References

- [1] Sanders, D. and Brown, K., "A Standardised Approach to the Evaluation of Hard Coal Deposits Using Borehole Techniques," in *Coal Exploration 3*, Proceedings of Third International Coal Exploration Symposium, Calgary, Canada, 1981.
- [2] Standard Association of Australia, "Guide to the Evaluation of Hard Coal Deposits Using Borehole Techniques," AS 2519-1982, Standards Association of Australia, 58 pp.
- [3] O'Rourke, J. E. and O'Connor, K., "Core Recovery of Soft or Poorly Consolidated Materials," in *Proceedings*, 1985 Conference on Coal Mine Subsidence in the Rocky Mountain Region, J. L. Hynes, Ed., Golorado Geological Survey, 1986.
- [4] Chugh, C. P., Manual of Drilling Technology, A. A. Balkema, Rotterdam, The Netherlands, 1985.
- [5] Whittaker, A., Ed., *Field Geologist's Training Guide*, International Human Resources Development Corporation, Boston, 1985.
- [6] Acker, W. L., III, Basic Procedures for Soil Sampling and Core Drilling, Library of Congress CCN 74-78909, Acker Drill Co., Inc., Scranton, Pa., 1974.
- [7] Landua, H. L., "Coring Techniques and Applications," in Subsurface Geology, L. W. LeRoy, D. O. LeRoy., and J. W. Raese, Eds., Colorado School of Mines, Golden, Colo., 1977, pp. 385– 388.
- [8] Gupta, B. S., Chilingarian, G. V., and Vorabutr, P., "Lost Circulation," in *Drilling and Drilling Fluids*, G. V. Chilingarian and P. Vorabutr, Eds., Elsevier, Amsterdam, The Netherlands, 1981, pp. 545-546.
- [9] Whitworth, B. J., "Rock Bits," in Subsurface Geology, L. W. LeRoy, D. O. LeRoy., and J. W. Raese, Eds., Colorado School of Mines, Golden, Colo., 1977, pp. 379–384.
- [10] Sutter, H. F., "Drilling Fluid Chemistry," in Subsurface Geology, L. W. LeRoy, D. O. LeRoy., and J. W. Raese, Eds., Colorado School of Mines, Golden, Colo., 1977, pp. 355–359.
- [11] Cumming, J. D., *Diamond Drill Handbook*, J. K. Smit and Sons of Canada, Toronto, Ontario, 1981.
- [12] Chilingarian, G. V. and Vorabutr, P., "Basic Concepts of Drilling and Drilling-Fluid Technology," in *Drilling and Drilling Fluids*, G. V. Chilingarian and P. Vorabutr, Eds., Elsevier, Ansterdam, The Netherlands, 1981.
- [13] McDermott, J. P., Drilling Mud and Fluid Additives, Noyes Data Corporation, Park Ridge, N.J., 300 pp.
- [14] Gray, G. R., Darly, H. C. H., and Rogers, W. F., Composition and Properties of Oil Well Drilling Fluids, Gulf Publishing Company, Houston, Tex., 1980, 630 pp.
- [15] Tschirley, N. K., "Teting of Drilling Fluids," Drilling and Drilling Fluids in Petroleum Science, G. V. Chilingarian and Vorabutr, Eds., 1981, pp. 121-168.
 [16] Crowder, R. E., "Cost-Effectiveness of Drill Hole Geophysical
- [16] Crowder, R. E., "Cost-Effectiveness of Drill Hole Geophysical Logging for Coal Exploration," in *Coal Exploration 3*, Proceedings of Third International Coal Exploration Symposium, Calgary, Canada, 1981.
- [17] Moore, C. A., Handbook of Subsurface Geology, Harper and Row, New York, 1963.
- [18] Bond, L. O., Alger, R. P., and Schmidt, A. W., in Well Log Applications in Coal Mining and Rock Mechanics, Annual Meeting of Society of Mining Engineers of AIME, Washington, D.C., 1969.

- [19] Reeves, D. R., "In-Situ Analysis of Coal by Borehole Logging Techniques," CIM Transactions, Vol. 74, 1971, pp. 61-69.
- [20] Cummins, A. et al., SME-Mining Engineering Handbook, American Institute of Mining, Metallurgical, and Petroleum Engineers, Society of Mining Engineers, Vol. 1, Chapter 6, 1973.
- [21] Kowalski, J. J. and Holter, M. E., "Coal Analysis from Well Logs," Special AIME Paper No.5503, 50th Annual Fall Meeting of SPE or AIME, Dallas, Tex., 1974.
- [22] Hallenburg, J., Logging Operator's Manual, Century Geophysical Corporation, Tulsa, Okla., 1975.
- [23] Lavers, B. A. and Smits, L. J. M., "Recent Developments in Coal Petro-Physics," in *Coal Exploration*, L. L. William, Ed., Proceedings of the First International Coal Exploration Symposium, London, England, 1976, pp. 129-152.
- [24] Hallenburg, J., "Faulty Logs," Century Geophysical Corporation, Tulsa, Okla., 1977.
- [25] Kowalski, J. J. and Fertl, W. H., "Application of Geophysical Well Logging to Coal Mining Operations," *Energy Sources*, Vol. 3, No. 2, April 1977, pp. 133–147.
- [26] Pickett, G. R., "Resistivity, Radioactivity, and Acoustic Logs," in Subsurface Geology, L. W. LeRoy, D. O. LeRoy, and J. W. Raese, Eds. Colorado School of Mines, Golden, Colo., 1977.
- [27] Hallenburg, J., "On-Site Computer Analysis of Coal Logs," in *Coal Exploration*, Denver, Colo., 1978, pp. 526–534.
- [28] Reeves, D. R., "Some Improvements and Developments in Coal Wireline Logging Techniques," in *Coal Exploration*, Vol. 2, Miller Freeman, San Francisco, Calif., 1978, pp. 468–489.
- [29] Fischel, K. W. and Mayer, R., "Extremely High Resolution Density Coal Logging Techniques," in *Coal Exploration*, Vol. 2, Miller Freeman, San Francisco, Calif., 1978, pp. 490-504.
- [30] McNulty, J. E., "Geophysical Logging of Coal: A Progress Report," in *Proceedings*, 9th International Congress of Carboniferous Stratigraphy and Geology, Urbana, Ill., 1979, 35 pp.
- [31] Miller, M. S. and Moore, M., "Geophysical Logging and Exploration Techniques," in *Proceedings*, 55th Annual Fall Technical Conference and Exhibition of the Society of Petroleum Engineers of AIME, Dallas, Tex., [SPE 9466], 1980, 10 pp.
- [32] Norris, J. and Thomas, R., "An In-Situ Coal Quality Prediction Technique," in *Proceedings*, 55th Annual Fall Technical Conference and Exhibition of the Society of Petroleum Engineers of AIME, Dallas, Tex., [SPE 9467], 1980, 9 pp.
- [33] BPB Instruments Limited, Logging Workshop Manual, Pittsburgh, Pa., 1981.
- [34] Groves, B. and Brown, E., "The Application of Geophysical Borehole Logging to Coal Exploration," Australian Coal Geology, Vol. 3, Part 1, 1981, pp. 51–58.
- [35] Renwick, R. I., "The Uses and Benefits of Down-hole Geophysical Logging in Coal Exploration Programs," Australian Coal Geology, Vol. 3, Part 1, 1981, pp. 37-50.
- [36] Vaninetti, J. and Thompson, R. M., "Geophysical Well-logging and Related Subsurface Data Useful in Coal Exploration and Development Programs," American Association of Petroleum Geology, 1982, 34 pp.
- [37] Luppens, J. A., Moster, N. H., Allcock, J. B., and Beckman, S. W., "Improved Techniques for Modeling Coal Quality Variations in a Texas Lignite Deposit: Implications for Mine Plan-

ning and Utilization," Coal Technology, 1984 Proceedings, Vol. 5, 1984, pp. 301-325.

- [38] Labo, J., A Practical Introduction to Borehole Geophysics, Society of Exploration Geophysicists, 1987.
- [39] Daniels, J. J. and Scott, J. H., "Computer-Associated Interpretation of Geophysical Well Logs in a Coal Depositional Environment," Illinois Basin, Kentucky, U.S. Geological Survey Bulletin, 1509, 44 pp.
- [40] Hobbs, R. G., "Guidelines for Logging, Describing and Sampling Cores and Cuttings of Coal and Associated Rocks at the Drill Site," USGS Open-File Report 79-1522, United States Department of the Interior—Geological Survey, 1979.
- [41] Stanton, R. W., "Sampling of Coal Beds for Analysis," in *Methods for Sampling and Inorganic Analysis of Coal*, D. W. Golightly and F. O. Simon, Eds., U.S. Geological Survey Bulletin 1823, 1989.
- [42] Schopf, J. M., "Field Description and Sampling of Coal Beds," U.S. Geological Survey Bulletin 1111-B, 1960, 67 pp.
- [43] Dutcher, R. R., Ed., Field Description of Coal, ASTM STP 661, American Society for Testing Materials, Philadelphia, 1978.
- [44] Ferm, J. C. and Weisenfluh, G. A., Cored Rocks of the Southern Appalachian Coalfields, University of Kentucky, Lexington, 1977, 109 pp.
- [45] Ferm, J. C. and Smith, G. C., A Guide to Cored Rocks in the Pittsburgh Basin, University of Kentucky, Lexington, 1980, 109 pp.
- [46] Ferm, J. C., Smith, G. C., Weisenfluh, G. A., and Dubois, S. B., Cored Rocks in the Rocky Mountain and High Plains Coalfields, University of Kentucky, Lexington, 1985, 90 pp.
- [47] Rees, O. W., Illinois Geological Survey, Report of Investigations No. 220, 1966.
- [48] Damberger, H. H., Harvey, R. D., Ruch, R. R., and Thomas, J. T., in *The Science and Technology of Coal and Coal Utilization*, B. R. Cooper and W. A. Ellison, Eds., Plenum Press, New York, 1984, pp. 7–45.
- [49] Svenson, D. and Miller, R. W., in *Proceedings*, Second International Coal Exploration Symposium, Vol. 2, 1979, pp. 372– 411.

- [50] Yurovskii, A. Z., *Sulfur in Coals*, Indian National Scientific Documentation Center, Delhi, 1974.
- [51] Weir, C. E. in *Proceedings*, First International Coal Exploration Symposium, Vol. 1, 1976, pp. 540–564.
- [52] "Clean Coal Technology: The New Coal Era," U.S. Department of Energy, Nov. 1989, 38 pp.
- [53] Wallis, G. R., in *Proceedings*, Second International Coal Exploration Symposium, Vol. 2, 1979, pp. 104–130.
- [54] Schopf, J. M., "Further Suggestions about Coal Descriptions in the Field," in *Field Description of Coal, ASTM STP 661*, R. R. Dutcher, Ed., American Society for Testing and Materials, Philadelphia, 1978, pp. 3–8.
- [55] Cameron, A. R., "Megascopic Description of Coal with Particular Reference to Seams in Southern Illinois," in *Field Description of Coal, ASTM STP 661*, R. R. Dutcher, Ed., American Society for Testing and Materials, Philadelphia, 1978, pp. 9– 32.
- [56] Goscinski, J. S., Robinson, J. W., and Chun, D., "Megascopic Description of Coal Drill Cores," in *Field Description of Coal*, *ASTM STP 661*, R. R. Dutcher, Ed., American Society for Testing and Materials, Philadelphia, 1978, pp. 50–57.
- [57] Chao, E. T. C, Minkin, J. A., and Thompson, C. L., "Recommended Procedures and Methodology of Coal Description," U.S. Geological Survey Circular No. 894, 31 pp.
- [58] Nelson, A., Dictionary of Mining, Philosophical Library, New York, 1965, p. 523.
- [59] Taylor, W. H., Concrete Technology and Practice, American Elsevier Publishing Co., New York, 1965, p. 639.
- [60] Dodd, A. E., Dictionary of Ceramics: Pottery, Glass, Vitreous Enamels, Refractories, Clay Building Materials, Cement and Concrete, Electro-Ceramics, and Special Ceramics, Philosophical Library, New York, 1964, p. 327.
- [61] Diamond, W. P. and Levine, J. R., "Direct Method Determination of the Gas Content of Coal: Procedures and Results," U.S. Bureau of Mines, Report of Investigations No. 8515, 1981.
- [62] Luppens, J. A., "The Equilibrium Moisture Problem," Journal of Coal Quality, Vol. 7, No. 2, 1988, pp. 39–44.