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CONTRIBUTIONS TO ECONOMIC GEOLOGY

(SHORT PAPERS AND PRELIMINARY REPORTS)

1909

PART II.—MINERAL FUELS

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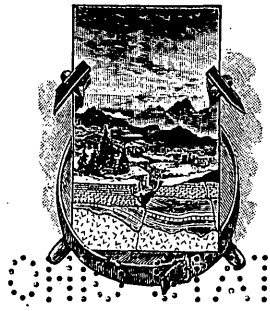
GEOLOGIST IN CHARGE



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PART II. MINERAL FUELS.

MARIUS R. CAMPBELL, *Geologist in charge.*

INTRODUCTION.

It has been the Geological Survey's custom at the end of each field season to prepare brief preliminary statements of the results obtained in the areas examined during the year. The annual volume containing papers of this kind treating of mineral fuels bears the title "Contributions to economic geology, Part II." The present volume is the fourth of the series in which the papers treating of mineral fuels have been separated from those pertaining to other subjects. These volumes are Bulletins 316, 341, 381, and 431.

The previous bulletins of this character have contained brief descriptions of all work accomplished during the preceding season, and consequently they serve as indices of the progress made in this particular branch of the Survey work. During the season of 1909 the field work was much more accurately done than heretofore, and this in turn increased the office work in the classification of the coal and oil lands and the valuation of the coal lands, as is now required by departmental regulations. The preparation of reports on all the areas examined during the season was impossible without interfering seriously with plans for the next field season. The present volume therefore contains only such papers as could be prepared without conflict with other work, and the report as a whole gives no indication of the number of fields examined or the amount of work accomplished during the year.

The following is a list of coal and oil fields that were examined during the year 1909 concerning which reports of one kind or another are being prepared for publication:

1. Standing Rock and Cheyenne River Indian reservations, in North and South Dakota; surveyed by William H. Calvert, Albert L. Beekly, Max A. Pishel, and Victor H. Barnett.

2. Smith River or Hound Creek coal field, in Cascade County, Mont.; surveyed by William H. Calvert and Victor H. Barnett.

3. Milk River coal field, south of Chouteau, Chouteau County, Mont.; surveyed by Leon J. Pepperberg.

4. Powder River coal field, near Kaycee, Johnson County, Wyo.; and Salt Creek oil field, in Natrona and Johnson counties, Wyo.; surveyed by Carroll H. Wegemann.

5. Wind River Basin coal fields and Lander oil field, in Fremont and Natrona counties, Wyo.; surveyed by Elmer G. Woodruff and Dean E. Winchester.

6. Yampa coal field, south of Craig, Routt County, Colo.; surveyed by John A. Davis.

7. Newcastle coal field, south of Grand River, Garfield and Pitkin counties, Colo.; surveyed by Albert L. Beekly.

8. Crested Butte coal field, Gunnison County, Colo.; surveyed by Willis T. Lee.

9. Survey of certain quadrangles in the coal field of Illinois, in cooperation with the Geological Survey of that State. The preliminary results of this work will be published by the State in its annual yearbook.

In this bulletin a slight change has been made in the form in which coal analyses are presented. Heretofore both proximate and ultimate analyses have been reported to the second decimal place and the calorimetric determinations to the nearest unit. As a rule this implies an accuracy which does not exist, and consequently after a conference with the chemists it was decided to give all percentages in the proximate analysis to one decimal place only. The percentages in the ultimate analysis are much more accurately determined, and therefore they remain as heretofore. In calorimetric determinations the British thermal units are not regarded as correct within 10 units, hence they are given to the nearest tens; the calories, being approximately of twice the value of the British thermal units, are given to the nearest 5 units.