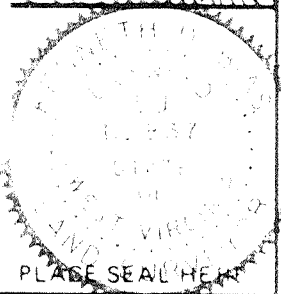


FILE NO: BMS 2-R  
 DRAWING NO: \_\_\_\_\_  
 SCALE: 1" = 1,000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500'  
 PROVEN SOURCE OF ELEVATION: PC 66 PEABODY COAL CO. DATUM ELEV. 1596.91' (U.S.G.S)

CO: 081 PMT: 822  
 TH: Loc Digitized from OGIS 7.5' Mylar  
 KN: QUAD: 547 DATE: 12-JUN-90  
 INF: LAT: 37 52.5 Miles South: 1.71  
 LA: LONG: 81 32.5 Miles West: 0.33  
 MENT OF MINES (SIGNED): Kenneth D. Pios  
 R.P.E. \_\_\_\_\_ LLS: 837-SU



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



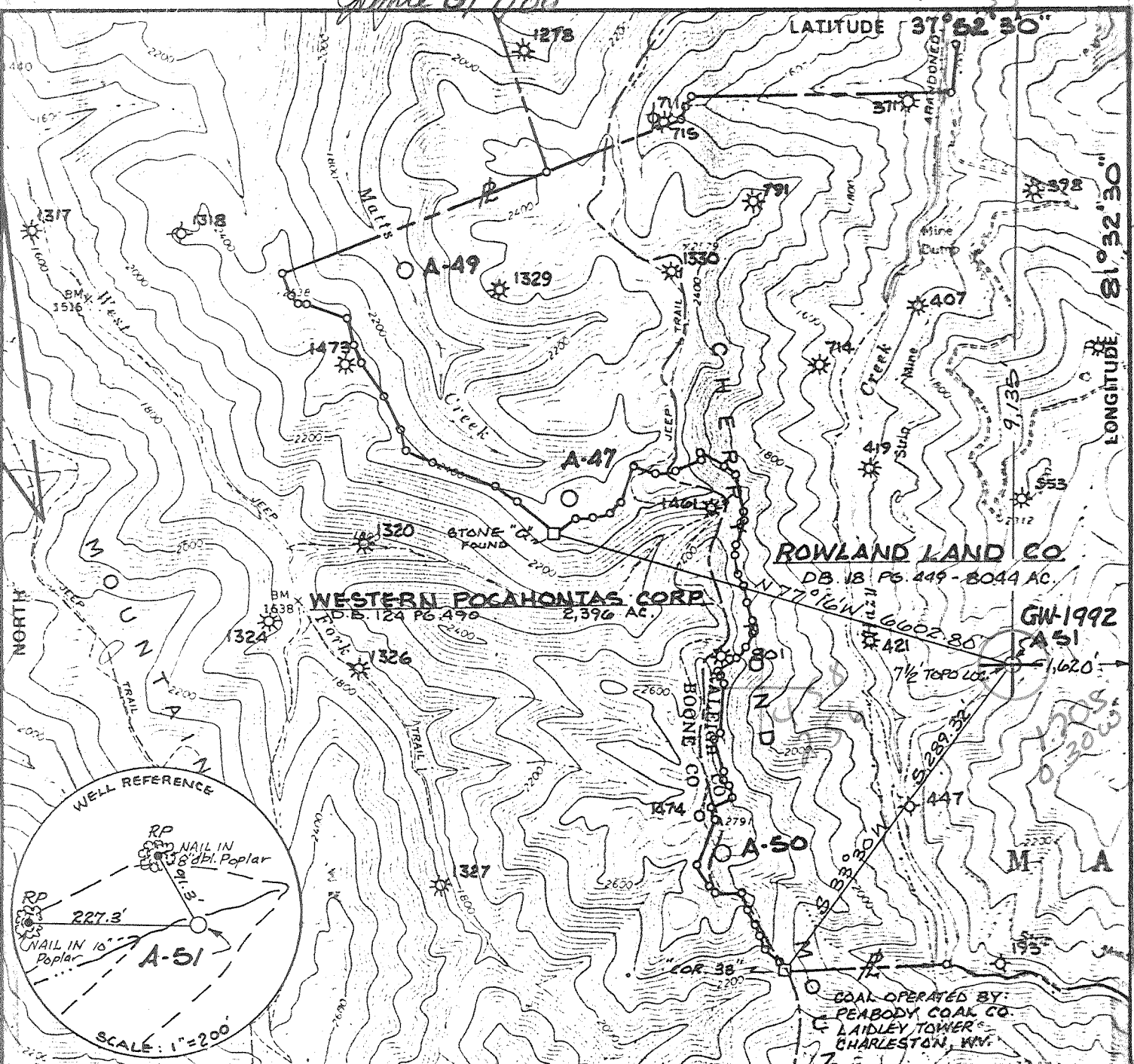
STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

DATE: JUNE 15<sup>TH</sup> 1989  
 OPERATOR'S WELL NO: ROWLAND A-51 REV.  
 API WELL NO: \_\_\_\_\_  
47 081 00822 REV.  
 STATE COUNTY PERMIT  
Revised

WELL TYPE: OIL \_\_\_\_\_ GAS  LIQUID INJECTION \_\_\_\_\_ WASTE DISPOSAL \_\_\_\_\_  
 (IF "GAS.") PRODUCTION  STORAGE \_\_\_\_\_ DEEP \_\_\_\_\_ SHALLOW \_\_\_\_\_  
 LOCATION: ELEVATION 1,691.10' WATER SHED HAZY CK OF MARSH FK. OF BIG COAL RIVER  
 DISTRICT MARSH FORK COUNTY RALEIGH  
 QUADRANGLE PILOT KNOB  
 SURFACE OWNER ROWLAND LAND CO. ACREAGE P/O 47,340.87  
 OIL & GAS ROYALTY OWNER ROWLAND LAND CO. LEASE ACREAGE 693.579  
 LEASE NO WV-389  
 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 DEVONIAN SHALE ESTIMATED DEPTH \_\_\_\_\_  
 WELL OPERATOR OXY USA Inc. DESIGNATED AGENT DELBERT G. OLIVER  
 ADDRESS BOX 873 ADDRESS BOX 873  
CHARLESTON WV 25323 CHARLESTON WV 25323

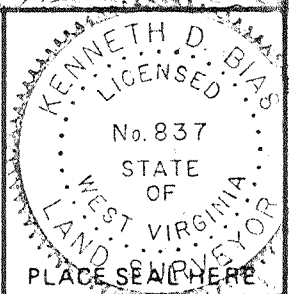
DEEP WELL

June 6/7/88



FILE NO. KDB-1  
 DRAWING NO. 6-88  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:2500'  
 PROVEN SOURCE OF ELEVATION STA. PC-666  
EL: 1596.91' (PEABODY COAL CO.)  
IN HAZY CREEK;

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) Kenneth D. Bias  
 R.P.E. \_\_\_\_\_ L.L.S. 837



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS  
 FORM IV-6  
 (8.78)



DATE 4-14 19 88  
 OPERATOR'S WELL NO. R.L.C.A-51, GW-1992  
 API WELL NO. \_\_\_\_\_  
47 - 081 - 0822  
 STATE COUNTY PERMIT

STATE OF WEST VIRGINIA  
 DEPARTMENT OF MINES  
 OIL AND GAS DIVISION

WELL TYPE: OIL \_\_\_ GAS X LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS.") PRODUCTION \_\_\_ STORAGE \_\_\_ DEEP X SHALLOW \_\_\_  
 LOCATION: ELEVATION 1,691.10' WATER SHED HAZY CK. - MARSH FK. - BIG COAL RIVER  
 DISTRICT MARSH FORK COUNTY RALEIGH  
 QUADRANGLE PILOT KNOB  
 SURFACE OWNER ROWLAND LAND CO. ACREAGE 5233.332 Tract 399-2  
 OIL & GAS ROYALTY OWNER ROWLAND LAND Co. LEASE ACREAGE 43,340.87  
 LEASE NO. WV-389  
 PROPOSED WORK: DRILL X 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 DEVONIAN SHALE ESTIMATED DEPTH 6200'  
 WELL OPERATOR OXY U.S.A., Inc. DESIGNATED AGENT DELBERT G. OLIVER JUN 10 1988  
 ADDRESS P.O. Box 873 ADDRESS P.O. Box 873  
CHARLESTON, WV. 25323 3072 CHARLESTON WV 25323

H T HALL DEEP WELL 3-3unnamed (o) DPD-4H

State of West Virginia  
DEPARTMENT OF ENERGY  
Division of Oil and Gas

Well Operator's Report of Well Work

Farm name: ROWLAND LAND COMPANY Operator Well No.: A-51, GW-1992

LOCATION: Elevation: 1691.10 Quadrangle: PILOT KNOB

District: MARSH FORK County: RALEIGH  
Latitude: 9135 Feet South of 37 Deg. 52Min. 30 Sec.  
Longitude: 1620 Feet West of 81 Deg. 32 Min. 30 Sec.

**RECEIVED**  
JUN 06 1989

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

Company: OXY USA, INC.  
P.O. BOX 873  
CHARLESTON, WV

Asent: DELBERT G. OLIVER

Inspector: RODNEY G. DILLON

Permit Issued: 06/07/88

Well work Commenced: 7-2-88

Well work Completed: 5-5-89

Verbal Pluggings: 70 reached 7/18/88

Permission granted on:

Rotary Cable Ris

Total Depth (feet) 6283'

Fresh water depths (ft) 40'

Salt water depths (ft) 715'; 2901'

Is coal beins mined in area (Y/N)? X

Coal Depths (ft): 50', 226', 267'

| Size    | Casings & Tubings | Used in Drillins | Left in Well | Cement Fill Up Cu. Ft. |
|---------|-------------------|------------------|--------------|------------------------|
| 20"     |                   | 26'              | 26'          |                        |
| 13-3/8" |                   | 299'             | 299'         | TOC 8'                 |
| 7"      |                   | 2654'            | 2654'        | 575 sx                 |
| 4-1/2"  |                   | 6251'            | 6251'        | TOC 2500'              |
| 2-3/8"  |                   | 5201'            |              |                        |

OPEN FLOW DATA

Devonian Shale, Weir;  
Big Lime

Producing formation \_\_\_\_\_ Pay zone depth (ft) 2760-5312'  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow 189 MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests 8 Hours  
Static rock Pressure 575 psia (surface pressure) after 120 Hours

Second producing formation \_\_\_\_\_ Pay zone depth (ft) \_\_\_\_\_  
Gas: Initial open flow \_\_\_\_\_ MCF/d Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow \_\_\_\_\_ MCF/d Final open flow \_\_\_\_\_ Bbl/d  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock Pressure \_\_\_\_\_ psia (surface pressure) after \_\_\_\_\_ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

*Delbert G. Oliver*

For: OXY USA, INC.

By: Delbert G. Oliver

Date: 6-2-89

JUN 16 1989



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

Lower Huron (4666-5312') Perforated with 69 holes. Fracture stimulated with 50,000# sand.  
 Upper Devonian (3553-4344') Perforated with 60 holes. Fracture stimulated with 50,000# sand.  
 Weir (3144-3252') Perforated with 40 holes. Fracture stimulated with 50,000# sand.  
 Big Lime (2760-2763') Perforated with 13 holes. Acidized with 1,000 gallons 15% HCl.

WELL LOG

| <u>FORMATION</u> | <u>TOP</u> | <u>BOTTOM</u> |
|------------------|------------|---------------|
| Sand             | 0          | 50            |
| Coal             | 50         | 52            |
| Sand             | 52         | 226           |
| Coal             | 226        | 232           |
| Sand             | 232        | 267           |
| Coal             | 267        | 268           |
| Sand             | 268        | 289           |
| Siltstone        | 289        | 401           |
| Sand             | 401        | 422           |
| Siltstone        | 422        | 707           |
| Sand             | 707        | 730           |
| Siltstone        | 730        | 794           |
| Sand             | 794        | 819           |
| Siltstone        | 819        | 909           |
| Sand             | 909        | 1017          |
| Siltstone        | 1017       | 1141          |
| Sand             | 1141       | 1499          |
| Siltstone        | 1499       | 1519          |
| Sand             | 1519       | 1597          |
| Siltstone        | 1597       | 1663          |
| Sand             | 1663       | 1734          |
| Siltstone        | 1734       | 1818          |
| Ravenclyff       | 1818       | 1907          |
| Siltstone        | 1907       | 2012          |
| Avis Limestone   | 2012       | 2050          |
| Siltstone        | 2050       | 2090          |
| Upper Maxton     | 2090       | 2141          |
| Siltstone        | 2141       | 2326          |
| Middle Maxton    | 2326       | 2492          |
| Siltstone        | 2492       | 2514          |
| Lower Maxton     | 2514       | 2528          |
| Siltstone        | 2528       | 2594          |
| Little Lime      | 2594       | 2659          |
| Pencil Cave      | 2659       | 2683          |
| Big Lime         | 2683       | 3048          |
| Siltstone        | 3048       | 3124          |
| Upper Weir       | 3124       | 3172          |
| Lower Weir       | 3172       | 3289          |
| Shale            | 3289       | 3509          |
| Sunbury          | 3509       | 3530          |
| Devonian Shale   | 3530       | 3722          |
| Gordon           | 3722       | 3736          |
| Devonian Shale   | 3736       | 4641          |
| Lower Huron      | 4641       | 5336          |
| Java             | 5336       | 5798          |
| Rhinestreet      | 5798       | 6226          |
| Marcellus        | 6226       | 6281          |
| Onondaga         | 6281       |               |

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DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

6283  
 3289  
 (2994) expl ftg

6283 TP

7155

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

- 1) Well Operator: 3072 OXY USA INC. 30205, 2, 546
- 2) Operator's Well Number: Rowland A-51, GW 1992 3) Elevation: 1691.10'
- 4) Well type: (a) Oil  / or Gas  /  
 (b) If Gas: Production  / Underground Storage  /  
 Deep  / Shallow  /
- 5) Proposed Target Formation(s): Devonian Shale 4411
- 6) Proposed Total Depth: 6200 feet
- 7) Approximate fresh water strata depths: OK 452
- 8) Approximate salt water depths: OK None
- 9) Approximate coal seam depths: OK Open Mines @ 41', 141', 221', 533-556', 1790'-17
- 10) Does land contain coal seams tributary to active mine? Yes  / No  /
- 11) Proposed Well Work:

12) DEVONIAN SHALE DRILLING WELL  
CASING AND TUBING PROGRAM

| TYPE         | SPECIFICATIONS |       |                | FOOTAGE INTERVALS |              | CEMENT                       |
|--------------|----------------|-------|----------------|-------------------|--------------|------------------------------|
|              | Size           | Grade | Weight per ft. | For drilling      | Left in well | Fill-up (cu. ft.)            |
| Conductor    | 16             | H40   | 52             | 80                | 80           | Surface                      |
| Fresh Water  | 13 3/8         | H40   | 48             | 350               | 350          | Surface                      |
| Coal         |                |       |                |                   |              | 38CSR18-11.3<br>38CSR18-11.2 |
| Intermediate | 7              | K55   | 23             | 2840              | 2840         | Surface                      |
| Production   | 4-1/2          | K55   | 11.6           | 6200              | 6200         | 38CSR18-11.1<br>350 cu ft    |
| Tubing       | 2 3/8          | EUE   | 4.7            | 6200              | 6200         |                              |
| Liners       |                |       |                |                   |              |                              |

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PACKERS : Kind \_\_\_\_\_  
 Sizes \_\_\_\_\_  
 Depths set \_\_\_\_\_

For Division of Oil and Gas Use Only

DIVISION OF OIL & GAS  
 DEPARTMENT OF ENERGY

Fee(s) paid: Plat Well Work Permit Reclamation Fund WPCP  
Agent  
 Bond 50 Blanket (Type)

7155  
 30070  
 176



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JUN 1 1988

DIVISION OF OIL & GAS  
DEPARTMENT OF ENERGY

1) Date: May 31, 1988  
2) Operator's well number  
Rowland A-51, GW 1992  
3) API Well No: 47 - 081 - 0822  
State - County - Permit

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

- 4) Surface Owner(s) to be served:
- (a) Name Rowland Land Company  
Address 1033 Quarrier Street  
Charleston, WV 25301
  - (b) Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Name \_\_\_\_\_  
Address \_\_\_\_\_
- 6) Inspector Rodney G. Dillon  
Address P. O. Box 1526  
Sophia, WV 25921  
Telephone (304)- 465-1911
- 5) (a) Coal Operator:  
Name Peabody Coal Company  
Address P. O. Box 1233  
Charleston, WV 25324
- (b) Coal Owner(s) with Declaration  
Name Rowland Land Company  
Address 1033 Quarrier Street  
Charleston, WV 25301  
Name \_\_\_\_\_  
Address \_\_\_\_\_
  - (c) Coal Lessee with Declaration  
Name Peabody Coal Company  
Address P. O. Box 1233  
Charleston, WV 25324

TO THE PERSON(S) NAMED ABOVE TAKE NOTICE THAT:

\_\_\_\_\_ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas OR  
X Included is the information required by Chapter 22B, Article 1, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22B of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through 4 on the above named parties, by:

- \_\_\_\_\_ Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- \_\_\_\_\_ Publication (Notice of Publication attached)

I have read and understand Chapter 22B and 38 CSR 11-18, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator OXY USA Inc.  
By: Delbert G. Oliver  
Its: Project Manager  
Address P. O. Box 873  
Charleston, WV 25323  
Telephone (304) 344-8383

Subscribed and sworn before me this 31<sup>st</sup> day of MAY, 1988

Robert P. Chandler Jr. Commissioner Notary Public  
My commission expires September 1, 1992