

Zuni Coal Field

Location

The Zuni coal field in McKinley and Cibola Counties, in western New Mexico, is a continuation of the Gallup coal field. The coal field is entirely within the Zuni Indian Reservation and is part of the Zuni Basin, a northwest-trending asymmetric syncline (Anderson, 1987).

Stratigraphy

The stratigraphy was first worked out in detail by Sears (1925), and was later placed into a regional context by Hook and others (1983). Geologic mapping and coal geology was refined by Anderson (1987) and Anderson and Stricker (1987). Approximate thicknesses of units are from Hook and others (1983, Pescado Creek section).

Table. Stratigraphy—Zuni coal field.

Stratigraphic units	Depositional environment	Thickness (ft)
Crevasse Canyon Formation		
Dilco Coal Member	coastal plain; coal	175 (part)
Gallup Sandstone		
Torrivio Member	fluvial	125
Ramah unit	coastal plain; minor coal	75
F sandstone	nearshore marine	60
Mancos Shale		
Pescado Tongue	marine	55
Tres Hermanos Formation		
Fite Ranch Member	nearshore marine	40
Carthage Member	coastal plain; coal	150
Atarque Sandstone Member	nearshore marine	50

Coal Deposits

Coal is present within the Dilco Coal Member of the Crevasse Canyon Formation, the School mine coal group in the Gallup Sandstone, and in the Harper and Shoemaker Canyon coal zones in the Carthage Member of the Tres Hermanos Formation (Anderson and Stricker, 1987). The Harper coals in the Carthage are 3 to 4 ft thick, and the upper zone in the Gallup is as thick as 7 ft (Anderson and Stricker, 1987).

Coal Quality

The coal in the Zuni field has an apparent rank of high-volatile C bituminous (Anderson, 1987). The sulfur content of the Gallup Ramah unit is between 0.6 and 1.5 percent, and ash content is between 8.8 and 36.0 percent (Anderson and Stricker, 1987).

Table. Coal in Ramah unit.

[Values reported on an as-received basis]

Ash content (percent)	Sulfur content (percent)	Heating value (Btu/lb)
8.8-36.0	0.6-1.5	10,470-11,250

Resources

Three areas in the middle of the field are thought to have strippable resources totaling about 6 million short tons (Kottlowski, 1971). Anderson (1987) estimated coal resources in the Gallup Sandstone at about 49 million short tons in the southeastern part of the field.

Production History

Three small mines operated in the coal field between 1905 and 1958 (Nickelson, 1988).

References

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