

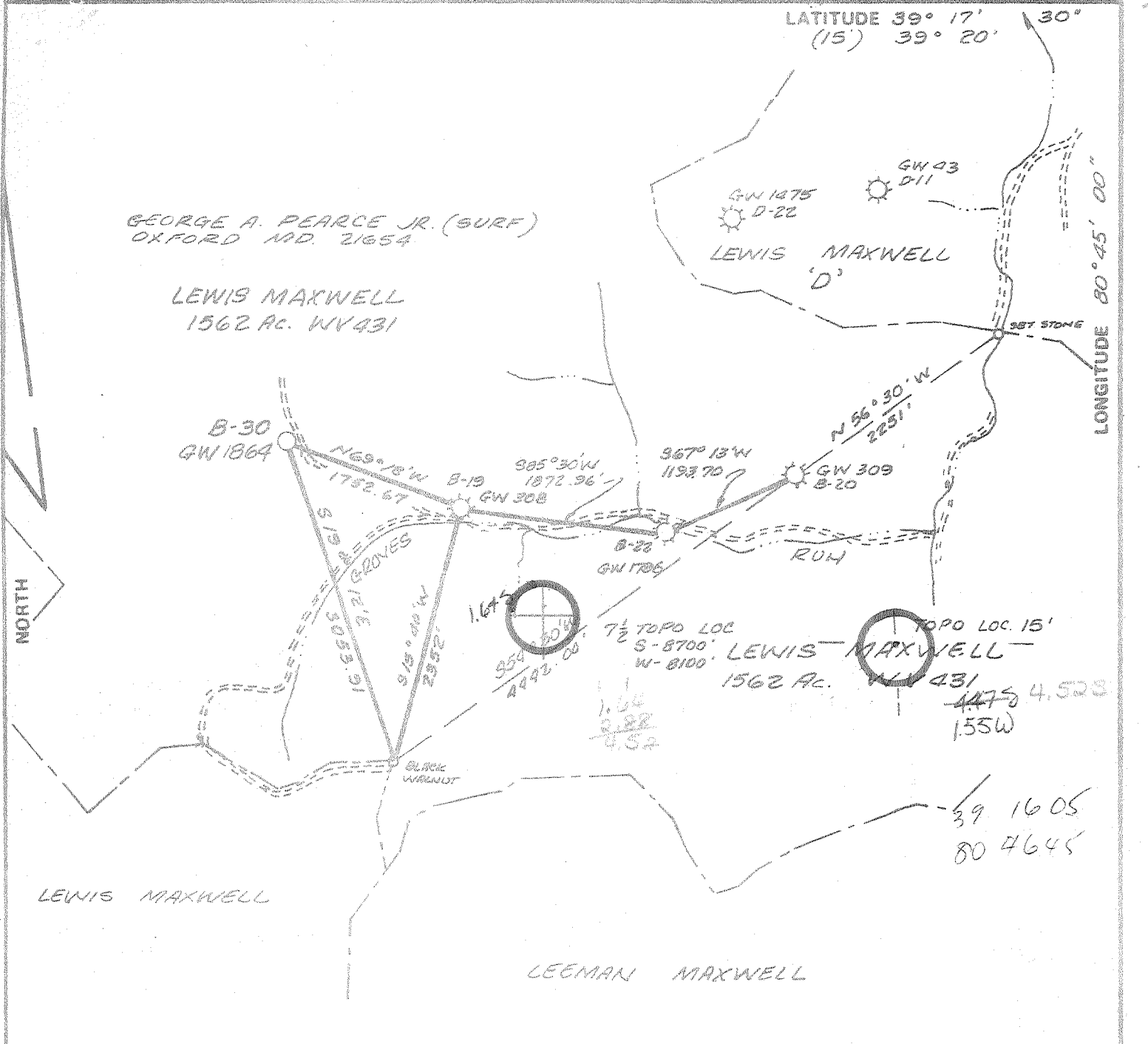
LATITUDE 39° 17' (15) 39° 20' 30"

GEORGE A. PEARCE JR. (SURF)
OXFORD MD. 21854

LEWIS MAXWELL
1562 AC. WV 431

LEWIS MAXWELL
'D'

LONGITUDE 80° 45' 00"



LEWIS MAXWELL

LEEMAN MAXWELL

39 16 05
80 46 45

FILE NO. _____
DRAWING NO. W-13-80
SCALE 1" = 1320'
MINIMUM DEGREE OF ACCURACY 1 in 200
PROVEN SOURCE OF ELEVATION MAXWELL B-19 GW 308
ELEV. 903'

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF MINES.
(SIGNED) _____
R.P.E. _____ L.L.S. 247

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
FORM IV-6 (8-78)



DATE MAY 31, 1980, 19 ____
OPERATOR'S WELL NO. B-30 GW 1864
API WELL NO. _____
47 - 017 - 2747
STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
(IF "GAS,") PRODUCTION ___ STORAGE ___ DEEP ___ SHALLOW X
LOCATION: ELEVATION 970.03 WATER SHED GROVES RUN
DISTRICT WEST UNION COUNTY DODDRIDGE
QUADRANGLE WEST UNION S2
SURFACE OWNER GEORGE PEARCE JR. ACREAGE _____
OIL & GAS ROYALTY OWNER LEWIS MAXWELL ETUX LEASE ACREAGE 1562
LEASE NO. WV 431
PROPOSED WORK: DRILL X CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
TARGET FORMATION ALEXANDER ESTIMATED DEPTH 5050'
WELL OPERATOR CITIES SERVICE CO. DESIGNATED AGENT SAM J. MATTHEWS
ADDRESS BX 873 ADDRESS BX 873
CHARLESTON WV. 25323 CHARLESTON WV 25323



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division

WELL RECORD

Rotary Oil _____
Cable _____ Gas _____
Recycling _____ Comb. _____
Water Flood _____ Storage _____
Disposal _____ (Kind) _____

Quadrangle West Union
Permit No. 47-017-2747

Company Cities Service Company
Address Box 873, Charleston, WV 25323
Farm Lewis Maxwell et ux Acres 1562
Location (waters) Groves Run
Well No. #30, GW-1864 Elev. 970.03
District West Union County Doddridge
The surface of tract is owned in fee by George A. Pearce, Jr.
Address Oxford, MD 21654
Mineral rights are owned by Lewis Maxwell, et ux
Address Robert Holland, Agent
Drilling Commenced 6-26-80 West Union, WV
Drilling Completed 11-6-80 26456
Initial open flow 0 cu. ft. 0 bbls.
Final production 772 M cu. ft. per day 0 bbls.
Well open 39 hrs before test 110# RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 13-10" 11-3/4"	80	80	surface (40 sx)
9 5/8			
8 5/8	1671	1671	surface (471 sx)
7			
5 1/2			
4 1/2	5196	5196	(685 sx)
3			1054.9 cu. ft.
2 -3/8"	2105.55	2105.55	
Liners Used			

Well treatment details:

Attach copy of cementing record.

Broke down Alexander perfs at 1900# with 1000 gal. 10% Mod Acid Containing 20 perf balls. Displaced with 68 bbl. balled out perfs. Flowed back 10 BLW. Ran bailer to knock out perf balls. Fraced Alex. with Halliburton Crosslink frac system containing 14,000# 80/100 sand 110,000# 20/40 sand. Broke down Weir perfs at 2800# with 2000 gal. 10% Mod Acid containing 60 perf balls. Bailed out perfs at 3500#. Knocked out per balls with bailer. Frac Weir with crosslinked gel system with 15000# 80/100 sand; 120,000# 20/60 sand and 190 MCF N2/

Coal was encountered at none Feet none Inches
Fresh water 220' Feet none Salt Water none Feet none
Producing Sand Alexander Depth 5032-5050
Weir 2034-2114

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
RR			0	9		
Sand			9	20		
RR			20	55		
Shale			55	200		
Sand			200	260	Water at 220'	
Shale			260	365		
RR			365	385		
Sand			385	403		
Shale			403	510		
Sand			510	527		
Shale			527	940		
Sand			940	1010		
Shale			1010	1070		
Sand			1070	1125		
Shale			1125	1140		
Sand			1140	1190		
Shale			1190	1315		
Sand			1315	1384		
Shale			1384	1640		
Sand			1640	2130		
Shale			2130	2260		
Sand			2260	2270		
Shale			2270	2307		
Sand			2307	2430		
Shale			2430	2440		

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Sand			2440	2465		
Shale			2465	3100		
Sand			3100	3140		
Shale			3140	3300		
Sand			3300	3435		
Shale			3435	3555		
Sand			3555	3563		
Shale			3563	4320		
Sand			4320	4360		
Shale			4360	4445		
Sand			4445	4460		
Shale			4460	4730		
Sand	ALEX.		4730			T.D. 5204'

Date January 20, 19 81

APPROVED Cities Service Company Owner

By Paul D. Phillips
Paul D. Phillips, Region Operations Manager



THIS PERMIT MUST BE POSTED AT THE WELL SITE

STATE OF WEST VIRGINIA All provisions being in accordance with Chapter 22, DEPARTMENT OF MINES of the W. Va. Code, the location is hereby approved

Oil and Gas Division

for drilling. This permit shall expire if operations have not commenced by 2-5-81

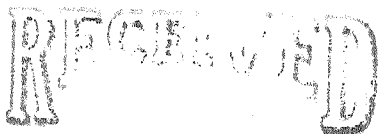
OIL AND GAS WELL PERMIT APPLICATION

Deputy Director - Oil & Gas Division

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

Surface Owner George A. Pearce, Jr.
Address Oxford, MD 21654
Mineral Owner Lewis Maxwell, et ux
Address Robert Holland, Agent
West Union, WV 26456
Coal Owner
Address
Coal Operator
Address

DATE June 2, 1980
Company Cities Service Company
Address Box 873, Charleston, WV 25323
Farm Lewis Maxwell, et ux Acres 1562
Location (waters) Groves Run
Well No. "B" #30, GW-1864 Elevation 970.03
District West Union County Doddridge
Quadrangle West Union



JUN 4 1980

OIL & GAS DIVISION DEPT. OF MINES

INSPECTOR TO BE NOTIFIED Paul Garrett

ADDRESS 321 Beech Street., Clarksburg, WV 26301

PHONE 622-3871

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 Feb. 1 1989 by Lewis Maxwell et ux made to Columbian Carbon Co. (now Cities Service) and recorded on the day of 19 in Doddridge County, Book 33 Page 431

X 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, Cities Service Company

(Sign Name) [Signature] Well Operator

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA GEOLOGICAL AND ECONOMIC SURVEY
P. O. BOX 879
MORGANTOWN, WEST VIRGINIA 26505
AC-304 - 292-6331

Address of Well Operator

Box 873 Street
Charleston City or Town
W. Va. 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.

47-017-2747

PERMIT NUMBER

"I have read and understand the reclamation requirements as set forth in Chapter 22, Article 4, Section 12-b and will carry out the specified requirements."

Signed by [Signature]

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

PROPOSED WORK ORDER TO DRILL DEEPEN FRACTURE-STIMULATE
 DRILLING CONTRACTOR: (If Known) RESPONSIBLE AGENT:
 NAME Spencer Drilling Co. NAME Sam J. Matthews
 ADDRESS West Union, WV 26456 ADDRESS Box 873, Charleston, WV 25323
 TELEPHONE _____ TELEPHONE 304-344-8383
 ESTIMATED DEPTH OF COMPLETED WELL: 5300 ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Devonian 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 11-3/4 42#	60'	60'	To Surface
9 - 5/8			
8 - 5/8 24#	1750'	1750'	To Surface
7			
5 1/2			
4 1/2 11.6#	5300'	5300'	500 sx
			Perf. Top
			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 405 FEET SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS 35'
 IS COAL BEING MINED IN THE AREA? No 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