

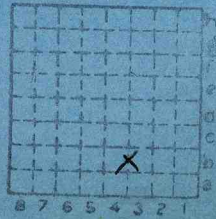


Form 180 Blue

Clarkson C. & M. C.  
"Nashville"

Mi. #226

53



Sec. 13

T.	2	E
		S.
R.	3	E
		W.

Index No.

S-2

G.I.C.  
Aug. 1967

Depths to No 6 coal Nashville Mine

Field notes

	Tocoal
1918	420
1922	425
1931	409
1933	407

Bull. 11

Tocoal 418'

Mine Reports

1882	No reports on Washington G		
1883	Chas. Hartman	420	
1884	Nashville C. Co (Hartman & York)	420'	8'
1885	" "	420	6'
1886	" "	420	
1887	Consolidated C. Co. (Joseph Morris Leslie)	420	
1888	" " "	No depth	
1889	" " "	" "	
1890	" " "	" "	
1891	Canerman & Morris	" "	
1892	Camman & Morris	420	
1893	Hugh Murray	425	
1894	No book		
1895	H. Murray Neshv.	No depth	
1896	H. Murray Nashville King G	425	5'6"
1897	Hugh Murray	425	
1898	Alexander Murray	425	
1899	" "	425	5'6"
1900	" "	425	
1901	Hugh Murray	No depth	
1902	" "	" "	
1903	" "	425	
1904	" "	425	
1905	Gallatin Coal & Coke G	425	
1906	" " " "	425	
1907	Nicholson Coal Co	625	(min)
1908	" " " Nol	425	
1909	" " " " (local)	425	
1910	Finke Harris C Co	425	

1911	Not operating 1911			
1912	Nicholson Coal Co	<del>Nashville</del>	450	
1913	" " "	" "	425	
1914	" " M&C	" "	420 T.C.	
1915	Muhlson Bros C. Co	<u>Nashville</u>		
1916	Nicholson Bros Coal Co	<del>Nashville</del>	420 T.C.	
1917	Nicholson Coal Co <u>Nashville M&amp;C</u>	<del>Nashville</del>	425	
1918	Nashville Mining Co		425	
1919	" " "		425	
1920	" Coal Co		425	
1921	" Mining Co		425	
1922	" " " Nol		425	
1923	<del>Starbuck Coal &amp; Mining Nashville M&amp;C</del>		425	
1924			400	
1925			Modena	
1926			415	
1927			415	
1928			415	57"
1929			415	5'8"
1930			415	5'8"
1931			415	5'8"
1932			415	5'8"
1933			415	5'8"
1934			415	5'8"
1935			415	5'8"
1936			415	5'8"
1937			415	5'0"
1938			415	5'8"
1939	Abandoned		415	5'8"
1940				

0813

Vol VII p 10

162



Co. No 53

1918

Consolidated Coal Co = Clarkson Co + M<sub>3</sub>C

25.3W 13

Elev. 508 Log in Survey files (GHC)

SW-SE N<sup>1</sup>/<sub>4</sub>

Other log in Ill Geol Surv Vol VII p 10

Clay, yellow	15		15	
Snd	18		33	
Clay, pale yellow	7		40	
Clay, blue	8		48	
Shale "	4	6	52	6
Ls, small Ch	6	6	59	
Slate, Black	4		63	
Coal	2		65	
Soapstone	6		71	
SS	8		79	
Sand shale	47		126	
Limestone		4	126	4
Slate, blue	14		140	4
Congl. clay gravel ls (pebbly)	2		142	4
Slate bk	1	6	143	6
Fr. Cl	4		147	10
Clay shale	8		155	10
Snd shale	25		180	10
SS, soft	22		202	10
Slate, blue shale	20		222	10
Slate "	6		228	10
Coal (No 8)	1	2	230	-
Frcl	1	8	231	8
Congl sand & ls	4	6	236	2
Snd shale	63		299	2
Shale, bl	39		338	2
" dk bl	3	6	341	8
" black		6	342	2
Frcl	1	8	343	10
Slate blue	3		346	10
Frcl	4	6	351	4
Rock, soft, sd & ls	5		356	4
Frcl	1	6	357	10
Ls, brd	15	10	373	8
Sh. blk	3	8	377	4
Sh. blue boulders of ls	3		380	4
S. shale	5		385	4

Sandst.	9		394	+
Frc l	1	6	395	10
Slate, white Sh. blue	2	0	397	10
Slate white	0	6	398	4
Ls, marble	1	6	399	10
Ls gray	2	8	402	6
Sh, dk blue	2	6	405	0
Ls, fossilif.		10	405	10
Sh, dk bk	7	6	413	4
Ls black	4	6	417	10
ls dk gr	3	6	421	4
Slate bk	2	8	424	
Coal	6		430	

Nashville Shaft

SW. SE 13, 2S 30

From Ill Geol Survey Vol VII p. 10

1883

Grand Wood & Jar Con. (1916)

Surface	38		38	
Shale, blue	4		42	
Ls. Shoal Ck	6		48	
Slate, blk	4		52	
Coal	2		54	
Soapst	6		60	
SS	55		115	
Ls		4	115	4
Silt. blue	14		129	4
Ls. pebbly	2		131	
Slate	1		132	
Frd	4		136	
Soapst	8		144	
SS	47		191	
Sh. blue	20		211	
Slate blue	6		217	
Coal No 8	1	2	218	
Frd	1		219	
Conglom.	4		223	
Sh. sandy	63		286	
Sh. blue	42		328	
Frd	1		329	
Silt blue	3		332	
Frd	4		336	
Ls congl.	5		341	
Frd	1		342	
Limest.	15		357	
Sh. bk	3		360	
Sh. blue, pebbly	3		363	
Shale	14		377	
Ls	1		378	
Shale	2 (3.)?		381	
Ls	4		385	
Sh	2		387	
SS ?				
Sh. blue	7		394	
Ls	8		402	
Slate	2		404	
Coal No 6	5	2	409	8"
Bone	1	8	411	4
Coal	1	4	412	8

Friday +

Comparison of 2 logs of Nashville shaft

	Log 1		Log 2	
Limestone	5		15	0
Fire clay	1	0	1	0
Limestone, hard	15	0	15 <sup>m</sup>	0
Shale blk	3	8 5/10	3 <sup>b</sup>	0
Shale bl & Ls	3			
Sandy shale	5			47' 0"
Sandstone	9	0		
fire clay, Shale blue	1	6	3	0
limestone	0	0	1 <sup>h</sup>	0
Shale blue	2	0	2	6
Slate, white	0	6		
Limestone, marble	1	6	4	0
Limestone, gray	2	8		
Shale, dark blue	2	6"	2	0
Limestone fossilif		10"		
Shale, dark blue	7	6	7	0
Limestone black	4	6	8	0
Limestone Dk gr	3	6		
Shale black	2	8	2'	0"
Coal	6'	0	5'	2"
Coal to base of 15 ft ls.	51.	0	47'	0"



COAL MINE NOTES.

COUNTY *Washington* TOWN *Nashville* MAP No.  
T. R. S.

OPERATOR *Gallatin Coal & Coke Co.*

OFFICE *Nashville*

*May 18 1906*

MINE *Nashville*

TIPPLE

ENGINES

BOILERS

DRUM

SHAFT

CAGE

HAULAGE

CARS

VENTILATION

DRAINAGE

SPRINKLING

WORKING SYSTEM

MINING METHODS *Shot off solid.*

SIZE OF ENTRIES—MAIN CROSS ROOM NECK

SIZE OF PILLARS—MAIN CROSS ROOM  
SHAFT CHAIN BARRIER

AMOUNT OF TIMBERING SIZE

PROPORTION OF COAL UTILIZED

AMOUNT AND CHARACTER OF WASTE

ACREAGE OF COAL MINED

ACREAGE OF COAL REMAINING

PROPORTION OF MINE RUN AND SCREENED COAL

METHOD OF SIZING RESCREENED

SIZES

PER CENT

PROPORTION AND SIZE OF WASHED COAL

DAILY OUTPUT

UTILIZATION

MARKETS

FREIGHT RATES

SELLING PRICES AT MINE

COAL LAND OWNED LEASED HELD IN FEE

COST OF LAND OWNED LEASED HELD IN FEE

ADDITIONAL NOTES

*0813 ?*





COAL MINE NOTES.  
CONTINUED.

1906  
MINE Nashville

OPERATOR *Gallatin C & C Co.*

ENTRANCE

NAME OF COAL BED

ELEVATION

THICKNESS OF COAL

DEPTH TO FLOOR *425*

MAX.

MIN.

AV.

ALTITUDE OF COAL

LOCATION OF SECTION *Room 3, on 2<sup>nd</sup> W. off Main N.*

No.	SECTION.	In.
1	<i>Ls.</i>	
2	<i>Soft Gray shale 10" to 38"</i>	
3	<i>Coal</i>	<i>46"</i>
4	<i>Blue Band</i>	<i>47</i>
5	<i>Coal</i>	<i>51</i>
6	<i>Blue Band</i>	<i>52 1/2</i>
7	<i>Coal</i>	<i>70 1/2</i>
8	<i>Bone</i>	<i>12" to 18"</i>
9	<i>Fire Clay</i>	<i>few feet.</i>
10	<i>Coal</i>	<i>about 24"</i>
11		
12		
	<i>Tape</i>	<i>Total</i>

SAMPLE No.

CAN No.

CONDITION

GROSS WEIGHT

TIME EXPOSED

NOT SHIPPED

NOT INCLUDED *3, 5 & 7*

SECTION

Feet

*Ls*

*sh.*

*Coal.*

*B. B.*

*B B*

*coal*

*Bone*

*F. C.*

PHYSICAL PROPERTIES BY NUMBERS \* *3 has some sulphur lenses.*

ROOF *varies from a common limy black slate to a very light soft gray shale. Ls. generally found 3' to 4' above coal though*  
FLOOR *sometimes less.*

DIP

FAULTS, ETC. *Faults quite numerous, ran in several directions*  
*thrown from 2' to 3'*

GAS

COLLECTOR *Groat*

REFERENCE *N.B. 7P49*

DATE *1906*

*0813*

*Washington*



COAL MINE NOTES.

July 16 1908

COUNTY *Washington* TOWN *Nashville* MAP No. *0813*  
T. *25* R. *3W* S. *13 NE 1/4 SE 1/4*

OPERATOR *Finke + Harris Coal Co. Abandoned.*  
OFFICE *Nashville*  
MINE *#1* *Nicholson Coal Co. 1912*  
*Nashville Mining Co. 1917*

TIPPLE *Wood 3 tracks*  
ENGINES *2<sup>nd</sup> motion, cylinders 14x28*  
BOILERS

DRUM *Wood 8'*  
SHAFT *6x12'* CAGE *Hand dump*  
HAULAGE *Mule*  
CARS *Wood 1 1/4 ton*  
VENTILATION *Fan 12' blades 5'*

DRAINAGE *Dry.*  
SPRINKLING  
WORKING SYSTEM *Room + Pillar*  
MINING METHODS *Hand; shot off solid*  
*Dupont Single F.*

SIZE OF ENTRIES—MAIN *12'* CROSS *12'* ROOM *25'* NECK

SIZE OF PILLARS—MAIN CROSS ROOM  
SHAFT CHAIN BARRIER

AMOUNT OF TIMBERING *Prop about 3' apart.* SIZE

PROPORTION OF COAL UTILIZED

AMOUNT AND CHARACTER OF WASTE

ACREAGE OF COAL MINED

ACREAGE OF COAL REMAINING

PROPORTION OF MINE RUN AND SCREENED COAL

METHOD OF SIZING *Bar screen ; crude bar + square hole* RESCREENED  
SIZES *1 1/4" 1"*

PER CENT

PROPORTION AND SIZE OF WASHED COAL

DAILY OUTPUT *250 tons.*

UTILIZATION *Domestic + steam.*

MARKETS

FREIGHT RATES

SELLING PRICES AT MINE

COAL LAND OWNED LEASED HELD IN FEE

COST OF LAND OWNED LEASED HELD IN FEE

ADDITIONAL NOTES *Bins 100 tons.* 0813



COAL MINE NOTES.  
CONTINUED.

OPERATOR *Finkert Harris Coal Co* MINE *\*1*  
 ENTRANCE *Shaft.* NAME OF COAL BED *\*6*  
 ELEVATION *500* THICKNESS OF COAL *6'*  
 DEPTH TO FLOOR *431* MAX. MIN. AV.  
 ALTITUDE OF COAL *69.*  
 LOCATION OF SECTION *Main North Entry 4200' in.*

0813

*Abandoned.* USED IN GOOP. REPT. 1912

No.	SECTION.	In.	SECTION
1	<i>Shale black</i>	<i>2'</i>	SAMPLE No. _____ CAN No. _____ CONDITION <i>Dry.</i> GROSS WEIGHT <i>50</i> TIME EXPOSED _____ NOT SHIPPED _____ NOT INCLUDED <i>517</i>
2	<i>Coal</i>	<i>7</i>	
3	<i>Sulphur</i>	<i>1/8</i>	
4	<i>Coal</i>	<i>32</i>	
5	<i>Shale parting</i>	<i>2</i>	
6	<i>Coal</i>	<i>2 1/4</i>	
7	<i>Blue Band</i>	<i>2</i>	
8	<i>Coal</i>	<i>25 1/2</i>	
9	<i>Bone Coal</i>	<i>15</i>	
10	<i>Fire Clay</i>	<i>8</i>	
11	<i>Coal</i>	<i>18</i>	
12	<i>Fire Clay</i>	<i>3± 18"</i>	
Tape		Total	<i>84"</i>

*200' in = 210'*

PHYSICAL PROPERTIES BY NUMBERS *Sulphur splashes thru out coal.*  
*Very irregular in continuity and thickness. It is very soft and has small concretions of iron pyrites thru it.*  
*The blue band is very soft and irregular and does not break out as clean as in other places*

ROOF *Black shale 2'-6" s. 2'. White top 2'-5'. Large concretions in black slate. White top rolls very slightly.*  
 FLOOR *Floor directly under coal #9, is fire clay 8", with 18" of coal below, with fire clay beneath with a thickness of 3' to 18"; with Ls. below.*

Dip: *East about 1' in 100*  
 FAULTS, ETC. *Cleat developed in N+S. direction*

GAS *Some gas reported.*

COLLECTOR *Udden* REFERENCE *N.B. 137 P 26* DATE \_\_\_\_\_

0813

*Washington*

Nashville Mine visited by Survey representatives

May 18 1906	Gallatin Coal & Coke Co	Frank Grout	Sampling
July 10 1908	Finke & Harris Coal Co (1912	Jon Udden	Sampling
<del>Aug 31 1918</del>	Nicholson Bros. Coal Co 1912)	G H Cady	
Aug 31 1918	Nashville Mining Co (12/26/17)	G H Cady	
July 29 1921	Nashville Coal Co	Netzeband	(Sampling)
	Clarkson Coal & Mining Co		1925
Aug 6,7 1931	Clarkson Coal & Mining Co	H P Nicholson	1931 2 columns
July 24,25 1933	Clarkson Coal & Mining CO	Sampling Many	1933 G.H.Cady & L.C McCabe
Nov 26 1935	Clarkson Coal & Mg Co	G H Cady	1935 Roof conditions
April 17 1936	Clarkson Coal & Mining	G H Cady	1936 Photos J M Schopf
Nov. 9 1938	Clarkson Coal & Mining Co	G H Cady	1938 L C McCabe Samples
Dec 14 1938	Clarkson Coal & Mining Co	J M Schopf and Carl Harman	1938 Fragment samples

Mine abandoned 1939 (No production report 1940)

Town, **Nashville**

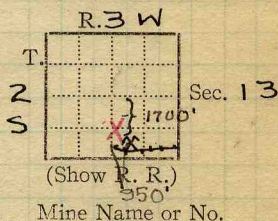
Local Authority, **John S. Clarkson**  
 Gen'l Mgr **Sam Day** Pit boss.  
 Level: Auth., **Cady**

Surface alt., **508** ft.  
 Depth to coal, **420** ft.  
 Alt. top coal, **88** ft.  
 Thickness: Av. **72** in.  
 Max. **114** in., Min. **66** in.

Method,

R. R., **S. & N.**

Location: authority, **Udden**  
 Notebook **137, p 26**  
 Letter from Co. **12-26-17**  
 Operator



Mine Name or No.

19 **Nicholson Bro. Coal Co.** **Nashville**

Successor to **Finke & Harris C. Co.** "

Date **1912**

Succeeded by **Nashville Mining Co.** "

Date **12-26-17.**

✓ Succeeded by **Clarkson Coal & Mng Co.** **Nashville**

Date **1925 Nashville, Del.**

PRODUCTION. **Q**

U. S. No.

19 **About 300T daily**  
**26 Daily cap. 500T.**

**1928**  
~~**1931**~~  
~~**1932**~~

**86 222**  
**66 225**

**1930 #2**

Geol. Notes? **Yes** Coop. No.

Coal secs.? **Yes**

Analyses No. **80680-1-2-3; 174, 1643**

Examined by **Cady Aug. 31, 18**

Ref.

Coal bed name: Local

Survey No. **0813**

County **Washington**

Index No. **X 6**

K.—ACTIVE SHIPPING OR LOCAL COAL MINE.

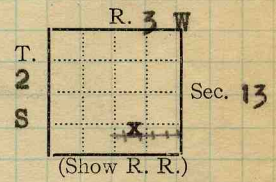


Town, **Nashville**  
 Local Authority, **John L. Clarkson**  
 Gen'l Mgr. **Sam Day** Pit boss  
 Level: Auth., **About 3 feet above**  
**L & N RR tracks at station**  
 Method, **Estimated ; Cady**

Surface alt., **About 508** ft.  
 Depth to coal, **420** ft.  
 Alt. top coal, **88** ft.  
 Thickness: Av. **72** in.  
 Max. **114** in., Min. **66** in.

R. R., **L & N**

Location: authority, **Cady**



Operator

Mine Name or No.

**19 18 Nashville Mining Co**

Successor to  
 Date  
 Succeeded by  
 Date  
 Succeeded by  
 Date

**PRODUCTION.**

							U. S. No.
19 18	About 300	tons	daily				

Geol. Notes? **Yes**  
 Analyses No.

Coop. No.

Coal secs? **Yes**

Examined by **Cady Aug 31, 1918**

Ref.

Coal bed name: Local

Survey No. **6**

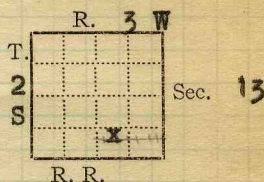
County **Washington**

Index No. **0813**

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



Mine Name or No., **Nashville**  
 mile from **Nashville**  
 Operator, 191 **Nashville Mining Co**  
 Operator, 191



Entrance, **Shaft** Elev., **508 ?** ft.  $\left\{ \begin{array}{l} \text{above,} \\ \text{below,} \end{array} \right.$  **about 3 ft above L&N**  
 Depth to ~~bottom~~ coal, **(420)** ft. Alt. **at Nashville**  
~~top~~ **88 ft above sea level**  
 SURFACE DATA.

- A. Topography, **Gently rolling** See  
 B. Surficial materials. (1) Character, **Some spady material**  
**25-30 feet from surface with some water**  
 (2) Thickness, (3) Effect on mining and shaft-sinking, of former  
 drainage lines, underground water strata, etc. **Find water bearing**

**sands in the drift. Position not known Mr Day thought**  
**they were within # 60 feet of the surface. Rock itself**  
**not water bearing**

- 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,

See

Coal bed name: Local,

Survey No. 6

Collector, **Cady Aug 31, 1918**

Mine, **Nashville**

Co. **Washington**

Index No.

**0813**

L.—SURFACE SHEET (Geol.)

F. Thickness of rock above bed worked, ?

(1) Important variations,

See

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

See

(1) Position,

(2) Character,

(3) Persistence,

(4) Other workable coal beds,

See

H. Cap rock, **Limestone**

(1) Thickness, **15 feet**

(2) Height above coal, **0 to more than 15 ft**

See

I. Immediate roof, **Bk st, Wht top, bastard rk**

(1) Thickness, **St.0- 18** (2) Contact with coal,

**Bk st tight to coal.**

(3) Horizontal variation,

See **X - 1**

J. Draw slate. (1) Thickness, (2) Contacts

**None**

(3) Persistence,

K. Coal bed: Max. **114** Min. **66** Av. **72** inches

(1) Benches, **Two well defined**

(a) Position, **From top to 3' down,**

**from bottom up to blue band or "buck".**

(b) Persistence, **Persistent**

See

(2) Bedded impurities, kind, position in benches, persistence, ease of separation. **Blue band or buck**

**27 - 36" from bottom. In one place 53"**

**Another clay band 4" above blue band, and a third 6" farther up. Thin plates of pyrite not uncommon**

See

(3) Irregularities in continuity of bed (due to deposition, erosion, or movement), **Few breaks where**

**roof changes from white top**

(a) Effect on mining, **Difficult to**

**hold roof**

See

SECTION				
Ft.	fn.	Name	Index	Sym.



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

- (a) Relative hardness, *Top coal relatively harder breaks in somewhat larger blocks* lower
- (b) Lustre, *Upper coal especially waxy compared with*
- (c) Fracture, *Rather blocky especially lower coal*
- (d) Texture, See
- (6) Impurities in coal, other than bedded, *Very little*
- (a) Kind, *Little gypsum or calcite along joint cracks*
- (b) Position and persistence, *Not persistent*
- (c) Rejected, *No* Ease of separation, See

L. Floor: (1) Material, *Commonly bony coal*

- (2) Thickness, *Said to be 18"*
- (3) Variation, *In one place in mine bony coal at base was good and floor was fire clay*
- (4) Note character, condition, tendency to heave, relation to undercutting commercial value. *Bone coal makes excellent floor.*

*1933: Along main westentry shortly after 1918 there was G.H.C. much trouble from a heaving floor. The clay ~~is~~ from below practically closed the entry and since then this part, the mine is wet. The water apparently comes from below and is salty*

See

- (5) Clay sample No. Location,

## M. Stratigraphy,

- (1) Fossiliferous horizons underground, *: Dk' bastard's contains fossils and fragments of charcoal.*

Collection No. Location,

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

See

Collector, *Cady Aug 31, 1918*  
 Mine, *Nashville* Co. *Washington*  
 N.—UNDERGROUND SHEET (Geol.)

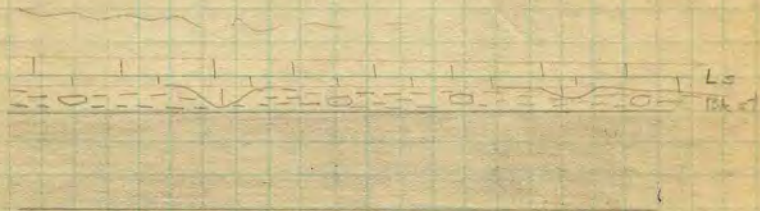
Coal: Survey No. *6* Index No. *0813*

INDEX

I-1

The roof of this mine shows interesting variations. The normal roof seems to be black slate with a common thickness of 15-18 inches. In places this is as much as 2 $\frac{1}{2}$ -3 feet thick but this is not commonly the case. Above the black slate is the cap rock limestone. This has a somewhat irregular under surface. Knobs of the limestone project below into the black slate and even extend down into the top of the coal. These knobs are commonly 4 to 6 feet across and extend from 1 to 2 feet below the bottom of the limestone. Along an entry where the roof has fallen to the cap rock these knobs may occur on the average about every 50 feet. They are not so numerous as to be of especial importance in mining. Bk st contains concretions commonly 12 - 15" across

OK  
933  
5 HC



Sketch showing relation of coal black slate and the caprock with knobs

Instead of the normal roof what is called "white top" is found at many places in the mine. This is a gray massive earthy shale which lies in lenticular masses between the coal and the black slate. It wedges in rather suddenly, is commonly about 12-15 inches thick but in places is 8-10 feet or more thick. Not uncommonly stringers of coal extend from the top of the coal bed into the white top for several feet. The indications point to

OK  
932

INDEX

I-1 Contd:

the probable deposition of of the shale in hollows in the top of the peat as in the case of the rolls in No. 6 coal in the Danville region. Called white top because of white crust that forms over it on exposure. Generally wet.

The third type of roof rock is known as the bastard rock This is a dense earthy rock also in places very limy and commonly darker than the white top. This rock in some places lies between the white top and the black slate and in some places between the coal and the black slate.

It varies in thickness up to possibly 8 to 10 feet, and is commonly hard to hold. There are relationships in the mine which suggest that the bastard rock or dark shale was deposited in irregularities possibly due to erosion after the deposition of the white top and before the deposition of the black shale. The contact between the whitetop and the gray shale is commonly marked by slips and in a few places the slips extend into the underlying coal, and along them the coal is offset, in one place as much as 2 feet and less in other places. The relationships where the whitetop and gray shale are in contact are shown in the accompanying sketches

OK  
ENC

OK

Gray  
= earthy  
ENC 1932

BR ST

gray shale

White top

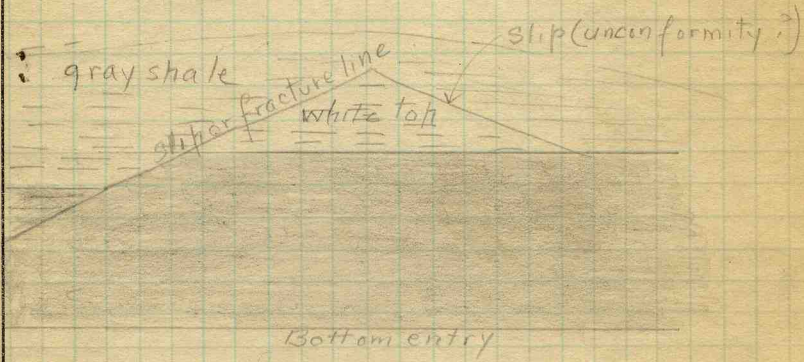
4th south entry



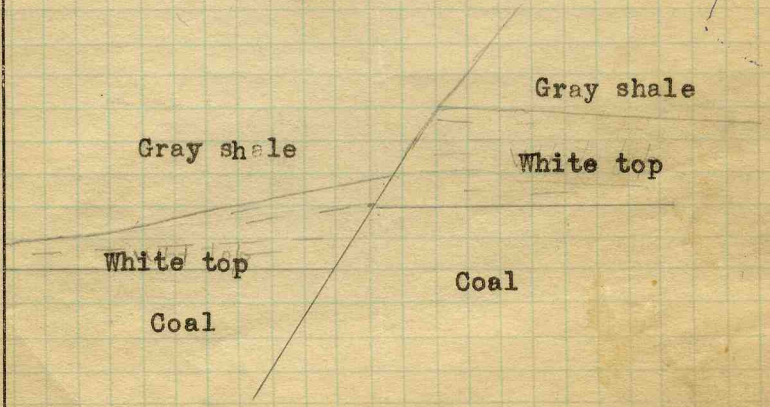
INDEX

I-1 Continued (2)

Along main west between 6 & 7 south



Along 6th south entry



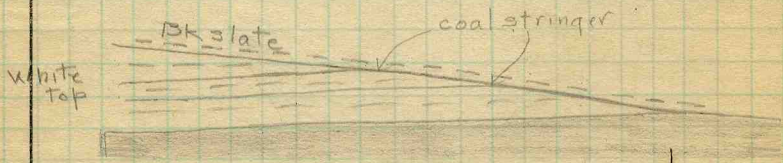
Collector Cady Aug 31, 1918  
Mine Nashville Co. Washington  
X.—EXTRA SHEET No. 3

Coal: Survey No. 6   
Index No. 0813

## INDEX

## I-1 Continued (4)

The accompanying sketch of conditions along east rib of 3rd north entry shows how in numerous places stringers of coal extend from white top into coal as though the deposition of the whitetop began before coal deposit on had entirely ceased



K-1 The coal is divided by a bench of dirt and dirty coal into an upper and lower bench. The dirt band consists of the "buck" and the "droppings". The "buck" consists of about  $1\frac{1}{2}$ " of "blue band" above which is about  $4\frac{1}{2}$ -5 inches of dirty coal and clay. The upper inch being commonly clay or clay and mothercoal. The droppings consist of a lower seam of coal 2-3" thick and a clay band  $\frac{1}{2}$ -1" thick. This coal and clay drops after the lower coal is undermined.

The floor of the mine is a bed of bone coal reported to be 15-18 thick which locally becomes coal. Below this is reported to be a few inches of clay and then 12-14" more coal above fireclay.



Symbol	Description	Inches
	Room #1 3rd north entry	
	Roof: Whitetop. (gray shale)	
	1 Coal, bright	23
	2 Sulphur plate	$\frac{1}{2}$
	3 Coal bright	7
	4 Coal, largely dull	8
	5 Dirt	$\frac{1}{2}$
	6 Coal	3
	7 Dirt: carbonaceous shale	1
	8 Dirty coal	3
	9 Shale, gray (blue band or "buck")	2
	10 Coal	$6\frac{1}{2}$
	11 Pyrite plate	$\frac{1}{8}$
	12 Coal	16
	13 Bone and coal not taken up 2"?	<hr/> 70 $\frac{3}{8}$

3

3

Nos 5 & 6 are called the droppings  
 Nos 7, 8, & 9 are called the dirt band  
 Nos. 5 to 9 inclusive are thrown out by the miner. The coal is shot out in benches. The lower bench below the dropping first, and the the upper bench. Machine are to be installed, to cut in the blue badd after which upper and then lowe benches will be mined out.

The impurities in this bed are high because of the difficulty of separating the dirt from the coal by the present method of mining.

(Scale: 1 division = 3 inches).

Sample No. \_\_\_\_\_ Can No. \_\_\_\_\_ Lab. No. \_\_\_\_\_  
 Collector, Cady Aug 31, 1918 Coal: Survey No. 6   
 Mine, Nashville Co. Washington Index No. 0813  
 Q.—COAL SECTION SHEET.



Symbol Description Inches

Room #2 3rd north entry

Roof white top

1	Coal	38
2	Coal with dirty streak at top (droppings)	42 4
3	Clay	45 3
4	Coal	47 2
5	Clay, blue band	48 1
6	Coal, bottom coal	35 1/2
7	Bone coal in floor 8 - 10"	83 1/2

(Scale: 1 division = 3 inches).

Sample No. \_\_\_\_\_ Can No. \_\_\_\_\_ Lab. No. \_\_\_\_\_  
 Collector, **Cady Aug 31 1918** Coal: Survey No. **6**   
 Mine, **Nashville** Co. **Washington** Index No. **0813**  
 Q.—COAL SECTION SHEET.



Symbol	Description	Inches
<b>Room 4 3rd north entry</b>		
	<b>Roof: gray shale</b>	
	1 Coal	41
	2 Coal with dirt streak at top ( $\frac{1}{2}$ " (Droppings)	4 $\frac{1}{2}$
	3 Dirt band	45
	4 Coal	52 $\frac{1}{2}$ 7
	5 Bony coal in floor	82 29 $\frac{1}{2}$

(Scale: 1 division = 3 inches).

Sample No. \_\_\_\_\_ Can No. \_\_\_\_\_ Lab. No. \_\_\_\_\_

Collector, **Cady** Coal: Survey No. **6**

Mine, **Nashville** Co. **Washington** Index No. **0813**

Q.—COAL SECTION SHEET.





Symbol	Description	Inches
	Last room on the 4th north entry	
	From bottom of blue band to top of coal	46½
	Coal - to usual bone coal	24
	Coal - commonly bony	9½
	Coal bone (floor) ?	
		80

(Scale: 1 division = 3 inches).

Sample No. \_\_\_\_\_ Can No. \_\_\_\_\_ Lab. No. \_\_\_\_\_  
 Collector, **Cady Aug 31, 1918** Coal: Survey No. **6**   
 Mine, **Nashville** Co. **Washington** Index No. **0813**  
**Q.—COAL SECTION SHEET.**



Symbol Description Inches

Room 1 off the 4th north entry

- 1 Coal 33
- 2 Clay streak 1/2
- 3 Coal 5
- 4 Clay, carbonaceous 3
- 5 Coal, dirty 3
- 6 Shale, blue band; dk cl and moth r cl 1 1/2
- 7 Coal 31

77

Bone coal in floor

(Scale: 1 division = 3 inches).

Sample No. \_\_\_\_\_ Can No. \_\_\_\_\_ Lab. No. \_\_\_\_\_  
 Collector, Cady Aug 31, 1918 Coal: Survey No. 6   
 Mine, Nashville Co. Washington Index No. 0813  
 Q.—COAL SECTION SHEET.



Symbol

Description

Inches

End of 7th north entry

Roof: white top

- 1 Coal
- 2 Clay, dark
- 3 Coal
- 4 Dirt band; two clay and 1 coal band
- 5 Coal
- 6 Coal, commonly bony coal

35 $\frac{1}{2}$   
 1  
 4  
 5 $\frac{1}{2}$   
 28  
 34  
 108

Floor: fire clay

35 $\frac{1}{2}$   
 3

Only place in mine where entire thickness of coal was being mined. Elsewhere lower part bony, or thought to be bony

108  
 34  
 74

(Scale: 1 division = 3 inches).

Sample No.

Can No.

Lab. No.

Collector, Cady Aug. 31, 1918

Coal: Survey No. 6

Mine, Nashville

Co. Washington

Index No.

0813

Q.—COAL SECTION SHEET.



Symbol	Description	Inches
	Last room 3rd south entry	
	Roof: black slate	
	1 Coal	26 <sup>1</sup> / <sub>2</sub>
	2 Clay, dark carbonaceous	5
	3 Coal	7
	4 Dirt band; coal and clay	27
	5 Coal	<u>66</u>
	Reported:-	
	6 Coal, bony	15-18
	7 Fire clay ?	6
	8 Coal	12-14
	Floor: fire clay	
	Only 1 to 5 mined except in one or two places in mine	

(Scale: 1 division = 3 inches).

Sample No.

Can No.

Lab. No.

Collector, Cady Aug 31, 1918

Coal: Survey No. 6 

Mine, Nashville

Co. Washington

Index No.

0813

Q.—COAL SECTION SHEET.



Town, *Nashville*  
Local Authority,

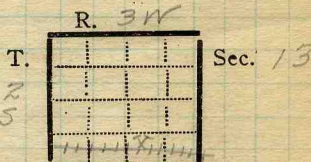
Surface alt., *505 ±* ft.  
Depth to coal, *425* ft.  
Alt. top coal, ft.  
Thickness: Av. *70* in.  
Max. *78* in., Min. *54* in.

Level: Auth.,

*July 29 1921*

Method,

R. R., *LEN*



Location: authority,

(Show R. R.)

Operator

Mine Name or No.

19 *21 Nashville Coal Co* *Nashville*

Successor to

Date

Succeeded by *Clarkson Coal & Min. Co*

Date *1926 coal act.*

Succeeded by

Date

**PRODUCTION.**

							U. S. No.
19			<i>200 ton daily</i>				
	<i>John Clarkson M. Mgr. very willing to give any assistance possible.</i>						

Geol. Notes? *Yes*

Coop. No.

Coal secs? *3*

Analyses No.

Examined by *Natzaband*

Ref. *Loose leaf*

Coal bed name: Local

Survey No. *6*

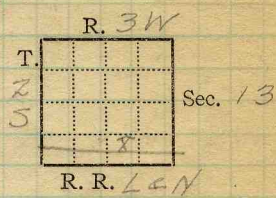
County *Washington*

Index No. *0813.52*

K.—ACTIVE SHIPPING OR LOCAL COAL MINE.



Mine Name or No., *Nashville*  
*7 1/2* mile from *Nashville*  
Operator, 19*21* *Nashville Coal Co*  
Operator, 19*1*



Entrance, *shaft* Elev., *505±* ft.  $\left\{ \begin{array}{l} \text{above,} \\ \text{below,} \end{array} \right.$  *sea level.*  
Depth to ~~bottom~~ coal, *425* ft. Alt. *80±*

SURFACE DATA.

- A. Topography, *Rolling* See
- B. Surficial materials. (1) Character, *Drift & loess*
- (2) Thickness, *8' ?* (3) Effect on mining and shaft-sinking, of former drainage lines, underground water strata, etc. *Shaft caved in spring of 1921 due to quicksand.*

- C. Outcrops, *none?* (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,

See

Coal bed name: Local, Survey No. *6*

Collector, *Netzeband - 1922*

Mine, *Nashville* Co. *Washington* Index No. *0813.52*

L.—SURFACE SHEET (Geol.)



F. Thickness of rock above bed worked, *106' ?*

(1) Important variations,

See

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

*White shale makes treacherous* See of *X1.*

(1) Position, *Above coal*

(2) Character, *Soft, light-grey shale (plastic when wet)*

(3) Persistence, *In patches thruout mine.*

(4) Other workable coal beds, *No. 5 3 1/2' thick*

See

H. Cap rock, *Limestone*

(1) Thickness, *15'*

(2) Height above coal, *Featheredge to > 10'* See *X1.*

I. Immediate roof, *White or black shale*

(1) Thickness, *40-70'* (2) Contact with coal,

*Coal sticks to black shale*

(3) Horizontal variation, *Varies considerable in thickness & character.* See

J. Draw slate. (1) Thickness, (2) Contacts

*Some of black shale draws.*

(3) Persistence,

K. Coal bed: Max. *78* Min. *54* Av. *70* inches

(1) Benches, *Two*

(a) Position, *Above & below B.B.*

(b) Persistence, *Thruout mine.*

See

(2) Bedded impurities, kind, position in benches, persistence, ease of separation. *Blueband 7"*

*thick in places causes much trouble. Layer of lime coal 18" thick about 2' below blueband. Use it for bottom.*

See

(3) Irregularities in continuity of bed (due to deposition, erosion, or movement, *Fault in east,*

*minor slips.*

See

(a) Effect on mining,

*Work abandoned in east.*

See

SECTION				
Ft.	fn.	Name	<del>Notes</del>	Sym.
15'		Limestone		
	10	Shale		
	5 10	Coal		
	5	Flourclay		
			<i>1 Div = 41</i>	

Collector, *Netzeband*

Coal: Survey No. *6*

Mine, *Nashville*

Co. *Washington*

Index No. *0813-52*

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

- (a) Relative hardness, *Very much harder than majority of Williamson Co. coal.*
- (b) Lustre, *Top 20" bright with  $\frac{1}{2}$ " glance layers, rest dull &*
- (c) Fracture, *No cleat seen. } bright  $\frac{1}{2}$  to  $\frac{1}{4}$  layer*
- (d) Texture, *Laminated.* See X2
- (6) Impurities in coal, other than bedded, *Pyrite is found thruout*
- (a) Kind, *the coal as lenses (max 2") & stringers.*
- (b) Position and persistence,

(c) Rejected, *large lenses* Ease of separation, *lose much coal because pyrite sticks tight.* See X1

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

- (2) Thickness, *4" to 5'*
- (3) Variation, *Not seen to determine character.*

(4) Note character, condition, tendency to heave, relation to undercutting commercial value.

*The top of the 18" layer of bone coal is used to cut upon so that in none of the fresh workings was the floor clay exposed. There is 24" of coal below the bony layer.*

*The entire south workings were lost thru a squeeze & the floor heaving gives much trouble.* See X2

(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, *Natzband*

Coal: Survey No. 6

Mine, *Nashville* Co. *Washington*

Index No. *0813.52*





INDEX

(36713-500-7-20)

G The roof is formed of limestone,  
 H black slate and light grey shale, which  
 I replace one another in rapid suc-  
 cession but no definite order.  
 Where all three are exposed you  
 find 1/2" to 3' light-grey, soft shale,  
 in contact with the coal, then 18 to  
 24" of black, brittle, fissile shale  
 which in turn is in contact with  
 the limestone.

In this mine the lower surface  
 of the limestone is very irregular  
 in many places nodules (4" dia)  
 project about 2' below the lower  
 surface of the roof. The nodules  
 appear to be the result of deposition  
 in hollows in the upper surface of  
 the black shale. The upper  
 surface of the coal is fairly regular,  
 showing apparently no difference  
 when under limestone or grey shale.  
 From all observations it seems  
 apparent that the limestone  
 and black shale comes and  
 goes above the coal allowing  
 for the deposition of the  
 grey shale, that is, that the  
 upper surface of the grey  
 shale is irregular and not  
 the lower.

(Probably cut out by Amel Bliss - Hopkins)  
 K3 The workings in the east are  
 abandoned because they ran  
 into a fault along the section  
 east and could not locate the  
 coal again. These workings  
 were abandoned years ago  
 and are impassable now

Collector Netzeband

Index No. 0813.52

X- EXTRA NO. 1

County Washington



INDEX

(36713-500-7-20)

L4 The workings in the south were lost thru a big squeeze which closed up the entire workings. The floor still heaves a little around the edges of the main squeeze making it necessary to grade the main roadways at frequent intervals. They are trying to drive an entry thru the squeeze so as to be able to pick up the coal that otherwise will be lost.

K5 The coal in this mine is unusually hard. The upper 20" is a bright, hard coal with a fairly well developed conchoidal fracture. It contains some glance in layers up to about  $\frac{3}{16}$ ". The coal between this and the blue band contains an increasing amount of dull coal with less glance. About 3" above the blueband is a "black jack" parting. The blueband in most parts of the mine is composed of a shale about  $2\frac{1}{2}$ " coal 2-3" and another band of shale 2-3". The shale bands contain many pyrite lenses (max 2") this 7 or 8" together with the coal up thru the "black jack" band is thrown out by the miners. The lower coal is very hard and is composed of laminae of dull & bright ( $\frac{1}{16}$ " -  $\frac{1}{8}$ ") mostly dull. There seems to be much pyrite disseminated thru out this coal. Below this coal is a layer of 18" of bony coal which is not mined. The top

Collector

Netzeband

Index No.

0813-52

x

EXTRA NO. 2

County

Washington



INDEX

(36713-500-7-20)

of this bony coal is used to undercut upon. There is about 2' of workable coal below the bony layer but no attempt is made to recover it.

Nashville coal was known to be very dirty coal but under the new management the coal has improved much in quality.

Collector

Netzeband

Index No.

0813.52

x 3

EXTRA NO

3

County

Washington

Symbol

Description

Inches

Room 9, 7<sup>th</sup> N off Main W

White shale roof 18" to 48"

Sulphur layer at contact with coal

Feet	Description	Inches	Inches
	1 Coal	12	12'
	2 Charcoal	12 1/4	1 1/4
	3 Coal	17 3/4	5 1/2
	4 Charcoal + Pyrite	18 1/2	3/4
	5 Coal	36 1/2	18"
+	6 Blue band shale	39 1/4	2 3/4"
	7 Coal	41 3/4	2 1/2
+	8 Shale	43 1/4	1 1/2
	9 Coal	68 1/4	25
+	10 Pyrite	68 3/4	1/2
+	11 Bone coal	88 3/4	18
+	12 Coal	110 1/2	24

Total 69

Time 1 hr 45 min

Excluded 6, 8, 10, 11, 12  
Weight gross 25 lbs

Condition Dry fresh.

68 3/8

(Scale: 1 division = 3 inches).

Sample No. N-21-101 Can No. 17898 Lab. No. 80681

Collector, Netzeband Coal: Survey No. 6

Mine, Nashville Co. Washington Index No. 0813.52



Symbol

Description

Inches

July 29, 1921

Crosscut Back West Entry

Condition Dry=fresh  
 Time 2 hr 38 min  
 Excluded 4, 5, 6  
 Weight gross 26 lbs

Black shale roof		
1 Coal Bright	73 3/4	23 1/2
2 Charcoal Band	50 1/4	1/8
3 Coal	50 1/2	1 4
4 Bone coal	30 1/2	2 1/2
5 coal + pyrite } Blue Band	33 1/2	2 1/2
6 Brown shale	30 1/2	2 1/2
7 coal	28 1/2	4
8 pyrite	24 5/8	1/8
9 coal	24 1/2	3 3/4
10 pyrite	20 7/8	1/4
11 coal	20 1/2	20 1/2
12 Coal (taken up later)	App 2"	

Total 73 1/4

(Scale: 1 division = 3 inches).

Sample No. N-21-102 Can No. 18014 Lab. No. 80682

Collector, Metzger Coal: Survey No. 6

Mine, Nashville Co. Washington Index No. 0813-52

Symbol

Description

Inches

July 29, 1921

Room 5, 8<sup>th</sup> S off Main W

Condition - face sweating - fresh

Time 1 hr 43 min

Weight gross 25 lbs

Black shale roof

- 1 coal Bright
- 2 pyrite
- 3 coal
- 4 shale & pyrite
- 5 coal
- 6 pyrite
- 7 coal

19 1/4    14 1/2  
 48 3/4    9 3/4  
 48 1/2    1 4/5  
 37 1/4  
 35  
 2 1/2  
 2 1/4

20 1/2  
 16  
 10 3/4  
 2 3/4  
 13 1/2  
 1/4  
 21 1/4

Tape 70"

124

69 3/8

(Scale: 1 division = 3 inches).

Sample No. *N-21-103* Can No. *17746* Lab. No. *80680*

Collector, *Natzaband* Coal: Survey No. *6*

Mine, *Nashville* Co. *Washington* Index No. *0813.52*

Q.—COAL SECTION SHEET.



John C. Moore Corporation, Rochester, N. Y. Binder and holes in leaves, each Patented 1906.  
(35031-500-6-23)

Mine Name or No. \_\_\_\_\_ Mine Address Nashville

Operator Clarkson Coal and Mining Co

Main Office Address Nashville

Illinois

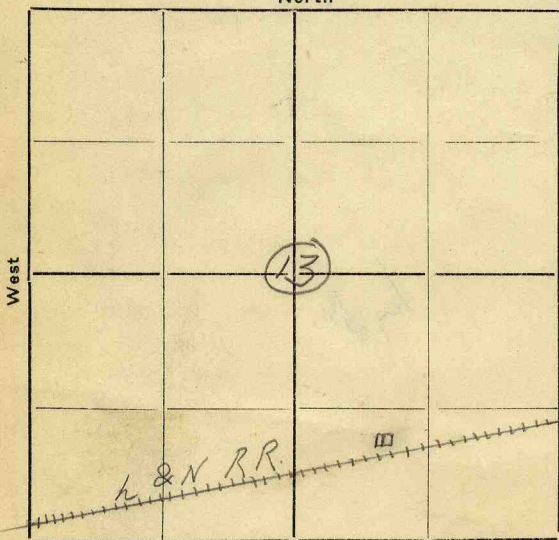
Location of Mine:

Township Name Nashville County Washington

Section No. 13 Township 2 S Range 3 W

Indicate location of mine and position of R. R. in plat of section below.

North



Kindly state number of feet from quarter section lines:

1600 from N. line

\_\_\_\_\_ from E. line

\_\_\_\_\_ from S. line

960 from W. line

Idle entire year 19 \_\_\_\_\_ Yes

No

Abandoned (date) 19 \_\_\_\_\_

South

Surface landing is \_\_\_\_\_ feet above sea level or about \_\_\_\_\_ feet (above)

(below) railroad station at \_\_\_\_\_ (nearest town).

Depth to top of coal is 409 feet.

Average thickness of coal is 5 feet 8 inches. what is mined

Nicholson Aug 6, 1931 Do not fill in below this line.

Coal Bed Name Belleville Survey No. 6

County Washington County Index No. \_\_\_\_\_



Operator, *Clarkson Coal & Mining Co.* Date *Aug 6, 1931*  
 Mine, *Clarkson* Sec. *13* T. *2 S* R. *3 W*  
 Location in mine, *3000' North 900' East* *Lower*

GRAPHIC SECTION		DESCRIPTION OF SECTION (AT POINT SAMPLED)		
In.	No.	No.	(Note character and thickness of roof)	Inches
			<i>Black slate Roof. Quite platy</i>	
			<i>Top of seam.</i>	
			<i>(6) Pyrite lamina, 1/32"</i>	
			<i>(5) Pyrite lamina 1/16"</i>	
			<i>(4) 1/2" charcoal</i>	
			<i>(3) soft dirty coal &amp; shale 1/2"</i>	
			<i>(2) Dirt band, here called the "Buck", composed of clean clay, dirty shale, shaly coal and coaly material.</i>	
			<i>(1) Bone coal 2' thick below which there is 2' more of coal.</i>	
			(Note character and thickness of floor)	
			Total thickness of coal	
			Condition,	Time, hr. min.
			Wt. Gross, lbs.	Net, lbs.
			What Nos. shipped by Co.?	
			Excluded from sample: No.	
			Sample represents	in. tons.
			Impurities? How do they occur?	

(1 division = 3 in.)

*Col* Sample No. 18 Can No. *R18* Lab. No.

Collector, *Hammelman* Aug 6, 1931 Coal: Survey No.   
 Mine, *Clarkson* Co. *Washington* Index No.



3500' North and 900' E of shaft.

$$\frac{41}{24} \frac{1}{7} \text{ (8.1)}$$

$$\frac{4100}{21} \frac{200}{42}$$

$$\frac{200}{1200} \frac{9}{100}$$

GEOMATIC SECTION

SECTION OF SECTION

DATE  
BY  
CHECKED

NO.

Operator, *Clarkson Coal & Mining Co* Date *Aug 7 1931*  
 Mine, *Clarkson* Sec. *13* T. *25* R. *3 W*  
 Location in mine, *4100' North 1800' West* *(over)*

GRAPHIC SECTION

DESCRIPTION OF SECTION (AT POINT SAMPLED)

In.	No.	No.	(Note character and thickness of roof)	Inches
6			<i>Black slate Roof. Quite hard.</i>	
5			<i>Top of seam 71"</i>	
	8			
	7		<i>(8) Pyrite 1/16"</i>	
			<i>(7) Pyrite 1/8"</i>	
			<i>(6) Pyrite 1/16"</i>	
	6		<i>(5) Charcoal 1/4"</i>	
			<i>(4) Clay, shale and coal 8"</i>	
	5		<i>(3) Pyrite 1/4"</i>	
			<i>(2) Pyrite 1/4"</i>	
	4 8"		<i>(1) Bone coal floor. 2' thick below which there is 2' coal</i>	
2			(Note character and thickness of floor)	
	3		Total thickness of coal	
	2			
			Condition,	Time, hr. min.
			Wt. Gross, lbs.	Net, lbs.
			What Nos. shipped by Co.?	
			Excluded from sample: No.	
			Sample represents	in. tons.
			Impurities? How do they occur?	

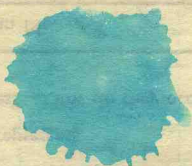
(1 division = 3 in.)

Sample No. *19* Can No. *R 19* Lab. No.

Collector, *H M. Nielsen* Coal: Survey No. 6  
 Mine, *Clarkson* Co. *Washington* Index No.

4100' North and 1800' West of shaft

Sheet No. 10  
Coast Survey No. 10



No.	Description	Depth	Temperature	Direction	Force
1	Surface water	0	55.0		
2	10 fms	10	54.5		
3	20 fms	20	54.0		
4	30 fms	30	53.5		
5	40 fms	40	53.0		
6	50 fms	50	52.5		
7	60 fms	60	52.0		
8	70 fms	70	51.5		
9	80 fms	80	51.0		
10	90 fms	90	50.5		
11	100 fms	100	50.0		
12	110 fms	110	49.5		
13	120 fms	120	49.0		
14	130 fms	130	48.5		
15	140 fms	140	48.0		
16	150 fms	150	47.5		
17	160 fms	160	47.0		
18	170 fms	170	46.5		
19	180 fms	180	46.0		
20	190 fms	190	45.5		
21	200 fms	200	45.0		
22	210 fms	210	44.5		
23	220 fms	220	44.0		
24	230 fms	230	43.5		
25	240 fms	240	43.0		
26	250 fms	250	42.5		
27	260 fms	260	42.0		
28	270 fms	270	41.5		
29	280 fms	280	41.0		
30	290 fms	290	40.5		
31	300 fms	300	40.0		
32	310 fms	310	39.5		
33	320 fms	320	39.0		
34	330 fms	330	38.5		
35	340 fms	340	38.0		
36	350 fms	350	37.5		
37	360 fms	360	37.0		
38	370 fms	370	36.5		
39	380 fms	380	36.0		
40	390 fms	390	35.5		
41	400 fms	400	35.0		
42	410 fms	410	34.5		
43	420 fms	420	34.0		
44	430 fms	430	33.5		
45	440 fms	440	33.0		
46	450 fms	450	32.5		
47	460 fms	460	32.0		
48	470 fms	470	31.5		
49	480 fms	480	31.0		
50	490 fms	490	30.5		
51	500 fms	500	30.0		
52	510 fms	510	29.5		
53	520 fms	520	29.0		
54	530 fms	530	28.5		
55	540 fms	540	28.0		
56	550 fms	550	27.5		
57	560 fms	560	27.0		
58	570 fms	570	26.5		
59	580 fms	580	26.0		
60	590 fms	590	25.5		
61	600 fms	600	25.0		
62	610 fms	610	24.5		
63	620 fms	620	24.0		
64	630 fms	630	23.5		
65	640 fms	640	23.0		
66	650 fms	650	22.5		
67	660 fms	660	22.0		
68	670 fms	670	21.5		
69	680 fms	680	21.0		
70	690 fms	690	20.5		
71	700 fms	700	20.0		
72	710 fms	710	19.5		
73	720 fms	720	19.0		
74	730 fms	730	18.5		
75	740 fms	740	18.0		
76	750 fms	750	17.5		
77	760 fms	760	17.0		
78	770 fms	770	16.5		
79	780 fms	780	16.0		
80	790 fms	790	15.5		
81	800 fms	800	15.0		
82	810 fms	810	14.5		
83	820 fms	820	14.0		
84	830 fms	830	13.5		
85	840 fms	840	13.0		
86	850 fms	850	12.5		
87	860 fms	860	12.0		
88	870 fms	870	11.5		
89	880 fms	880	11.0		
90	890 fms	890	10.5		
91	900 fms	900	10.0		
92	910 fms	910	9.5		
93	920 fms	920	9.0		
94	930 fms	930	8.5		
95	940 fms	940	8.0		
96	950 fms	950	7.5		
97	960 fms	960	7.0		
98	970 fms	970	6.5		
99	980 fms	980	6.0		
100	990 fms	990	5.5		

DEPTH SECTION OF SECTIONAL TEMPERATURES

Observed at 10:30 AM  
Date 10/10/1900

## Column #19

This column was cut at the corner of an entry and a room from a straight face. The coal was extra hard and tough and very difficult to cut. The dust band was removed from the center of column to facilitate the taking down of the column. This was placed in its correct order at the bottom of Box #2, that is pieces of the dust were wrapped in a sack and placed there. Some of the bone coal floor was placed at the top of Box #1. There is about 2' of bone and 2' of coal left over for a floor.

Aug 7, 1930  
McCabe with Long

Column 16 Centralia C-G No 5

Vitram	17.31	Room 13	13S-4W
Claram	73.02		
Fusain	7.47		
			A.4th 1931
Clay	1.46		
Pyrite	0.72		
	<u>99.97</u>		

Column 17

		Room 4	3S, 6W
Vitram	14.43		
Claram	78.41		Aug 5, 1931
Fusain	5.35		
Pyrite	1.47		
Clay	0.31		
	<u>99.97</u>		

Column 18 Nashville

300' N  
900' E  
↓ shaft  
Aug 6 1931

Vitram	10.88
Claram	73.52
Fusain	10.50
Durain	
Clay	3.79
Pyr	1.28
	<u>99.97</u>

2nd Anal	
12.24	
<del>62.63.81</del>	
+ 2.81	→ 77.71
13.90	
Clay 4.83	
Pyr 1.69	
<u>99</u>	
Calc .70	99.99

Column 19

4100 N  
1800 W  
↓ shaft

Vitram	11.39
Claram	75.71
Fusain	7.67
Pyr	1.09
Clay	4.02
	<u>99.88</u>

19.1	
64.0	
1.6	
Boor 6.6	
Pyr 3.5	
Clay 5.1	
<u>99.9</u>	

Nicholson -

Clarkson Coal and Mining Co.  
Columns No. 18 and 19.

The Clarkson Coal and Mining Co. is a small independent organization consisting of two brothers who operate the mine and who do a good railroad coal business and a very good local coal business. They have no selling organization. The mine is located at the edge of the town of Nashville, the county seat of Washington County. In addition to the business of mining coal the Clarkson brothers have developed and are manufacturing a track-mounted loading machine that has the promise of becoming very popular. The plant for manufacturing this loader is located at the mine.

There are some unusual conditions in this mine and the mine is unique in several ways. It is the only mine in the state as far as I know that only mines the top part of the seam and that does the cutting in the middle of the face. A vertical section of the coal from the floor to the roof would show two feet of coal, then two feet of bone, then 27 inches of coal, then 8 inches of shale and shaly coal, and then 33 inches of coal. The roof is heavy black slate. At the mine they will tell you that the 8 inches of shale and shaly coal is the "blue band" and in which they do their cutting. However the bottom of this dirt band is six feet above the fire clay, which is out of proportion to the distance that the real blue band is above the floor in other mines of the state that are mining No. 6 coal.

It is my sincere belief that the two feet of bone which they leave for a floor is the so called "blue band", only here it is different in character than commonly found. There need to be no opposition to this supposition of the grounds that the blue band never is bone coal for in many mines that were entered this summer and in some entered two years ago, the blue band was locally nothing but bone coal, though it was no more than the usual thickness.

Since it is not uncommon to find the so called "blue band" changed into bone coal or carbonaceous shale the only unusual circumstance at this mine is its unusual thickness.

The upper dirt band in which the cutting is done is about three feet from the roof. The other place where conditions of this sort are found is in the mine of the Franklin County Coal Company at Royalton. In this mine as noted when I visited it two years ago and as recorded in the field notes taken at that time, there was a shale band near the top of the seam, which was eight or nine feet thick. The shale band there at Royalton had much the same character as the dirt band at Nashville, that is alternating and interbedding layers of shale and coal. At Royalton there were many plant impressions in the shale which were not noted at Nashville. This dirt band at these two places occupy very nearly the same stratigraphic position in the seam with respect to the roof

and the floor. As characteristic of the No. 6 coal seam the upper part of it is very much banded, even some of the mines in Franklin County having distinct layers of very dull coal, approaching bone in character. At several of the mines these bands could be correlated from one to another, being three of them close together and about 18 inches from the top. It would not seem surprising that if there was a hesitation in the coal forming processes that locally eight inches of shaly coal might accumulate in one local place as it had done in the Nashville area. On the basis of these correlations I believe that the bone coal that is left as a floor in the Nashville mine occupies the same horizon in the seam as the true blue band and that the upper dirt band in which they do the mining occupies another horizon comparable to the shaly coal band as found at Royalton and the characteristic dull coal bands in Franklin County.

13  
14  
Column No. 18 was cut from a irregular rib on the side of an entry at a point 3000 feet north and 900 feet east of the shaft.

Column No. 19 was cut from the corner of a room and an entry at a point 4100 feet north and 1800 feet west of the shaft. The room neck had been advanced in only two cuts and the entry was only ten feet ahead so the coal was absolutely fresh. Mr. McCabe took some pictures of this column as it was being cut.

a



Location and Elevation Data

Location: Exact  Approximate  
(Approximate only if no trace of record of original exists)

Location by Advance Sheet - Nashville Quadrangle

Date \_\_\_\_\_ Notebook No. \_\_\_\_\_ Page \_\_\_\_\_

Looseleaf ref. \_\_\_\_\_

Map files No. \_\_\_\_\_

Description of location

Position in sec., 1/4 sec., 40 acres

\_\_\_\_\_ feet from North line

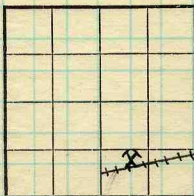
1800 feet from East line

1025 feet from South line

\_\_\_\_\_ feet from West line

NE 1/4 SW 1/4 SE 1/4

Sec. 13



T. 2 S.  
R. 3 W.

Farm Company Mine property  
No. \_\_\_\_\_

Company Clarkson Coal & Mining Co.

No. Nashville mine  
County No. 53

Other description: \_\_\_\_\_

Probably too high by  
T.M. contours  
Based on RR Levels

Elevation 508 ft.

By G.H. Cady

Method: Level, transit, alidade, hand level

Field estimate from Railroad levels

Elevation of \_\_\_\_\_

Height of point above ground \_\_\_\_\_

Date \_\_\_\_\_ Notebook \_\_\_\_\_ P. \_\_\_\_\_

Looseleaf ref. Mine notes by GH Cady - July 24-25, 1933

Map files No. \_\_\_\_\_

Description of item: (drill hole, mine, etc.) Active shipping shaft mine

Abd. 1943 - 19 1939-40

July 24, 25, 1933

1933

See  
Extra  
Sheet  
No.

Entrance **Shaft** 407 Rail to top of coal  
 Kind of tippel **Wooden** 415' RR to RR. (1933)  
 Motive power for hoist **Steam**  
 Source if electrical

Kind of hoist (cage, skip, etc.) **Cage**  
 Kind of haulage **Motor and mule**  
 Mining equipment **Center cutting machines**  
 Note any features of the equipment that are of special interest

## SURFACE DATA.

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

- C. Outcrops, (1) Character,  
 (2) Structure, **About horizontal**  
 (3) Fossil horizons, **- Caprock, + lens of ls between C + bk slate**  
 Collection No.,  
 (4) Evidences of subsidence,  
 D. Note collection of mine maps, drill records and shaft logs.

See drill record sheet,

- E. Notes on surrounding area,

July 24, 25 1933

Coal bed name: Local,

Survey No. 6 Collector, **G. H. Cady**Mine, **Nashville**Co. **Washington**Index No. **0813**



## K. (5) Physical character of Coal,

(a) Relative hardness, *Upper bench and bench below blueband are hard, middle bench less hard*

(b) Lustre, *Upper bench, slightly greasy, luster*

(c) Fracture, *Best cleat NE. SW. - Only fairly well developed*

(d) Texture, *Coal largely clarain* See

(6) Impurities in coal, other than bedded, kind, position, persistence, ease of separation, etc. *Calcite facings are common particularly in upper bench. Kaolinite facings rare. Pyrite facings fairly common. Some lenses of pyrite and ls petrefactions.*

See

L. Floor: (1) Material, *Black carbonaceous & coaly shale or bone*

(2) Thickness, *said to be 18" to 2'*

(3) Variation,

*Below the bone is 2' of coal and then 2'± fireclay*

(4) Note character, condition, tendency to heave, relation to undercutting, commercial value.

*The fire clay at bottom of bed heaved badly along the main west entry at one time practically completely filling entry*

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 July 24, 25, 1933*Cola: Survey No. *6*Mine, *Nashville*Co. *Washington*Index No. *0813*

I  
1-3

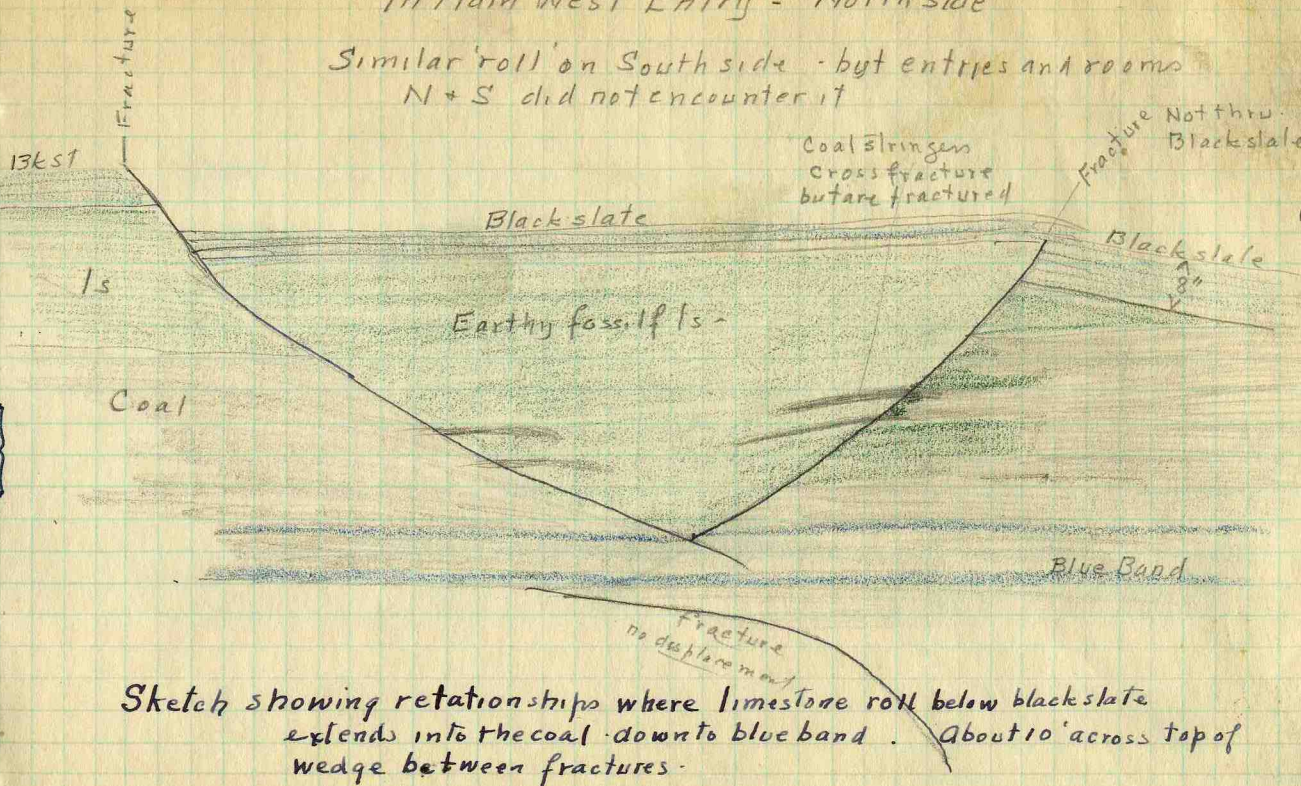
The immediate roof is egl either black slate or gray shale (soapstone) where black slate is the roof there is usually a draw slate up to 6 to 8 inches thick but commonly thinner. The soapstone wedges in between the black slate and the coal, the slate riding up over the soapstone to an undetermined thickness - as much as 10 feet soapstone has fallen in places

The soapstone roof covers the coal in a large part of the northwest section of the mine but occurs here and there in other parts. The coal is in general this roof is difficult to hold and is likely to be full of slips and large masses of the roof fall out very suddenly

In addition to the black slate + soapstone there are lenses of a earthy black fossiliferous limestone occasionally present below the black shale. These may be directly on the coal or on the soapstone where this intervenes between the black shale and coal. In one locality a thick wedge of this earthy limestone extended down into the coal as far as the blue band - with each margin smoothly + abruptly terminated by a fracture - See X-2 For sketch

In Main West Entry - North side

Similar roll on South side - but entries and rooms  
N + S did not encounter it



Sketch showing relationships where limestone roll below black slate extends into the coal down to blue band. About 10' across top of wedge between fractures.

July 24 1932

Coal: Survey No. 6  
Index No. 0813

Collector Cady  
Mine Nashvile Co. Washington  
X.—EXTRA SHEET NO. 2

INDEX  
I  
1-3



- K The seam contains several well marked benches:
1. The bottom bench is said to be about 2 feet thick but was not seen
  2. Above (1) is a bench of boggy coal also 18" to 2 feet thick. This is a very impure coal consisting practically of a coaly shale - full thickness not seen - (locally, this became good coal in one place in mine)  
Neither 1 or 2 are mined. No 2 forming the floor of the mine
  3. The bottom coal mined is 24" to 26" thick and lies between the 'bone' and the blue band
  4. The blue band is a dk gr. carb to coaly shale, only locally light gray 3" to 4" thick
  5. A thin. There is a ~~poor~~ light contact between the blue band and the coal below so that mining is done in the blue band entirely removing it.
  5. A thin layer of coal 3" to 4" thick lies between the blue band and clay band above (see 6)
  6. A clay band 1 to 3" thick is persistent 3 to 4 inches above the blue band. There is a well developed parting above this clay band. After the blue band is cut out the coal (5) and clay band (6) hang above the cut and are wedged down by the minor.
  7. The middle bench is not readily separated from the upper bench but is characterized by being well bedded with fairly numerous but thin fusain partings. It is about 2 feet thick
  8. The top coal is the best coal. Is solid, practically all clarain - has a slight greasy luster - and has ~~not~~ few partings. It is also about 2 feet thick with an indefinite parting below

Collector Cady July 24, 25 1933  
Mine Nashville Co. Washington

Coal: Survey No. 6  
Index No. 0813

Sample 1



Operator, Clarkson Coal & Mg Co

Date July 24, 1933

Mine, Nashville

SW. SE Sec. 13 T. 2.S., R. 3W

Location in mine, Room 50, 10th N off Main West  
3450' N - 2400 W of shaft

GRAPHIC SECTION

DESCRIPTION OF SECTION (AT POINT SAMPLED)

In.	No.	No.	(Note character and thickness of roof)	Inches
			Top: Gray soapstone shale - possibly 15' Hard to hold	
17 1/4		1.	Clairain with thin (1/32") streaks vitrain - calc. Fe facing (edge of ls. conc. 1/4" thick 3 1/8 from top.) (3' x 1/4")	11 1/2
12"		2.	Fusain wedge 0 to	3/8
		3.	Coal, bright banded - thin vitrain bands	1 3/4
		4.	Fusain parting (1/32") - fairly continuous	
		5.	Coal, bright banded - thin vitrain bands	3
		6.	Fusain parting	
		7.	Coal, bright banded - thin vitrain bands	12 3/4
		8.	Fusain parting not persistent	
		9.	Coal bright banded - thin vitrain bands	4 7/8
		10.	Fusain parting fairly persistent	
		11.	Coal, bright banded - thin vitrain bands	2 3/4
		12.	Fusain parting -	
		13.	Coal bright banded, upper inch rather dirty	3 3/4
		14.	Pyrite lens	3 1/16
		15.	Coal bright banded	1
		16.	Clay band	3 3/4
		17.	Coal and bone	3 7/16
			(Note character and thickness of floor)	
			Total thickness of coal.	

Condition, Dry, but humidity Time, hr. 15 min.

Wt. Gross, 50 lbs. Net, lbs.

What Nos. shipped by Co.? all but 16, 17, + 18

Excluded from sample: Nos. 16, 17, 18, 14 (3 3/4)

Sample represents 71 1/16 in. tons.

Impurities? How do they occur? - Bedded clay bands

few pyrite lenses, calcite facing in top coal - some pyrite facing

(1 division = 3 in.)

Sample No.

Face R. 10  
Can No. over

Lab. No.

Collector, LCM McCabe G. H. Cady

Coal: Survey No. 6

Mine, Nashville

Co. Washington

Index No. 0813

R.—COAL SAMPLE SHEET.



- |  |                                 |
|--|---------------------------------|
| 18 Clay-(blueband)   | 2 <sup>3</sup> / <sub>8</sub>   |
| 19 Coal, bright, banded, thin vitrain bands<br>Coal + with pyrite streaks in lower<br>1/2 inch | 7<br>1/16                       |
| 20 Pyrite  | 1/16                            |
| 21 Coal, bright banded, thin vitrain bands   | 20 <sup>3</sup> / <sub>16</sub> |
- Base of coal mined
- (unexposed except top)
- |                               |                                |
|-------------------------------|--------------------------------|
| 22 Bony coal - generally 18"± |                                |
| 23 Coal (unexposed) ..        | 24 <sup>1</sup> / <sub>2</sub> |

Thickness of coal mined (1 to #21) 75<sup>3</sup>/<sub>16</sub>

### Samples.

Lab. Nos  
Face R-10 - 50# lard can - entire sample cut  
down and sealed in tin - exposed less than 15 min.

Clavain 426 ✓

Vitrain 404 ✓

Fusain 412 ✓

[1 division = 3 in.]

Clarkson Coal & Mining Co Nashville  
July 24 1933

Room 50 off 10th N.

For more detailed section see  
sheet for sample #1

Top: Soapstone, gray, poor roof 15'±

1. Coal, bright, banded mainly clarain  
a small calc. nodule 4" below top

41

2. Pyrite lens

1/8

3 Coal

1

Parting

4 Clay, variable thickness but top  
fairly even

3/4

5 Coal

4

6 Blue band sticks to coal below

2 1/2

7 Coal - lower 1 1/4" with pyrite facings

8

8 Pyrite

1/8

9 Coal

18 7/8

Bony coal in floor.

Total

76 3/8

Vitrain in coal. 1

Above upper clay band:

3/16 3/16 3/16 1/8 1/4 1/8 1/2 1/8 3/16 1/4 1/4 1/16 1/16 = 2 1/2

Between clay bands

3/16 1/16 1/4 1/16 ~~1/16~~ 1/16

Below Blue band

3/16 3/16 1/4 3/4 1/4 5/16 1 15/16

Total = 5 5/16

Approx 7.%



Symbol

Description

Inches

1 division = 3 in.

Clarkson C. & Mfg Co, Nashville Ill

July 24, 1933

Room 29 11th S., off West.

See sheet for Sample 2 for more detailed section of bed

Roof: Black shale - no drawslate here - generally present below bkst.

1. Coal, dense, somewhat waxy luster mainly clarain

2 Coal bright banded 33 10

3 Clayband 35 1/4 2 1/4

4 Coal bright banded 37 1/4 2

5 Blue band 40 2 3/4

6 Coal bright banded 65 25

7 Coal lony 3 3"

Bony coal in floor:

With 3" bone 68"

Vitrain in coal

Upper part of bed

1/16 1/8 1/8 1/8 1/8 1/8 3/16 1/8 1/8 3/16 21/16

Total = 15/16 20%

approx. 20%

Room 32 11th S 62" coal

Vitrain above B.B.

1/8 1/8 3/16 1/8 1/8 1/8 3/8 3/8 1/2 1/4 33/16

Below Blueband

5/16 1/4, 7/16 13/16

Total = 2 14/16

Approx 4.8%

# 14

# 17

C. 367

Collector. G. H. Cady July 24 1933

Coal: Survey No. 6

Mine. Nashville

Co. Washington

Index No. 0813

Q.-COAL SECTION SHEET.

Anal. C. 367



Sample 2

Operator, Clarkson Coal & Mg Co

Date July 24, 1933

Mine, Nashville

SW-SE Sec. 13 T. 2S R. 3W

Location in mine, Room 29 11<sup>th</sup> S off West

650' S - 3700' W of shaft

GRAPHIC SECTION

DESCRIPTION OF SECTION (AT POINT SAMPLED)

In.	No.	No.	(Note character and thickness of roof)	Inches
			Black slate (no draw slate here) Usually 2 to 3 feet	
		1.	Mainly clarain, with rather greasy luster thin (1/16") streaks of iron calcite facings	7
		2.	Pyrite partings (1/64")	68 12/16
		3.	Clarain with like #1	61 12/16
		4.	Partings, indistinct.	
		5.	Coal, bright banded, mainly clarain	56 0 1 1/16
		6.	Fusain	54 15/16 1 3/8
		7.	Coal, bright banded, mainly clarain	54 13/16 3 1/2
		8.	Fusain	51 5/16 1 1/16
		9.	Coal, bright banded, mainly clarain	51 1/4 3 3/4
		10.	Fusain partings (1/64")	
		11.	Coal bright banded " " "	47 1/2 1 5/8
		12.	Fusain partings 1/64"	
		13.	Coal bright banded " " "	45 7/8 1 1/8
		14.	Fusain partings (1/64")	
		15.	Coal bright banded " " "	44 12/16 3 1/16
		16.	Fusain partings (1/64")	41 9/16
			over	
			(Note character and thickness of floor)	
			Total thickness of coal.	

29 13/16  
5 10/16  
63 12/16

C-367

16  
#14

Condition, Dry, Humidity high Time, hr. 15 min.

Wt. Gross, 50 lbs. Net, lbs.

What Nos. shipped by Co.? all but, 19, 20, 21, 31

Excluded from sample: No. 19, 20, 21, 31

Sample represents 56 7/8 in. tons.

Impurities? How do they occur? - Two clay bands

Calcite + pyrite facings + occasional ls. lenses + pyrite lenses.

(1 division = 3 in.)

Sample No. Can No. See over Lab. No.

Collector, LCM McCabe, G.H. Cady Coal: Survey No. 6

Mine, Nashville Co. Washington Index No. 0813

R.—COAL SAMPLE SHEET.

17 Fusain partings ( $\frac{1}{6}$ " )

18 Coal, bright banded (mainly clarain)  
 $\frac{3}{16}$ " vitrain band at bottom

4  $\frac{1}{4}$  21  $\frac{9}{16}$

19 Clay, gray, carbonaceous

2  $\frac{5}{8}$  } 37  $\frac{5}{16}$

20 Coal, bright banded (consid. vitrain)  $\frac{1}{4}$ "

2  $\frac{1}{8}$  } 7  $\frac{7}{8}$  34  $\frac{11}{16}$

21 Clay, 'blue-band'  $\frac{20}{16}$

3  $\frac{1}{8}$  } 32  $\frac{9}{16}$

22 Coal, bright banded mainly clarain

6  $\frac{1}{2}$  29  $\frac{7}{16}$

23 Fusain, soft, lens.

$\frac{5}{8}$  22  $\frac{15}{16}$

24 Coal, bright banded " "

2  $\frac{1}{8}$  22  $\frac{5}{16}$

25 Fusain, hard

$\frac{1}{16}$  20  $\frac{3}{16}$

26 Coal, bright banded " "

3 20  $\frac{1}{8}$

27 Pyrite flake ( $\frac{1}{32}$ " )

— 20  $\frac{1}{8}$

28 Coal bright banded " "

5  $\frac{3}{4}$  17  $\frac{1}{8}$

29 Pyt. + fus. pts.

—

30 Coal bright banded " "

5  $\frac{1}{2}$  11  $\frac{3}{8}$

Base of good coal

31 Bone & coal (machine cut)

5  $\frac{7}{8}$  5  $\frac{7}{8}$

bone

Floor bony coal,

Total thickness 1 to 30 incl. = 64  $\frac{3}{4}$ "

Thickness sampled 56  $\frac{7}{8}$ "

Lab No

Face Sample N. 2 - in 50# lard tin

Vitram 446 ✓

Fusain 416 ✓

Clarain - Top coal (Nos 1 and 3) 415 ✓

Clarain Bottom coal 451 ✓

1 division = 3 in.

 Clarkson Coal & Mining Co. Nashville  
 July 25, 1933

Room 57 - off 7th N. off west

More detailed section see Sample sheet (Sample 3)

Roof black slate -  
Drawslate - 2"

1 Coal, hard, clean, mainly clarain	14"
2 Coal, banded, bright, thin bedded	19"
3 Fusain band with some pyrite	1 1/2"
4 Coal	5"
5 Clay, dk to black. carb. shale	2"
6 Coal with indistinct lower parting	3"
7 Blue band, dk carb. shale with coal streaks	4 1/2"
8 Coal bright banded	25 1/2"

Floor: Bony coal

74 1/2"

Vitrain bands:

Upper part of bed:

$$\frac{1}{10}, \frac{3}{8}, \frac{1}{10}, \frac{1}{10}, \frac{3}{10}, \frac{1}{8}, \frac{1}{8}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4}, \frac{3}{16}, \frac{1}{8}, \frac{1}{2}, \frac{1}{8}, \frac{1}{8} = 2 \frac{9}{16}$$
~~$$\frac{1}{8}, \frac{1}{10}, \frac{1}{8}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4}$$~~

Below blue band

$$\frac{1}{8}, \frac{1}{10}, \frac{1}{8}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4} = \frac{13}{16}$$

$$\text{Total} = 3 \frac{6}{16}$$

approx 4.5%

Collector. G H Cady July 24 1933

Coal: Survey No. 6

Mine. Nashville

Co. Washington

Index No. 0813

Q.-COAL SECTION SHEET.

Sample 3

Operator, **Clarkson C & M Co**

Date **July 25, 1933**

Mine, **Nashville**

SW-SE. Sec. 13 T. 2 S R. 3 W

Location in mine, **Room 57 off 7th N. off west**

**4100 N 2400 W of shaft**

GRAPHIC SECTION		DESCRIPTION OF SECTION (AT POINT SAMPLED)		
In.	No.	No.	(Note character and thickness of roof)	Inches
			Roof. Bk slate with about 1/2" draw slate above coal	
		1.	Mainly clarain - greasy luster, calcite facings	6 1/16
		2	Pyrite-calcite shell. 1/16"	
		3	Mainly clarain - greasy luster " "	7 14/16
		4	Coal, bright banded thin vitrain bands.	3 1/16
		5	Clay + pyrite parting (1/16")	
		6	Coal bright banded thin vitrain bands	6
		7	Fusain parting	
		8	Coal bright banded " " "	1 3/16
		9	Fusain parting	
		10	Coal bright banded " " "	4
		11	Fusain parting	
		12	Coal bright banded, thin bedded 2 vit. bands 1/4" near bottom	4 3/16
		13	Fusain, soft with 1/8" pyrite streak in middle	1 1/8
		14	Mainly clarain - 1-2 1/8" vit. bands -over-	4 5/8
			(Note character and thickness of floor)	
			Total thickness of coal.	
			Face 10 days old	
		Condition, Dry, humid. 7 hr. 15 min.	Time,	hr. 15 min.
		Wt. Gross, 50 lbs. Net, lbs.	Net,	lbs.
		What Nos. shipped by Co.?	all but 15, 16, + 17	
		Excluded from sample: No. 15, 16 + 17	8 11/16	
		Sample represents	62 3/4 in.	tons.
		Impurities? How do they occur?	Bedded clay bands few horizontal pyrite plates, and calcite + pyrite facings.	

(1 division = 3 in.)

Sample No.	Can No. Seeover -	Lab. No.
Collector, <b>L.C.M. Cabe and G.H. Cady</b>		Coal: Survey No. <b>6</b> <input type="checkbox"/>
Mine, <b>Nashville</b>	Co. <b>Washington</b>	Index No. <b>0813</b>

}	15 - Clay, dark carb. with coal streaks at top & bottom	7/8"	}	8 11/16
	16 Coal mainly clarain, vitrain 1/8 - 1/16	2 13/16		
	17 Clay, blue band, dk carb. shale few streaks coal, little light gray clay	5		
18 Coal - mainly clarain; thin vitrain bands	6 11/16			
19 Pyrite plate	1/16			
20 Coal mainly clarain " " "	5			
21 Fusain ptg				
22 Coal mainly clarain " " "	2 1/2			
23 Pyrite parting				
24 Coal mainly clarain " " "	6 1/4			
25 clay, gray	1/4			
26 Coal mainly clarain " " "	3 7/8			
Bottom good coal + floor				
27 Bony coal	15" +			

Total thickness seam mined	71 7/16
Discarded 15, 16, 17	8 11/16

Thickness in sample	62 3/4
---------------------	--------

Face Sample Can N3 - 50" larg. tin sealed Lab. No

- Fusain 439 ✓
- Clarain 445 ✓ Top coal
- Clarain 444 ✓ Bottom coal
- Vitrain 443 and 437 ✓
- Bone at bottom 436 ✓



Symbol



Description

Inches

[1 division = 3 in.]

Clarkson Coal &amp; Mg Co Nashville 111

July 25, 1933

Room near #50 on 10<sup>th</sup> N off Main West

1. Coal-	77 1/2	21 1/16
2 Pyrite		
3 Coal	56 3/4	7 1/2
4 Parting		
5 Coal	49 1/4	3 3/4
6 Pyrite	45 1/2	1/4
7 Coal	45 1/4	4 1/2
8 Carbonaceous shale	40 3/4	3/4
9 Coal, laminated, bright	40	5
10 Shale dk carb with coal streaks	35	2 1/2
11 Coal	32 1/2	1 1/2
12 Blueband, dk carb. shale	31	5
13 Coal, bright banded	26	23
14 Bony coal - Floor.	3	3
Floor hard bone coal		74 1/16

Bands of vitrain as follows:

Top coal:  $\frac{1}{8}, \frac{1}{4}, \frac{1}{8}, \frac{1}{4}, \frac{1}{16}, \frac{1}{32}, \frac{1}{16}, \frac{1}{16}, \frac{1}{16}, \frac{1}{16}, \frac{1}{8}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4} = 1 \frac{7}{8}$  $\frac{1}{32}, \frac{1}{32}, \frac{1}{32}, \frac{1}{32}, \frac{1}{32}$ Below blueband:  $\frac{3}{8}, \frac{1}{4}, \frac{1}{4}, \frac{1}{16} = \frac{4}{16}$ Total  $2 \frac{9}{16}$  inches.

approx 3.2%

Vitrain at place in same room 15' ft removed

Above blueband

 $\frac{1}{8}, \frac{1}{8}, \frac{1}{16}, \frac{1}{16}, \frac{3}{16}, \frac{1}{8}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4}, \frac{1}{4}, \frac{1}{8}, \frac{1}{8}, \frac{1}{16}, \frac{1}{16}, \frac{3}{8}, \frac{3}{16}, \frac{1}{8}, \frac{1}{4}, \frac{1}{8} = 3 \frac{1}{16}$ 

Below blueband

 $\frac{1}{8}, \frac{1}{16}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4}, \frac{1}{8}, \frac{1}{8}, \frac{1}{4} = 1 \frac{3}{16}$ Total  $4 \frac{1}{4}$ 

Thickness of coal 5'3" (5" top coal not included)

Approx 6.8% vitrain

Collector. Cady July 25 1933

Coal: Survey No. 6

Mine. Nashville

Co. Washington

Index No. 0813

Q.—COAL SECTION SHEET,



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

1 division = 3 in.

Clarkson C. & Mg Co. Nashville III  
 July 25-1933  
 Room 60 off 7th N. off Main West

Roof: light gray soapstone

- |   |        |
|---|--------|
| 1. Coal, mostly clarain, slight greasy luster | 20 7/8 |
| 2. Fusain                                     | 1 1/4  |
| 3. Coal, banded, bright                       | 3 1/2  |
| 4. Fusain parting                             |        |
| 5. Coal bright banded                         | 7 3/8  |
| 6. Bone lens 1" to 1 1/4"                     | 1 1/4  |
| 7. Coal                                       | 4 1/2  |
| 8. Clay band with coal streaks                | 2      |
| 9. Coal                                       | 2 1/2  |
| 10. Blue band - dk carb. shale or clay        | 4 1/2  |
| 11. Coal                                      | 25     |

72"

Floor hard, bone coal.

Bands of vitrain as follows: Top coal to Bl. band  
 1/4, 1/4, 1/8, 1/4, 1/16, 1/4, 1/8, 1/16, 1/8, 1/8, 1/8, 1/16, 1/4, 1/16, 1/16, 3/16 = 2 3/16

Bottom coal below Bl. band

1/4, 5/16, 3/16, 1/4, 1/8, 1/8, 1/8, 1/8, 1/4 = 1 3/4

Total 4 1/16.

approx 5 1/16

19

off

Visited mine alone - Taking observations  
on roof conditions particularly.

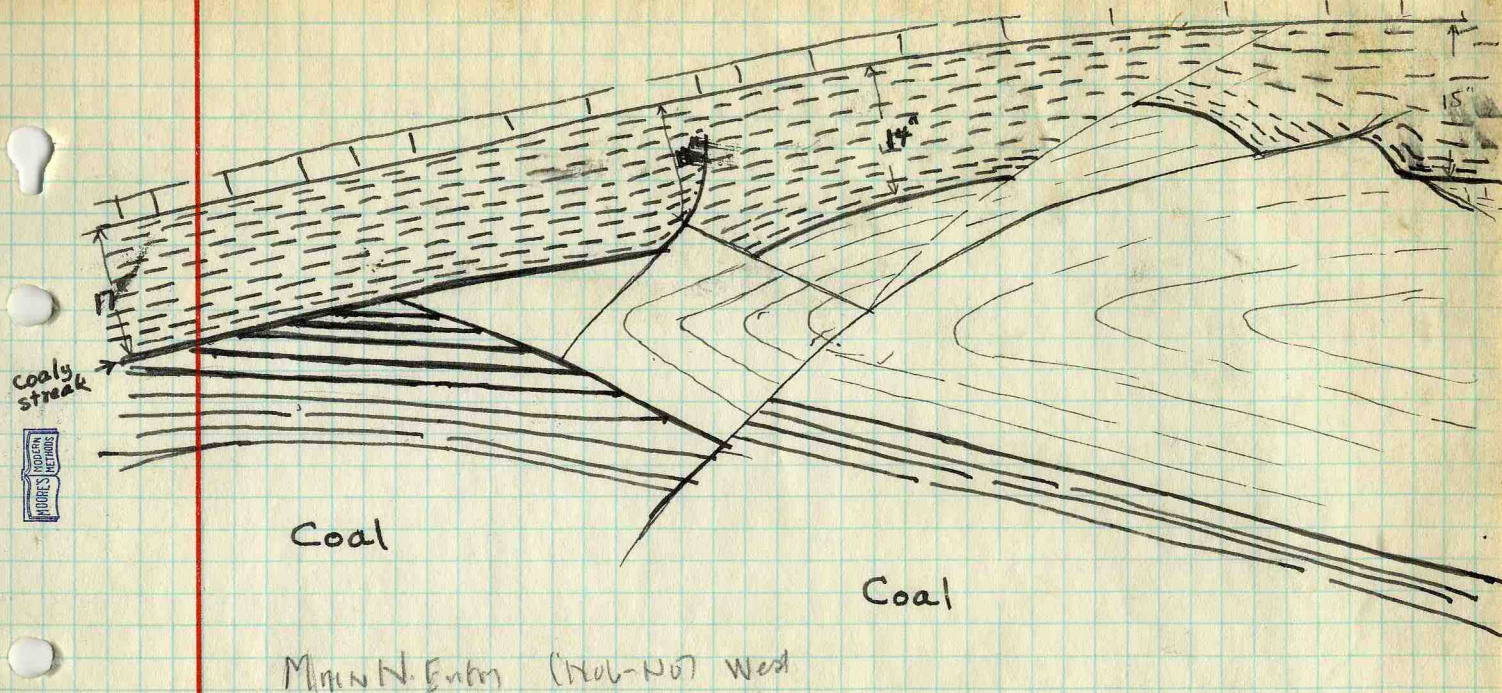
Spent most of time in Main North - ~~#~~

Mr Day reports that they drilled down in  
sump and found 27" coal 93 feet below  
No 6 coal. Coal was overlain by 4 ft of black  
slate and underlain by 5' of underclay. They  
did not reach bottom of underclay.

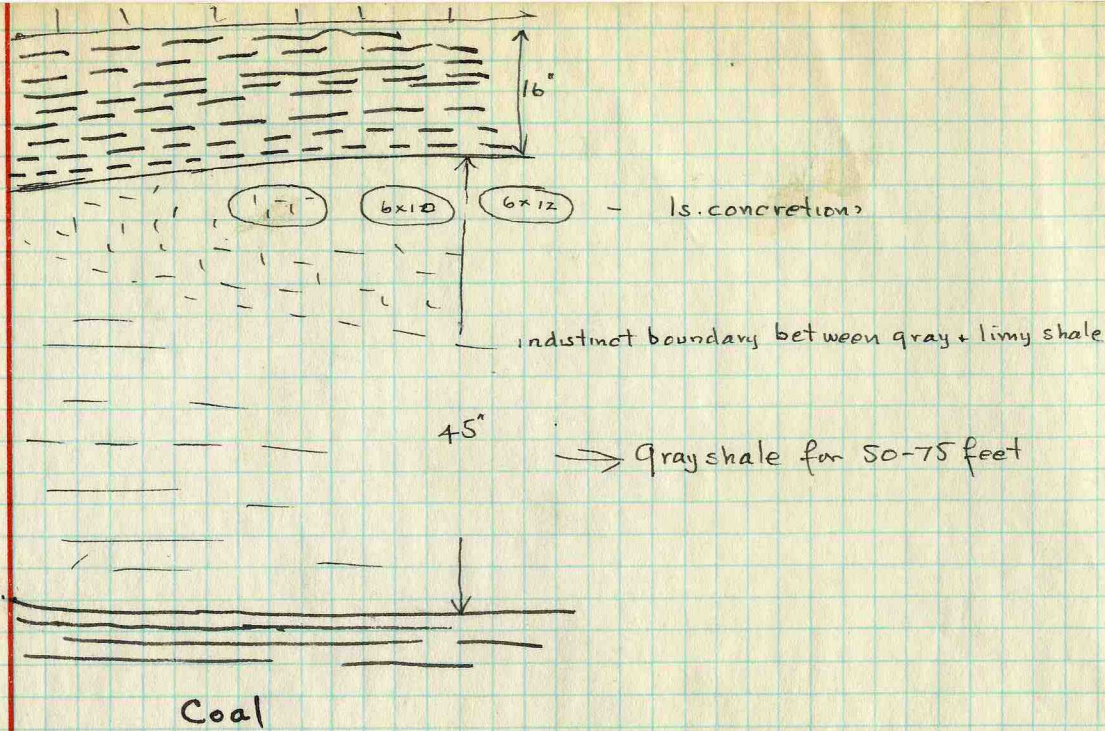
Along N. entry found many places where  
the succession of gray shale, calc. shale (bastard lo)  
and limestone were present. Apparent that  
gray shale (white top or soapstone) is grades upward  
into calc. shale. The bk st. in places rests on  
coal, gray shale, or calc. shale. The calc. shale  
in some places almost limestone & may rest directly  
on coal. Apparently contin. deposition from  
soapstone to calc shale but places in mine  
where both are absent & bk st rest directly on  
coal. Not able to discover any definite  
distribution. at because of inaccessibility of much  
of mine.

Nov. 26 - 1935. G.H.C

Nashville Mine  
Washington 0813

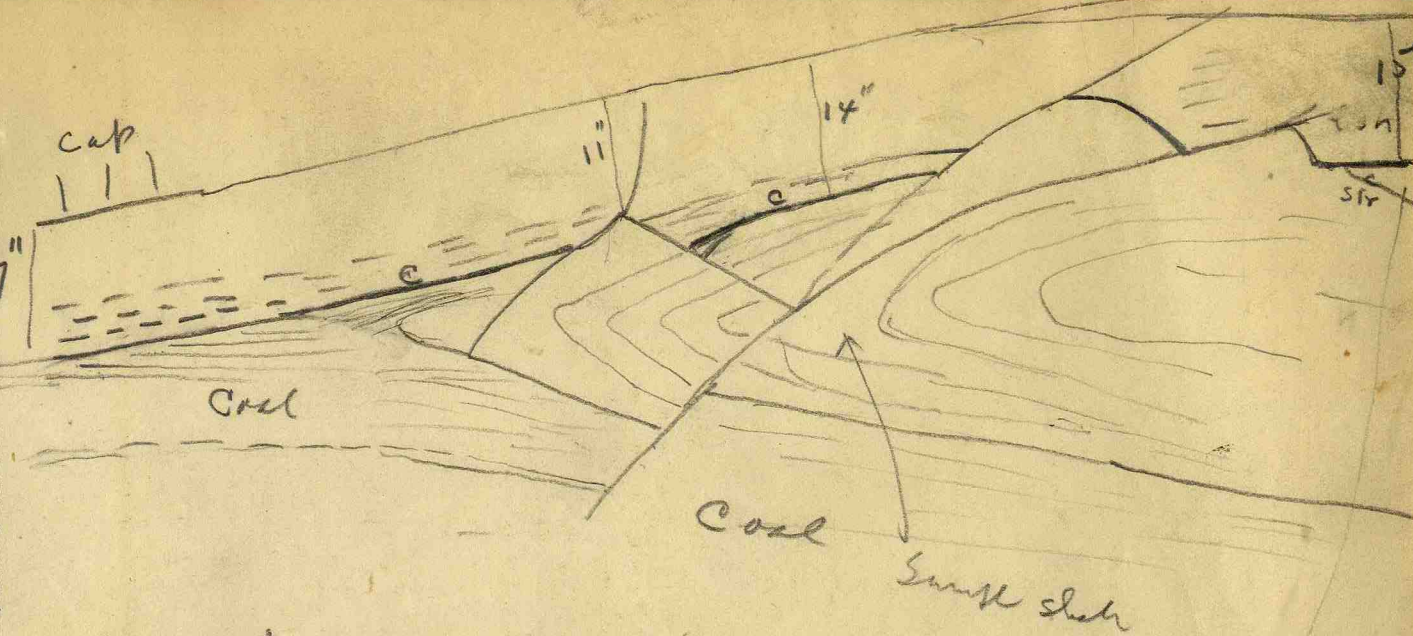


The top of coal bed seemed to be definitely truncated as indicated but truncation was only 6-8 inches



The sketch shows the three types of roof and relation to caprock + coal near end of wedge of gray shale. The concentric pattern of soapstone was very striking. The faults in blk sh. soapstone + coal did not appear to extend into caprock but represent adjustments between cap-rock + coal bed

Nashville Mine  
 Washington 0813  
 Sketch Made in Main N.  
 entry. prob. between  
 6th + 7th west.  
 East rib.



Main N -  
East up?

about 300 yds N. Main

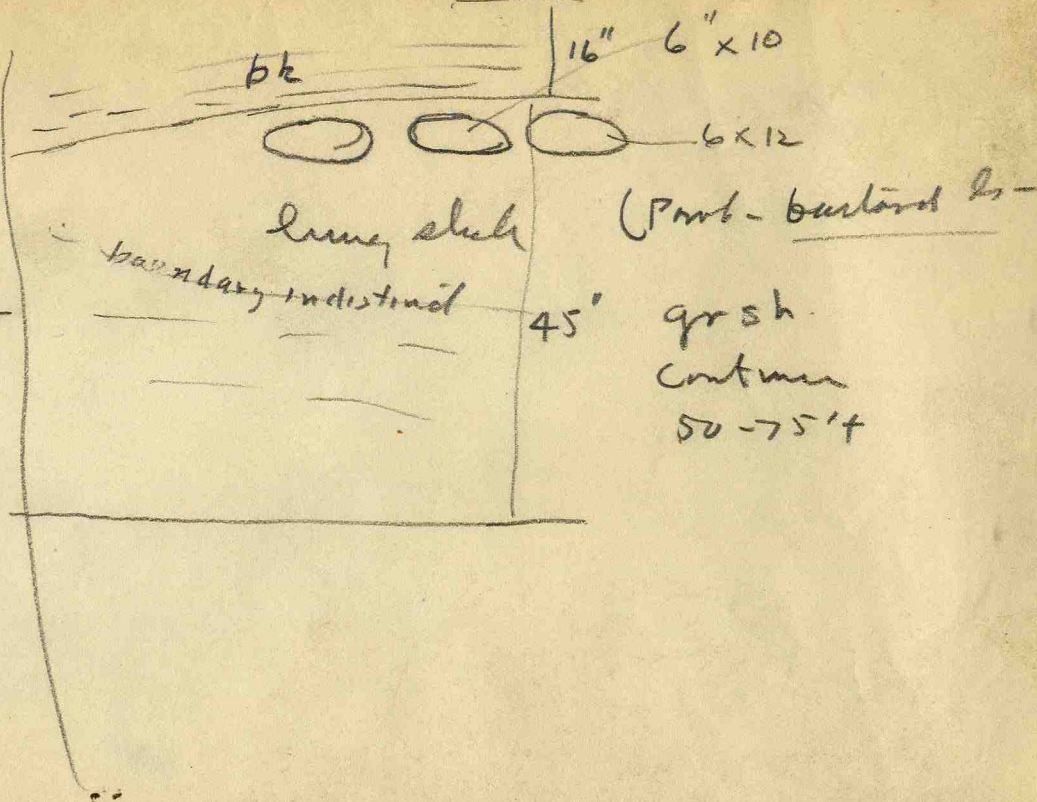
Sample # # 1

Sample coal  
under shot  
1936

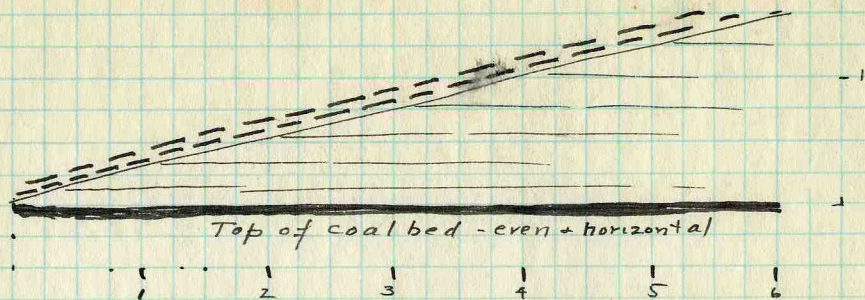
#1

Man H  
Entrol

cont'd



Main N. entry north of main West (5-6<sup>th</sup> West) Westrib



### Contact of gray and bk shale (slate)

Bk sl. crossed by joints spaced 20"-24" and striking nearly E + W. or slightly N. of E. In some places these joints are observed to extend down into the gray shale particularly where the shale is thick and limy. In other places no jointing observed.

The cleat of the coal is developed in same direction particularly under jointed shales.

G.H.C. Nov. 26, 1935

Nashville Mine

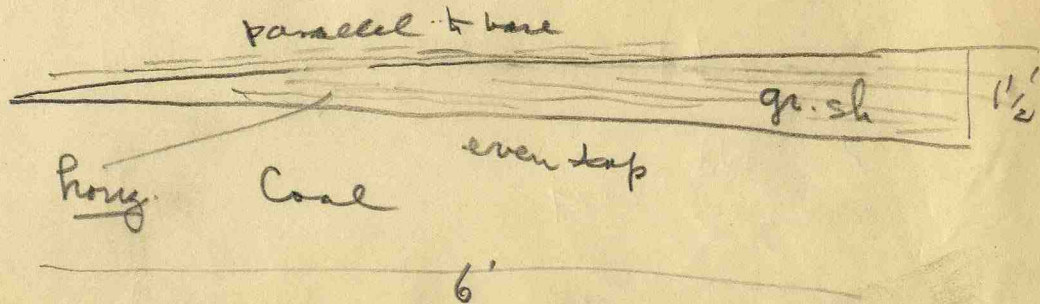
Washington Co 0813



Cleat joints 10-24" wide

Very regular

Main road north of main west  
Contact of ~~gray~~ gray + bk shale



Along this entire bk shale + prob. gray shale  
joints approx east-west / cleat also

Dred hole in shaft

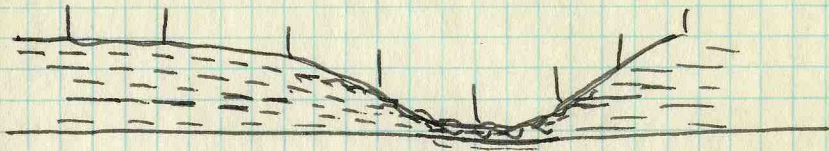
: 100 foot hole in sump

4 ft thick

27" coal

5' +

fine clay - bottom 100' below #6



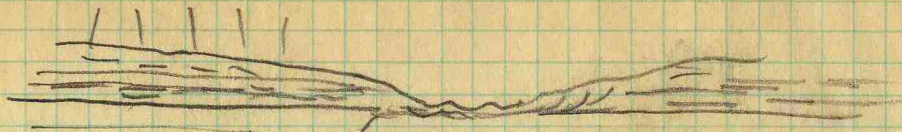
Le knob extending into bk st almost to coal  
There is a thin layer of mashed slate between  
coal + ls. Apparently ls knob has been forced  
down into slate and coal but coal has yielded  
very little all adjustment was in slate. The ls is  
simply a knob on bottom of cap rock. Wherever such  
rolls occur the bk slate becomes much disturbed.

GHC Nov. 26/35

Nashville Mine

Washington 0B13

Room No. 2 - 4th West  
Main N.



Best mud crushed + thickened  
the sliver of slate between coal  
ls -

No 2 4<sup>th</sup> West

A small fault was observed cutting across the neck of Room 5 3rd west off main N- The gray shale roof is faulted down 2 ft on west - the strike nearly N-S. The fault runs only about 5 feet.

Likewise in Room 13, 2nd west Main N- is an east-west fault down on N side - which has been traced thru about 14 rooms (700 ft) down thru about 15 inches.

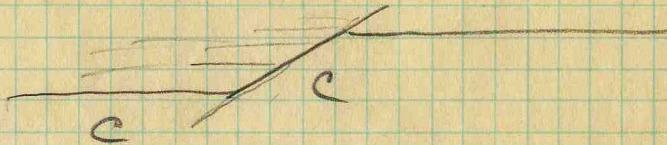
G.H.C.  
Nov. 26, 1931  
Nashville Mine

Washington 0813

10-16

Fault - in Room 5 off 3rd west -  
Main N.  
neck of room

Gray shale roof - faulted down 2' in west  
strike N+S-



Fault runs only about 5 ft -

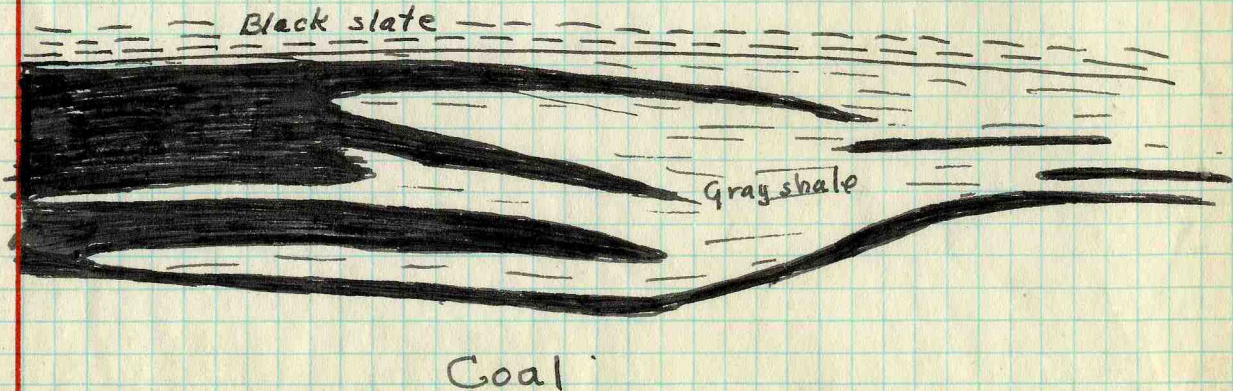
also Room 13 - 2nd west - main N. (new?)

Fault east + west down to N. about  
- trace down about 14 room (700 ft) 15 miles

Occurrence of bkst, and interbedded gray shale  
and coal along Main N. entry - south of Mary west  
on East mb

G.H.C. Nov. 20, 1935  
Nashville Mine

Washington 0813



N. entry

Blk

1



gray sh

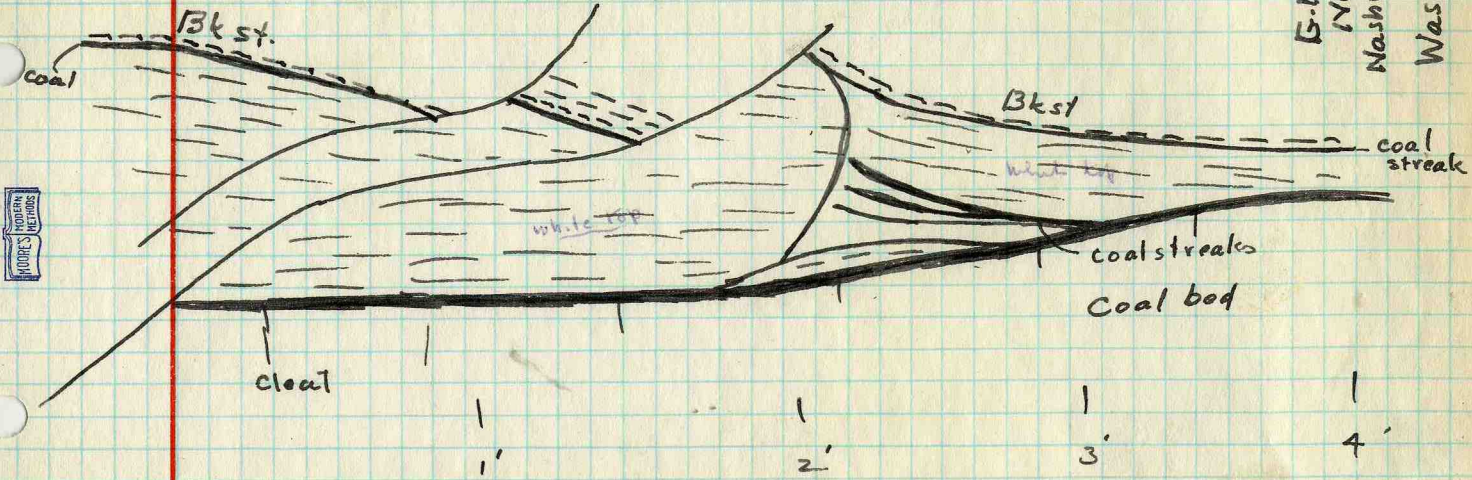
Coal

11

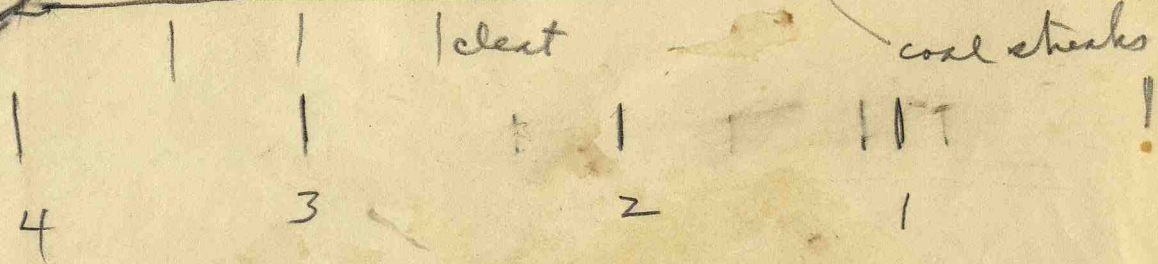
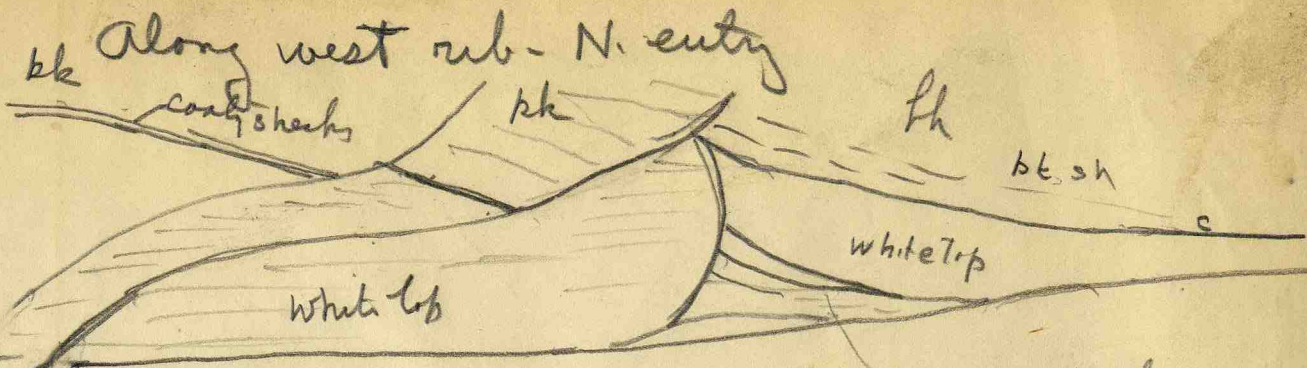
Exp. of gray sh + interbedded coal  
woul be at above



G.H.C.  
Nov 26, 1935  
Nashville Mine  
Washington 0813



Roof conditions - West Rib N. Entry - Near Main West <sup>6W</sup>



thin coaly  
 evidently unequal subsidence in gray shale & con

Nov. 26

Top coal 14"

Coal 6 1/2

Coal 5 1/2

Coal 23"

Clay band 1"

Coal 1"

Clay 1/2"

} Buck band

Coal 22" -

Free clay

Visit To Nashville Mine April 17/1936

G.H.C, J.M.Schopf, Gene Beysinger

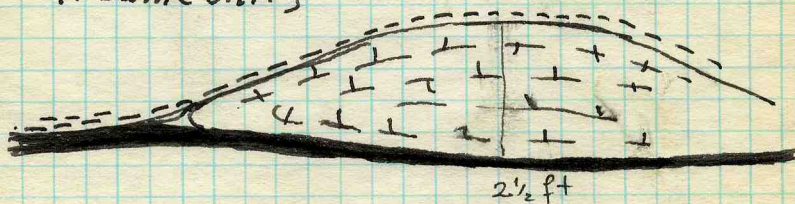
This visit was for the purpose of obtaining a few pictures of coal and roof condition. - Noting 2 new coal ball occurrences.

#4

Picture Nashville Mine April 17, 1936

Picture No 6 coal in cross cut  
at end main N. entry.

Picture No 5

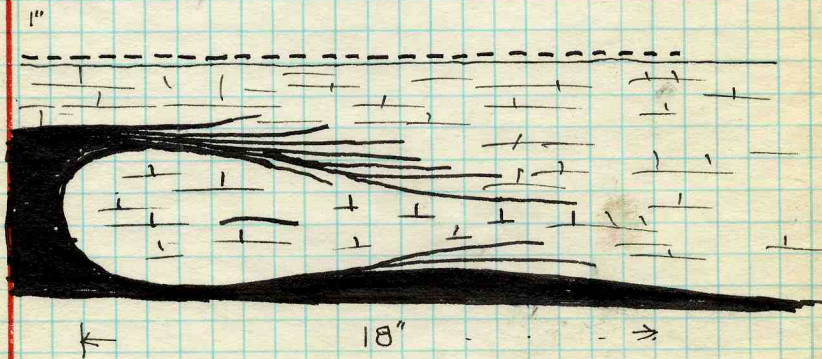
Roll in ~~roof~~ roof. about room  
#3 in new 1st west off main N.not far. ~~east~~ east of coal ball locality  
in same entryIt was in this entry that the gastropods  
were found in the bastard limestone

Visit to Nashville Mine April 17, 1936

Pictures - continued

No 3 - Main North - about 200 feet  
north of 5<sup>th</sup> W. beyond door.

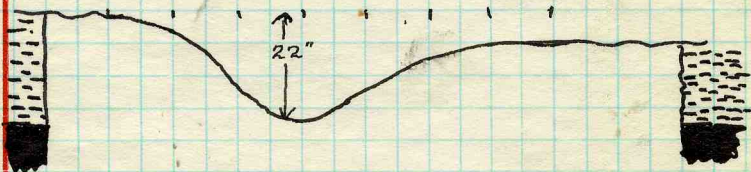
Contact of coal and b. limestone



Visit. Nashville Mine - April 17, 1936

Pictures.

#1. Limestone boss about 100' North  
of shaft at bottom.

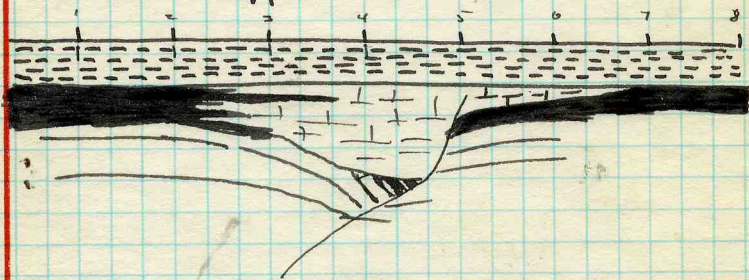


#2 Wedge of bastard limestone  
between coal and black slate



Roll - of bastard limestone

Room 8 - off new third west



*On map*

Fingers of coal penetrate into b.l.s on left  
not so evident on right - Very little if  
any bending of bk. slate over the "roll"

April. 17, 1936



Nashville Mine - April 17, 1936

Sample of vitrain - For L.C.M.

#1. <sup>New Main</sup>  
North entry - end -

#2 From vitrain in roof - incrosscut  
where photo. 4 was taken

3. Two bottles. in rooms on  
S. side 1st. West North.

Direction of jointing in slate N. 80° E

Noted in 1st West off New Main N.



Coat balls - 2 localities ✓

(1) 1st West entry off new Main North  
at room #4. ✓

(2) Near cross cut. Main-Back entry. New Main N.  
500' N. of 1st west entry

Picture  
#670

Room 29 off 7th N. =  
Picture of shale -

:

Picture to Saw Ray

670

669

671

673

674

675

668

Picture of bottom of

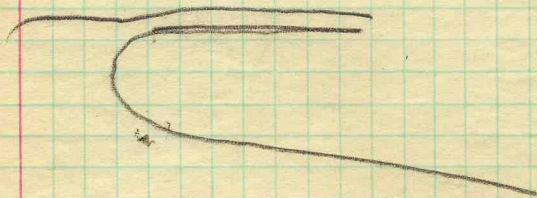
Picture of Bob Schiever + column

1936.7

Joining in roof slick  
NE-SW

No 3 = Main N - 150' N 6  
main west

Contact of coal + bastard  
le



ap-17/36

#1 Sample of vitreous

N. entry - W of Main N.

---

Running into a gray shale lens  
well away from surface

ap. 17/36

On m. N. about 380 yd ✓

6 ft of gray shale below the ct

+ ls.

---

Coal balls

1st unit N. ✓

Model #4 room

Few coal balls under  
but none ls.

---

Slate N 80° E.

---

got 1

Picture of roll in rock at about  
#3 room

ap. 17/30

Sample 1 Blue band

Upper Bevel Sample 2

2" Clay with thin streak coal

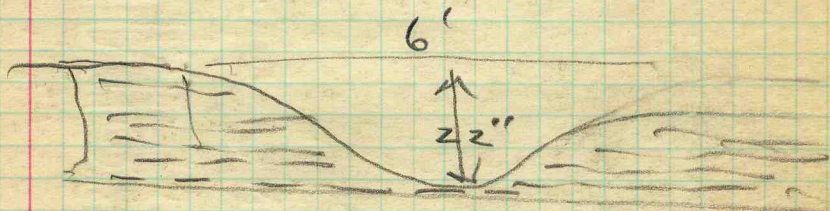
2 1/2" Coal, bright + dull claram

1" Blue band

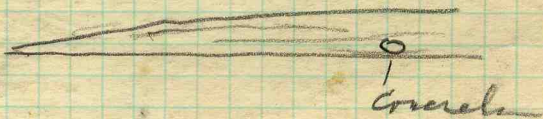
Bottom Bevel

#1 Flash light of ls - boss  
 about 100 ft N of shaft  
 at bottom -

Exposed about 22"



#2 about 200 yds N of bottom  
 wedge of bartand ls - the  
 site -



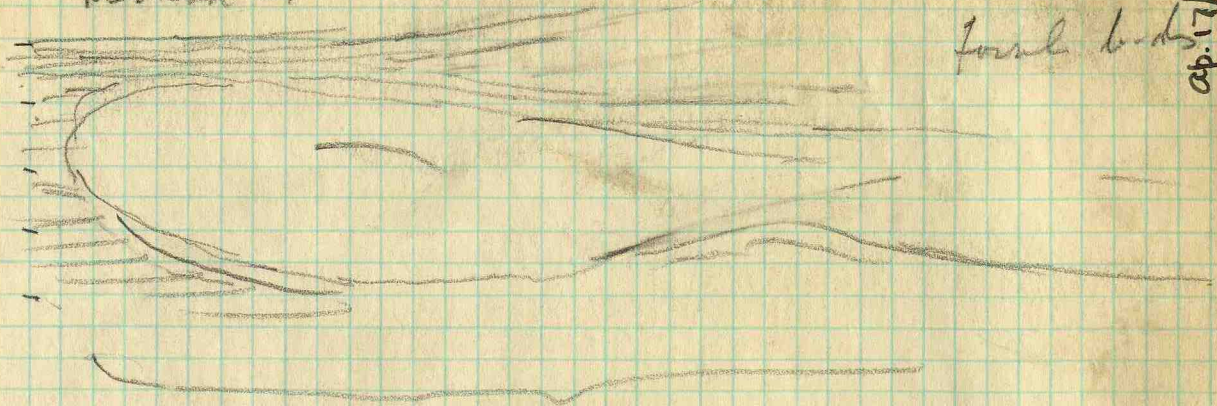
ap. 17/26

bush

barstand ls

found books

ap. 17/26



18"

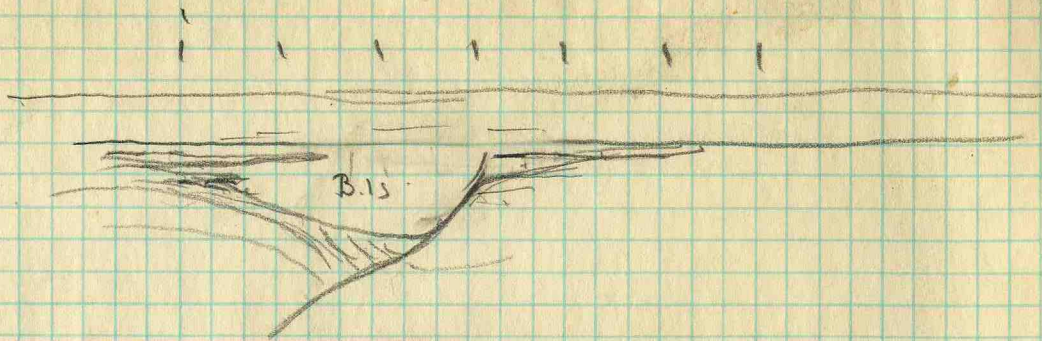
sh thickens up to 2ft ±

#3



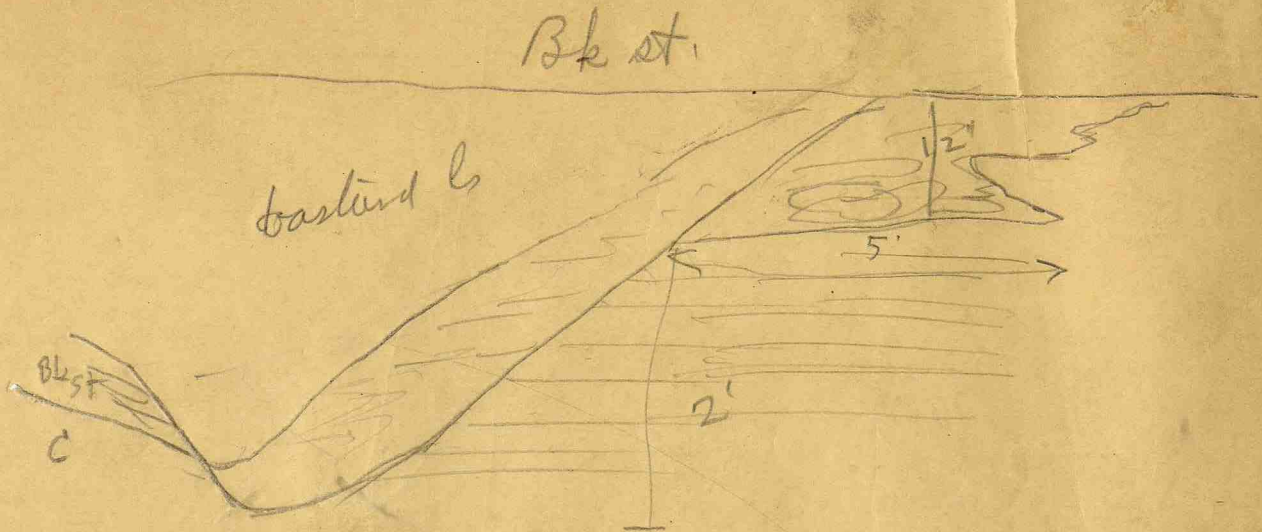


708 - <sup>nr</sup> 3rd West  
1



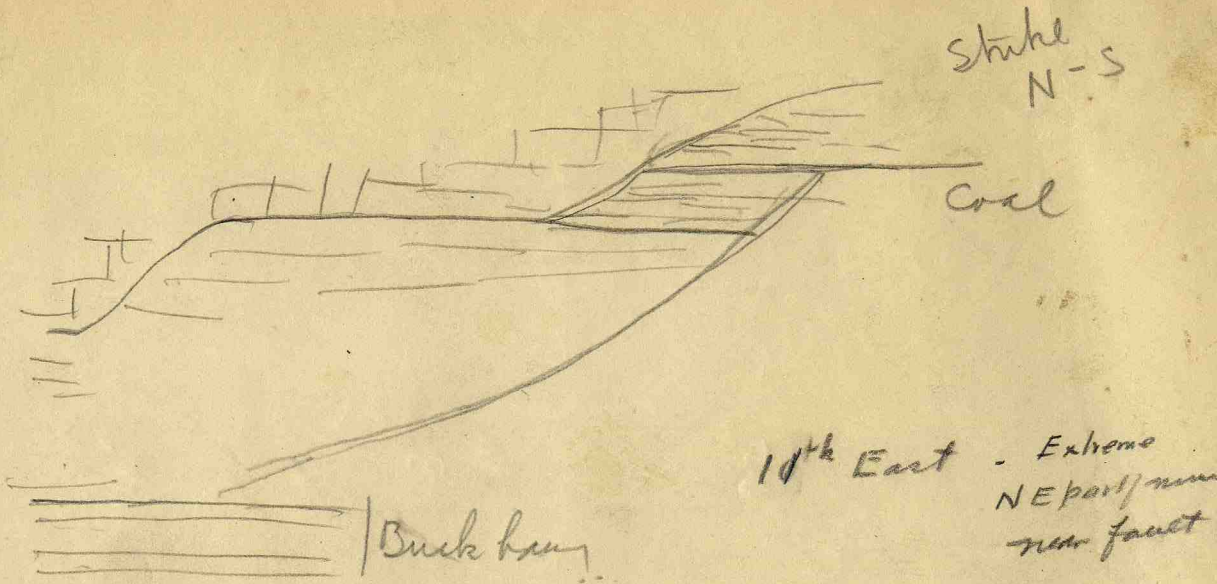
Mar 17/36

B.15 - mass lying on top of coal - fossils  
Coal extends into ls - ~~app. contemporaneous~~  
contemporaneous



Photograph of well

3rd west  
north of shaft



Strike  
N-S

Coal

Buck bay

10th East - Extreme  
NE part / near  
fault

*Nashville  
Nov 8-9 1938*

Nashville Mines

November 8-9, 1938

L.C. McCabe and G.H. Cady



CLARKSON COAL & MINING COMPANY  
NASHVILLE, ILLINOIS

Sept 15, 1967

GHC

Record of face sampling and bed measurements  
by McCabe and Cady Nov. 8-9 1938

Tabulated No	Can NO	Localities	Analysis
6		<u>1</u> Cross-cut between rooms 5-6 and 6-7 1st East off Main North entry	
67	1 R	5-6 Bottom coal (2 samples)	C-2082
68	2	6-7 Top coal (2 samples)	C-2083
		<u>2.</u> Room 18 2nd E off Main N.	
72	606	Top coal (1 sample)	C-2087(AS)
75	610	Bottom coal (2 samples)	C-2090(AS)
	602	Top coal (F1 & Sink) = 606	C-209
	605	Bottom coal (F1 & sink) = 610	
		<u>3</u> 4th E entry opposite Room 10	
71	603	Top coal	C-2086(AS)
73	608	Bottom coal	C-2088(AS)
		<u>4</u> Room 6 1st E off main N.	
69	600	Top coal	C-2084(AS)
76	611	Bottom coal	C-2091(AS)
		<u>5</u> Room 24 off 3rd W off main N.	
70	601 &-7	Top coal 2 samples	C-2085(AS)
74	604 &-9	Bottom coal 2 samples	C-2089(AS)

68-76 Complete

①

CLARKSON COAL AND MINING CO  
NASHVILLE, ILLINOIS

Cross-cut between rooms 5 and 6  
1st E. off Main North Top coal

Cross-cut between rooms 6 and 7  
1st E. off Main North

November 8 and 9 1938 McCabe and Cady

1. Typewritten section of top coal Sample 2  
No can Number C 2083
2. Type written section of bottom bench Sample 1  
2682
3. Original written section top coal Sample 2  
C 2083
4. Original written version at sample 1  
C 2082

No record of sample can numbers  
if any sample was taken

Clarkson Coal & Mining Co  
 Nashville Illinois  
 Sampling Nov. 8 and 9 1938  
 Samplers L.C. McCabe & G.H. Cady

Sample 2 : Ground in mine. Small can  
 Location Cross-cut between rooms 5 and 6  
 in first east entry off Main North entry  
 Sample represents the top coal above the  
 Buck band.

Thickness Tape 35" C. 2083 Sample

C-2083

Roof: Slate, black with conspicuous joints		
Pyrite, bright,	$\frac{1}{2}$ "	$\frac{1}{2}$
Coal bright not conspicuously banded	6"	$6\frac{1}{2}$
Pyrite, bright	$1\frac{1}{32}$ "	6 $\frac{17}{32}$
Coal	$6\frac{1}{4}$ "	6 $\frac{25}{32}$
Pyrite	$1\frac{1}{64}$ "	6 $\frac{31}{32}$
Coal, bright, banded	10 $\frac{3}{4}$ "	17 $\frac{64}{64}$
Coal bright, few fusain layers	11	28 $\frac{41}{64}$
Fusain, hard, bony, some coal streaks	$\frac{3}{4}$ "	29 $\frac{25}{64}$
Fusain, pyritized, stony	$\frac{3}{4}$ "	30 $\frac{64}{64}$
Coal bright	$1\frac{1}{2}$ "	31 $\frac{7}{64}$
Coal bony	1"	32 $\frac{41}{64}$
Coal, bright banded	4" / 36"	36 $\frac{41}{64}$
Bottom of sample		36 $\frac{41}{64}$
Clay, with thin streaks coal	2"	38 $\frac{41}{64}$
Coal, bright, and dull	$2\frac{1}{2}$ "	} Buck band
Clay, (blue band)	1"	

Dropping

Bottom bench see Sample 1

= 50  $\frac{1}{8}$

The 6-7 inches of coal above the Buckband is called the "droppings" The coal is cut in the blue band. In some places the upper part of the buckband is wedged down and discarded; in other places the coal may be wedged down to the top of the droppings and the clay at top picked off.

Top

#20

Top



Clarkson Coal & Mining Co  
 Nashville Illinois  
 Sampling Nov. 8 and 9, 1938;  
 Samplers L.C. McCabe and G.H. Cady

Sample 1 Ground in the mine. Small can  
 Location: Cross-cut between rooms 6 and 7  
 in the First East off the Main North entry  
 Sample represents bottom coal below blue band  
 Thickness: Tape  $26\frac{1}{2}$ "  
 Measurement: C 2082

Blue band - mined off	
Coal, bright mainly vitrain, sample also in extra cans -----	3"
( $\frac{1}{2}$ -inch of fusain in the middle)	
Fusain parting	
Coal, bright banded	$8\frac{1}{2}$ " $11\frac{1}{2}$
Fusain parting	
Coal, bright banded	5" $16\frac{1}{2}$
Coal and pyrite	$3\frac{3}{4}$ "
Coal bright, banded	9 $17\frac{1}{4}$
(Lens of pyrite and coal 1"-0 on one side of but mostly outside of cut)	$26\frac{1}{4}$
Bone Bottom of part sampled	<hr/> $26\frac{1}{4}$
Bone floor	

\* 20  
 bottom

24  
 12



Sample #2 Topcoal Crosscut  
 between Romblet 7 hTE  
 of main No. 4

Sample 2  
 #C 2083

Slate, black - concave - joints		
Bit Pyrite lense - 1/2" - - included		1/2"
Coal bright, - net concave banded -	6 1/2	6" 6"
Pyrite bright		1/32"
Coal	6 3/4	1 1/4"
Pyrite - bright	1	1/64"
Coal, bright banded	17 1/2	10 3/4"
<del>Pyrite</del> bright, - few fusam layers	28 1/2	11"
Fusam hard, bony - some coal sheath + ochre	29 1/4	3/4"
Fusam, pyritized strong	30	3/4"
Coal bright	31 1/2	1 1/2"
Bony coal	32	1"
Coal, bright banded	36	4"

Upper clay band not included  
 Rule 35"

In general coal contains much more  
 fine fusam than lower coal - but a good  
 deal in both

Sample #1

Crosscut R<sup>6</sup> to R<sup>7</sup> lot East off main N

Bottom coal, below 26 1/2" coal

C. 2082

Blue band - mined off	
Coal bright - main vitran	(sample in window) 3"
1/2" fusain in middle (Parting fusain)	
Coal bright, banded	1-8" = 11 1/2"
Fusain parting	
Coal bright bandy	5" 16 1/2"
Coal + pyrite streaked abt	3/4" 17 1/4"
Coal bright	9" 26 1/4"

(Lense pyrite - coal 1" → 0)

one side / cut - - Moddy

outside / cut

Bone coal - floor not mined

Handwritten mark

CLARKSON COAL & MINING CO  
NASHVILLE ILL

Room 18m 2nd East Entry off Main North  
Nov. 8 and 9 Nov. 8 and 9 1938

Samples A606 610 602 and 605

2087 #72  
2080 #75  
#12  
2091  
2090

A606 top coal in one place Face sample  
A610 bottom coal in two places Face sample  
A602 top coal float and sink sample  
A605 bottom coal 2 place " " " "

Sequence of pages:

- 1 Written explanation
2. Typed section top coal for Can A 606
3. Written " " " " " " " #3
- 4 Typed 2 sections of bottom coal A 610
- 5 Written explanation Cans 602,606,610,605
- 6 Typed section of top coal not included in  
can 606 but was included in can 602
- 7 Written section of No.6 above

Clarkson Coal & Mining Co. Nashville Illinois  
Sampled November 8 and 9 1938  
Sampled by L.C. McCabe and G.H. Cady

Sample: <sup>3</sup> Can A 606 For analysis

Location: Room 18 2nd East off Main North  
Ground in laboratory

Sample represents top coal

Roof: black slate; about 2" draw slate  
sticks to the coal

Thickness Tape entire bed 62"

Slate, black Roof.

Coal, bright banded, few pyrite faces		10 $\frac{1}{2}$ "
Fusain, hard	11	$\frac{1}{2}$ "
Coal, bright banded	12 $\frac{1}{4}$	1 $\frac{1}{4}$ "
Pyrite band	12 $\frac{3}{4}$ 0 - 1/8"	1/8"
Coal, Bright, banded	23 $\frac{5}{8}$	11 $\frac{1}{4}$ "
Pyrite band	21 0 - 1/16	1/16
Coal	23 $\frac{7}{8}$	$\frac{1}{4}$ "
Fusain or durain parting	24 $\frac{1}{2}$	$\frac{1}{4}$ "
Coal bright and dull	27 $\frac{1}{2}$	3"
Coal and bone (dropping clay band)	27 $\frac{1}{4}$	3/4"
Coal bright banded	30 $\frac{1}{4}$	2 $\frac{1}{4}$ "
Bottom of sample		<hr/> 30 3/16

Coal bright	1"	} 7 $\frac{1}{2}$
Clay	1"	
Coal bright, (with pyrite lense	3 3/4"	
0 - $\frac{1}{3}$ " )		
Clay; blue band coal in lower	1 3/4"	
3/4 inch		

Single cut included in this can

7 (Can 608 = Bottom coal

7  $\frac{1}{2}$   

---

37  $\frac{1}{16}$

C-2090

44

Top 23



Clarkson Coal & Mining Co Nashville Illinois  
 Sampled Nov. 8 and 9 1938  
 Sampled by L.C. McCabe and G H Cady

Sample Can 610 For analysis  
 Location Room 18 2nd East off Main North  
 Sample represents bottom coal cut  
 at two places in room. First cut below  
 top coal cut for sample A606  
 Ground in laboratory

Sample

C 20 91  
 47

Blue band	not taken		
Coal, clean, bright			6 1/4" <sup>4/16</sup>
Fusain-bone band		6 7/16	1/16"
Coal bright banded		13 7/16	7"
Fusain		13 11/32	1/32"
Coal, bright banded		17 11/32	4"
Fusain		17 19/32	1/4"
Coal bright banded		25 19/32	8"
Bone coal			<hr/> 25 7/16"
Tape 25"			19/32

Combined with sample collected at  
 opposite side of room below top coal blue band  
 collected for sample A606 (float & sink)

Blue band			
Coal bright		3 1/2	3 1/2"
Fusain, soft		4	1/16"
Coal, bright banded		14 1/2	10 1/8"
Fusain soft		14 3/4	1/4"
Coal, bright		17 3/4	3"
Fusain & pyrite		18	1/4"
Coal bright banded		22 1/2	4 1/8"
Fusain		22 3/4	1/4"
Coal bright		26 1/4	1 1/8"
Clay band		26 3/4	1/8"
Coal		30 3/4	4"
Bone coal			
Tape 30"		+ 37 1/16	<hr/> 30 3/4"
		23/16	

151

Total 68" 7/16

Clarkson Coal & Mining Co Nashville Ill  
 Sampled Nov. 8 and 9 1938  
 Sampled by L.C. McCabe and G.H. Cady

<u>Sample can A602</u>	<u>Float and sink</u>
Sample of top coal	Not sampled for
can A606; upper part of second cut included in can A610	
Roof Black shale (slate)	
Coal, bright banded	9 1/2"
Fusain and pyrite band	1/4"
Coal, bright, banded	7"
Fusain	1/16"
Coal, bright	5 3/4"
Coal bright and dull	1"
Coal bright	1 3/4"
Coal dull and bright	1"
Coal, bright banded	4"
Clay, hard (droppings)	1/2"
Coal bright banded	2 1/4"
Bottom of sample	
Tape 28" ?	33 1/16"
Clay with thin coal streaks	2 1/4"
Coal bright	4"
Clay, blue band	3/4"
	7"

Room 18 - 2nd E off Main N

CLARKSON COAL & MINING CO.

NASHVILLE ILL

Nov 8-9, 1938 McCabe & Cady

Sample can A 602 Float and sink sample

Room 18 2nd East off Main North

Top coal two cuts

Sample A 605 Float and sink sample

Bottom coal 2 cuts See Can A610

Typed explanation

Original section top coal can A602

C-2091

C-2090

Clarkson Coal & Mining Co Nashville Illinois  
Sampled Nov. 8 and 9 1938  
Sampled by L.C. McCabe and G.H. Cady

Sample can A602 Float & sink  
Location Room 18 2nd East off Main N.

Sample combined two cuts of top coal  
one cut being along side sample in can 610  
the other cut being the top coal of the  
second bottom cut in Can A 610

This A corresponding cut was not placed  
in can A 606 Hence A 602 and A 606  
are not exactly the same.

Sample can A 605 Float and sink  
Location as for A 602.

This is a sample of the bottom coal  
cut from two places in the mine room/  
corresponding to sample in can A610



601?

Top : 606 - Top coal Room 18 2nd E  
One place

Bottom 610 Bottom coal Room 18 2nd E  
Two places

Top 602 : Floats such next to 606  
 and upper part of in con 610  
2 places

Bottom 605 Bottom at two places  
2 places

Sample 3 -

Nov. 9, 1938

Sample No 3

Sample A606 Room 18 2nd East

Row 1 BK slate - about 2"

draw slate - sticks to coal

Tape-bed 62"

Top coal

Coal, bright, banded - few pyrite faces 10 1/2"

Fusain hard 11 1/2"

Coal - bright banded 12 1/2" 1 1/4"

Pyrite band - 0 - 1/8"

Coal bright banded 13 3/4" 11 1/4"

Pyrite band 0 - 1/16"

Coal 24 1/4"

Fusain or durain

Coal - bright + dull - 27 3"

Coal + + bone (dropping) 27 3/4" 3 1/4"

Coal bright banded 29 3/4" 2 1/4"

Bottom sample

coal bright 1" )

Clay band 1" ) 7 1/2"

coal, bright - pyrite lens (1/2 - 0) 3 3/4"

Blue band, coal in lower 3/4 1 3/4"

A606

Sample 4 Lower part bed Sample 3

Blue band

C 2091

Coal - clean bright			6 1/4
Fusain bone land	bottom band	6 5/16	1/16
Coal bright banded	6 1/4 - 13 1/4	13 5/16	7
Fusain band -		13 1/2	1/2
Coal bright banded	Can 610	17 1/2	4"
Fusain		17 19/32	1/4
Coal bright banded		25 11/32	8"

Bone Tape 25"

Can # 1

Combined will cut at rt hd side from below DD

C 2091

Coal bright		3 1/2	
Fusain soft		1/2	4
Coal bright banded	Bottom band	10 1/2	14 1/2
Fusain soft		1/4	14 3/4
Coal bright		3"	17 1/4
Fusain 2 pyrite		1/4"	18
Coal bright - banded	Tape 30	4 1/2	22 1/2
Fusain	Can 610	1/4	22 3/4
Coal bright		3 1/2	26 1/4
Clay band		1/2	26 3/4
Coal		4	30 1/2

Bone

Can 602 -

Float & Sink

Cut along side Cut top coal  
in can 606 -

~~and upper coal at cut~~

and upper coal at cut  
in can 610

---

Can 605 - Float + Sink

Bottom coal along side 610  
both places.

Measurement Top Coal at 2nd  
 Go cut for can 6oz - Upper coal  
 (not sampled) except for Float + Sink.

Tape 28"

Coal bright, banded		9 1/2"
Fusain & pyrite band	9 3/4	1/4"
Coal - bright banded	16 3/4	7"
Fusain band		4/16"
Coal, bright	22 1/2	5 3/4"
Coal bright & dull	23 1/2	1"
Coal bright	25 1/4	1 3/4"
Coal dull, bright	26 1/4	1"
Coal bright	30	4 1/4"
Clay band (droppings)	30 3/4	1/2"
Coal bright	33	2 1/4"

Bottom of sample

Clay + coal streak	} Buck band	2 1/4"
Coal bright		4"
Clay blue band		3/4"

CLARKSON COAL & MINING CO  
NASHVILLE ILLINOIS

Nov 9 1932

M. Caba & Cady

Sample Can #A603 4th East opposite Room 10  
Roof and upper 33 5/16 top coal  
and 5 3/4" to bottom blue band  
A #608 Same place  
29" below blue band  
( Original and typed copy

*Partial analysis*

#7  
C-2088  
A 603

C-2088  
A #13

#3

Clarkson Coal & Mining Co Nashville Ill  
 Sampled Nov. 9 1938  
 Sampled by L.C. McCabe and G.H. Cady

Sample can No. A603 Top coal Analysis  
 Location 4th East entry opposite Room 10

Roof: Black slate ( about 2" draw slate)

<i>20 8/16</i>	Coal bright banded	13"	
	Pyrite bands with coal between	$\frac{1}{4}$ "	13 $\frac{1}{4}$
	Coal, bright banded	$6\frac{1}{2}$ "	19 $\frac{3}{4}$
	Fusain and bone	$\frac{1}{4}$ "	20
	Coal, bright, banded	$5\frac{1}{2}$ "	25 $\frac{1}{2}$
	Pyrite and coal	$\frac{1}{4}$ "	25 $\frac{3}{4}$
	Coal, bright, banded	1"	26 $\frac{3}{4}$
	Fusain streaks	$\frac{1}{16}$ "	26 $\frac{15}{16}$
	Coal, bright banded	$2\frac{1}{4}$ "	28 $\frac{9}{16}$
	Clay band (droppings)	$\frac{3}{4}$ "	29 $\frac{5}{16}$
	Coal	$3\frac{1}{2}$ "	32 $\frac{17}{16}$
	Bottom of sample cut		
	Tape 33"		$33\frac{5}{16}$ "

<i>20 25</i>	Clay	$\frac{1}{2}$ "	
	Coal dull and bright	$4\frac{1}{4}$ "	
	Clay, blue band	1"	
	Tape $6\frac{1}{4}$ "		$5\frac{3}{4}$ "

*cut below*

Ground in laboratory

*Bottom # 608*

*12/16*

Clarkson Coal & Mining Co Nashville Ill  
 Sampled Nov.9 1938 By L.C.McCabe & G.H.Cady

Sample can No. A608 Bottom coal Analysis  
 Location 4th East entry opposite Room 10

Blue band: See sample No.603

C-2088  
 # 13  
 # 25  
 Bottom 25  
 35

Coal bright banded	3"
Pyrite	1/16"
Coal with pyrite streaks	1 1/2"
Coal bright banded	4
Fusain streaks	1/16"
Coal bright banded	4 1/2"
Fusain parting	1/8"
Coal bright banded	5 1/2"
Fusain	1/8
Coal bright banded	2"
Pyrite and fusain	1/8
Coal bright banded	2"
Bone	1/8
Coal bright banded	6 1/4
Bottom of cut	<hr/>
Tape 29"	29

Ground in laboratory



4th Ent entry opposite Room 10. near  
 Can 603 (608 later)

Tape 33"

\* C 2056 / Tap coal

Roof bk st (alt 2" draw st)

Coal, bright banded	13"	
Pyrite (with coal between)	1/4"	13 1/4
Coal bright banded	6 1/2"	19 3/4
Fusain bone	1/4"	20
Coal bright banded	5 1/2"	25 1/2
Pyrite coal	1/4"	25 3/4
Coal bright	1"	26 3/4
Fusain sheath	1/16"	
Coal	2 1/4"	29
Clay (drifters) (bony)	3/4"	29 3/4
Coal	3 1/2"	33 1/2

Bottom couple

clay	} 6 1/4	1/2	Beels band
coal dulls bright		4 1/4	
BB		1	

Can 608

4th East Entry  
opposite neck Room 10

T Bottom Coal

C. 2088

Tape 28"

Bunk bands, not sample

Coal bylt		3"
Pyrite band	3 1/4	1/16
Coal w/ pyrite etc	4 1/2	1 1/2
Coal bylt band	4 1/2	4
Jusan sheak	8 3/4	1/16
Coal	12 3/4	4
Jusan sheak	18 1/4	5 1/2
Coal	18 3/4	1/8
Jusan sheak	20	2
Pyrite + Jusan	20 1/2	1/8
Coal	22 1/2	2
Base		1/8
Coal bylt	29	1 1/2

Base — Not sample

CLARKSON COAL & MINING CO  
 NASHVILLE, ILLINOIS  
 Room 6 1st E off Main North entry  
 Nov. 9 1938 McCabe and Cady

*C-2004*  
 Cans Nos A-600 and A 611

- 4 # 69*  
*C-2004*  
*C 2004*  
*76*
- ✓ 1. Top coal Typewritten section Can A-600
  2. Bottom bench " " Can A-611
  - 3 Top bench original Can(A)600
  - 4 Bottom bench original " A-611

Clarkson Coal & Mining Co Nashville

Nov 9 1938

Sampled by L.C. McCabe and G.H. Cady

Sample can No. A 600 Analysis  
 Location Room 6 1st east entry off Main N.  
 Sample ground in laboratory

Top coal.

Top.

Roof: Gray shale

Coal bright banded	11 1/2"	11 5/8"
Fusain	1/8"	
Coal bright banded	7"	18 3/4"
Fusain	1/16"	18 11/16"
Coal bright banded	3"	21 1/16"
Fusain	1/16"	21 3/4"
Coal, bright banded	7"	28 3/4"
Fusain and dirt	1/2"	29 1/4"
Coal, bright banded	5"	34 1/4"
Fusain and dirt	1/2"	34 3/4"
Coal bright banded	2"	36 3/4"
Clay (droppings)	1/2"	37 1/4"
Coal bright	3 1/2"	40 3/4"
Tape 41	40 3/4"	

Bottom of sample

Clay and streaks of coal	2 1/2"
Coal	3"
Clay	2 1/2"

Bottom bench (see can A611)

30  
 Top #26

40 3/4  
 2

Clarkson Coal & Mining Co Nashville  
Sampled Nov. 8 & 9 1938  
Sampled by D. C. McCabe and G.H. Cady

Bottom

Sample can No. A611 Analysis  
Location Room 6 1st east off main North  
Bottom coal For top coal see A600

Blue band

Coal, bright banded	8"
Fusain and slate	$\frac{1}{4}$ "
Coal, bright banded	4"
Coal bright banded	4 $\frac{1}{2}$ "
Pyrite and fusain ( $\frac{1}{4}$ " pyrite)	5"
Coal, bright band	5"
B <sup>n</sup> e and fusain	2"
Coal, bright, banded	2"
Tape 25	<hr/> 26

31  
Bottom 25

Bone coal floor.

Sample ground in laboratory

49  
26  

---

74

Nov 9 -

Can 600

~~#3~~ 1st E

Rom 6

41"

#4

Gray shuck roof		
Coal bright bands		11 1/2
Fusam layer	18 1/2	1/8
Coal	18 1/2	3"
Fusam pty		1/16
Coal bright	32 1/2	3
Coal Fusam pty	-	1/16
Coal bright	28 1/2	7'
Fusam + dirt		1/2
Coal bright	33 1/2	5'
Fusam + dirt		1/2
Coal bright	36 3/4	2 1/2
Clay -	37 1/4	1/2
coal	40 3/4	

41"  
Can 600

Bottom of ramp

Clay + coal shuck	2 1/2	} Cudob
Coal	3	
Coal	2 1/2	

A611 Bottom Coal  
1st E Room 6

Tape 25'

Coal bright banded		8"
Fusain + slate		1/4
Coal bright banded	12 1/4	4"
Coal bright banded	16 3/4	4 1/2
Pyrite and fusain (1/4" pyrite)	17 1/2	1/2"
Coal bright banded	23	5 1/2
Bone + fusain		1/2
Coal bright banded	26	2 1/2

Bone —

CLARKSON COAL & MINING CO.,  
NASHVILLE ILLINOIS

Room 24 off 3rd west off Main North entry  
Nov. 9 1938, McCabe & Cady

5  
#7D  
2085

- Cans No. A- 601 & A -607 Top coal (2 places)  
604 (614?)609 Bottom coal (2 ")
- 1. A 601 & A 604 for analysis 607 & 609 Float & sk.
  - 1. Typewritten copy top coal first cut A-601, 607
  - 2. Typewritten copy top coal 2nd cut A-601, A-607
  - 3 Typewritten copy bottom coal  
1st and second cuts A-604, A609
  - 4 Original copy top coal first cut A-601, A607
  - 5 " " " " 2nd cut A-604, A609
  - 6 Original copy bottom coal ten A-604 609  
Can 604 called can 614
  - 7 Explanation, written
  - 8 Original copy bottom coal A604 A609

Cans 601 and 604 in each case represent  
two face samples for analysis top & bottom  
Cans 607 and 609 two face sample in each  
case for float and sink tests.





Clarkson Coal & Mining Co Nashville Illinois  
 Sampled Nov 9 1938 By L.C. McCabe & G.H. Cady

Sample can No. A 601 } One for analysis  
 Sample can No. A 607 } One for float-sink  
 Two cuts in same room

Location: Room 24 3rd west off Main north

First cut Top coal

Roof: Black slate

Coal, bright banded 5 1/2"

Fusain parting 1/16"

Coal bright banded 2"

Fusain parting

Coal bright banded 1 1/4"

Fusain parting

Coal, bright banded 2"

Fusain discontinuous 1/16-1/4 1/4"

Coal, bright banded 6" 1/8"

Fusain 1"

Coal bright banded 1"

Fusain parting 8 1/2"

Coal with fusain streaks 8 1/4"

Bone band (droppings) 4"

Coal with pyrite nod. (1"x0) 4"

Bottom of sample cut 31" approx

Tape 34"

Clay coal streaks 4"

Coal 1 1/2"

Clay blue band 2"

Tape 3" 8"

Ground in laboratory

*Location  
 not on map*

#A 601  
 C-208  
 1/27  
 101

Clarkson Coal & Mining Co Nashville Ill  
 Sampled N.v.9 1938 By L.C. McCabe & G.H. Cady

Sample can No. 601 One for analysis  
 Sample can No. 607 One for float & sink

*Romney*  
 Two cuts in same room

Second cut

Roof black slate:

Coal, bright banded	4 1/4"
Fusain	1/32
Coal, bright banded	6 1/2"
Fusain	1/32
Coal bright banded	2 1/2"
Pyrite	1/32
Coal bright banded	2 1/4"
Fusain and pyrite	1/8
Coal	3 1/4"
Fusain	1/8
Coal	3 1/2"
Fusain parting	
Coal bright banded	1 1/2"
Bone and fusain	1 1/2"
Coal bright banded	1 3/4"
Fusain parting	
Coal bright banded	2 3/4
Coal bony	3/4
Coal bright banded	2 1/2"
Clay band (droppings)	2 1/2"
Coal bright banded	4 1/2"

Bottom of sample cut

Tape 36  
 Clay  
 Coal, bright banded  
 Clay with coal streaks B band

3 7/8"  
 2"  
 2"  
 2 1/2"

Ground in laboratory

C-2006  
 #10  
 31  
 (8)  
 1/2  
 1/2

Clarkson Coal & Mining Co Nashville Illinois  
 Smpled Nov. 9, 1938 By L.C. McCabe & G.H. Cady

Sample can No. A 604 One for analysis and  
 Sample can No. A 609 one for f and sink

*No room 24 on floor entry*

Location Room 24 3rd west off main north  
 Two cuts in the same room  
 Bottom coal See samples 601- & 607 for  
 top coal

Second cut: Below blue band

Coal	4"
Fusain	1/8
Coal	4
Fusain streak	
Coal	6 1/2
Fusain and bone	1/16
Coal	4 1/2"
Fusain and clay streak	
Coal	4 1/2
Fusain and bone	1/16
Coal	2 3/4"
	<hr/>
Bottom cut	26 3/4"
Tape 26 3/4	

*Location?*

#2089  
 604 609  
 Box 28  
 #74  
 32  
 (9)

Bone floor.

First cut:

Coal bright banded pyrite 0-1/8"	7 1/2"
Coal bright banded	9"
Pyrite streak 0-1/32	
Coal bright banded with clayey fusain 4" from top	9"
Bottom of sample cut	<hr/>
Bone floor	25 1/2"

609  
 Box 27  
 609

Ground in laboratory

Can A601 } Insured in 2 places  
A607 } Insured in 2 places  
Room 24 -  
A604 } Bod West entry  
A609 } Ballroom 2 floor  
Ballroom 2 floor

---

Room 24 - 3rd west off

#70  
C. 2085

Can 601 Top Coal further

For analysis 3 1/4" Tape

also from 2nd cut in same room

Roof blk slate

Coal bright band		5 1/4	
Fusain packing			1/16
Coal bright	7 1/4	2"	
Fusain ptg			1/32
Coal	8 1/2	1 1/4	
Fusain ptg			1/32 1/16
Coal	10 1/2	2'	
Fusain descent -	1/16 - 1/4		
Coal bright	16 1/2	6"	
Fusain		1/8	3/8
Coal	17 1/2	1"	1/32
Fusain ptg			
Coal 8 1/2	bone band (darker) 26	8 1/2	
	(w/ fusain streaks)		
Bone band darker	26 1/2	1/4	
Coal w/ pyrit nod (1" x 0)	29 1/2	4	

Bottom sample

Bibb band 8"	{	clay coal sth	4"
		coal	1 1/2
		clay	2 1/2

A70  
C-2029

Can 601 - second cut in room 24  
 Top coal - Top 36"

Best roof

Coal bought  
 Fusan

$4\frac{1}{4}\frac{1}{32}$

Coal - bright  
 Fusan sheek

10 $\frac{3}{4}$

8 $\frac{1}{2}$

Coal  
 Pyrite

13 $\frac{1}{4}$

2 $\frac{1}{2}$   
 $\frac{1}{32}$

Coal  
 Pyrite + fusan

15 $\frac{1}{2}$

2 $\frac{1}{4}$  $\frac{1}{8}$

Coal  
 Fusan

18 $\frac{3}{4}$

3 $\frac{1}{4}$  $\frac{1}{8}$

Coal  
 Fusan

22 $\frac{1}{2}$

3 $\frac{1}{2}$

Coal  
 Bone fusan

24

1 $\frac{1}{2}$

Coal  
 Fusan ply

26 $\frac{1}{2}$

4 $\frac{1}{2}$

Coal  
 Coal buy

26 $\frac{1}{4}$

13 $\frac{1}{4}$

Coal  
 Clay tan

29

2 $\frac{3}{4}$  $\frac{3}{4}$

Coal

29 $\frac{1}{4}$

32 $\frac{1}{4}$

32 $\frac{1}{4}$

37 $\frac{1}{4}$

2 $\frac{1}{2}$  $\frac{1}{2}$

4 $\frac{1}{2}$

Ball cut

one

Buch band 6 1/2

{ Clay 2"  
Coal banded 2"  
Clay + coal str 2 1/2

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Can 614

Same places can 601

Batter coal —  $26\frac{3}{4}$ "

Bulls bay

Coal	4"	
Fusan sheet	$\frac{1}{8}$	
Coal	4"	8
Fusan sheet		
Coal	$6\frac{1}{2}$	14
Fusan + one sheet		
Coal	$4\frac{1}{2}$	20
Fusan + dry sheet		
Coal	$4\frac{1}{2}$	24
Fusan + one sheet		
Coal	$2\frac{7}{8}$	26



607 Top coal - Romney 3rd W  
2 places

∴ 1 place at 601 can  
 and other other side from

Romney 3rd W

614 ~~Bottom~~ coal  
 2 places

609 Bottom coal  
 2 places

Rom 24

Bottom coal at floor <sup>foot</sup>

7

Brick band

Coal light banded 7 1/2

Pyrite streak 0 - 1/8

Coal bright 9"

Pyrite streak 0 - 1/32

Coal light 9"

with little clay, fus - 4" from top

Bone bottom

12/16/38

A sample of coal for active determination was collected from the Clabon mine available, etc. on the morning of 12/14/38. The sample consisted of drill cuttings from 2 1/2' - 3' bed from the face of the coal. The location of the sample in the face is shown in the attached diagram.

The sample was collected in the ball mill in a N<sub>2</sub> atmosphere and sealed. The mill was then swept thoroughly with CO<sub>2</sub> and then the sample was ground for approx. 21 hrs. The sample was removed, sized to pass 100 mesh and bottled in air tight bottles in a CO<sub>2</sub> atmosphere.

Titration will first be run to determine the active O<sub>2</sub> in approx 2 gram sample of the coal which has not been exposed to the atmosphere.

Titration to determine TiCl<sub>3</sub>/FeCl<sub>3</sub> solution ratio.

Batch used: 10cc TiCl<sub>3</sub>, 5cc conc. HCl, 200cc lld distilled H<sub>2</sub>O, 3 drops 27, and 0T.

I cc FeCl <sub>3</sub>		II cc FeCl <sub>3</sub>	
EMF (R=145.7)		EMF (R=145.8)	
0	-2416	0	.2205
15.0	.2000	15.0	.1645
20.0	-1576	20.0	+.0000
23.0	+0145	23.0	+0280
24.0	.0335	24.0	.0390
25.0	.0531	25.0	.0655
25.5	.1075	25.5	.1000
26.0	.1910	26.0	.2105
26.5	.3630	26.5	.3718
27.0	.3715	27.0	.3710
28.0	.4104	28.0	.4100
30.0	.4268	30.0	.4280
35.0	.4470	35.0	.4482
40.0	.4586	40.0	.4594

E.P. = 26.0

E.P. = 26.0

with non-exposed coal sample added

15.8303

13.8535

1764

23.0	.1570
24.0	-1360
25.0	+10053
25.5	.2880
26.0	.3665
27.0	.3978
30.0	.4296
35.0	.4460
40.0	.4562

E.P. = 25.4cc

23.0	.1867
24.0	.1703
25.0	-1033
25.5	+1383
26.0	.3405
27.0	.3925
30.0	.4263
35.0	.4455
40.0	.4550

E.P. = 25.6cc

Coal sample used has analytical # 2102

Notebook 148 (C.A. Harman)

Slate

No 18 Room, 4th West

Top Coal 5 in

ca 2-3 in

Core sample from Top, ca 2-3 ft deep on face.

Buck

200  
5

Coal hump collected

Considerable pyrite

Bony

Dec. 14, 1938

(Note character and thickness of floor)  
Total thickness of coal.

Condition, extra fresh Time, hr. min.  
Wt. Gross, lbs. Net, lbs.  
What Nos. shipped by Co.?

Excluded from sample: No.  
Sample represents in. tons.  
Impurities? How do they occur?

(1 division = 3 in.)

Sample No.	Can No.	Lab. No.
Collector, <u>J.M. Schopf + Carl Harman</u>	Coal: Survey No.	<input type="checkbox"/>
Mine, <u>Claykson</u>	Co. <u>Washington</u>	Index No.
R.—COAL SAMPLE SHEET.		