

7900' LATITUDE 37°52'30"

Janie
10/8/96.

NORTH

5102
00.02 818 EQUINOCT

ROWLAND LAND CO.
33,000 AC. LEASE

CRK.
WORKMAN

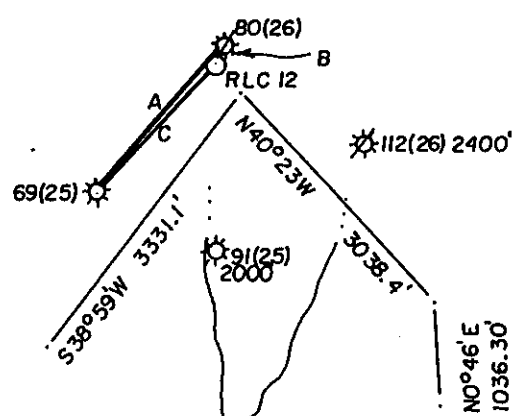
FORK

STOVER

7.5

1.335
1.50W

MARSH FORK DIST. CLEAR FORK DIST.



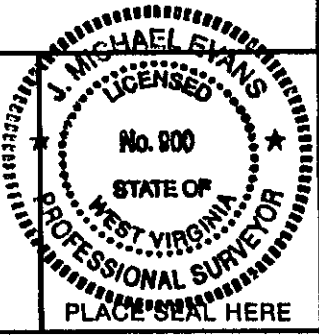
SURVEY TIE LINES:
 A) N41°30'E, 2025.13'
 B) S29°26'W, 206.35'
 C) S42°51W, 1823.85'

WELL REFERENCES:
 S9°30'E, 176' TO 6" POPLAR
 N29°30'E, 206' TO WELL 80-P

(+) 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 Plugged well 80
206' NE. at 2432.8'

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 REGU-
 LATIONS ISSUED AND PRESCRIBED BY THE DEPART-
 MENT OF ENERGY.
 (SIGNED) _____
 R.P.E. _____ L.L.S. 900



STATE OF WEST VIRGINIA
 Division of Environmental Protection
 OFFICE OF OIL AND GAS



DATE September 9, 19 96
 OPERATOR'S WELL NO. Rowland Land
 API WELL NO. Co. 12

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 081 PERMIT 01053-7
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 2393' WATER SHED Wingrove Branch
 DISTRICT Clear Fork COUNTY Raleigh

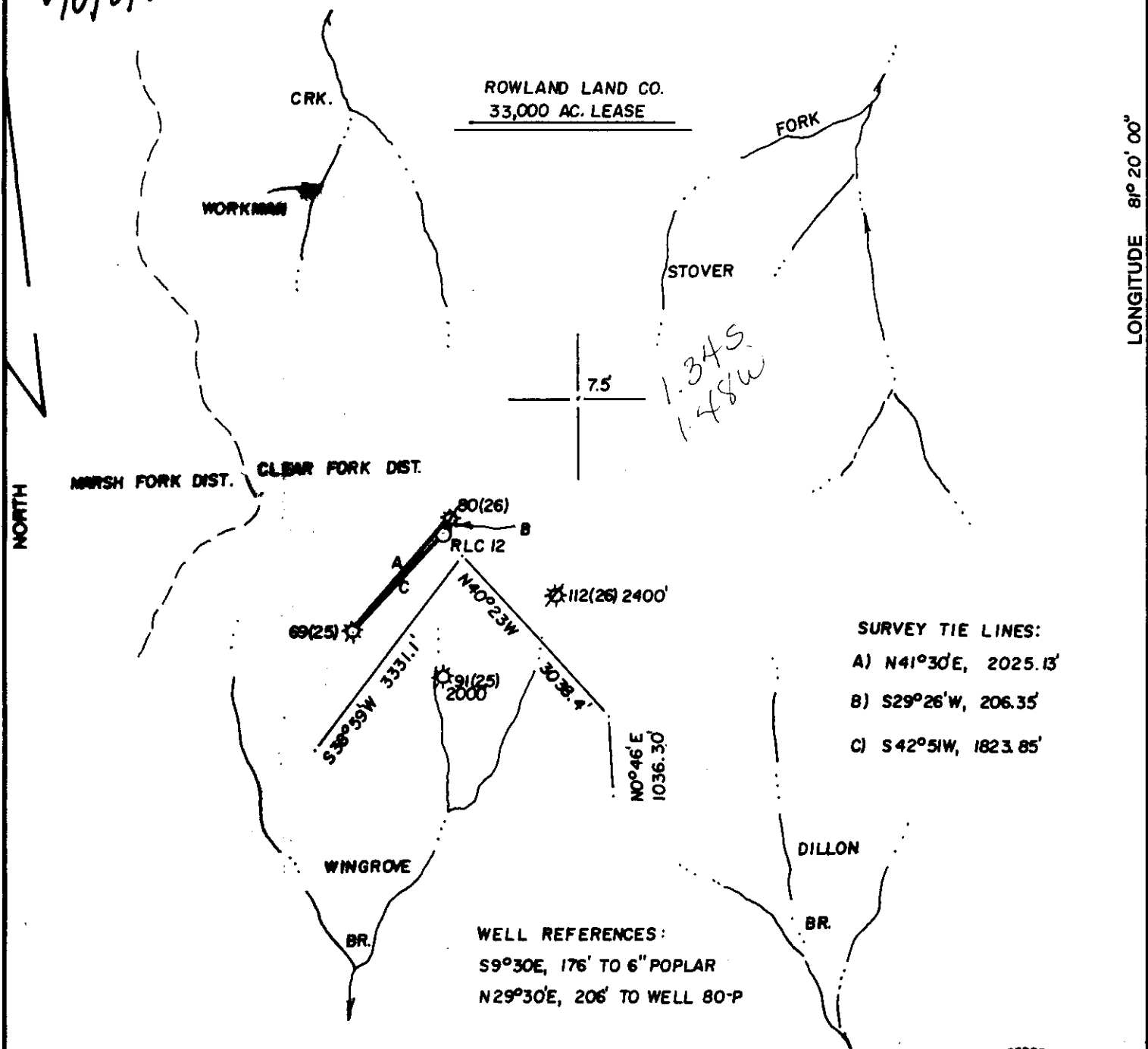
QUADRANGLE Eccles 7.5'
 SURFACE OWNER Consolidation Coal Co. ACREAGE 480.97
 OIL & GAS ROYALTY OWNER Rowland Land Co. LEASE ACREAGE 33,000

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR Set temporary plug
 STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW has found life - remove
 FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) plug concrete
Existing well drilled in 1996 ID 4255 Production from Kentucky W. W.
 PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION Gordon ESTIMATED DEPTH 4200'
 WELL OPERATOR Dominion Appalachain Dev. DESIGNATED AGENT John H. McKinis MAY 17 1999
 ADDRESS P. O. Drawer R ADDRESS P. O. Drawer R
Jane Lew, WV 26378-0080 Jane Lew, WV 26378-0080

FORM WW-6

COUNTY NAME RAL
PERMIT 1053 F

Janie
10/8/96.



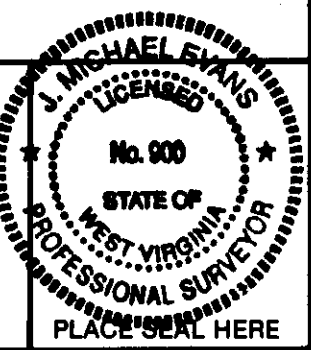
- SURVEY TIE LINES:**
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(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE NO. _____
DRAWING NO. _____
SCALE 1" = 2000'
MINIMUM DEGREE OF ACCURACY 1 in 2500
PROVEN SOURCE OF ELEVATION Plugged well 80
206' NE. at 2432.8'

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. 900



STATE OF WEST VIRGINIA
Division of Environmental Protection
OFFICE OF OIL AND GAS

DATE September 9, 19 96
OPERATOR'S WELL NO. Rowland Land
API WELL NO. Co. 12
47-081-01053
STATE COUNTY PERMIT

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

LOCATION: ELEVATION 2393' WATERSHED Wingrove Branch
DISTRICT Clear Fork COUNTY Raleigh
QUADRANGLE Eccles 7.5'

SURFACE OWNER Consolidation Coal Co. ACREAGE 480.97
OIL & GAS ROYALTY OWNER Rowland Land Co. LEASE ACREAGE 33,000
LEASE NO. _____

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR
STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW
FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 6-6248

PLUG AND ABANDON CLEAN OUT AND REPLUG
TARGET FORMATION Gordon ESTIMATED DEPTH 4200'
WELL OPERATOR Dominion Appalachain Dev. DESIGNATED AGENT John Haskins
ADDRESS P. O. Drawer R ADDRESS P. O. Drawer R
Jane Lew, WV 26378-0080 Jane Lew, WV 26378-0080

OCT 18 1996

FORM WW-6

0.4.230

COUNTY NAME
PERMIT

SEP 21 1999

WV Division of Environmental Protection

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

14-May-99
API # 47- 81-01053 F

Reviewed VBO

Farm name: CONSOL. COAL CO. Operator Well No.: ROWLAND LAND 12

LOCATION: Elevation: 2,393.00 Quadrangle: ECCLES

District: CLEAR FORK County: RALEIGH
Latitude: 7015 Feet South of 37 Deg. 52Min. 30 Sec.
Longitude 7900 Feet West of 81 Deg. 20 Min. 0 Sec.

Company: DOMINION APPALACHIAN DEVE
P. O. BOX 1248
JANE LEW, WV 26378-0000

Agent: JOHN T. HASKINS

Inspector: RODNEY DILLON
Permit Issued: 05/14/99
Well work Commenced: 8/2/99
Well work Completed: 8/2/99
Verbal Plugging
Permission granted on: _____
Rotary _____ Cable _____ Rig
Total Depth (feet) _____
Fresh water depths (ft) _____
Salt water depths (ft) _____
Is coal being mined in area (Y/N)? _____
Coal Depths (ft): _____

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
* no Change; See Original WR-35			

OPEN FLOW DATA

Producing formation Ravencliff Pay zone depth (ft) 2166-2176'
Gas: Initial open flow 0 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 103 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 8 Hours
Static rock Pressure 40 psig (surface pressure) after 24 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.

Larry J. Cavallo
For: DOMINION APPALACHIAN DEVELOPMENT, INC.
By: Larry J. Cavallo; Manager of Engineering
Date: 9/20/99

SEP 27 1999

RAL 1053 F

One	STAGE(S)	750 foam	FRAC	DATE	7/26/99
ZONES	PERFS.	Holes	BBL	BP	ISI
Ravencliff	2166-2176	16	90	937	0

FORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
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* No change; see original WR-35

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

Well Operator's Report of Well Work

Farm name: CONSOLIDATION COAL CO. Operator Well No.: ROWLAND #12

LOCATION: Elevation: 2,393.00 Quadrangle: ECCLES

District: CLEAR FORK County: RALEIGH
Latitude: 7015 Feet South of 37 Deg. 52Min. 30 Sec.
Longitude 7900 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: 10/10/96
Well work Commenced: 11/05/96
Well work Completed: 11/10/96
Verbal Plugging
Permission granted on: N/A
Rotary Cable _____ Rig
Total Depth (feet) 4255'
Fresh water depths (ft) 80'

Salt water depths (ft) N/A

Is coal being mined in area (Y/N)? N
Coal Depths (ft): 120', 170', 183', 278', 440'

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
11 3/4	30	0	PULLED
8 5/8	708	708	105 SKS
4 1/2	4208'	4208'	194 SKS

OPEN FLOW DATA

GORDON 4002-4096
Producing formation WEIR Pay zone depth (ft) 3492-3514
Gas: Initial open flow 55 MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 377 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 17 Hours
Static rock Pressure 480 psig (surface pressure) after 168 Hours
Big Lime 3070-3076
Second producing formation L & M Maxton Pay zone depth (ft) 2513-2799
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.

RECEIVED
OFFICE OF OIL AND GAS

JAN 17 1997

For: Larry J. Cavallo
DOMINION APPALACHIAN DEVELOPMENT, INC.

By: LARRY J. CAVALLO; SENIOR GEOLOGIST
Date: 1/10/97

WV Division of
Environmental Protection

4	STAGE(S)	Acid & 75 Q FOAM	FRAC	DATE 12/12/96		
ZONES	PERFS	HOLE	BBL	BR	ISIP	
GORDON	4002-4096	14	139 75Q	1770	1300	
WEIR	3492-3514	24	170 75Q	2250	1170	
BIG LIME	3070-3076	8	60(28% HCL)	1880	1730	
L & M MAXTON	2513-2799	16	174 75Q	2800	1000	

FORMATION	COLOR	HARD/SOFT	TOP	BOTTOM	REMARKS
OVERBURDEN			0'	60'	
SANDY SHALE			60'	120'	WET @ 80' 1"
COAL			120'	121'	Stream
SANDY SHALE			121'	170'	
COAL			170'	170.5'	
SHALE			170.5'	183'	
COAL			183'	184'	
SANDY SHALE			184'	198'	
SANDSTONE			198'	260'	
SHALE			260'	278'	
COAL			278'	280'	
SANDY SHALE			280'	360'	
SANDSTONE			360'	440'	
COAL			440'	442'	
SANDY SHALE			440'	500'	
SANDSTONE			500'	580'	
SANDY SHALE			580'	640'	
SANDSTONE			640'	680'	
SHALE			680'	720'	
SANDY SHALE			720'	741'	T.D. 8 7/8" HOLE
SANDY SHALE			741'	760'	
SANDSTONE			760'	910'	
SANDY SHALE			910'	1100'	
SHALE			1100'	1150'	
SANDY SHALE			1150'	1430'	
SHALE			1430'	1500'	
SANDSTONE			1500'	1650'	
SANDY SHALE			1650'	1870'	
SANDSTONE			1870'	2010'	
SANDY SHALE			2010'	2140'	
SANDSTONE			2140'	2195'	
SANDY SHALE			2195'	2235'	GAS CK @ 2200'
RED SHALE			2235'	2345'	NO SHOW -1" H ₂ O
SANDSTONE			2345'	2410'	
SANDY SHALE			2410'	2505'	GAS CK @ 2300'
SANDSTONE			2505'	2550'	80/10-1" H ₂ O
SANDY SHALE			2550'	2751'	
SANDSTONE			2751'	2815'	GAS CK @ 2400'
SANDY SHALE			2815'	2910'	80/10-1" H ₂ O
LIME			2910'	3330'	
SHALE (RED)			3330'	3370'	GAS CK @ 2560'
BLACK SHALE			3370'	3490'	80/10 -1" H ₂ O
SANDSTONE WEIR			3490'	3640'	
BLACK SHALE			3640'	3840'	GAS CK @ 2900'
GRAY SHALE			3840'	4080'	40/10 -1" H ₂ O
SANDY SHALE			4080'	4255'	GAS CK @ 3340-3380
TD				4255'	10/10 -1" H ₂ O
			GAS CK 4120'		GAS CK @ 3680'
			2/10-1" MFC		2/10-1" MFC

RECEIVED
WV Division of
Environmental Protection

081-1053

FORM WW-2B

STATE OF WEST VIRGINIA

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

Permitting
Office of Oil & Gas

5735

4785°

(1) 331

Well Operator: DOMINION APPALACHIAN DEVELOPMENT, INC.

Operator's Well Number: ROWLAND LAND #12 3) Elevation: 2393'

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

Issued 10/10/96
Expired 10/10/98

- 5) Proposed Target Formation(s): GORDON 49
- 6) Proposed Total Depth: 4250' feet
- 7) Approximate fresh water strata depths: 40', 60', 150'
- 8) Approximate salt water depths: N/A
- 9) Approximate coal seam depths: 30', 280', 620'
- 10) Does land contain coal seams tributary to active mine? Yes ___ / No X /
- 11) Proposed Well Work: DRILL & STIMULATE NEW GAS WELL
- 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	11 3/4		27#	30	0	PULL
Fresh Water						38 CSR 18-11.3
Coal	8 5/8		20#	700'	700' <i>OT</i>	28 CSR 18-11.2.2
Intermediate						
Production	4 1/2	J-55	10.5#	4210'	4210'	38 CSR 18-11.1
Tubing						
Liners					<i>R.D.</i>	9/17/96

PACKERS : Kind _____
Sizes _____
Depths set _____

For Division of Oil and Gas Use Only

007953
31

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