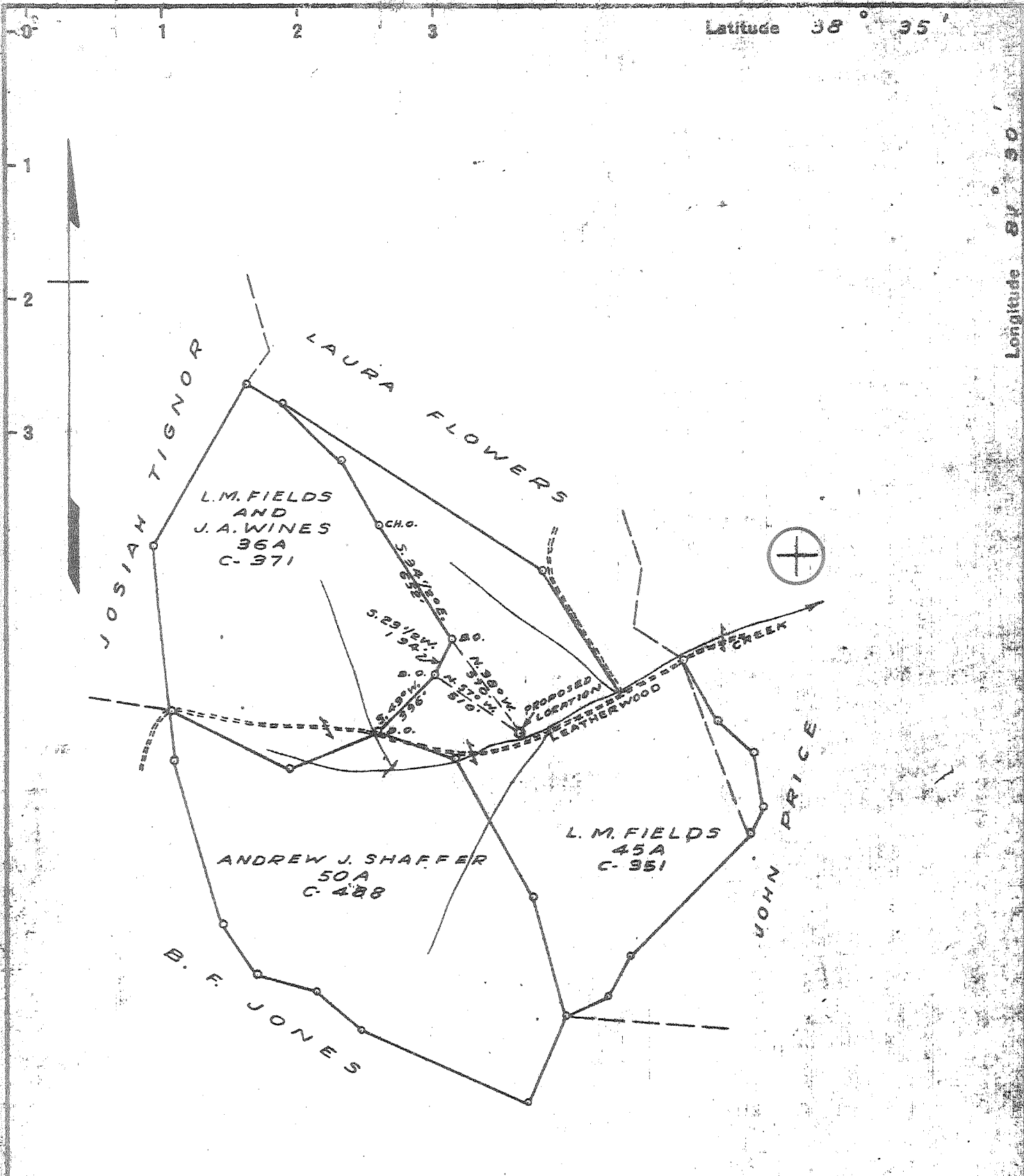


7/10/78



Part Rug 7, 10/78  
Fracture - 7, 10, 78

New Location   
Drill Deeper   
Abandonment  10/16/78

NOTE: LOCATION 1.2 MILES S.W. BLUNDON

Company CITIES SERVICE CO.  
 Address BOX 873 - CHARLESTON - W.VA.  
 Farm L.M. FIELDS ET AL  
 Tract \_\_\_\_\_ Acres 131.0 Lease No. C-351, C-371 AND C-488  
 Well (Farm) No. 1 Serial No. GW-922  
 Elevation (Spirit Level) 843.0  
 Quadrangle KENNA - S.E.  
 County KANAWHA District POCA  
 Engineer James N. Sell  
 Engineer's Registration No. 772  
 File No. \_\_\_\_\_ Drawing No. \_\_\_\_\_  
 Date NOV. 29, 1938 Scale 1" = 660'

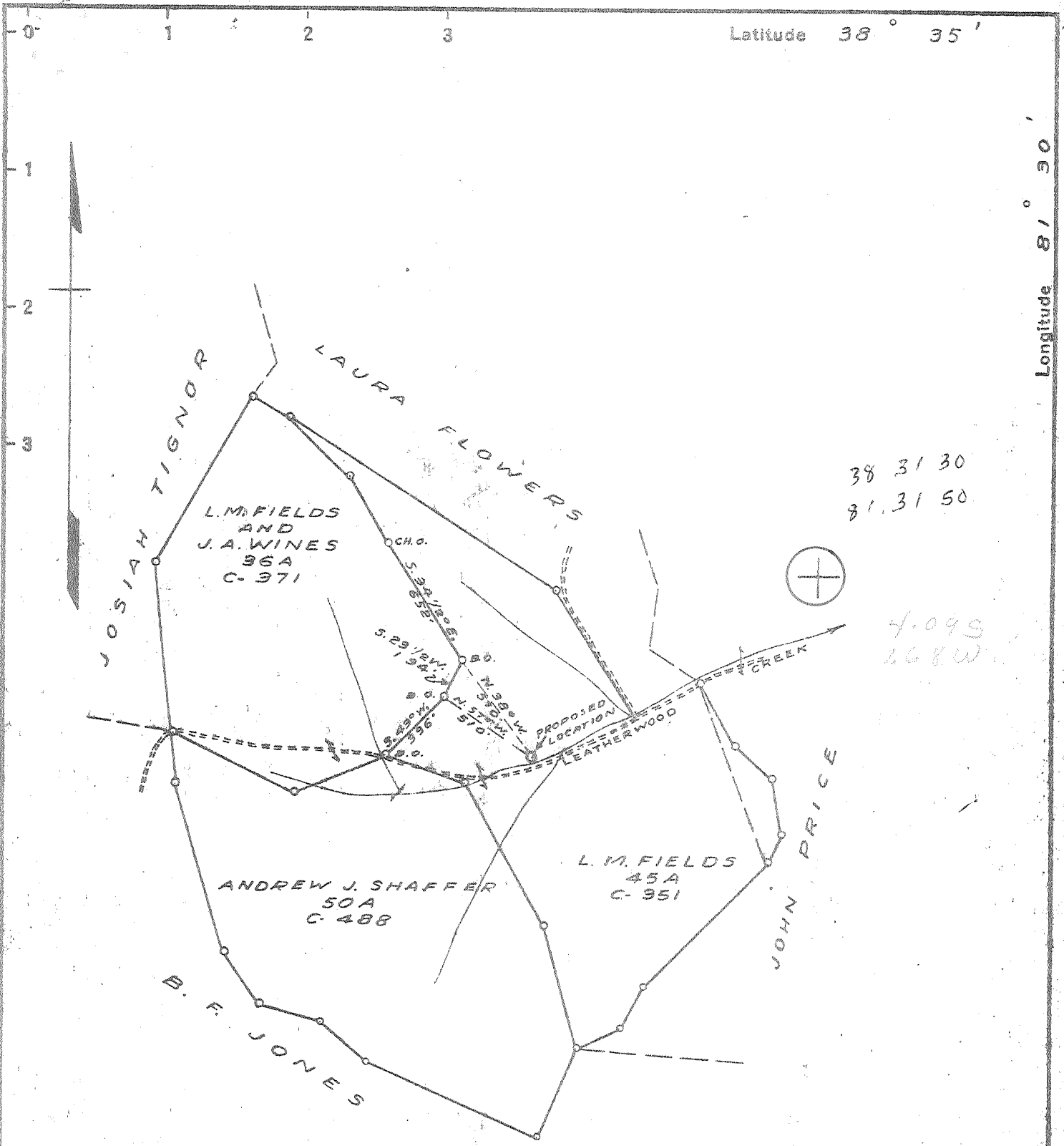
STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION  
CHARLESTON

WELL LOCATION MAP  
FILE NO. Kan-600-FRAC-PP-P

+ 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.

47-039 NOV 30 1978



Part Plug 7, 10/78  
Fracture - 7, 10, 78

New Location   
Drill Deeper   
Abandonment

NOTE: LOCATION 1.2 MILES S.W. BLUNDON

Company CITIES SERVICE CO.

Address BOX 873 - CHARLESTON - W. VA.

Farm L.M. FIELDS ET AL

Tract                      Acres 131.0 Lease No. C-351, C-371 AND C-488

Well (Farm) No. 1 Serial No. GW-322

Elevation (Spirit Level) 843.0

Quadrangle KENNA - S.E.

County KANAWHA District POCA

Engineer James N. Sell

Engineer's Registration No. 772

File No.                      Drawing No.                     

Date NOV. 29, 1938 Scale 1" = 660'

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

WELL LOCATION MAP  
FILE NO. Kan-600-FRAC-PP

+ 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.

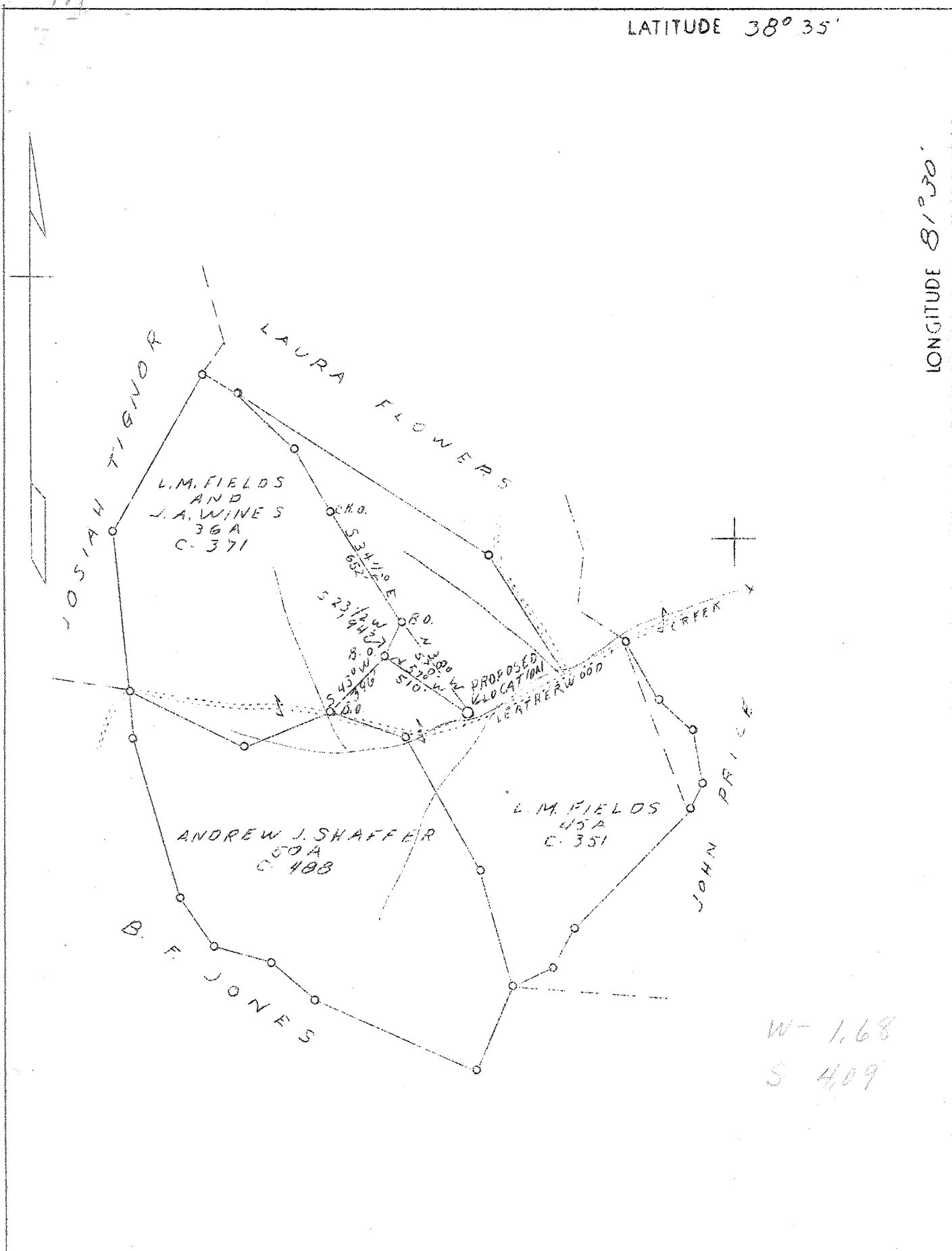
- Denotes one inch spaces on border line of original tracing.

JUL 19 1978

47-039

LATITUDE 38° 35'

LONGITUDE 81° 30'



New Location

NOTE: LOCATION 1.2 MILES S.W. BLUNDON

Company	Columbian Carbon Co.	STATE OF WEST VIRGINIA
Address	B-1240, Charleston, W. Va.	Department of Mines
Farm	L. M. Fields, et al	OIL & GAS DIVISION
Acres	131.0	Charleston
Lease No.	C-351, C-371 & C-488	WELL LOCATION MAP
Well (Farm) No.	One	File No. <u>Kan-600</u>
Elevation (SL)	843.0	
Quadrangle	Kenna S. E.	
County	Kanawha	
District	Poca	
Engineer	James N. Sell	x Denotes location of well on U. S. Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
Eng. Reg. No.	772	- Denotes one inch spaces on border line of original tracing.
Date	Nov. 29, 1938	
Scale	1" - 660'	

WEST VIRGINIA DEPARTMENT OF MINES

OIL & GAS DIVISION

WELL RECORD

Permit No. Kan-600

Gas Well

Kenna Quad.

CASING & TUBING

Company	Columbian Carbon Co.	14"	41-1	41-1
Address	Box 1240, Charleston, W. Va.	10-3/4	370-2	pulled
Farm	L. M. Fields, et al ACRES 131	8-5/8	1580-0	1580-0
Location	Leatherwood Creek	6-5/8	4942-5	4942-5
Well No.	1 (GW-422) ELEV. 848.1 DF	2-3/8	5118-9	5118-9
District	Poca - Kanawha County			
Surface	Andrew Shaffer, et ux & Walter Fields, et ux, Elkview, W. Va.			No packer
Mineral	Same & Lewis F. Wines, Chas. W.Va.			
Commenced	Dec. 23, 1938 - completed 4/14/39			
Shot	Not shot			Casing Cemented:
Volume	2,844,000 c.f.			(See below)
Rock Pressure	1320 lbs. 43 hrs.			
Fresh Water	Enough water to drill at 1185			
Salt Water	HFW 1225			

Formation Color <sup>Has</sup> TOP Base Result Formation Color <sup>Has</sup> TOP Base Result

Formation Color	Has	TOP	Base	Result	Formation Color	Has	TOP	Base	Result
Sand & Gravel			0	38					
Sand			38	60					
Red Rock			60	115					
Slate			115	140					
Red Rock			140	150					
Sand			150	175					
Slate			175	210					
Red Rock			210	300					
Sand			300	370					
Slate			370	375					
Sand			375	425					
Slate			425	535					
Sand			535	590					
Slate			590	612					
Sand			612	640					
Slate			640	675					
Sand			675	775					
Slate			775	825					
Sand			825	865					
Slate			865	990					
Sand			990	1010					
Slate			1010	1040					
Salt Sand			1040	1472	Gas 1082				small show
Slate			1472	1505	Gas 1145				show
Little Lime			1505	1533	Water 1185				enough to drill with
Slate			1533	1536					
Lime Shell			1536	1539	Water 1225				Hole full water
Pencil Cave			1539	1546	HSLM				
Big Lime	HSLM		1546	1715	Gas 1589		1613	805 M	- blew down to 73 M
Injun Sand			1715	1728					
Slate			1728	2116					
Brown Shale			2116	2126					
Lime Shell			2126	2131					
Slate Shells			2131	3340					
Brown Shale			3340	3415					
Slate			3415	3538					
Slate & Shells			3538	3680					
Brown Shale			3680	3705					
Slate			3705	3830					
Brown Shale			3830	4040					
Slate			4040	4502					
Brown Shale			4502	4785					
Slate, White			4785	4830					
Black Shale			4830	4903	HSLM				
Corniferous Lime	HSLM		4903	5011	SLM				
Oriskany Sand	SLM		5011	5090	5031 SLM				First Gas Show
Total Depth				5090	Pay: 5031-5043				
					5070-5074				



STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES

Oil and Gas Division  
WELL RECORD

RECEIVED

NOV 18 1978

OIL & GAS DIVISION  
DEPT. OF MINES

Quadrangle Kenna  
Permit No. KAN-600-PP-Frac

Rotary \_\_\_\_\_ Oil \_\_\_\_\_  
Cable X Gas X Show  
Recycling \_\_\_\_\_ Comb. \_\_\_\_\_  
Water Flood \_\_\_\_\_ Storage \_\_\_\_\_  
Disposal \_\_\_\_\_ (Kind) \_\_\_\_\_

Company Cities Service Company  
Address Box 873, Charleston, WV 25323  
Farm L. M. Fields Acres 131.0  
Location (waters) Leatherwood Creek  
Well No. #1, GW-422 Elev. 848.1  
District Poca County Kanawha  
The surface of tract is owned in fee by Andrew Shaffer  
and Walter Fields, et ux et ux  
Address Blundon Rt., Elkview, W. Va.  
Mineral rights are owned by same  
Address \_\_\_\_\_  
Drilling Commenced 9/6/78  
Drilling Completed P&A 10/24/78  
Initial open flow 0 cu. ft. - bbls.  
Final production 0 cu. ft. per day - bbls.  
Well open NA hrs. before test NA RP.

Casing and Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft. (Sks.)
Size 20-16			
Cond. 14"	41' 1"	41' 1"	
13-10"			
9 5/8			
8 5/8	1580'	1580'	75 sx
7			
5 1/2			
4 1/2	4942' 5"	4942' 5"	25 sx
3			
2			
Liners Used			

Well treatment details:

Attach copy of cementing record.

Big Lime (1596-1600 & 1616-20) Acidized w/2000 gal. of 15% HCL and 3000 gal. 28% HCL

Big Lime (1720-28) Acidized w/2000 gal. 15% HCL plus 3000 gal. 28% HCL

Coal was encountered at NA Feet NA Inches  
Fresh water NA Feet NA Salt Water \_\_\_\_\_ Feet \_\_\_\_\_  
Producing Sand Big Lime Depth 1596 thru 1728

Formation	Color	Hard or Soft	Top Feet	Bottom Feet	Oil, Gas or Water	* Remarks
<p>This well record is filed as an addendum to the original well record filed April 24, 1939. The worked outlined here was permitted under W. Va. Oil &amp; Gas Permit No. KAN-600-PP-FRAC. This workover was a plug back to the Big Lime formation to evaluate such zone for Hydrocarbon Production Potential. Two zones of the Big Lime (as noted above) were perforated and acidized. Both zones produced salt water. This well was originally completed as an Oriskany at 5011' and said Oriskany is depleted.</p>						

(over)

\* Indicates Electric Log tops in the remarks section.

THIS PERMIT MUST BE POSTED AT THE WELL SITE  
Rev. - 71



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 11-10-78 DEPARTMENT OF MINES

RECEIVED  
JUL 14 1978  
OIL & GAS DIVISION  
DEPT. OF MINES

[Signature]  
Deputy Director - Oil & Gas Division

### Oil and Gas Division

## OIL AND GAS WELL PERMIT APPLICATION

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

DATE July 7, 1978

~~Surface~~ Owner E. J. Crowder, Gdn.  
Address Cicaron St., Box 194  
Wassonville, WV 25320  
Mineral Owner Corbis M. Fields  
Address 330 W High  
Springfield, OH 45506  
~~Coal~~ Owner James C. Fields  
Address Blundon Rt., Box 24, Elkview, WV 25071  
~~Coal~~ Operator John A. Fields  
Address 1448 6th Avenue  
Charleston, WV 25312  
D. E. Good  
1220 W Summer St., Kissimmee, FL 32741

Company Cities Service Company  
Address Box 873, Charleston, WV 25323  
Farm L. N. Fields Acres 131.0  
Location (waters) Leatherwood Creek  
Well No. "A" #1, OH-422 Elevation 848.1  
District Poca County Kanawha  
Quadrangle Kenna

Richard Jackson  
5904 Starling Dr., Rand, WV 25300  
Stella Jarrett, Elkview, WV 25071  
(additional lessons attached)

INSPECTOR  
TO BE NOTIFIED Martin Nichols  
ADDRESS P. O. Box 554, Clendenin, WV 25045  
PHONE 477-3660

#### 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 Oct. 31 1938 by L. N. Fields, et al made to Columbia Carbon Co. (now Cities Service Co.) and recorded on the 12 day of Nov. 1938, in Kanawha County, Book 82 Page 91  
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) [Signature]  
Well Operator Sam J. Matthews  
Box 873 Region Prod. Manager  
Address \_\_\_\_\_ Street \_\_\_\_\_  
of \_\_\_\_\_  
Well Operator Charleston City or Town \_\_\_\_\_  
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

LAN-600 -PP-FRAC. PERMIT NUMBER

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 unknown \_\_\_\_\_ NAME Cities Service Company \_\_\_\_\_  
 ADDRESS \_\_\_\_\_ ADDRESS Sam J. Matthews \_\_\_\_\_  
 TELEPHONE \_\_\_\_\_ TELEPHONE Box 873, Charleston, WV 25323  
 ESTIMATED DEPTH OF COMPLETED WELL: 1865 \_\_\_\_\_ ROTARY \_\_\_\_\_ CABLE TOOLS \_\_\_\_\_  
 PROPOSED GEOLOGICAL FORMATION: Big Line \_\_\_\_\_  
 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.
<del>20-16x 14"</del>	41'1"	41'1"	
12 - 10-3/4"	370'2"	Pulled	
9 - 5/8			
8 - 5/8	1580'	1580'	75 sz cement
7			
<del>1530x 6-5/8"</del>	1865'	1865'	100 sz cement
4 1/2			
3			Perf. Top
2-3/8" tubing			Perf. Bottom
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS None FEET \_\_\_\_\_ SALT WATER 1185' & 1225' FEET \_\_\_\_\_  
 APPROXIMATE COAL DEPTHS None \_\_\_\_\_  
 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