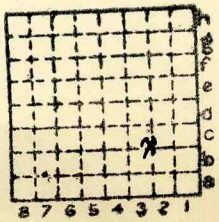
Form 180

WESTERN COAL & MINING Co. #2.

Co. No. 275

Mine index #147, BM68



Sec. 31

T. ~~N.~~ 7 S.

R. 1 E. ~~W.~~

Index No.

MOORE'S MODERN METHODS

Mine originally operated by: (1)

Date 1917 Western Coal & Mining Co. Bush

Original name or number: #2

Illinois Coal Report 1954 p. 75

LATER OPERATORS

	Date	Operator	Name or No.
2			
3			
4			
5			
6			
7		A wholly owned subsidiary of Mo. Pac.	
8			
9			
10			
11			
12			
13			
14			

* Also owners #See ownership sheet

Railroad, Wagon, Idle, Abandoned Shaft 1521

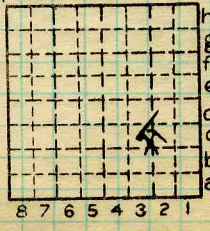
M. Pac. SHIPPING MINE

IDENTIFICATION

County No. 275 Coal No. 6 10'6"

Quad. 264 Part

County Franklin



Sec. 31

T. 7 N. S.

R. 1 E. W.

Index No. 1231.3C

COAL MINE OPERATOR

(3106–21531) 3

(Sheets) COAL PRODUCTION (Sheet)

Period Mo. Day Year	Period Mo. Day Year	Tons		
Daily Prod. 1918			2	000
" Cap - 1926			3	600
1927			421	792
SUMMARIES				
No. to	No.			
1917 - 1930			7	147 697

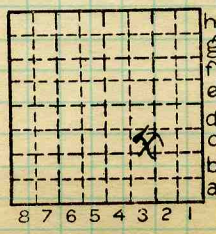
Railroad, Wagon, Idle, Abandoned

IDENTIFICATION

County No. 275 Coal No. 6

Quad. 264 Part

County Franklin



Sec. 31

T. 7 ~~N.~~ S.

R. 1 E. ~~W.~~

Index No. 1231.3C

COAL MINE—PRODUCTION

(34217—1M—3-30) 7

MOORE'S MODERN METHODS

LOCATION AND ELEVATION

Location: W side M & O R. R.

side R. R.

W side Highway No. 149

on top. map Location sheet Mine notes

Elevation: Method, 1. Est. ( ) ft.

2. Inst. (kind Company) 416 ft.

By — Data sheet

DEPTH

Authority Albert Shaw, Supt To coal 160 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

By instrumental data Company Engr. 2565[illegible] ft.

Thickness

Max. 144 in. Min. 78 in. Aver. 120 in.

GEOLOGICAL DATA

Mine notes, date 1918

Coop No. 147 (B.M.68) Pyr. inv. * Coal Ash inv.

CHEMICAL DATA

Analyses Face	U. I.	B. M 30877-81	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 Rank Ind.131;Unit c.ind.146

Misc. tests: Coking. Cleaning Boiler

Published descriptions:—

B.M.193 pp.30,145

Railroad, Wagon, Idle, Abandoned

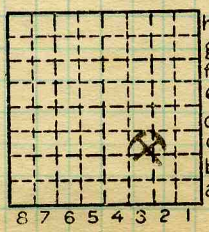
IDENTIFICATION

County No. 275 (BM [illegible]) Coal No. 6

Part

Quad. Herrin

County Franklin



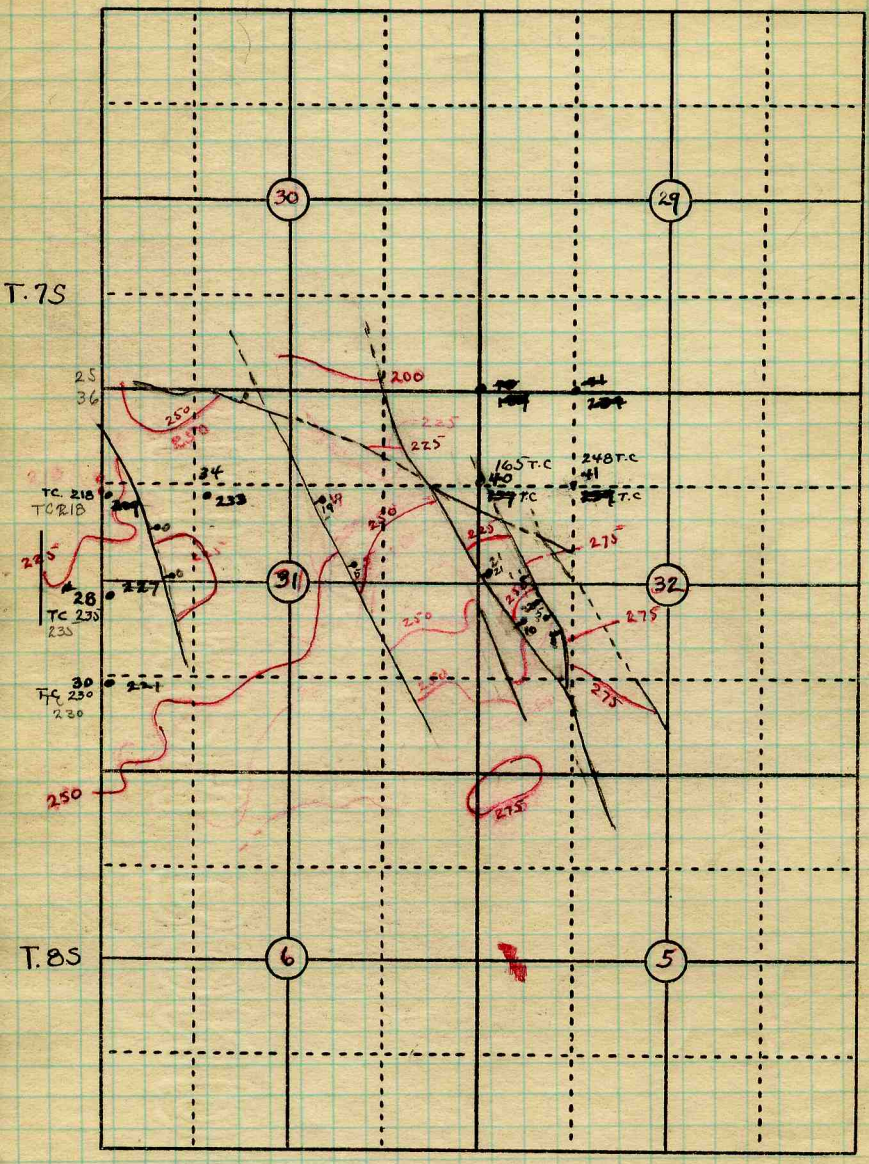
Sec. 31

T. 7 N. S.

R. 1 E. W.

Index No. 1231·3C

COAL MINE LOCATION AND DATA



Date

Mine Maps 5-28-11 & 11b.

Operator

Western C. & M. Co

Name or No. 2

County Franklin

Index No.

Mine Name or No., **Bush #2**
mile from
Operator, 1918 **Western Coal & Mining Co**
Operator, 191

R. **1 E**
T. **7 S**
Sec. **31**
R. R.

Entrance, **Shaft** Elev., **416** ft. { above, below,
Depth to ~~bottom~~ **top** coal, **160** ft. Alt. **256** **Co. elevation**

SURFACE DATA.

A. Topography, **Level** See

B. Surficial materials. (1) Character, **Flat underlain by water-bearing gravels overlying the rock**

(2) Thickness, **See records** (3) Effect on mining and shaft-sinking, of former drainage lines, underground water strata, etc. **Water in mine comes from water-bearing gravels. Supt believes drawing pillars would weaken roof and let water into the mine, making it difficult or impossible to operate**

See

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. **Records of about 20 drill holes recently drilled sent in to office.**

See drill record sheet,

E. Notes on surrounding area, **Supt described fault in south mine at Royalton running about NW - SE with a 35-foot upthrow on the NE side. A fault about parallel to this is found in this mine with upthrow on NE side of 6-8 feet in places**

See

Coal bed name: Local, Survey No. **6**
Collector, **Cady & Schroyer** **Aug 27, 1918**
Mine, **Brush #2** Co. **Franklin** Index No. **1231**
L.—SURFACE SHEET (Geol.)

F. Thickness of rock above bed worked, **About 145 feet at shaft**
(1) Important variations,
See

G. Note presence of strata having important effect on mining,
See

(1) Position,
(2) Character, **Gravel in fill just above rock**
(3) Persistence,
(4) Other workable coal beds, **No.5 coal 50 feet below No.6**
See

H. Cap rock, **Limestone**
(1) Thickness, **About 3 feet**
(2) Height above coal, **About 18 feet**
See

I. Immediate roof, **Gray shale -"soapstone"**
(1) Thickness, **About 18'** (2) Contact with coal, **Clean**
(3) Horizontal variation, **Persistent**
See

J. Draw slate. (1) Thickness, (2) Contacts **None**
(3) Persistence,

K. Coal bed: Max. **144** Min. **78** Av. **120** inches
(1) Benches, **Top, middle and bottom**
(a) Position,
(b) Persistence, **Persistent. Top bench left as roof in mine**
See
(2) Bedded impurities, kind, position in benches, persistence, ease of separation. **Blue band about 1½" 18 to 30 inches above the coal. Lower coal thickest where whole seam is thickest. Smut band about midway in bed ½ - 2 inches. Mother coal and mud.**
See 3
(3) Irregularities in continuity of bed (due to deposition, erosion, or movement, **Fault crosses main north just off bottom**
See
(a) Effect on mining,
See 1 & 2

SECTION				
Ft.	In.	Name	Index	Sym.

Collector, **Cady & Schroyer Aug 27 1918** Coal: Survey No. **6**
Mine, **Bush #2** Co. **Franklin** Index No. **1231**
M.—UNDERGROUND SHEET (Geol.)

K. (5) Physical character of coal in benches,

(a) Relative hardness, **Coal rather soft, prob. due to brittleness.**

(b) Lustre, **Bright and dull as usula**

(c) Fracture, **Coal rather brittle, much small coal**

(d) Texture, See

(6) Impurities in coal, other than bedded,

(a) Kind, **Sulphur sprangles very common, Some lenses**

(b) Position and persistence, **Not persistent**

(c) Rejected, **Only larger ones** Base of separation, **Considerable coal wasted with sulphur. Much less than 1%** See X 3

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**

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

Collector, **Cady & Schroyer** **Aug 27 1918** Coal: Survey No. 6

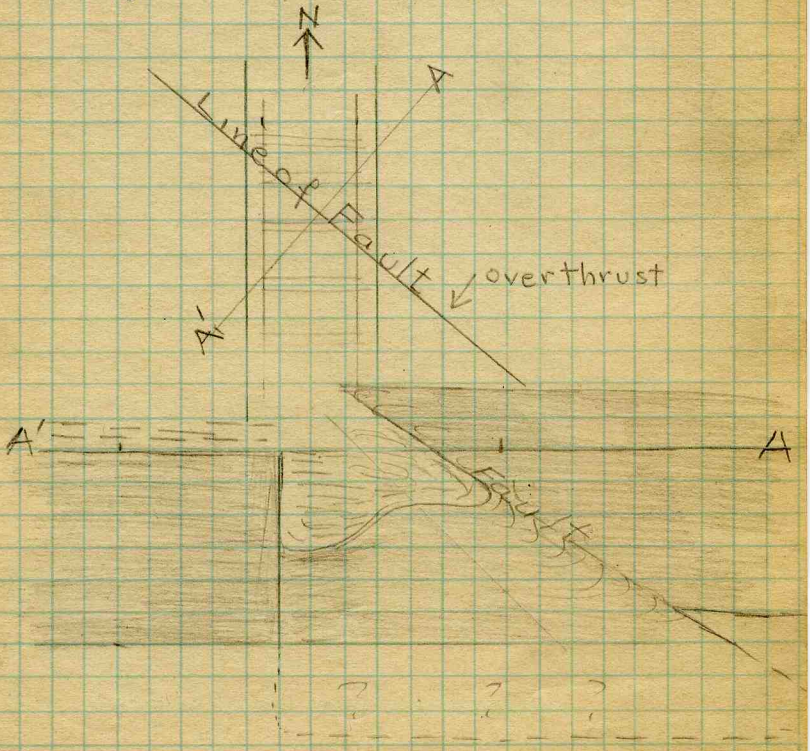
Mine, **Bush #2** Co. **Franklin** Index No. 1231

N.—UNDERGROUND SHEET (Geol.)

INDEX

K-3

Of special interest in this mine is the fault which crosses the works along the main north entry just off the bottom probably not over 200 feet from the shaft. The fault has been followed possibly for about ¼ mile and trends nearly NW-SE. Along the Main north the fault seems to be a thrust fault in part at least, the northeast side being thrust over the opposite side thickening the coal up to about 15 feet. A sketch of the relationships in this entry is shown below. The sketch represents a section across the fault at right angles to the line of fracture and hence across the entry.



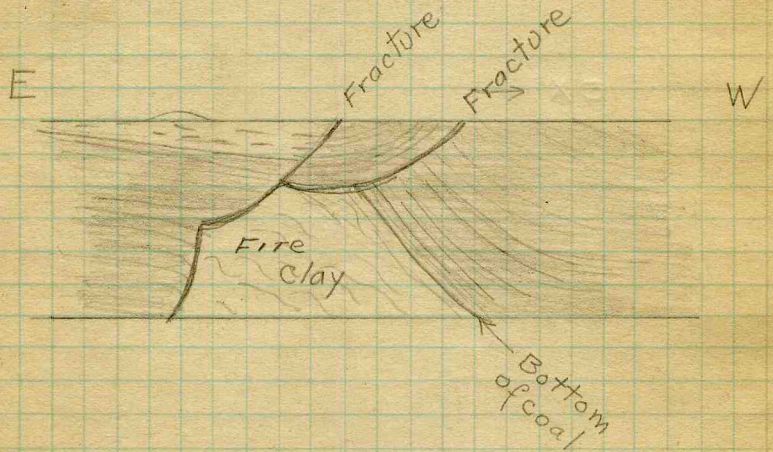
Collector Cady Aug 27, 1918
Mine Bush #2 Co. Franklin
X.—EXTRA SHEET No. 1

Coal: Survey No. 6
Index No. 1231

INDEX

K-3

The fault on the west entry off the horth has also been crossed. A sketch of relationships observed along the south side of entry is shown below:



Schroyer made a sketch of the opposite side of the entry. Apparently the condition shown resulted from a thrust from the west as in the the first sketch shown but the line of fracture is less definite. The line of the base of the coal was definite and the clay was evidently floor clay rather than roof shale.

Mr Shaw the Supt. pointed out the approxim te parallelism of this fault with the one running between the north and south mines at Royalton These would be Franklin County C.C. # 7 (north) and # 11 (South)

Apparently there is one general system of faults in this region running nearly parallel with the axis of the Duluoin anticline: slightly west of north.

Collector G.H. Cady Aug 27, 1918 Coal: Survey No. 6

Mine Bush #2 Co. Franklin Index No. 1231

X.—EXTRA SHEET No.

INDEX

K-2 About midway of the bed is a persistent layer of mother coal commonly about 1½" thick up to 2" and very locally thickens up to a foot or more. The material is apparently a mixture of mother coal and clay. It is very soft can almost be scraped out of the bed in the face. Shoots up to dust.

K-6 The most important and conspicuous impurity is the pyrite, which is especially common as facings or sprangles running vertically through layers in the bed. Lenses of solid stony pyrite are not uncommon especially in the upper part of the bed. The coal is conspicuously richer in pyrite than the coal in the mine at Possum Ridge for instance.

Collector Cady + Schroyer
Mine Bush #2 Co. Franklin
Coal: Survey No.
Index No. 1231
X.—EXTRA SHEET No.

MOORE'S MODERN METHODS

Operator, Western Coal & Mining Co Date Aug 27, 1918
Mine, Bush #2 Sec. 31 T. 7 S R. 1 E
Located, 1½ miles from Bush (North)
Location in mine, 5th south off 2nd West South 500'S - 1000 W

GRAPHIC SECTION In.		No.	No.	DESCRIPTION OF SECTION (AT POINT SAMPLED) (Note character and thickness of roof)	Inches
				Roof: gray shale	
			1	Top coal left as roof 18" ?	
			2	Coal	40
			3	Smut band	½
			4	Coal	21
			5	Blue band	1 ¼
			6	Coal	21
				Floor: fire clay	83 3/4
				(Note character and thickness of floor)	
				Total thickness of coal.	

Condition, Dry Time, 1 hr. 10 min.
Wt. Gross, 42 lbs. Net, 4 lbs.
What Nos. shipped by Co.? 2,3,4 & 6

Excluded from sample: No. 1 and 5(blue band)
Sample represents 82½ in. tons.
Impurities? How do they occur? Sulphur sprangles and soot band.

Sample No. Can No. BM 698-[illegible] Lab. No. 30879
Collector, Cady & Schroyer Coal: Survey No. 6
Mine, Bush #2 Co. Franklin Index No. 1231
R.—COAL SAMPLE SHEET.

Operator, Western Coal & Mining Co Date Aug 27 1918
Mine, Bush #2 Sec. 31 T. 7 S R. 1 E
Located, 1½ miles from Bush (North)
Location in mine, End of main south entry 1200 feet from shaft

GRAPHIC SECTION In.		No.	No.	DESCRIPTION OF SECTION (AT POINT SAMPLED) (Note character and thickness of roof)	Inches
				Roof gray shale	
			1	Top coal in roof ?	
			2	Coal	38
			3	Smut band	1/8
			4	Coal	22
			5	Blue band	2
			6	Coal	18
					80 1/8
				Floor: fire clay	
				(Note character and thickness of floor)	
				Total thickness of coal.	

Condition, Dry Time, 1 hr. 10 min.
Wt. Gross, 50 lbs. Net, 4 lbs.
What Nos. shipped by Co.? 2, 3, 4, & 6

Excluded from sample: No. 1 and 5 (blue band)
Sample represents 78 1/8 in. tons.
Impurities? How do they occur? Sulphur lenses and sprangles: Soot or smut band

Sample No. Can No. BM 24847 Lab. No. 30880
Collector, Cady & Schroyer Coal: Survey No. 6
Mine, Bush #2 Co. Franklin Index No. 1231
R.—COAL SAMPLE SHEET.

MOORE'S MODERN METHODS

Operator, **Western Coal & Mining Co** Date **Aug 27, 1918**
Mine, **No. 2** Sec. **31** T. **7S** R. **1 E**
Located, **1½** miles from **Bush (North)**
Location in mine, **End of northwest entry (1400'W 300' N)**

GRAPHIC SECTION In.		No.	No.	DESCRIPTION OF SECTION (AT POINT SAMPLED) (Note character and thickness of roof)	Inches
				Roof: gray shale	
			1	**Coal in roof; not mined 36"?**	
			2	**Coal**	38
			3	**Smut band**	2¼
			4	**Coal**	24
			5	**Blue band**	1½
			6	**Coal**	35
				Floor: fire clay	100 3/4
				(Note character and thickness of floor) Total thickness of coal.	

Condition, **Dry** Time, **1** hr. min.
Wt. Gross, **44** lbs. Net, **4** lbs.
What Nos. shipped by Co.? **1,2,3,4,& 6**

Excluded from sample: No. **5, Blue band; 1 top coal**
Sample represents **99¼** in. tons.
Impurities? How do they occur? **Sulphur sprangles and soot band:- mother coal and mud**

Sample No. Can No. **B.M.8217** Lab. No. **30878**

Collector, **Cady & Schroyer** Coal: Survey No. **6**
Mine, **Bush #2** Co **Franklin** Index No. **1231**

R.—COAL SAMPLE SHEET.

Operator, **Western Coal & Mining Co** Date **Aug 27, 1918**
Mine, **Bush #2** Sec. **31** T. **7S** R. **1 E**
Located, **1½** miles from **Bush (north)**
Location in mine, **Face of the main northeast**

GRAPHIC SECTION In.		No.	DESCRIPTION OF SECTION (AT POINT SAMPLED) No. (Note character and thickness of roof)	Inches
			Roof: gray shale	
		1	**Coal: left for roof about 15"**	
		2	**Coal**	37¼
		3	**Soot band**	¼
		4	**Coal**	20
		5	**Blue band**	1½
		6	**Bottom bench coal**	17½
			Floor: fire clay	76 ½"
			(Note character and thickness of floor) Total thickness of coal.	

Condition, **Dry** Time, **1** hr. **15** min.
Wt. Gross, **50** lbs. Net, **4** lbs.
What Nos. shipped by Co.? **2, 3, 4, & 6**

Excluded from sample: No. **5 Blue band; 1 top coal**
Sample represents **75** in. tons.
Impurities? How do they occur? **Sulphur in vert. sprangles & some lenses. Soot band.**

Sample No. Can No. **BM 714** Lab. No. **30877**

Collector, **Cady & Schroyer** Coal: Survey No. **6**
Mine, **Bush # 2** Co. **Franklin** Index No. **1231**

R.—COAL SAMPLE SHEET.

West C.M. Co No 2.

Notes on North East part of Mine

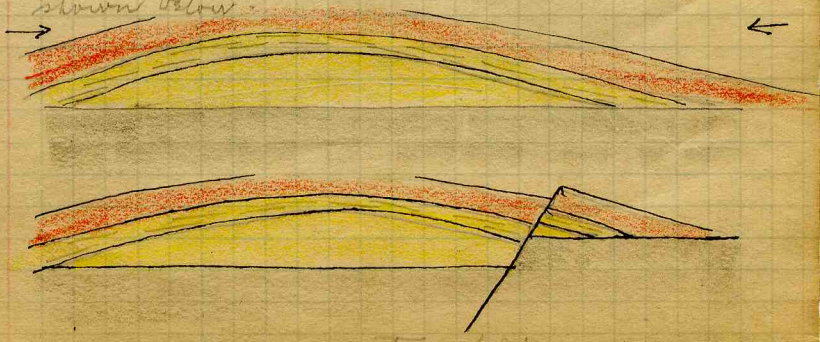
The blue band in this mine ranges from a knife edge to 1" — Locally not discernible. Measured points show

1½" shale 19½" from bottom
1½" " 20" from floor — Total coal 92"
This was at the turn of 5th S off 2nd E.S. ca
·37 mi E ·06 mi south of shaft.

4" shale 20" from floor Total 88"
An adjacent face shows 1½" as usual.

Four faults are mapped along the 2nd E.S. but other slips appear. These latter are so small as to be unimportant in mining It is of interest to note, tho, that one of these bands N.E.—S.W. at a high angle to the more important mapped faults. Compare Fishers Dike area in maps for presence of similar structures.

Variation in roof in this part of the mine shows lenticular, black fissile shale and gray shale as in the Franklin mine. Similar relations of roof shale lenses & locus of slips is observed. Detailed mapping here would be helpful in clearing up this apparently causal relation, which seems to be as shown below:



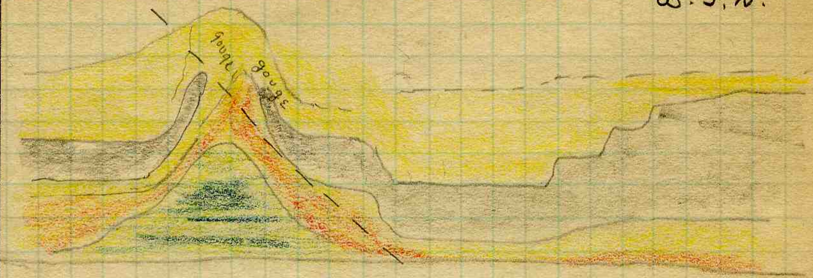
Franklin 1231-72

INDEX

1000' NL, 1200' EL, Sec 31, T7S, R1E (from mine map)

N this is Cottage Grove master fault, trend N70W S

W. J. N.



not accurately scaled

Section at fault on Main North at 2nd x cut south of 7th E –

The fault sketched here is little more than a broken fold, the displacement being less than the drawing suggests. Time did not permit more careful study. A north-south compression has apparently buckled the strata, forcing the calc. shale below the fireclay up thru the coal and creating a wide gouge zone, not common in the other faults of this mine. The lower lying sandy shale, here better called a sandstone has been squeezed into the breach also, giving the impression that considerable compression had been exerted. Altho the relations as sketched do not show it, a second hasty inspection suggested a plane of slippage dipping southward, marked by contact of the nodular clay from the left (north) and the nodular clay from the right (South).

The following sketch shows the relations see next sheet – (red ruled)

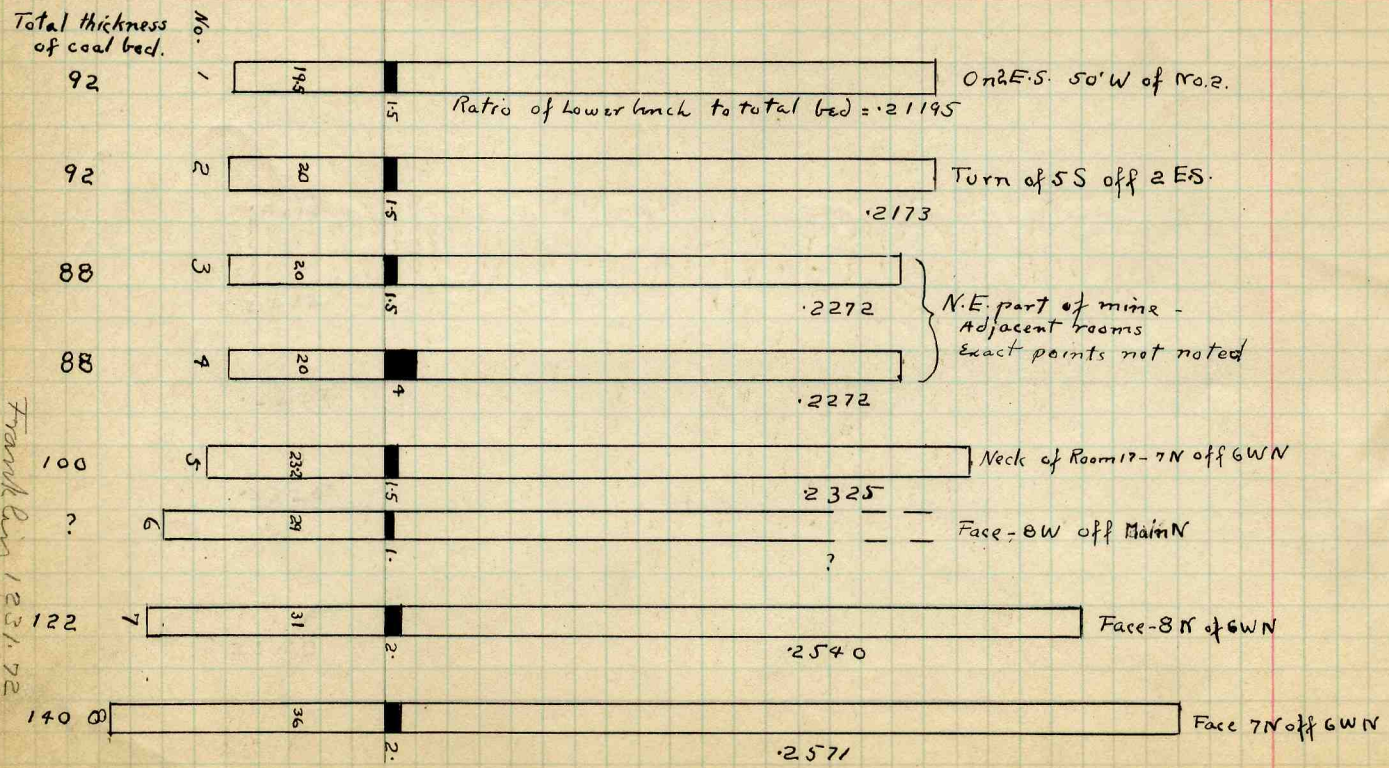
Collector H E C

Mine No 2 Co. Franklin

Coal: Survey No.

Index No. 1231.72

X.—EXTRA SHEET No.



Franklin 1231.72

Fault on 4th West off main North about midway between 2nd and 3rd North.

1 div. = 2 feet ±

W

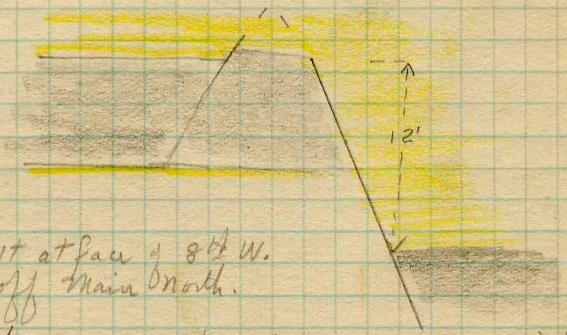
E

This shows a down throw on the East of less than 5 feet.
This fault is traced across the central part of the mine but does not appear south of the 4th E.S. as of any height. no inspection of these Southeast entries was attempted.
Apparently this fracture has an east down-throw throuout its extent.

Franklin 1231-72

at the face of the newly turned 8th W. entry off the main north. The 12 foot downthrow is to the west? sketch not labelled in the mine (since this is uncertain).

E?



Fault at face of 8th W. off Main North.

The main break is surprisingly clear and sharp, with little gouge developed. The minor fracture is only a fold at the base of the coal bed and does not appear in the floor.

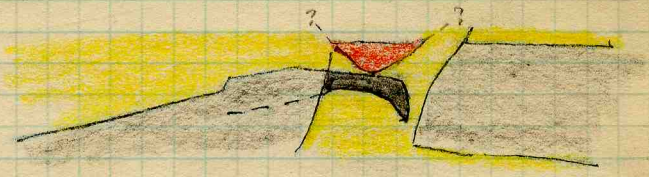
Probably 300' NL, 2200' WL, Sec. 31, T7S, R1E from mine map.

Master fault again W.J.N.

Franklin 1231-72

Fault at face of 7th North off 6th W.N.

North South



The relations here are not clear in detail, the development of gouge being sufficient to obscure them. The coal is mashed in the darker area, being crowded into the odd shape shown. The coal on the right is less disturbed that on the left (north) having taken most of the motion. The limestone here shown appears to have slipped to its present position by means of a flaring V-shaped fault. This suggests that the underlying shale was thin at this point. Perhaps this was a factor in the fault location.

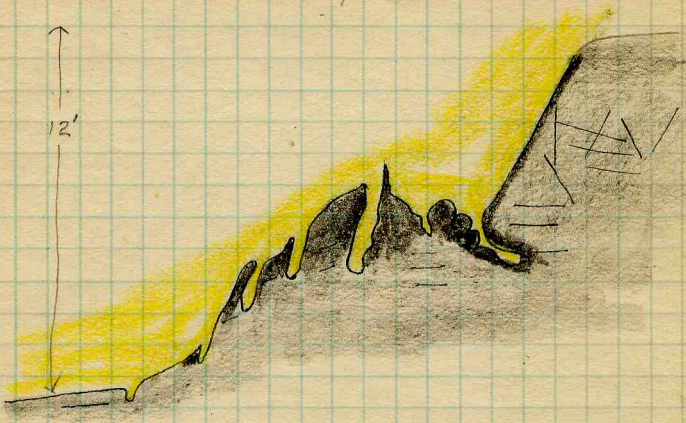
This is one of a number of roughly similar dislocations in which the force involved was great enough to cause much mashing and gouge development, but in which the relative displacement finally was slight.

This is probably 100' SL, 2000' WL, Sec. 30. T 7S. R 1E
fault strikes N 40° W, crossing master fault diagonally. North of master fault about 300 ft.
W. J. N.

Franklin 1231-72

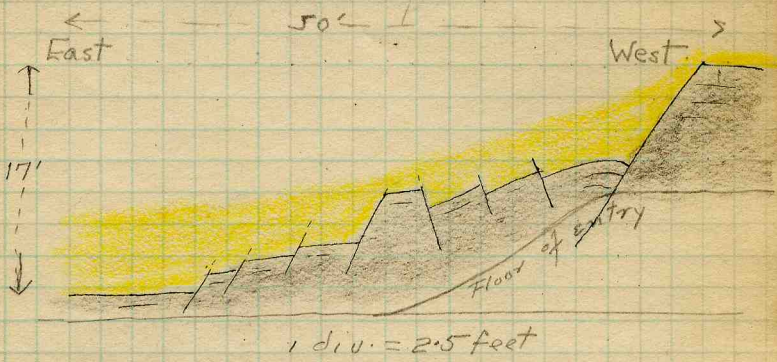
1

1 div = 1 foot.



Fault at station X (mine Map)

Franklin 1231-72



Sketch showing approximate relations of the dislocated blocks of coal at a "fault" at the face of the 5th W.N. entry.

This set of fractures lets the East side down about 17 feet, but the convergence of the two sets of minor fracture planes is of interest. Cf the diagram of this fault at its intersection with the 4th W.N. entry.

Probably 1550' NL. 2200' EL, Sec. 31.

Same fault that crosses near shaft bottom.

W. J. N.

Franklin 1231.92

Bush. Bush No. 2 Mine.

Analyses 30877 to 30881 (p. 30). Bituminous coal, Illinois field, from Bush No. 2 mine, a shaft mine 1½ miles northwest of Bush, in sec. 31, T. 7 S., R. 1 E., on the Missouri Pacific R. R. Coal bed, Herrin, or No. 6; Carboniferous age, Carbondale formation. Bed is 7½ to 12 feet thick, and averages 10 feet. There are top, middle, and bottom benches; top bench left as roof in mine. "Blue band" about 1½ inches, 18 to 30 inches above the coal. Lower coal is thickest where whole bed is thickest. Coal rather soft; "sulphur" streaks very common. Fault crosses main north entry just off bottom. About midway of bed is a persistent layer of "mother coal." Roof, gray shale 18 feet thick; floor, fire clay, which heaves a little. Cover at points of sampling, 160 feet. The bed was sampled by G. H. Cady and C. R. Schroyer on August 27, 1918, as described below:

Sections of coal bed in Bush No. 2 mine.

Section	A.	B.	C.	D.
Laboratory No.	30877	30878	30879	30880
Roof, gray shale.				
Coal	[a] 1 3	[a] 3? 0	[a] 1 6?	[a](?)
Coal	3 1½	3 2	3 4	3 2
"Soot band"	¼	2¼	½	⅛
Coal	1 8	2 0	1 9	1 10
"Blue band"	[a] 1½	[a] 1½	[a] 1½	[a] 2
Coal	1 5½	2 11	1 9	1 6
Floor, gray clay.				
Thickness of bed	7 7½	11 4¾	8 5¾	6 8⅛
Thickness of coal sampled	6 3	8 3¼	6 10½	6 6⅛

Section A (sample 30877) was cut at face of main northeast entry, 1,100 feet east and 400 feet north of shaft. Section B (sample 30878) was cut at end of northwest entry, 1,400 feet west and 300 feet north of shaft. Section C (sample 30879) was cut at face of 5 south entry, 2 west entry, south, 500 feet south, 1,000 feet west of shaft. Section D (sample 30880) was cut at end of main south entry, 1,200 feet south of shaft.

The ultimate analysis of a composite sample made by combining face samples 30877 to 30880 is given under laboratory No. 30881. At time of sampling the daily output was 2,000 tons.

[a] Not included in sample.

Coal No 6

#2 Mine Franklin Co. Index No 12317