

87B 7/3/87

11700'

LATITUDE 37° 52' 30"

310'

REF "B" TAG 350
TWIN 10" POPLAR

N 79-35-19W 62.91'

S 34-05-00E 99.86'

REF "A" TAG 349
12" POPLAR

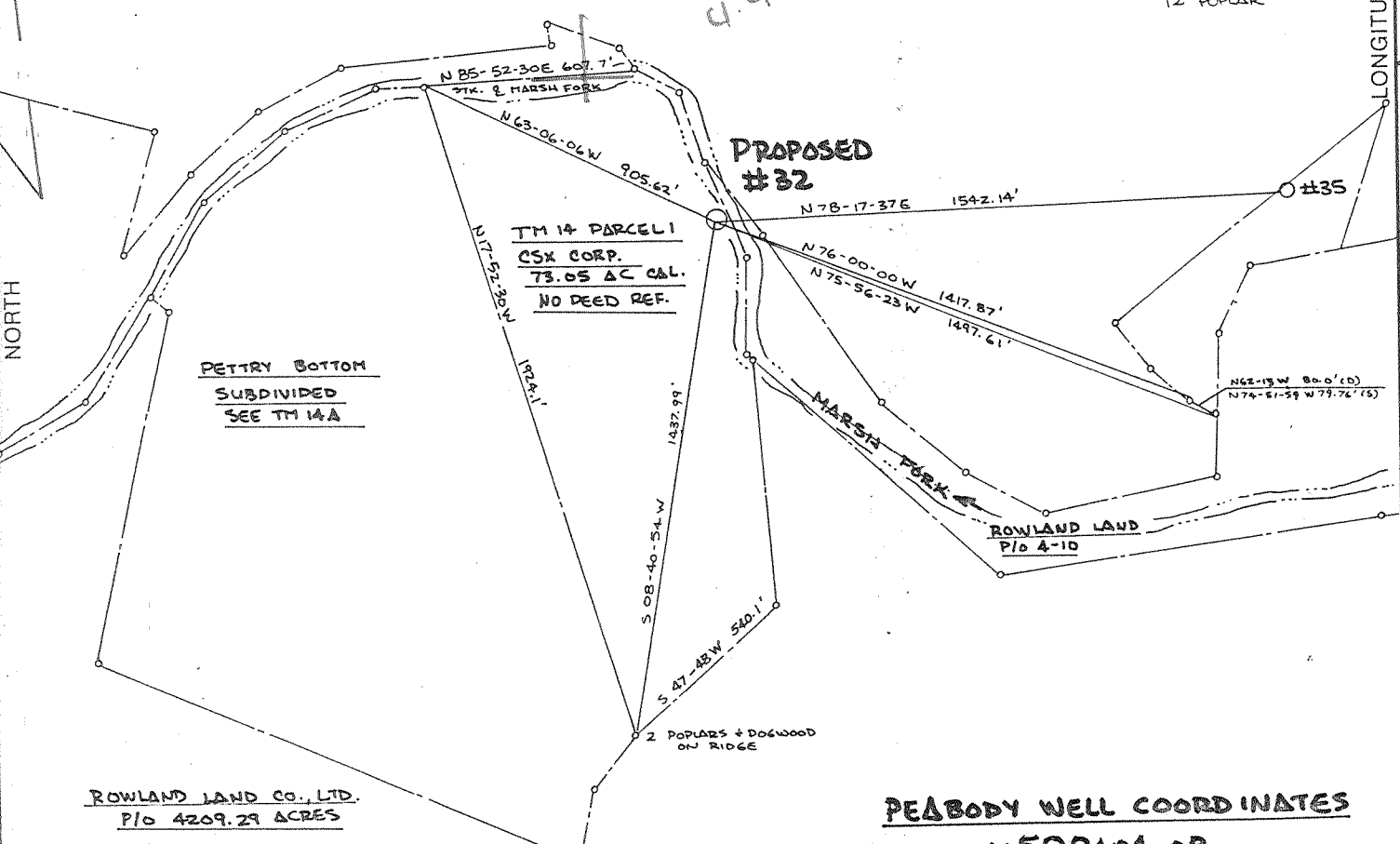
REFERENCES
1" = 50'

0.055
2.21W

2.935
4.48W

LONGITUDE 81° 27' 30"

NORTH



PEABODY WELL COORDINATES
 N: 588404.08
 E: 3226828.57

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

FILE NO. AW-081-016
 DRAWING NO. _____
 SCALE 1" = 500'
 MINIMUM DEGREE OF ACCURACY 1 IN 10000
 PROVEN SOURCE OF ELEVATION BM MOUTH OF HORSE CREEK 1075'

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. _____

ROY JAMES COPPER
 REGISTERED
 No. 9456
 STATE OF _____
 PLACE SEAL HERE

STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE 1 JULY 19 87
 OPERATOR'S WELL NO. ROWLAND #32
 API WELL NO. _____

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1071 WATERSHED MARSH FORK OF BIG COAL RIVER
 DISTRICT MARSH FORK COUNTY RALEIGH
 QUADRANGLE ARNETT 7.5' 218 036 4 8006W WC
 SURFACE OWNER CSX CORPORATION ACREAGE 73.05
 OIL & GAS ROYALTY OWNER ROWLAND LAND 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 ESTIMATED DEPTH 5900'
 WELL OPERATOR A+W ENERGY CORP. DESIGNATED AGENT DENNIS L. MANU
 ADDRESS P.O. BOX 2587 ADDRESS P.O. BOX 2587
CHARLESTON, W.VA. 25329 CHARLESTON, W.VA. 25329

DEEP WELL 1-6 Hooking Fork - Jarrolds Valley (247)

COUNTY NAME
 PERMIT

FORM WW-6
 HT. HALL 1-5-87



IV-35
(Rev 8-81)

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State of West Virginia
Department of Mines
Oil and Gas Division

Date December 1, 1987
Operator's Well No. Rowland 32
Farm Rowland Land Co
API No. 47 - 081 - 0794

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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: 1071 Watershed Marsh Fork of Big Coal River
District: Marsh Fork County Raleigh Quadrangle Arnett 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 8/14/87
DRILLING COMMENCED 8/31/87
DRILLING COMPLETED 9/11/87
IF APPLICABLE: PLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON

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"	472	472	200 sks
8 5/8"			
7"	1975	1975	200 sks
5 1/2"			
4 1/2"	5600	5600	230 sks
3"			
2"			
Liners used:			

GEOLOGICAL TARGET FORMATION Devonian Shale Depth 5290 feet
Depth of completed well 5632 feet Rotary X / Cable Tools
Water strata depth: Fresh 30 feet; Salt 1632 feet
Coal seam depths: N/A Is coal being mined in the area? no

OPEN FLOW DATA
Producing formation Devonian Shale Pay zone depth 3738 feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow 198 Mcf/d Final open flow Bbl/d
Time of open flow between initial and final tests 24 hours
Static rock pressure 900 psig (surface measurement) after 24 hours shut in
(If applicable due to multiple completion--)
Second producing formation Pay zone depth feet
Gas: Initial open flow Mcf/d Oil: Initial open flow Bbl/d
Final open flow Mcf/d Oil: Final open flow Bbl/d
Time of open flow between initial and final tests hours
Static rock pressure psig (surface measurement) after hours shut in

(Continue on reverse side)

FEB 16 1988

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

3738-4834 perf w/ 45 holes frac w/ 60,000# 20/50 sd + 999,700 scf n2
 4912-5581 perf w/ 50 holes frac w/ 60,000# 20/50 sd + 1,172,300 scf n2

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WELL LOG

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

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	1103	
salt sand			1103	1388	
shale			1388	1244	
salt sand			1244	1605	
sand & shale			1605	1683	
little lime			1683	1771	
big lime			1771	2230	
shale			2230	2294	
weir			2294	2452	
shale			2452	2694	
sunbury shale			2694	2712	
sandy shale			2712	2904	
gordon			2904	2924	
grey & brown shale			2924	5510	
marcellus shale			5510	5602	
onodaga			5602	5632	TD 5632 KB.

5632
2712
2904

(Attach separate sheets as necessary)

Allegheny & Western Energy Corp

Well Operator

By: Devin L. Mann, Vice President

Date: December 1, 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 minerals, encountered in the drilling of a well."
 874

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1) Date: 1 July, 19 87
2) Operator's Well No. Rowland #32
3) API Well No. 47 - 081 - 0794
State County Permit

STATE OF WEST VIRGINIA
DIVISION OF OIL & GAS DEPARTMENT OF ENERGY, OIL AND GAS DIVISION
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: 1071 Watershed: Marsh Fork of Big Coal River
District: Marsh Fork 2 County: Raleigh 081 Quadrangle: Arnett 7.5' 218
6) WELL OPERATOR A&W Energy Corp. CODE: 1100 7) DESIGNATED AGENT Dennis L. Mann
Address P.O. Box 2587 Charleston, WV 25329
8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Rodney Dillon Address P.O. Box 1526 Sophia, WV 25921
9) DRILLING CONTRACTOR: Name NA Address
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, Devonian Shales
12) Estimated depth of completed well, 5900 feet
13) Approximate trata depths: Fresh, 30, 74, 729 feet; salt, 1632 = 1903 feet.
14) Approximate coal seam depths: 103, 350, 513, 607 Is coal being mined in the area? Yes / No XXX /

15) CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight per ft., New, Used), FOOTAGE INTERVALS (For drilling, Left in well), CEMENT FILL-UP OR SACKS (Cubic feet), PACKERS (Kinds, Sizes, Depths set, Perforations: Top, Bottom). Rows include Conductor, Fresh water, Coal, Intermediate, Production, Tubing, Liners.

OFFICE USE ONLY
DRILLING PERMIT

Permit number 47-081-0794 Date August 14, 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 August 14, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

Table with columns: Bond, Agent, Casing, Fee, WPCP, S&E, Other. Includes handwritten signatures and numbers.

NOTE: Keep one copy of this permit posted at the drilling location.

Director, Division of Oil and Gas File