

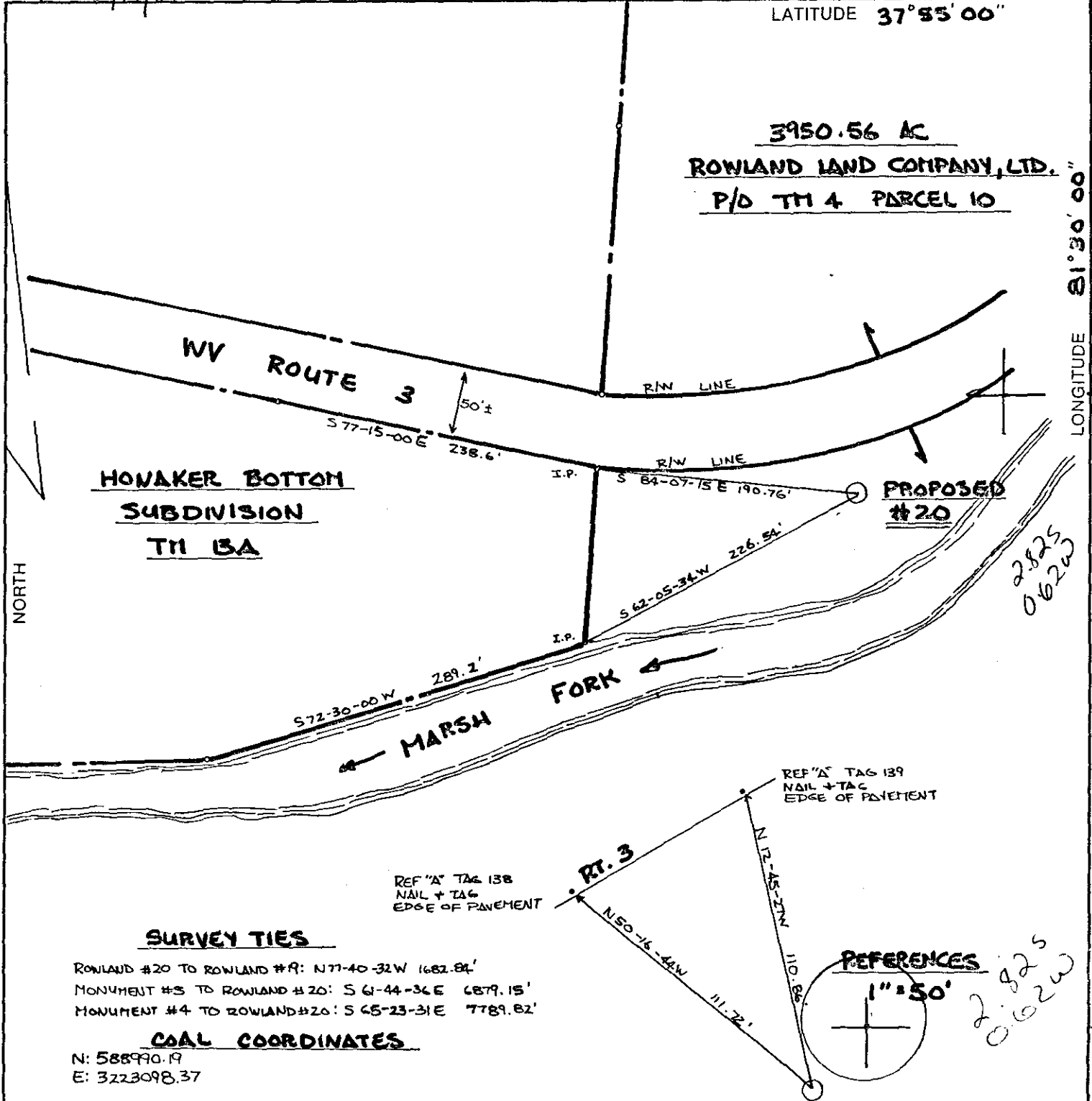
NS 6/17/87 plotted loc 2124/88. KWA ✓

3200'

LATITUDE 37° 55' 00"

3950.56 AC
 ROWLAND LAND COMPANY, LTD.
 P/O TR 4 PARCEL 10

LONGITUDE 81° 30' 00"



SURVEY TIES

ROWLAND #20 TO ROWLAND #19: N 77-40-32 W 1682.84'
 MONUMENT #3 TO ROWLAND #20: S 61-44-36 E 6879.15'
 MONUMENT #4 TO ROWLAND #20: S 65-23-31 E 7789.82'

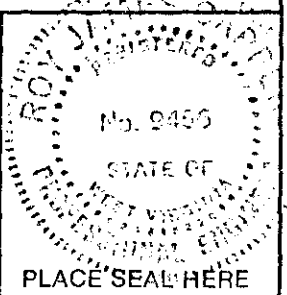
COAL COORDINATES

N: 588990.19
 E: 3223098.37

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

FILE NO. AW-081-018
 DRAWING NO. _____
 SCALE 1" = 100'
 MINIMUM DEGREE OF ACCURACY 1 IN 10000
 PROVEN SOURCE OF ELEVATION BRI AT EDWIGHT BRIDGE (985')

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. 9/56 L.L.S.



STATE OF WEST VIRGINIA
 DEPARTMENT OF ENERGY
 OIL AND GAS DIVISION



DATE 4 MAY, 19 87
 OPERATOR'S WELL NO. ROWLAND #20
 API WELL NO.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 1006.4 WATERSHED MARSH FORK OF BIG COAL RIVER
 DISTRICT MARSH FORK 2 COUNTY RALEIGH
 QUADRANGLE WHITESVILLE 7.5' 677 006 EC & Bald Knob
 SURFACE OWNER ROWLAND LAND COMPANY, LTD. ACREAGE 3950.56
 OIL & GAS ROYALTY OWNER SAME LEASE ACREAGE 15,000

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 5700' 6-6 Hopkins Fork, Jarrolds Valley (247)
 WELL OPERATOR ALLEGHENY + WESTERN DESIGNATED AGENT DENNIS L. MANN
 ADDRESS P.O. BOX 2587 ADDRESS P.O. BOX 2587
CHARLESTON, WV 25329 004 CHARLESTON, WV 25329

JUN 22 1987

FORM WW-8

COUNTY NAME PERMIT

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

Op. Dev → H. 3155-4604 perf w/ 52 holes frac w/ 60,000# 20/50 sd + 1,316,000 scf n2
 H → RK 4675-5392 perf w/ 40 holes frac w/ 60,000# 20/50 sd + 1,136,000 scf n2

RECEIVED
FEB 05 1988

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	1021	
saltsand			1021	1266	
shale			1266	1301	
salt sand			1301	1694	
shale & sand			1694	1752	
little lime			1752	1834	
big lime			1834	2295	
shale			2295	2353	
weir			2353	2510	
shale			2510	2740	
sunbury shale			2740	2766	
sandy shale			2766	2954	
gordon			2954	2973	
grey & brown shale			2973	5479	TD 5479 KB.

RK @TD

(Attach separate sheets as necessary)

Allegheny & Western Energy Corp

Well Operator

By: Dennis G. Mc... 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 ... encountered in the drilling of a well."
 1209

RECEIVED JUN 15 1987



1) Date: 4 May 1987
2) Operator's Well No. Rowland Land Company #20
3) API Well No. 47 081 0769
State County Permit

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

DIVISION OF OIL & GAS DEPARTMENT OF ENERGY

- 4) WELL TYPE: A Oil / Gas XXX
B (If "Gas", Production XXX) Underground storage Deep / Shallow XXX
5) LOCATION: Elevation: 1006.4 Watershed: Marsh Fork of Big Coal River
District: Marsh Fork 2 County: Raleigh 081 Quadrangle: Whitesville 7.5' 076
6) WELL OPERATOR A&W Energy Corp. CODE: 1100 7) DESIGNATED AGENT Dennis L. Mann
Address Post Office Box 2587 Charleston, WV 25329
8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Rodney Dillon Address Post Office Box 1526 Sophia, WV 25921
9) DRILLING CONTRACTOR: Name Milt Shafner Address NA
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, 10 feet; salt, 400 feet.
14) Approximate coal seam depths: 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 or as required, Perforations: Top, Bottom)

OFFICE USE ONLY DRILLING PERMIT

Permit number 47-081-0769

June 17 19 87 Date

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 June 17, 1989 unless well work is commenced prior to that date and prosecuted with due diligence.

10304

Table with columns: Bond, Agent, Plat, Casing, Fee, VPOP, S&F, Other. Includes handwritten checkmarks and signatures.

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.

