Coal Exploration Bibliography

Selected References— Revised April 2021

These bibliographic references have been compiled as a TSOP project, and organic petrologists have found the references to be useful in their work. They should be available at university or geological research center libraries. They are not available from TSOP.

Argall, G.O., Jr., ed., 1979, Coal exploration, v. 2: San Francisco, Miller Freeman Publications, Inc., 560 p.

ASTM, 1992, Manual on drilling, sampling, and analysis of coal: American Society for Testing and Material Manual 11, 72 p.

Atalay, F., and A.E. Tercan, 2017, Coal resource estimation using Gaussian copula: International Journal of Coal Geology, v. 175, p. 1-9.

Beeley, T.J., J.C. Crelling, J.R. Gibbins, A.C. Scott, and J. Williamson, 1995, Observations of maceral and mineral heterogeneity in pulverised coals, in J.A. Pajares and J.M.D. Tascon, eds., Coal science: New York, Elsevier Coal Science and Technology 24, v. 1, p. 203-206.

Berggren, D., 1991, Measuring coal seam thicknesses with normal-lateral electric logs: Illinois State Geological Survey, Illinois Minerals 107, 26 p.

Berkowitz, N., 1979, An introduction to coal technology: New York, Academic Press, 345 p.

Bertoli, O., A. Paul, Z. Casley, and D. Dunn, 2013, Geostatistical drillhole spacing analysis for coal resource classification in the Bowen Basin, Queensland: International Journal of Coal Geology, v. 112, p. 107-113.

Bond, L.O., R.P. Alger, and A.W. Schmidt, 1986, Well log applications in coal mining and rock mechanics, in D.J. Buchanan and L.J. Jackson, eds., Coal geophysics: Tulsa, Society of Exploration Geophysicists, Geophysics Reprint Series 6, p. 28-35.

Buchanan, D.J., and L.J. Jackson, eds., 1986, Coal geophysics: Tulsa, Society of Exploration Geophysicists, Geophysics Reprint Series 6, 466 p.

Carter, M.D., N.K. Gardner, R.E. Sergeant, E.V.M. Campbell, and N. Fedorko, III, 1990, Coal availability studies—a progress report (abstract), in L.M.H. Carter, ed., USGS research on energy resources—1990 program and abstracts: U.S. Geological Survey Circular 1060, p. 13-14.

Cecil, C.B., and J.H. Medlin, 1987, Coal basin analysis and synthesis, in Coal exploration, evaluation and exploitation: ESCAP Series on Coal, v. 5, p. 33-36.

Cecil, C.B., R.W. Stanton, F.T. Dulong, and J.J. Renton, 1979, Geologic factors that control mineral matter in coal, in A.C. Donaldson, M.W. Presley, and J.J. Renton, eds., Carboniferous coal short course and guidebook: West Virginia Geological and Economic Survey, Bulletin B-37-3, p. 43-56.

Cobb, J.C., and C.B. Cecil, eds., 1993, Modern and ancient coal-forming environments: Geological Society of America Special Paper 286, 202 p.

Cornah, A., J. Vann, and I. Driver, 2013, Comparison of three geostatistical approaches to quantify the impact of drill spacing on resource confidence for a coal seam (with a case example from Moranbah North, Queensland, Australia): International Journal of Coal Geology, v. 112, p. 114-124.

De Souza, L.E., and J.F.C.L. Costa, 2013, Sample weighted variograms on the sequential indicator simulation of coal deposits: International Journal of Coal Geology, v. 112, p. 154-163.

Deutsch, C., and B.J. Wilde, 2013, Modeling multiple coal seams using signed distance functions and global kriging: International Journal of Coal Geology, v. 112, p. 87-93.

Dresen, L., and H. Rüter, 1994, Seismic coal exploration. Part B: in-seam seismics: New York, Pergamon Press, Handbook of Geophysical Exploration, section 1. Seismic Exploration, v. 16B, 433 p.

Dutcher, R. R., ed., 1978, Field description of coal: Philadelphia, American Society for Testing and Materials Special Technical Publication 661, 71 p.

East, J.A., 2013, Coal fields of the conterminous United States: National coal resource assessment updated version: U.S. Geological Survey, Open-File Report 2012-1205, one sheet. <http://pubs.usgs.gov/of/2012/1205/>

Eggleston, J.R., M.D. Carter, and J.C. Cobb, 1990, Coal resources available for development—a methodology and pilot study: U.S. Geological Survey Circular 1055, 15 p.

Ertunç, G., A.E. Tercan, M.A. Hindistan, B. Űnver, S. Űnal, F. Atalay, and S.Y. Killioğlu, 2013, Geostatistical estimation of coal quality variables by using covariance matching constrained kriging: International Journal of Coal Geology, v. 112, p. 14-25.

Falivene, O., L. Cabrera, and A. Sáez, 2007, Optimum and robust 3D facies interpolation strategies in a heterogeneous coal zone (Tertiary As Pontes Basin, NW Spain): International Journal of Coal Geology, v. 71, p. 185-208.

Friederich, M.C., and T. van Leeuwen, 2017, A review of the history of coal exploration, discovery and production in Indonesia: The interplay of legal framework, coal geology and exploration strategy: International Journal of Coal Geology, v. 178, p. 56-73.

Galloway, W. E., and Hobday, D. K., 1996, Terrigenous clastic depositional systems: Application to fossil fuel and groundwater resources, 2nd ed.: New York, Springer, 489 p.

Geboy, N.J., R.A. Olea, M.A. Engle, J.A. Martín-Fernández, 2013, Using simulated maps to interpret the geochemistry, formation and quality of the Blue Gem coal bed, Kentucky, USA: International Journal of Coal Geology, v. 112, p. 26-35.

Gluskoter, H.J., R.R. Ruch, W.G. Miller, R.A. Cahill, G.B. Dreher, and J.K. Kuhn, 1977, Trace elements in coal: occurrence and distribution: Illinois State Geological Survey Circular 499, 154 p.

Goulty, N.R., 1995, Review of borehole seismic methods developed for opencast coal exploration, in M.K.G. Whateley and D.A. Spears, eds., European coal geology: London, Geological Society Special Publication 82, p. 159-167.

Greb, S.F., 2013, Coal more than a resource: Critical data for understanding a variety of earth-science concepts: International Journal of Coal Geology, v. 118, p. 15-32.

Hacquebard, P. A., and Donaldson, J. R., 1969, Carboniferous coal deposition associated with floodplain and limnic environments in Nova Scotia: Geological Society of America Special Paper 114, p. 143-191.

Haigh and I.H. Edwards, 1982, Computer processing of geophysical logging data in coal deposits, in C.W. Mallett, ed., Coal resources: origin, exploration and utilization in Australia, Proceedings: Geological Society of Australia Coal Group, Symposium, p. 364-380.

Hancox, P.J., and A.E. Götz, 2014, South Africa’s coalfields—A 2014 perspective: International Journal of Coal Geology, v. 132, p. 170-254.

Haney, D.C., and J.C. Cobb, 1993, Coal-resource investigations for Kentucky: traditional versus coal-availability investigations: 12th International Congress of Stratigraphy and Geology of the Carboniferous and Permian, Comptes Rendus, v. 1, p. 231-238.

Harvey, R. D., and Dillon, J. W., 1985, Maceral distributions in Illinois coals and their paleoenvironmental implications: International Journal of Coal Geology, v. 5, p. 141-165.

Hatherly, P., T. Medhurst, and B. Zhou, 2016, Geotechnical evaluation of coal deposits based on the Geophysical Strata Rating: International Journal of Coal Geology, v. 163, p. 72-86.

Hatton, W., and A. Fardell, 2012, New discoveries of coal in Mozambique—Development of the coal resource estimation methodology for International Resource Reporting Standards: International Journal of Coal Geology, v. 89, p. 2-12.

Heriawan, M.N., and K. Koike, 2008, Identifying spatial heterogeneity of coal resource quality in a multilayer coal deposit by multivariate geostatistics: International Journal of Coal Geology, v. 73, p. 307-330.

Heriawan, M.N., and K. Koike, 2008, Uncertainty assessment of coal tonnage by spatial modeling of seam distribution and coal quality: International Journal of Coal Geology, v. 76, p. 217-226.

Heriawan, M.N., P. Pillayati, L.E. Widodo, and A.H. Widayat, 2020, Drill hole spacing optimization of non-stationary data for seam thickness and total sulfur: A case study of coal deposits at Balikpapan Formation, Kutai Basin, east Kalimantan: International Journal of Coal Geology, v. 223, 103466.

Herrin, J.M., and D. Deming, 1996, Thermal conductivity of U.S. coals: Journal of Geophysical Research, v. 101, no. B11, p. 25,381-25,386.

Hoffman, G.L., G.R. Jordan, and G.R. Wallis, 1982, Geophysical borehole logging handbook for coal exploration: Edmonton, Alberta, Canada, The Coal Mining Research Centre, 270 p.

Hohn, M.E., and J.Q. Britton, 2013, A geostatistical case study in West Virginia: All coals are not the same: International Journal of Coal Geology, v. 112, p. 125-133.

Hollub, V.A., and P.S. Schafer, 1992, A guide to coalbed methane operations: Gas Research Institute, 366 p. (chapter 3, wireline logging)

Höök, M., and K. Aleklett, 2010, Trends in U.S. recoverable coal supply estimates and future production outlooks: Natural Resources Research, v. 19, p. 189-208.

Horne, J.C., J.C. Ferm, F.T. Caruccio, and B.P. Baganz, 1978, Depositional models in coal exploration and mine planning in Appalachian region: AAPG Bulletin, v. 62, p. 2379-2411.

Hou, H., L. Shao, S. Guo, Z. Li, Z. Zhang, M. Yao, S. Zhao, and C. Yan, 2017, Evaluation and genetic analysis of coal structures in deep Jiaozuo coalfield, northern China: Investigation by geophysical logging data: Fuel, v. 209, p. 552-566.

Hulatt, E., 1990, Geophysical log interpretation and coal recognition in the subsurface, in S. Stuhec, compiler, Introduction to coal sampling techniques for the petroleum industry: Alberta Research Concil, Coal-bed methane Information Series 111, p. 51-112.

Jacobsen, R.J., C.G. Treworgy, C. Chenoweth, and M.H. Bargh, 1996, Availability of coal resources in Illinois: Mt. Carmel Quadrangle, southeastern Illinois: Illinois State Geological Survey, Illinois Minerals 114, 39 p.

Jamieson, E.D., 1993, Coal supply prospects in North America: London, IEA Coal Research, 93 p.

Jelsema, C., and R. Paul, 2013, Spatial mixed effects model for compositional data with applications to coal geology: International Journal of Coal Geology, v. 114, p. 33-43.

Jeuken, R., C. Xu, and P. Dowd, 2020, Improving coal quality estimations with geostatistics and geophysical logs: Natural Resources Research, v. 29, p. 2529-2546.

Johnston, D.J., 1990, Geochemical logs thoroughly evaluate coalbeds: Oil & Gas Journal, v. 88, no. 52, p. 45-51.

Johnston, D.J., 1991, Interpreting wireline measurements in coal beds (abstract): AAPG Bulletin, v. 75, p. 1129-1130.

Knight, J.L., B.J. Shevlin, D.C. Edgar, and P. Dolan, 1996, Coal thickness distributions on the UK continental shelf, in R. Gayer and I. Harris, eds., Coalbed methane and coal geology: London, Geological Society Special Publication 109, p. 43-57.

Li, J., D. Liu, Y. Yao, Y. Cai, and Y. Qiu, 2011, Evaluation of the reservoir permeability of anthracite coals by geophysical logging data: International Journal of Coal Geology, v. 87, p. 121-127.

Luppens, J.A.., D.C. Scott, L.M. Osmonson, J.E. Haacke, and P.E. Pierce, 2013, Assessment of coal geology, resources, and reserve base in the Powder River Basin, Wyoming and Montana: U.S. Geological Survey, Fact Sheet 2012-3143, 6 p.

Lyons, P. C., and C.L. Rice, eds., 1986, Paleoenvironmental and tectonic controls on coal-forming basins in the United States: Geological Society of America Special Paper 210, 200 p.

Marchioni, D. L., 1980, Petrography and depositional environment of the Liddell seam, Upper Hunter Valley, New South Wales: International Journal of Coal Petrology, v. 1, p. 35-61.

McCabe, P.J., 1984, Depositional environments of coal and coal-bearing strata, in R.A. Rahmani and R.M. Flores, eds., Sedimentology of coal and coal-bearing sequences: Boston, Blackwell Scientific Publications, International Association of Sedimentologists Special Publication 7, p. 13-42.

McCabe, P. J., 1987, Facies studies of coal and coal-bearing strata, in A.C. Scott, ed., Coal and coal-bearing strata: recent advances: Geological Society Special Publication 32, p.51-66.

McCabe, P.J., and J.T. Parrish, eds., 1992, Controls on the distribution and quality of Cretaceous coals: Geological Society of America Special Paper 267, 417 p.

Merritt, R.D., 1986, Coal exploration, mine planning, and development: Park Ridge, New Jersey, Noyes Publications, 464 p.

Milici, R.C., R.M. Flores, and G.D. Stricker, 2013, Coal resources, reserves and peak coal production in the United States: International Journal of Coal Geology, v. 113, p. 109-115.

Miller, M., J. Platt, J. Price, R. Schadelbaur, and S. Suboleski, eds., 1993, New perspectives on central Appalachian low-sulfur coal supplies: Fairfax, VA, Tech Books.

Miller, M.S., and M. Moore, 1980, Geophysical logging and exploration techniques in the Appalachian coal fields: Society of Petroleum Engineers of AIME, SPE 9466, 10 p.

Molayemat, H., F.M. Torab, V. Pawlowsky-Glahn, A.H. Morshedy, and J.J. Egozcue, 2018, The impact of the compositional nature of data on coal reserve evaluation, a case study in Parvadeh IV coal deposit, central Iran: International Journal of Coal Geology, v. 188, p. 94-111. (proximate analysis)

Moore, P.D., 1987, Ecological and hydrological aspects of peat formation, in A.C. Scott, ed., Coal and coal-bearing strata: recent advances: Geological Society Special Publication 32, p. 7-15.

Muir, W.L.G., ed., 1976, Coal exploration, v. 1: San Francisco, Miller Freeman Publications, Inc., 664 p.

Mullen, M.J., 1988, Log evaluation in wells drilled for coalbed methane, in J.E. Fassett, ed., Geology and coal-bed methane resources of the northern San Juan basin, Colorado and New Mexico: Denver, Rocky Mountain Association of Geologists, p. 113-124.

Olea, R.A., J.A. Luppens, and S.J. Tewalt, 2011, Methodology for quantifying uncertainty in coal assessments with an application to a Texas lignite deposit: International Journal of Coal Geology, v. 85, p. 78-90.

Olea, R.A., and J.A. Luppens, 2012, Sequential simulation approach to modeling of multi-seam coal deposits with an application to the assessment of a Louisiana lignite: Natural Resources Research, v. 21, p. 443-459.

Pardo-Igúzquiza, E., P.A. Dowd, J.M. Baltuille, and M. Chica-Olmo, 2013, Geostatistical modeling of a coal seam for resource risk assessment: International Journal of Coal Geology, v. 112, p. 134-140.

Peters, D.C., ed., 1991, Geology in coal resource utilization: Fairfax, VA, Techbooks, 581 p. (available from AAPG)

Peters, W. C., 1978, Exploration and Mining Geology: New York, John Wiley & Sons, 696 p.

Pierce, B.S., and K.O. Dennen, 2009, The National Coal Resource Assessment overview: U.S. Geological Survey Professional Paper 1625-F, 402 p. <http://pubs.usgs.gov/pp/1625f/>

Raju, M.V.B., and G.B. Misra, 1994, Undiscovered unit regional resources of Gondwana coals in India: International Journal of Coal Geology, v. 25, p. 133-144.

Rahmani, R.A., and R.M. Flores, eds., 1984, Sedimentology of coal and coal-bearing sequences: Boston, Blackwell Scientific Publications, International Association of Sedimentologists Special Publication 7, 412 p.

Ren, P., H. Xu, D. Tang, Y. Li, C. Sun, S. Tao, S. Li, F. Xin, and L. Cao, 2018, The identification of coal texture in different rank coal reservoirs by using geophysical logging data in northwest Guizhou, China: Investigation by principal component analysis: Fuel, v. 230, p. 258-265.

Rimmer, S. M., and A. Davis, 1988, Influence of depositional environments on coal petrographic composition in the Lower Kittanning seam, western Pennsylvania: Organic Geochemistry, v. 12, p. 375-387

Rodriguez, R., 1987, Characterization of coal seams by seismic methods: Lexington, KY, Institute for Mining and Minerals Research, IMMR86/107, 19 p.

Rohrbacher, T.J., D.D. Teeters, G.L. Sullivan, and L.M. Osmonson, 1993, Coal resource recoverability. A methodology: U.S. Bureau of Mines, Information Circular 9368, 48 p.

Rohrbacher, T.J., J.A. Luppens, L.M. Osmonson, D.C. Scott, and P.A. Freeman, 2005, An external peer review of the U.S. Geological Survey energy resource program’s economically recoverable coal resource assessment methodology—report and comments: U.S. Geological Survey Open-File Report 2005-1076, 21 p.

Roslin, A., and J.S. Esterle, 2015, Electrofacies analysis using high-resolution wireline geophysical data as a proxy for inertinite-rich coal distribution in Late Permian coal seams, Bowen Basin: International Journal of Coal Geology, v. 152, p. 10-18.

Ruppert, L.F., S.J. Tewalt, L.J. Bragg, and R.N. Wallack, 1999, A digital resource model of the Upper Pennsylvanian Pittsburgh coal bed, Monongahela Group, northern Appalachian basin coal region, USA: International Journal of Coal Geology, v. 41, p. 3-24.

Saikia, K., and B.C. Sarkar, 2013, Coal exploration modeling using geostatistics in Jharia coalfield, India: International Journal of Coal Geology, v. 112, p. 36-52.

Savinskii, I.D., 1965, Probability tables for locating elliptical underground masses with a rectangular grid (English translation): New York, Consultants Bureau, 110 p.

Scholes, P.L., and D. Johnston, 1993, Coalbed methane applications of wireline logs, in B.E. Law and D.D. Rice, eds., Hydrocarbons from coal: AAPG Studies in Geology 38, p. 287-302.

Schopf, J.M., 1960, Field description and sampling of coal beds: U.S. Geological Survey Bulletin 1111-B, 67 p.

Shi, J., L. Zeng, S. Dong, J. Wang, and Y. Zhang, 2020, Identification of coal structures using geophysical logging data in Qinshui Basin, China: Investigation by kernel Fisher discriminant analysis: International Journal of Coal Geology, v. 217, 103314.

Singer, D. A., and C.M. McCulloch, 1969, Probability tables for locating elliptical targets with square, rectangular, and hexagonal pointnets: Pennsylvania State Univ., Mineral Experimental Station, Special Publication 1-69, 100 p.

Spackman, W., 1989, Sample selection, in R. Klein and R. Wellek, eds., Sample selection, aging, and reactivity of coal: New York, John Wiley & Sons, p. 1-48.

Srivastava, R.M., 2013, Geostatistics: A toolkit for data analysis, spatial prediction and risk management in the coal industry: International Journal of Coal Geology, v. 112, p. 2-13.

Stach, E., M.-Th. Mackowsky, M. Teichmüller, G.H. Taylor, D. Chandra, and R. Teichmüller, 1982, Stach’s textbook of coal petrology (third revised and enlarged edition): Berlin Stuttgart, Gebrüder Borntraeger, 535 p.

Suau, J., 1981, Logging methods for coal exploration: Bulletin Des Centres De Recherchese Exploration-Production Elf-Aquitaine, v. 5, no. 2, p. 621-633.

Sutcu, E.C., 2012, Use of GIS to discover potential coalfields in Yatagan-Milas area in Turkey: International Journal of Coal Geology, v. 98, p. 95-109.

Teng, J., Y. Yao, D. Liu, and Y. Cai, 2015, Evaluation of coal texture distributions in the southern Qinshui basin, North China: Investigation by a multiple geophysical logging method: International Journal of Coal Geology, v. 140, p. 9-22.

Tercan, A.E., and B. Sohrabian, 2013, Multivariate geostatistical simulation of coal quality data by independent components: International Journal of Coal Geology, v. 112, p. 53-66.

Tercan, A.E., B. Űnver, M.A. Hindistan, G. Ertunç, F. Atalay, S. Űnal, and Y. Killioğlu, 2013, Seam modeling and resource estimation in the coalfields of western Anatolia: International Journal of Coal Geology, v. 112, p. 94-106.

Thomas, L., 1992, Handbook of practical coal geology: New York, John Wiley & Sons, 338 p.

Thomas, L., 2013, Coal geology (second edition): Hoboken, New Jersey, Wiley-Blackwell, 444 p. (Coal exploration and data collection, p. 151-184)

Treworgy, C.G., L.E. Bengal, and A.G. Dingwell, 1978, Reserves and resources of surface-minable coal in Illinois: Illinois State Geological Survey, Circular 504, 44 p.

Treworgy, C.G., G.K. Coats, and M. Bargh, 1994, Availability of coal resources for mining in Illinois: Middleton Quadrangle, central Illinois: Illinois State Geological Survey, Circular 554, 48 p.

Treworgy, C.G., C. Chenoweth, and M.H. Bargh, 1995, Availability of coal resources for mining in Illinois: Galatia Quadrangle, Saline County, southern Illinois: Illinois State Geological Survey, Illinois Minerals 113, 38 p.

Treworgy, C.G., C.A. Chenoweth, and M. Justice, 1996, Availability of coal resources for mining in Illinois: Atwater, Collinsville, and Nokomis Quadrangles, Christian, Macoupin, Madison, Montgomery, and St. Clair Counties: Illinois State Geological Survey, Open File Series OFS 1996-2, 33 p.

Treworgy, C.G., C.A. Chenoweth, and R.J. Jacobsen, 1996, Availability of coal resources for mining in Illinois: Newton and Princeville Quadrangles, Jasper, Peoria, and Stark Counties: Illinois State Geological Survey, Open File Series OFS 1996-3, 38 p.

Trumbull, J.V.A., 1960, Coal fields of the United States (sheet 1): U.S. Geological Survey map, scale 1:5,000,000.

Tully, J., compiler, 1996, Coal fields of the conterminous United States: U.S. Geological Survey Open-File Report 96-92, one sheet, scale 1:5,000,000. <http://pubs.usgs.gov/of/1996/of96-092/index.htm>

USGS, 1976, Coal resource classification system of the U.S. Bureau of Mines and U.S. Geological Survey: USGS Bulletin 1450-B, 7 p.

Van Krevelen, D.W., 1981, Coal: typology, chemistry, physics, and constitution: New York, Elsevier Scientific Publishing Company, Coal Science and Technology v. 3, 514 p.

Vorres, K. S., 1986, Mineral matter and ash in coal: American Chemical Society Symposium Series 301, 557 p.

Wang, Y.J., R.L. Grayson, and R.L. Sanford, eds., 1986, Use of computers in the coal industry: Boston, A.A. Balkema, 331 p.

Watson, W.D., L.F. Ruppert, S.J. Tewalt, and L.J. Bragg, 2001, The Upper Pennsylvanian Pittsburgh coal bed: resources and mine models: Natural Resources Research, v. 10, p. 21-34.

Webber, T., J. felipe Coimbra Leite Costa, and P. Salvadoretti, 2013, Using borehole geophysical data as soft information in indicator kriging for coal quality estimation: International Journal of Coal Geology, v. 112, p. 67-75.

Weber, M., 1982, Well-log geophysics for coal measures, in C.W. Mallett, ed., Coal resources: origin, exploration, and utilization in Australia, Proceedings: Geological Society of Australia Coal Group, Symposium, p. 354-363.

Wood, G.H., J. Kehn, T.M. Carter, and W.C. Culberston, 1983, Coal resources classification system of the U.S. Geological Survey: U.S. Geological Survey Circular 891, 65 p.

Xu, H., D. Tang, J.P Mathews, J. Zhao, B. Li, S. Tao, and S. Li, 2016, Evaluation of coal macrolithotypes distribution by geophysical logging data in the Hancheng Block, eastern margin, Ordos Basin, China: International Journal of Coal Geology, v. 165, p. 265-277.

Zhou, B., and G. O’Brien, 2016, Improving coal quality estimation through multiple geophysical log analysis: International Journal of Coal Geology, v. 167, p. 75-92.