

4/2/87

9700'

LATITUDE 37° 55' 00"

LONGITUDE 81° 03' 18"

9160'

ROWLAND LAND COMPANY

TRACT 380

1845.25 ACRES

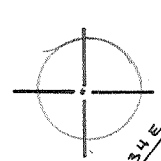
DB 644 PG 605

PROPOSED #7

ROWLAND LAND COMPANY

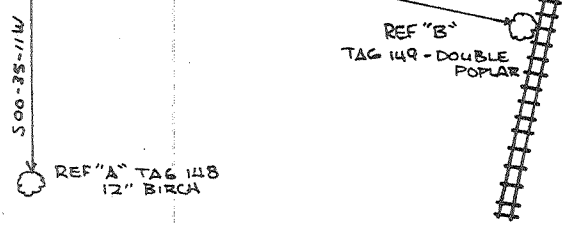
BERWIND LAND COMPANY

1.745
1.830



S 30-44-40E 240.07'

S 78-16-02E 126.14'



7192.84 ACRES

ROWLAND LAND COMPANY

TRACT 399

"EDWIGHT LEASE"

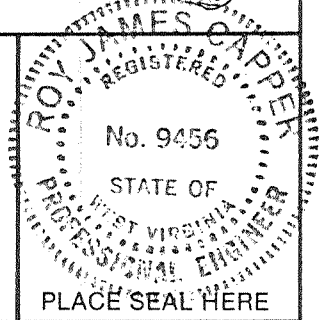
REFERENCES
1" = 50'

PEABODY COAL COORDINATES, N: 594428.69
E: 3216385.89

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

FILE NO. 86-081-015
DRAWING NO. 86050
SCALE 1" = 1000'
MINIMUM DEGREE OF ACCURACY 1 IN 5000
PROVEN SOURCE OF ELEVATION BM 40X ± 2700'
SOUTH 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 Copper
R.P.E. 9456 L.L.S.



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



DATE 29 OCTOBER, 19 86
OPERATOR'S WELL NO. ROWLAND #7
API WELL NO. 755
47 081 0755
STATE COUNTY PERMIT

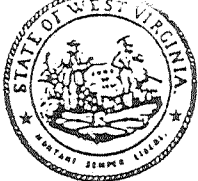
WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
(IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
LOCATION: ELEVATION 995.6' WATER SHED MARSH FORK OF BIG COAL RIVER
DISTRICT MARSH FORK COUNTY RALEIGH
QUADRANGLE WHITESVILLE 7.5' 677 006 6 Bald Knob EC
SURFACE OWNER ROWLAND LAND COMPANY ACREAGE 1845.25
OIL & GAS ROYALTY OWNER ROWLAND LAND CO. LEASE ACREAGE 15000

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' 666 Hopkins Fork-Jarrolds Valley
WELL OPERATOR ALLEGHENY + WESTERN DESIGNATED AGENT DENNIS L. MANN (247)
ADDRESS P.O. BOX 2587 ADDRESS P.O. BOX 2587
DEEPWELL CHARLESTON, WV 25329 004 CHARLESTON, WV 25329

APR 06 1987

COUNTY NAME PERMIT



IV-35
(Rev 8-81)

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AUG 11 1987

State of West Virginia

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

Department of Mines
Oil and Gas Division

Date Aug 3 1987
Operator's Well No. Rowland # 7
Farm Rowland Land Co
API No. 47 - 081 - 0755

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: 995.6 Watershed Marsh Fork of Big Coal River
District: Marsh Fork County Releigh 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 P.O. Box 1526 ADDRESS Sophia, W.Va.
PERMIT ISSUED 4/2/87
DRILLING COMMENCED 4/15/87
DRILLING COMPLETED 4/23/87

Casing Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"	123	123	250 sks
9 5/8"	933	933	390 sks
8 5/8"			
7"	2046	2046	175 sks
5 1/2"			
4 1/2"	5540	5540	210 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 Devonian Shale Depth 5300 feet
Depth of completed well 5559 feet Rotary X / Cable Tools
Water strata depth: Fresh 30 feet; Salt 500 feet
Coal seam depths: N/A Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Weir Pay zone depth 2378 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Ebl/d
Final open flow (688) Mcf/d Final open flow Ebl/d
Time of open flow between initial and final tests 24 hours

688 Mcf POF for well.

"Static" rock pressure 850 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)
Second producing formation Devonian Shale Pay zone depth 2822 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Ebl/d
Final open flow (1000) Mcf/d Oil: Final open flow Ebl/d
Time of open flow between initial and final tests 24 hours
Static rock pressure 850 psig (surface measurement) after 24 hours shut in

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

2378-2905 perf w/ 40 holes frac w/ 60,000# 20/50 sd + 750 gal 15% acid + 810,000 scf n2
 3020-3458 perf w/ 34 holes frac w/ 60,000# 20/50 sd + 750 gal 15% acid + 1,113,500 scf n2
 3524-4806 perf w/ 32 Holes frac w/ 60,000# 20/50 sd + 750 gal 15% acid + 859,000 scf n2
 4882-5533 perf w/ 36 holes frac w/ 60,000# 20/50 sd + 750 gal 15% acid + 1,135,000 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
sandstone & shale			0	1468	
salt sand			1468	1631	
shale			1631	1663	
salt sand			1663	1885	
sand & shale			1885	2116	
little lime			2116	2147	
pencil cave			2147	2157	
big lime			2157	2352	
shale & sand			2352	2440	
weir			2440	2494	
shale			2494	2815	
sunbury shale			2815	2822	
sandysiltstone & shale			2822	3023	
gordon			3023	3033	
grey & lt brown shale			3033	5497	
marcellus shale			5497	5533	
onondaga Lime			5533	5559	T.D 5559 K.B.
404	2822				
813	4022				
822	4772				
825	4972				
830	5272				

(Attach separate sheets as necessary)

Allegheny & Western Energy Corp
Well Operator

By: Devin G. Mann Vice President

Date: Aug 3, 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."



1) Date: 6 March, 19 87
 2) Operator's Well No. Rowland #7
 3) API Well No. 47-081-0755
 State 47 County 081 Permit 0755

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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 XXX /
 B (If "Gas", Production XXX / Underground storage / Deep / Shallow XXX /)
- 5) LOCATION: Elevation: 995.6 Watershed: Marsh Fork of Big Coal River 676
 District: Marsh Fork 2 County: Raleigh 081 Quadrangle: Whitesville 7.5'
- 6) WELL OPERATOR A&W Energy 004 CODE: 1100 7) DESIGNATED AGENT Dennis L. Mann
 Address P.O. Box 2587 Address P.O. Box 2587
Charleston, West Virginia 25329 Charleston, West Virginia 25329
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Rodney Dillon 9) DRILLING CONTRACTOR: Name Not Available
 Address P.O. Box 1526 Address
Sophia, West Virginia 25921
- 10) PROPOSED WELL WORK: Drill XXX / Drill deeper / Redrill / Stimulate XXX /
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 11) GEOLOGICAL TARGET FORMATION, Weir, Marcellus Shale 401
- 12) Estimated depth of completed well, 5300 feet
 13) Approximate strata depths: Fresh, 30 feet; salt, 500 feet.
 14) Approximate coal seam depths: Is coal being mined in the area? Yes / No XX

15) CASING AND TUBING PROGRAM

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		910	910	300 sks scts	by rule 15.05
Coal	7	smls	23	x		2690	2690	200 sks (cts)	Sizes
Intermediate									
Production	4-1/2	smls	10.5	x		5300	5300	200-400 sks	Depths set or as required by rule 15.01
Tubing									Perforations:
Liners									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-081-0755

Date April 2 19 87

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 April 2, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Bond: <input checked="" type="checkbox"/>	Agent: <input checked="" type="checkbox"/>	Plat: <input checked="" type="checkbox"/>	Casing: <input checked="" type="checkbox"/>	Fee: <u>5241</u> <u>184</u>	WPCP: <input checked="" type="checkbox"/>	S&E: <input checked="" type="checkbox"/>	Other: <input checked="" type="checkbox"/>
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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.