

Latitude 39°20' 39.20

Cities Service Oil Co.

Plat of the proposed location of well no. E-20 on the ~~Columbian Carbon Company~~ of Charleston, W.Va. on the Lewis Maxwell farm consisting of 1562 acres. Located in West Union District Doddridge County.

Longitude 80°45'

4.58 S
0.69 W

Scale: 1" = 1320'

Hope Nat. Gas Co. Samuel Koontz

Columbian Carbon Co. Lewis Maxwell 1562 Ac.

Columbian Carbon Co. Lewis Maxwell 1682 Ac.

Columbian Carbon Co. Lewis Maxwell

Carnegie Nat. Gas Co. Leeman Maxwell

I, the undersigned, hereby certify that this map is correct and shows all the information to the best of my knowledge and belief required by the oil and gas section of the mining laws of West Virginia

Robert C. Coffey
Engineer

Permit No. Dod-46-3rd SE

Acknowledged before me a Notary Public

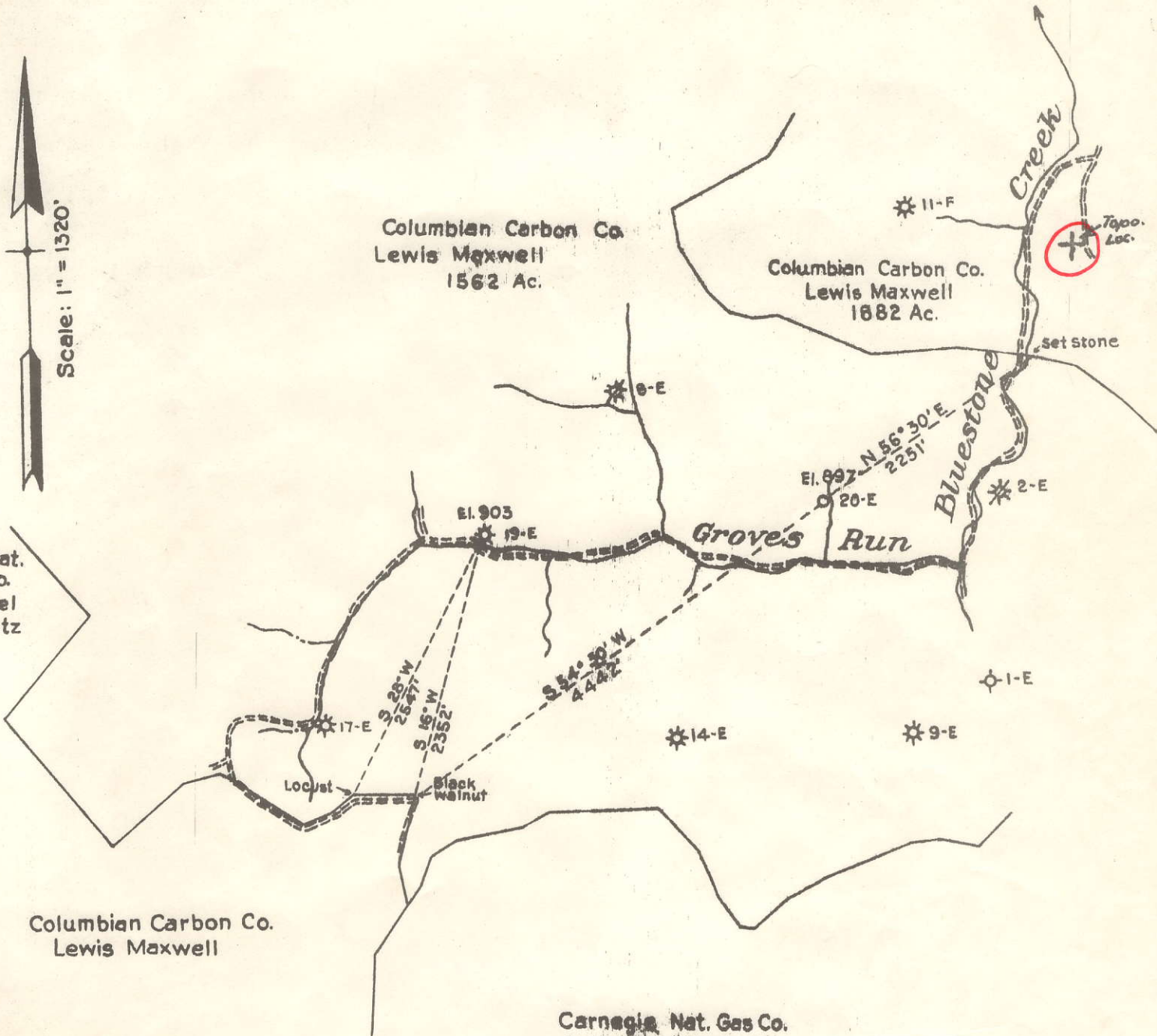
this 2 day of October 1933

Roberta Schlossstein

My commission expires May 16, 1933.

WEST UNION QUAD.

APR 11 1973



CODE No. 309

NAME Lewis Maxwell Well No. 20-E

N. 290.22 E. 323.68

CASING AND TUBING

PACKERS

GAS, WATER AND OIL RECORD

SIZE	PUT IN WELL	PULLED	CASING FT.	SIZE	MAKE,	SET AT	LIQUID OR GAS	DEPTH	FT. RAISED IN HOLE	VOLUME
10"	298'7"	298'7"		8-1/4"	Steel Shoe	869'4"	Water	100'		Little Water
8-1/4"	864'4"			6-5/8"	<i>OILWELL</i> Steel Shoe	1646'9"	Gas	Maxon		Light Show
6-5/8"	204'1646'9"						Gas	1683-90		28/10 Water in
							Gas	2333-38		Very Light Sho
							Gas	1668		

Gas in Maxon Braden Headed Between 6-5/8" - 8-1/4"

NOT TUBED

DODD 46

WEST UNION-7-5

RECORD OF SHOT

DATE SHOT	FROM	TO	SAND	TYPE OF EXPLOSIVE	QUANTITY	PRODUCTION BEFORE SHOT	PRODUCTION AFTER SHOT
NOT SHOT							

	Soil & wellbore	0	16	16
	Soil and Red Rock	0	25	25
	Sand Bluff	25	50	25
250	Red Rock	50	85	35
	Sand	85	130	45
300	Lime Grey	130	138	8
	Slate	138	143	5
400	Hurry Up Sand	143	170	28
	Red Rock	170	190	20
500	Lime	190	234	44
	Slate	234	244	10
600	Lime	244	266	22
	Slate	266	300	34
700	Lime	300	340	40
	Slate	340	360	20
800	Red Rock	360	367	7
	Lime	367	389	22
900	Red Rock	389	398	9
	Lime	398	428	30
1000	Slate	428	440	12
	Lime	440	480	40
1100	Red Rock	480	490	10
	Lime	490	515	25
1200	Red Rock	515	525	10
	Lime	525	580	55
1300	Slate & Lime Shells	580	590	10
	Red Rock	590	610	20
1400	Lime	610	615	5
	Red Rock	615	650	35
1500	Little Dunkard Sand	650	675	25
	Black Slate	675	685	10
1600	Lime	685	775	90
	Slate	775	795	20
1700	Big Dunkard Sand	795	880	85
	Lime	880	920	40
1800	Slate	920	930	10
	Lime	930	940	10
1900	Gas Sand	940	1030	90
	Lime	1030	1062	32
2000	Slate	1062	1072	10
	Lime	1072	1135	63

reconditioned 1-21 to 1-23-56

Gamma Ray survey showed:
Maxon 1476 - 1496'
Big Injun 1664 - 1732'
Temperature Survey showed:

reconditioned 1-21 to 1-23-56

Garms Bay survey showed:
 Maxon 1476 - 1496'
 Big Injun 1664 - 1732'
 Temperature Survey showed:
 Gas in Injun - 1620'
 Bottom of 7" 1631'
 Gas gauged 3/10 w. 2" 73M
 27# 1 hr.)
 32# 2 1/2 hrs) Gordon

27# 1 hr.)
 245# 72 hrs.) Maxon
 Bridged hole at 1830' to test Big Injun.
 Not sufficient rock pressure to fracture.
 Drilled out bridge set at 1830'. Bailed
 brv. Turned Gordon gas in 7" and Maxon
 gas in 8" into line. Set tank to catch
 Maxon gas.
 Gas 3/10 w. 2" 73M - 15# 15 hrs.

2 1/2 - 35# in 40 hrs

1600	Black Slate	675	685	10
	Lime	685	775	90
	Slate	775	795	20
1700	Big Dunkard Sand	795	880	85
	Lime	880	920	40
1800	Slate	920	930	10
	Lime	930	940	10
1900	Gas Sand	940	1030	90
	Lime	1030	1062	32
2000	Slate	1062	1072	10
	Lime	1072	1135	63
2100	1st Salt Sand	1135	1165	30
	Slate	1165	1173	8
2200	Lime	1173	1193	20
	Slate & Shells	1193	1255	62
2300	Lime	1255	1270	15
	Slate	1270	1295	25
2400	Lime	1295	1360	65
	2nd Salt Sand	1360	1415	55
2500	Slate	1415	1432	17
	Lime	1432	1472	40
2600	Maxon Sand	1472	1497	25
	Slate	1497	1505	8
2700	Lime	1505	1515	10
	Red Rock	1515	1518	3
2800	Lime	1518	1542	24
	Slate	1542	1551	9
2900	Lime	1551	1571	20
	Sand	1571	1583	12
3000	Slate	1583	1588	5
	Lime	1588	1604	16
3100	Slate	1604	1606	2
	Big Lime	1606	1667	61
3200	Steel Line	1630		
	Big Injun Sand	1667	1750	83
3300	Lime	1750	1900	150
	Gantz Sand	1900	2040	140
3400	Slate & Shells	2040	2095	55
	Thirty Foot Sand	2095	2123	28

Slate White Soft	2123	2128	5
Lime	2128	2232	104
Fifty Foot Sand	2232	2254	22
Lime	2254	2320	66
Steel Line	2311		
Gordon Stray	2320	2326	6
Slate	2326	2333	7
Sand	2333	2338	5
Slate	2338	2346	8
Lime	2346	2358	12
Slate	2358	2387	29
TOTAL DEPTH	2387		

VOLUME AND PRESSURE TESTS

DATE	LINE PRES.	MINUTES					TIME SHUT IN	ROCK	VOLUME	SAND	REMARKS
		1	2	3	4	5					
6-1-44	10	0	0	2	4	6		84,000	84.000	Flow 30 min	
12-1-44	10			2	4	6		73,000	73.000		
6-1-45	11			2	4	6		84,000	84.000		
12-1-45	9	2	4	6	8	10		78,000	78.000		
6-1-46	10	2	4	5	6	7		84,000	84.000	30"	
12-1-46	9			3	4	6		84,000	84.000	1/2 hr.	
6-1-47	10			1	2	4		84,000	84.000		
12-1-47	10	-	2	3	5	7		94,000	94.000	Flowing	
6-1-48	10	2	4	6	7	9		94,000	94.000		
12-1-48	10	-	3	5	7	9		94,000	94.000		
6-1-49	9	-	2	4	5	6		94,000	94.000		
12-1-49	5	1	2	4	5	7		84,000	84.000		
6-1-50	7	1	2	4	6	8		73,000	73.000		
12-1-50	7	1	2	3	4	5		73,000	73.000		
6-1-51	7	1	2	3	4	5		73,000	73.000		
12-1-51	7	1	2	3	4	5		73,000	73.000		
6-2-52	6	1	2	3	4	5		84,000	84.000		
12-2-52	7	1	2	3	4	5		73,000	73.000		
6-12-52	7	1	2	3	4	5		73,000	73.000		
6-17-53	9	1	2	3	4	5		60,000	60.000		
12-15-53	7	1	2	3	4	5		73,000	73.000		
6-16-54	13	1	2	3	4	5		60,000	60.000		
7-20-54	11	11	11	12	14	16		73,000	73.000		
9-23-54	11	11	11	12	14	15		60,000	60.000		
12-21-54	7	1	2	3	5	6		73,000	73.000		
6-2-55	8	1	2	3	4	5		73,000	73.000		
8-30-55	9	9	9	10	11	13		60,000	60.000		
10--55											
12-20-55	13	0	1	2	4	7		73,000	73.000		
1-25-56											
6'	0	0	1	5	7	10					
8'	0	2	4	4 1/2	5	8					
2-24-56	7	9	9	10	11	13					

3-21-56 9 9 9 10 11 13 15 23 27
 1-21-56
 16th 27 } London
 24th 32 }
 1st 27 } 73M
 72th 245 } Max
 Reconn 12/3/56

RECORD OF WELL USE

COUNTY Doddridge
 WATERS Blue Stone (Penitentiary Hollow)
 COMMENCED 11-19-33
 DATE SPUNDED 10-20-33 DATE SHUT IN 11-19-33
 RIG Furnished by Columbian Carbon Company
 MANAGERS O.L. Pratt, Weston; ALGY McKinney, Jack Spellacy
 Dressers: Gainer Pratt, F.R. Pratt, F.R. Greathouse
 W. O. NO. I. R. NO.

COST COMPLETE \$ 6,757

COST PER FOOT \$

DATE CONNECTED 11-19-33 Temporary Line

DATE PLUGGED DATE A.B.D.

TOTAL DEPTH 8387

C. H. ELEVATION HOW OBTAINED Alidade

Contractor: F. S. Greathouse, Weston, W.VA.

Big Spring & Bourbon

Total on line

VOLUME AND PRESSURE TESTS

DATE	LINE PRES.	MINUTES										TIME SHUT IN	ROCK	VOLUME	SAND	REMARKS	
		1	2	3	4	5	10	30	60	30	60						
11-19-33																	193,240 Big Injun
12-1-33	26	2	6	8	10	14	22	36	46								238,080 " 4 GOTTEN
6-1-34		2	4	6	8	10	20	30	36								42 151 720 " " Shut IN.
12-1-34	13	0	0	0	2	4	10	27	36								150,720 " " Blown 1/2 hr.
6-15-35	5	0	2	3	4	4	12	26	36								40 134,400 " " 1/2 hr
12-15-35	11	0	2	4	6	6	14	24	30								94,560 " " 1/2 "
6-25-36	10	2	2	4	6	7	12	22	30								94,560 " " 1/2 "
12-15-36	10																67,342 " " 1/2 "
6-15-37		2	4	4	6	8	16	26	32								83,040 " " 1/2 "
12-1-37	12	2	4	4	6	8	12	24	30								115,968 " " 1/2 "
6-1-38	11	2	4	4	6	9	14	24	28								67,342 " " 1/2 "
12-1-38	9																60,000 " " 1/2 "
6-1-39	10																73,000 " " 1/2 "
12-1-39	8	2	4	6	7	12	20	25									73,000 " " 1/2 "
6-1-40	9	2	4	4	6	10	22	30									73,000 " " 1/2 "
12-1-40	10																73,000 " " 1/2 "
6-1-41	9	2	4	6	8	8	12	23	31								84,000 " " 1/2 "
12-1-41	11	2	4	6	8	10	14	24	32								84,000 " " 1/2 "
6-1-42	10	2	4	6	7	9	12	22	30								84,000 " " 1/2 "
12-1-42	11																60,000 " " 1/2 "
6-1-43	10	2	4	6	8	10	14	24	32								84,000 " " 1/2 "
12-1-43	10																73,000 " " 1/2 "



RECEIVED

MAR 23 1973

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

TO THE DEPARTMENT OF MINES,
Charleston, W. Va.

DATE March 23, 1973

Surface Owner Louis Maxwell
Address West Union, W. Va.

Company Cities Service Oil Company

Address Box 873, Charleston, W. Va. 25323

Mineral Owner _____

Farm Louis Maxwell Acres 1,562

Address _____

Location (waters) Grove Run of Bluestone Creek

Coal Owner _____

Well No. "B" #20, GR-309 Elevation 897

Address _____

District West Union County Doddridge

Coal Operator _____

Quadrangle West Union

Address _____

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for fracturing. This permit shall expire if operations have not commenced by 7-23-73.

Robert L. Todd
Deputy Director - Oil & Gas Division

INSPECTOR TO BE NOTIFIED Bill Blosser
Colfax, WV. PH: 363-9105

GENTLEMEN:

The undersigned well operator is entitled to drill upon the above named farm or tract of land for oil and gas, having fee title thereto, (or as the case may be) under grant or lease dated December 28, 1898 by Louis & Sarah E. Maxwell made to Cities Service Oil Co. (formerly Columbian Carbon Co.) and recorded on the 14 day of March 1973, in Doddridge County, Book 11 Page 479

NEW WELL DRILL DEEPER REDRILL FRACTURE OR STIMULATE
OIL AND GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1969.

The enclosed plat was prepared by a registered engineer or licensed land surveyor and all coal owners and/or operators have been notified as of the above date.

The above named coal owners and/or operator are hereby notified that any objection they wish to make, or are required to make by Section 3 of the Code, must be received by, or filed with the Department of Mines within ten (10) days. *

Copies of this notice and the enclosed plat were mailed by registered mail, or delivered to the above named coal operators or coal owners at their above shown respective address _____ day _____ before, or on the same day with the mailing or delivery of this copy to the Department of Mines at Charleston, West Virginia.

Very truly yours,

(Sign Name)

Verlin Meier Well Operator Region Engr. Manager

P. O. Box 873

Address
of
Well Operator

Street

Charleston,

City or Town

West Virginia 25323

State

*SECTION 3 . . . If no objections are filed or found by the Department of mines, within said period of ten days from the receipt of notice and plat by the department of mines, to said proposed location, the department shall forthwith issue to the well operator a permit reciting the filing of such plat, that no objections have been made by the coal operators or found thereto by the department and that the same is approved and the well operator authorized to proceed.

BLANKET BOND

Survey

DOD-46 -FRAC.

PERMIT NUMBER

THIS IS AN ESTIMATE ONLY
ACTUAL INFORMATION WILL BE SUBMITTED ON OG-10 UPON COMPLETION

DEPARTMENT OF MINES
 Gas Division

PROPOSED WORK ORDER TO _____ DRILL _____ DEEPEN FRACTURE-STIMULATE

DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT: _____

NAME Bud Spencer _____ NAME San J. Matthew _____

ADDRESS West Union, West Virginia _____ ADDRESS Box 873, Charleston, W. Va. _____

TELEPHONE _____ TELEPHONE 344-8383 _____

ESTIMATED DEPTH OF COMPLETED WELL: 2387' _____ ROTARY _____ CABLE TOOLS _____

PROPOSED GEOLOGICAL FORMATION: Big Injun & Gordon Sands _____

TYPE OF WELL: OIL _____ GAS COMB. _____ STORAGE _____ DISPOSAL _____

RECYCLING _____ WATER FLOOD _____ OTHER _____

TENTATIVE CASING PROGRAM:

CASING AND TUBING SIZE	USED FOR DRILLING	LEFT IN WELL	CEMENT FILL UP OR SACKS - CUBIC FT.
20 - 16			
13 - 10			
9 - 5/8			
8 - 5/8 1/4"	864'		Not cemented
7 6-5/8"	1647'		Not cemented
5 1/2			
4 1/2			
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 100 FEET SALT WATER _____ FEET

APPROXIMATE COAL DEPTHS _____

IS COAL BEING MINED IN THE AREA? _____ BY WHOM? _____

TO DRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, \$100.00 PERMIT FEE, PERFORMANCE BOND AND PERMANENT COPY OF PLAT.

TO DRILL DEEPER OR REDRILL:

SUBMIT FIVE (5) COPIES OF OG - 1, SHOWING ORIGINAL PERMIT NUMBER AND PERFORMANCE BOND. ON WELLS DRILLED PRIOR TO 1929, A PERMANENT COPY OF THE PLAT AND THE ORIGINAL WELL RECORD MUST ALSO BE SUBMITTED.

TO FRACTURE - STIMULATE:

OIL AND/OR GAS WELL ORIGINALLY DRILLED BEFORE JUNE 5, 1929, FIVE (5) COPIES OG - 1, PERFORMANCE BOND, PERMANENT PLAT AND ORIGINAL WELL RECORD.

OIL AND/OR GAS WELL ORIGINALLY DRILLED ON AND/OR AFTER JUNE 5, 1929, FIVE COPIES OG - 1, SHOWING ORIGINAL PERMIT NUMBER, AND PERFORMANCE BOND.

Required forms must be filed within ninety (90) days of completion for bond release. Inspector to be notified twenty-four (24) hours in advance.

The following waiver must be completed by the coal operator if the permit is to be issued within ten days of receipt thereof.

WAIVER: I the undersigned, Agent for _____ Coal Company, Owner or Operator of the coal under this lease have examined and place on our mine maps this proposed well location.

We the _____ Coal Company have no objections to said well being drilled at this location, providing operator has complied with all rules and regulations in Articles 4, 5, and 7, Chapter 22 of the West Virginia Code.

 For Coal Company

 Official Title