



CERTIFICATE

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by paragraph 6 of the rules and regulations of the oil and gas section of the mining laws of West Virginia."

Minimum degree of accuracy is one part in 200

Signed *William S. Crawley* L.L.S. No. 116

(N.B. #118 Pg. 28)

- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

COMPANY CITIES SERVICE COMPANY
 ADDRESS P.O. Box 873 CHARLESTON, W.VA. 25323
 FARM LEWIS MAXWELL
 MAP _____ ACRES 2654.88 LEASE NO. WV-427
 WELL (FARM) NO. A-71 SERIAL NO. GW-1880
 ELEVATION (SPIRIT LEVEL) 1195.?
 QUADRANGLE OXFORD (N.E. HOLBROOK - 1:62,500)
 COUNTY ODDRIDGE DISTRICT WEST UNION
 POINT OF PROVEN ELEVATION U.S.G.S. DATUM
WELL No. A-61
 FILE NO. _____ DRAWING NO. W-2-81
 DATE JANUARY 20, 1981 SCALE 1" = 1320'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON
 WELL LOCATION MAP (new report)
 FILE NO. 47-017-2968
66 Straight Fork - Bluestone Creek (133)
 + DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC
 MAPS. SCALE 1 TO 24,000. LATITUDE AND LONGITUDE LINES
 BEING REPRESENTED BY BORDER LINES AS SHOWN. MAR 9 1981
 - DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Perforated Alexander Sand from 5228' to 5277', 26 shots, 1 SPF. Broke down formation with 1000 gal. 15% HCl. Pumped 100 bbl. gel pad. Fraced with 30,000# 80/100 sand and 90,000# 20/40 sand suspended in crosslinked gel.

Perforated Weir Sand from 2207' to 2297', 35 shots, 1 SPF. Broke down formation with 2000 gal. 15% HCl. Balled out. Pumped 75 bbl. pad with 500 SCF/bbl. of N₂. Fraced with 15,000# 80/100 sand and 105,000# 20/40 sand suspended in crosslinked gel energized with 200 SCF/bbl. of N₂.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Red Rock			0	5	
Shale			5	25	
Sand			25	40	
Shale			40	65	
Sand			65	95	
Red Rock			95	102	
Sand			102	170	Water @ 115
Red Rock			170	190	
Shale & Red Rock			190	315	
Sand			315	335	
Red Rock			335	365	
Sand			365	455	
Red Rock			455	480	
Sand			480	510	
Red Rock & Shale			510	539	
Sand			539	551	
Shale & Red Rock			551	655	
Red Rock			655	680	
Shale			680	818	
Sand			818	849	
Shale			849	1040	
Sand			1040	1066	
Shale			1066	1110	
Sand			1110	1330	
Shale			1330	1535	
Sand			1535	1638	
Shale			1638	1656	
Sand			1656	1668	
Shale			1668	1738	
Sand			1738	1770	
Shale			1770	1805	
Lime			1805	1890	
Big Injun Sand			1890	2020	
Shale			2020	2030	
Sand			2030	2049	
Shale			2049	2196	
Weir Sand			2196	2304	
Shale			2304	2400	
Berea Sand			2400	2412	

(CONTINUED)

(Attach separate sheets as necessary)

Cities Service Company

Well Operator

Paul D. Phillips

Region Operations Manager

By: Paul D. Phillips

Date: 9/30/81

Note: Regulation 2:02(i) provides as follows:
"The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including all, encountered in the drilling of a well."

WELL LOG

(Page Two - Maxwell "A" #71)

FORMATION	TOP FEET	BOTTOM FEET	REMARKS
Shale	2412	2620	
Gordon Sand	2620	2648	
Shale	2648	3294	
Warren Sand	3294	3430	
Shale	3430	4936	
Benson Sand	4936	4946	
Shale	4946	5224	
Alexander Sand ✓	5224	5290	
Shale	5290	5383	

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RECEIVED

OCT 1 - 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

OCT 22 1981



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
Oil and Gas Division
WELL RECORD

Quadrangle Oxford
Permit No. 47-017-2968

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

Company <u>Cities Service Company</u>	Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Address <u>P.O. Box 873, Charleston, WV 25323</u>	Size			
Farm <u>Lewis Maxwell et ux</u> Acres <u>2654.88</u>	20-16			
Location (waters) <u>Arnolds Creek</u>	Cond.			
Well No. <u>"A" #71, GW-1880</u> Elev. <u>1195.2</u>	13-10" 11-3/4,	47# 36'	36'	15 sxs. to surface
District <u>West Union</u> County <u>Doddridge</u>	9 5/8			
The surface of tract is owned in fee by <u>Mrs. E. Maxwell</u>	8 5/8 23#/ft.	1784'	1784'	420 sxs. to surface
Address <u>West Union, WV 26456</u>	7			
Mineral rights are owned by <u>Lewis Maxwell et ux</u> <u>Robert Holland, Agent</u>	5 1/2			
Address <u>West Union, WV 26456</u>	4 1/2 10.5#/ft.			600 sxs.
Drilling Commenced <u>4-3-81</u>	3			
Drilling Completed <u>5-30-81</u>	2			
Initial open flow <u>762</u> cu. ft. _____ bbls.	Liners Used			
Final production <u>298</u> cu. ft. per day _____ bbls.				
Well open <u>24</u> hrs. before test _____ RP.				

Well treatment details: Attach copy of cementing record.
Broke down Alexander with 1,000 gal. 15% HCL. Pump 100 bbl. pad. Frac Alexander with 30,000# 80/100 sand and 90,000# 20/40 sand suspended in cross-linking gel.

Coal was encountered at none Feet _____ Inches _____
Fresh water 115' Feet _____ Salt Water none Feet _____
Producing Sand Alexander Sand Depth 5219

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
Red Rock			0	5		
Shale			5	25		
Sand			25	40		
Shale			40	65		
Sand			65	95		
Red Rock			95	102		
Sand			102	170		Water @ 115
Red Rock			170	190		
Shale & Red Rock			190	315		
Sand			315	335		
Red Rock			335	365		
Sand			365	455		
Red Rock			455	480		
Sand			480	510		
Red Rock & Shale			510	539		
Sand			539	551		
Shale & Red Rock			551	655		
Red Rock			655	680		
Shale			680	818		
Sand			818	849		
Shale			849	1040		
Sand			1040	1066		
Shale			1066	1110		
Sand			1110	1330		

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JUN 17 1981

OIL & GAS DIVISION
DEPT. OF MINES

JUN 31 1981

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	Remarks
Shale			1330	1535		
Sand			1535	1638		
Shale			1638	1656		
Sand			1656	1668		
Shale			1668	1738		
Sand			1738	1770		
Shale			1770	1805		
Lime			1805	1890		

Date June 15 19 81

APPROVED Paul P. Phillips Owner



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

Oil and Gas Division

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FEB - 6 1981

OIL AND GAS WELL PERMIT APPLICATION OIL & GAS DIVISION
DEPT. OF MINES

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

DATE February 4, 1981

Surface Owner Mrs. E. Maxwell

Company Cities Service Company

Address West Union, WV 26456

Address Box 873, Charleston, WV 25323

Mineral Owner Lewis Maxwell et ux
Robert Holland, Agent

Farm Lewis Maxwell et ux Acres 2654.88

Address West Union, WV 26456

Location (waters) Arnolds Creek

Coal Owner _____

Well No. "A" #71, GW-1880 Elevation 1195.2

Address _____

District West Union County Doddridge

Coal Operator _____

Quadrangle Oxford

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 drilling. This permit shall expire if operations have not commenced by 10-9-81.

[Signature]
Deputy Director - Oil & Gas Division

INSPECTOR
TO BE NOTIFIED Paul Garrett
321 Beech Street
ADDRESS 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 August 18 1905 by Lewis Maxwell et ux made to Columbia Carbon(now Cities Service) and recorded on the _____ day of _____ 19____, in Doddridge County, Book 23 Page 69

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]* Paul D. Phillips
Well Operator Paul D. Phillips
Operations Manager

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.

47-017-2968

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 _____

BLANKET BOND

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 Enterprises NAME Paul D. Phillips
 ADDRESS _____ ADDRESS Box 873, Charleston, WV 25323
 TELEPHONE _____ TELEPHONE 304-344-8383
 ESTIMATED DEPTH OF COMPLETED WELL: 5250' ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Alexander Sand
 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#	80	80	48 sacks to surface
9 - 5/8			
8 - 5/8 24#	1800	1800	420 sacks to surface
7			
5 1/2			
4 1/2 10-1/2#	5250	5250	600 sacks to surface
3			Perf. Top
2			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 375 FEET - SALT WATER _____ FEET
 APPROXIMATE COAL DEPTHS None
 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