FIELD NOTES

Illinois State Geological Survey

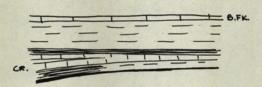
March 24, 1940 1133. a4

About 200 yards east of Sec. 3. Strata dip gradually east - at this place the distance from the top of #6 to Jamestown coal not more than 3. The coal has ½"-1" of clay below it and the cap rock comes it. Cap rock very impure, carbonaceous - slabby - but cannot be more than 2 thick and - possibly less.

The Bk Fk limestone is 9 to 10° above in normal succession - no limestone exposed above Jamestown coal

here.

Can follow Jamestown coal along bank here and there for entire 200 yards.



Coal rests on coal bed. No white top or bastard limestone in pit - - Notices some coal balls - along road.

		h g
		f e d
By G.H. Cady	Date 1940	c b
Quadrangle_ New Athens		87654321
County St. Clair	Sec. 33	T 1S R 7W

FIELD NOTES Illinois State Geological Survey

1133.4a
March 24, 1946
United Electric Coal Co. Red Ray pit near
Freeburg

The section of Coal Measure exposed in the pit extends from base of Herrin (No.6) coal bed to the Cutler limestone. The complete thickness of Cutler not exposed at this time. The pit wall extends about E-W along slope to creek and in direction of dip of beds. The dip is not regular but in a series of steps in which coal dips about 30' so that bed falls off suddenly more than its full thickness. From the east end of pit to the west end I would say that the coal declines close to 40-50 feet. The surface declines in the same direction so that stripping can continue. How the large shovel negotiated the steep dips is difficult to imagine.

The Herrin limestone along the present stripping face exposed for about ½ mile varies in thickness from less than 3' to over 10'. The rock is an earthy argillaceous black limestone, fairly pure toward bottom but becomes increasingly argillaceous upward.

(cont. on next page)

By G.H.Cady

Date 1946

Quadrangle New Athens

Sec. 33

T 1S R 7W

Triginal: G.M. Cacy et al. #622

FIELD NOTES

Illinois State Geological Survey

p.2

1133.4a (continued from preceding page)

Where it is 5' or more thick the upper part is almost a calcareous shale. The thickness of the limestone appears to vary as the surface of the coal rises or falls away. In one place where the surface rolled downstream several feet - a corresponding thickness was added to the limestone.

The Jamestown coal extends the entire length of the pit wall lying a few inches above the Herrin limestone - or calcareous shale apparently representing a more impure phase of the Herrin limestone. Underclay, 3 or 4" thick is present locally; in places a lense of compact, fine-grained, fire clay limestone underlies the coal. In one place such a limestone was 6-8" thick, in other places 1" to 2". It's commonly absent and coal may rest on underclay (3"-4") or on the black calcareous shale or argillaceous limestone of the Herrin limestone member.

The Jamestown coal commonly has a thin hard base of earthy brownish gray limestone above it. Elsewhere this may be absent, and the coal (or limestone where present) be overlain by gray, poorly laminated shale probably fossiliferous and calcareous but not certain. In other places this bed contains enough lime to be hard and forms ? a limestone ledge.

	continued on nex		h h
By G.H.Cac	dy	Date 1946	e d c
Quadrangle_	New Athens		87654321
			10 mil

Sec. 33 T 15 R/W

FIELD NOTES Illinois State Geological Survey

p.3
1133.4a (continued from preceding page)

It maintains great uniformity in thickness, lithology, and position in the pit. Its distance from the top of the coal bed varies mainly because of the variable thickness of the Herrin limestone. It is 8-10 feet above the Jamestown coal which later may be 3 to 10 feet or more above the No.6 coal bed.

Section - Bankston Fork to Cutler (a) Galum limestone: the Galum limestone is a freshwater limestone in the Cutler formation. In this exposure it lies 20" to 30" above the Bankston Fork limestone - alight greenish gray calcareous somewhat nodular shale intervening. The Galum limestone lies in two benches, the lower 18", the upper 12"+ thick with 4" light gray shale intervening, like that below lower bench. The limestone is earthy massive, somewhat nodular weak, making rather poorly defined ledges in outcrops. It's an earthy freshwater type of limestone. Found no fossils - probably few if any present. (b) Pipestone ? Shales. These are variegated shales and clays underlying the Cutler limestone at this place. There is no coal present. The interval to the Galum limestone is about 15'. the lower part consists of greenish more or less mottled red shale - fine, fairly well laminated. The upper half or one third consists of underclay like shale. (continued on next page)

By G.H.Cady Date 1946
Quadrangle New Athens 8 7 6 5 4 3 2 1

County St. Clair Sec. 33 T 1S R 7W

FIELD NOTES

Illinois State Geological Survey

p.4 1133.4a (contined from preceding page)

The Jamestown limestone appears to be represented by a fairly continuous earthy dark to light gray limestone 5" to 10"± thick. Locally this may combine with the underlying bed whereby limestone to form a ledge 203' thick above the Jamestown coal bed.

Beds between Jamestown limestone and Bankston Fork limestone

In this interval which is practically uniform at 9-10 feet above the Jamestown coal, and 6-7 above Jamestown limestone. The strata consist of dark carbonaceous shale at base, thin bedded rather soft, black, with rather numerous limestone concretions - elliptical in outline; at top is about same thickness (3-4) of green shale mottled black in lower foot or so and grayish green at top. This is probably calcareous near top and fossiliferous but did not examine carefully. Upon this shale rests the Bankston Fork limestone.

The Bankston Fork limestone except for a thin layer of nodular limestone 2-4" thick and a thin layer of light gr. shale between the nodular limestone and the main ledge - a single ledge of white fine-grained, dense, compact and apparently pure limestone about 15 to 18" thick.

(continued on nest page)

By G.H.Cady Date

Quadrangle New Athens

8 7 6 5 4 3 2 1

County St.Clair Sec. 33

o. d. Lady e

1S R

7W

FIELD NOTES Illinois State Geological Survey

p.5
1133.4a (continued from preceding page)

Much weathered with some nodular material has yellowish and white color. No coal bed in evidence below Cutler.

Cutler Limestone

This is a much weathered limestone that appears very white in isolated masses of corroded rock immediately beneath the drift - no continuous ledge. Probably only base remains. Thickest about 3. Limestone pure fossiliferous dense texture grayish. Like the coal it slopes toward the east and is apparently the limestone outcropping along the creek on road Freeburg - New Athens.

