Emery Coal Field

Location

The Emery coal field is located within Emery County in central Utah. The field extends for about 35 mi in a northeast-southwest direction. The eastern edge of the field is bounded by good exposures called the Coal Cliffs. The field is bounded on the south by volcanic rocks on the Fish Lake Plateau, and is limited to the west by excessive depth beneath the Wasatch Plateau. The coal deposits extend into the subsurface to the north and the field boundary is arbitrarily chosen near Price, Utah. We include the Ferron coal-bed gas play (fig. 1) in this summary—(play 2052 Uinta Piceance–Emery of Rice, 1995).

Stratigraphy

Thicknesses of the Tununk and Ferron Sandstone Members of the Mancos Shale are from isopach maps from Ryer and McPhillips (1983) for the Emery coal field and the Ferron play. Sequence stratigraphic studies of the unit have been completed by Gardner (1993).

Table. Stratigraphy—Emery coal field.

Stratigraphic units	Depositional environment	Thickness (ft)
Mancos Shale		
Blue Gate Member	marine	(part)
Ferron Sandstone Member	coastal plain/nearshore marine; coal	55-830
Tununk Member	marine	300-790

Coal Deposits

The coal was first described by Lupton (1916) and named, in ascending order, the A, B, C, D, G, I, J, L, and M. Isopach maps of the A, C, G, J, and I are shown in Ryer (1981), who also provides an excellent summary of the associated depositional environments of the Ferron coal-bearing interval in the Emery field. These isopachs show a pod shape for most of the Ferron coal deposits.

Coal Quality

The rank of the coal is high-volatile bituminous B, and mean values of ash and sulfur contents are summarized below (Tabet, in press). The data, based on about 75 samples, are from the A, C, G, and I beds.

Table. Coal in Ferron Sandstone Member.

[Values reported on an as-received basis]

Ash content (percent)	Sulfur content (percent)	Heating value (Btu/lb)
8.20-14.54	0.78-1.26	11,275-12,179

Resources

The Ferron coals in the Emery coal field proper are estimated to contain about 1.4 billion short tons (Doelling, 1972, p. 437). An additional undetermined resource is present in the area around Price, Utah, where coal-bed methane is currently being produced in the Drunkard's Wash field (Gloyn and Sommer, 1993). The Drunkard's Wash field contains coal beds as much as 28 ft thick with overburden depths of between 100 and 2,500 ft (Bunnell and Hollberg, 1991).

Production History

As of 1996, cumulative production from the Emery field was 270 million short tons; however, there has been no active mining since 1990 (Jahanbani, 1996).

References

Bunnell, M.D., and Hollberg, R.J., 1991, Coal beds of the Ferron Sandstone Member in northern Castle Valley, east-central Utah, *in* Chidsey, T.C., Jr., ed., Geology of East-Central Utah: Utah Geological Association Publication 19, p. 157–172.

Doelling, H.H., 1972, Emery coal field, *in* Doelling, H.H., ed., Central Utah Coal Fields: Utah Geological and Mineralogical Survey Monograph Series No. 3, p. 417–496.

Gardner, M.H., 1993, Sequence stratigraphy and facies architecture of the Upper Cretaceous Ferron Sandstone Member of the Mancos Shale, east-central Utah: Golden, Colo., Colorado School of Mines, unpub. Ph.D. dissertation, 528 p.

Gloyn, R.W., and Sommer, S.N., 1993, Exploration for coalbed methane gains momentum in Uinta Basin: Oil and Gas Journal, May 31, p. 73–76.

Lupton, C.T., 1916, Geology and coal resources of Castle Valley in Carbon, Emery, and Sevier Counties, Utah: U.S. Geological Survey Bulletin 628, 88 p.

Jahanbani, F.R., 1996, 1995 Annual review and forecast of Utah coal, production and distribution: State of Utah Natural Resources, Office of Energy and Resource Planning, 26 p.

Rice, D.D., 1996, Geologic framework and description of coalbed gas plays, *in* Gautier, D.L., Dolton, G.L., Takashashi, K.I., and Varnes, K.L. eds., 1995 National Assessment of United States Oil and Gas Resources—Results, Methodology, and Supporting Data: U.S. Geological Survey Digital Data Series DDS-30, Release 2.

Ryer, T.A., 1981, Deltaic coals of Ferron Sandstone Member of Mancos Shale: Predictive model for Cretaceous coal-bearing strata of Western Interior: American Association of Petroleum Geologists Bulletin, v. 65, p. 2323–2340.

Ryer, T.A., and McPhillips, M., 1983, Early Late Cretaceous paleogeography of east-central Utah, *in* Reynolds, M.W., and Dolly, E.D., eds., Mesozoic Paleogeography of the West-Central United States: Rocky Mountain Section of Society of Economic Paleontologists and Mineralogists Rocky Mountain Paleogeography Symposium 2, p. 253–272.

Tabet, D.E, in press, Coal Resources: Carbon-Emery Counties Report.