NW 1/4 NE 1/4 SW 1/4 sec. 35, T. 3 N., R. 95 W., and dips about 50° to the southwest. It is 6.0 feet (1.8 m) thick where measured at one location along the outcrop.

COAL RESOURCES

Data from outcrop measurements (Reheis, 1975; Pipiringos and Rosenlund, 1977) were used to construct an areal distribution and identified resources map of the non-isopached coal beds (plate 4). The source of each indexed data point shown on plate 1 is listed in table 4.

Coal resources for Federal land were calculated using data obtained from plate 4. The coal bed acreage (measured by planimeter), multiplied by the average thickness of the coal bed and by a conversion factor of 1,770 short tons of coal per acre foot (13,018 metric tons per hectare-meter) for subbituminous coal, or 1,800 short tons of coal per acre-foot (13,238 metric tons per hectare-meter) for bituminous coal, yields the coal resources in short tons for each coal bed. Coal beds thicker than 5.0 feet (1.5 m) that lie less than 3,000 feet (914 m) below the ground surface are included. These criteria differ somewhat from those stated in U.S. Geological Survey Bulletin 1450-B which call for a minimum thickness of 28 inches (70 cm) for bituminous coal and a maximum depth of 1,000 feet (305 m) for both subbituminous and bituminous coal.

Only Reserve Base tonnages (designated as inferred resources) are calculated for the non-isopached coal beds. These are shown on plate 4, and are rounded to the nearest 10,000 short tons (9,072 metric tons). Coal Reserve Base tonnages per Federal section are shown on figure 2 and total approximately 2,410,000 short tons (2,190,000 metric tons) for the entire quadrangle. Reserve Base tonnages in the various development potential categories for surface and subsurface mining methods are shown in tables 2 and 3.

Dames & Moore has not made any determination of economic recoverability for any of the coal beds described in this report.

COAL DEVELOPMENT POTENTIAL

The standard criteria for classifying coal resource development potential by surface and subsurface mining methods were not applied to the White Rock quadrangle. Unknown development potentials are assigned to those areas where coal data is absent or extremely limited, such as those areas influenced by isolated data points in this quadrangle. Even though these areas may contain coal thicker than 5 feet (1.5 m), limited knowledge of the areal distribution, thickness, depth, and attitude of the coal bed prevents accurate evaluation of development potential in the high, moderate, and low categories. Coal tonnages included in the unknown potential category for the isolated data points in this quadrangle are believed to total approximately 1,460,000 short tons (1,320,000 metric tons) for surface mining methods and approximately 950,000 short tons (860,000 metric tons) for conventional subsurface and in-situ mining methods.

Table 1. -- Chemical analyses of coals in the White Rock quadrangle, Rio Blanco and Moffat Counties, Colorado.

Location	COAL BED NAME	Form of Analysis	Proximate				Ultimate					Heating Value	
			Moisture	Volatile Matter	Fixed Carbon	Ash	Sulfur	Hydrogen	Carbon	Nitrogen	Oxygen	Calories	Btu/Lb
SW¼ sec. 13, T. 4 N., R. 94 W., Ed Collum Mine (Hancock, 1925) from Easton Gulch quadrangle	Fairfield coal group coal bed (33)	A	14.8	38.7	42.7	3.82	0.66	-	-	-	-	-	10,780
		B	13.1	39.5	43.5	3.90	0.67	-	-	-	-	-	11,000
		C	-	45.4	50.1	4.49	0.78	-	-	-	-	-	12,660
NW¼ sec. 29, T. 1 N., R. 94 W., Montgomery Mine (Hancock and Eby, 1930) from Meeker quadrangle	Lion Canyon coal group	A	12.4	38.6	42.9	6.1	0.71	-	-	-	-	-	10,790
		B	10.6	39.4	43.7	6.3	0.72	-	-	-	-	-	11,010
		C	-	44.1	48.9	7.0	0.81	-	-	-	-	-	12,320
NW¼ SE¼ sec. 27, T. 8 N., R. 93 W., Grassie Mine (George and others, 1937) from Lay SE quadrangle	Fort Union Formation	A	15.9	32.5	46.6	5.0	0.5	-	-	-	-	-	10,140
		C	-	38.6	55.5	5.9	0.6	-	-	-	-	-	12,060
		D	-	41.0	59.0	-	0.6	-	-	-	-	-	12,820

Form of Analysis: A, as received
B, air dried
C, moisture free
D, moisture and ash free

Note: To convert Btu/pound to kilojoules/kilogram, multiply by 2.326

Table 2. -- Coal Reserve Base data for surface mining methods for Federal coal lands (in short tons) in the White Rock quadrangle, Rio Blanco and Moffat Counties, Colorado.

Coal Bed or Zone	High Development Potential	Moderate Development Potential	Low Development Potential	Unknown Development Potential	Total
Isolated Data Points	-	-	-	1,460,000	1,460,000
Totals	-	-	-	1,460,000	1,460,000

NOTE: To convert short tons to metric tons, multiply by 0.9072.

Table 3. -- Coal Reserve Base data for subsurface mining methods for Federal coal lands (in short tons) in the White Rock quadrangle, Rio Blanco and Moffat Counties, Colorado.

Coal Bed or Zone	High Development Potential	Moderate Development Potential	Low Development Potential	Unknown Development Potential	Total
Isolated Data Points	-	-	-	950,000*	950,000
Totals	-	-	-	950,000	950,000

NOTE: To convert short tons to metric tons, multiply by 0.9072.

*Includes 890,000 short tons dipping greater than 15°.

Table 4. -- Sources of data used on plate 1

Plate 1 Index Number	Source	Data Base
1	Pipiringos and Rosenlund, 1977, U.S. Geological Survey Miscellaneous Field Studies Map MF-837	Measured Section
2	Reheis, compiler, 1975, U.S. Geological Survey, unpublished map	Measured Section
3	Pipiringos and Rosenlund, 1977, U.S. Geological Survey Miscellaneous Field Studies Map MF-837	Measured Section
4	Reheis, compiler, 1975, U.S. Geological Survey, unpublished map	Measured Section
5	↓	Measured Section

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