



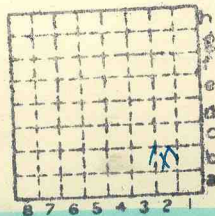
Form 180

STAR CC.  
Stew CC

R - F

HERRIN

238



Sec. 30

T.	1	N.
		S.
R.	7	E.
		W.

Index No.

Mine Index 3568



Town, **Freeburg**  
Local Authority, **Clyde Kurtz, Mine Mgr**  
**David Archibald, Pres.**  
Level: Auth., **Cady**

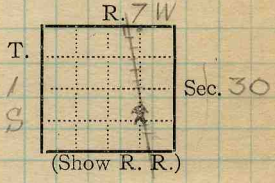
Surface alt., **500** ft.  
Depth to coal, **77** ft.  
Alt. top coal, **423** ft.  
Thickness: Av. **88** in.  
Max. **80** in., Min. **124** in.

Method, **Estimated from top.**

map

R. R., **I.C.**

Location: authority, **Cady; See topographic map,**



Operator

Mine Name or No.

19 **Star Coal Co**

**Star**

Successor to

Date

Succeeded by

Date

Succeeded by

Date

**PRODUCTION.**

								U. S. No.
19	About 900 tons; 126 miners							

Geol. Notes? **Yes**

Coop. No.

Coal secs? **Yes**

Analyses No.

**GEN'L COAL REPT.**

Examined by **Cady Sept 6, 1918**

Ref. **238**

Coal bed name: Local

Survey No. **6**

County **St. Clair**

Index No. **113052**

**K.—ACTIVE SHIPPING OR LOCAL COAL MINE.**



LOCATION AND ELEVATION

Location: **W** side **1.C** side  
 side  
 side Highway No.

R. R.  
 R. R.

on top. map **246** Location sheet **13-87-14c (41c?)**

Elevation: Method, 1. Est. ( ) ft.  
 2. Inst. (kind **Plane table**) **501.6** ft.

By **W.B.R. 9-26-30** Data sheet

DEPTH

Authority To coal \_\_\_\_\_ ft.  
 Authority Rail to rail \_\_\_\_\_ ft.  
 Top of coal above rail. (Est. Rule) \_\_\_\_\_ ft.  
 To coal \_\_\_\_\_ ft.

ALTITUDE OF TOP OF COAL

By estimated data \_\_\_\_\_ ft.  
 By instrumental data \_\_\_\_\_ ft.

Thickness

Max. in. Min. in. Aver. in.

GEOLOGICAL DATA

Mine notes, date **1918**

Coop No. Pyr. inv. **X** Coal Ash inv.

CHEMICAL DATA

Analyses Face	U. I.	B. M.	Others
Car	U. I.	B. M.	Others
Org. Sulf	U. I.	B. M.	Others
Ash fusion	U. I.	B. M.	Others
Ash anal.	U. I.	B. M.	Others
	U. I.	B. M.	Others

Classification

Misc. tests: Coking. Cleaning Boiler

Published descriptions:—

Railroad, Wagon, Idle, Abandoned

IDENTIFICATION

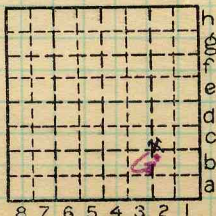
County No. **238**

Coal No. **6**



Part **4**

Quad. **New Athens**  
 County **St Clair**



Sec. **30**

T. **1** S.  
 R. **7** W.

Index No.

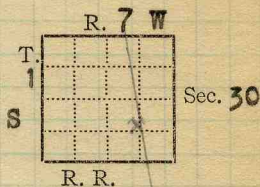
**1130 B2**

COAL MINE LOCATION AND DATA

**ABA**



Mine Name or No., **Star**  
 1/2 mile **S** from **Freeburg**  
 Operator, 191 **Star Coal Co**  
 Operator, 191



Entrance, **Shaft** Elev., **500** ft. (above,  
 (below,  
 Depth to ~~bottom~~ **top** coal, **77** ft. Alt. **423 ?**  
 SURFACE DATA.

- A. Topography, **Nearly level.** See  
 B. Surficial materials. (1) Character,  
 (2) Thickness, **About 60** (3) Effect on mining and shaft-sinking, of former drainage lines, underground water strata, etc.

**Water gets into shaft rather badly from the surface after almost every hard shower. The roof seems to be intact throughout the mine however.**

- C. Outcrops, (1) Character, See  
 (2) Structure, See  
 (3) Fossil horizons, See  
 Collection No.,  
 (4) Evidences of subsidence, See  
 D. Note collection of mine maps, drill records and shaft logs.

See drill record sheet,

- E. Notes on surrounding area,

GEN'L COAL REPT.

238

See

Coal bed name: Local, Survey No. 6

Collector, **Cady**, **Sept 6, 1918**

Mine, **Star** Co. **St. Clair** Index No. **1130 a**



K. (5) Physical character of coal in benches, **Top and bottom coal**  
 (a) Relative hardness, **seemed to be best. Middle coal broken more by bands of impurities**

(b) Lustre, **Nothing noteworthy**

(c) Fracture,

(d) Texture, **See**

(6) Impurities in coal, other than bedded,

(a) Kind, **Vertical pyrite streaks up to 1/4" thick**

(b) Position and persistence, **Clay bands in horsebacks**

**Neither persistent or in definite position**

(c) Rejected, **Clay rejected** Ease of separation,

**See**

L. Floor: (1) Material, **Fire clay**

(2) Thickness,

(3) Variation,

(4) Note character, condition, tendency to heave, relation to undercutting commercial value. **Heaves a little in some places**

**See**

(5) Clay sample No. **Location,**

M. Stratigraphy,

(1) Fossiliferous horizons underground,

Collection No.

Location,

N. Notes on effect of deep drilling in coal mine areas.

**See**



## INDEX

H-1

The r of in this mine is variable. The ordinary roof is black slate which pitches out in places beneath the cap-rock and attains a thickness of at least 8 - 10 feet under the thickest coal. In this latter place the shale becomes lighter colored toward the top.

The cap rock commonly rests either upon the black slate or upon the clod which lies between it and the coal. In places however, a incoherent clay called "white top" lies between the black slate and the coal. I did not see this but it was described to me as "mud", and as impossible to support if the black slate came down.

The clod is a soft clay shale with no coherence, that lies between the caprock and the coal. It is usually present under the rock roof but may be very thin down to a fraction of an inch. Black slate contains numerous large concretions, commonly 18-24" across.

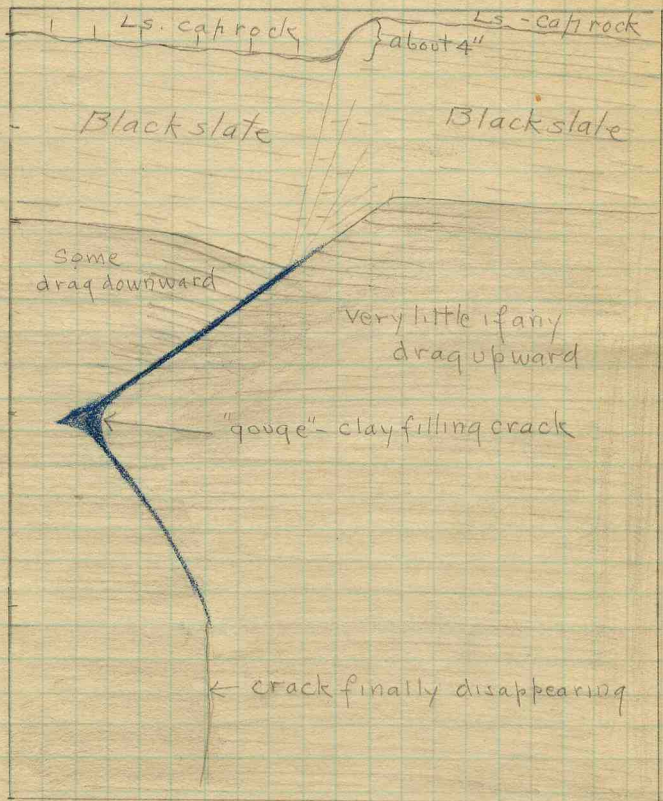
Under the rock roof, especially the coal is crossed by numerous vertical slips like the horsebacks in coal No. 5. These cracks in the coal are always beneath similar cracks in the limestone. In places the limestone will be off set up to six inches or more possibly, the off-sets being called the "rolls". The coal is usually off set more than the limestone and the crack will be filled with gouge up to a thickness of possibly a foot or more according to the miners but did not see any thicker than a few inches. Several sketches of the "rolls" are shown on the accompanying pages:

Collector Cady Sept 6, 1918  
 Mine Star Co. St Clair  
 X.—EXTRA SHEET No. 1

Coal: Survey No. 6   
 Index No. 1130a



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Sketch at bottom - near runaround  
East side

Collector Cady Sept 6, 1918  
Mine Star Co. St Clair

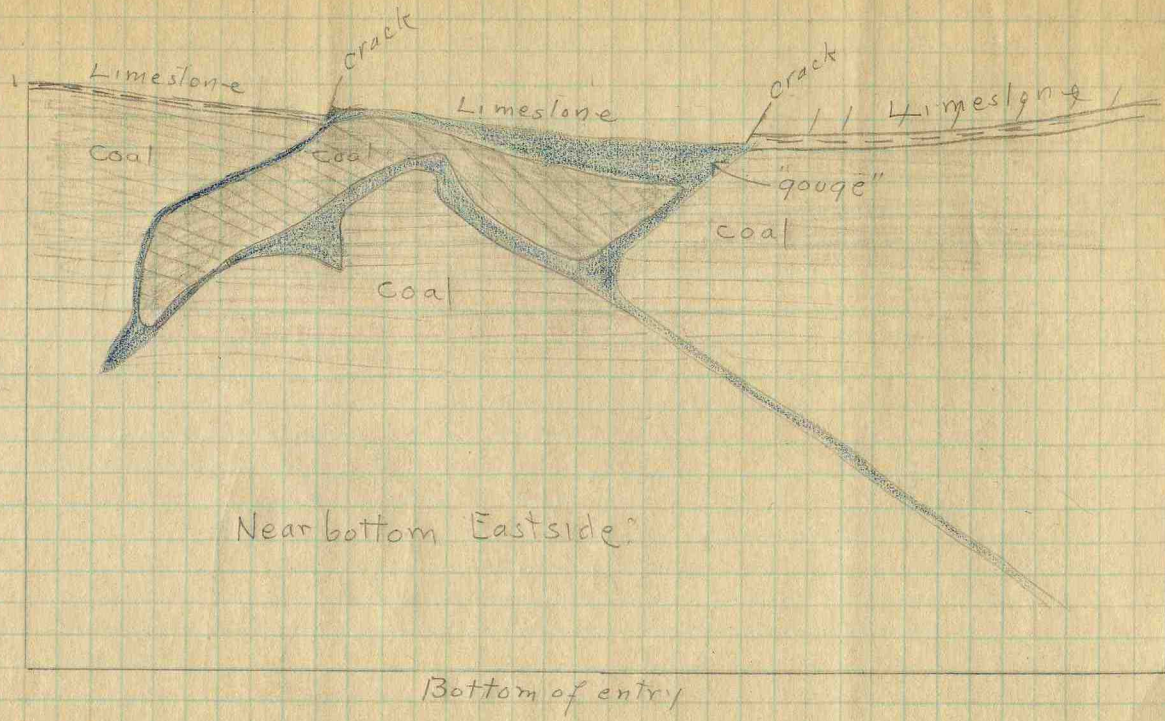
Coal: Survey No. 6

Index No. 1130a





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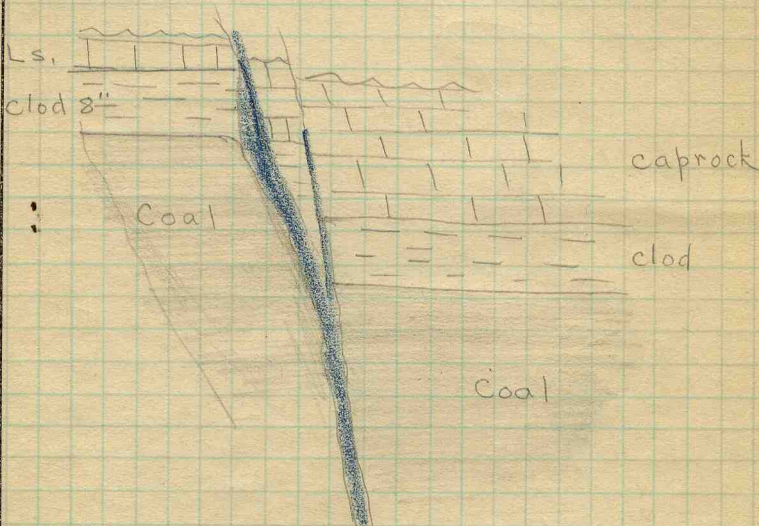
Collector Cady  
 Mine Star  
 Co. St. Clair  
 Sept 6, 1918

Coal: Survey No. 9  
 Index No. 1130a

X.—EXTRA SHEET No. 3



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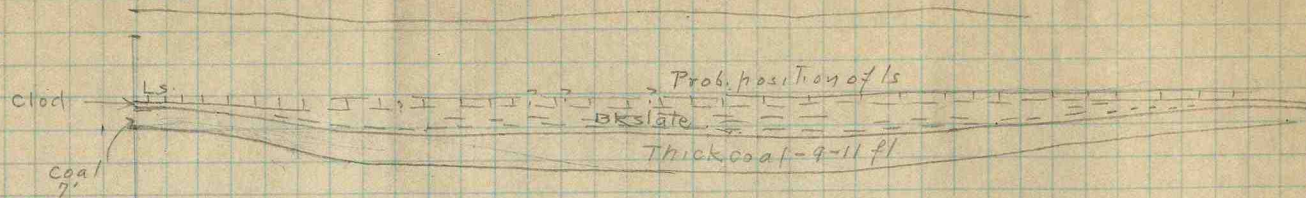
Coal contains numerous small faults such as sketched

Collector Cady Sept. 6 1918  
Mine Star Co. St Clair  
X.—EXTRA SHEET No. 4

Coal: Survey No. 6   
Index No. 1130a



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Relation of thick coal  
roof and floor  
in Star Mine at  
Freeburg

Coal thickens in swale under the black slate roof which  
is also of unusual thickness

Collector Cady Sept 6, 1918  
Mine Star Co. St. Clair  
X.—EXTRA SHEET No. 5

Coal: Survey No. 6  
Index No. 1130a



Symbol	Description	Inches
--------	-------------	--------

6th room off the 8th south on west side

Roof slate

1	Coal, with sulphur lense (1"x 6")	17 3/4
2	Clay streak	
3	Coal	16
4	Clay, sulphur in places	1/2
5	Coal	12
6	Clay and sulphur	1/2
7	Coal	4
8	Blue band and pyrite	1
9	Coal	28 1/2

Tape 79

Pyrite especially strong in the blue band and in the clay parting about 4" above the blue band. Probably averages about 1/4" in this part of mine.

(Scale: 1 division = 3 inches).

Sample No.

Can No.

Lab. No.

Collector, Cady Sept. 6, 1918  
 Mine, Star Co. St. Clair

Coal: Survey No. 6

Index No. 1130a

Q.—COAL SECTION SHEET.



Symbol	Description	Inches
	Measured near bottom on east side	
	Roof: Black slate about 2 ft, Ls above	
	1 Coal	25½
	2 Parting, clay, sulphur, mothercoal	
	3 Coal	13½
	4 Clay parting about	½
	5 Coal	9
	6 Clay and mothercoal, and sulphur	½
	7 Coal	7
	8 Blue band (0 - 2")	½
	9 Coal, lower bench	24½
		<hr/>
	Tape	81
	<p>The partings #2, 4, 6, &amp; 8 are very persistent throughout the mine. In many places one or more of them will be pyrite. The blue band is not commonly all pyrite but will in places be half pyrite. The amount of pyrite in the bed probably amounts on the average to ¼ to 1/3rd of an inch of pyrite</p>	

(Scale: 1 division = 3 inches).

Sample No.

Can No.

Lab. No.

Collector, Cady  
Mine, StarSept. 6, 1918  
Co. St. ClairCoal: Survey No. 6  
Index No. 1130a

Q.—COAL SECTION SHEET.



## INDEX

## General Notes

Main north entry off the main west near end

Roof: black slate.

Coal contains a few lenses  $\frac{1}{2}$ " x 4"  
Saw one plate thrown on gob  $1\frac{1}{2}$  x 18" There  
seems to be considerable of this kind of  
material in the mine.

Room #6 off 8th north west side

Sulphur in blue band. Only a little commonly  
not separated.  $\frac{3}{4}$  to 1" thick and is badly  
broken up in shooting

Roof: ls 5 ft thick

Room 2 8th north.

Sulphur in blue band.  $\frac{1}{2}$ " in part of room.  
Probably average less than  $\frac{1}{4}$ "

$26\frac{1}{2}$ " from blue band to bottom of coal  
Coal 7'4" thick

7th and 8th entries on the south on west side.

Cross cut near 3rd room. 8th south

Sulphur aver.  $\frac{1}{8}$ " in blue band

3" coal above blue band then another band  
of clay about  $\frac{1}{2}$ " thick with pyrite, and  
13" above blue band another clay band with  
pyrite, Sulphur is all shot up so that  
it will be difficult to recover

Collector Cady  
Mine St r

Sept 6 1918  
Co. St. Clair

Coal: Survey No. 6   
Index No. 1130a

X.—EXTRA SHEET No.



Symbol	Description	Inches
--------	-------------	--------

5th and 6th south entrys on east side

Roof: Black slate

1	Coal	31
2	Clay streak	
3	Coal	19
4	Clay and pyrite	$\frac{1}{2}$
5	Coal	14
6	Clay streak	
7	Coal	4
8	Blue band	1
9	Coal	$30\frac{1}{2}$
10	Mothercoal	$\frac{1}{2}$
11	Coal	21

~~1112~~

121 1/2

Very little sulphur here.

Coal thin abruptly to the west against a rise in the floor. The floor rising at about a 30 degree angle, the roof not quite as rapidly. The coal very clearly thins up between the converging roof and floor showing that the structure is in part at least original.

**Note:** Letter in conversation with Wm Hartman of Kolb Coal Co P received the impression that the high irregular coal was on the west rather than on the east side. Still think note as taken correct.

(Scale: 1 division = 3 inches).

Sample No.

Can No.

Lab. No.

Collector, Cady Sept 6, 1918

Coal: Survey No. 6

Mine, Star

Co. St Clair

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Q.—COAL SECTION SHEET.



## PYRITE GEOLOGICAL OCCURRENCE

See  
Extra  
Sheet  
No.

1. Manner Pyrite occurs as plates between the various benches, as in general in the Belleville region

Pyrite is of the good stony variety that generally comes out fairly clean. High grade stuff

2. Size of Masses Commonly  $\frac{1}{4}$ - $\frac{1}{2}$ " thick and 8-15" across

A few possibly twice as large. and a few balls

One plate seen  $1\frac{1}{2}$ " x 18"

3. Measurements to determine amount

No.	Location in mine	1	2	3	4	5	Total		Px3	P %
		C P	C P	C P	C P	C P	Coal	Pyrite		
1	R-6, 8th south						79	$\frac{1}{4}$	3/4	1.
2	5 & 6 south off E		Very little							
3	3 off 8th N off W						80	3/4	1.5	1.7
4	R-2, 8th north						88	$\frac{1}{8}$	3/8	.5
5	R-3, 8th south						81	$\frac{1}{8}$	3/8	.5
6										
7										
8										
9										
10										

4. Notes

	Total	4.7
Percent of pyrite present will aver. around 1%. Prod only about $\frac{1}{2}$ of this recoverable	Average	1.2

5. Samples.

Label No.	Location in mine	Analyses, etc.
C-18-95	Banded pyr. & coal	
C-18-96	Pyr. from brown ball	example of balls found in top coal.

Neither of the above samples are representative of the common pyrite found in plates, which is of the ordinary variety as found elsewhere in St. Clair County

6. Notes

Collector Cady	Date Sept 6, 1918	Coal No. 6	
Operator Star Coal Co	No. 49		
Mine Star	St Clair Co	Index No. 1130a	

Y-PYRITESHEET (1)





**PYRITE  
RECOVERY**

See  
Extra  
Sheet  
No.

7. Method of rejection of pyrite Pyrite picked out to some  
 (1) In mine extent by the miners, though in shooting  
 off the solid it is much broken up.  
 (2) Per cent rejected Probably less than .5%.  
 (3) At tippel Little at cars  
 (4) Per cent rejected
8. Per cent of pyrite in rejected lumps Plate pyrite very clean  
 That in blue band probably 50-75%
9. Possible daily production of pyrite  
 Production of coal 900 tons; probably not much over  
 $\frac{1}{4}$  of total pyrite present would be recovered. Poss, 2 tons
0. Possibility of future production Fair, with suitable price
1. Pyrite ever cleaned and shipped?  
 (1) Method  
 (2) How loaded  
 (3) Consignee  
 (4) Price F. O. B. cars
2. Washing: Daily tonnage of refuse  
 (1) Maximum size  
 (2) Pyrite in refuse, per cent:  
 (3) Samples. No.  
 (4) Sulphur samples. No.  
 (5) Conditions of recovery
3. General conclusion as to pyrite recovery The method of mining  
 somewhat against recovery. Much material lost

Collector Cady

Date Sept 6, 1918

Coal No. 6

Operator Star Coal Co No. 49

Mine Star

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Z PYRITE SHEET (2)