

D 205 10/8/86

12010'

LATITUDE 37°55'00"

**ROWLAND LAND COMPANY**

**TRACT 380**

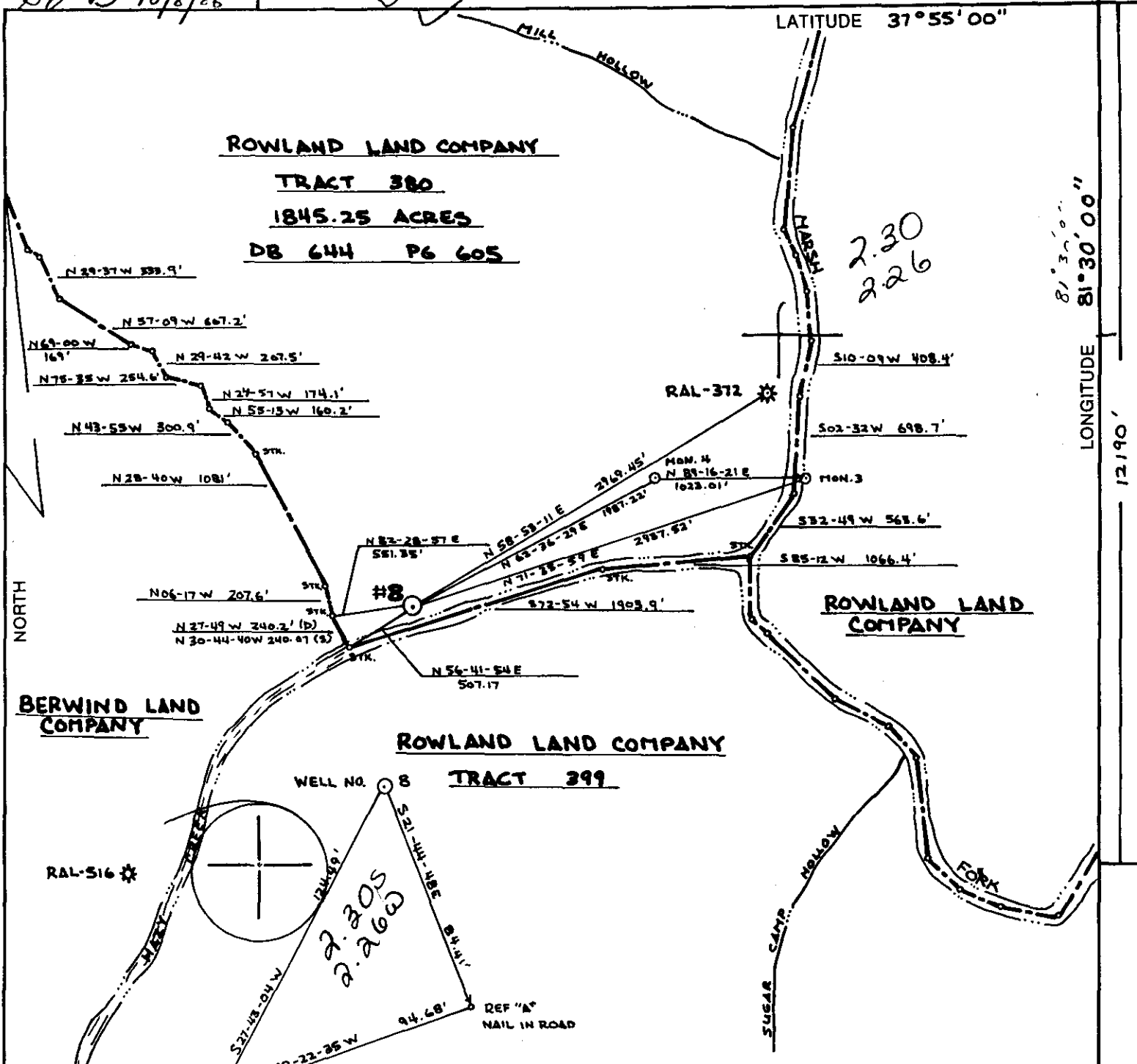
**1845.25 ACRES**

**DB 644 PG 605**

81°30'00"

LONGITUDE

12190'



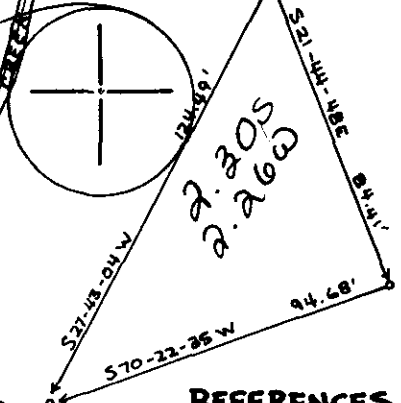
2.30  
2.26

**BERWIND LAND COMPANY**

**ROWLAND LAND COMPANY**

**TRACT 399**

WELL NO. 8



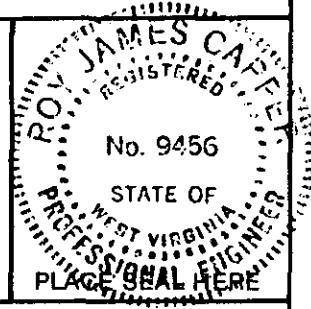
**REFERENCES**  
1" = 50'

**PEABODY COAL COORDINATES:**  
N: 591319.69  
E: 3214251.64

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

FILE NO. 86-081-012  
 DRAWING NO. 86036  
 SCALE 1" = 1000'  
 MINIMUM DEGREE OF ACCURACY 1 IN 10000  
 PROVEN SOURCE OF ELEVATION BM N-40x  
±2500' EAST OF LOCATION  
 ELEVATION ± 984.657

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) Roy James Capper  
 R.P.E. 9456 L.L.S.



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



DATE 15 SEPTEMBER 19 86  
 OPERATOR'S WELL NO. ROWLAND #8  
 API WELL NO.

47-081-0743

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  STATE COUNTY PERMIT  
 (IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW   
 LOCATION: ELEVATION 1002.1' WATER SHED HAZY CREEK OF MARSH FORK  
 DISTRICT MARSH FORK 2 COUNTY RALEIGH  
 QUADRANGLE WHITESVILLE 7.5' 677 006 Ec6 Bald Knob  
 SURFACE OWNER ROWLAND LAND COMPANY ACREAGE 1845.25  
 OIL & GAS ROYALTY OWNER ROWLAND LAND COMPANY LEASE ACREAGE 15000

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) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG   
 TARGET FORMATION MARCELLUS SHALE ESTIMATED DEPTH 5300  
 WELL OPERATOR ALLEGHENY & WESTERN DESIGNATED AGENT DENNIS L. MANN  
 ADDRESS P.O. BOX 2587 0019 ADDRESS P.O. BOX 2587  
CHARLESTON, WEST VIRGINIA 25329 CHARLESTON, WEST VIRGINIA 25329

OCT 14 1986

3-3 Hopkinsfork-Jarrolds Valley (247) DPD-Devsh. this area

FORM WW-6

COUNTY NAME

PERMIT



IV-35  
(Rev 8-81)

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DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

State of West Virginia

Department of Mines  
Oil and Gas Division

Date April 6 1987  
Operator's  
Well No. Rowland 8  
Farm Rowland Land  
API No. 47 - 081 - 0743

WELL OPERATOR'S REPORT  
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1002 Watershed Hazy Creek  
District: Marsh Fork County Raleigh Quadrangle Whitesville 7.5

COMPANY Allegheny & Western Energy Corp  
ADDRESS P.O. Box 2587, Charleston, W.Va., 25329  
DESIGNATED AGENT Dennis L. Mann  
ADDRESS P.O. Box 2587, Charleston, W.Va., 25329  
SURFACE OWNER Rowland Land Co  
ADDRESS 1033 Quarrier St, Charleston W.Va  
MINERAL RIGHTS OWNER Same  
ADDRESS       
OIL AND GAS INSPECTOR FOR THIS WORK Rodney  
Dillon ADDRESS Sophia, W.Va  
PERMIT ISSUED 10/8/86  
DRILLING COMMENCED 10/14/86  
DRILLING COMPLETED 10/27/86

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cond.			
13-10"	41	0	0
9 5/8	427	427	420 sks
8 5/8			
7	2018	2018	175 sks
5 1/2			
4 1/2	4945	4945	260 sks
3			
2			
Liners used			

IF APPLICABLE: PLUGGING OF DRY HOLE ON  
CONTINUOUS PROGRESSION FROM DRILLING OR  
REWORKING. VERBAL PERMISSION OBTAINED  
ON     

GEOLOGICAL TARGET FORMATION Devonish Shale Depth 5300 feet  
Depth of completed well 4955 feet Rotary X / Cable Tools       
Water strata depth: Fresh 40 feet; Salt 1490 feet  
Coal seam depths: N/A Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Big Lime/Weir Pay zone depth 2295 feet  
Gas: Initial open flow      Mcf/d Oil: Initial open flow      Bbl/d  
Final open flow (600) Mcf/d Final open flow      Bbl/d  
Time of open flow between initial and final tests 24 hours  
Static rock pressure 820 psig (surface measurement) after 24 hours shut in  
(If applicable due to multiple completion--)

Second producing formation Devonian Shale Pay zone depth 2888 feet  
Gas: Initial open flow      Mcf/d Oil: Initial open flow      Bbl/d  
Final open flow (900) Mcf/d Oil: Final open flow      Bbl/d  
Time of open flow between initial and final tests 24 hours  
Static rock pressure 820 psig (surface measurement) after 24 hours shut in

(Continue on reverse side)

AUG 17 1987

FOF for well 1500 Mcf

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

Blind 2295-2415 perf w/ 9 holes frac w/ 10,000 gal gel acid + 80,000 scf n2  
 w/ 2507-3675 perf w/ 51 holes frac w/ 60,000# 20/50 sd + 1,000 gal 15% acid + 1,064,000 scf n2  
 up 3734-4845 perf w/ 39 holes frac w/ 60,000# 20/50 sd + 1,000 gal 15% acid + 1,224,000 scf n2

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DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all fresh and salt water, coal, oil and gas
shale & sandstone			0	1471	
salt sand			1471	1634	
shale			1634	1736	
salt sand			1736	1858	
sandstone & shale			1858	2157	
little lime			2157	2196	
pencil cave			2196	2203	
big lime			2203	2414	
shale			2414	2502	
upper weir			2502	2552	
shale			2552	2630	
lower weir			2630	2652	
shale			2652	2862	
sunbury shale			2862	2881	
berea			2881	2888	
siltstone & shale			2888	3074	
gordon			3074	3084	
grey & brown shale			3084	4955	TD 4955 KB
404	2888				Huron
813	4088				4955 2652 ----- 23 03 - expl ftg)
822	4838				

(Attach separate sheets as necessary)

Allegheny & Western Energy Corp  
Well Operator

By: Den J. Mc, Vice President

Date: April 6, 1987

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 ..., encountered in the drilling of a well."

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OCT 7 1986



1) Date: 2 October, 1986  
 2) Operator's Well No. Rowland Land #8  
 3) API Well No. 47 -081-0743  
 State County Permit

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

- 4) WELL TYPE: A Oil        / Gas XX /  
 B (If "Gas", Production XX / Underground storage        / Deep        / Shallow XX /)  
 5) LOCATION: Elevation: 1002.1' Watershed: Hazy Creek of Marsh Fork 676  
 District: Marsh Fork 0042 County: Raleigh Quadrangle: Whitesville 7.5  
 6) WELL OPERATOR A&W Energy Co. CODE: 1100 7) DESIGNATED AGENT Dennis L. Mann  
 Address P.O. Box 2587 Address P.O. Box 2587  
Charleston, WV 25329 Charleston, WV 25329  
 8) OIL & GAS INSPECTOR TO BE NOTIFIED 9) DRILLING CONTRACTOR:  
 Name Rodney Dillon Name Unknown  
 Address P.O. Box 1526 Address         
Sophia, WV 25921  
 10) PROPOSED WELL WORK: Drill XX / Drill deeper        / Redrill        / Stimulate XX /  
 Plug off old formation        / Perforate new formation         
 Other physical change in well (specify)         
 11) GEOLOGICAL TARGET FORMATION, Weir, Devonian Shales 401  
 12) Estimated depth of completed well, 5300 feet  
 13) Approximate strata depths: Fresh, 40, 392 feet; salt, 1490 feet.  
 14) Approximate coal seam depths: not expected (372) Is coal being mined in the area? Yes        / No XX /  
 Well#

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILL-UP OR SACKS (Cubic feet)	PACKERS
	Size	Grade	Weight per ft.	New	Used	For drilling	Left in well		
Conductor									Kinds
Fresh water	9-5/8	smls	32	x		435	435	300 cts	by rule 15.05
Coal	7	smls	23	x		2450	2450	200 cts	Sizes
Intermediate									
Production	4-1/2	smls	10.5	x		5300	5300	200-400cts	Depths set or as required by rule 15.01
Tubing									Perforations:
Lin.									Top Bottom

OFFICE USE ONLY  
 DRILLING PERMIT

Permit number 47-081-0743 Date October 8 19 86

This permit covering the well operator and well location shown below is evidence of permission granted to drill in accordance with the pertinent legal requirements subject to the conditions contained herein and on the reverse hereof. Notification must be given to the District Oil and Gas Inspector. (Refer to No. 8) Prior to the construction of roads, locations and pits for any permitted work. In addition, the well operator or his contractor shall notify the proper district oil and gas inspector 24 hours before actual permitted work has commenced.)

The permitted work is as described in the Notice and Application, plat, and reclamation plan, subject to any modifications and conditions specified on the reverse hereof.

Permit expires October 8, 1988 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <u>      </u>	Agent: <u>RLD</u>	Plat: <u>Steve</u>	Casing: <u>Steve</u>	Fee: <u>3906</u> <u>148</u>	WPCP: <u>      </u>	S&E: <u>      </u>	Other: <u>      </u>
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NOTE: Keep one copy of this permit posted at the drilling location.        Director, Division of Oil and Gas File

See the reverse side of the APPLICANT'S COPY for instructions to the well operator.

