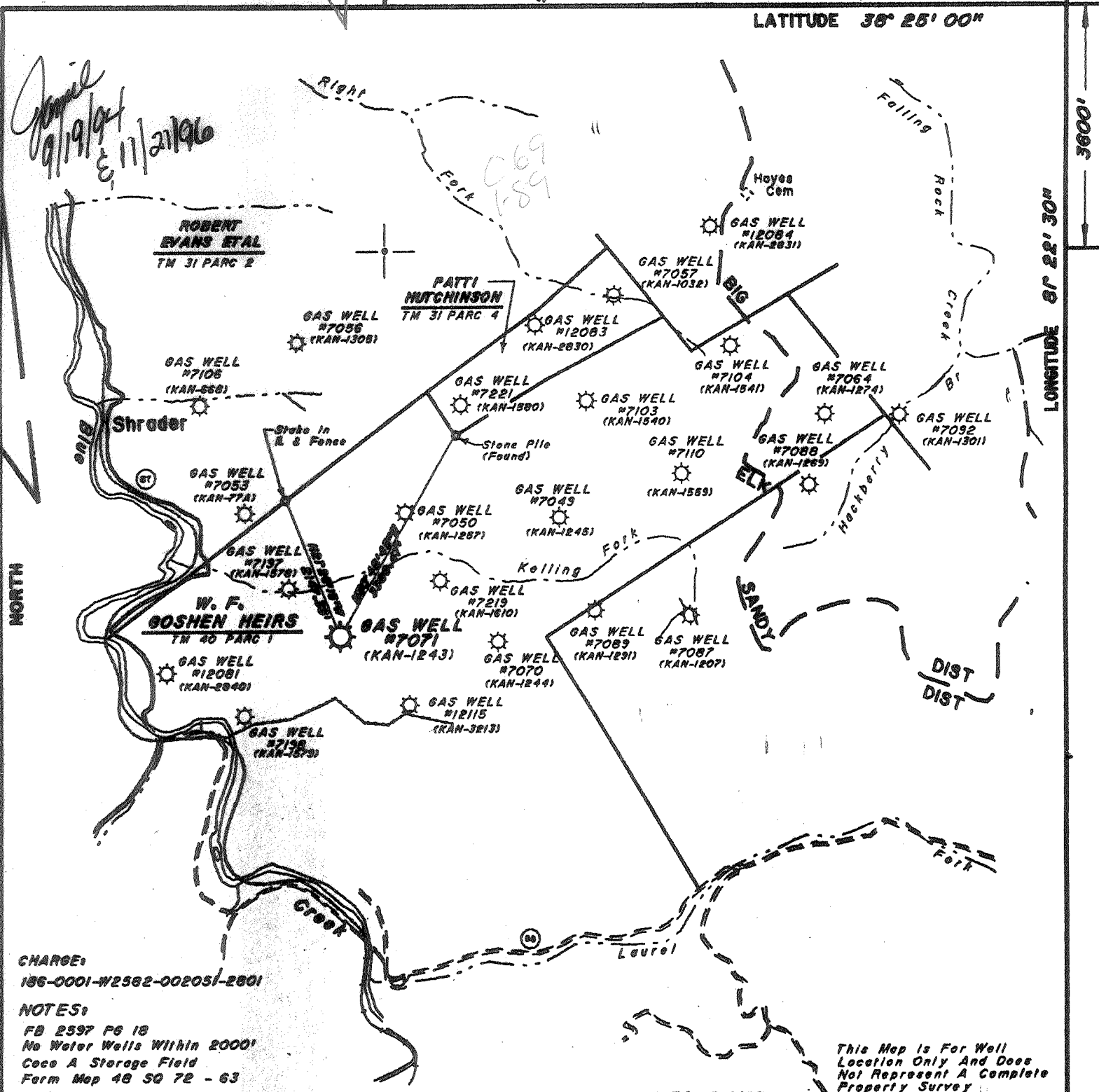


LATITUDE 36° 25' 00"

Janice
9/19/94
& 11/21/96



CHARGE: 156-0001-W2582-002051-2801

NOTES:
FB 2597 Pg 18
No Water Wells Within 2000'
Coco A Storage Field
Form Map 48 SO 72 - 63

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS (7 1/2')

FILE NO. _____
 DRAWING NO. 7071
 SCALE 1"=2000'
 MINIMUM DEGREE OF ACCURACY L. 200
 PROVEN SOURCE OF ELEVATION _____

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 ENERGY.
 (SIGNED) [Signature]
 R.P.E. 2936 L.L.S. 738

PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL & GAS
 NITRO, WEST VIRGINIA 25143



DATE August 8, 1994
 OPERATOR'S WELL NO. 7071
 API WELL NO. _____
 STATE 47 COUNTY 039 PERMIT 012430

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 852 WATER SHED Blue Creek
 DISTRICT EIR COUNTY Kanawha
 QUADRANGLE Blue Creek, WV COORDINATES LAT: 36° 24' 25" LONG: 81° 24' 35"

SURFACE OWNER W. F. Bosher Heirs ACREAGE 1661
 OIL & GAS ROYALTY OWNER Robert A. Marshall, Et al LEASE ACREAGE 787
 COAL OWNER _____ LEASE NO. 1048180 & 1048341
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) Storage Recondition
 PLUG AND ABANDON CLEAN OUT AND REPLUG 5260' ESTIMATED DEPTH 100'
 TARGET FORMATION _____
 WELL OPERATOR COLUMBIA GAS TRANS CORP DESIGNATED AGENT R. L. Colby
 ADDRESS PO BOX 1273, CHARLESTON, WV 25325 - 1273 ADDRESS PO BOX 1273, CHARLESTON, WV 25325 - 1273

KANAWHA COUNTY NAME PERMIT 1243 F

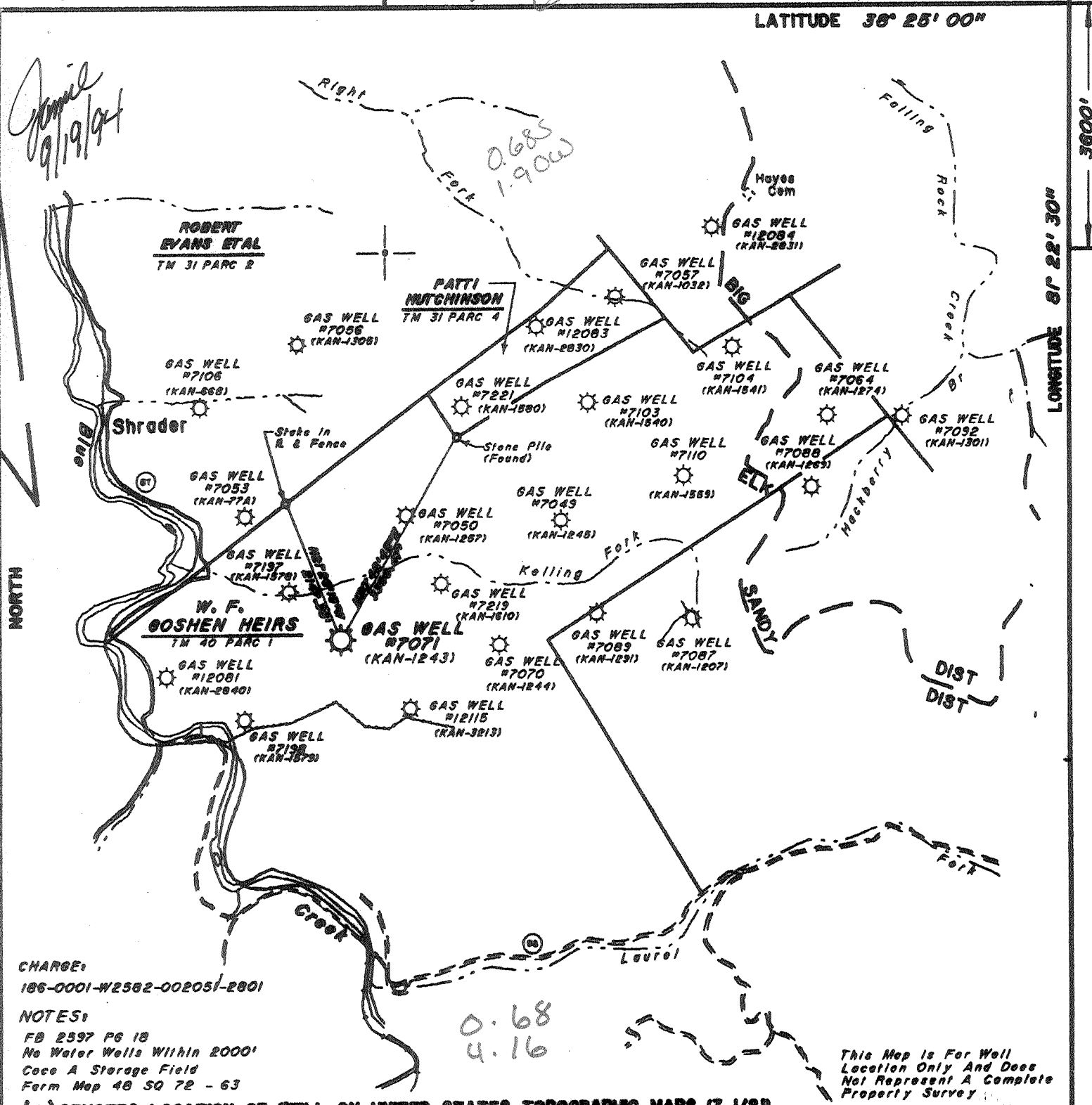
098P well

LATITUDE 38° 25' 00"

10000'

LONGITUDE 81° 22' 30"

Janice
9/19/94



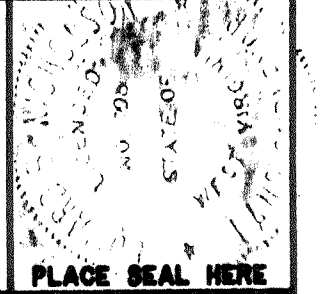
CHARGE: 186-0001-W2562-00205-2801

NOTES: FB 2597 PG 18 No Water Wells Within 2000' Coco A Storage Field Form Map 48 SQ 72 - 63

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS (7 1/2')

FILE NO. _____
 DRAWING NO. 7071
 SCALE 1"=2000'
 MINIMUM DEGREE OF ACCURACY 1:200
 PROVEN SOURCE OF ELEVATION _____

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 ENERGY.
 (SIGNED) [Signature]
 R.P.E. 2376 L.L.S. 798



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE August 8, 1994
 OPERATOR'S WELL NO. 7071
 API WELL NO. _____

WELL TYPE: OIL ___ GAS X LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION ___ STORAGE X DEEP ___ SHALLOW ___

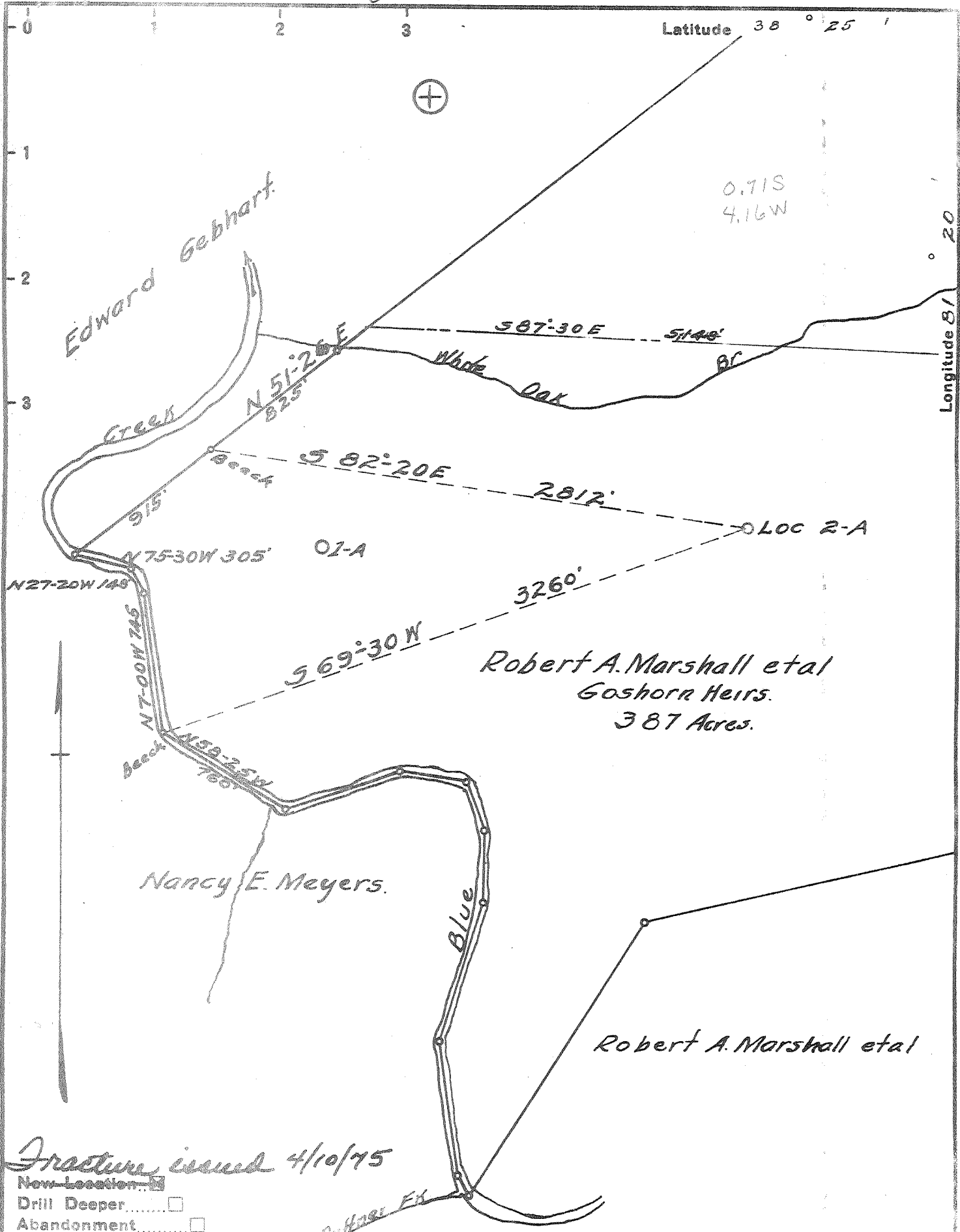
LOCATION: ELEVATION 852 WATER SHED Blue Creek
 DISTRICT Elk COUNTY Kenosha

QUADRANGLE Blue Creek, NY Quad. C COORDINATES LAT: 38° 24' 25" LONG: 81° 24' 35"
 SURFACE OWNER W. F. Goshorn Heirs ACREAGE 1681
 OIL & GAS ROYALTY OWNER Robert A. Marshall, Et al LEASE ACREAGE 787

COAL OWNER _____ LEASE NO. 1048180 & 1048341
 PROPOSED WORK: DRILL ___ CONVERT ___ DRILL DEEPER ___ REDRILL ___ FRACTURE OR STIMULATE ___ PLUG OFF OLD FORMATION ___ PERFORATE NEW FORMATION ___ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) STORAGE RECONDITION

PLUG AND ABANDON ___ CLEAN OUT AND REPLUG ___
 TARGET FORMATION _____ ESTIMATED DEPTH _____
 WELL OPERATOR COLUMBIA GAS TRANS CORP DESIGNATED AGENT R. L. Colby
 ADDRESS PO BOX 1273, CHARLESTON, WV 25325 - 1273 ADDRESS PO BOX 1273, CHARLESTON, WV 25325 - 1273

KANAHA COUNTY NAME PERMIT



Fracture issued 4/10/75

- New Location
- Drill Deeper
- Abandonment

Columbia Gas Transmission Corp.	
Company	United Carbon Company
P.O. Box	1218
Address	Charleston, W.V. 25325
Farm	Robert A. Marshall et al
Tract	Acres 1800 Lease No. 2450
Well (Farm) No.	2-A Serial No. 1326
Elevation (Spirit Level)	859.2 = Ground
Quadrangle	Clendenin NW C
County	Kanawha District Elk
Engineer	H. J. Rurhett
Engineer's Registration No.	710
File No.	Drawing No.
Date	Aug 27-1945 Scale 1" = 660'

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

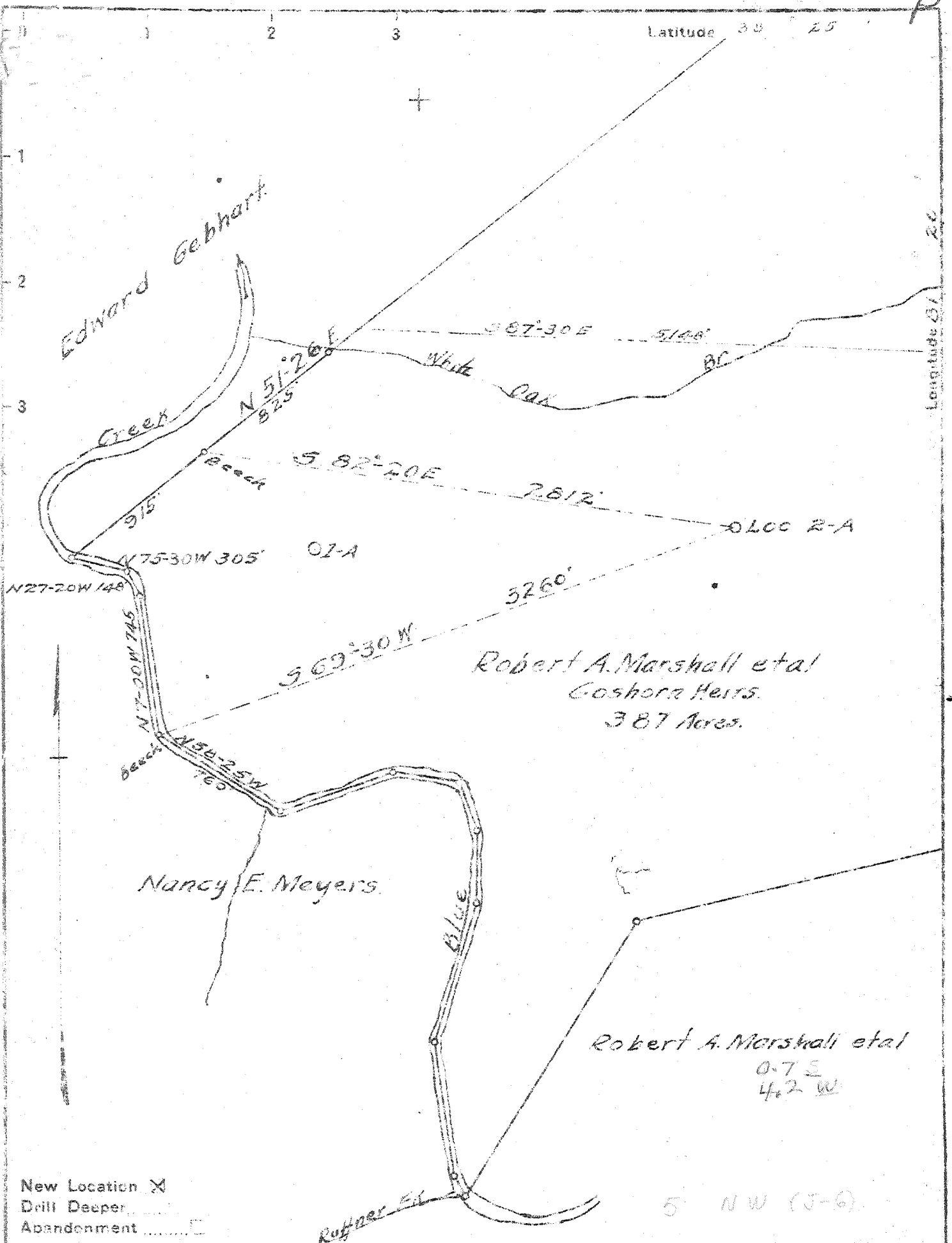
WELL LOCATION MAP
FILE NO. KAN-1243-Frac^W

+ 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.

H7-039

Deep Well



Company United Carbon Company
 Address Charleston, W.V.
 Farm Robert A. Marshall et al
 Tract _____ Acres 1800 Lease No. 2150
 Well (Farm) No. 2-A Serial No. 1326
 Elevation (Spirit Level) 859.2 = Ground
 Quadrangle Clendenin ~~W~~ C
 County Kanawha District ELK
 Engineer H. J. Ruffner
 Engineer's Registration No. 710
 File No. _____ Drawing No. _____
 Date Aug 27-1945 Scale 1" = 660'

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

WELL LOCATION MAP
 FILE NO. KAN-1243

+ 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.

6-8-215
Deep Well

WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

Permit No. Kan 1243
Clendenin Quad.

Gas Well
CASING & TUBING

Company	United Carbon Company			
Address	Box 1913, Charleston 27, W.Va.	16	16	16
Farm	Robert A. Marshall et al A 1800	13 3/8	751	751
Location	Blue Creek	10 1/2	1416	1416
Well No.	2-A (1326) Elev. 859.2' GR	8 5/8	2065	2065
District	Elk Kanawha County	6 5/8	5019	5019
Surface		2 3/8	5130	5130
Mineral				

Commenced	Nov. 1, 1945	Coal at 297' 24";
Completed	June 28, 1946	417' 36"; 475' 24"
Not shot		554' 48"
Open flow	46/10ths M in 6 5/8"	
Volume	9, 248,000 C.F.	
Rock Pressure	1500 lbs. 24 hrs.	
Fresh Water	198' 1/2 blr. per hr.	
	808' H.F.	

Clay	0	16	Lime	2060	2075
Sand	16	35	Slate & Shells	2075	2305
Slate	35	70	Lime Blue	2305	2335
Sand	70	90	Slate & Shells	2335	4175
Slate	90	120	Shale Brown	4175	4190
Lime	120	130	Slate Wh	4190	4963
Slate & Shells	130	148	-Shale Bk	4963	5008
Sand	148	170	-Corniferous Lime	5008	5129
Slate & Shells	170	193	-Oriskany Sand		5129
Lime	193	260	TOTAL DEPTH		5157
Slate & Shells	260	285			
Lime	285	297	Gas 2065' show		
-Coal	297	299	Gas 5131-5136' 9 248 MCF		
Slate	299	387			
Lime	387	417			
-Coal	417	420			
Lime	420	457			
Slate & Shells	457	475			
-Coal	475	477			
Slate & Shells	477	494			
Lime	494	515			
Slate & Shells	515	554			
-Coal	554	559			
Slate	559	564			
Lime Wh	564	595			
Slate Br	595	635			
Lime	635	664			
Sand	664	717	Oil 670' show		
Slate	717	723			
-Sand	723	984			
Slate	984	994			
-Sand	994	1237			
Slate & Shells	1237	1243			
Red Rock	1243	1255			
Slate & Shells	1255	1326			
Lime	1326	1355			
Slate	1355	1370			
Lime	1370	1380			
Slate	1380	1392			
-Lime	1392	1402			
-Slate	1402	1416			
-Big Lime	1416	1530	Gas 1530' show		
-Sand	1530	1595	Gas 1566' show		
Red Rock	1595	1603			
-Sand	1603	1812	Gas 1640' show		
Slate	1812	1820	Gas 1690' show		
Lime	1820	1840	Gas 1795-1808 show		
Slate & Shells	1840	1980			
-Shale Brown	1980	1990			
-Berea Sand	1990	2002			
Slate & Shells	2002	2060			



STATE OF WEST VIRGINIA
DEPARTMENT OF MINES

RECEIVED

APR 9 1975

OIL & GAS DIVISION
DEPT. OF MINES

Oil and Gas Division

OIL AND GAS WELL PERMIT APPLICATION

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

DATE April 7, 1975

Surface Owner B. B. Brown, Jr., Trustee, et al
Address P.O. Box 2746, Charleston, W. Va. 25330

Company Columbia Gas Transmission Corp.
Address P.O. Box 1273, Charleston, W. Va. 25325

Mineral Owner Same as above

Farm Robert A. Marshall Acres 787

Address _____

Location (waters) White Oak Fork

Coal Owner Same as above

Well No. X-52 A 7071* Elevation 859.2

Address _____

District Elk County Kanawha

Coal Operator Not Operated

Quadrangle Blue Creek

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 fracturing. This permit shall expire if
operations have not commenced by 8-10-75

Robert A. Marshall
Deputy Director - Oil & Gas Division
GENTLEMEN:

INSPECTOR TO BE NOTIFIED Martin Nichols
Clendenin, W. Va. PH: 548-6993

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 May 1, 19 50 by Fred W. Goshorn, et al made to Columbia Gas Trans. Corp. and recorded on the 26th day of September 19 50 in Kanawha County, Book 124 Page 386

_____ NEW WELL _____ DRILL DEEPER _____ REDRILL _____ FRACTURE ~~XXXXXXXXXXXX~~
_____ 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.

COLUMBIA GAS TRANSMISSION CORPORATION
Very truly yours,

(Sign Name) [Signature]
Well Operator

P.O. Box 1273

Address _____
of _____
Well Operator _____
_____ Street
Charleston
_____ City or Town
West Virginia 25325
_____ State

PLEASE SUBMIT COPIES OF ALL
GEOPHYSICAL LOGS DIRECTLY TO:

West Virginia Geological and Economic Survey
P. O. Box 379
Morgantown, W. Va. 26505
AC 304-296-4461

*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.

*The United Carbon Co. well Number 2-A-1326,
purchased 5-1-50

W
KAN-1243-~~TRAC~~ _____ PERMIT NUMBER

47-039

BLANKET BOND

[Signature]

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

PROPOSED WORK ORDER TO _____ DRILL _____ DEEPEN _____ FRACTURE ~~XXXXXXXX~~
 DRILLING CONTRACTOR: (If Known) _____ RESPONSIBLE AGENT:
 NAME _____ NAME W. H. Chapman
 ADDRESS _____ ADDRESS P.O. Box 610, Clendenin, W.Va. 25045
 TELEPHONE _____ TELEPHONE 304 965-3317
 ESTIMATED DEPTH OF COMPLETED WELL: 5157 ROTARY _____ CABLE TOOLS
 PROPOSED GEOLOGICAL FORMATION: Criskany
 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.
16	16	16	
13-3/8	751	751	
9 - 5/8			
8 - 5/8	2065	2065	
6-5/8	5009	5009	
5 1/2			
4 1/2	5142	5142	100 Sacks
3			Perf. Top 5117
2			Perf. Bottom 5129
Liners			Perf. Top
			Perf. Bottom

APPROXIMATE FRESH WATER DEPTHS 198 FEET _____ SALT WATER _____ FEET _____
 APPROXIMATE COAL DEPTHS 297-299, 417-420, 475-477, 554-559
 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

DEC 15 1994

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Permitting
Office of Oil & Gas

Well Operator's Report of Well Work

Farm name: BROWN, JAMES F, III Operator Well No.: 7071

LOCATION: Elevation: 859.00 Quadrangle: BLUE CREEK

District: ELK County: KANAWHA
Latitude: 3600 Feet South of 38 Deg. 25Min. 0 Sec.
Longitude 10000 Feet West of 81 Deg. 22 Min. 30 Sec.

Company: COLUMBIA GAS TRANSMISSION
P.O. BOX 1273
CHARLESTON, WV 25325-1273

Agent: RICHARD L. COTY

Inspector: CARLOS HIVELY
Permit Issued: 09/20/94
Well work Commenced: 10/11/94
Well work Completed: 10/12/94
Verbal Plugging
Permission granted on: N/A
Rotary Cable Rig N/A
Total Depth (feet) 5,157
Fresh water depths (ft) 198, 808
Salt water depths (ft) 994

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 297-299 417-420
475-477 554-559

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size			
13 3/8	751	751	Unknown
10 3/4	1,416	1,416	Unknown
8 5/8	2,065	2,065	Unknown
7	5,007	5,007	10 sks
4 1/2	5,126	5,126	100 sks

OPEN FLOW DATA

Producing formation Oriskany Sandstone Pay zone depth (ft) 5108'-5157'
Gas: Initial open flow 20,000 MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow 27,000 MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests 385 days ~~XXXXX~~
Static rock Pressure 1,615 psig (surface pressure) after 62 days ~~XXXXX~~

Second producing formation _____ Pay zone depth (ft) _____
Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
Final open flow _____ MCF/d Final open flow _____ Bbl/d
Time of open flow between initial and final tests _____ Hours
Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: R. L. Coty, Manager, Well Services
COLUMBIA GAS TRANSMISSION CORP.
By: R. L. Coty
Date: 12/13/94

JAN 4 1995

- 1) Well was originally perforated 5,114' to 5,126' in the Oriskany Sandstone. Well was reperfored in a dry (natural gas filled) wellbore from 5,110' to 5,127' in the Oriskany Sandstone. Work was performed using a logging truck and a wireline lubricator.
- 2) Geologic record remains as is originally on record.

SEP 07 1994

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS
 Office of Oil & Gas
 WELL WORK PERMIT APPLICATION

- 1) Well Operator: COLUMBIA GAS TRANSMISSION CORP. 10450 (4) 258
- 2) Operator's Well Number: 7071 3) Elevation: 859'
- 4) Well type: (a) Oil ___ / or Gas X /
 (b) If Gas: Production ___ / Underground Storage X /
 Deep X / Shallow ___
- 5) Proposed Target Formation(s): ORISKANY SANDSTONE
 EXISTING
- 6) ~~Proposed~~ Total Depth: 5150 feet
- 7) Approximate fresh water strata depths: 198', 808'
- 8) Approximate salt water depths: 994'
- 9) Approximate coal seam depths: 297'-299', 417'-420', 475'-477', 554'-559'
- 10) Does land contain coal seams tributary to active mine? Yes ___ / No X /
- 11) Proposed Well Work: CLEAN OUT SALT AND DEBRIS TO TOTAL DEPTH; RE-PERFORATE THE ORISKANY FROM 5108'-5126' (NEW PERFORATIONS: 5108'-5114').
- 12)

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor						
Fresh Water	13-3/8"	UNK.	UNK.	751'	751'	UNK.
Coal	10-3/4"	UNK.	UNK.	1416'	1416'	UNK.
Intermediate	8-5/8"	UNK.	UNK.	2065'	2065'	UNK.
INTERMEDIATE PRODUCTION	7"	UNK.	UNK.	5007'	5019'	10 SKS.
PRODUCTION	4-1/2"	K-55, N-80	11.6#	5126'	5130'	100 SKS.
Liners						

Existing Logwell Records of State

PACKERS : Kind NONE
 Sizes _____
 Depths set _____

For Division of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
 Plat WW-9 WW-2B Bond Agent
 (Type)

00406694
 29

RECEIVED

WV Division of Environmental Protection

SEP 07 1994

Permitting Office of Oil & Gas

Page 1 of Form WW2-A (09/87) file Copy

1) Date: AUGUST 8, 1994
2) Operator's well number 7071
3) API Well No: 47 - 039 - 1243 -FRAC State - County - Permit

STATE OF WEST VIRGINIA DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served: (a) Name JAMES F. BROWN, III ET AL Address P. O. BOX 88 CHARLESTON, WV 25721 (b) Name Address (c) Name Address

5) (a) Coal Operator: Name Address (b) Coal Owner(s) with Declaration Name JAMES F. BROWN, III, ET AL Address P. O. BOX 88 CHARLESTON, WV 25721 Name Address (c) Coal Lessee with Declaration Name Address

6) Inspector CARLOS HIVELY Address 223 PINCH RIDGE ROAD ELKVIEW, WV 25071 Telephone (304)-965-6069

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR

X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through on the above named parties, by:

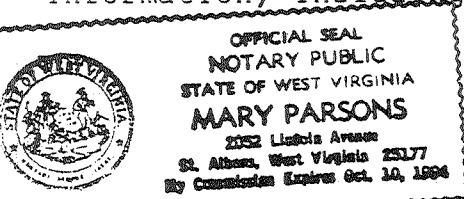
- Personal Service (Affidavit attached)
X Certified Mail (Postmarked postal receipt attached)
Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator COLUMBIA GAS TRANSMISSION CORP.
By: Richard L. Coty
Its: MANAGER, WELL SERVICES
Address P. O. BOX 1273 CHARLESTON, WV 25325-1273
Telephone 304-357-3034



Subscribed and sworn before me this 12th day of August, 1994

Mary Parsons Notary Public
My commission expires October 10, 1994

STATE OF WEST VIRGINIA

DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS

WELL WORK PERMIT APPLICATION

10-15-90 (4) 258

22915

H.H.

Well Operator: Columbia Gas^{TS} Transmission Corp.

Operator's Well Number: 7071 3) Elevation: 859

Well type: (a) Oil ___ / or Gas X /
(b) If Gas: Production ___ / Underground Storage X /
Deep X / Shallow ___ /
475

Issued 12/03/96
Expires 12/03/98

1) Proposed Target Formation(s): Oriskany Sandstone

6) Proposed Total Depth: 5260 feet

7) Approximate fresh water strata depths: 198'

8) Approximate salt water depths: N/A

9) Approximate coal seam depths: 297'-299', 417'-420', 475'-477', 554'-559'

10) Does land contain coal seams tributary to active mine? Yes ___ / No X /

11) Proposed Well Work: Install API 3000 wellhead. Drill well

12) 100' deeper. Log. Stimulate Oriskany. Install tubing if needed.

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
Conductor	16"			16'	16'	
Fresh Water	13 3/8"		48	751'	751'	
Coal	10 3/4"		32.75, 40.5	1416'	1416'	
Intermediate	8 5/8"		24, 28	2065'	2065'	75 sks
Int. Production	7"		24	5019'	5019'	10 sks
Prod. Tubing	4 1/2"		11.6	5126'	5126'	100 sks
Liners						

Expanding from Well Roads

PACKERS : Kind _____ Sizes _____ Depths set _____

30CSR18 11.1

For Office of Oil and Gas Use Only

Fee(s) paid: Well Work Permit Reclamation Fund WPCP
Plat WW-9 WW-2B Bond Blanket (Type) Agent

Environmental Protection
Permitting
Office of Oil & Gas
NOV 18 1996

10/12/96
258

RECEIVED
Environmental Protection
NOV 18 1996
Photocopy
Office of Oil and Gas

- 1) Date: 10/29/96
- 2) Operator's well number
COCO- WELL # 7071
- 3) API Well No: 47 - 039 - 01243 -D
State - County - Permit

STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

NOTICE AND APPLICATION FOR A WELL WORK PERMIT

- 4) Surface Owner(s) to be served:
 - a) Name James F. Brown III - Trustee
Address P. O. Box 1793
Charleston, WV 25326
 - b) Name _____
Address _____
 - c) Name _____
Address _____

- 5) (a) Coal Operator:
 - Name _____
Address _____
- (b) Coal Owner (s) with Declaration
 - Name James F. Brown III - Trustee
Address P. O. Box 1793
Charleston, WV 25326
 - Name _____
Address _____

- 6) Inspector Carlos W. Hiviely
Address 223 Pinch Ridge Road
Elkview, WV 25071
Telephone (304) - 965-6069

- (c) Coal Lessee with Declaration
 - Name _____
Address _____

*Copy of Storage Lease in
Col. R. To...
Office in Hona City*

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR
X Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through on the above named parties, by:

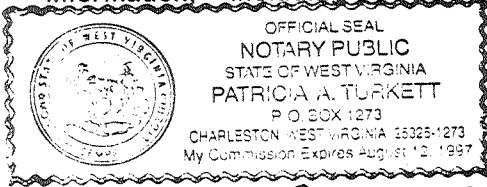
- Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator COLUMBIA GAS TRANSMISSION CORP.
By: [Signature]
Its: Storage Engineer / Well Services
Address P. O. Box 1808
St. Albans, WV 25177-1808
Telephone (304) 722-8612



Subscribed and sworn before me this 14th day of November, 19 96

Patricia A. Turkett Notary Public
My commission expires August 12, 1997

RECEIVED
 WR-35WV Division of
 Environmental Protection

JAN 21 1998

Permitting
 Office of Oil & Gas

04-Dec-96
 API # 47- 39-01243 D

State of West Virginia
 Division of Environmental Protection
 Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: BROWN, JAMES F. III Operator Well No.: COCO 7071

LOCATION: Elevation: 859.00 Quadrangle: BLUE CREEK

District: ELK County: KANAWHA
 Latitude: 3600 Feet South of 38 Deg. 25Min. 0 Sec.
 Longitude 10000 Feet West of 81 Deg. 22 Min. 30 Sec.

Company: COLUMBIA GAS TRANSMISSION
 P. O. BOX 1273
 CHARLESTON, WV 25325-1273

Agent: RICHARD L. COTY

Inspector: CARLOS HIVELY
 Permit Issued: 12/03/96
 Well work Commenced: 09/09/97
 Well work Completed: 10/30/97
 Verbal Plugging _____
 Permission granted on: _____
 Rotary Cable Rig _____
 Total Depth (feet) 5129'
 Fresh water depths (ft) _____
 Not Reported _____
 Salt water depths (ft) _____
 Not Reported _____
 Is coal being mined in area (Y/N)? N
 Coal Depths (ft): Not Reported

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"		751'	
10 3/4"		1416'	
8 5/8"		2065'	75SX
7"		5019'	10SX
4 1/2", 11.6 lb, N-80		5129'	100SX

OPEN FLOW DATA

Producing formation ORISKANY STORAGE Pay zone depth (ft) 5110'-5129'
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

Second producing formation _____ Pay zone depth (ft) _____
 Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d
 Final open flow _____ MCF/d Final open flow _____ Bbl/d
 Time of open flow between initial and final tests _____ Hours
 Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: COLUMBIA GAS TRANSMISSION CORP.

By: *[Signature]*
 Date: 1-15-98

JAN 23 1998

Replaced top joint of 4 1/2" casing and installed new
7" X 4 1/2" API 3000 wellhead. Stimulated ORISKANY with
N₂-Assist Deltafrac using 453 bbls water, 129 MSCF N₂, and
27,600 lbs. 20/40 sand.

Time	Pressure (psi)	Flow (bbls/hr)	Notes
08:00	100	0	Wellhead replaced
08:15	100	0	Flow test initiated
08:30	100	0	Flow test continued
08:45	100	0	Flow test continued
09:00	100	0	Flow test continued
09:15	100	0	Flow test continued
09:30	100	0	Flow test continued
09:45	100	0	Flow test continued
10:00	100	0	Flow test continued
10:15	100	0	Flow test continued
10:30	100	0	Flow test continued
10:45	100	0	Flow test continued
11:00	100	0	Flow test continued
11:15	100	0	Flow test continued
11:30	100	0	Flow test continued
11:45	100	0	Flow test continued
12:00	100	0	Flow test continued
12:15	100	0	Flow test continued
12:30	100	0	Flow test continued
12:45	100	0	Flow test continued
13:00	100	0	Flow test continued
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13:30	100	0	Flow test continued
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16:00	100	0	Flow test continued
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22:15	100	0	Flow test continued
22:30	100	0	Flow test continued
22:45	100	0	Flow test continued
23:00	100	0	Flow test continued
23:15	100	0	Flow test continued
23:30	100	0	Flow test continued
23:45	100	0	Flow test continued
00:00	100	0	Flow test continued

OPEN FLOW TEST

Pressure (psi) vs. Flow (bbls/hr)

Flow test results:

- Flow rate: 0 bbls/hr
- Pressure: 100 psi

Summary of wellhead replacement and stimulation results.

Wellhead replaced with 7" X 4 1/2" API 3000.

Stimulation performed using N₂-Assist Deltafrac.

Flow test results show no flow at 100 psi.