00	5.20	0.70	365845	823258	B	14770	09/01/88
								5.60	1.70		8.5	2678
SURFACE MINE				WISE								
1.80	33.40	54.10	12.50	WISE	75.60	4.90	2.00	365849	823229	B	13600	09/01/88
								3.50	1.50		7.0	2426
SURFACE				WISE								
3.50	32.50	52.00	15.50	WISE	71.90	5.00	1.10	365851	822541	B	12840	09/01/88
								4.90	1.60		8.5	2516
SURFACE MINE				WISE								
2.10	35.20	54.10	10.70	WISE	76.70	5.10	0.70	365851	824254	B	13730	09/01/88
								5.40	1.40		8.0	2804
SURFACE MINE				WISE								
3.10	33.50	58.20	8.30	WISE	79.00	5.20	0.60	365854	823157	B	14070	09/01/88
								5.30	1.60		8.0	2750
UNDERGROUND MINE				WISE								
1.10	34.40	53.90	11.70	WISE	75.40	4.80	0.80	365856	825855	B	13440	09/01/88
								5.90	1.40		6.5	2804
SURFACE MINE				WISE								
3.00	32.50	61.70	5.80	WISE	81.30	5.10	1.10	365910	823115	B	14460	09/01/88
								5.20	1.50		7.5	2543
UNDERGROUND				WISE								
2.90	35.60	59.30	5.10	WISE	81.40	5.20	0.60	365910	825003	B	14390	09/01/88
								6.10	1.60		5.0	2804
SURFACE MINE				WISE								
3.30	35.30	59.10	5.60	WISE	81.70	5.20	0.70	365911	823849	B	14570	09/01/88
								5.20	1.60		7.0	2804

Coal Field Information Printout for: VA - Virginia

Location		County			Code Number		Latitude		Longitude		Rank	Htg Val	Last Chg
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell		Hemi Temp	
SURFACE MINE			WISE		W192586		365913	823249	B	12430	09/01/88		
4.50	30.70	52.30	17.00	69.00	4.60	2.80	5.10	1.50		9.0	2255		
UNDERGROUND MINE			RUSSELL		W197303		365914	821422	B	14580	09/01/88		
1.60	32.00	61.80	6.20	82.90	5.00	0.50	4.00	1.40		9.0	2300		
SURFACE MINE			WISE		W191134		365915	823250	B	14210	09/01/88		
6.20	34.30	57.60	8.10	79.40	5.20	0.70	5.10	1.50		8.0	2651		
SURFACE MINE			WISE		W192601		365916	823252	B	15080	09/01/88		
3.90	33.50	64.30	2.20	84.50	5.60	0.50	5.50	1.70		9.0	2534		
UNDERGROUND MINE			WISE		W214255		365917	824823	B	14450	09/01/88		
1.80	37.40	58.40	4.20	81.40	5.30	0.70	6.70	1.70		5.0	2678		
SURFACE MINE			WISE		W199466		365918	823104	B	15070	09/01/88		
2.80	32.50	65.20	2.30	85.00	5.30	1.30	4.60	1.50		8.0	2030		
UNDERGROUND MINE			WISE		W214256		365918	824708	B	14640	09/01/88		
1.50	34.90	60.80	4.30	82.60	5.30	0.70	5.60	1.50		7.5	2633		
SURFACE MINE			WISE		W196287		365925	823324	B	13560	09/01/88		
1.70	34.40	54.20	11.40	74.10	4.90	5.30	2.70	1.60		9.0	2201		
SURFACE MINE			WISE		W194852		365928	823323	B	14450	09/01/88		
2.30	33.80	59.90	6.30	80.20	5.20	2.60	3.90	1.80		9.0	2120		
SURFACE MINE			WISE		W192588		365929	823034	B	14750	09/01/88		
2.60	32.30	63.80	3.90	82.60	5.20	1.20	5.50	1.60		9.0	2111		
SURFACE MINE			WISE		W191332		365931	823032	B	14330	09/01/88		
3.90	36.40	57.30	6.30	79.50	5.20	3.10	4.90	1.00		9.0	2210		
SURFACE MINE			WISE		W194412		365932	823325	B	14620	09/01/88		
5.50	32.80	61.40	5.80	81.60	5.20	0.60	5.10	1.70		8.5	2660		
SURFACE MINE			RUSSELL		W195445		365933	820945	B	12650	09/01/88		
2.30	30.60	51.80	17.60	70.80	4.70	1.00	4.60	1.30		0.0	2804		
SURFACE MINE			WISE		W191328		365933	822839	B	14810	09/01/88		
1.40	34.60	61.60	3.80	82.70	5.30	0.60	6.10	1.50		8.5	2597		
SURFACE MINE			WISE		W191337		365935	823056	B	14610	09/01/88		
3.50	35.60	60.70	3.70	82.00	5.40	1.10	6.60	1.20		9.0	2147		
UNDERGROUND MINE			WISE		W214253		365936	824706	B	14660	09/01/88		
1.50	35.20	61.20	3.60	82.90	5.30	0.50	6.20	1.50		8.5	2543		

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash				Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	2.40	28.60	51.60	RUSSELL	68.90	4.60	0.80	365941	821106	B	12260	09/01/88
								4.50	1.40		7.5	2507
UNDERGROUND MINE	1.50	34.20	61.90	WISE	82.70	5.10	0.80	365943	823942	B	14760	09/01/88
								5.70	1.80		8.5	2624
UNDERGROUND	3.50	34.70	58.30	WISE	79.10	5.00	0.60	365946	824930	B	13910	09/01/88
								6.60	1.70		4.5	2723
SURFACE MINE	4.20	32.20	61.10	WISE	81.00	5.00	0.90	365951	823333	B	14410	09/01/88
								4.80	1.60		8.5	2633
SURFACE MINE	2.90	33.20	55.10	WISE	74.40	4.80	2.90	365955	823516	B	13420	09/01/88
								4.70	1.50		7.5	2264
SURFACE MINE	2.90	30.80	59.90	WISE	78.00	5.20	0.80	365956	823516	B	13910	09/01/88
								5.20	1.50		8.0	2804
SURFACE	2.70	32.20	63.00	WISE	82.60	5.10	0.80	365957	822952	B	14680	09/01/88
								5.10	1.60		9.0	2759
UNDERGROUND MINE	1.80	29.70	57.90	RUSSELL	76.60	4.80	0.60	370001	821107	B	13510	09/01/88
								4.30	1.30		0.0	2381
UNDERGROUND MINE	1.90	34.10	56.10	DICKENSON	76.90	5.20	1.80	370005	821937	B	13860	09/01/88
								4.90	1.40		8.5	2093
SURFACE MINE	11.00	31.70	60.80	WISE	77.40	4.80	1.00	370007	823531	B	13490	09/01/88
								7.70	1.60		2.0	2399
SURFACE MINE	6.40	33.30	63.70	WISE	83.80	5.30	0.70	370009	823531	B	14930	09/01/88
								5.60	1.60		9.0	2912
SURFACE MINE	1.50	34.00	55.40	WISE	74.60	4.90	4.50	370012	823245	B	13490	09/01/88
								4.20	1.20		9.0	2201
UNDERGROUND MINE	2.80	32.00	57.70	WISE	77.00	4.90	1.00	370014	823400	B	13770	09/01/88
								5.20	1.60		8.5	2273
SURFACE MINE	2.40	26.00	49.50	DICKENSON	64.60	4.20	0.70	370016	822552	B	11420	09/01/88
								4.60	1.40		9.0	2489
UNDERGROUND MINE	3.00	35.90	56.80	DICKENSON	77.30	5.20	4.20	370018	822003	B	14180	09/01/88
								4.60	1.40		8.5	2048
SURFACE	2.20	35.30	57.70	WISE	79.30	5.20	0.70	370021	824719	B	13990	09/01/88
								6.20	1.60		5.0	2804

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE	1.60	30.50	54.00	DICKENSON	15.50	73.40	W210398	0.80	370022	822017	B	13060	09/01/88
							4.70	0.80	4.20	1.40		7.5	2381
UNDERGROUND MINE	2.00	32.40	58.40	DICKENSON	9.20	78.70	W209963	0.70	370028	821848	B	13900	09/01/88
							5.30	0.70	4.70	1.40		8.0	2354
SURFACE MINE	1.20	34.60	60.90	WISE	4.50	82.00	W225108	0.80	370029	823948	B	14740	09/01/88
							5.10	0.80	5.80	1.80		7.5	2804
	1.20	31.60	58.90	RUSSELL	9.50	79.00	D161632	0.70	370045	821037	B	13950	09/01/88
							5.00	0.70	4.40	1.40		0.0	0
UNDERGROUND MINE	1.30	45.10	47.90	DICKENSON	7.00	81.10	W210391	0.80	370045	821844	B	14460	09/01/88
							5.10	0.80	4.40	1.60		8.0	2219
SURFACE MINE	3.60	38.20	55.90	WISE	5.90	80.10	W195441	0.80	370045	824250	B	14400	09/01/88
							5.50	0.80	6.00	1.70		8.5	2804
SURFACE MINE	3.90	31.50	63.20	WISE	5.30	81.90	W192703	0.90	370046	823328	B	14630	09/01/88
							5.30	0.90	4.80	1.80		9.0	2804
SURFACE MINE	5.00	30.00	60.70	WISE	9.30	76.40	W192613	3.50	370048	823321	B	13630	09/01/88
							4.80	3.50	4.40	1.60		9.0	2084
UNDERGROUND MINE	2.00	32.30	61.30	DICKENSON	6.40	81.50	W209959	0.60	370050	822556	B	14530	09/01/88
							5.00	0.60	5.00	1.50		8.0	2579
SURFACE MINE	1.90	33.80	62.70	WISE	3.50	83.70	W223356	0.80	370052	823908	B	14900	09/01/88
							5.20	0.80	5.10	1.70		8.5	2768
SURFACE MINE	3.40	33.90	51.60	WISE	14.50	72.50	W195443	1.20	370057	824248	B	12950	09/01/88
							5.00	1.20	5.40	1.40		8.5	2804
UNDERGROUND MINE	2.60	23.20	46.40	RUSSELL	30.40	59.80	W192707	0.50	370100	820952	B	10470	09/01/88
							3.80	0.50	4.30	1.20		5.0	2777
SURFACE MINE	3.70	32.10	59.20	DICKENSON	8.70	77.90	W209960	1.00	370104	822724	B	13990	09/01/88
							5.50	1.00	5.30	1.60		8.5	2291
SURFACE	3.30	33.70	62.60	DICKENSON	3.70	84.60	W204160	0.60	370108	821814	B	14960	09/01/88
							5.20	0.60	4.30	1.60		8.0	2246
SURFACE MINE	3.20	34.10	62.60	WISE	3.30	83.70	W229076	0.80	370111	823348	B	14930	09/01/88
							5.20	0.80	5.30	1.70		8.5	2543
SURFACE MINE	5.90	32.70	63.50	WISE	3.80	84.20	W229075	0.60	370116	823218	B	14910	09/01/88
							5.20	0.60	4.60	1.60		8.0	2804

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrog	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.00	31.10	56.10	12.80	RUSSELL		74.00	4.60	D161636	0.60	370120	821129	B	13100	09/01/88
										6.70	1.30		0.0	0
SURFACE MINE				DICKENSON		82.20	5.40	W192612	1.10	370131	821527	B	14710	09/01/88
2.70	33.70	63.00	3.30							6.50	1.50		8.5	2246
UNDERGROUND MINE				DICKENSON		71.70	4.90	W210401	2.20	370133	821252	B	13030	09/01/88
1.50	33.60	51.30	15.10							4.80	1.30		7.5	2489
UNDERGROUND MINE				DICKENSON		80.70	5.70	W210402	0.80	370135	821239	B	14470	09/01/88
3.80	33.50	59.70	6.80							4.40	1.60		6.0	2507
UNDERGROUND MINE				BUCHANAN		83.90	5.00	W217594	0.80	370137	820834	B	14800	09/01/88
1.80	30.80	65.00	4.20							4.70	1.40		8.5	2471
SURFACE MINE				RUSSELL		78.20	4.80	W192607	0.70	370140	820819	B	13770	09/01/88
4.60	28.60	62.50	8.90							6.10	1.30		8.0	2516
UNDERGROUND MINE				DICKENSON		66.90	4.30	W210399	0.70	370140	822031	B	11620	09/01/88
3.30	44.40	33.20	22.40							4.50	1.20		7.0	2696
UNDERGROUND MINE				BUCHANAN		78.40	5.00	W217597	0.80	370141	820803	B	13920	09/01/88
1.80	32.30	58.70	9.00							5.30	1.50		7.5	2417
SURFACE MINE				DICKENSON		83.40	5.40	W195444	1.00	370142	822816	B	14900	09/01/88
4.30	31.80	63.60	4.60							3.80	1.80		9.0	2255
UNDERGROUND MINE				DICKENSON		80.80	5.30	W210400	0.80	370143	821611	B	14420	09/01/88
2.40	31.20	61.50	7.30							4.30	1.50		8.0	2210
13.00	29.00	58.80	12.20	RUSSELL		67.80	3.50	D161627	0.60	370145	820828	B	11080	09/01/88
										14.80	1.10		0.0	0
1.40	33.10	57.30	9.60	RUSSELL		77.50	5.00	D161634	0.50	370145	821054	B	13720	09/01/88
										6.00	1.40		0.0	0
SURFACE MINE				WISE		78.40	4.80	W192592	1.00	370147	823536	B	14020	09/01/88
4.40	28.80	62.20	9.00							5.00	1.80		8.5	2786
1.10	31.20	62.80	6.00	RUSSELL		82.40	5.00	D161626	0.80	370149	820840	B	14550	09/01/88
										4.50	1.30		0.0	0
UNDERGROUND MINE				DICKENSON		78.50	5.10	W210393	1.00	370149	822008	B	14100	09/01/88
2.00	30.20	60.50	9.30							4.60	1.50		8.5	2471
SURFACE MINE				WISE		81.30	4.80	W197300	0.80	370149	823425	B	14490	09/01/88
2.30	31.10	62.60	6.30							5.30	1.50		9.0	2912

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE				WISE									
2.20	33.50	53.50	13.00			73.20	4.90	4.60	370149	823740	B	13330	09/01/88
									2.90	1.40		8.0	2147
SURFACE MINE				WISE									
2.70	32.90	55.20	11.90			74.60	4.80	2.50	370151	823534	B	13390	09/01/88
									5.30	0.90		8.5	2498
UNDERGROUND MINE				WISE									
2.10	35.00	52.90	12.10			74.30	5.00	1.30	370154	824358	B	13240	09/01/88
									5.60	1.70		7.0	2696
SURFACE MINE				WISE									
3.90	35.70	53.40	10.90			74.80	5.00	3.40	370155	823519	B	13510	09/01/88
									4.70	1.20		8.5	2273
SURFACE MINE				WISE									
4.10	31.50	60.60	7.90			79.40	5.30	0.90	370156	823519	B	14170	09/01/88
									4.80	1.70		8.5	2588
SURFACE MINE				WISE									
3.60	32.00	50.40	17.60			69.40	4.60	0.80	370202	824347	B	12300	09/01/88
									6.10	1.50		5.0	2804
SURFACE MINE				DICKENSON									
2.60	28.70	63.50	7.80			80.40	5.00	1.20	370215	822853	B	14360	09/01/88
									4.00	1.60		9.0	2660
UNDERGROUND MINE				DICKENSON									
2.20	29.00	59.50	11.50			75.90	4.90	1.10	370218	821723	B	13580	09/01/88
									5.20	1.40		7.5	2480
KISER RIDGE STRIP MINE				DICKENSON									
1.80	34.00	63.10	2.90			83.20	5.30	1.10	370220	821455	B	14770	09/01/88
									5.80	1.70		0.0	0
KISER RIDGE STRIP MINE				DICKENSON									
1.90	32.20	58.60	9.20			78.80	4.90	0.80	370220	821457	B	13930	09/01/88
									4.70	1.60		0.0	0
UNDERGROUND MINE				DICKENSON									
2.50	28.90	57.90	13.20			74.70	4.70	1.10	370220	821834	B	13330	09/01/88
									4.90	1.40		7.0	2678
SURFACE MINE				DICKENSON									
2.10	34.00	62.50	3.50			83.10	5.30	0.80	370221	821431	B	14730	09/01/88
									5.70	1.60		8.5	2426
SURFACE MINE				WISE									
5.50	35.70	57.70	6.60			79.40	5.20	1.30	370224	824223	B	14010	09/01/88
									6.00	1.50		4.5	2417
				DICKENSON									
1.40	32.30	59.30	8.40			80.00	5.00	0.50	370228	821122	B	14010	09/01/88
									4.70	1.40		0.0	0
SURFACE MINE				WISE									
1.40	38.40	59.10	2.50			84.60	5.40	0.80	370233	824114	B	15120	09/01/88
									5.20	1.50		5.0	2534
UNDERGROUND MINE				WISE									
3.80	31.60	60.40	8.00			78.90	4.90	2.30	370239	823340	B	14180	09/01/88
									4.20	1.70		8.0	2543

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE	2.80	29.60	59.80	DICKENSON	10.60	78.40	W203390	0.90	370246	822858	B	13920	09/01/88
							4.90		3.90	1.30		8.0	2912
SURFACE MINE				WISE			W226972		370248	824105	B	14360	09/01/88
	5.60	35.00	60.60		4.40	80.40	5.20	1.90	6.80	1.30		8.0	2084
SURFACE MINE				WISE			W226973		370254	824113	B	14910	09/01/88
	1.10	37.70	58.90		3.40	83.40	5.30	0.80	5.60	1.50		4.5	2741
UNDERGROUND MINE				DICKENSON			W217596		370257	821156	B	14790	09/01/88
	1.60	32.40	62.80		4.80	83.20	5.20	0.80	4.30	1.70		7.0	2417
SURFACE MINE				DICKENSON			W211173		370259	821436	B	12840	09/01/88
	2.20	29.60	54.40		16.00	72.50	4.70	0.60	4.80	1.40		7.5	2804
SURFACE				DICKENSON			W204159		370303	820922	B	13270	09/01/88
	4.00	26.70	59.30		14.00	75.10	4.50	0.60	4.30	1.50		8.0	2804
				WISE			W191331		370306	823800	B	14420	09/01/88
	4.90	34.00	60.40		5.60	80.40	5.30	1.70	5.80	1.20		9.0	2399
SURFACE MINE				WISE			W191333		370307	823759	B	14930	09/01/88
	4.30	37.40	59.60		3.00	83.40	5.50	0.90	6.10	1.10		9.0	2588
UNDERGROUND MINE				WISE			W212491		370308	823711	B	12710	09/01/88
	2.20	29.20	54.70		16.10	71.70	4.40	0.70	5.90	1.20		8.0	2804
DEEP MINE				RUSSELL			W187053		370311	815906	B	12420	09/01/88
	3.20	33.80	49.30		16.90	69.60	4.30	0.70	7.40	1.10		2.5	2750
SURFACE MINE				WISE			W212488		370313	823855	B	13860	09/01/88
	1.70	34.30	56.40		9.30	77.80	5.00	1.10	5.40	1.40		8.0	2804
SURFACE MINE				DICKENSON			W196290		370318	822153	B	12960	09/01/88
	1.80	26.30	56.80		16.90	73.00	4.50	0.60	3.60	1.40		9.0	2615
SURFACE MINE				WISE			W231834		370319	823246	B	14620	09/01/88
	3.40	32.70	61.70		5.60	80.90	5.10	1.60	5.40	1.40		8.5	2417
SURFACE				WISE			W203389		370327	823829	B	13620	09/01/88
	3.10	33.60	55.40		11.00	75.80	5.10	2.10	5.60	0.40		8.5	2552
UNDERGROUND MINE				DICKENSON			W193665		370328	820827	B	12940	09/01/88
	3.30	26.50	57.60		15.90	73.30	4.40	0.80	4.40	1.20		8.5	2624
UNDERGROUND MINE				WISE			W212492		370332	823303	B	14740	09/01/88
	2.40	31.00	64.60		4.40	82.80	5.00	0.70	5.40	1.70		8.5	2804

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	4.10	30.40	62.40	DICKENSON	7.20	81.80	4.90	0.70	370336	822724	B	14420	09/01/88
									3.80	1.60		6.5	2912
UNDERGROUND MINE	2.00	23.40	51.50	DICKENSON	25.10	64.90	4.00	0.50	370337	821317	B	11490	09/01/88
									4.30	1.20		8.0	2669
UNDERGROUND MINE	1.90	34.20	59.40	WISE	6.40	80.50	5.20	1.10	370345	824028	B	14300	09/01/88
									5.40	1.40		8.0	2624
SURFACE MINE	1.70	38.30	55.70	WISE	6.00	79.80	5.30	2.50	370401	824210	B	14390	09/01/88
									4.90	1.50		6.5	2030
SURFACE MINE	17.70	33.50	60.60	WISE	5.90	75.00	4.20	0.70	370404	823728	B	12570	09/01/88
									12.50	1.70		0.0	2318
SURFACE MINE	1.80	32.50	58.50	WISE	9.00	78.30	5.10	0.90	370404	823730	B	13980	09/01/88
									5.00	1.70		7.5	2804
SURFACE MINE	3.30	29.00	55.40	RUSSELL	15.60	72.80	4.50	1.70	370411	815845	B	12800	09/01/88
									4.40	1.00		5.5	2642
	2.20	37.20	57.70	RUSSELL	5.10	82.00	5.10	0.80	370421	815655	B	14580	09/01/88
									5.50	1.50		5.5	2093
SURFACE MINE	2.30	32.50	65.00	WISE	2.50	85.40	5.30	0.60	370421	823206	B	15230	09/01/88
									4.60	1.60		7.5	2804
UNDERGROUND MINE	1.80	23.80	57.60	DICKENSON	18.60	71.30	4.30	0.60	370424	820945	B	12440	09/01/88
									4.00	1.20		9.0	2678
UNDERGROUND MINE	2.20	30.90	63.20	WISE	5.90	81.70	4.40	0.80	370426	823145	B	14450	09/01/88
									5.60	1.60		8.5	2804
UNDERGROUND MINE	2.60	25.60	64.70	DICKENSON	9.70	80.60	4.50	0.70	370429	821001	B	13950	09/01/88
									3.00	1.50		9.0	2354
UNDERGROUND MINE	2.00	31.70	62.60	WISE	5.70	81.00	4.80	0.90	370429	823146	B	14500	09/01/88
									6.00	1.60		9.0	2732
SURFACE MINE	6.00	33.80	64.90	WISE	1.30	86.40	5.40	0.90	370445	823118	B	15340	09/01/88
									4.40	1.60		9.0	2417
DEEP MINE, H COAL CO	11.50	37.90	57.60	RUSSELL	4.50	80.60	5.10	0.50	370447	815550	B	14160	09/01/88
									7.90	1.40		0.5	2138
UNDERGROUND MINE	1.50	20.10	54.40	DICKENSON	25.50	65.10	3.90	0.60	370452	821331	B	11370	09/01/88
									3.80	1.10		7.5	2804

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE				BUCHANAN									
2.30	34.10	61.80	4.10			82.00	5.10	1.00	370457	820204	B	14810	09/01/88
									6.10	1.70		8.0	2237
SURFACE MINE				WISE									
2.60	32.20	54.90	12.90			74.10	4.80	2.50	370503	823519	B	13230	09/01/88
									3.90	1.80		8.0	2372
SURFACE MINE				DICKENSON									
3.90	31.10	64.10	4.80			83.50	5.30	0.90	370506	822536	B	14780	09/01/88
									3.80	1.70		9.0	2597
SURFACE MINE				DICKENSON									
2.50	19.20	49.10	31.70			59.20	3.60	0.80	370508	821308	B	10330	09/01/88
									3.70	1.00		7.5	2804
				RUSSELL									
2.80	35.00	56.50	8.50			79.00	5.00	0.60	370509	815419	B	14010	09/01/88
									5.40	1.50		7.0	2462
SURFACE MINE				WISE									
1.80	30.80	54.50	14.70			71.70	4.70	3.40	370510	823519	B	12940	09/01/88
									3.80	1.70		6.5	2219
				RUSSELL									
1.60	34.00	59.30	6.70			80.70	5.10	0.90	370519	815755	B	14310	09/01/88
									5.20	1.40		8.0	2462
SURFACE MINE				WISE									
4.10	32.70	63.70	3.60			84.10	5.20	0.70	370519	823524	B	15020	09/01/88
									4.70	1.70		8.5	2777
				RUSSELL									
2.50	35.40	56.30	8.30			79.10	4.90	0.50	370524	815449	B	13910	09/01/88
									5.80	1.40		6.5	2408
DEEP MINE, MCCALL COAL CO				RUSSELL									
1.50	36.90	55.80	7.30			80.10	5.10	0.60	370526	815415	B	14120	09/01/88
									5.40	1.50		7.5	2516
				RUSSELL									
3.30	35.30	57.90	6.80			79.70	5.10	0.60	370526	815417	B	14120	09/01/88
									6.10	1.70		6.5	2462
SURFACE MINE				WISE									
2.60	34.70	58.70	6.60			78.80	5.20	2.80	370527	823711	B	14220	09/01/88
									5.10	1.50		9.0	2039
SURFACE MINE				WISE									
3.10	35.80	57.60	6.60			79.30	5.20	2.50	370528	823844	B	14370	09/01/88
									5.00	1.40		9.0	2264
				RUSSELL									
1.30	35.70	56.60	7.70			78.90	5.10	0.60	370535	815439	B	14180	09/01/88
									6.10	1.60		0.0	0
SURFACE MINE				WISE									
3.40	33.10	64.20	2.70			83.70	5.20	0.70	370543	823514	B	15080	09/01/88
									6.10	1.60		8.5	2732
SURFACE MINE				DICKENSON									
3.00	32.60	65.00	2.40			84.40	5.30	1.00	370554	823013	B	15040	09/01/88
									5.30	1.60		9.0	2579

Coal Field Information Printout for: VA - Virginia

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
1.60	33.20	62.70	4.10	83.20	D168910	0.80	370559	815820	B	14810	0.0	09/01/88	0		
DEEP MINE, HESS CREEK MIN CO															
2.40	28.30	49.80	21.90	66.40	W187055	2.30	370620	815748	B	11720	4.5	09/01/88	2516		
SURFACE MINE															
2.30	34.20	61.00	4.80	80.90	W192611	2.90	370620	823050	B	14610	9.0	09/01/88	2111		
SURFACE MINE															
1.60	32.90	60.20	6.90	80.30	D170136	1.70	370632	815842	B	14310	8.5	09/01/88	2183		
SURFACE MINE															
2.70	35.00	57.40	7.60	78.90	W229073	0.90	370648	823727	B	14100	8.0	09/01/88	2606		
SURFACE MINE															
2.50	32.70	60.20	7.10	81.20	W193945	0.70	370702	815912	B	14460	8.5	09/01/88	2696		
UNDERGROUND MINE															
2.50	19.60	50.10	30.30	59.80	W211172	1.50	370719	821346	B	10670	8.0	09/01/88	2579		
SURFACE MINE															
4.00	33.00	62.10	4.90	80.60	W212487	0.90	370726	822757	B	14150	7.5	09/01/88	2507		
UNDERGROUND MINE															
1.40	21.10	56.00	22.90	65.40	W211168	0.80	370748	821449	B	11860	8.0	09/01/88	2732		
SURFACE															
3.90	35.10	60.00	4.90	82.20	W203392	0.80	370749	822804	B	14710	8.0	09/01/88	2633		
TAEZEWELL															
3.00	28.90	62.00	9.10	79.30	D170145	0.90	370800	814444	B	14080	9.0	09/01/88	2363		
TAEZEWELL															
2.60	30.00	64.60	5.40	82.80	D170144	1.40	370812	814447	B	14660	9.0	09/01/88	2039		
TAEZEWELL															
2.70	24.50	55.80	19.70	68.20	W191031	0.70	370814	814324	B	11980	1.0	09/01/88	2624		
UNDERGROUND MINE															
1.70	28.90	66.40	4.70	83.90	W217592	0.70	370823	815951	B	14790	8.0	09/01/88	2453		
SURFACE MINE															
2.10	31.60	63.10	5.30	81.70	W212486	0.70	370836	822953	B	14380	3.5	09/01/88	2804		
TAEZEWELL															
2.80	28.20	68.30	3.50	84.20	D170143	2.00	370838	814230	B	14880	9.0	09/01/88	2174		

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Free Swell	Hemi Temp	Last Chg
UNDERGROUND MINE	0.90	23.00	56.10	DICKENSON	20.90	69.10	4.20	0.60	370842	821951	B	12070	6.0	2804	09/01/88
SURFACE MINE	2.50	37.20	57.60	WISE	5.20	79.60	5.20	2.00	370842	823336	B	14360	5.5	2111	09/01/88
	3.70	35.60	53.70	WISE	10.70	75.10	5.10	1.40	370845	823740	B	13470	6.5	2642	09/01/88
	2.00	27.10	69.60	TAZEWELL	3.30	85.30	5.00	0.90	370858	814726	B	15010	9.0	2138	09/01/88
SURFACE MINE	8.90	37.40	54.00	DICKENSON	8.60	76.70	5.40	2.90	370904	823238	B	13930	8.0	2120	09/01/88
DRILLCORE	2.90	35.30	59.90	WISE	4.80	81.80	5.10	0.60	370904	823625	B	14550	7.0	2804	09/01/88
SURFACE MINE	9.40	31.60	62.10	DICKENSON	6.30	76.00	4.50	0.80	370915	822807	B	13180	0.5	2480	09/01/88
	2.90	31.30	62.00	BUCHANAN	6.70	81.30	4.90	0.60	370917	815412	B	14370	6.5	2624	09/01/88
SURFACE MINE	1.80	32.20	53.60	WISE	14.20	73.10	4.60	0.70	370918	823259	B	13010	6.5	2804	09/01/88
SURFACE MINE	4.50	34.10	58.70	DICKENSON	7.20	79.90	5.10	1.50	370919	322808	B	14270	7.5	2516	09/01/88
	1.90	27.30	68.40	TAZEWELL	4.30	84.10	4.90	1.20	370924	814704	B	14840	9.0	2138	09/01/88
	3.60	29.80	66.30	TAZEWELL	3.90	84.90	5.00	0.50	370937	815131	B	14990	8.5	2093	09/01/88
UNDERGROUND MINE	2.60	26.60	66.00	BUCHANAN	7.40	82.20	4.80	0.90	370947	820738	B	14440	7.5	2642	09/01/88
UNDERGROUND MINE	3.10	26.00	69.20	BUCHANAN	4.80	84.20	4.80	0.80	370951	820027	B	14880	8.0	2318	09/01/88
UNDERGROUND MINE	1.20	18.50	69.10	BUCHANAN	12.40	79.70	3.90	0.70	370955	820101	B	13690	7.5	2498	09/01/88
SURFACE	4.00	36.00	60.30	DICKENSON	3.70	83.10	5.60	0.90	371003	822840	B	14860	7.0	2363	09/01/88

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	3.70	35.80	57.60	DICKENSON	6.60	79.40	W206886	5.70	371003	822903	B	14270	09/01/88
								1.70	4.80	1.80		8.0	2543
UNDERGROUND MINE	3.40	26.20	69.30	BUCHANAN	4.50	84.90	W215877	5.00	371004	820026	B	14980	09/01/88
								0.80	3.10	1.70		8.0	2282
UNDERGROUND MINE	2.10	38.80	56.20	DICKENSON	5.00	80.60	W238481	5.40	371004	823111	B	14580	09/01/88
								1.30	5.80	1.90		7.0	2291
				TAZEWELL	7.40	81.40	D170161	4.80	371012	814754	B	14330	09/01/88
	2.30	27.30	65.30					0.70	4.40	1.30		8.5	2912
UNDERGROUND MINE	1.30	25.30	60.70	BUCHANAN	14.00	75.50	W215447	4.50	371012	820737	B	13570	09/01/88
								3.00	1.60	1.40		6.0	2363
SURFACE MINE	1.70	25.50	57.20	BUCHANAN	17.30	72.70	W194301	4.50	371023	820556	B	12910	09/01/88
								1.00	3.20	1.30		8.0	2804
	1.90	28.50	68.40	BUCHANAN	3.10	85.70	D170147	5.10	371029	815248	B	15080	09/01/88
								0.80	3.90	1.40		9.0	2138
	2.60	31.00	65.70	TAZEWELL	3.30	85.30	D170129	5.10	371030	815026	B	15080	09/01/88
								0.90	3.90	1.50		9.0	2300
SURFACE MINE	3.80	35.90	62.20	DICKENSON	1.90	85.50	W238478	5.40	371032	822656	B	15240	09/01/88
								0.70	4.90	1.60		7.5	2390
SURFACE MINE	2.00	35.80	60.50	BUCHANAN	3.70	82.90	W238479	5.30	371035	822639	B	14850	09/01/88
								1.00	5.30	1.80		7.0	2606
SURFACE	3.90	32.90	59.80	DICKENSON	7.30	79.40	W204618	5.10	371036	822537	B	14150	09/01/88
								0.80	5.80	1.60		9.0	2804
	2.00	27.10	68.70	BUCHANAN	4.20	85.50	D170148	4.90	371039	815048	B	14990	09/01/88
								0.70	3.40	1.30		8.0	2084
SURFACE MINE	4.00	34.60	58.80	DICKENSON	6.60	80.00	W206887	5.40	371040	822548	B	14370	09/01/88
								1.40	4.70	1.90		9.0	2624
SURFACE MINE	3.40	34.90	61.10	DICKENSON	4.00	82.30	W206888	5.60	371042	822549	B	14830	09/01/88
								1.70	4.50	1.90		9.0	2309
UNDERGROUND MINE	1.70	25.20	71.70	BUCHANAN	3.10	86.40	W215448	4.70	371043	820100	B	15140	09/01/88
								1.00	3.10	1.70		8.0	2399
	2.20	26.70	70.70	BUCHANAN	2.60	86.90	D170146	5.00	371049	815206	B	15260	09/01/88
								0.50	3.70	1.30		9.0	2039

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
UNDERGROUND MINE	1.10	19.00	70.90	BUCHANAN	10.10	80.60	W214765	4.10	371050	820431	B	14050	09/01/88
								0.80	3.20	1.20		6.5	2480
DRILLCORE	2.40	39.90	54.00	DICKENSON	6.10	77.90	W219343	5.30	371115	823241	B	14070	09/01/88
								2.80	6.00	1.90		5.0	2039
UNDERGROUND MINE	2.90	24.80	64.40	BUCHANAN	10.80	78.60	W214768	4.60	371116	820634	B	13830	09/01/88
								1.40	3.20	1.40		8.0	2606
	3.40	27.40	68.90	BUCHANAN	3.70	86.40	D170131	5.00	371118	815049	B	15140	09/01/88
								0.70	2.90	1.30		8.0	2156
UNDERGROUND MINE	1.30	24.90	54.40	BUCHANAN	20.70	69.50	W217398	4.00	371126	820843	B	12200	09/01/88
								0.60	4.00	1.20		5.0	2804
	3.40	26.00	67.50	TAZEWELL	6.50	83.70	D170142	4.70	371130	814134	B	14700	09/01/88
								0.90	2.90	1.30		9.0	2462
	3.20	28.10	62.60	TAZEWELL	9.30	78.90	D170166	4.60	371131	814350	B	13980	09/01/88
								2.70	3.40	1.10		9.0	2111
SURFACE MINE	2.70	25.70	70.90	BUCHANAN	3.40	85.90	W193932	4.90	371135	815215	B	15160	09/01/88
								0.60	3.80	1.40		9.0	2354
	8.10	28.10	64.70	TAZEWELL	7.20	78.80	D170165	4.20	371137	814541	B	13600	09/01/88
								1.00	7.50	1.30		1.5	2264
	2.90	27.60	66.70	TAZEWELL	5.70	83.70	D170164	4.90	371140	814544	B	14720	09/01/88
								0.90	3.40	1.40		9.0	2462
	2.30	24.00	68.60	BUCHANAN	7.40	82.60	D170167	4.50	371141	815030	B	14500	09/01/88
								0.70	3.40	1.40		9.0	2462
	3.80	24.80	71.20	BUCHANAN	4.00	85.60	D170130	4.90	371141	815114	B	15000	09/01/88
								2.10	2.20	1.20		9.0	2183
SURFACE MINE	4.50	29.80	61.90	BUCHANAN	8.30	80.70	W1 4293	4.90	371148	820831	B	14430	09/01/88
								1.00	3.50	1.60		8.0	2804
SURFACE MINE	5.90	29.40	54.80	BUCHANAN	15.80	72.30	W194305	4.50	371149	820842	B	13000	09/01/88
								1.60	4.40	1.40		8.5	2453
SURFACE MINE	2.70	30.30	57.40	DICKENSON	12.30	75.00	W211675	4.70	371150	821554	B	13390	09/01/88
								2.30	4.20	1.50		9.0	2336
SURFACE MINE	2.70	31.20	57.50	DICKENSON	11.30	75.40	W211174	4.80	371151	821555	B	13490	09/01/88
								2.90	4.20	1.40		9.0	2363

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
6.40	20.20	72.90	72.90	TAZEWELL	6.90	82.60	4.30	W191030	0.60	371155	813913	B	14100	09/01/88
										4.00	1.60		1.0	2138
SURFACE MINE				BUCHANAN	12.20	76.70	4.40	W193950	1.30	371206	815739	B	13550	09/01/88
7.00	25.10	62.70	62.70							4.10	1.30		9.0	2489
SURFACE MINE				BUCHANAN	7.00	82.20	4.70	W193948	1.70	371208	815737	B	14570	09/01/88
3.40	25.90	67.10	67.10							3.10	1.30		9.0	2417
UNDERGROUND MINE				BUCHANAN	5.60	86.10	4.30	W214763	0.60	371212	815949	B	14740	09/01/88
1.60	18.30	76.10	76.10							2.30	1.10		2.5	2309
1.40	23.70	71.00	71.00	TAZEWELL	5.30	83.10	4.90	W191033	1.00	371215	814102	B	14780	09/01/88
										4.40	1.30		9.0	2237
1.80	24.40	72.10	72.10	TAZEWELL	3.50	85.30	4.80	W191032	0.80	371219	814112	B	15110	09/01/88
										4.20	1.40		9.0	2264
UNDERGROUND MINE				BUCHANAN	2.80	87.10	4.80	W215412	0.70	371258	815939	B	15340	09/01/88
1.20	23.70	73.50	73.50							3.00	1.60		9.0	2516
DRILLCORE				DICKENSON	4.40	81.30	5.20	W219406	0.80	371302	822858	B	14440	09/01/88
2.90	37.40	58.20	58.20							6.70	1.60		5.5	2804
SURFACE MINE				BUCHANAN	6.50	82.90	4.80	W193947	0.70	371305	815430	B	14600	09/01/88
4.60	24.20	69.30	69.30							3.60	1.50		9.0	2804
UNDERGROUND MINE				BUCHANAN	16.20	75.70	3.90	W193935	0.90	371315	820536	B	12990	09/01/88
1.20	15.50	68.30	68.30							2.30	1.00		4.5	2804
UNDERGROUND MINE				BUCHANAN	5.60	83.90	4.80	W217397	0.70	371316	820652	B	14780	09/01/88
1.30	24.40	70.00	70.00							3.40	1.60		9.0	2327
SURFACE MINE				BUCHANAN	11.00	77.70	4.90	W238474	1.00	371319	820858	B	13860	09/01/88
2.40	29.10	59.90	59.90							3.90	1.50		8.0	2786
SURFACE MINE				BUCHANAN	3.70	81.90	4.90	W238475	1.00	371320	820855	B	14340	09/01/88
8.20	29.90	66.40	66.40							6.90	1.60		2.5	2084
UNDERGROUND MINE				BUCHANAN	5.80	81.80	5.10	W217399	1.50	371323	820827	B	14620	09/01/88
1.30	31.20	63.00	63.00							4.50	1.30		8.5	2030
1.90	23.10	72.70	72.70	BUCHANAN	4.20	86.20	4.80	D170149	0.50	371325	815238	B	15080	09/01/88
										3.00	1.30		9.0	2363
UNDERGROUND MINE				BUCHANAN	7.60	84.40	4.20	W193933	0.60	371346	815946	B	14550	09/01/88
0.90	15.70	76.70	76.70							2.10	1.10		3.5	2426

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE	2.80	30.60	61.00	BUCHANAN	79.90	5.10	W194298	371349	820807	B	14270	09/01/88
						1.20		3.90	1.50		9.0	2642
SURFACE MINE	2.50	25.90	54.30	BUCHANAN	69.90	4.30	W194300	371349	820809	B	12410	09/01/88
						0.70		4.00	1.30		6.5	2804
SURFACE MINE	1.60	32.20	55.80	DICKENSON	74.20	4.80	W236240	371356	821933	B	13400	09/01/88
						3.70		3.90	1.40		9.0	2156
UNDERGROUND MINE	0.80	17.70	69.80	BUCHANAN	79.10	3.90	W193934	371357	820428	B	13580	09/01/88
						0.90		2.60	1.00		6.5	2309
UNDERGROUND MINE	1.60	20.60	75.10	BUCHANAN	86.50	4.50	W214766	371358	820614	B	14900	09/01/88
						0.60		2.90	1.20		5.0	2210
SURFACE MINE	5.10	27.00	51.90	BUCHANAN	67.70	4.30	W194302	371358	820723	B	12060	09/01/88
						1.30		4.30	1.30		9.0	2804
SURFACE MINE	4.10	22.40	44.50	BUCHANAN	56.90	3.60	W194303	371359	820721	B	10110	09/01/88
						1.40		4.00	1.00		8.5	2615
SURFACE MINE	2.30	26.40	57.10	BUCHANAN	73.10	4.50	W194292	371400	820720	B	13010	09/01/88
						1.00		3.50	1.40		8.5	2804
SURFACE MINE	1.80	33.70	63.40	DICKENSON	83.60	5.20	W236241	371404	821938	B	15000	09/01/88
						0.80		5.90	1.60		8.0	2597
	2.50	19.40	69.60	BUCHANAN	79.90	4.10	D170158	371407	815028	B	13870	09/01/88
						0.90		2.80	1.30		8.5	2912
	3.10	20.10	71.30	BUCHANAN	81.80	4.40	D170157	371418	814930	B	14230	09/01/88
						0.60		3.20	1.40		9.0	2912
	1.70	25.50	66.10	TAZEWELL	81.20	4.70	D170151	371420	812859	B	14230	09/01/88
						0.50		3.90	1.30		8.5	2912
	0.90	28.10	68.00	TAZEWELL	86.20	4.90	D170150	371422	812909	B	15140	09/01/88
						0.50		3.10	1.40		7.0	2471
UNDERGROUND MINE	2.80	32.00	57.60	DICKENSON	77.10	4.90	W211676	371427	822038	B	13590	09/01/88
						0.60		5.50	1.50		7.5	2804
UNDERGROUND MINE	2.30	29.60	54.00	DICKENSON	71.60	4.70	W211677	371429	822027	B	12930	09/01/88
						0.80		4.90	1.60		7.5	2651
UNDERGROUND MINE	2.80	28.10	61.90	BUCHANAN	77.80	4.70	W211771	371433	820904	B	13840	09/01/88
						2.10		3.90	1.50		6.5	2462

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Oxygen	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash							Nitrogen	Hardgrove	Free Swell	Hemi Temp
LESLIE COAL CO MINE	3.00	25.90	64.90	TAZEWELL	81.10	4.60	0.60	371434	812940	B		14210	09/01/88
								3.10	1.40			8.0	2912
SURFACE MINE	13.20	26.10	60.10	BUCHANAN	69.10	4.00	0.60	371434	820954	B		11520	09/01/88
								11.10	1.40			0.0	2723
UNDERGROUND MINE	3.10	32.10	65.60	BUCHANAN	84.60	4.80	1.40	371436	820926	B		15160	09/01/88
								5.10	1.80			9.0	2102
UNDERGROUND MINE	1.40	18.30	78.00	BUCHANAN	87.00	4.20	0.70	371437	820136	B		14990	09/01/88
								3.20	1.20			3.5	2336
SURFACE MINE	2.20	31.40	65.60	BUCHANAN	84.60	5.30	1.20	371439	820949	B		15090	09/01/88
								4.30	1.60			8.0	2201
				BUCHANAN		D170132		371440	815050	B		14210	09/01/88
								2.80	1.40			9.0	2732
CONSOL LAUREL NO 2 MINE	2.10	26.80	63.60	TAZEWELL	80.10	4.70	0.80	371445	812802	B		14150	09/01/88
								3.40	1.40			7.0	2732
UNDERGROUND MINE	1.50	17.90	77.70	BUCHANAN	86.30	4.20	0.70	371448	815713	B		14960	09/01/88
								3.20	1.20			3.0	2381
				BUCHANAN		D170156		371449	815022	B		13750	09/01/88
								3.70	1.40			2.5	2912
				TAZEWELL		D170153		371450	812958	B		14240	09/01/88
								3.60	1.10			9.0	2408
UNDERGROUND MINE	1.60	27.50	66.70	BUCHANAN	82.20	4.70	1.20	371453	820847	B		14410	09/01/88
								4.60	1.50			6.0	2714
				BUCHANAN		D170159		371500	814802	B		15310	09/01/88
								2.90	1.40			9.0	2111
UNDERGROUND	1.90	21.30	68.90	TAZEWELL	80.90	4.50	0.60	371501	812909	B		14180	09/01/88
								3.00	1.20			9.0	2507
UNDERGROUND	2.00	22.10	69.30	TAZEWELL	82.10	4.60	0.70	371502	812954	B		14340	09/01/88
								2.80	1.20			9.0	2471
SURFACE MINE	2.50	31.80	61.30	BUCHANAN	80.70	5.20	1.50	371503	821054	B		14390	09/01/88
								4.30	1.40			9.0	2444
				TAZEWELL		D170152		371515	812959	B		15030	09/01/88
								3.20	1.20			9.0	2237

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE				BUCHANAN									
3.60	24.20	46.50	29.30			60.80	3.80	0.60	371519	821011	B	10690	09/01/88
									4.40	1.10		4.5	2804
UNDERGROUND MINE				BUCHANAN									
2.60	30.00	61.30	8.70			79.20	5.00	1.20	371529	820811	B	14100	09/01/88
									4.30	1.60		8.5	2210
SURFACE MINE				BUCHANAN									
2.50	28.30	68.70	3.00			84.70	5.00	0.90	371536	820713	B	15100	09/01/88
									5.00	1.40		9.0	2255
SURFACE MINE				BUCHANAN									
2.40	26.50	52.80	20.70			68.50	4.30	0.60	371548	820713	B	12210	09/01/88
									4.70	1.20		8.0	2804
AUGER MINE, LAUREL FORK				TAZEWELL									
2.80	27.60	68.00	4.40			84.50	4.90	0.80	371600	812645	B	14850	09/01/88
									4.20	1.20		9.0	2408
UNDERGROUND MINE				BUCHANAN									
1.60	27.90	67.10	5.00			82.90	4.90	0.60	371615	821112	B	14600	09/01/88
									4.90	1.70		8.0	2777
				BUCHANAN									
2.00	20.70	72.70	6.60			83.60	4.40	0.60	371617	815332	B	14540	09/01/88
									3.40	1.40		9.0	2912
SURFACE MINE				BUCHANAN									
3.60	29.10	61.90	9.00			78.60	5.00	1.50	371638	821025	B	14040	09/01/88
									4.30	1.60		8.5	2588
SURFACE MINE				BUCHANAN									
2.00	36.30	56.60	7.10			79.30	5.30	2.70	371717	821520	B	14400	09/01/88
									4.00	1.60		6.0	2021
SURFACE MINE				BUCHANAN									
1.90	35.90	51.60	12.50			73.40	4.90	4.00	371746	821502	B	13370	09/01/88
									3.80	1.40		8.5	2138
UNDERGROUND MINE				BUCHANAN									
1.40	29.80	59.10	11.10			77.20	4.80	1.60	371748	820808	B	13670	09/01/88
									3.80	1.50		6.0	2824
UNDERGROUND MINE				BUCHANAN									
2.60	29.90	62.30	7.80			80.10	5.00	1.20	371805	820002	B	14210	09/01/88
									4.20	1.70		8.5	2480
				BUCHANAN									
3.00	22.30	74.60	3.10			87.70	4.70	0.60	371813	814504	B	15250	09/01/88
									2.50	1.40		9.0	2237
DRILLCORE				MONTGOMERY									
4.90	10.20	51.00	38.80			52.70	2.60	0.30	371817	801930	B	8750	09/01/88
									5.00	0.60		0.0	2804
UNDERGROUND MINE				BUCHANAN									
1.60	28.50	65.30	6.20			81.50	5.10	1.10	371821	820108	B	14530	09/01/88
									4.40	1.70		9.0	2588
UNDERGROUND MINE				BUCHANAN									
1.70	32.30	59.90	7.80			79.60	5.00	1.00	371822	821327	B	14180	09/01/88
									5.00	1.60		9.0	2660

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND MINE	1.50	34.20	59.70	BUCHANAN	6.10	81.10	W217685	1.30	371823	821329	B	14440	09/01/88
							5.10		4.70	1.70		7.0	2498
UNDERGROUND MINE	2.70	31.80	61.50	BUCHANAN	6.70	80.10	W218771	1.20	371824	820546	B	14500	09/01/88
							4.90		5.40	1.70		8.0	2606
SURFACE MINE	2.90	34.00	63.90	BUCHANAN	2.10	85.20	W218770	1.10	371833	821218	B	15250	09/01/88
							5.10		4.80	1.70		8.0	2228
UNDERGROUND MINE	2.00	32.90	60.30	BUCHANAN	6.80	80.30	W217689	0.60	371848	821309	B	14350	09/01/88
							5.10		5.70	1.50		8.5	2804
SURFACE MINE	1.60	31.80	65.10	BUCHANAN	3.10	84.50	W223355	0.70	371913	820349	B	15040	09/01/88
							5.20		4.80	1.70		8.5	2660
UNDERGROUND MINE	2.40	29.70	52.00	BUCHANAN	18.30	69.60	W218774	0.80	371926	820617	B	12520	09/01/88
							4.50		5.40	1.40		6.5	2804
SURFACE MINE	3.50	29.70	55.40	BUCHANAN	14.90	72.70	W218973	0.70	372000	820549	B	12900	09/01/88
							4.90		5.30	1.50		8.0	2804
UNDERGROUND MINE	2.50	33.10	61.50	BUCHANAN	5.40	81.60	W218775	1.70	372006	820608	B	14650	09/01/88
							5.10		4.60	1.60		8.0	2192
UNDERGROUND MINE	1.50	30.00	61.40	BUCHANAN	8.60	79.00	W225106	0.70	372010	820210	B	14040	09/01/88
							4.90		5.20	1.60		8.0	2651
UNDERGROUND MINE	2.20	31.50	62.10	BUCHANAN	6.40	81.30	W218772	1.20	372010	820645	B	14590	09/01/88
							4.60		4.90	1.60		7.0	2552
UNDERGROUND MINE	2.40	31.80	63.80	BUCHANAN	4.40	83.90	W218773	0.80	372010	820654	B	14900	09/01/88
							5.10		4.20	1.60		7.5	2588
UNDERGROUND MINE	2.70	29.50	63.60	BUCHANAN	6.90	81.20	W218769	0.70	372055	821040	B	14400	09/01/88
							4.90		4.70	1.60		7.0	2804
UNDERGROUND MINE	3.20	29.00	63.40	BUCHANAN	7.60	81.00	W218765	0.60	372103	821402	B	14310	09/01/88
							4.80		4.40	1.60		7.5	2624
UNDERGROUND MINE	1.40	29.60	62.90	BUCHANAN	7.50	80.70	W223359	0.70	372117	820849	B	14330	09/01/88
							4.90		4.60	1.60		7.5	2804
UNDERGROUND MINE	3.20	28.90	64.40	BUCHANAN	6.70	81.40	W223360	0.70	372118	820846	B	14440	09/01/88
							4.90		4.70	1.60		7.5	2804
UNDERGROUND MINE	2.70	32.90	62.50	BUCHANAN	4.60	83.30	W218768	1.10	372131	821033	B	14680	09/01/88
							4.80		4.60	1.60		8.5	2453

Coal Field Information Printout for: VA - Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Code Number		Latitude	Longitude	Rank	Htg Val	Last Chg
				Ash		Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
SURFACE MINE				BUCHANAN		W218978		372140	820227	B	14390	09/01/88
2.20	30.90	62.50	6.60	6.60	81.20	5.10	1.00	4.40	1.70		8.0	2687
UNDERGROUND MINE				BUCHANAN		W223357		372151	820619	B	14620	09/01/88
1.90	30.30	64.20	5.50	5.50	82.30	5.00	0.70	4.90	1.60		7.5	2804
SURFACE MINE				BUCHANAN		W223361		372154	820230	B	14630	09/01/88
1.90	33.40	61.50	5.10	5.10	82.30	5.00	1.10	4.90	1.60		8.0	2516
UNDERGROUND MINE				BUCHANAN		W225107		372159	820534	B	14220	09/01/88
1.10	33.40	58.80	7.80	7.80	79.00	5.20	0.80	5.50	1.70		7.5	2804
UNDERGROUND MINE				BUCHANAN		W223358		372238	821142	B	14170	09/01/88
2.40	35.10	58.90	6.00	6.00	78.30	5.10	4.10	4.90	1.60		8.0	2030
SURFACE MINE				BUCHANAN		W223352		372250	820520	B	12550	09/01/88
1.40	29.70	52.70	17.60	17.60	70.50	4.50	0.80	5.20	1.40		7.5	2804
SURFACE MINE				BUCHANAN		W206890		372523	815758	B	14410	09/01/88
3.30	34.30	59.10	6.60	6.60	81.10	5.40	0.80	4.40	1.70		9.0	2804
UNDERGROUND MINE				BUCHANAN		W223353		372721	815950	B	14830	09/01/88
2.10	33.10	63.50	3.40	3.40	83.50	5.30	0.80	5.30	1.70		8.5	2516
DRILLCORE				BOTETOURT		W219206		372933	795952	A	11820	09/01/88
4.30	10.70	66.30	23.00	23.00	70.00	3.20	0.70	2.30	0.80		0.5	2552
SURFACE MINE				WISE		W231828		375854	823309	B	12710	09/01/88
16.50	31.30	64.20	4.50	4.50	74.30	4.40	0.70	14.60	1.50		0.0	2246
SURFACE MINE				WISE		W231829		375855	823309	B	12740	09/01/88
15.70	32.40	63.40	4.20	4.20	75.40	4.40	0.50	14.20	1.30		0.0	2291

Coal Field Information Printout for

WA - Washington

Coal Field Information Printout for: WA - Washington

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp

15.80	37.80	47.00	51.30	ASOTIN	15.20	59.00	3.10	0.40	460310	1172035	L	9280	09/01/88
									21.60	0.70		0.0	2282

2.40	23.40	51.30	25.30	PIERCE	25.30	62.30	4.00	0.60	464530	1220210	B	10930	09/01/88
									6.20	1.60		1.0	2804

19.30	40.80	41.20	18.00	THURSTON	18.00	59.60	4.40	0.50	464631	1224600	SB	10310	09/01/88
									16.50	1.00		0.0	2399

11.80	20.90	49.70	29.40	PIERCE	29.40	54.20	2.80	0.70	470415	1220040	B	8890	09/01/88
									10.90	2.00		0.0	2804

6.20	21.70	54.40	23.90	KING	23.90	61.90	3.30	0.40	472148	1215850	B	10290	09/01/88
									9.30	1.20		0.0	2912

8.70	29.20	51.20	19.60	WHATCOM	19.60	62.90	3.30	0.40	485030	1215845	A	10300	09/01/88
									12.60	1.20		0.0	2912

4.00	15.10	50.70	34.20	WHATCOM	34.20	53.50	2.20	0.40	485114	1215804	SA	8300	09/01/88
									9.10	0.60		0.0	2912

3.60	28.70	35.70	35.60	WHATCOM	35.60	51.80	3.70	0.40	485254	1220742	SA	9210	09/01/88
									7.00	1.50		4.0	2300

Coal Field Information Printout for
WV - West Virginia

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
2.20	21.80	73.90	4.30	MCDOWELL	86.00	4.70	0.50	371530	812943	B	14990	09/01/88
								3.20	1.30		9.0	2246
2.60	21.60	74.00	4.40	MCDOWELL	86.20	4.60	0.60	371611	813019	B	14900	09/01/88
								3.00	1.20		9.0	2912
US STEEL NO 14 MINE, RD FORK	4.90	25.20	69.80	MCDOWELL	85.50	4.80	0.70	371616	812758	B	14990	09/01/88
								2.70	1.30		9.0	2354
CONSOL JENKIN JONES MINE	2.40	23.50	69.90	MCDOWELL	83.80	4.50	0.60	371645	812530	B	14660	09/01/88
								3.30	1.20		9.0	2129
STR BNCH, BALLARD HARMON BR	6.20	24.00	63.80	MCDOWELL	75.40	4.10	0.60	371700	812650	B	12930	09/01/88
								6.60	1.10		1.5	2561
UNDERGROUND	2.40	16.70	80.30	MCDOWELL	88.40	4.40	0.70	371730	813450	B	15320	09/01/88
								2.30	1.20		9.0	2246
UNDERGROUND	2.50	16.60	66.30	MCDOWELL	74.30	3.90	0.70	371948	813831	B	12890	09/01/88
								2.70	1.30		9.0	2804
UNDERGROUND	1.40	15.40	75.10	MCDOWELL	81.50	4.10	1.40	372020	813957	B	14170	09/01/88
								2.20	1.30		5.0	2561
UNDERGROUND	1.20	15.40	79.90	MCDOWELL	87.30	4.40	0.60	372049	813747	B	15110	09/01/88
								1.90	1.10		8.0	2318
UNDERGROUND	1.70	16.30	73.50	MCDOWELL	80.60	4.10	1.50	372114	814025	B	14070	09/01/88
								2.20	1.40		7.0	2552
UNDERGROUND	2.10	17.00	77.30	MCDOWELL	85.80	4.40	0.70	372116	813136	B	14930	09/01/88
								2.20	1.20		9.0	2785
UNDERGROUND	2.50	17.00	76.50	MCDOWELL	84.30	4.30	0.90	372116	813957	B	14730	09/01/88
								2.60	1.40		8.5	2561
UNDERGROUND	3.20	16.10	78.90	MCDOWELL	86.50	4.30	0.70	372121	813058	B	14940	09/01/88
								2.30	1.20		7.0	2651
UNDERGROUND	1.00	15.30	78.00	MCDOWELL	85.20	4.10	0.50	372146	814123	B	14660	09/01/88
								2.30	1.20		0.0	2354
UNDERGROUND	1.50	15.20	78.70	MCDOWELL	85.30	4.20	0.80	372200	813614	B	14760	09/01/88
								2.40	1.20		7.5	2291
UNDERGROUND	1.50	24.80	71.30	MCDOWELL	85.30	4.70	0.60	372202	815041	B	15060	09/01/88
								4.10	1.40		8.5	2084

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	3.00	15.50	77.20	MCDOWELL	84.50	4.20	0.80	372220	813218	B	14600	09/01/88
								2.10	1.10		8.0	2723
UNDERGROUND	1.50	25.50	58.30	MCDOWELL	82.10	4.90	1.30	372225	815007	B	14590	09/01/88
								3.90	1.60		9.0	2219
UNDERGROUND	3.30	18.00	72.80	MCDOWELL	82.20	4.50	0.60	372243	812730	B	14350	09/01/88
								2.30	1.20		9.0	2804
UNDERGROUND	2.30	17.30	79.60	MCDOWELL	87.70	4.40	0.60	372251	813717	B	15330	09/01/88
								2.80	1.40		8.5	2552
UNDERGROUND	1.40	27.30	68.10	MCDOWELL	83.20	5.20	0.80	372305	815402	B	14830	09/01/88
								4.60	1.60		9.0	2606
UNDERGROUND	1.00	14.40	78.50	MCDOWELL	85.10	4.10	0.50	372404	814058	B	14610	09/01/88
								2.10	1.10		3.5	2642
STRIP	3.10	20.50	76.00	MCDOWELL	87.00	4.60	0.60	372406	812125	B	15230	09/01/88
								2.90	1.40		9.0	2804
UNDERGROUND	2.40	16.90	73.30	MCDOWELL	81.50	4.10	0.60	372420	813555	B	14120	09/01/88
								2.60	1.40		9.0	2804
UNDERGROUND	3.40	17.50	71.20	MCDOWELL	79.70	4.10	1.10	372437	814023	B	13880	09/01/88
								2.50	1.30		9.0	2804
STRIP	0.60	18.10	73.90	MCDOWELL	82.00	4.50	0.80	372445	813328	B	14180	09/01/88
								4.00	0.70		9.0	2678
UNDERGROUND	2.70	14.80	76.90	MCDOWELL	83.20	4.40	0.80	372446	813037	B	14430	09/01/88
								2.20	1.10		8.0	2804
UNDERGROUND	1.50	19.20	71.10	MCDOWELL	80.50	4.40	1.20	372450	812152	B	14100	09/01/88
								2.90	1.30		9.0	2507
UNDERGROUND	2.30	19.40	72.30	MCDOWELL	82.70	4.40	0.70	372458	813442	B	14400	09/01/88
								2.50	1.40		9.0	2804
UNDERGROUND	2.30	17.50	64.20	MCDOWELL	73.50	3.90	1.10	372502	812017	B	12860	09/01/88
								2.00	1.20		8.5	2651
UNDERGROUND	2.60	20.30	74.00	MCDOWELL	84.70	4.50	0.70	372520	814122	B	14820	09/01/88
								2.90	1.50		9.0	2804
UNDERGROUND	2.10	18.80	73.60	MCDOWELL	83.30	4.60	1.00	372600	812828	B	14540	09/01/88
								2.30	1.20		9.0	2750

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
POCAHONTAS NO 2	7.00	19.40	73.20	MERCER	80.60	3.90	0.50	372612	811358	B	13630	09/01/88
								6.40	1.20		1.0	2651
0.80	18.50	77.20	4.30	MERCER	86.60	4.50	1.10	372618	811626	B	15130	09/01/88
								2.30	1.20		9.0	2345
UNDERGROUND	2.30	19.30	75.70	MCDOWELL	85.50	4.50	1.30	372620	812742	B	14960	09/01/88
								2.40	1.30		9.0	2345
UNDERGROUND	2.00	16.00	50.30	WYOMING	58.10	3.40	0.80	372624	812004	B	10200	09/01/88
								3.00	1.00		8.0	2804
UNDERGROUND	2.30	17.50	75.90	WYOMING	85.40	4.30	0.80	372635	812225	B	14950	09/01/88
								1.60	1.30		9.0	2714
UNDERGROUND	2.50	18.70	75.00	MCDOWELL	84.20	4.50	1.10	372700	814120	B	14750	09/01/88
								2.50	1.40		9.0	2651
UNDERGROUND	3.60	19.40	68.70	MCDOWELL	78.00	4.40	1.60	372714	814209	B	13680	09/01/88
								3.20	0.90		9.0	2669
UNDERGROUND	1.90	17.90	70.40	WYOMING	80.20	4.20	1.20	372727	812252	B	13930	09/01/88
								1.50	1.20		9.0	2606
UNDERGROUND	3.20	32.60	64.70	MCDOWELL	83.40	5.10	1.00	372727	815648	B	14850	09/01/88
								6.30	1.50		9.0	2237
UNDERGROUND	1.70	18.30	78.00	MCDOWELL	87.30	4.60	0.60	372749	813731	B	15240	09/01/88
								2.30	1.50		9.0	2615
UNDERGROUND	2.30	15.80	76.70	MCDOWELL	84.50	4.00	0.60	372750	812808	B	14510	09/01/88
								2.30	1.10		4.5	2462
UNDERGROUND	2.40	16.50	75.00	WYOMING	83.00	4.10	0.50	372835	812308	B	14390	09/01/88
								2.80	1.10		7.0	2399
POCAHONTAS NO 3	1.40	29.00	42.30	MERCER	58.80	4.10	0.90	372845	811045	B	10410	09/01/88
								6.30	1.20		6.0	2804
UNDERGROUND	3.20	31.20	53.60	MCDOWELL	68.40	4.60	4.40	372854	815751	B	12630	09/01/88
								6.20	1.20		8.5	2219
0.50	12.90	48.70	38.40	WYOMING	54.20	2.80	0.40	372921	811834	B	9260	09/01/88
								3.50	0.70		8.5	2804
UNDERGROUND	3.10	17.20	75.80	WYOMING	83.50	4.20	1.90	372926	812421	B	14530	09/01/88
								2.30	1.10		8.0	2345

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash			Sulfur		Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.70	29.50	65.70	MCDOWELL	83.10	5.00	W191111	372933	815059	B	14780	09/01/88
						2.00		3.50	1.60		9.0	2192
UNDERGROUND	3.60	30.20	60.40	MCDOWELL	78.10	5.20	W191108	372933	815210	B	13860	09/01/88
						1.30		4.90	1.10		8.5	2732
UNDERGROUND	1.50	17.10	72.10	MERCER	80.40	4.10	W192728	372934	811456	B	14010	09/01/88
						0.50		3.00	1.20		8.0	2912
UNDERGROUND	2.40	17.00	77.80	WYOMING	86.60	4.50	W192720	372942	812200	B	14940	09/01/88
						0.50		2.10	1.10		8.0	2408
UNDERGROUND	2.50	16.10	77.00	WYOMING	85.10	4.10	W194016	372951	812034	B	14710	09/01/88
						0.50		2.30	1.10		7.5	2804
STRIP	1.70	19.20	76.10	WYOMING	86.70	4.60	W192722	373003	812125	B	14980	09/01/88
						0.50		2.20	1.30		7.0	2588
UNDERGROUND	3.10	19.20	78.30	WYOMING	87.80	4.80	W193992	373017	813443	B	15370	09/01/88
						0.80		2.60	1.50		9.0	2516
STRIP MINE	2.60	31.30	64.80	MCDOWELL	82.70	5.20	W191110	373031	815406	B	14490	09/01/88
						1.00		6.50	0.70		8.5	2579
	3.80	20.00	75.90	WYOMING	86.10	4.60	D165681	373046	811520	B	14920	09/01/88
						0.70		2.90	1.60		8.0	2912
UNDERGROUND	1.20	23.10	57.60	WYOMING	68.80	4.30	W19.129	373047	814710	B	12150	09/01/88
						2.10		4.80	0.70		9.0	2633
SEWELL STRIP	0.70	19.40	70.90	MERCER	80.30	4.50	W194370	373100	811320	B	14150	09/01/88
						0.70		3.40	1.40		9.0	2804
STRIP MINE	2.00	31.50	65.70	MCDOWELL	84.20	5.50	W191130	373115	815221	B	14830	09/01/88
						0.80		5.70	1.00		9.0	2363
UNDERGROUND	1.50	17.60	75.50	WYOMING	83.90	4.30	W192733	373126	812704	B	14550	09/01/88
						0.50		3.20	1.20		7.0	2408
UNDERGROUND	1.20	25.70	67.80	WYOMING	81.80	5.00	W191131	373149	814724	B	14430	09/01/88
						1.70		4.10	0.90		9.0	2390
UNDERGROUND	2.50	32.00	62.20	WYOMING	80.70	5.20	W191107	373157	814812	B	14470	09/01/88
						1.10		5.80	1.40		9.0	2444
UNDERGROUND	1.80	30.40	53.20	MINGO	70.30	4.70	W189349	373203	815417	B	12620	09/01/88
						3.10		4.20	1.30		7.0	2237

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	Ash	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.80	21.90	69.80	8.30	WYOMING	82.10	4.50	0.90	373248	813756	B	14370	09/01/88
									2.80	1.40		9.0	2732
UNDERGROUND	3.00	28.40	56.40	15.20	WYOMING	72.60	4.60	4.40	373257	814741	B	13140	09/01/88
									1.80	1.40		9.0	2138
UNDERGROUND	2.50	19.30	73.10	7.60	WYOMING	81.70	4.50	1.50	373302	812533	B	14380	09/01/88
									3.40	1.30		9.0	2408
UNDERGROUND	1.60	17.10	72.10	10.80	WYOMING	79.80	4.30	1.10	373307	812650	B	13870	09/01/88
									2.90	1.10		7.0	2561
UNDERGROUND	2.70	19.40	73.80	6.80	WYOMING	83.60	4.60	0.60	373319	813409	B	14600	09/01/88
									3.00	1.40		9.0	2912
STRIP	2.70	15.20	73.70	11.10	WYOMING	80.60	4.10	0.50	373324	812206	B	13870	09/01/88
									2.60	1.10		4.0	2714
UNDERGROUND	1.20	16.60	67.30	16.10	WYOMING	74.60	4.10	0.70	373324	812529	B	12930	09/01/88
									3.50	1.00		6.5	2912
STRIP	2.50	30.90	57.70	11.40	MINGO	76.10	4.70	1.10	373327	815435	B	13490	09/01/88
									5.40	1.30		7.5	2750
STRIP	9.50	21.30	75.40	3.30	WYOMING	86.30	4.80	1.30	373356	812555	B	15130	09/01/88
									2.80	1.50		9.0	2489
UNDERGROUND	1.60	42.70	41.30	16.00	MINGO	70.80	4.70	1.50	373404	820615	B	12540	09/01/88
									5.70	1.30		7.0	2777
STRIP	5.70	34.10	58.50	7.40	MINGO	77.10	4.50	1.00	373406	820619	B	13380	09/01/88
									8.60	1.40		1.5	2300
UNDERGROUND	2.90	33.10	60.00	6.90	MINGO	80.30	5.00	0.80	373409	815150	B	14250	09/01/88
									5.60	1.40		7.5	2750
UNDERGROUND	2.80	32.10	62.70	5.20	MINGO	81.80	5.00	0.70	373432	815205	B	14550	09/01/88
									5.90	1.40		8.5	2912
STRIP	3.60	33.70	59.80	6.50	MINGO	80.50	5.10	0.70	373439	820017	B	14390	09/01/88
									5.70	1.50		9.0	2795
STRIP	3.90	33.90	62.90	3.20	MINGO	82.20	5.00	0.70	373458	815300	B	14370	09/01/88
									7.90	1.00		4.5	2579
	1.90	23.50	73.10	3.40	WYOMING	86.40	4.90	0.90	373515	812902	B	15210	09/01/88
									2.90	1.50		9.0	2255

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carb3a	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	1.50	18.60	74.90	WYOMING	6.50	83.30	4.50	1.50	373545	812550	B	14610	09/01/88
									2.80	1.40		9.0	2192
UNDERGROUND	4.80	30.80	62.90	MINGO	6.30	78.80	4.70	0.60	373559	815554	B	13760	09/01/88
									8.10	1.50		1.0	2804
UNDERGROUND	1.70	18.10	72.50	WYOMING	9.40	81.40	4.30	0.90	373609	812331	B	14040	09/01/88
									2.90	1.10		5.5	2732
UNDERGROUND	5.20	33.00	53.00	MINGO	14.00	72.50	4.70	0.80	373621	820800	B	12850	09/01/88
									6.60	1.40		6.0	2678
UNDERGROUND	2.00	32.80	57.40	MINGO	9.80	77.30	4.80	1.50	373635	820313	B	13650	09/01/88
									5.20	1.40		7.5	2354
POCAHONTAS NO 6	0.60	17.20	78.10	RALEIGH	4.70	85.60	4.40	1.60	373700	811045	B	14910	09/01/88
									2.40	1.30		8.5	2417
UNDERGROUND	2.30	22.30	75.40	WYOMING	2.30	87.60	4.80	0.50	373702	813358	B	15390	09/01/88
									3.30	1.50		9.0	2804
STRIP	4.00	26.60	69.90	WYOMING	3.50	84.60	5.00	0.60	373709	813636	B	14910	09/01/88
									4.70	1.60		8.0	2651
UNDERGROUND	2.00	16.00	79.30	RALEIGH	4.70	86.60	4.50	0.90	373741	811012	B	15040	09/01/88
									2.10	1.20		8.0	2804
NO 5 MINE, JUMAERTS COAL CO	2.40	34.80	58.60	MINGO	6.60	80.10	5.10	0.80	373750	815729	B	14300	09/01/88
									5.90	1.50		8.0	2912
STRIP	3.70	17.80	77.80	RALEIGH	4.40	85.80	4.60	1.00	373751	811023	B	15020	09/01/88
									2.50	1.70		9.0	2354
UNDERGROUND	2.30	33.60	58.10	MINGO	8.30	78.40	5.20	0.90	373812	820518	B	14030	09/01/88
									5.70	1.50		9.0	2804
UNDERGROUND	3.10	35.10	57.90	MINGO	7.00	79.20	5.10	1.00	373831	820632	B	14160	09/01/88
									6.20	1.50		9.0	2804
UNDERGROUND	2.30	37.20	58.70	MINGO	4.10	82.00	5.40	0.80	373846	820938	B	14720	09/01/88
									6.20	1.50		7.5	2804
	1.30	17.60	79.40	RALEIGH	3.00	87.10	4.60	0.70	373900	810345	B	15110	09/01/88
									3.10	1.50		1.0	2696
UNDERGROUND	2.80	35.10	56.20	MINGO	8.70	76.40	5.20	1.20	373907	821222	B	13580	09/01/88
									7.70	0.80		0.0	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.90	35.20	61.60	MINGO	3.20	83.40	W191119	0.70	373941	815258	B	14820	09/01/88
							5.20		6.20	1.30		8.5	2912
POCAHONTAS NO 3	0.70	14.50	72.80	MERCER	12.70	79.00	W194387	0.50	373945	810250	B	13540	09/01/88
							4.20		2.50	1.10		3.5	2804
UNDERGROUND	2.60	33.10	59.70	MINGO	7.20	78.70	W190674	0.60	373948	821159	B	13900	09/01/88
							5.10		7.40	1.00		7.0	2759
STRIP	1.30	33.40	63.00	WYOMING	3.60	83.10	W193951	0.90	373956	814234	B	14880	09/01/88
							4.90		5.90	1.60		9.0	2804
UNDERGROUND	2.70	35.10	58.10	MINGO	6.80	79.00	W191868	1.50	374003	815308	B	14170	09/01/88
							5.10		6.50	1.10		8.0	2579
UNDERGROUND	3.20	33.90	55.60	MINGO	10.50	75.90	W191873	0.50	374012	821437	B	13400	09/01/88
							4.90		6.90	1.30		5.0	2813
STRIP	1.60	34.70	52.50	LOGAN	12.80	73.90	W195044	3.00	374021	815123	B	13420	09/01/88
							4.90		4.00	1.40		6.5	2543
STRIP	3.00	33.90	58.90	LOGAN	7.20	78.70	W195068	1.60	374021	815419	B	14060	09/01/88
							5.00		6.20	1.30		9.0	2453
UNDERGROUND	4.10	33.00	57.60	MINGO	9.40	76.90	W190675	0.70	374026	821433	B	13620	09/01/88
							5.10		7.00	0.90		7.0	2912
STRIP	3.50	34.70	55.60	BOONE	9.70	76.90	W195041	0.80	374036	815148	B	13670	09/01/88
							5.00		6.10	1.50		7.5	2804
STRIP	2.00	36.40	57.70	LOGAN	5.90	80.80	W195043	0.60	374037	815145	B	14430	09/01/88
							5.20		5.90	1.60		9.0	2804
UNDERGROUND	2.00	34.70	54.80	LOGAN	10.50	75.80	W195067	1.50	374039	815152	B	13630	09/01/88
							5.20		5.60	1.40		9.0	2579
UNDERGROUND	5.90	32.10	61.70	LOGAN	6.20	75.60	W189294	0.50	374040	815130	B	12940	09/01/88
							4.50		12.00	1.20		0.0	2786
UNDERGROUND	2.50	34.80	61.70	LOGAN	3.50	83.40	W195066	0.60	374046	815133	B	14890	09/01/88
							5.60		5.40	1.50		9.0	2606
STRIP	1.60	34.80	53.90	LOGAN	11.30	75.90	W195042	0.60	374046	815148	B	13550	09/01/88
							4.80		6.10	1.30		7.0	2804
UNDERGROUND	1.90	34.40	56.90	LOGAN	8.70	76.60	W189295	1.70	374047	815130	B	13640	09/01/88
							5.10		6.80	1.10		8.0	2507

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Oxygen	Sulfur	Code Number	Latitude	Longitude	Rank	Free Swell	Htg Val	Last Chg
UNDERGROUND	1.80	33.80	62.00	LOGAN	4.20	81.80	5.30	6.80	0.50	W189293	374048	814820	B	14490	7.5	09/01/88
																2696
UNDERGROUND	2.60	35.30	60.20	LOGAN	4.50	81.60	5.20	6.50	0.70	W195054	374049	815320	B	14590	9.0	09/01/88
																2759
UNDERGROUND	1.80	35.80	54.60	LOGAN	9.60	76.50	5.00	5.30	2.30	W195056	374054	815328	B	13790	8.0	09/01/88
																2309
UNDERGROUND	3.90	39.80	56.70	MINGO	3.50	81.10	5.50	7.60	0.60	W195037	374116	821356	B	14520	5.5	09/01/88
																2759
STRIP	4.40	32.70	52.70	MINGO	14.60	70.80	4.50	7.90	0.80	W193955	374120	820710	B	12410	1.0	09/01/88
																2804
UNDERGROUND	4.00	35.90	52.60	MINGO	11.50	73.70	4.80	7.70	0.80	W189338	374123	821545	B	13080	2.5	09/01/88
																2912
STRIP	3.10	34.50	54.80	LOGAN	10.70	75.50	5.00	6.50	0.90	W195022	374139	815630	B	13520	8.0	09/01/88
																2804
UNDERGROUND	1.50	34.30	55.80	WYOMING	9.90	76.60	5.10	6.50	0.60	W189292	374153	814310	B	13680	8.5	09/01/88
																2912
UNDERGROUND	2.60	34.90	59.90	LOGAN	5.20	81.50	5.10	5.80	0.90	W195060	374158	815313	B	14510	9.0	09/01/88
																2804
UNDERGROUND	2.10	35.60	55.20	LOGAN	9.20	77.20	5.10	6.00	1.10	W195057	374204	815410	B	13800	8.5	09/01/88
																2768
STRIP	4.60	33.20	65.00	LOGAN	1.80	84.10	5.20	6.80	0.60	W195036	374224	814739	B	14900	6.0	09/01/88
																2462
UNDERGROUND	2.90	33.20	57.10	LOGAN	9.70	76.90	4.90	6.40	0.70	W191125	374229	814740	B	13650	7.5	09/01/88
																2912
UNDERGROUND	1.90	35.70	58.70	LOGAN	5.60	81.60	5.10	5.60	0.70	W195058	374314	815500	B	14520	8.5	09/01/88
																2543
UNDERGROUND	3.30	31.50	64.10	WYOMING	4.40	83.40	5.10	5.10	0.60	W195024	374354	814025	B	14760	9.0	09/01/88
																2804
UNDERGROUND	3.00	36.70	53.70	MINGO	9.60	75.40	5.00	7.50	1.10	W189337	374359	821137	B	13520	4.5	09/01/88
																2912
UNDERGROUND	3.20	33.60	62.60	LOGAN	3.80	81.70	5.20	6.20	1.40	W195021	374423	815643	B	14670	9.0	09/01/88
																2147

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
UNDERGROUND	3.10	33.20	53.40	LOGAN	3.40	83.00	5.20	0.90	374447	815438	B	14800	09/01/88
									6.10	1.40		8.5	2057
UNDERGROUND	1.40	32.90	56.40	LOGAN	8.70	77.70	5.10	0.60	374511	815108	B	13860	09/01/88
									6.80	1.10		9.0	2912
STRIP	5.20	35.40	57.50	MINGO	7.10	77.20	5.00	0.80	374524	821805	B	13690	09/01/88
									8.40	1.50		3.0	2786
MAPLE MEADOW MINE	1.20	18.50	69.90	RALEIGH	11.60	79.20	4.10	0.40	374527	812150	B	13770	09/01/88
									3.50	1.20		9.0	2912
STRIP	4.20	38.30	54.30	MINGO	7.40	77.60	5.10	0.70	374528	821815	B	13920	09/01/88
									7.60	1.60		5.0	2804
UNDERGROUND	3.60	35.70	59.20	WYOMING	5.10	81.60	5.60	0.90	374553	814207	B	14560	09/01/88
									5.60	1.20		9.0	2669
UNDERGROUND	4.70	31.70	64.00	WYOMING	4.30	83.10	5.30	2.60	374623	812925	B	14820	09/01/88
									3.70	1.00		9.0	2228
BELVA COAL CO. MINE 5A	5.90	35.10	54.70	LOGAN	10.20	74.70	4.70	0.90	374626	815843	B	13160	09/01/88
									8.10	1.40		2.0	2894
STRIP	3.70	29.00	47.30	LOGAN	23.70	64.10	4.20	1.10	374627	814118	B	11410	09/01/88
									5.80	1.10		4.5	2804
STRIP	2.70	31.60	58.30	LOGAN	10.10	77.00	4.80	0.90	374631	814049	B	13780	09/01/88
									5.80	1.40		6.0	2804
WEDGEWOOD MINING	5.00	33.90	49.60	LOGAN	16.50	68.80	4.30	0.80	374642	815256	B	12060	09/01/88
									8.40	1.20		1.5	2912
UNDERGROUND	2.40	32.60	58.30	LOGAN	9.10	78.30	5.50	0.60	374644	815040	B	13890	09/01/88
									5.50	1.00		8.5	2912
ELKAY MINING CO. WADE NO 1	5.50	38.10	53.00	LOGAN	8.90	76.60	5.10	0.80	374645	815404	B	13750	09/01/88
									7.10	1.50		4.5	2912
UNDERGROUND	2.30	34.90	56.80	LOGAN	8.30	77.70	5.20	1.80	374647	815028	B	13910	09/01/88
									5.90	1.10		9.0	2543
	1.70	32.20	56.80	LOGAN	11.00	76.40	5.10	0.70	374650	814431	B	13600	09/01/88
									5.70	1.10		8.5	2912
STRIP	2.80	17.50	74.90	RALEIGH	7.60	82.90	4.30	1.60	374654	810827	B	14450	09/01/88
									2.40	1.20		7.0	2561

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
ELK MINING CO, MINE 1	2.60	35.30	58.40	LOGAN	6.30	81.00	W187010	5.10	374734	814021	B	14460	09/01/88
								1.10	5.10	1.40		7.0	2723
PERRY BRANCH COAL CO, MINE 1	3.20	32.00	45.20	LOGAN	22.80	64.80	W187014	4.30	374758	814645	B	11450	09/01/88
								0.60	6.40	1.10		4.0	2912
UNDERGROUND	3.10	32.10	54.20	LOGAN	13.70	73.80	W194993	4.60	374804	814817	B	13000	09/01/88
								0.70	5.90	1.30		7.5	2804
	3.20	35.80	58.50	LOGAN	5.70	81.30	W187033	5.20	374810	814034	B	14500	09/01/88
								0.90	5.50	1.40		7.5	2516
STRIP	4.60	27.40	69.20	RALEIGH	3.40	85.30	W191862	5.00	374818	812802	B	15160	09/01/88
								2.00	2.90	1.40		9.0	2192
CORE	2.80	32.70	60.00	LOGAN	7.30	79.70	W195039	5.10	374818	814613	B	14260	09/01/88
								1.10	5.40	1.40		9.0	2741
MINE 8B, BUFFALO MINING CO	2.60	34.20	49.70	LOGAN	16.10	71.50	W187034	4.60	374820	813952	B	12670	09/01/88
								0.90	5.60	1.30		6.0	2912
UNDERGROUND	3.90	25.20	45.50	LOGAN	29.30	59.00	W194995	3.80	374830	814554	B	10370	09/01/88
								0.60	6.30	1.00		3.0	2804
UNDERGROUND	2.50	35.80	53.60	LOGAN	10.60	76.80	W189252	5.00	374841	814811	B	13630	09/01/88
								0.90	5.40	1.30		7.0	2912
UNDERGROUND	0.40	38.70	53.60	LOGAN	7.70	80.80	W190686	5.80	374842	824045	B	14770	09/01/88
								0.70	3.50	1.50		4.5	2228
B&S COAL CO, MINE 1	5.50	30.50	47.30	LOGAN	22.20	66.00	W187012	4.10	374845	814624	B	11590	09/01/88
								0.40	6.10	1.20		2.5	2912
UNDERGROUND	3.50	18.00	73.50	SUMMERS	8.50	82.10	W210191	4.40	374857	805230	B	14280	09/01/88
								1.10	2.60	1.30		9.0	2804
UNDERGROUND	2.30	20.00	77.30	RALEIGH	2.70	86.80	W206550	5.10	374913	810846	B	15250	09/01/88
								0.70	3.10	1.60		9.0	2804
UNDERGROUND	1.30	29.80	50.40	LOGAN	19.80	67.50	W189291	4.60	374916	814755	B	12000	09/01/88
								0.90	6.20	1.00		5.5	2912
UNDERGROUND	2.60	35.40	53.40	LOGAN	11.20	75.50	W189261	4.90	374918	815240	B	13440	09/01/88
								1.60	5.40	1.40		6.0	2678
YOUNGSTOWN MINES, DEHUE 7B	2.20	34.70	57.90	LOGAN	7.40	78.50	W187038	5.10	374925	815629	B	14000	09/01/88
								0.60	6.90	1.50		8.0	2912

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	3.10	38.70	54.80	MINGO	6.50	78.10	5.20	0.80	374955	822301	B	13960	09/01/88
									8.10	1.30		3.5	2912
UNDERGROUND	2.40	32.90	55.20	BOONE	11.90	75.80	4.80	1.00	375009	813739	B	13520	09/01/88
									5.10	1.40		7.5	2615
UNDERGROUND	2.60	30.90	58.70	RALEIGH	10.40	77.90	4.90	0.60	375047	813332	B	13740	09/01/88
									5.00	1.20		7.5	2912
STRIP	3.80	36.70	49.70	LOGAN	13.60	72.20	4.80	0.70	375047	815657	B	12900	09/01/88
									7.20	1.50		7.5	2804
STRIP	3.10	19.10	70.70	FAYETTE	10.20	78.30	4.80	1.00	375056	805823	B	13910	09/01/88
									4.00	1.70		9.0	2750
UNDERGROUND	2.10	31.10	59.60	RALEIGH	9.30	78.70	5.10	0.70	375057	813325	B	14000	09/01/88
									5.20	1.00		9.0	2912
UNDERGROUND	3.60	32.60	58.60	RALEIGH	8.80	79.10	5.00	2.30	375143	813254	B	14170	09/01/88
									3.60	1.20		8.5	2147
UNDERGROUND	3.60	36.70	59.40	MINGO	3.90	80.20	5.40	0.80	375148	822305	B	14240	09/01/88
									8.90	0.80		5.5	2102
STRIP	4.90	29.70	58.40	RALEIGH	11.90	74.40	4.90	1.00	375231	813336	B	13240	09/01/88
									6.70	1.10		8.5	2912
STRIP	4.30	32.50	57.90	RALEIGH	9.60	77.80	5.00	0.70	375231	813337	B	13760	09/01/88
									5.80	1.10		5.0	2912
STRIP	4.30	33.20	54.50	RALEIGH	12.30	74.70	5.10	0.70	375231	813338	B	13230	09/01/88
									6.20	1.00		9.0	2912
STRIP	6.60	32.40	61.10	RALEIGH	6.50	78.10	4.90	0.60	375231	813339	B	13650	09/01/88
									8.80	1.10		1.0	2912
UNDERGROUND	1.90	18.70	73.70	FAYETTE	7.60	82.80	4.60	1.30	375234	804644	B	14280	09/01/88
									2.40	1.30		9.0	2624
DONNA MINE	3.10	37.70	53.00	LOGAN	9.30	76.70	5.00	0.60	375237	815540	B	13610	09/01/88
									7.00	1.40		7.0	2912
BETTY MINE	2.50	34.90	56.10	LOGAN	9.00	77.50	4.90	0.90	375253	814930	B	13690	09/01/88
									6.20	1.50		7.5	2912
STRIP	3.40	32.10	51.90	BOONE	16.00	71.30	4.60	0.70	375257	814216	B	12610	09/01/88
									6.20	1.20		4.0	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.30	31.80	62.70	RALEIGH	5.50	82.30	5.10	0.70	W195047	375258	813035	B	14680	09/01/88
										5.00	1.40		9.0	2804
UNDERGROUND	1.60	18.90	63.60	FAYETTE	17.50	72.20	4.20	0.90	W206566	375314	805534	B	12630	09/01/88
										3.80	1.40		8.0	2912
BUFFALO MINING CO, MARK MINE	4.20	41.00	51.20	WAYNE	7.80	76.30	5.00	2.30	W187011	375314	822316	B	13680	09/01/88
										7.10	1.50		5.0	2129
STRIP	4.60	28.60	63.00	RALEIGH	8.40	79.60	5.00	0.80	W206549	375332	811836	B	13900	09/01/88
										4.60	1.60		8.5	2804
STRIP	2.60	25.10	70.00	FAYETTE	4.90	84.20	4.80	0.60	W206542	375336	811402	B	14870	09/01/88
										3.80	1.70		9.0	2804
UNDERGROUND	2.30	34.20	59.40	RALEIGH	6.40	81.20	5.10	0.50	W189339	375350	813003	B	14410	09/01/88
										5.30	1.50		6.5	2912
UNDERGROUND	1.70	26.00	49.00	BOONE	25.00	63.20	4.30	0.60	W191114	375356	813340	B	11190	09/01/88
										5.90	1.00		3.5	2912
UNDERGROUND	4.30	34.30	57.30	BOONE	8.40	77.40	5.10	0.80	W191880	375404	814354	B	13760	09/01/88
										7.20	1.10		7.0	2912
UNDERGROUND	2.90	35.60	53.00	LOGAN	11.40	73.50	4.70	1.60	W195063	375405	815155	B	13210	09/01/88
										7.50	1.30		7.0	2804
JEAN MINE	3.10	32.40	48.90	LOGAN	18.70	68.30	4.50	1.10	W187023	375415	815016	B	12140	09/01/88
										6.20	1.20		6.5	2912
STRIP	2.10	21.20	73.00	FAYETTE	5.80	83.20	4.90	2.20	W206545	375421	811357	B	14630	09/01/88
										2.20	1.70		9.0	2147
UNDERGROUND	3.60	37.00	57.80	LOGAN	5.20	79.90	5.20	1.10	W191887	375431	814540	B	14270	09/01/88
										7.50	1.10		7.0	2786
STRIP	4.50	22.90	74.70	FAYETTE	2.40	87.20	5.00	0.60	W206546	375433	810759	B	15220	09/01/88
										2.90	1.90		9.0	2516
UNDERGROUND	2.40	32.50	53.90	LOGAN	13.60	73.50	4.70	0.90	W195062	375444	814851	B	12990	09/01/88
										5.90	1.40		7.0	2804
STRIP	5.10	36.80	60.70	LOGAN	2.50	82.80	5.20	0.70	W195055	375450	815805	B	14700	09/01/88
										7.20	1.60		5.0	2543
STRIP	3.00	19.90	74.30	GREENBRIER	5.80	84.20	4.70	0.90	W206540	375456	804630	B	14630	09/01/88
										3.10	1.30		9.0	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash				Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	1.50	33.10	64.60	RALEIGH	84.90	5.30	W191117	375503	813321	B	15040	09/01/88
			2.30			0.70		5.40	1.40		9.0	2912
UNDERGROUND	3.20	38.20	54.50	LOGAN	78.90	5.20	W195061	375507	814751	B	13970	09/01/88
			7.30			0.70		6.50	1.40		7.5	2804
BUFFALO NO 4 MINE	2.40	31.10	39.70	LOGAN	63.20	4.20	W187022	375512	815120	B	11190	09/01/88
			29.20			0.80		1.50	1.10		5.5	2912
UNDERGROUND	3.40	33.60	54.60	BOONE	75.20	4.90	W191881	375556	813400	B	13340	09/01/88
			11.80			0.90		6.20	1.00		7.5	2804
UNDERGROUND	3.50	34.90	55.00	BOONE	76.50	5.10	W191882	375556	814400	B	13600	09/01/88
			10.10			0.90		6.20	1.20		7.0	2912
STRIP	3.90	19.90	74.30	GREENBRIER	84.00	4.80	W206539	375600	804257	B	14650	09/01/88
			5.80			0.80		3.10	1.50		9.0	2723
UNDERGROUND	2.20	35.50	60.60	BOONE	82.60	5.40	W191115	375612	813615	B	14620	09/01/88
			3.90			0.60		6.20	1.30		8.5	2624
UNDERGROUND	3.90	36.50	58.20	LOGAN	79.10	5.30	W195034	375634	815626	B	14220	09/01/88
			5.30			1.40		7.30	1.60		6.0	2246
UNDERGROUND	2.80	30.60	51.50	BOONE	68.80	4.50	W191884	375636	814350	B	12190	09/01/88
			17.90			0.70		7.10	1.00		6.0	2912
2-C MIFFLIN MINE	2.80	34.60	54.40	BOONE	75.50	4.60	W187021	375703	815015	B	13260	09/01/88
			11.00			0.90		6.60	1.40		6.0	2354
PRATT MINING CO	2.20	31.40	63.10	FAYETTE	83.50	5.10	D170192	375728	811915	B	14680	09/01/88
			5.50			0.80		3.60	1.50		5.5	2912
PRATT MINING CO	2.40	30.20	63.20	FAYETTE	81.60	5.00	D170191	375729	811917	B	14480	09/01/88
			6.60			0.70		4.60	1.50		6.5	2912
UNDERGROUND	2.60	23.80	67.10	GREENBRIER	80.80	4.70	W210130	375810	803613	B	14100	09/01/88
			9.10			1.40		2.70	1.30		9.0	2804
UNDERGROUND	1.80	38.00	55.10	BOONE	79.30	5.60	W191885	375815	813914	B	14260	09/01/88
			6.90			0.80		6.30	1.10		9.0	2777
STRIP	5.10	23.00	71.20	GREENBRIER	83.20	4.80	W210190	375820	803316	B	14620	09/01/88
			5.80			0.60		3.80	1.80		9.0	2804
STRIP	2.70	23.40	70.50	GREENBRIER	83.50	4.70	W210134	375829	803659	B	14630	09/01/88
			6.10			1.10		3.30	1.30		9.0	2507

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	4.80	27.50	70.30	FAYETTE	2.20	85.70	5.10	W206547	0.60	375834	810406	B	15140	09/01/88
										4.60	1.80		9.0	2660
STRIP	2.70	31.00	62.70	FAYETTE	6.30	81.70	5.10	W210338	0.80	375911	811917	B	14620	09/01/88
										4.40	1.70		8.5	2804
UNDERGROUND	3.30	25.00	70.10	FAYETTE	4.90	83.90	4.70	W210124	0.70	375931	805436	B	14750	09/01/88
										4.10	1.70		9.0	2804
C D NO 36 MINE	1.80	33.30	61.60	KANAWHA	5.10	83.20	5.10	D170188	0.50	375946	812345	B	14740	09/01/88
										4.60	1.50		7.0	2912
UNDERGROUND	3.70	37.30	54.90	BOONE	7.80	77.60	5.20	W195052	0.70	375957	815516	B	13880	09/01/88
										7.10	1.60		5.5	2804
STRIP	4.30	36.20	54.00	BOONE	9.80	74.00	5.00	W195017	2.10	375958	815519	B	13390	09/01/88
										7.60	1.50		4.0	2165
STRIP	2.90	34.40	44.10	BOONE	21.50	65.40	4.60	W195016	0.50	375958	815520	B	11630	09/01/88
										6.90	1.10		1.0	2804
STRIP	3.70	37.20	58.40	BOONE	4.40	79.50	5.30	W195013	1.70	375958	815529	B	14340	09/01/88
										7.40	1.70		5.0	2057
STRIP	4.10	36.30	56.20	BOONE	7.50	77.50	5.10	W195014	0.90	375959	815521	B	13940	09/01/88
										7.50	1.50		5.5	2561
	1.60	29.90	68.10	FAYETTE	2.00	85.90	5.00	D168088	0.50	380000	810730	B	15190	09/01/88
										5.10	1.50		0.0	0
	2.10	24.90	72.10	FAYETTE	3.00	85.00	4.70	D161644	0.60	380010	810235	B	14750	09/01/88
										5.20	1.50		0.0	0
OMAR MINING, CHESTERFIELD 3	3.50	35.60	53.30	BOONE	11.10	75.80	4.80	W187015	0.60	380025	814439	B	13340	09/01/88
										6.40	1.30		5.5	2912
STRIP	4.20	31.80	63.20	FAYETTE	5.00	82.20	5.50	W206541	0.70	380026	811025	B	14710	09/01/88
										4.90	1.70		8.5	2804
STRIP	1.60	32.00	61.00	FAYETTE	7.00	81.20	5.10	W210336	0.90	380026	811845	B	14490	09/01/88
										4.30	1.50		8.0	2804
UNDERGROUND	2.50	32.60	58.10	KANAWHA	9.30	78.10	5.00	W210332	0.90	380035	812309	B	13930	09/01/88
										5.30	1.40		8.0	2804
UNDERGROUND	2.20	26.60	69.00	FAYETTE	4.40	84.40	5.00	W210182	0.80	380056	805335	B	14840	09/01/88
										3.80	1.60		9.0	2804

Coal Field Information Printout for: WV - West Virginia

Location		County			Code Number		Latitude		Longitude		Rank	Htg Val	Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell			Hemi Temp	
STRIP	3.70	26.00	66.10	GREENBRIER	79.50	4.90	1.30	380100	803351	B	14330	9.0	2759	09/01/88
STRIP	6.30	25.50	67.20	GREENBRIER	81.00	4.90	1.30	380107	803642	B	14390	9.0	2660	09/01/88
DAUGHERTY MINING CO, MINE 1	4.20	36.80	59.90	BOONE	82.30	5.30	0.70	380112	814533	B	14670	7.5	2669	09/01/88
STRIP	5.90	26.40	69.20	FAYETTE	84.20	5.30	0.60	380117	805736	B	14790	9.0	2804	09/01/88
UNDERGROUND	1.10	36.10	51.60	KANAWHA	74.40	4.90	0.90	380129	812109	B	13200	7.5	2912	09/01/88
OMAR MINING, CHESTERFIELD 5	2.50	37.20	50.80	BOONE	73.90	4.80	0.90	380132	814300	B	13240	5.5	2912	09/01/88
UNDERGROUND	3.90	35.30	59.10	BOONE	79.50	5.50	0.80	380148	814200	B	14150	6.5	2912	09/01/88
STRIP	4.20	34.80	57.80	LOGAN	77.20	4.90	0.70	380151	815518	B	13740	4.5	2804	09/01/88
UNDERGROUND	3.10	24.90	68.30	GREENBRIER	81.50	4.70	1.20	380153	803824	B	14400	9.0	2804	09/01/88
EXPANSION MINING CO, MINE 1	3.10	34.30	46.50	BOONE	67.60	4.40	0.60	380159	814134	B	11910	5.0	2912	09/01/88
STRIP	2.90	27.00	67.30	GREENBRIER	81.80	4.70	1.20	380203	803517	B	14630	9.0	2750	09/01/88
STRIP	1.20	52.10	38.80	BOONE	75.80	6.40	1.00	380205	815438	B	14270	0.5	2129	09/01/88
STRIP	2.50	25.80	65.10	GREENBRIER	79.80	4.80	1.20	380206	803525	B	14020	9.0	2759	09/01/88
BETHLEHEM MINE	1.70	35.40	53.70	KANAWHA	76.20	5.10	0.70	380211	812528	B	13610	7.0	2912	09/01/88
STRIP	3.90	25.90	70.90	GREENBRIER	84.60	5.10	1.10	380217	804541	B	14960	9.0	2354	09/01/88
UNDERGROUND	2.70	31.60	59.40	BOONE	77.70	4.90	0.90	380223	813323	B	13860	0.0	2804	09/01/88

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.70	35.50	54.70	9.80	KANAWHA	76.60	4.90	1.50	380250	812633	B	13620	09/01/88
									5.90	1.30		6.5	2894
STRIP	2.50	32.40	53.50	14.10	FAYETTE	73.20	4.70	0.60	380305	812054	B	13060	09/01/88
									6.10	1.30		5.0	2804
STRIP	5.50	34.60	57.30	8.10	FAYETTE	75.80	4.90	0.70	380310	812053	B	13380	09/01/88
									9.00	1.50		1.0	2777
STRIP	3.20	34.70	53.60	11.70	BOONE	74.70	4.80	0.60	380346	813527	B	13160	09/01/88
									6.90	1.30		2.0	2912
UNDERGROUND	2.50	25.70	68.00	6.30	GREENBRIER	82.60	4.90	1.00	380358	803810	B	14700	09/01/88
									3.30	1.90		9.0	2516
STRIP	3.00	24.60	69.70	5.70	GREENBRIER	83.20	5.00	0.60	380400	804630	B	14630	09/01/88
									4.00	1.50		9.0	2804
UNDERGROUND	2.40	25.80	65.40	8.80	FAYETTE	79.70	5.00	0.80	380417	805521	B	13890	09/01/88
									4.10	1.60		9.0	2804
	5.20	37.00	47.60	15.40	WAYNE	67.50	4.70	2.00	380419	823144	B	12110	09/01/88
									8.90	1.50		0.0	2759
STRIP	2.70	26.60	66.20	7.20	GREENBRIER	81.20	4.90	1.30	380437	803118	B	14340	09/01/88
									3.60	1.80		9.0	2804
	1.90	26.00	71.10	2.90	FAYETTE	84.30	4.70	0.50	380445	810550	B	14620	09/01/88
									6.10	1.50		0.0	0
UNDERGROUND	5.10	26.00	69.80	4.20	GREENBRIER	83.50	5.00	0.90	380456	803259	B	14760	09/01/88
									4.50	1.90		9.0	2354
UNDERGROUND	2.50	36.90	56.70	6.40	BOONE	77.60	5.40	3.30	380504	814401	B	14110	09/01/88
									6.20	1.10		6.5	2084
STRIP	4.30	34.90	52.00	13.10	BOONE	71.80	5.00	1.60	380528	813544	B	12920	09/01/88
									7.00	1.50		6.0	2642
UNDERGROUND	3.70	34.40	55.00	10.60	LOGAN	75.50	4.80	0.60	380540	813445	B	13380	09/01/88
									7.00	1.50		5.5	2804
	6.80	35.70	48.80	15.50	WAYNE	66.90	4.70	0.90	380545	823047	B	11880	09/01/88
									10.60	1.40		0.0	2804
DRIFT	3.20	36.80	60.40	2.80	KANAWHA	82.90	5.30	0.80	380639	812133	B	14730	09/01/88
									6.70	1.50		8.0	2660

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.80	27.80	58.30	FAYETTE	3.90	84.40	5.30	0.60	380646	805701	B	14830	09/01/88
									4.10	1.70		9.0	2651
STRIP	2.10	39.40	55.70	KANAWHA	4.90	80.90	5.40	0.80	380708	812816	B	14410	09/01/88
									6.50	1.50		7.5	2804
STRIP	4.00	32.20	54.10	BOONE	13.70	71.80	4.50	1.10	380727	815234	B	12750	09/01/88
									7.50	1.40		2.5	2804
UNDERGROUND	3.20	37.50	58.50	KANAWHA	4.00	82.10	5.30	0.60	380729	812358	B	14630	09/01/88
									6.60	1.40		7.0	2912
UNDERGROUND	3.40	36.20	57.40	KANAWHA	6.40	79.00	5.20	0.90	380730	813048	B	14010	09/01/88
									7.10	1.40		6.0	2804
STRIP	3.70	25.80	61.70	GREENBRIER	12.50	75.20	4.60	1.10	380734	803422	B	13380	09/01/88
									5.00	1.60		9.0	2408
	15.10	35.20	58.80	FAYETTE	6.00	71.60	3.80	0.60	380735	811223	B	11710	09/01/88
									16.70	1.30		0.0	2462
UNDERGROUND	3.10	34.70	54.80	KANAWHA	10.50	74.00	5.10	1.10	380740	813020	B	13390	09/01/88
									7.90	1.40		6.5	2804
STRIP	3.60	35.10	56.00	BOONE	8.90	74.40	5.10	1.70	380740	815327	B	13460	09/01/88
									8.30	1.60		4.0	2201
STOCKTON NO 2 MINE	1.90	34.70	47.30	KANAWHA	18.00	67.50	4.50	3.30	380742	812218	B	12220	09/01/88
									5.50	1.20		2.5	2390
DRIFT	2.40	37.60	54.90	KANAWHA	7.50	77.60	5.20	0.60	380744	812447	B	14070	09/01/88
									7.90	1.20		6.0	2804
DRIFT	1.70	28.60	41.90	KANAWHA	29.50	57.90	4.10	0.50	380808	812300	B	10440	09/01/88
									6.90	1.10		2.0	2804
UNDERGROUND	2.10	26.00	62.40	GREENBRIER	11.60	76.30	4.70	1.30	380820	803549	B	13500	09/01/88
									4.60	1.50		8.5	2804
UNDERGROUND	3.10	31.00	53.80	BOONE	15.20	70.10	4.80	2.90	380825	813714	B	12630	09/01/88
									5.90	1.10		6.0	2192
STRIP	3.80	37.90	58.50	BOONE	3.60	82.20	5.30	0.70	380826	814354	B	14480	09/01/88
									6.70	1.50		5.0	2851
STRIP	3.70	39.80	55.30	BOONE	4.90	79.70	5.50	0.90	380826	814355	B	14280	09/01/88
									7.50	1.50		2.5	2444

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carb.%	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
STRIP	4.40	37.10	55.20	BOONE	7.70	75.80	4.90	2.70	380836	814311	B	13730	09/01/88
									7.60	1.30		4.5	2282
STRIP	7.90	28.60	68.30	NICHOLAS	3.10	84.80	5.00	0.70	380839	803821	B	15050	09/01/88
									4.80	1.60		8.5	2804
UNDERGROUND	1.80	34.30	57.80	KANAWHA	7.90	77.60	5.3	0.80	380840	813705	B	13760	09/01/88
									7.00	1.40		4.5	2183
MORTON MINE	2.50	35.90	55.00	KANAWHA	9.10	77.30	5.00	0.80	380915	813412	B	13740	09/01/88
									6.40	1.40		6.5	2534
UNDERGROUND	3.40	34.60	55.00	KANAWHA	10.40	76.40	4.90	0.60	380918	812219	B	13590	09/01/88
									6.40	1.30		6.0	2912
UNDERGROUND	3.50	27.50	67.70	NICHOLAS	4.80	83.70	5.10	0.60	380928	804218	B	14710	09/01/88
									4.10	1.70		9.0	2804
UNDERGROUND	2.40	31.90	62.20	FAYETTE	5.90	80.40	5.10	0.70	380928	811425	B	14260	09/01/88
									6.30	1.60		8.5	2912
UNDERGROUND	2.80	37.20	58.80	KANAWHA	4.00	81.80	5.30	0.70	380941	812251	B	14630	09/01/88
									6.60	1.60		7.5	2912
NO 1 MINE	1.90	33.40	51.00	KANAWHA	15.60	71.60	4.70	0.60	380944	812249	B	12640	09/01/88
									6.30	1.20		3.5	2912
	2.30	36.60	58.30	FAYETTE	5.10	80.50	5.20	0.80	380953	811610	B	14260	09/01/88
									6.80	1.60		7.0	2912
NO 5 BLOCK MINE	4.00	33.10	56.00	FAYETTE	10.90	75.30	4.70	1.00	381012	811628	B	13390	09/01/88
									6.60	1.50		4.5	2804
UNDERGROUND	3.90	35.50	52.80	KANAWHA	11.70	74.10	5.10	0.80	381015	813507	B	13200	09/01/88
									6.70	1.60		5.5	2804
UNDERGROUND	2.00	35.10	55.70	FAYETTE	9.20	77.60	5.20	1.70	381021	811738	B	13890	09/01/88
									4.80	1.50		8.0	2480
UNDERGROUND	4.00	27.60	69.20	NICHOLAS	3.20	82.50	5.20	0.50	381022	803909	B	14950	09/01/88
									6.90	1.70		9.0	2804
UNDERGROUND	3.00	36.10	60.40	FAYETTE	3.50	83.30	5.40	0.70	381040	811216	B	14870	09/01/88
									5.50	1.60		8.5	2768
STRIP	2.60	33.60	62.00	FAYETTE	4.40	81.90	5.60	0.90	381054	805858	B	14750	09/01/88
									5.20	2.00		9.0	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
CANNELTON CO MINE	1.70	36.40	62.10	FAYETTE	85.30	5.40	0.60	381055 5.70	811332 1.50	B	15260 9.0	09/01/88 2624
SEMET-SOLWAY STRIP MINE	3.20	34.10	57.90	FAYETTE	77.80	4.80	0.60	381056 7.40	811639 1.40	B	13820 1.5	09/01/88 2804
STRIP	4.00	36.10	53.10	KANAWHA	73.00	4.80	1.80	381108 8.20	813141 1.40	B	13170 6.5	09/01/88 2804
UNDERGROUND	3.10	29.20	66.30	NICHOLAS	83.10	5.30	0.90	381134 4.40	804003 1.80	B	14760 9.0	09/01/88 2606
UNDERGROUND	3.30	28.50	64.40	NICHOLAS	80.00	5.00	1.60	381135 4.60	804142 1.70	B	14260 9.0	09/01/88 2804
UNDERGROUND	2.10	36.90	53.40	KANAWHA	76.70	5.10	0.80	381139 6.40	812056 1.30	B	13620 7.0	09/01/88 2912
UNDERGROUND	2.70	35.60	53.20	KANAWHA	76.20	4.80	0.50	381152 5.90	813531 1.40	B	13450 4.0	09/01/88 2912
UNDERGROUND	2.80	35.20	63.80	FAYETTE	85.00	5.30	0.70	381203 6.30	811444 1.70	B	15060 8.0	09/01/88 2246
UNDERGROUND	3.10	34.60	51.90	KANAWHA	71.60	4.70	2.70	381211 6.30	813502 1.20	B	12830 5.5	09/01/88 2453
UNDERGROUND	1.80	33.60	50.30	FAYETTE	71.10	4.80	1.00	381231 5.60	311146 1.40	B	12700 7.0	09/01/88 2912
UNDERGROUND	2.60	30.10	66.90	NICHOLAS	84.00	5.10	0.80	381236 5.40	804041 1.70	B	14910 9.0	09/01/88 2552
UNDERGROUND	2.30	34.40	56.20	FAYETTE	77.90	5.00	0.70	381242 5.50	811640 1.50	B	13820 6.0	09/01/88 2912
UNDERGROUND	2.30	36.30	61.70	FAYETTE	83.80	5.40	0.70	381244 6.40	811639 1.70	B	14930 8.0	09/01/88 2534
UNDERGROUND	2.30	35.10	54.80	KANAWHA	76.50	5.00	0.70	381255 6.20	812040 1.50	B	13580 7.5	09/01/88 2480
4.70	37.30	50.30	12.40	LINCOLN	71.10	4.80	0.80	381310 9.50	821207 1.40	B	12630 3.0	09/01/88 2912
CANNELTON CO MINE	1.00	35.40	58.80	FAYETTE	80.90	5.10	0.60	381332 6.00	811055 1.60	B	14550 8.5	09/01/88 2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
CANNELTON CO MINE	1.50	31.00	49.00	FAYETTE	20.00	67.20	4.40	2.40	381332	811355	B	12110
								4.80	1.20		8.0	2759
CANNELTON CO MINE	2.50	31.60	53.30	FAYETTE	15.10	72.00	4.50	0.50	381337	811557	B	12700
								6.60	1.30		4.5	2804
UNDERGROUND	3.00	36.50	57.70	KANAWHA	5.80	80.00	5.20	1.10	381345	811952	B	14240
								6.30	1.60		7.5	2732
UNDERGROUND	3.40	29.00	66.40	NICHOLAS	4.60	83.30	4.90	0.70	381350	804145	B	14680
								4.70	1.80		9.0	2804
UNDERGROUND	3.60	28.90	67.80	NICHOLAS	3.30	84.10	5.00	0.60	381355	803805	B	14950
								5.30	1.70		9.0	2804
UNDERGROUND	1.70	38.10	57.00	KANAWHA	4.90	81.70	5.30	1.10	381411	811619	B	14620
								5.40	1.60		7.5	2669
UNDERGROUND	8.20	33.40	52.20	KANAWHA	14.40	65.50	4.10	0.50	381411	812158	B	10900
								14.50	1.00		0.0	2912
UNDERGROUND	2.00	38.70	52.50	KANAWHA	8.80	77.90	5.20	0.70	381420	811854	B	13920
								5.90	1.50		5.5	2912
STRIP	3.70	34.60	58.00	NICHOLAS	7.40	78.90	5.10	0.70	381432	810809	B	14260
								6.20	1.70		8.0	2804
UNDERGROUND	2.50	35.90	56.00	KANAWHA	8.10	78.70	5.20	1.00	381441	311921	B	14000
								5.50	1.50		7.5	2453
UNDERGROUND	2.50	35.70	56.20	FAYETTE	8.10	78.20	5.20	0.80	381458	811254	B	13980
								6.10	1.60		8.0	2912
UNDERGROUND	3.40	36.40	54.50	KANAWHA	9.10	76.00	4.90	1.00	381538	812848	B	13520
								7.40	1.60		4.5	2912
UNDERGROUND	3.50	38.50	55.20	KANAWHA	6.30	79.10	5.20	1.00	381541	812822	B	14150
								6.90	1.50		6.0	2912
VALLEY CAMP NO 35 MINE	3.60	33.10	56.10	KANAWHA	10.80	76.30	4.70	0.70	381545	812826	B	13320
								6.00	1.50		3.0	2912
UNDERGROUND	3.10	31.30	64.90	NICHOLAS	3.80	83.10	5.10	0.70	381557	804407	B	14830
								5.60	1.70		8.5	2642
UNDERGROUND	2.80	34.00	53.40	KANAWHA	12.60	74.20	4.70	0.70	381559	812207	B	13080
								6.50	1.30		5.0	2912

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
UNDERGROUND	3.80	37.20	53.00	KANAWHA	9.80	75.50	4.90	0.90	381611	812758	B	13420	09/01/88
									7.40	1.50		5.5	2912
SURFACE	2.60	40.20	54.50	KANAWHA	5.30	79.70	5.20	0.70	381612	812829	B	14180	09/01/88
									7.50	1.60		5.5	2912
UNDERGROUND	3.10	34.50	52.00	KANAWHA	13.50	72.80	4.80	0.70	381617	812315	B	12820	09/01/88
									6.90	1.30		5.0	2912
UNDERGROUND	2.50	32.40	49.30	KANAWHA	18.30	67.10	4.70	0.80	381617	812828	B	11750	09/01/88
									8.20	0.90		1.0	2723
UNDERGROUND	2.50	30.20	58.00	NICHOLAS	11.80	75.70	4.70	3.90	381626	810138	B	13260	09/01/88
									2.40	1.50		8.0	2462
UNDERGROUND	2.40	36.30	52.90	KANAWHA	10.80	75.60	5.00	0.60	381628	812132	B	13410	09/01/88
									6.70	1.30		5.5	2912
NO 1 MINE, DOUGLAS EAGLE CC	3.20	32.00	61.90	NICHOLAS	6.10	81.10	5.00	2.30	381645	810031	B	14240	09/01/88
									4.00	1.50		8.5	2642
DRIFT	3.50	28.80	48.80	KANAWHA	22.40	65.20	4.20	0.60	381650	811652	B	11490	09/01/88
									6.50	1.10		3.5	2804
UNDERGROUND	2.10	31.70	64.60	NICHOLAS	3.70	83.90	5.20	0.80	381705	803924	B	14830	09/01/88
									4.80	1.60		8.5	2597
UNDERGROUND	3.10	31.60	48.50	KANAWHA	19.90	66.10	4.40	0.60	381728	812328	B	11710	09/01/88
									7.80	1.20		3.0	2912
DRIFT	2.80	31.30	55.70	NICHOLAS	13.00	73.40	4.80	1.50	381730	805456	B	13180	09/01/88
									5.90	1.40		8.5	2804
	6.10	29.50	52.70	KANAWHA	17.80	62.60	3.90	0.50	381732	812141	B	10430	09/01/88
									14.10	1.10		0.0	2912
UNDERGROUND	4.20	31.40	59.90	NICHOLAS	8.70	77.70	4.70	1.50	381742	805057	B	13790	09/01/88
									5.80	1.60		7.5	2084
DRIFT	3.20	35.30	62.50	NICHOLAS	2.20	84.10	5.40	0.60	381743	805511	B	15010	09/01/88
									6.00	1.70		9.0	2507
STRIP	2.90	34.60	55.90	NICHOLAS	9.50	76.60	5.20	0.90	381745	804556	B	13780	09/01/88
									6.00	1.80		8.5	2570
DRIFT	2.90	32.90	62.40	NICHOLAS	4.70	81.80	5.10	0.70	381751	804213	B	14520	09/01/88
									6.10	1.60		9.0	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	2.30	30.10	64.30	NICHOLAS	5.60	81.70	5.10	1.00	381804	804239	B	14460	09/01/88
									5.00	1.60		8.5	2498
STRIP	8.00	31.00	61.30	NICHOLAS	7.70	78.60	4.90	0.70	381821	805319	B	13990	09/01/88
									6.60	1.50		8.0	2804
HOLE B-88	2.70	37.80	40.70	KANAWHA	21.50	59.90	4.60	7.00	381836	814353	B	10990	09/01/88
									6.00	1.00		4.5	2102
MINE 2A, PEERLESS EAGLE CC	2.40	35.20	59.10	NICHOLAS	5.70	80.70	5.20	1.30	381902	805154	B	14240	09/01/88
									5.50	1.60		9.0	2282
UNDERGROUND	2.20	34.60	57.00	NICHOLAS	8.40	77.90	4.80	1.20	381905	805302	B	13660	09/01/88
									6.40	1.30		8.0	2201
NO 1 MINE, STAR COAL CO	3.30	32.60	56.90	NICHOLAS	10.50	76.70	4.80	0.60	381906	805355	B	13580	09/01/88
									6.00	1.40		8.0	2849
	1.60	25.90	46.20	KANAWHA	27.90	58.70	4.00	0.70	381908	811712	B	10240	09/01/88
									7.70	1.00		1.5	2912
	4.20	32.30	47.80	KANAWHA	19.90	65.70	4.40	1.40	381912	811756	B	11610	09/01/88
									7.30	1.30		1.5	2678
UNDERGROUND	2.10	33.80	55.40	NICHOLAS	10.80	76.20	4.90	2.10	381933	805141	B	13520	09/01/88
									4.50	1.50		8.5	2912
STRIP	2.70	34.90	62.80	NICHOLAS	2.30	83.60	5.30	0.80	381935	804234	B	14880	09/01/88
									6.20	1.80		8.5	2804
STRIP	4.10	33.90	59.30	NICHOLAS	6.80	79.90	5.10	0.60	381939	805008	B	14230	09/01/88
									5.90	1.70		8.0	2804
UNDERGROUND	3.50	33.30	58.90	NICHOLAS	7.80	79.50	5.00	0.50	381939	805400	B	14030	09/01/88
									5.70	1.50		8.0	2912
UNDERGROUND	3.20	36.70	56.30	NICHOLAS	7.00	79.40	5.20	1.50	381948	805538	B	14120	09/01/88
									5.40	1.50		8.5	2453
	3.00	35.80	48.50	KANAWHA	15.70	69.60	4.50	1.20	381952	812201	B	12360	09/01/88
									7.70	1.30		5.0	2912
NO 2 MINE, PHILLIPS RUN CC	2.60	34.10	56.10	NICHOLAS	9.80	76.40	4.90	0.70	382001	804852	B	13680	09/01/88
									6.70	1.50		8.5	2192
STRIP	3.00	33.60	55.70	NICHOLAS	10.70	75.90	5.00	1.10	382047	804751	B	13400	09/01/88
									6.00	1.30		8.5	2264

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
DRIFT				NICHOLAS								
2.00	30.60	52.30	17.10		70.40	4.60	0.90	382050	805306	B	12520	09/01/88
								5.70	1.30		8.0	2786
NO 2 MINE, BIG FORK COAL CO				NICHOLAS								
1.20	32.50	52.80	14.70		72.50	4.50	0.70	382330	804901	B	12830	09/01/88
								6.20	1.40		5.0	2912
STRIP				WEBSTER								
2.90	35.20	50.60	14.20		70.20	5.00	2.00	382457	802405	B	12610	09/01/88
								7.20	1.40		5.0	2615
STRIP				WEBSTER								
3.70	36.60	61.50	1.90		83.60	5.70	0.80	382527	803103	B	15070	09/01/88
								6.40	1.60		9.0	2282
STRIP				NICHOLAS								
3.60	32.40	48.90	18.70		68.20	4.50	1.00	382528	804912	B	12080	09/01/88
								6.40	1.20		4.5	2804
UNDERGROUND				NICHOLAS								
3.50	32.60	48.20	19.20		67.30	4.50	0.80	382555	805220	B	12010	09/01/88
								7.00	1.20		8.0	2804
STRIP				WEBSTER								
2.10	33.30	53.20	13.50		71.50	5.00	4.60	382605	803456	B	13010	09/01/88
								4.00	1.40		9.0	2030
STRIP				WEBSTER								
5.20	34.80	62.90	2.30		83.50	5.50	0.60	382632	803106	B	15000	09/01/88
								6.50	1.60		9.0	2309
UNDERGROUND				WEBSTER								
2.80	32.20	64.60	3.20		84.30	5.20	0.80	382641	802036	B	15020	09/01/88
								5.10	1.40		8.5	2804
STRIP				WEBSTER								
4.00	29.60	62.80	7.60		78.80	4.70	0.70	382645	802229	B	13960	09/01/88
								6.70	1.50		7.0	2804
STRIP				WEBSTER								
2.50	30.80	63.10	6.10		82.00	5.00	0.60	382650	802040	B	14520	09/01/88
								4.80	1.50		7.0	0
UNDERGROUND				WEBSTER								
2.40	26.70	64.20	9.10		79.10	4.60	0.40	382651	802510	B	13680	09/01/88
								6.00	0.80		6.5	2912
UNDERGROUND				CLAY								
3.90	37.90	48.50	13.60		70.70	5.00	3.70	382651	810806	B	12730	09/01/88
								5.80	1.20		6.5	2192
STRIP				WEBSTER								
2.70	36.50	60.90	2.60		83.40	5.40	1.00	382657	802734	B	14970	09/01/88
								5.80	1.80		8.5	2138
STRIP				WEBSTER								
2.20	30.00	65.70	4.30		83.30	5.50	0.80	382752	801945	B	14820	09/01/88
								5.00	1.10		9.0	2669
STRIP				WEBSTER								
3.10	34.00	59.20	6.80		79.40	5.10	0.60	382854	803729	B	13970	09/01/88
								7.10	1.00		8.0	2912

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
OUTCROP	1.20	28.90	58.50	WEBSTER	12.60	74.70	4.80	W190680	0.40	382932	802509	B	13270	09/01/88
										6.60	0.90		4.5	2912
OUTCROP	2.90	27.40	55.80	WEBSTER	16.80	69.30	4.50	W190681	0.60	382936	802509	B	12160	09/01/88
										8.20	0.60		5.0	2912
OUTCROP	2.30	28.10	65.90	WEBSTER	5.00	80.40	5.00	W190682	0.60	382942	802509	B	14180	09/01/88
										7.00	1.00		9.0	2912
OUTCROP	6.40	27.80	58.50	WEBSTER	13.70	72.10	4.70	W190688	0.60	383254	803527	B	12590	09/01/88
										8.00	0.90		1.0	2912
UNDERGROUND	2.60	31.90	60.90	RANDOLPH	7.20	80.70	5.10	W210342	0.60	383258	801050	B	14380	09/01/88
										5.10	1.30		8.0	2804
UNDERGROUND	3.20	29.20	63.90	RANDOLPH	6.90	81.10	4.90	W210341	1.00	383521	800641	B	14320	09/01/88
										4.80	1.30		8.5	2804
STRIP	3.80	34.10	62.40	RANDOLPH	3.50	83.30	5.30	W210325	0.70	383634	800929	B	14890	09/01/88
										5.50	1.70		8.5	2228
STRIP	4.40	38.00	55.90	BRAXTON	6.10	77.60	5.30	W194951	1.60	384031	805145	B	13970	09/01/88
										8.00	1.40		7.5	2057
UNDERGROUND	3.20	30.20	66.00	RANDOLPH	3.80	84.20	5.10	W211658	0.50	384123	800842	B	14860	09/01/88
										4.90	1.50		8.0	0
UNDERGROUND	2.90	28.00	65.60	RANDOLPH	6.40	80.90	4.70	W210326	1.10	384124	800849	B	14250	09/01/88
										5.70	1.20		7.5	2804
STRIP	4.80	31.20	55.10	UPSHUR	13.70	72.20	4.70	W194956	0.60	384645	802116	B	12760	09/01/88
										7.40	1.40		1.5	2804
STRIP	2.60	25.10	66.80	GREENBRIER	8.10	79.20	4.70	W210193	1.80	385000	803258	B	14200	09/01/88
										4.50	1.70		9.0	2507
STRIP	3.30	32.40	52.80	UPSHUR	14.80	72.10	4.80	W1-4957	0.70	385020	801228	B	12810	09/01/88
										6.30	1.30		8.5	2804
STRIP	3.00	39.40	53.10	BRAXTON	7.50	76.40	5.40	W206563	2.00	385133	804413	B	13650	09/01/88
										7.40	1.30		6.0	2264
STRIP	4.10	37.90	51.60	GILMER	10.50	72.70	4.90	W206561	3.00	385426	804737	B	13140	09/01/88
										7.60	1.30		4.0	2111
STRIP	2.30	40.50	53.10	GILMER	6.40	77.40	5.30	W206562	2.10	385458	804718	B	13860	09/01/88
										7.40	1.40		6.5	2246

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank	Htg Val Free Swell	Last Chg Hemi Temp
HOLE NO TB47R				LEWIS								
2.10	41.70	51.70	6.60		76.50	5.30	3.90	385528	802827	B	13930	09/01/88
								6.60	1.10		8.0	2066
UNDERGROUND				GILMER								
3.10	39.50	51.20	9.30		74.00	5.00	3.10	385540	804759	B	13350	09/01/88
								7.30	1.30		4.0	2102
HOLE NO S-5				LEWIS								
3.00	39.10	49.10	11.80		71.30	5.10	5.20	385612	802950	B	13070	09/01/88
								5.40	1.20		7.0	2012
UNDERGROUND				MASON								
3.60	35.60	42.90	21.50		60.10	4.40	4.10	385630	820247	B	10870	09/01/88
								9.20	0.70		1.0	2192
HOLE CS NO 1				LEWIS								
1.80	33.50	54.30	12.20		75.70	4.80	0.50	385652	803103	B	13380	09/01/88
								5.40	1.40		5.0	2471
STRIP				LEWIS								
3.10	41.00	48.90	10.10		73.80	5.40	3.20	385828	802308	B	13330	09/01/88
								6.20	1.30		6.5	2147
6.30	19.60	68.00	12.40	TUCKER				385845	792200	B	13600	09/01/88
								1.60	1.10		8.0	2354
HOLE CS NO 2				LEWIS								
2.40	40.30	50.00	9.70		73.70	5.40	4.50	385846	802824	B	13420	09/01/88
								5.40	1.30		7.5	2003
UNDERGROUND				FAYETTE								
2.20	32.00	63.30	4.70		83.50	5.20	0.60	385905	812128	B	14870	09/01/88
								4.40	1.60		7.5	2804
9.40	19.50	66.90	13.60	TUCKER				390010	792115	B	13190	09/01/88
								3.10	1.20		4.0	2138
STRIP				UPSHUR								
3.50	39.50	52.50	8.00		76.20	5.20	3.60	390011	801756	B	13840	09/01/88
								5.90	1.10		8.0	2102
HOLE NO 93				LEWIS								
3.40	39.00	51.40	9.60		73.90	9.40	4.00	390012	802824	B	13320	09/01/88
								2.00	1.10		5.0	2021
STRIP				LEWIS								
2.90	42.30	48.10	9.60		74.20	5.00	2.70	390109	804252	B	13310	09/01/88
								7.20	1.30		6.5	2336
3.00	22.70	59.90	17.40	TUCKER				390115	792100	B	12640	09/01/88
								1.20	1.10		9.0	2039
STRIP				LEWIS								
2.40	41.20	51.00	7.80		76.30	5.30	3.20	390119	802053	B	13930	09/01/88
								6.20	1.20		7.5	2138
STRIP				LEWIS								
2.40	42.00	52.30	5.70		78.20	5.50	2.80	390203	802343	B	13990	09/01/88
								6.60	1.20		7.5	2192

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Code Number	Latitude	Longitude	Rank	Htg Val	Last Chg
										Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	2.50	42.50	47.80	LEWIS	9.70	72.80	5.40	3.80	W206580	390231	804320	B	13300	09/01/88
										7.10	1.20		6.0	2111
STRIP	2.00	38.40	55.90	UPSHUR	5.70	78.80	5.40	2.20	W206575	390233	801343	B	14100	09/01/88
										6.60	1.30		8.5	2111
STRIP	3.20	40.20	51.20	LEWIS	8.60	75.00	5.20	2.70	W206586	390244	803552	B	13450	09/01/88
										7.30	1.20		6.5	2156
STRIP	3.50	36.20	47.10	UPSHUR	16.70	68.30	4.70	4.10	W194978	390257	801111	B	12500	09/01/88
										5.10	1.10		8.5	2255
STRIP	2.10	39.20	54.30	UPSHUR	6.50	78.70	5.30	1.80	W194977	390312	801245	B	14220	09/01/88
										6.30	1.40		8.5	2219
STRIP	3.30	41.70	51.20	LEWIS	7.10	75.70	5.20	3.70	W206581	390321	803802	B	13840	09/01/88
										7.10	1.20		7.5	2111
STRIP	2.10	41.60	51.50	LEWIS	6.90	77.10	5.20	3.20	W194982	390341	802303	B	14000	09/01/88
										6.50	1.10		7.5	2111
UNDERGROUND	2.80	30.20	54.10	BARBOUR	15.70	71.90	4.50	1.90	W194952	390348	800609	B	12770	09/01/88
										4.80	1.20		7.5	2642
STRIP	4.30	38.20	50.20	LEWIS	11.60	72.50	4.90	2.30	W194979	390405	802056	B	13070	09/01/88
										7.60	1.10		8.0	2354
STRIP	1.90	41.10	52.50	LEWIS	6.40	78.30	5.30	2.30	W194980	390448	801932	B	14180	09/01/88
										6.60	1.10		7.5	2192
UNDERGROUND	2.60	40.20	52.60	BARBOUR	7.20	77.60	5.50	3.00	W206582	390629	801053	B	14100	09/01/88
										5.20	1.50		8.0	2048
STRIP	2.80	36.40	57.30	BARBOUR	6.30	79.40	5.20	0.90	W194973	390631	801237	B	14250	09/01/88
										6.70	1.50		9.0	2804
STRIP	1.70	42.70	50.50	HARRISON	6.80	77.20	5.50	3.30	W194974	390643	801734	B	14150	09/01/88
										6.10	1.10		8.5	2138
UNDERGROUND	2.10	38.40	51.60	UPSHUR	10.00	74.30	5.20	3.30	W206553	390647	801400	B	13420	09/01/88
										5.90	1.30		8.5	2102
STRIP	2.50	38.60	51.00	BARBOUR	10.40	75.00	5.20	2.80	W194976	390648	800853	B	13580	09/01/88
										5.30	1.30		9.0	2246
UNDERGROUND	2.20	36.50	56.00	BARBOUR	7.50	77.50	5.30	2.20	W207555	390658	800842	B	13870	09/01/88
										6.10	1.40		9.0	2102

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
STRIP	2.40	35.50	56.60	BARBOUR	7.90	78.20	W194975	1.60	390702	800847	B	14000	09/01/88
							5.20	5.80	5.80	1.30		9.0	2318
STRIP	3.10	39.60	53.90	HARRISON	6.50	77.10	W206576	2.20	390705	802142	B	13870	09/01/88
							5.20	7.70	7.70	1.30		7.5	2210
STRIP	2.30	37.40	54.30	HARRISON	8.30	76.50	W206574	2.00	390720	801351	B	13690	09/01/88
							5.40	6.40	6.40	1.40		8.5	2147
UNDERGROUND	1.50	40.40	49.40	BARBOUR	10.20	76.30	W206573	5.30	390730	801308	B	13370	09/01/88
							5.30	1.60	1.60	1.30		8.0	2111
STRIP	3.00	38.20	52.10	BARBOUR	9.70	74.70	W194965	4.90	390732	800815	B	13690	09/01/88
							5.10	4.30	4.30	1.30		9.0	2057
UNDERGROUND	2.80	37.60	53.40	BARBOUR	9.00	76.00	W206554	2.70	390735	800928	B	13580	09/01/88
							5.10	5.90	5.90	1.30		8.5	2156
STRIP	2.70	37.30	53.00	BARBOUR	9.70	75.40	W194964	3.30	390740	800754	B	13660	09/01/88
							5.00	5.40	5.40	1.20		9.0	2147
STRIP	3.30	36.40	57.10	BARBOUR	6.50	79.20	W194962	3.30	390756	801221	B	14120	09/01/88
							5.20	4.40	4.40	1.40		9.0	2543
STRIP	2.60	41.90	52.10	HARRISON	6.00	76.90	W210340	3.70	390803	802140	B	14070	09/01/88
							5.40	6.70	6.70	1.30		8.0	2021
STRIP	1.20	38.40	53.70	BARBOUR	7.90	76.70	W189284	2.20	390807	801025	B	13830	09/01/88
							5.30	6.80	6.80	1.10		9.0	2462
STRIP	3.50	39.50	49.40	BARBOUR	11.10	74.30	W194963	4.10	390820	801228	B	13580	09/01/88
							5.10	4.10	4.10	1.30		8.0	2057
STRIP	2.80	36.60	55.90	BARBOUR	7.50	78.30	W194972	1.70	390821	801006	B	14090	09/01/88
							5.20	6.00	6.00	1.30		9.0	2255
STRIP	1.60	41.30	51.30	BARBOUR	7.40	77.30	W206572	2.70	390859	801303	B	13990	09/01/88
							5.40	5.80	5.80	1.40		9.0	2156
UNDERGROUND	2.10	36.20	53.20	BARBOUR	10.60	74.80	W206568	1.80	390911	801104	B	13370	09/01/88
							5.00	6.40	6.40	1.40		9.0	2246
UNDERGROUND	1.30	36.80	54.30	BARBOUR	8.90	75.60	W189285	2.40	390927	801019	B	13670	09/01/88
							5.30	6.80	6.80	1.00		9.0	2345
UNDERGROUND	1.60	31.10	48.90	BARBOUR	20.00	67.80	W194953	1.50	390945	795937	B	12230	09/01/88
							4.50	4.80	4.80	1.40		8.5	2804

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash						Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND	1.90	31.20	53.80	BARBOUR	71.50	4.90	W194954	3.70	390949	800313	B	12920	09/01/88
									3.50	1.40		9.0	2246
STRIP	3.70	33.50	58.60	BARBOUR	77.60	5.10	W206567	1.10	391035	800639	B	13740	09/01/88
									6.80	1.50		9.0	2714
STRIP	1.80	40.70	51.40	HARRISON	76.30	5.30	W210197	2.90	391050	802146	B	13800	09/01/88
									6.30	1.30		7.5	2102
STRIP	1.70	38.40	50.60	BARBOUR	73.60	5.00	W206569	3.30	391052	801145	B	13310	09/01/88
									5.80	1.30		8.5	2201
STRIP	1.00	38.10	54.30	BARBOUR	78.70	5.40	W194969	1.80	391103	800732	B	14260	09/01/88
									4.90	1.60		9.0	2219
STRIP	3.10	35.90	55.80	BARBOUR	76.80	5.00	W194970	2.90	391105	800722	B	13890	09/01/88
									5.70	1.30		9.0	2318
STRIP	2.30	33.70	53.00	BARBOUR	72.70	4.90	W194971	2.70	391122	800621	B	13120	09/01/88
									5.10	1.30		9.0	2237
STRIP	3.60	36.70	56.70	BARBOUR	77.80	5.20	W194968	1.80	391130	800931	B	14060	09/01/88
									7.10	1.50		9.0	2408
STRIP	1.40	29.90	51.10	BARBOUR	68.60	4.60	W206571	2.90	391151	800308	B	12250	09/01/88
									3.70	1.20		8.0	2273
STRIP	3.10	36.80	50.40	BARBOUR	72.90	4.80	W194966	3.30	391151	801127	B	13090	09/01/88
									5.00	1.20		8.5	2111
STRIP	2.70	36.70	52.10	HARRISON	73.00	4.80	W206570	3.60	391255	801232	B	13140	09/01/88
									6.20	1.20		8.5	2147
STRIP	2.70	38.10	53.20	BARBOUR	76.50	5.20	W194960	3.70	391353	801015	B	13890	09/01/88
									4.60	1.30		9.0	2255
STRIP	1.50	37.10	55.40	TAYLOR	77.80	5.20	W194959	1.60	391444	800722	B	14180	09/01/88
									6.40	1.50		9.0	2156
OUTCROP	1.50	36.40	48.90	HARRISON	69.70	4.90	W189280	2.80	391652	801701	B	12590	09/01/88
									6.90	1.00		9.0	2156
STRIP	2.70	37.40	56.40	TAYLOR	79.50	5.40	W194958	0.40	391917	800416	B	14390	09/01/88
									6.90	1.60		9.0	2246
UNDERGROUND	2.70	36.10	57.00	MARION	78.50	5.20	W206584	0.90	392954	801202	B	13940	09/01/88
									6.90	1.60		8.0	2291

Coal Field Information Printout for: WV - West Virginia

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
UNDERGROUND				MARION									
2.70	39.30	54.00	6.70	78.40	5.30	2.60	393005	801111	B	14090	9.0	2210	09/01/88
UNDERGROUND				MARION									
2.40	38.20	54.90	6.90	78.90	5.40	1.40	393045	801123	B	14100	8.5	2408	09/01/88
UNDERGROUND				MARION									
1.80	39.10	53.60	7.30	77.60	5.30	2.70	393100	801203	B	13860	9.0	2147	09/01/88
STRIP				PRESTON									
0.90	27.00	62.50	10.50	77.30	4.90	1.50	393430	793824	B	13780	9.0	2687	09/01/88
DIPPEL&DIPPEL STRIP				MONONGALIA									
1.20	28.30	35.60	36.10	51.10	3.80	2.10	393730	800300	B	9220	4.0	2804	09/01/88
STRIP				MONONGALIA									
1.70	32.30	56.10	11.60	73.00	5.10	1.20	393730	800329	B	13050	5.5	2444	09/01/88
STRIP				MONONGALIA									
7.10	33.80	54.50	11.70	72.40	4.90	1.10	393804	795340	B	12710	2.0	2516	09/01/88
				MONONGALIA									
1.60	21.00	43.30	35.70	55.00	3.50	1.40	393941	795038	B	9650	1.0	2804	09/01/88
DIPPEL&DIPPEL STRIP				MONONGALIA									
1.20	31.10	42.10	26.80	60.50	4.40	0.80	394143	800100	B	10810	6.0	2804	09/01/88
STRIP				MONONGALIA									
2.10	35.40	46.70	17.90	66.80	4.80	3.90	394155	800108	B	12160	8.0	2372	09/01/88
HOLE 5				LEWIS									
1.80	37.40	46.70	15.90	69.80	4.90	1.60	395451	802640	B	12640	5.5	2750	09/01/88
STRIP MINE				LEWIS									
7.00	28.70	41.50	29.80	56.10	4.10	2.00	401410	803222	B	10010	3.0	2678	09/01/88
STRIP				BROOKE									
6.10	37.80	55.20	7.00	76.00	5.00	1.60	401906	803300	B	13530	7.0	2354	09/01/88
STRIP				BROOKE									
4.80	38.10	53.30	8.60	75.00	5.10	2.40	401950	803138	B	13270	6.5	2138	09/01/88

Coal Field Information Printout for
WY - Wyoming

Coal Field Information Printout for: WY - Wyoming

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
14.70	36.10	53.10	CARBON	56.80	4.70	0.70	411245 15.20	1073045 1.80	SB	11460 0.0	09/01/88 2444
27.40	43.40	33.70	CARBON	49.10	2.80	1.10	411432 22.70	1072938 1.40	SB	7410 0.0	09/01/88 2453
17.50	33.50	50.50	CARBON	63.10	4.10	0.60	411548 14.50	1073342 1.70	SB	10820 0.0	09/01/88 2354
15.00	34.90	47.90	CARBON	61.70	4.30	0.60	411610 14.70	1073215 1.50	SB	10650 0.0	09/01/88 2804
17.70	34.30	44.00	CARBON	58.90	4.30	0.60	411829 13.40	1073231 1.10	SB	10210 0.0	09/01/88 2615
13.80	36.40	52.30	CARBON	67.20	4.60	0.50	412014 15.00	1073420 1.40	SB	11640 0.0	09/01/88 2462
15.50	34.00	47.50	CARBON	61.00	4.00	0.70	412125 14.50	1073039 1.30	SB	10500 0.0	09/01/88 2759
1.20	25.10	57.30	SWEETWATER	71.90	4.40	0.80	412230 3.60	1075230 1.70	B	12780 9.0	09/01/88 2732
27.00	45.10	45.10	SWEETWATER	58.80	3.30	0.80	412230 25.50	1083730 1.80	SB	9030 0.0	09/01/88 0
34.70	43.40	37.20	SWEETWATER	51.70	3.10	0.60	412230 23.70	1084500 1.50	SB	7960 0.0	09/01/88 0
14.20	38.80	51.80	CARBON	68.20	4.80	0.50	412325 15.70	1073118 1.40	SB	11780 0.0	09/01/88 2516
21.60	36.50	47.90	CARBON	62.20	3.80	0.60	413024 16.80	1073908 1.00	SB	10250 0.0	09/01/88 2264
NO 7 SEAM STRIP MINE 8.50	40.30	52.70	SWEETWATER	72.70	5.00	0.90	413040 12.70	1091330 1.70	B	12680 0.5	09/01/88 2912
22.40	39.00	52.10	CARBON	66.80	4.10	0.50	413046 18.70	1073856 1.00	SB	11070 0.0	09/01/88 2201
10.40	42.50	51.50	SWEETWATER	73.80	5.20	1.00	413111 12.20	1091326 1.80	SB	13080 0.0	09/01/88 2246
20.50	37.70	48.10	CARBON	62.20	4.10	1.80	413112 16.70	1073758 1.00	SB	10310 0.0	09/01/88 2255

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrog n	Cor's Number	Latitude	Longitude	Rank	Htg Val	Last Chg
								Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
	23.40	38.10	48.10	CARBON	13.80	62.70	3.90	0.80	413136	1073759	SB	10460	09/01/88
									17.90	0.90		0.0	2309
	25.20	37.30	49.30	CARBON	13.40	62.70	4.10	0.70	413152	1073712	SB	10440	09/01/88
									18.20	0.90		0.0	2228
	9.50	41.50	54.10	SWEETWATER	4.40	74.30	5.00	0.90	413325	1091235	B	12970	09/01/88
									14.80	0.60		0.5	2192
	14.40	36.70	54.30	SWEETWATER	9.00	67.90	4.20	0.80	413340	1091247	B	11360	09/01/88
									16.90	1.20		0.0	2912
	SWANSON DEEP MINE												
	10.20	39.30	49.20	SWEETWATER	11.50	67.70	4.60	1.20	413345	1091250	B	11850	09/01/88
									14.10	0.90		0.5	2912
	17.50	32.00	35.00	CARBON	33.00	47.70	3.60	1.70	413413	1074539	SB	8060	09/01/88
									13.00	1.00		0.0	2363
	19.50	32.90	32.70	CARBON	34.40	42.70	3.30	4.60	413450	1074441	SB	7220	09/01/88
									14.10	0.90		0.0	2201
	19.60	36.10	37.20	CARBON	26.70	47.50	3.50	5.30	413501	1074505	SB	8090	09/01/88
									16.00	1.00		0.0	2156
	21.20	32.40	30.60	CARBON	37.00	41.40	3.00	3.70	413505	1074447	SB	5960	09/01/88
									14.00	0.90		0.0	2327
	SWANSON DEEP MINE												
	11.70	41.10	54.60	SWEETWATER	4.30	75.00	5.00	1.10	413555	1091020	B	13010	09/01/88
									13.40	1.20		0.5	2354
	38.80	44.90	46.40	CARBON	8.70	60.50	3.10	0.30	413700	1073410	SB	9130	09/01/88
									26.30	1.10		0.0	2201
	24.50	38.70	51.80	CARBON	9.50	66.80	3.80	1.10	413725	1073440	SB	11150	09/01/88
									17.90	0.90		0.0	2147
	41.60	45.70	45.90	CARBON	8.40	60.70	3.20	0.30	413733	1073427	SB	9040	09/01/88
									26.20	1.20		0.0	2300
	20.50	31.20	30.40	CARBON	38.40	44.10	3.00	0.50	413740	1073403	SB	7190	09/01/88
									13.40	0.60		0.0	2264
	39.50	43.30	48.40	CARBON	8.30	61.50	3.20	0.20	413815	1073335	SB	9400	09/01/88
									25.80	1.00		0.0	2201
	43.40	42.40	43.30	CARBON	14.30	56.80	3.10	0.50	413821	1073327	SB	8550	09/01/88
									24.40	0.90		0.0	2102

Coal Field Information Printout for: WY - Wyoming

Location Moisture	Volatiles	Fxd Crbn	County Ash	Carbon	Hydrogen	Sulfur	Latitude Oxygen	Longitude Nitrogen	Rank Hardgrove	Htg Val Free Swell	Last Chg Hemi Temp
30.00	34.60	47.40	CARBON	18.00	60.70	4.20	413840	1073238	SB	10230	09/01/88
							14.90	0.90		0.0	2246
23.20	38.80	50.70	CARBON	10.50	65.70	4.30	413903	1073218	SB	10980	09/01/88
							17.80	0.80		0.0	2048
41.60	45.50	47.30	CARBON	7.20	61.60	3.00	413910	1073920	SB	9230	09/01/88
							27.10	0.90		0.0	2084
42.60	48.20	41.30	SWEETWATER	10.50	59.30	2.60	413935	1073830	SB	8820	09/01/88
							26.50	0.90		0.0	2183
36.30	44.30	45.20	SWEETWATER	10.50	60.20	3.20	413935	1073900	SB	9140	09/01/88
							24.70	0.90		0.0	2165
25.80	45.80	46.00	SWEETWATER	8.20	68.80	4.80	413947	1073118	SB	11790	09/01/88
							16.50	0.80		0.0	2084
41.80	43.30	40.20	SWEETWATER	16.50	53.10	2.80	413957	1073155	SB	7970	09/01/88
							25.50	1.20		0.0	2417
26.20	37.00	54.60	SWEETWATER	8.40	68.20	4.20	414012	1073132	SB	11530	09/01/88
							16.50	1.20		0.0	2102
39.70	45.10	44.30	SWEETWATER	10.60	58.40	3.00	414026	1073133	SB	8660	09/01/88
							26.10	1.20		0.0	2318
26.10	32.20	44.30	SWEETWATER	23.50	58.20	3.80	414027	1073150	SB	9770	09/01/88
							12.90	0.80		0.0	2246
16.70	42.90	54.50	SWEETWATER	2.60	74.10	4.70	414150	1091800	B	12630	09/01/88
							15.90	1.60		0.5	2093
17.00	39.80	52.70	CARBON	7.50	67.60	4.50	414405	1072111	SB	11490	09/01/88
							17.90	1.80		0.0	2129
23.80	43.40	49.60	LINCOLN	7.00	66.60	4.50	414417	1103729	SB	11230	09/01/88
							19.30	1.80		0.0	2102
20.50	41.50	49.80	LINCOLN	8.70	67.70	4.70	414432	1103752	SB	11840	09/01/88
							15.90	1.90		0.0	1976
12.10	41.20	47.70	CARBON	11.10	66.90	5.00	414500	1063000	SB	11750	09/01/88
							14.40	1.60		0.0	0
21.90	41.90	48.40	SWEETWATER	9.70	64.00	4.10	414500	1084500	SB	10670	09/01/88
							19.90	1.50		0.0	0

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
HOLE NO RM-1-CS				CARBON									
15.70	42.70	47.90	9.40			63.20	4.50	0.60	414630	1060705	SB	10630	09/01/88
									20.90	1.40		0.0	2912
23.00	39.10	47.40	13.50	SWEETWATER		62.50	4.00	0.60	414658	1084532	SB	10310	09/01/88
									18.00	1.40		0.0	2516
20.60	42.70	53.10	4.20	LINCOLN		71.90	5.10	0.40	414703	1103705	SB	12480	09/01/88
									16.60	1.80		0.0	2093
15.60	42.20	52.60	5.20	LINCOLN		70.80	5.10	0.40	414710	1103650	SB	12320	09/01/88
									17.00	1.50		0.0	2192
17.50	42.50	53.00	4.50	LINCOLN		70.90	5.00	0.50	414712	1103706	SB	12340	09/01/88
									17.30	1.80		0.0	2129
18.90	41.30	52.30	6.40	LINCOLN		70.90	4.90	0.60	414714	1103630	SB	12280	09/01/88
									15.50	1.70		0.0	2084
16.70	43.80	51.40	4.80	LINCOLN		72.10	5.20	1.60	414720	1103640	SB	12640	09/01/88
									15.20	1.10		0.0	2210
15.40	42.70	52.80	4.50	LINCOLN		70.80	5.00	0.40	414726	1103650	SB	12210	09/01/88
									17.50	1.80		0.0	2336
16.00	29.30	33.90	36.80	CARBON		44.90	3.40	0.60	415051	1073052	SB	7620	09/01/88
									13.20	1.10		0.0	2804
HOLE NO RM-1-CS				CARBON									
34.40	42.80	37.70	19.50			49.20	3.20	0.30	415155	1061650	SB	7410	09/01/88
									26.40	1.40		0.0	2840
11.30	38.40	49.30	12.30	CARBON		66.30	4.60	0.50	415212	1064027	SB	11350	09/01/88
									14.70	1.60		0.0	2147
10.70	43.10	45.40	11.50	CARBON		66.70	5.10	0.80	415230	1063000	SB	11930	09/01/88
									14.40	1.50		0.0	0
12.60	42.00	51.80	6.20	CARBON		71.90	4.80	0.70	415230	1063730	SB	12380	09/01/88
									14.90	1.50		0.0	0
10.50	40.00	55.30	4.70	CARBON		69.40	4.30	0.30	415230	1064500	SB	11540	09/01/88
									20.30	1.00		0.0	0
14.40	36.90	52.80	10.30	CARBON		67.10	4.30	0.50	415310	1064925	SB	11440	09/01/88
									16.70	1.10		0.0	2264
10.10	41.40	51.60	7.00	CARBON		71.60	5.00	0.70	415312	1064002	SB	12400	09/01/88
									13.90	1.80		0.0	2129

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Code Number			Latitude		Longitude		Rank	Htg Val	Last Chg
					Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell			
13.80	38.60	51.40	10.00	CARBON	67.20	D170255	4.50	0.50	415338	1064806	B	11540	09/01/88	
									16.90	0.90		0.0	2120	
16.00	40.80	54.60	4.60	CARBON	71.40	D170254	4.80	0.50	415348	1064831	B	12120	09/01/88	
									17.70	1.00		0.0	2426	
12.30	38.20	53.80	8.00	CARBON	71.20	D170260	4.80	0.60	415354	1063823	B	12340	09/01/88	
									14.10	1.30		0.0	2111	
RIMROCK STRIP MINE														
14.60	37.80	50.00	12.20	CARBON	64.30	D177435	4.20	1.30	415355	1063804	SB	10830	09/01/88	
									16.50	1.50		0.0	2183	
11.30	45.20	48.70	6.10	CARBON	73.30	D170253	5.50	0.50	415403	1064550	B	12800	09/01/88	
									13.10	1.50		0.0	2120	
12.40	44.70	45.30	10.00	CARBON	68.20	D170259	4.90	1.40	415410	1063039	B	11930	09/01/88	
									14.00	1.50		0.0	2129	
12.50	36.50	54.00	9.50	CARBON	68.70	D183110	4.60	0.70	415435	1064750	SB	11770	09/01/88	
									15.10	1.40		0.0	2246	
14.10	34.60	53.90	11.50	CARBON	66.50	D183109	4.60	0.50	415440	1064935	SB	11360	09/01/88	
									15.70	1.20		0.0	2354	
10.30	43.90	45.20	10.90	CARBON	67.90	D177434	5.10	0.80	415500	1063243	SB	11920	09/01/88	
									13.70	1.60		0.0	2192	
13.90	40.20	53.40	6.40	CARBON	70.60	D177436	4.60	0.60	415510	1064535	SB	12000	09/01/88	
									16.30	1.50		0.0	2156	
11.20	46.10	45.70	8.20	CARBON	69.10	D170258	5.10	1.10	415535	1063040	B	12200	09/01/88	
									14.70	1.80		0.0	2282	
10.20	40.30	52.20	7.50	CARBON	69.50	D176222	4.80	0.70	415605	1064650	SB	12090	09/01/88	
									16.20	1.30		0.0	2120	
10.60	41.80	53.30	4.90	CARBON	73.30	D171832	5.30	0.80	415622	1063146	SB	12870	09/01/88	
									14.00	1.70		0.0	2084	
7.10	31.00	37.80	31.20	CARBON	51.80	D187058	3.80	0.40	420020	1064720	SB	8950	09/01/88	
									12.00	0.80		0.0	2624	
29.90	35.80	49.60	14.60	CARBON	64.30	D187057	4.50	0.60	420030	1064840	SB	11190	09/01/88	
									14.40	1.60		0.0	2318	
HOLE NO RM-1-CS														
29.20	42.20	44.00	13.80	CARBON	56.20	D176627	3.20	0.40	420340	1065945	SB	8550	09/01/88	
									25.30	1.10		0.0	2912	

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash					Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
JOHNSTON MINE				CONVERSE								
14.80	45.30	45.10	9.60	CONVERSE	65.50	D161312	4.80	0.80	1054500	SB	11170	09/01/88
								18.50	0.80		0.0	0
20.70	44.50	35.70	19.80	CONVERSE	57.90	D171837	4.40	0.60	1054940	SB	9900	09/01/88
								16.50	0.80		0.0	2147
19.50	47.40	41.70	10.90	CONVERSE	64.40	D171839	4.90	0.90	1055012	SB	11020	09/01/88
								17.20	1.70		0.0	2039
22.70	45.10	42.20	12.70	CONVERSE	62.40	D171838	4.80	0.60	1055018	SB	10720	09/01/88
								18.70	0.80		0.0	2138
17.10	44.30	50.60	5.10	CONVERSE	69.60	D166180	4.90	0.50	1051500	SB	12000	09/01/88
								18.80	1.10		0.0	0
22.50	44.90	49.80	5.30	CAMPBELL	69.70	D165593	4.90	0.40	1051616	SB	11950	09/01/88
								18.70	1.00		0.0	0
27.80	45.40	49.90	4.70	CAMPBELL	70.10	D165600	5.00	0.40	1051452	SB	12150	09/01/88
								18.80	1.00		0.0	0
17.30	30.70	30.70	38.60	JOHNSON	37.80	D179875	2.80	7.90	1060335	SB	6570	09/01/88
								12.40	0.50		0.0	2039
19.40	31.80	28.80	39.40	JOHNSON	40.50	D179876	3.00	4.80	1060405	SB	7030	09/01/88
								11.70	0.60		0.0	2057
BELLE AYR MINE				CAMPBELL								
14.50	40.50	52.00	7.50	CAMPBELL	68.40	D177022	4.50	0.50	1052230	SB	11500	09/01/88
								17.90	1.20		0.0	2066
29.30	45.40	45.70	8.90	CAMPBELL	66.40	D178089	4.90	1.30	1053350	SB	11430	09/01/88
								16.90	1.60		0.0	2336
BELLE AYR MINE				CAMPBELL								
26.20	45.50	47.30	7.20	CAMPBELL	68.70	D160988	5.30	0.80	1052230	SB	11950	09/01/88
								17.10	0.90		0.0	0
29.20	44.80	50.30	4.90	CAMPBELL	70.60	D163521	5.00	0.60	1052234	SB	12190	09/01/88
								17.90	1.00		0.0	0
22.60	42.50	51.20	6.30	CAMPBELL	69.90	D171826	5.20	0.50	1052233	SB	12030	09/01/88
								16.90	1.20		0.0	2183
27.10	43.20	49.30	7.50	CAMPBELL	67.90	D160987	4.90	0.40	1052328	SB	11700	09/01/88
								18.30	1.00		0.0	0
27.20	46.50	42.90	10.60	CAMPBELL	65.40	D171830	4.80	1.10	1052319	SB	11370	09/01/88
								17.10	1.00		0.0	2192

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Carbon	Hydrogen	Code Number	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
			Ash						Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
29.90	45.80	46.50	7.70	CAMPBELL	68.90	4.50	D171829	0.40	441649	1052328	SB	11670	09/01/88
									17.40	1.10		0.0	2084
WYODAK MINE													
10.40	45.70	44.30	10.00	CAMPBELL	65.60	5.00	D160983	1.00	441700	1052334	SB	11470	09/01/88
									17.50	0.90		0.0	0
21.90	43.00	51.60	5.40	CAMPBELL	70.30	5.10	D171831	0.80	441725	1052332	SB	12290	09/01/88
									16.60	1.80		0.0	2138
HOLE NO B-1													
22.70	34.40	29.50	36.10	JOHNSON	44.00	3.60	D179941	0.50	442112	1064135	SB	7490	09/01/88
									15.20	0.60		0.0	2282
30.90	44.40	48.40	9.10	CAMPBELL	67.10	5.00	D178107	1.00	442540	1055100	SB	11510	09/01/88
									18.70	1.00		0.0	2102
37.10	48.10	42.80	9.10	CAMPBELL	62.80	4.40	D178396	1.10	443250	1054955	SB	10370	09/01/88
									21.50	1.10		0.0	2462
29.50	45.00	47.50	7.50	CAMPBELL	64.40	4.60	D178106	2.80	443340	1055530	SB	10920	09/01/88
									19.30	1.40		0.0	2246
34.60	49.00	42.70	8.30	SHERIDAN	58.90	4.10	D169770	0.80	443908	1063138	SB	9460	09/01/88
									25.90	2.00		0.0	0
36.80	48.60	35.30	16.10	SHERIDAN	52.20	3.30	D169064	0.90	443909	1064412	SB	7900	09/01/88
									25.90	1.60		0.0	0
38.70	50.10	39.30	10.60	SHERIDAN	56.00	3.60	D169772	0.70	443956	1063408	SB	8650	09/01/88
									27.10	2.00		0.0	0
36.50	48.20	43.60	8.20	SHERIDAN	59.40	3.70	D169071	0.60	444250	1064216	SB	9390	09/01/88
									26.20	1.90		0.0	0
37.10	50.40	41.80	7.80	SHERIDAN	58.40	3.80	D169073	1.30	444323	1064322	SB	9240	09/01/88
									26.30	2.40		0.0	0
40.70	47.20	36.40	16.40	SHERIDAN	51.20	3.30	D169063	1.00	444326	1064112	SB	7860	09/01/88
									26.20	1.90		0.0	0
HOLE NO RM-7													
41.50	43.20	48.40	8.40	CAMPBELL	66.30	4.40	D177741	0.70	444330	1053625	SB	11250	09/01/88
									19.50	0.70		0.0	2255
41.80	49.10	39.00	11.90	SHERIDAN	55.20	3.40	D169777	0.90	444330	1063421	SB	8440	09/01/88
									25.90	1.70		0.0	0
40.30	49.20	42.40	8.40	SHERIDAN	59.00	3.70	D169076	1.30	444451	1064350	SB	9400	09/01/88
									25.80	1.80		0.0	0

Coal Field Information Printout for: WY - Wyoming

Location		County		Code Number		Latitude		Longitude		Rank		Htg Val		Last Chg	
Moisture	Volatiles	Fxd Crbn	Ash	Carbon	Hydrogen	Sulfur	Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp				
22.40	44.90	44.30	CAMPBELL	59.90	D164618	3.80	444610	1052624	SB	13250	09/01/88				
							23.70	1.20		0.0					
HOLE NO 76-103															
27.70	36.00	30.40	CAMPBELL	47.80	D186993	3.90	444719	1053321	SB	8390	09/01/88				
							11.70	0.80		0.0					
HOLE NO RM-1-CS															
31.50	43.20	45.90	CAMPBELL	63.60	D176630	4.20	444740	1053150	SB	10740	09/01/88				
							19.60	1.00		0.0					
HOLE NO RM-2															
29.20	40.80	40.40	CAMPBELL	58.80	D177704	4.30	444743	1053238	SB	9920	09/01/88				
							16.60	0.70		0.0					
HOLE NO RM-5															
34.00	41.10	42.70	CAMPBELL	61.50	D177715	4.30	444756	1053723	SB	10450	09/01/88				
							16.20	0.90		0.0					
HOLE NO RM-4-CS															
31.60	43.40	47.80	CAMPBELL	66.50	D176799	4.70	444802	1053530	SB	11390	09/01/88				
							18.30	1.00		0.0					
SHERIDAN															
33.20	46.90	49.20	3.90	64.10	D169059	4.50	444816	1063426	SB	10730	09/01/88				
							23.60	1.80		0.0					
HOLE NO 76-105															
34.60	42.80	47.30	CAMPBELL	64.90	D187005	4.50	444819	1053336	SB	10930	09/01/88				
							19.00	1.10		0.0					
HOLE NO RM-1-CS															
31.60	43.40	43.90	CAMPBELL	62.70	D176502	4.50	444841	1053530	SB	10470	09/01/88				
							18.40	1.00		0.0					
CAMPBELL															
18.70	42.10	44.70	CAMPBELL	60.10	D164626	4.20	444849	1052703	SB	13460	09/01/88				
							21.00	1.10		0.0					
HOLE NO 76-108															
28.30	42.30	34.00	CAMPBELL	56.00	D186987	4.70	444856	1053454	SB	9950	09/01/88				
							13.50	1.00		0.0					
HOLE NO RM-6															
30.90	41.80	45.20	CAMPBELL	62.80	D177730	4.40	444930	1053835	SB	10670	09/01/88				
							18.10	1.00		0.0					
SHERIDAN															
25.80	45.10	51.50	3.40	63.50	D165045	4.40	445020	1064626	SB	10820	09/01/88				
							21.90	2.20		0.0					
SHERIDAN															
24.70	45.20	47.00	7.80	61.50	D165043	4.60	445020	1064635	SB	10310	09/01/88				
							22.50	1.60		0.0					
SHERIDAN															
27.60	43.50	51.70	4.80	65.30	D165046	4.50	445034	1064504	SB	11150	09/01/88				
							20.10	2.30		0.0					
SHERIDAN															
32.90	50.10	42.90	7.00	57.60	D165044	4.10	445230	1065208	SB	11950	09/01/88				
							27.10	2.40		0.0					

Coal Field Information Printout for: WY - Wyoming

Location	Moisture	Volatiles	Fxd Crbn	County	Ash	Carbon	Hydrogen	Sulfur	Latitude	Longitude	Rank	Htg Val	Last Chg
									Oxygen	Nitrogen	Hardgrove	Free Swell	Hemi Temp
BIG HORN MINE, TIPPLE SAMPLE													
18.70	40.80	54.20	5.00	SHERIDAN	72.00	D161320	4.90	0.60	445230	1065230	SB	13280	09/01/88
									16.30	1.20		0.0	0
SHERIDAN													
18.90	45.10	44.30	10.60	SHERIDAN	56.00	D164633	3.80	2.60	445356	1064452	SB	9360	09/01/88
									23.30	1.70		0.0	0
SHERIDAN													
21.10	42.00	50.60	7.40	SHERIDAN	69.60	D171840	4.90	0.80	445400	1065835	SB	12120	09/01/88
									16.00	1.30		0.0	2093
SHERIDAN													
19.10	35.00	37.90	27.10	SHERIDAN	52.00	D171845	4.10	2.30	445402	1070559	SB	9120	09/01/88
									13.30	1.20		0.0	2192
WELCH STRIP MINE													
17.70	47.40	46.40	6.20	SHERIDAN	68.60	D164650	5.40	1.80	445408	1070550	SB	12130	09/01/88
									16.50	1.50		0.0	0
SHERIDAN													
23.80	44.10	48.70	7.20	SHERIDAN	62.00	D164628	3.10	0.50	445903	1064914	SB	9380	09/01/88
									25.40	1.80		0.0	0

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