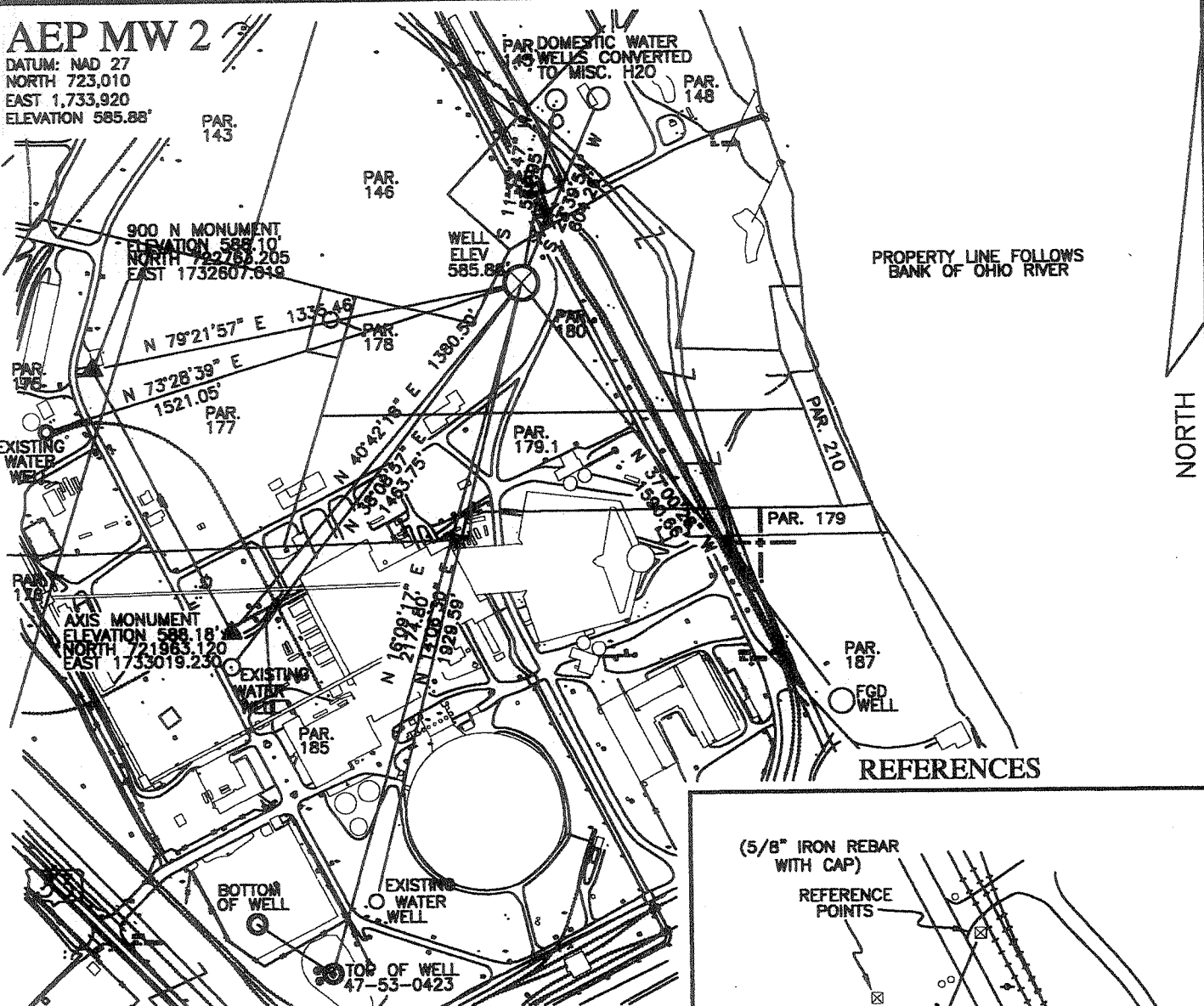


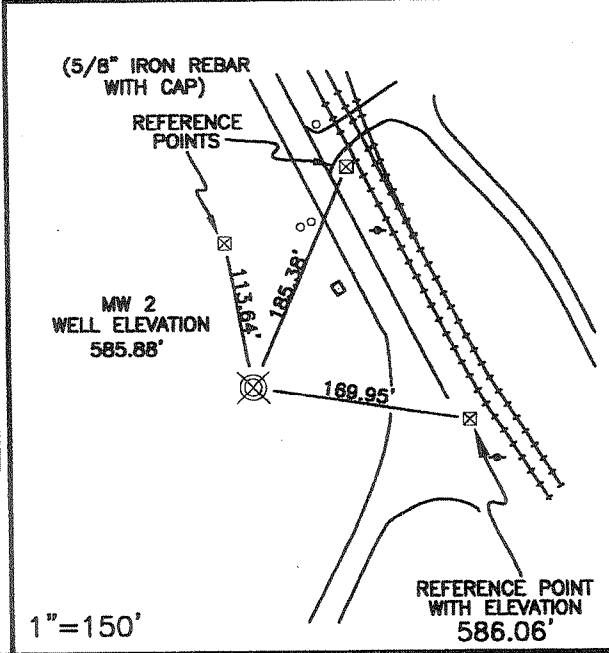
# AEP MW 2

DATUM: NAD 27  
 NORTH 723,010  
 EAST 1,733,920  
 ELEVATION 585.88'



6,627'  
NORTH  
W 81°55'00"  
LONGITUDE

## REFERENCES



| PAR. | OWNER          | D.B. | PG. | PAR.  | OWNER          | D.B. | PG. |
|------|----------------|------|-----|-------|----------------|------|-----|
| 143  | APP. POWER CO. | 237  | 263 | 179   | APP. POWER CO. | 237  | 263 |
| 145  | APP. POWER CO. | 235  | 323 | 179.1 | APP. POWER CO. | 237  | 263 |
| 146  | APP. POWER CO. | 237  | 263 | 180   | APP. POWER CO. | 237  | 263 |
| 147  | APP. POWER CO. | 237  | 263 | 185   | APP. POWER CO. | 237  | 263 |
| 148  | APP. POWER CO. | 237  | 263 | 186   | APP. POWER CO. | 237  | 263 |
| 177  | APP. POWER CO. | 234  | 217 | 187   | APP. POWER CO. | 237  | 263 |
| 178  | APP. POWER CO. | 237  | 263 | 210   | APP. POWER CO. | 237  | 263 |

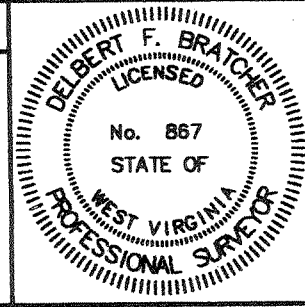
**Point Surveying Mapping**  
 PO BOX 28  
 MILLWOOD, WV 25262  
 (304) 273-2915 Phone  
 (304) 273-2916 Fax  
 Professional Land, S&E,  
 Construction Industrial Surveying

1"=150'

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

FILE No \_\_\_\_\_  
 SCALE 1" = 500'  
 MINIMUM DEGREE OF ACCURACY 1:2500  
 PROVEN SOURCE OF ELEVATION NOTED ON PLAT  
 DATE 05-21-2008  
 DRAWN BY J. SWISHER

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 DIVISION OF ENVIRONMENTAL PROTECTION.  
 (SIGNED) Delbert F. Bratcher  
 R.P.E. \_\_\_\_\_ R.P.S. \_\_\_\_\_



**STATE OF WEST VIRGINIA**  
 DIVISION OF ENVIRONMENTAL PROTECTION  
 OFFICE OF OIL AND GAS

DATE 20  
 OPERATOR'S WELL No. AEP MW 2  
 API WELL No. 47 053 -00490  
 STATE COUNTY PERMIT

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  IF "GAS" PRODUCTION  STORAGE  DEEP  SHALLOW  OTHER   
 LOCATION: ELEVATION 585.88' WATER SHED MIDDLE OHIO  
 DISTRICT GRAHAM COUNTY MASON  
 QUADRANGLE NEW HAVEN  
 SURFACE OWNER APPALACHIAN POWER CO ACREAGE 2460  
 OIL & GAS ROYALTY OWNER APPALACHIAN POWER CO LEASE ACREAGE N/A  
 LEASE No. N/A

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 ROSE RUN-COPPER RIDGE ESTIMATED DEPTH 8400 FT  
 WELL OPERATOR APPALACHIAN POWER CO DESIGNATED AGENT RICHARD D. THOMPSON  
 ADDRESS US RT. 33 MOUNTAINEER PLANT ADDRESS US RT. 33 MOUNTAINEER PLANT  
 NEW HAVEN, WV 25265-0419 NEW HAVEN, WV 25265-0419 **JUN 27 2008**

FORM IV-6 (8-78)

MAS 06/30

WR-35  
Rev (5-01)

DATE: 6/18/09  
API #: 47-5300490

State of West Virginia  
Department of Environmental Protection  
Office of Oil and Gas

Well Operator's Report of Well Work

Farm name: Appalachian Power Co. Operator Well No.: MW-2 *CO2 seg. monitoring well*

LOCATION: Elevation: 585.8 ft. Quadrangle: New Haven

District: Graham County: Mason  
Latitude: 6,627 Feet South of 39 Deg. 00 Min. 00 Sec.  
Longitude 5,483 Feet West of 81 Deg. 55 Min. 00 Sec.

Company: Appalachian Power Co. DBA AEP

|  | Casing & Tubing | Used in drilling | Left in well | Cement fill up Cu. Ft. |
|--|-----------------|------------------|--------------|------------------------|
| Address: <u>U.S.Rt. 33, Mountaineer Plant New Haven, WV 25265-0419</u>                       | 16"             | 279'             | 279'         | 295 cf                 |
|  | 10-3/4"         | 1800'            | 1800'        | 1224 cf                |
| Agent: <u>Richard D. Thompson</u>  | 7"              | 6418'            | 6418'        | 315 cf                 |
| Inspector: <u>Jamie Stevens</u>  | 4-1/2"          | 8335'            | 8335'        | 785 cf                 |
| Date Permit Issued: <u>06/24/2008</u>  | 2-3/8"          | 8,050'           | 8,050'       | --                     |
| Date Well Work Commenced: <u>09/25/2008</u>  |                 |                  |              |                        |
| Date Well Work Completed: <u>5/21/2009</u>   |                 |                  |              |                        |
| Verbal Plugging: <u>n/a</u>  |                 |                  |              |                        |
| Date Permission granted on:  |                 |                  |              |                        |
| Rotary <input checked="" type="checkbox"/> Cable <input type="checkbox"/> Rig: <u>UDI 51</u> |                 |                  |              |                        |
| Total Depth (feet): <u>8340'</u>   |                 |                  |              |                        |
| Fresh Water Depth (ft.): <u>250'</u>   |                 |                  |              |                        |
| Salt Water Depth (ft.): <u>1232'</u>   |                 |                  |              |                        |
| Is coal being mined in area (N/Y)? <u>Yes</u>  |                 |                  |              |                        |
| Coal Depths (ft.): <u>417'-1073' layered</u>   |                 |                  |              |                        |

RECEIVED  
Office of Oil & Gas  
JUL 22 2009  
WV Department of Environmental Protection

OPEN FLOW DATA

Formation of interest: Rose Run Pay zone depth (ft): 7729'  
Gas: Initial open flow: 0 MCF/d Oil: Initial open flow: 0 Bbl/d  
Final open flow: 0 MCF/d Final open flow: 0 Bbl/d  
Time of open flow between initial and final tests: n/a Hours  
Static rock Pressure \_\_\_\_\_ psig (surface pressure) after \_\_\_\_\_ Hours

Formation of interest: Copper Ridge Pay zone depth (ft): 7829'  
Gas: Initial open flow: 0 MCF/d Oil: Initial open flow: 0 Bbl/d  
Final open flow: 0 MCF/d Final open flow: 0 Bbl/d  
Time of open flow between initial and final tests: n/a Hours  
Static rock Pressure \_\_\_\_\_ psig (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.

Signed: Richard D. Thompson  
By: Richard D. Thompson  
Date: 7/9/09

JUL 24 2009

MASON 00490

**AEP Mountaineer Plant, MW-2 Perforations**

| Run   | Perforated Zone                              | Lithology    |
|---|--|--------------|
| 1   | 8,102 - 8,105                                | Copper Ridge |
| 2   | 8,119 - 8,134                                | Copper Ridge |
| 3   | 8,139 - 8,142<br>8147 - 8,151<br>8155 - 8162 | Copper Ridge |
| 4   | 7,780 - 7,800                                | Copper Ridge |
| 5   | 8,176 - 8,812                                | Copper Ridge |
| 6   | 8,221 - 8,224<br>8,230 - 8,233               | Copper Ridge |
| 7   | 8,233 - 8,253                                | Copper Ridge |
| 8   | 8,271 - 8,284                                | Copper Ridge |
| Shot Density = 6 shots per foot<br>500 gallons 15% HCl spotted prior to perforating, swabbed back |  |              |

**AEP Mountaineer Plant, MW-2 Well Log Summary (47-5300490)**

| Lithology or Formation                                 | Depth   |
|--|---------|
| Ground Surface/Alluvium/ Undiff. Pennsylvania Bedrock* | 0-1,147 |
| Sharon Sandstone                                       | 1,147   |
| Maxville Limestone                                     | 1,231   |
| Cuyahoga Shale   | 1,245   |
| Sunbury (Coffee) shale                                 | 1,703   |
| Berea sandstone  | 1,713   |
| Chagrin shale  | 1,733   |
| Lower Huron shale                                      | 2,801   |
| Java shale   | 3,176   |
| Pipe Creek shale                                       | 3,263   |
| Angola shale   | 3,281   |
| Rhinestreet shale                                      | 3,363   |
| Hamilton shale   | 3,529   |
| Marcellus shale  | 3,577   |
| Onondaga limestone                                     | 3,581   |
| Helderberg limestone                                   | 3,709   |
| Salina dolomite  | 3,801   |
| Lockport dolomite                                      | 4,347   |
| Niagaran/Rose Hill shale                               | 4,569   |
| Dayton/Casing Shell limestone                          | 4,774   |
| Brassfield/Packer Shell limestone                      | 4,836   |
| Tuscarora/Clinton sandstone                            | 4,867   |
| Medina sandstone                                       | 5,003   |
| Queenston shale  | 5,013   |
| Utica Shale  | 5,629   |
| Point Pleasant Shale                                   | 6,263   |
| Trenton limestone                                      | 6,337   |
| Black River limestone                                  | 6,460   |
| Gull River limestone                                   | 6,948   |
| Lower Chazy limestone                                  | 7,005   |
| Glenwood/Wells Creek shale                             | 7,063   |
| St. Peter sandstone                                    | 7,141   |
| Beekmantown dolomite                                   | 7,170   |
| Rose Run sandstone                                     | 7,729   |
| Copper Ridge dolomite                                  | 7,829   |

\*Coal found between 417'-1,073'