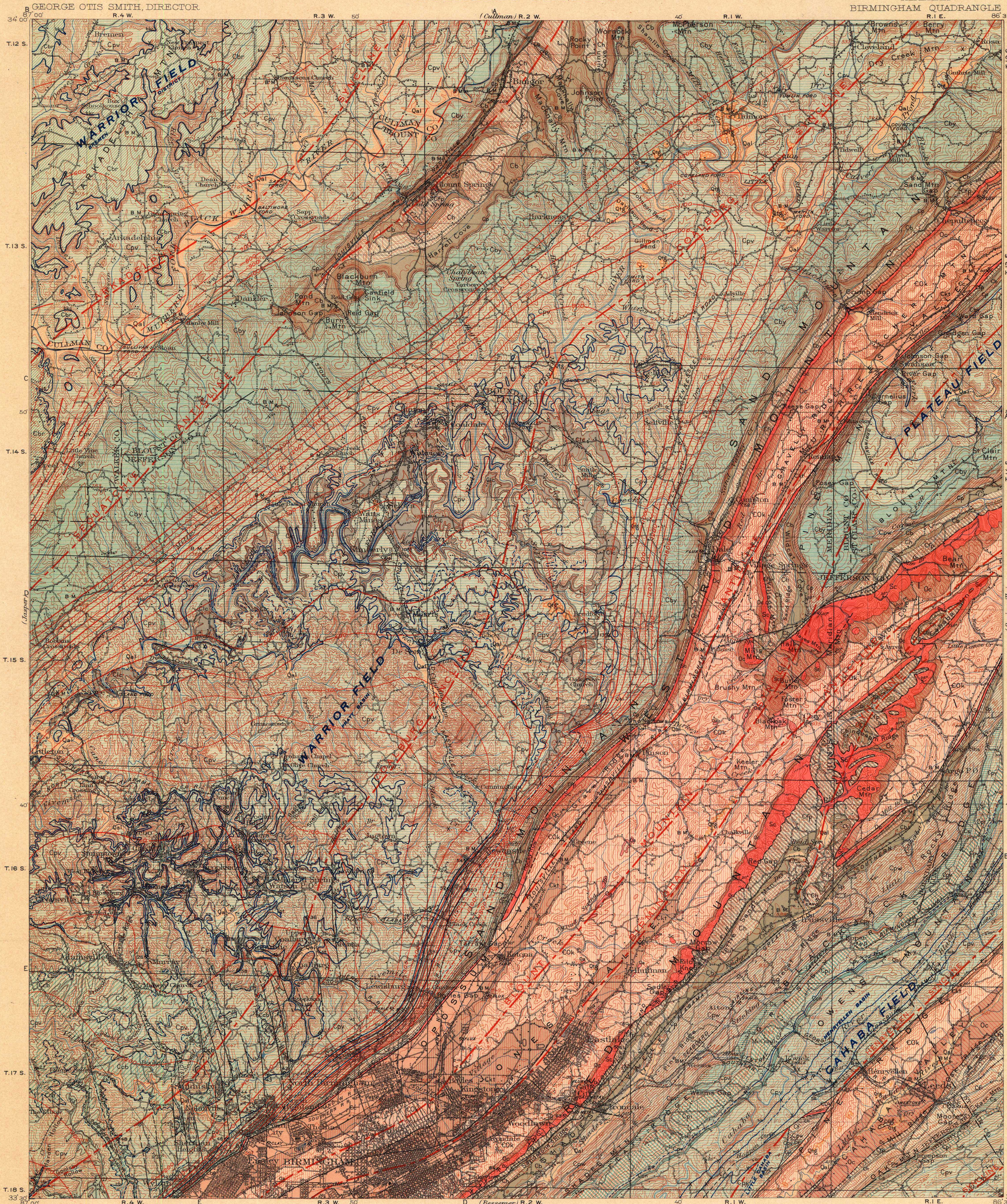
ECONOMIC GEOLOGY

U.S. GEOLOGICAL SURVEY
GEORGE OTIS SMITH, DIRECTOR

ALABAMA
BIRMINGHAM QUADRANGLE



LEGEND

SEDIMENTARY ROCKS

(Areas of subaqueous deposits are shown by patterns of parallel lines, subaerial deposits by patterns of dots and circles)

QUATERNARY

Recent

Qal — Alluvium
(flood plain deposits of present streams)

Pleistocene

Qtg — Terrace gravels
(gravel and sand of probable Pleistocene age on terraces or hills 100 to 300 feet above present streams)

CARBONIFEROUS

Pennsylvanian

Cpv, Cbc, Cby, Cb, Cc, Ccb, Clc, Cpv, Ccn, Cpi, Cs — Pottsville formation
(sandstone, shale, and coal beds, and Shades, Ce, Boyles, Cby, Pine, Cpi, Chestnut, Ccn, Bremen, Cbr, Lick Creek, Clc, Camp Branch, Ccb, and Razbury, Cr, sandstone members)

Cpw — Parkwood formation
(gray shale and sandstone)

Cp — Pennington shale
(gray, green, red, and black shale, some sandstone, conglomerate, and chert)

Mississippian

Cf, Ch — Floyd shale
(black carbonaceous shale, greenish and gray shale, and thin Hartselle sandstone member, Ch)

Cb, Ch — Bangor limestone
(thick-bedded gray crystalline limestone with Hartselle sandstone member, Ch, and a little shale and chert)

Cfp — Fort Payne chert
(chert and limestone)

DEVONIAN

Dc — Chattanooga shale and Frog Mountain sandstone
(black shale and sandstone below, too thin to separate on map)

SILURIAN

Sc — Clinton (Rockwood) formation
(shale and sandstone with beds of iron ore)

ORDOVICIAN

Oc, Oa — Chickamauga ("Pelham") limestone
(thick to thin-bedded, dove and blue fossiliferous limestone; Attalla conglomerate member, Oa, chiefly chert pebbles, locally at base)

CAMBRIAN

€Ok, €kt — Knox dolomite
(heavy bedded cherty dolomite with chert-free Ketona dolomite member, €kt, at base)

€c — Conasauga ("Coosa") limestone
(thin-bedded blue limestone with shale and some chert)

€r — Rome ("Montevallo") formation
(variegated shale with some limestone and sandstone)

ECONOMIC AND STRUCTURE DATA

Iron ore
(Clinton formation contains workable beds of hematite)

Coal outcrops
(dashed lines indicate uncertainty as to position or thickness of beds)

WARRIOR COAL FIELD
- cb, *Cobb coal*
- pt, *Pratt coal*
- np, *Nickel Plate coal*
- nc, *Newcastle coal*
- ml, *Mary Lee coal*
- bc, *Blue Creek coal*
- jg, *Jagger coal*
- js, *Jefferson coal*
- bkc, *Black Creek coal*

CAHABA COAL FIELD
- mh, *Mammoth coal*
- wd, *Wadsworth coal*
- hk, *Harkness coal*
- gd, *Gould coal*

PLATEAU COAL FIELD
- rs, *Rosa coal*

Structure contours on the top of the Mary Lee coal
(contour interval 100 feet, datum plane, sea level)

Structure contours on the top of the Black Creek coal
(contour interval 100 feet; datum plane, sea level)

- *Coal mines, unless otherwise specified*
- *Iron ore mines*
- *Coal prospects and county banks*
- *Iron ore prospects*
- *Bore holes*

Mine names, represented on the map by numbers, are printed on the back of this sheet.

Strike and dip of stratified rocks
Strike of vertical beds

Faults

H. M. Wilson, Geographer.
H. B. Blair, in charge of section.
Topography by H. B. Blair, Oscar Jones, and C. D. S. Clarkson.
Assistants, R. L. Harrison and Carroll Caldwell.
Control by Coast and Geodetic Survey, Oscar Jones, and C. B. Kendall.
Surveyed in 1904-1905.

Geology by Charles Butts, assisted by E. F. Burchard, C. W. Washburne, E. M. Dawson, and William F. Prouty.
Surveyed in 1905-6.

Scale 1/125000
1 ½ 0 1 2 3 4 5 Miles
1 ½ 0 1 2 3 4 5 Kilometers

Contour interval 50 feet.
Datum is mean sea level.

DIAGRAM OF TOWNSHIP

6	5	4	3	2	1	
7	8	9	10	11	12	
18	17	16	15	14	13	
19	20	21	22	23	24	
30	29	28	27	26	25	
31	32	33	34	35	36	

TRUE NORTH
MAGNETIC NORTH 9°
APPROXIMATE MEAN DECLINATION 1905.

Edition of Apr. 1910.