



- NEW LOCATION
- RECONDITION
- DRILL DEEPER
- ABANDONMENT

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 _____ L.L.S. 247

COMPANY CITIES SERVICE COMPANY
 ADDRESS BX. 873 CHARLESTON WV. 25323
 FARM LEWIS MAXWELL 'A'
 MAP _____ ACRES 2654 LEASE NO. WV-427
 WELL (FARM) NO. 67-A SERIAL NO. GW 1867
 ELEVATION (SPIRIT LEVEL) 1150.67
 QUADRANGLE OXFORD 7 1/2 HOLBROOK 15' NE
 COUNTY DODDRIDGE DISTRICT WEST UNION
 POINT OF PROVEN ELEVATION U.S.G.S. DATUM - WELL No. 64-A

FILE NO. _____ DRAWING NO. W-17-80
 DATE AUG. 26, 1980 SCALE 1"=1320'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 CHARLESTON

WELL LOCATION MAP
017-2837

FILE NO. _____
6-b Straight Fork - Bluestone Creek (133)

+ DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS. SCALE 1 TO 62,500. LATITUDE AND LONGITUDE LINES BEING REPRESENTED BY BORDER LINES AS SHOWN.

— DENOTES ONE INCH SPACES ON BORDER LINE OF ORIGINAL TRACING.

OCT 10 1980



IV-35
(Rev 8-81)

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NOV 24 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date November 19, 1981
Operator's
Well No. "A" #67-A (GW-1867)
Farm Lewis Maxwell
API No. 47 - 017 - 2837

WELL OPERATOR'S REPORT
OF

DRILLING, ~~FRACTURING AND/OR STIMULATING, OR PERMANENT PLUG~~

WELL TYPE: Oil / Gas X / Liquid Injection / Waste Disposal /
(If "Gas," Production X / Underground Storage / Deep / Shallow X /)

LOCATION: Elevation: 1150.67' Watershed Left Fork of Arnold's Creek
District: West Union County Doddridge Quadrangle Oxford 7.5'
Holbrook 15'

COMPANY Cities Service Company
ADDRESS P.O. Box 873, Charleston, WV 25323-0873
DESIGNATED AGENT Paul D. Phillips
ADDRESS same
SURFACE OWNER Mrs. Everet Maxwell
ADDRESS West Union, WV 26456
MINERAL RIGHTS OWNER Lewis Maxwell, et ux
c/o Robert Holland, Agent
ADDRESS Box 425, West Union, WV 26456
OIL AND GAS INSPECTOR FOR THIS WORK Paul
Garrett ADDRESS 321 Beech Street,
Clarksburg, WV 26301
PERMIT ISSUED September 26, 1980
DRILLING COMMENCED February 17, 1981
DRILLING COMPLETED September 30, 1981
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
11-3/4" 13-1/2"	42'	42'	-
9 5/8			
8 5/8	1850'	1850'	to surface
7			
5 1/2			640 sxs.
4 1/2	5271'	5271'	952 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Alexander, Weir, Big Injun Depth 5300 feet
Depth of completed well 5247 feet Rotary XX / Cable Tools
Water strata depth: Fresh 155 feet; Salt -- feet
Coal seam depths: -- Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Alexander Pay zone depth 5154 feet
Gas: Initial open flow 462 Mcf/d Oil: Initial open flow Bbl/d
Final open flow 368 Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests 18 hours
Static rock pressure 1225 psig (surface measurement) after 50 hours shut in
(If applicable due to multiple completion--)
Second producing formation Weir Pay zone depth 2156 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 189 Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests 24 hours
Static rock pressure psig (surface measurement) after hours shut in

SEE ATTACHMENT FOR ADDITIONAL ZONES

(Continue on reverse side)

630 MCF

630 MCF

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

Alexander - Perforated interval 5159'-5195' (26 shots). Broke down formation with 1000 gal. 15% HCl. Fraced with 20,000# 80/100 sand and 66,000# of 20/40 sand suspended in crosslinked gel.

Weir - Perforated interval 2164'-2242' (32 shots). Broke down formation with 2000 gal. 15% HCl. Fraced with 15,000# 80/100 sand and 75,000# 20/40 sand suspended in crosslinked gel and energized with nitrogen.

Big Injun - Perforated interval 1995'-2004' (19 shots). Broke down formation with 1000 gal. 15% HCl, 10 bbl. water, and nitrogen. Fraced with 60,000# 20/40 sand in a gel system energized with nitrogen.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
Shale			0	25	
Sand			25	55	
Red Rock			55	62	
Sand			62	130	
Red Rock			130	150	
Shale & Red Rock			150	275	
Sand			275	295	Water @ 155'
Red Rock			295	325	
Sand			325	415	
Red Rock			415	440	
Sand			440	470	
Red Rock & Shale			470	499	
Sand			499	511	
Shale & Red Rock			511	615	
Red Rock			615	640	
Shale			640	778	
Sand			778	809	
Shale			809	1000	
Sand			1000	1026	
Shale			1026	1070	
Sand			1070	1290	
Shale			1290	1495	
Sand			1495	1598	
Shale			1598	1616	
Sand			1616	1628	
Shale			1628	1698	
Sand			1698	1730	
Shale			1730	1765	
Lime			1765	1850	
Big Injun Sand			1850	2004	
Shale			2004	2048	
Sand			2048	2060	
Shale			2060	2156	
Weir Sand			2156	2264	
Shale			2264	2356	
Berea Sand			2356	2364	

CONTINUED ON ATTACHMENT

(Attach separate sheets as necessary)

Cities Service Company
Well Operator

By: William L. Smith William L. Smith
Region Petroleum Engineer
Date: November 19, 1981

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 coal, encountered in the drilling of a well."

WELL OPERATOR'S REPORT OF DRILLING
ATTACHMENT

Lewis Maxwell "A" #67-A
API #47-017-2837

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NOV 24 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

OPEN FLOW DATA:

Producing Formation Big Injun Pay zone depth 1995-2004 feet
Gas: Initial open flow _____ Mcf/D Oil: Initial open flow _____ Bbl/d
Final open flow 73 Mcf/D Final open flow _____ Bbl/d
Time of open flow between initial and final tests 48 hours
Static rock pressure 280 psig (surface measurement) after 42 hours shut in

THE WELL WAS TESTED BY CONSOLIDATED WITH ALL THE ZONES COMMINGLED:

880 Mcf/D after flowing 4 hours.

375 psig static rock pressure after 12 days shut in

CONTINUATION OF WELL LOG:

Formation	Top Feet	Bottom Feet	Remarks
Shale	2364	2584	
Gordon Sand	2584	2602	
Shale	2602	3220	
Warren Sand	3220	3384	
Shale	3384	4870	
Benson Sand	4870	4878	
Shale	4878	5154	
Alexander Sand	5154	5208	
Shale	5208	5335 T.D.	

William L. Smith
William L. Smith
Region Petroleum Engineer

DEC 4 1981



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

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Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

OIL & GAS DIVISION
PT. OF MINES

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

DATE September 22, 1980

Surface Owner Mrs. Evert Maxwell
Address West Union, WV 26456
Mineral Owner Lewis Maxwell, et ux
Address Robert L. Holland, Agent
Coal Owner Box 425, West Union, WV 26456
Address _____
Coal Operator _____
Address _____

Company Cities Service Company
Address Box 873, Charleston, WV 25323
Farm Lewis Maxwell Acres 2654
Location (waters) Left Fork of Arnolds Creek
Well No. "A" #67, GW-1867 Elevation 1150.67
District West Union County Doddridge
Quadrangle Oxford 7-1/2' Holbrook 15'

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 5-26-81.

INSPECTOR
TO BE NOTIFIED Paul Garrett
ADDRESS 321 Beech St., Clarksburg, WV 26301
PHONE 622-3871

[Signature]
Deputy Director - Oil & Gas Division

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 Columbian 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.

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

Very truly yours, Cities Service Company

(Sign Name) Paul D. Phillips
Well Operator Paul D. Phillips
Reg. Petr. Engineer

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.

47-017-2837

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 Paul D. Phillips

BLANKET SIGN

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 _____ NAME Sam J. Matthews
 ADDRESS _____ ADDRESS Box 873, Charleston, WV 25323
 TELEPHONE _____ TELEPHONE (304) 344-8383
 ESTIMATED DEPTH OF COMPLETED WELL: 5300 ROTARY CABLE TOOLS _____
 PROPOSED GEOLOGICAL FORMATION: Alexander
 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 <u>11-3/4" 42#</u>	80	80	Circulate
9 - 5/8			
8 - 5/8 <u>24#</u>	1900	1900	Circulate
7			
5 1/2			
4 1/2 <u>10-1/2#</u>	5300	5300	939 Ft ³
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