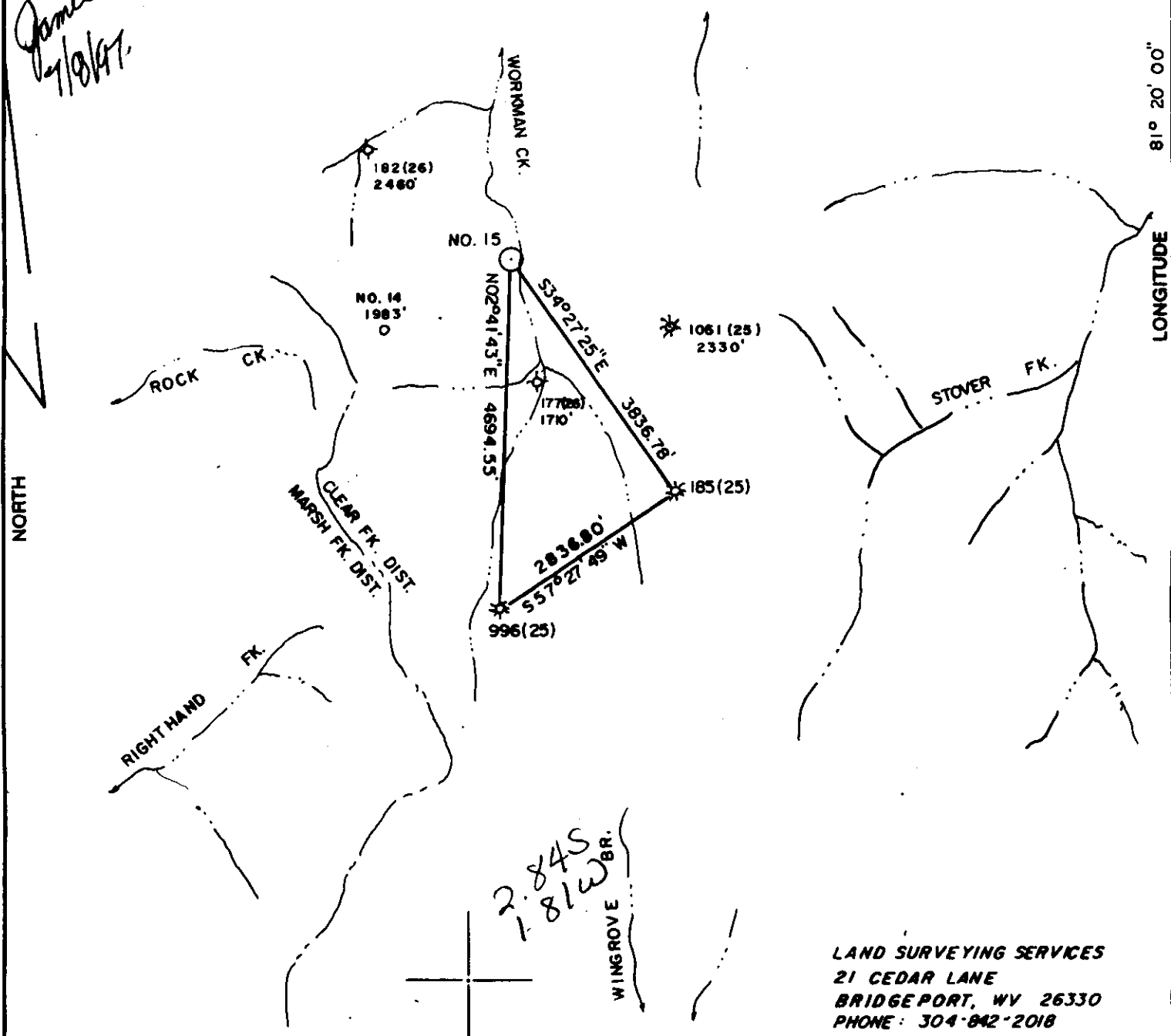


9560'

LATITUDE 37°55'00"

WELL REFERENCES:  
S08°E, 89.50' TO 2" MUSCLEWOOD  
S24°30'W, 83' TO 5" PAPER BIRCH

*Janice*  
*7/10/97*



LONGITUDE 104° 02' 18"

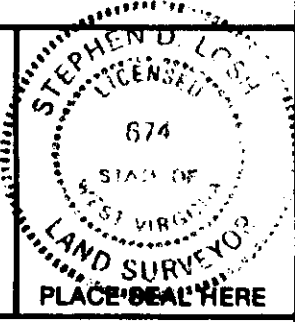
NORTH

LAND SURVEYING SERVICES  
21 CEDAR LANE  
BRIDGEPORT, WV 26330  
PHONE: 304-842-2018

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1 in 2500  
 PROVEN SOURCE OF ELEVATION Exist. well #996  
 Elev. = 2371.04'

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) \_\_\_\_\_  
 R.P.E. \_\_\_\_\_ L.L.S. 674  
 Stephen D. Losh



WEST VIRGINIA  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS  
 #10 McJUNKIN ROAD  
 NITRO, WEST VIRGINIA 25143-2506



DATE May 30, 1997  
 OPERATOR'S WELL NO. Rowland Land #15  
 API WELL NO. 47-081-01089  
 STATE COUNTY PERMIT

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS,") PRODUCTION X STORAGE \_\_\_ DEEP \_\_\_ SHALLOW X  
 LOCATION: ELEVATION 1842' WATERSHED Workman Creek  
 DISTRICT Clear Fork COUNTY Raleigh

QUADRANGLE Pax 7.5 min.  
 SURFACE OWNER Rowland Land Co. (Tract #601) ACRES 654.875  
 OIL & GAS ROYALTY OWNER Rowland Land Co. LEASE ACREAGE 33,000

PROPOSED WORK: DRILL X CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE \_\_\_ PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 6-6 248

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION Gordon ESTIMATED DEPTH 3650'  
 WELL OPERATOR Dominion Appalachian Development DESIGNATED AGENT John Haskins  
 ADDRESS P. O. Drawer R ADDRESS P. O. Drawer R  
Jane Lew, WV 26378 Jane Lew, WV 26378

FORM WVA-6

COUNTY NAME PERMIT



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: ROWLAND LAND CO.

Operator Well No.: ROWLAND LAND 15

LOCATION: Elevation: 1,842.00 Quadrangle: PAX

District: CLEAR FORK County: RALEIGH  
Latitude: 14940 Feet South of 37 Deg. 55Min. 0 Sec.  
Longitude 9560 Feet West of 81 Deg. 20 Min. 0 Sec.

Company: DOMINION APPALACHIAN DEVE  
P. O. DRAWER R  
JANE LEW, WV 26378-0000

Agent: JOHN T. HASKINS

Inspector: RODNEY DILLON  
Permit Issued: 07/08/97  
Well work Commenced: 7/14/97  
Well work Completed: 7/18/97  
Verbal Plugging  
Permission granted on: N/A  
Rotary X Cable Rig  
Total Depth (feet) 3135'  
Fresh water depths (ft) 90', 200'  
Salt water depths (ft) N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
9 5/8"	30'	0	PULLED
7"	487'	487'	83 sks
4 1/2"	3075.75'	3075.75'	200 sks

Is coal being mined in area (Y/N)?  
Coal Depths (ft): 160', 190', 360', 405'

OPEN FLOW DATA

Producing formation Big Lime Pay zone depth (ft) 2426-2616  
 Gas: Initial open flow 204 MCF/d Oil: Initial open flow N/A Bbl/d  
 Final open flow 1739 MCF/d Final open flow N/A Bbl/d  
 Time of open flow between initial and final tests 23 Hours  
 Static rock Pressure 550 psig (surface pressure) after 168 Hours  
 2722-2728

Second producing formation Pocono Upper & Lower Maxey Pay zone depth (ft) 1856-2129  
 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  
 \* Commingled

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: Larry J. Cavallo  
DOMINION APPALACHIAN DEVELOPMENT, INC.

By: LARRY J. CAVALLO; Manager of Engineering  
Date: 10/9/97

OCT 17 1997

ONES	PERFS	HOLE	BBL	BP	ISIP
Cocono	2722-2728	13	468 75Q	1980	1000
Big Lime	2608-2616	13	95 28% HCL	1501	1000
Big Lime	2426-2431	8	60 28% HCL	1800	1040
Upper & Lower Maxton	1856-2129	19	367 75Q	1300	1040

FORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
Overburden	Brown	Soft	0	15	
Sandstone	Brown	Soft	15	20	
Sandy Shale	Brown/Gray	Soft	20	40	
Shale	Gray	Medium	40	105	1" stream 90'
Sandy Shale	Light Gray	Medium	105	160	
Coal/Bone	Black	Soft	160	162	
Sandy Shale	Gray	Medium	162	190	
Sandstone	Light Gray	Hard	190	240	2" stream 200'
Shale	Dk. Gray	Medium	240	255	
Sandstone/Shale	Gray	Medium	255	350	
Shale	Gray	Soft	350	360	
Coal	Black	Soft	360	362	
Shale	Gray	Medium	360	405	
Sandy Shale	Light Gray	Medium	405	565	
Shale	Gray	Medium	565	620	
Sandstone	Light Gray	Hard	620	760	
Sandy Shale	Light Gray	Medium	760	940	
Shale	Gray	Medium	940	1020	
Sandstone	Light Gray	Hard	1020	1190	
Shale Sand streak	Gray	Medium	1190	1215	
Sandstone	Light Gray	Hard	1215	1245	
Sandy Shale	Gray	Medium	1245	1305	
Shale	Gray	Soft/Medium	1305	1515	GAS CK 1489' N.S.
Sandstone	White	Medium/Hard	1515	1555	
Sandy Shale	Red	Soft/Medium	1555	1736	Gas CK 1705' 2/10-
Sandstone	Gray/white	Hard	1736	1760	1" H2O
Sandy Shale	Red	Soft/Medium	1760	1830	Gas Ck 1799' 2/10-
Sandstone & Shale	Gray	Medium/Hard	1830	1891	1" H2O
Sandy Shale	Red	Soft/Medium	1891	2016	Gas Ck 1985' 2/10-
Sandstone & Shale	Gray	Medium/Hard	2016	2120	1" H2O
Sandstone	Gray	Medium/Hard	2120	2175	Gas CK 2102' 9/10-
Shale	Gray	Medium	2175	2245	1" H2O
Limestone	Gray	Medium	2245	2670	Gas Ck 2227' 8/10-
Sandstone & Shale	Red	Medium	2670	2830	1" H2O
Sandstone	Gray	Medium/Hard	2830	2875	Gas Ck 2813' 50/1
Sandy Shale	Gray	Soft	2875	2910	-2" H2O
Sandstone	Gray	Hard	2910	2960	Gas Ck 2910' 50/1
Sandy Shale	Gray	Medium	2960	3130	-2" H2O
			TD	3130	Gas Ck 3130' 24/1
					-2" H2O

STATE OF WEST VIRGINIA  
DEPARTMENT OF ENERGY, DIVISION OF OIL AND GAS  
WELL WORK PERMIT APPLICATION

081 1089

5735

47850 (1) 537

- 1) Well Operator: DOMINION APPALACHIAN DEVELOPMENT, INC.
- 2) Operator's Well Number: ROWLAND LAND #15 (11493) )3) Elevation: 1842'
- 4) Well type: (a) Oil  / or Gas  /  
(b) If Gas: Production  / Underground Storage  /  
Deep  / Shallow  /
- 5) Proposed Target Formation(s): GORDON 419
- Proposed Total Depth: 3600 feet
- Approximate fresh water strata depths: 40.80
- Approximate salt water depths: N/A
- Approximate coal seam depths: 250, 270
- Does land contain coal seams tributary to active mine? Yes  / No  /
- 11) Proposed Well Work: DRILL & STIMULATE NEW WELL
- 12)

*Issued 07/08/97  
Expires 07/08/99*

*Remitting  
Division of Oil & Gas  
397*

CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft.	For drilling	Left in well	Fill-up (cu. ft.)
Conductor	11 3/4"		27#	30'	0	PULL No CEMENT
Fresh Water						<i>38 CSR 18-11.3</i>
Coal					<i>480'</i>	
<del>Intermediate</del>	8 5/8"		20#	480'	480'	38 CSR 18-11.2.2
Production	4 1/2"		9.5#	3550'	3550'	38 CSR 18-11.1
Tubing						
Liners						

PACKERS : Kind \_\_\_\_\_  
 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)

*0168 26  
19*

1) Date: JUNE 10, 1997  
2) Operator's well number  
ROWLAND LAND #15 (11493)  
3) API Well No: 47 - 081 - 1089  
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: 5) (a) Coal Operator:  
 (a) Name ROWLAND LAND CO., LTD Name N/A  
 Address SUITE 609-405 CAPITOL CHARLESTON, WV 25301 Address \_\_\_\_\_  
 (b) Name \_\_\_\_\_ (b) Coal Owner(s) with Declaration  
 Address \_\_\_\_\_ Name SAME AS SURFACE  
 Address \_\_\_\_\_  
 (c) Name \_\_\_\_\_ Name \_\_\_\_\_  
 Address \_\_\_\_\_ Address \_\_\_\_\_

6) Inspector RODNEY DILLON (c) Coal Lessee with Declaration  
 Address BOX 131 Name CONSOLIDATED COAL COMPANY  
BRADLEY, WV 25818 Address P O BOX 1289  
 Telephone (304)- 256-6946 BLUEFIELD, VA 24605

**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)

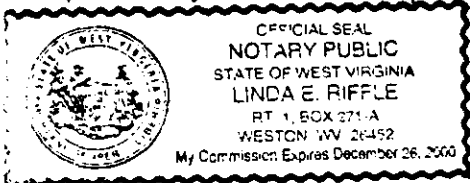
I certify that as required under Chapter 22 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through        on the above named parties, by:

- 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 DOMINION APPALACHIAN DEVELOPMENT, INC.  
 By: [Signature] JOHN T. HASKINS  
 Its: SENIOR VICE PRESIDENT  
 Address P O DRAWER R  
JANE LEW, WV 26378  
 Telephone (304) 884-2000

Subscribed and sworn before me this 10<sup>th</sup> day of June, 19 97

[Signature] Notary Public  
 My commission expires December 26, 2000