

ACCURACY: 1/200

- New Location
- Drill Deeper
- Abandonment
- Fracture
- Redrill
- Other

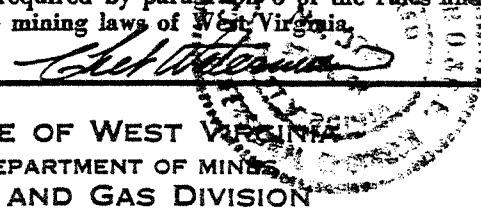
Formation ALEXANDER

Est. Depth 5300'

- Oil
- Gas
- Other

Source of Elevation DODD-1195P-ABANDONED WELL 14A (966')

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.



Company CITIES SERVICE CO.
 Address CHARLESTON, WV
 Surface Owner ROBERT MAXWELL
 Mineral Owner LEWIS MAXWELL HEIRS ("A")
GW-1881
 Well No. A-72 Acres 2654.88
 Elevation 1260' Holbrook NE
 Quadrangle OXFORD Series 7.5'
 County DODDRIDGE District WEST UNION
 Date 2/11/81 Scale 1" = 2000'

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

WELL LOCATION MAP
47 - 017 - 2992
 STATE COUNTY PERMIT

+ Denotes location of well on United States Topographic Maps.
 Engineer CHET WATERMAN
 Engineer's Registration No. 3788 File No. 81-056

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

Alexander - (5200-5243) Broke down formation with 2000 gal. HCl and 2800 psi pressure. Fraced with 80,000# of sand suspended in 75% quality foam.

Bradford - (4344-4363) Broke down formation with 1000 gal. HCl and 800 psi pressure. Fraced with 60,000# of sand suspended in a waterfrac gel system.

Weir - (2200-2285) Broke down with 2000 gal. HCl and 2200 psi pressure. Fraced with 85,000# of sand suspended in a waterfrac gel system and 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
Soil			0	30	
Red Rock			30	100	
Lime			100	150	
Red Rock			150	190	
Slate			190	240	
Sand			240	300	
Lime			300	380	
Slate			380	400	
Lime			400	510	
Red Rock			510	550	
Lime			550	610	
Slate			610	650	
Red Rock			660	690	
Lime			690	750	
Sand			750	780	
Red Rock			780	810	
Lime			810	860	
Slate			860	900	
Lime			900	1010	
Little Dunkard Sand			1010	1080	
Lime			1080	1130	
Big Dunkard Sand			1130	1240	
Black Shale			1240	1260	
Gas Sand			1260	1300	
Slate			1300	1340	
Lime			1340	1370	
First Salt Sand			1370	1430	
Black Shale			1430	1550	
Second Salt Sand			1550	1590	
Slate			1590	1730	
Third Salt Sand			1730	1770	
Black Slate			1770	1790	
Lime			1790	1820	
Maxon Sand			1820	1850	
Red Rock			1850	1874	
Lime			1874	1890	
Slate			1890	1900	
Little Lime			1900	1922	
Blue Monday			1922	1940	

CONTINUED ON ATTACHMENT

(Attach separate sheets as necessary)

Cities Service Company

Well Operator

By: *Paul D. Phillips*

Paul D. Phillips
Region Operations Manager

Date: February 11, 1982

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."



IV-35
(Rev 8-81)

Date February 11, 1982
Operator's Well No. "A" #72
Farm Lewis Maxwell Heirs
API No. 47 - 017 - 2992

State of West Virginia
Department of Mines
Oil and Gas Division

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1260' Watershed Left Fork of Arnold's Creek
District: West Union County Doddridge Quadrangle Oxford

COMPANY Cities Service Company
ADDRESS P.O. Box 873, Charleston, WV 25323
DESIGNATED AGENT Paul D. Phillips
ADDRESS same
SURFACE OWNER Robert Maxwell
ADDRESS West Union, WV 26436
MINERAL RIGHTS OWNER Lewis Maxwell Heirs, c/o
ADDRESS Robert Holland, Agent; West Union, WV 26436
OIL AND GAS INSPECTOR FOR THIS WORK
Stephen Casey ADDRESS Rt. 2, Box 232-D
Jane Lew, WV 26378
PERMIT ISSUED April 16, 1981
DRILLING COMMENCED June 3, 1981
DRILLING COMPLETED December 19, 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" 13-10"		39'	20 sacks 24 cu. ft.
9 5/8			
8 5/8		1431'	350 sacks 476 cu. ft.
7			
5 1/2			
4 1/2		5333'	700 sacks 1041 cu. ft.
3			
2		5238'	
Liners used			

GEOLOGICAL TARGET FORMATION Alexander Depth 5300' feet
Depth of completed well 5352 feet Rotary XX / Cable Tools
Water strata depth: Fresh feet; Salt feet
Coal seam depths: Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Alexander Pay zone depth 5197 feet
Gas: Initial open flow 492 Mcf/d Oil: Initial open flow -- Bbl/d
Final open flow 348 Mcf/d Final open flow -- Bbl/d
Time of open flow between initial and final tests 20 hours
Static rock pressure psig (surface measurement) after hours shut in
(If applicable due to multiple completion--)
Second producing formation Weir Pay zone depth 2182 feet
Gas: Initial open flow -- Mcf/d Oil: Initial open flow -- Bbl/d
Final open flow 348 Mcf/d Oil: Final open flow -- Bbl/d
Time of open flow between initial and final tests 24 hours
Static rock pressure 500 psig (surface measurement) after 14 hours shut in

CONTINUED ON ATTACHMENT

(Continue on reverse side)

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Cities Service Company

Well Operator

By: Paul D. Phillips

Paul D. Phillips
Region Operations Manager

Date: February 11, 1982

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WELL LOG - CONTINUED

MAXWELL "A" #72

API #47-017-2992

FORMATION	TOP FEET	BOTTOM FEET	REMARKS
Big Lime	1940	1966	
Big Injun Sand	1966	2032	
Slate	2032	2078	
Squaw Sand	2078	2140	
Slate	2140	2182	
Weir	2182	2296	
Shale	2296	2390	
Berea	2390	2402	
Slate, Lime & Shells	2402	2511	
Sand	2511	2550	
Shale	2550	2615	
Gordon	2615	2632	
Shale	2632	2767	
Sand	2767	2777	
Shale	2777	3244	
Warren	3244	3406	
Shale	3406	3784	
Sand	3784	3804	
Shale	3804	4051	
Sand	4051	4086	
Shale	4086	4200	
Sand	4200	4310	
Shale	4310	4341	
Bradford Sand	4341	4373	
Shale	4373	4450	
Sand	4450	4518	
Shale	4518	4703	
Sand	4703	4720	
Shale	4720	4910	
Benson	4910	4926	
Shale	4926	5196	
Alexander	5196	5268	
Shale	5268	5392	
T.D.	5392		

POP

OPEN FLOW DATA

Producing Formation Bradford Pay zone depth 4341 feet

Gas: Initial open flow -- Mcf/d Oil: Initial Open flow -- Bbl/d

Final open flow 348 Mcf/d Final open flow -- Bbl/d

Time of open flow between initial and final tests 24 hours

Static rock pressure 1000 psig (surface measurement) after 18 hours shut in

All three zones were tested for commingled production

Four hour open flow 1905 MCF/D

Twenty-four open flow 730 MCF/D

Static pressure 860 after 48 hours shut in.

PPF



RECEIVED

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

APR 14 1981

Oil and Gas Division OIL & GAS DIVISION
DEPT. OF MINES

OIL AND GAS WELL PERMIT APPLICATION

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

Surface Owner Robert Maxwell
Address West Union, WV 26436
Mineral Owner Lewis Maxwell Heirs
Address Robert Holland, Agent
West Union, WV 26436
Coal Owner _____
Address _____
Coal Operator _____
Address _____

DATE April 9, 1981
Company Cities Service Company
Address Box 873, Charleston, WV 25323
Farm Lewis Maxwell Heirs Acres 2654.88
Location (waters) Left Fork Arnolds Creek
Well No. "A" #72, GW-1881 Elevation 1260'
District West Union County Doddridge
Quadrangle Oxford

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 12-16-81

INSPECTOR
TO BE NOTIFIED Stephen Casey
Rt. 2 Box 232-D
ADDRESS Jane Lew, WV 26378
PHONE 884-7470

[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 5, 1905 by Lewis Maxwell et ux made to Columbian Carbon Co. (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) Paul D. Phillips
Well Operator Paul D. Phillips
Region Operations Manager
Box 873 Street
Charleston City or Town
W. Va. 25323 State

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

*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.

47-017-2992

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

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PP