

Tabby Mountain Coal Field

Location

The Tabby Mountain coal field is located on the northwestern flank of the Uinta Basin and extends for about 35 mi within Wasatch and Duchesne Counties, Utah (Doelling and Smith, 1982). Strata dip from 24 to 75 degrees, and the western margin of the field is highly deformed from eastward-directed thrusting (Doelling and Smith, 1982). Most of the coal is owned by the Uinta and Ouray Indian Tribes (Doelling and Smith, 1982).

Stratigraphy

Lupton (1912) completed the first fairly detailed study of the stratigraphy and geology of the coal-bearing units. Lupton's study and later stratigraphic and geologic studies were compiled by Doelling (1972). The revised stratigraphy and thickness of the Frontier Formation is from Molenaar and Wilson (1990). Thicknesses of the upper shale member of the Mancos Shale and the Mesaverde Formation are from Lupton (1912).

Table. Stratigraphy—Tabby Mountain coal field.

Stratigraphic units	Depositional environment	Thickness (ft)
Mesaverde Formation	coastal plain/nearshore marine; coal	3,300
Mancos Group		
upper shale member	marine shale	1,450
Frontier Formation	coastal plain/nearshore marine; coal	760
unnamed shale unit	marine shale	170
Mowry Shale	marine shale	200

Coal Deposits

Coal as thick as 10 ft is present in the Frontier Formation (Doelling and Smith, 1982). As many as 21 beds of coal are present in the Mesaverde Formation and they are as much as 28 ft thick (Lupton, 1912). The main bed is named the Fraughton.

Coal Quality

The coal in the Frontier and Mesaverde is subbituminous C to lignite A in apparent rank. Ash and sulfur content in the following table are from (Doelling and Smith, 1982). Calorific values, based on 27 analyses indicate an apparent rank of lignite (Affolter, chap. G, this CD-ROM); Doelling and Smith (1982) reported values of 8,000 to 10,000 Btu/lb.

Table. Coal in Frontier and Mesaverde Formations.

[Values reported on an as-received basis]

Ash content (percent)	Sulfur content (percent)	Heating value (Btu/lb)
6-10	0.7-1.0	3,674-7,784

Resources

The Tabby Mountain field is estimated to have about 1.9 billion short tons of coal in beds greater than 14 inches thick and under less than 3,000 ft of overburden (Lupton, 1912). Of this amount, Doelling (1972) estimated that about 231 million tons are in beds greater than 4 ft thick and under less than 3,000 ft of overburden.

Production History

Four small mines and a few prospects operated in the Tabby Mountain field from the early 1900's until about 1949 (Doelling, 1972).

References

- Doelling, H.H., 1972, Tabby Mountain coal field, *in* Doelling, H.H., and Graham, R.L., eds., Eastern and Northern Utah Coal Fields: Utah Geological and Mineralogical Survey Monograph Series No. 2, p. 281–321.
- Doelling, H.H., and Smith, M.R., 1982, Overview of Utah coal fields, 1982, *in* Gurgel, K.D., ed., Proceedings Fifth Symposium on the Geology of Rocky Mountain Coal 1982: Utah Geological and Mineral Survey Bulletin 118, p. 1–26.
- Lupton, C.T., 1912, The Blacktail (Tabby) Mountain coal field, Wasatch County, Utah, *in* Campbell, M.R., ed., Contribution to Economic Geology 1910: U.S. Geological Survey Bulletin 471, p. 595–628.
- Molenaar, C.M., and Wilson, B.W., 1990, The Frontier Formation and associated rocks of northeastern Utah and northwestern Colorado: U.S. Geological Survey Bulletin 1787, 21 p.