

U.S. GEOLOGICAL SURVEY
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ECONOMIC GEOLOGY SHEET

COLORADO
(LAS ANIMAS CO.)
ELMORO QUADRANGLE

LEGEND

SEDIMENTARY ROCKS

(Areas of Sedimentary rocks are shown by patterns of parallel lines.)

Nn

Nussbaum formation
(sand and gravel in part cemented into conglomerate)

Kl

Laramie formation
(gray sandstone and shale containing coal beds)

Ktd

Tinidat formation
(gray sandstone with shaly beds in the lower portion; probably represents the upper part of the Fort Hills series)

Kp

Pierre shale
(argillaceous shale with calcareous concretions)

Ka

Apishapa formation
(chiefly calcareous arenaceous shale and somewhat bituminous)

Kt

Timpas formation
(calcareous shale and pale-gray limestone)

Kcr

Carlile shale
(argillaceous shale with large septarian concretions in the upper beds)

Kgn

Greenhorn limestone
(alternating beds of dove-colored limestone and shale)

Kgs

Graneros shale
(argillaceous shale with large concretions)

Kd

Dakota sandstone
(gray sandstone with thin shale partings and a bed of fine clay)

IGNEOUS ROCKS

(Areas of igneous rocks are shown by patterns of triangles and rhombs.)

Nb

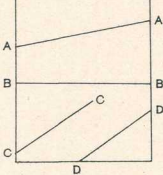
Extrusive basalt
(lava flows)

Nib

Intrusive basalt
(plugs, sheets, dikes and irregular bodies)

Earlier intrusives -
(dikes and sheets of early lamprophyre, diorite and later lamprophyre, etc.)

Sections



Coal mines

Known productive formations

Kl

Coal
(in the Laramie formation, extensively mined for making coke)

Fire clay

(in the Dakota sandstone)

NEOCENE ?

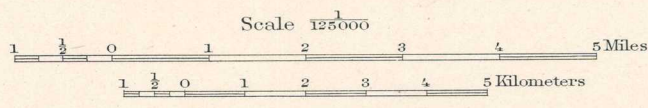
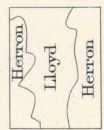
CRETACEOUS

NEOCENE

Eocene ?



Henry Gannett, Chief Topographer.
E.M. Douglas, Topographer in charge.
Triangulation by A.H. Thompson.
Topography by W.H. Herron and W.J. Lloyd.
Surveyed in 1895.



Contour interval 50 feet.
Datum is mean sea level.
Edition of July 1899.

Geology by R.C. Hills.
Surveyed in 1896.