

6/16/87

7220'

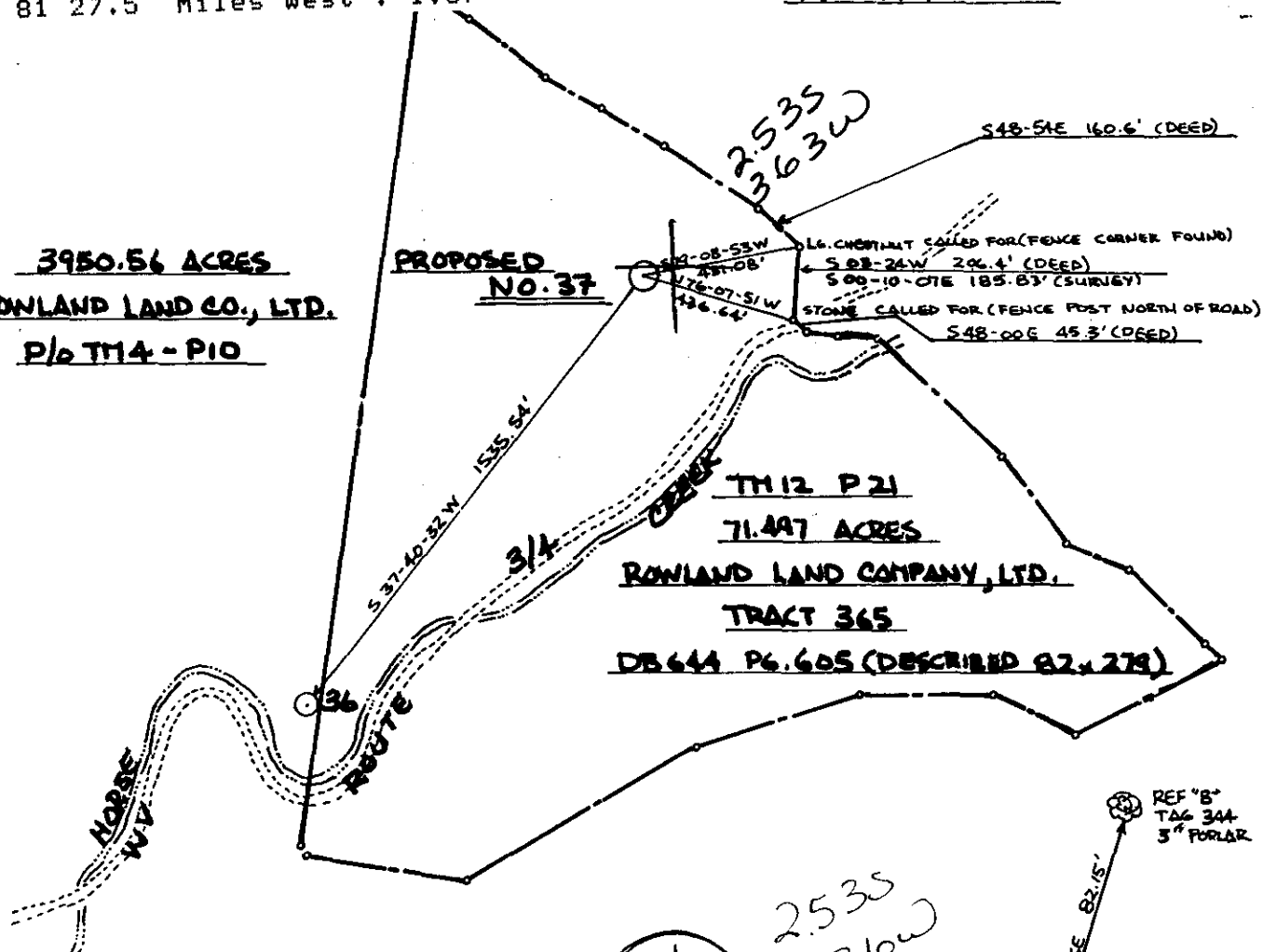
LATITUDE 37° 55' 00"

CO: 081 PMT: 767
Loc Digitized from OGIS 7.5' Mylar
QUAD: 325 DATE: 9-FEB-90
LAT: 37 55.0 Miles South: 2.53
LONG: 81 27.5 Miles West: 1.37

3950.56 ACRES
ROWLAND LAND CO., LTD.
PLOT 14 - P10

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ROWLAND LAND CO., LTD.
PLOT 14 - P10

TH 12 P 21
71.497 ACRES
ROWLAND LAND COMPANY, LTD.
TRACT 365
DB 644 PG. 605 (DESCRIBED 82, 279)

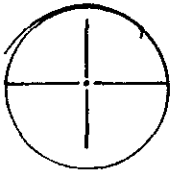


SURVEY TIES:

MONUMENT NO. 3 TO #37: S 84-03-50 E 14072.20'
MONUMENT NO. 4 TO #37: S 84-30-53 E 15088.70'

COAL COORDINATES:

N: 590791.62
E: 3231035.69



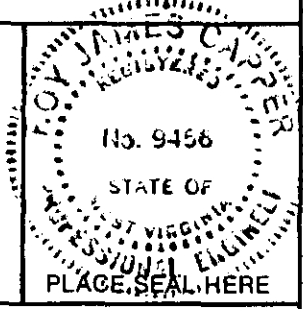
REF "A"
TAG 343
TWIN 6" POPLAR

REFERENCES
1" = 50'

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

FILE NO. AW-08-018
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) Ray James Copper
R.P.E. 9456 L.L.S.



STATE OF WEST VIRGINIA
DEPARTMENT OF ENERGY
OIL AND GAS DIVISION



DATE 1 JUNE, 19 87
OPERATOR'S WELL NO. ROWLAND #37
API WELL NO. 47 881 0767

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

LOCATION: ELEVATION 1264.1' WATER SHED HORSE CREEK
DISTRICT MARSH FORK 2 COUNTY RALEIGH
QUADRANGLE DOROTHY 7.5' 325 036 W24 Fodles
SURFACE OWNER ROWLAND LAND COMPANY, LTD. ACREAGE 71.497
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 5900'
WELL OPERATOR ALLEGHENY + WESTERN DESIGNATED AGENT DENNIS L. MANN
ADDRESS P.O. BOX 2587 ADDRESS P.O. BOX 2587
CHARLESTON, WV 25329 CHARLESTON, WV 25329

6-6 Hopkins Fork - Jarrolds Valley (247)

FORM WW-6
H.T. HALL #8573

COUNTY NAME
PERMIT



IV-35
(Rev 8-81)

Date November 1, 1987
Operator's
Well No. Rowland 37
Farm Rowland Land
API No. 47 - 081 - 0767

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State of West Virginia
Department of Mines
Oil and Gas Division

DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

WELL OPERATOR'S REPORT
OF

DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

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

LOCATION: Elevation: 1264.1 Watershed Horse Creek
District: Marsh Fork County Raleigh Quadrangle Dorothy 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 P.O.Box 1526
Sophia, W.Va.
PERMIT ISSUED 6/16/87
DRILLING COMMENCED 8/7/87
DRILLING COMPLETED 8/19/87

Casing & Tubing	Used in Drilling	Left in Well	Cement fill up Cu. ft.
Size 20-16 Cord.			
13-10"	42	0	0
9 5/8	639	639	220 sks
8 5/8			
7	2138	2138	175 sks
5 1/2			
4 1/2	5626	5626	230 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 5900 feet
Depth of completed well 5695 feet Rotary / Cable Tools _____
Water strata depth: Fresh 50 feet; Salt 500 feet
Coal seam depths: N/A Is coal being mined in the area? no

OPEN FLOW DATA

Producing formation Devonian Shale Pay zone depth 3335 feet
Gas: Initial open flow _____ Mcf/d Oil: Initial open flow _____ Ebl/d
Final open flow (712) Mcf/d Final open flow _____ Ebl/d
Time of open flow between initial and final tests 24 hours
Static rock pressure 960 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 _____ Ebl/d
Final open flow _____ Mcf/d Oil: Final open flow _____ Ebl/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)

NOV 1 1987

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1) Date: 6 June, 19 87
 2) Operator's Well No. Rowland Land Company #37
 3) API Well No. 47 State 081 County 0767 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: 1264.1' Watershed: Horse Creek
 District: Marsh Fork 2 County: Raleigh 081 Quadrangle: Dorothy 7.5' 325
- 6) WELL OPERATOR A&W Energy Corp. CODE: 1100 7) DESIGNATED AGENT Dennis L. Mann
 Address Post Office Box 2587 Address Post Office Box 2587
Charleston, WV 25329 Charleston, WV 25329
- 8) OIL & GAS INSPECTOR TO BE NOTIFIED Name Rodney Dillon 9) DRILLING CONTRACTOR: Name Milt Shafner
 Address Post Office Box 1526 Address NA
Sophia, WV 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, Devonian Shales 4
- 12) Estimated depth of completed well, 5900' feet
 13) Approximate trata depths: Fresh, 50 feet; salt, 500 feet.
 14) Approximate coal seam depths: Is coal being mined in the area? Yes / No XXX
- 15) CASING AND TUBING PROGRAM

CASING OR TUBING TYPE	SPECIFICATIONS					FOOTAGE INTERVALS		CEMENT FILLUP 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		1179	1179	300 sks cts	by rule 15.05
Coal	7	smls	23 #	X		2959	2959	200 sks	Sizes
Intermediate									
Production	4-1/2	smls	10.5#	X		5900	5900	200-400 sks	Depths set or as required
Tubing									by rule 15.01
Liners									Perforations:
									Top Bottom

OFFICE USE ONLY
 DRILLING PERMIT

Permit number 47-081-0767 Date June 16, 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 June 16, 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>5883</u>	WPOP: <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.

[Signature]
 Director, Division of Oil and Gas File

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

10302

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

3335-4609 perf w/ 51 holes frac w/ 60,000# 20/50 sd + 1,356,000 scf n2
4712-5559 perf w/ 40 holes frac w/ 60,000# 20/50 sd + 1,106,000 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	901	
salt sand			901	1258	
shale			1258	1315	
salt sand			1315	1712	
shale & sand			1712	1784	
little lime			1784	1866	
big lime			1866	2314	
shale			2314	2376	
weir			2376	2530	
shale			2530	2776	
sunbury shale			2776	2790	
sandy shale			2790	2990	
gordon			2990	3012	
grey & brown shale			3012	5695	TD. 5695 KB.
404	2790				
813	3990				
822	4740				
825	4940				
830	5240				
835	5540				

(Attach separate sheets as necessary)

Allegheny & Western Energy Corp

Well Operator

By: Devin L. Mann, Vice President

Date: November 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 coal, encountered in the drilling of a well."