



FILE NO 81-683
 DRAWING NO _____
 SCALE 1"=2000'
 MINIMUM DEGREE OF ACCURACY 1"/200'
 PROVEN SOURCE OF ELEVATION TYLER RD. (701)

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 MINES.

(SIGNED) Chester B. Waterman
 R.P.E. 3788 L.L.S. _____

CHESTER B. WATERMAN O.G.E.
 REGISTERED
 No. 3788
 STATE OF WEST VIRGINIA
 PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 FORM IV-6 (8-78)



DATE 12/28/1991
 OPERATOR'S WELL NO. 2
 API WELL NO. 3804
47 - 039 - 3304
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION

WELL TYPE: OIL ___ GAS LIQUID INJECTION ___ WASTE DISPOSAL ___
 (IF "GAS,") PRODUCTION STORAGE ___ DEEP ___ SHALLOW ___
 LOCATION: ELEVATION 1000' WATER SHED ROCKY FORK
 DISTRICT UNION COUNTY KANAWHA
 QUADRANGLE POCOTALICO 7.5' Charleston 1S' NW
 SURFACE OWNER H. HUTTON ACREAGE 37.83
 OIL & GAS ROYALTY OWNER R. LAWSON ET AL now R. Jarrett LEASE ACREAGE 158
 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 4960'
 WELL OPERATOR ALLEGHENY & WESTERN DESIGNATED AGENT ROLAND C. BAER, JR. FEB 01 1992
 ADDRESS CHARLESTON, W. VA. ADDRESS CHARLESTON, W. VA.

RECORDED



JAN 21 1983

IV-35
(Rev 8-81)

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

State of West Virginia
Department of Mines
Oil and Gas Division

Date January 20, 1983
Operator's
Well No. Jarrett #2
Farm Jarrett
API No. 47 - 039 - 3804 REN.

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 x / Underground Storage ___ / Deep ___ / Shallow x /)

LOCATION: Elevation: 1,000 Watershed Rocky Fork
District: Union County Kanawha Quadrangle Pocatalico 7.5

COMPANY Allegheny & Western Energy Corporation

ADDRESS Box 2587, Charleston, WV 25329

DESIGNATED AGENT Roland C. Baer, Jr.

ADDRESS Box 2587, Charleston, WV 25329

SURFACE OWNER R. Lawson, et. al.

ADDRESS 4894 Klondike Rd., Charleston, WV 25313

MINERAL RIGHTS OWNER Same

ADDRESS Same

OIL AND GAS INSPECTOR FOR THIS WORK
H. Dougherty ADDRESS Linden Rte., Box 3-A, Looneyville, WV 25259

PERMIT ISSUED December 15, 1982

DRILLING COMMENCED December 21, 1982

DRILLING COMPLETED December 31, 1982

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 Cord.			
13-10"			
9 5/8		358	150 cf
8 5/8			
7		2,530	175 cf
5 1/2			
4 1/2		4,386	238 cf
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Devonian Shale (Brown thru Marcellus) Depth 4,960 feet

Depth of completed well 4,474 feet Rotary x / Cable Tools

Water strata depth: Fresh 75 feet; Salt 1,020 feet

Coal seam depths: N/A Is coal being mined in the area? N/A

OPEN FLOW DATA

Producing formation Devonian Shale (Brown thru Marcellus) Pay zone depth 2,913 - 4,367 feet

Gas: Initial open flow ___ Mcf/d Oil: Initial open flow ___ Bbl/d

Final open flow (190) Mcf/d Final open flow ___ Bbl/d

Time of open flow between initial and final tests ___ hours

Static rock pressure 640 psig (surface measurement) after 48 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

JAN 31 1983

(Continue on reverse side)

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

Perforated 2,913 - 4,367 w/51 shots. Foam frac w/500 gal. of 28% HCL, 60,000# of 20/50 U. S. Mesh Sand and 1,026,000 of N₂.

Up: Dev → ^{Angola} ~~Huron~~

2913 - 4000 - U.S. Dev.

4000 → 4367 - Huron

WELL LOG Young Wireline Services

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS Including indication of all fresh and salt water, coal, oil and gas
Hard Rock			0	80	
Sand Stone			80	210	
Shale			210	1000	
Salt Sand			1000	1650	
Little Lime			1650	1775	
Big Lime			1775	1810	
Injun			1810	1885	
Shale			1885	2426	
Berea			2426	2456	
Shale			2456	4474	T.D.
				Angola Huron T.D.	4474 2456 ----- 2018 4345 PPC elog -
				Angola @	2913 2456 ----- 4367

(Attach separate sheets as necessary)

Allegheny & Western Energy Corporation

Well Operator

By:

[Signature]

Date:

January 20, 1983

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

(Obverse)

(Revised 3-81)



Farm R. F. Jarrett Estate
API # 47 - 039 - 3804
Date _____

STATE OF WEST VIRGINIA
OFFICE OF OIL AND GAS - DEPARTMENT OF MINES

OIL AND GAS WELL PERMIT APPLICATION

WELL TYPE: Oil ___ / Gas X /

(If "Gas", Production X / Underground storage ___ / Deep ___ / Shallow X /

LOCATION: Elevation: 1000' Watershed: Rocky Fork
District: Union County: Kanawha Quadrangle: Pocatalico 7.5

WELL OPERATOR Allegheny & Western Drilling
Address P.O. Box 2587
Charleston, WV 25329

DESIGNATED AGENT Roland C. Baer, Jr.
Address P.O. Box 2587
Charleston, WV 25329

OIL AND GAS ROYALTY OWNER R. Lawson, A. Goetz & C. Bane
Address 4894 Klondike Rd, 4898 Klondike Rd.
Charleston, WV
Acreage 158

COAL OPERATOR N/A
Address _____

SURFACE OWNER Hershel G. Hutton
Ruby Lawson & Charles Vanoy
Address 4894 Klondike Rd. 4898 Klondike Rd.
Charleston, WV
Acreage 158

COAL OWNER(S) WITH DECLARATION ON RECORD:
NAME N/A
Address _____

FIELD SALE (IF MADE) TO:
NAME N/A
Address _____

NAME _____
Address _____

COAL LESSEE WITH DECLARATION ON RECORD:
NAME N/A
Address _____

OIL AND GAS INSPECTOR TO BE NOTIFIED:
NAME Martin Nichols
Address P.O. Box 554
Clendenin, WV
Telephone _____

RECEIVED

DEC 30 1981

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

The undersigned well operator is entitled to operate for oil or gas purposes at the above location under a deed ___ / lease X / other contract ___ / dated April 15 1981, to the undersigned well operator from Lawson, Goetz & Bane.

(If said deed, lease, or other contract has been recorded:)

Recorded on June 11, 1981, in the office of the Clerk of County Commission of Kanawha County, West Virginia, in 209 Book at page 562. A permit is requested as follows:

PROPOSED WORK: Drill X / Drill Deeper ___ / Redrill ___ / Fracture or stimulate ___ / Plug off old formation ___ / Perforate new formation ___ / Other physical change in well (specify) _____

--planned as shown on the work order on the reverse side hereof.

The above named coal operator, coal owner(s), and coal lessee are hereby notified that any objection they wish to make or are required to make by Code §22-4-3 must be filed with the Department of Mines within fifteen (15) days after receipt of this Application by the Dept. Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessees on or before the day of the mailing or delivery of this Application to the Department of Mines at Charleston, West Virginia.

PLEASE SUBMIT COPIES OF ALL GEOPHYSICAL LOGS DIRECTLY TO:

WEST VIRGINIA OIL AND GAS CONSERVATION COMMISSION
1613 WASHINGTON ST., E.
CHARLESTON, WV 25311
Telephone - 304/348-3092

Allegheny & Western Drilling Corporation
Well Operator

By: [Signature]

Its: [Signature]

BLANKET BOND

(Reverse)

(Revised 3-81)

PROPOSED WORK ORDER

THIS IS AN ESTIMATE ONLY:
ACTUAL INFORMATION MUST BE SUBMITTED ON FORM IV-35 UPON COMPLETION

DRILLING CONTRACTOR (IF KNOWN) FWA Drilling

Address Elkview, WV

GEOLOGICAL TARGET FORMATION Devonian Shale (Brown thru Marcellus)

Estimated depth of completed well 4960 feet. Rotary x / Cable tools /

Approximate water strata depths: Fresh, 200 feet; salt, 1600 feet.

Approximate coal seam depths: N/A

Is coal being mined in this area: Yes / No x /

CASING AND TUBING PROGRAM

Table with columns: CASING OR TUBING TYPE, SPECIFICATIONS (Size, Grade, Weight, New, Used), FOOTAGE INTERVALS (For Drill, Left in Well), CEMENT FILL (UP OR SACKS, Cubic ft.), PACKERS (Kinds, Sizes, Depths set, Perforations: Top Bottom)

NOTE: Regulation 7.02 of the Department of Mines provides that the original and four copies of Form IV-2 must be filed with the Department, accompanied by (i) a plat in the form prescribed by Regulation 11, (ii) a bond in one of the forms prescribed by Regulation 12, or in lieu thereof the other security allowed by Code 822-4-2, (iii) Form IV-9, "Reclamation Plan" applicable to the reclamation required by Code 822-4-12b and Regulation 23, (iv) unless previously paid on the same well, the fee required by Code 822-4-12a, and (v) if applicable, the consent required by Code 822-4-8a from the owner of any water well or dwelling within 200 feet of the proposed well.

A separate Form IV-2 shall not be required for fracturing or stimulating a well where fracturing or stimulating is to be part of the work for which a permit is sought and is noted as such on the Form IV-2 filed in connection therewith.

THIS PERMIT MUST BE POSTED AT THE WELL SITE

All provisions being in accordance with Chapter 22, of the W. Va. Code, the location is hereby approved for drilling

This permit shall expire if operations have not commenced by 9-15-82

Signature of Fred Russell, Deputy Director, Oil & Gas Division

Signature of Surveyor

The following waiver must be completed by the coal operator and by any coal owner or coal lessee who has recorded a declaration under Code 822-4-20, if the permit is to be issued within fifteen (15) days of receipt thereof:

W A I V E R

The undersigned coal operator / owner / lessee / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of the well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided the well operator has complied with all applicable requirements of the West Virginia Code and the governing regularions.

Date: , 19 .

By: _____

Its: _____



1) Date: Dec. 14, 1982
 2) Operator's Well No. Jarrett #2
 3) API Well No. 47 State WV County Putnam Permit 2004

DRILLING CONTRACTOR:

Putnam Drilling Co.
Marlow, WV

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES, OIL AND GAS DIVISION

OIL AND GAS WELL PERMIT APPLICATION

- 4) WELL TYPE: A Oil / Gas X
 B (If "Gas", Production X / Underground storage / Deep / Shallow X)
- 5) LOCATION: Elevation: 1000' Watershed: Rocky Fork
 District: Union County: Kanawha Quadrangle: Pocahontas 7.5
- 6) WELL OPERATOR Allochony & Western Drilling 11) DESIGNATED AGENT Roland C. Baer
 Address P.O. Box 2587 Address P.O. Box 2587
Charleston, WV 25329 Charleston, WV 25329
- 7) OIL & GAS ROYALTY OWNER R. Lawson, A. Gowtz & C. Bane 12) COAL OPERATOR N/A
 Address 4894 Klondike Rd. Address
Charleston, WV
- 8) SURFACE OWNER H. Hutton, R. Lawson 13) COAL OWNER(S) WITH DECLARATION ON RECORD:
 Address SAMS Name N/A
 Address
 Acreage 158 Name
 Address
- 9) FIELD SALE (IF MADE) TO:
 Address N/A
- 10) OIL & GAS INSPECTOR TO BE NOTIFIED
 Name Homer H. Dougherty
 Address Linden St. Box 34
Loonerville, WV 25259
- 14) COAL LESSEE WITH DECLARATION ON RECORD:
 Name
 Address
- 15) PROPOSED WORK: Drill X / Drill deeper / Redrill / Fracture or stimulate
 Plug off old formation / Perforate new formation
 Other physical change in well (specify)
- 16) GEOLOGICAL TARGET FORMATION, Devonian Shale (Brown Thru Marcellus)
- 17) Estimated depth of completed well, 4960' feet
 18) Approximate water strata depths: Fresh, 200 feet; salt, 20000 feet.
 19) Approximate coal seam depths: N/A Is coal being mined in the area? Yes / No

RECEIVED

OIL AND GAS DIVISION
WV DEPARTMENT OF MINES

20) 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	<u>9 5/8</u>	<u>SMLS</u>	<u>32</u>	<u>X</u>			<u>350'</u>	<u>to surface</u>	Sizes
Coal									
Intermediate	<u>7</u>	<u>SMLS</u>	<u>23</u>	<u>X</u>			<u>2300</u>	<u>125</u>	Depths set
Production	<u>4 1/2</u>	<u>SMLS</u>	<u>10.5</u>				<u>4960</u>	<u>300</u>	Perforations:
Tubing									Top Bottom
Liners									

- 21) EXTRACTION RIGHTS
 Check and provide one of the following:
 Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil or gas.
 The requirement of Code 22-4-1-(c) (1) through (4). (See reverse side for specifics.)
- 22) ROYALTY PROVISIONS
 Is the right to extract, produce or market the oil or gas based upon a lease or other continuing contract or contracts providing for flat well royalty or any similar provision for compensation to the owner of the oil or gas in place which is not inherently related to the volume of oil or gas so extracted, produced or marketed? Yes No
- If the answer above is No, nothing additional is needed. If the answer is Yes, you may use Affidavit Form IV-60.
- 23) Required Copies (See reverse side.)
- 24) Copies of this Permit Application and the enclosed plat and reclamation plan have been mailed by registered mail or delivered by hand to the above named coal operator, coal owner(s), and coal lessee on or before the day of the mailing or delivery of this Permit Application to the Department of Mines at Charleston, West Virginia.

Notary:
 My Commission Expires 6/3/93

Signed: R. C. Baer
 Its: President

OFFICE USE ONLY
DRILLING PERMIT

Permit number 62-039-3806-283 Date December 13 1982

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. 10) 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.)

Permit expires August 13, 1983 unless drilling is commenced prior to that date and prosecuted with due diligence.

Bond:	Agent:	Plat:	Casing	Fee

R. C. Baer
 Administrator, Office of Oil and Gas