

3500
0618
BAMIBNO7

7.5' loc change
37-97 32w

1/2

02

Loc. Topo

Lick Branch

Tom & Fred COPENHAVER

GRANT COPENHAVER

S70°W
1085'

HICKORY

SUSAN I. GIVON

S. 28° 30' W
204.21'

COPENHAVER HEIRS
151-48

N. 12° W
149'

N. 11° W
1285'

HICKORY

W.M. Gibson

Loc.

S. 65° E
9.65'

N. 32° 30' W
475'

N. 65° E
805'

N. 54° E
305'

7.5' loc

38° 27' 30" .605
81° 30' 1.78w

15'
3.485
1.78w

N. 65° E
859'

D.W. Willms

HICKORY

WELL No. 4 ELEVATION 661.0-L. LEASE No. G-221

FARM Ed Lucas - surface COPENHAVER HEIRS A-4 ACRES 151

DISTRICT ELK Charleston NE

COUNTY KANAWHA

DATE 11-12-35 SCALE 1" = 800'

ENGINEER C.A. Branham

DEEP WELL 6-6

STATE OF WEST VIRGINIA

DEPARTMENT OF MINES

OIL & GAS DIVISION

47-039-0201-P

WELL LOCATION MAP

Cities Service Oil & Gas Corporation
P.O. Box 873 - Charleston, WVa. 25323
Attn: Paul Phillips, Agent (344-4883)

(192)

JUL 28 1986

+Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude

W. F. Copenhaver Heirs No. 4 (GW-343) Well.

Elk District, Kanawha County, W. Va.
 By Columbian Carbon Co.
 Permit No. Kan-201 and 201-D.
 Elevation, 665.6' L. (D. F.)
 9,979 M. cu. ft. gas; R. P., 1610 lbs.
 Located 3.5 mi. S. of 38° 30' and 1.87 mi. W. of 81° 30'—NE—Charles-
 ton Quadrangle.
 On west side of Lick Branch of Little Sandy Creek, 0.6 mi. N. W. of
 mouth of branch.
 1.38 mi. N. W. of Copenhaver; 2.3 mi. N. E. of Mink.

	Top.	Bottom.	Thickness.	Elevation (top)
Big Lime -----	1342	1494	152	— 676
Big Injun Sand -----	1494	1528	34	— 828
Berea Sand -----	1940	1941	1	—1274
Corniferous Lime ----	4702	4309	107	—4036
Oriskany Sand -----	4809	4342	33)	—4143
	4853	4363	10)	

Thickness, Devonian Shales, 2761± feet. Total depth, 4871'.
 Remarks: Completed to 4843' March 16, 1936. Deepened June 28,
 1937. Shot at 4811-43', and 4843-63'.
 Water, 60'+ and 825' (hole full). Salt water, 1506'. Gas show, 393',
 788', and 1403'.
 Oriskany gas, 4814-16' and 4826-35'.
 2,017 M. cu. ft. gas; R. P., 800 lbs., on deepening.
 On 151 acres.

WVGS

Summarized Records of Deep Wells

Vol. XVI, 1944

P. 306

WEST VIRGINIA DEPARTMENT OF MINES

OIL AND GAS DIVISION

WELL RECORD

FINAL

Permit No. Kan. 201-D

Gas Well

Quad. not given *Charleston*

CASING & TUBING

Company	Columbian Carbon Co.	2-3/8 OD	4871
Address	Box 1240, Charleston, W.Va.		
Farm	Copenhaver Heirs Acres 151	Liners used	
Location	Lick Branch of Little Sandy	3 1/2" 8.7#	91
Well No.	4- G.W.-343 Elev. 665.6	(30' Blank-61' Perf)	
District	Elk County Kanawha		
Coal	Alexander M. Bruen Hrs.	<u>PACKERS</u>	
Address	c/o 19 E. 83rd St., New York City	Kind of Packer	O.W.S.
Surface	Copenhaver Heirs, c/o Grant Copenhaver	Conical sleeve swabbing	
Address	108 Arlington, Charleston, W.Va. & F.S. Copenhaver, Big Chimney, W.Va. Agents	type.	
Drilling	Commenced (Deeper) 6-19-37		
	Completed 6-28-37	Size of	2x6-5/8 5'0"
Date Shot	6-28-37 Depth 4843-4863	Depth set	4781
Volume	1,853,928 B.S; 2,017,008 A.S. (Cu.Ft.)		
Rock Press.	800# 1 hrs.		

Formation	Color	Hor	Top	Base	Result	Formation	Color	Hor	Top	Base	Result
-----------	-------	-----	-----	------	--------	-----------	-------	-----	-----	------	--------

DRILLED DEEPER

Lime		4843	4853		
Oriskany Sand		4853	4863		
Lime		4863			
TOTAL DEPTH			4871	SLM	

Kan-201

OIL OR GAS WELL GAS WELL

COLUMBIAN CARBON COMPANY Company
Box 1240
Charleston, W. Va. Address

COMPLETION DATA SHEET
NO. 2
FORMATION RECORD

WELL NO. 4 (GW-343) FARM Copenhaver Heirs

Name	Color	Character	Oil, Gas or Water	Top	Bottom	Thickness	Total Depth	Remarks
Slate & Shells				3131	3165	34		
Sand								
Shells				3165	3420	255		
Slate & Shells				3420	3620	200		
Brown Shale				3620	3722	102		
Slate & Shells				3722	4323	601		
Shale	Brown			3423	4358	935		
Slate & Shells			Cave -- 4376-80'	4358	4405	47		
Shale	Brown			4405	4590	185		
Slate	White			4590	4628	38		
Shale	Brown			4628	4702	74		
Corniferous				4702	4809	107		
Oriskany				4809	4842	33		
Lime			Gas -- 4814-16'	4842	4843	1		
			Gas -- 4826-35'				4843	

shot
Well was not shot at feet; well was shot at feet.

Salt
Fresh water at feet; salt
fresh water at feet.

producing
Well was hole.
dry

COLUMBIAN CARBON COMPANY

March 26, 1936
Date

Approved By Robert C. Epler
Dist. Geologist

NOTE: All bottom formations must be noted as indicated above and all key-rocks and oil and gas sands must be recorded under their proper geological names in the district as well as any local names commonly used in the district for such strata.



WEST VIRGINIA DEPARTMENT OF MINES

OIL AND GAS DIVISION

PRELIMINARY DATA SHEET NO. 1

File No. Kan-201

Well No. 4(GW-343)

Columbian Carbon Company of Charleston, W. Va.

completed on the Copenhaver Heirs' Farm

containing 400 acres. Location Lick Branch of Little Sandy

Elk District, in Kanawha County, West Virginia
and minerals

The surface of the above tract is owned in fee by Copenhaver Heirs, c/o Grant Copenhaver Agents

of Big Chimney, W. Va. address, and the coal rights are owned by

108 Arlington Avenue, Charleston, W. Va.

Alexander M. Bruen Hrs., of 19 E. 83d Street, New York City

c/o Alexander J. Bruen

The oil and gas privileges are held under lease by the above named company, and this well is drilled under permit No. Kan-201 issued by the West Virginia Department of Mines, Oil and Gas Division

November 21, 1935

Elevation of surface at top of well, 665.6 DF Spirit
~~Barometer~~

The number of feet of the different sized casings used in the well.

_____ feet _____ size. Wood conductor.

32' 10" feet 12-1/2" size, csg. 4753' 3" feet 6-5/8" sized csg.

242' 10" feet 10" size, csg. _____ feet _____ sized csg.

1374' 7" feet 8-1/4" size, csg. _____ feet _____ sized csg.

_____ packer of _____ size, set at _____

_____ packer of _____ size, set at _____

_____, in casing perforated at _____ feet to _____ feet.

_____, in casing perforated at _____ feet to _____ feet.

Coal was encountered at _____ feet, thick ness _____ inches, and at _____

feet; thickness _____ inches; and at _____ feet; thickness _____ inches.

Liners were used as follows: (Give details) _____

March 26, 1936 Date.

Approved Columbian Carbon Company, Owner.

By Robert C. Lafferty, District Geologist
(TITLE)

WEST VIRGINIA DEPARTMENT OF MINES

OIL AND GAS DIVISION

PRELIMINARY DATA SHEET NO. 1

File No. KAN-201

Well No. 4 (GW-343)

Columbian Carbon Company of Charleston, W. Va.

completed on the Copenhaver Heirs' Farm

containing 400 acres. Location Lick Branch of Little Sandy

Elk District, in Kanawha County, West Virginia

The surface ^{and minerals} of the above tract is owned ~~by~~ Copenhaver Heirs, c/o (F. S. Copenhaver) Agent
Big Chimney, W. Va.
of 108 Arlington Avenue, Charleston, W. Va. address, and the ~~coal~~ ^{coal} rights are owned by
Alexander M. Bruen Hrs.,
c/o Alexander J. Bruen of 19 E. 83rd St., New York City

The oil and gas privileges are held under lease by the above named company, and this well is drilled under permit
No. KAN-201 issued by the West Virginia Department of Mines, Oil and Gas Division
November 21, 1925

Elevation of surface at top of well, 665.6 Spirit Barometer.

The number of feet of the different sized casings used in the well.

_____ feet _____ size. Wood conductor.

32' 10" feet 12-1/2" size, csg. 4753' 3" feet 6-5/8" sized csg.

242' 10" feet 10" size, csg. _____ feet _____ sized csg.

1374' 7" feet 8-1/4" size, csg. _____ feet _____ sized csg.

_____ packer of _____ size, set at _____

_____ packer of _____ size, set at _____

_____, in casing perforated at _____ feet to _____ feet.

_____, in casing perforated at _____ feet to _____ feet.

Coal was encountered at _____ feet, thickness _____ inches, and at _____

feet; thickness _____ inches; and at _____ feet; thickness _____ inches.

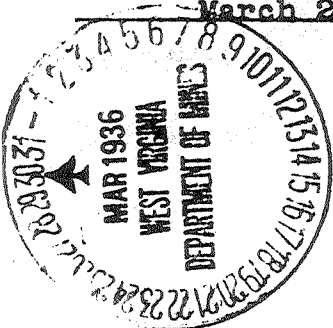
Liners were used as follows: (Give details) _____

March 26, 1936

Date.

Approved COLUMBIAN CARBON COMPANY, Owner.

By Robert C. Lyle
(7177.5) District Geologist



KAN. 201

OIL OR GAS WELL GAS WELL

COLUMBIAN CARBON COMPANY Company

Box 1240
Charleston, W. Va. Address

COMPLETION DATA SHEET

No. 2

WELL No. 4 (GW-343)

FARM Copenhaver Heirs

FORMATION RECORD

Name	Color	Character	Oil, Gas or Water	Top	Bottom	Thickness	Total Depth	Remarks
Surface				0	36	36		
Sandy Shale			Water 60'	36	70	34		
Sand				70	130	60		
Sandy Slate				130	212	82		
Sand				212	240	28		
Slate & Shells				240	345	105		
Sand				345	400	55		
Slate & Shells			Gas 393'	400	440	40		
Sand				440	566	126		
Slate & Shells				566	660	94		
Lime				660	690	30		
Slate & Shells				690	787	97		
1st Salt Sand				787	1001	214		
Slate				1001	1008	7		Small show
2nd Salt Sand				1008	1052	44		
3rd Salt Sand				1052	1300	248		
Little Lime				1300	1323	23		
Pencil Cave			1323	1328	5			
Little Lime			1328	1340	12			
Pencil Cave			1340	1342	2			
Big Lime			Gas 1403' Salt Water 1506'	1342	1494	152		Show
Big Injun Sandy				1494	1528	34		
Slate			1528	1568	40			
Slate & Lime			1568	1654	86			
Slate & Shells			1654	2925	1271			
Lime			2925	3131	206			

shot Well was ~~XXXX~~ at 4811 to 4843 feet; well was shot at _____ feet.

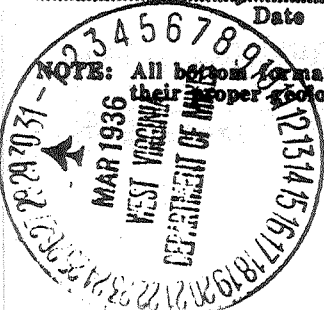
Fresh water at 60' and (HFW 825') salt water at 1506 feet; ~~salt~~ water at _____ feet.

producing Well was _____ hole.

COLUMBIAN CARBON COMPANY

March 26, 1936

Approved By Robert C. Smith Dist. Geologist



WEST VIRGINIA DEPARTMENT OF MINES

OIL AND GAS DIVISION

PRELIMINARY DATA SHEET NO. 1

File No. KAN-201

Well No. 4 (GW-343)

Columbian Carbon Company of Charleston, W. Va.

drilling on the Copenhaver Heirs' Farm

containing 400 acres. Location Lick Branch of Little Sandy

District, in _____ County, West Virginia
and minerals _____ (F. S. Copenhaver) Agent

The surface of the above tract is owned in fee by Copenhaver Heirs, c/o (Grant Copenhaver)

-Big Chimney, W. Va.

of -108 Arlington Avenue, Charleston, W. Va. address, and the coal rights are owned by

Alexander M. Bruen Hrs.,

c/o Alexander J. Bruen of 19 E. 83rd St., New York City.

The oil and gas privileges are held under lease by the above named company, and this well is drilled under permit No. KAN-201 issued by the West Virginia Department of Mines, Oil and Gas Division

Nov. 21 1935

Elevation of surface at top of well, 661.0 Spirit Barometric.

The number of feet of the different sized casings used in the well.

_____ feet _____ size. Wood conductor.

37'10" feet 12-1/2" size, csg. _____ feet _____ sized csg.

242' feet 10" size, csg. _____ feet _____ sized csg.

1374'7" feet 8-1/4" size, csg. _____ feet _____ sized csg.

_____ packer of _____ size, set at _____

_____ packer of _____ size, set at _____

_____, in casing perforated at _____ feet to _____ feet.

_____, in casing perforated at _____ feet to _____ feet.

Coal was encountered at _____ feet, thickness _____ inches, and at _____

feet; thickness _____ inches; and at _____ feet; thickness _____ inches.

Liners were used as follows: (Give details) _____

January 30, 1936 Date.

Approved COLUMBIAN CARBON COMPANY, Owner.

By Robert C. Ritty District Geologist.



Km-201

Columbian Carbon Company
 Box 1240
 Charleston, W. Va. Address

COMPLETION DATA SHEET
 No. 2
 FORMATION RECORD

Well No. 1 (GW-343)

Name	Color	Character	Oil, Gas or Water	Top	Bottom	Thickness	Total Depth	Remarks
clay				0	36	36		
sand				36	240	204		
plate				240	345	105		
and			Gas Show 393'	345	400	55		
plate & Shells				400	440	40		
and				440	566	126		
plate & Shells				566	660	94		
lime Shells				660	690	30		
plate Shells			Gas Show 788'	690	787	97		
st. Salt Sand				787	1001	214		
plate				1001	1008	7		
nd. Salt Sand				1008	1052	44		
rd. Salt Sand				1052	1234	182		
lime & Sand				1234	1300	66		
ittle Lime				1300	1323	23		
encil Cave				1323	1328	5		
ig Lime				1328	1340	12		

shot
 Well was not shot at _____ feet; well was shot at _____ feet.

fresh water at 60' salt
 Fresh water at _____ feet; fresh water at _____ feet.

producing
 Well was _____ hole.
 dry

January 30, 1936 Date Approved COLUMBIAN CARBON COMPANY Owner

NOTE: All local formations must be noted as indicated above and all key-rocks and oil and gas sands must be recorded under their proper geological names in the district as well as any local names commonly used in the district for such strata.

