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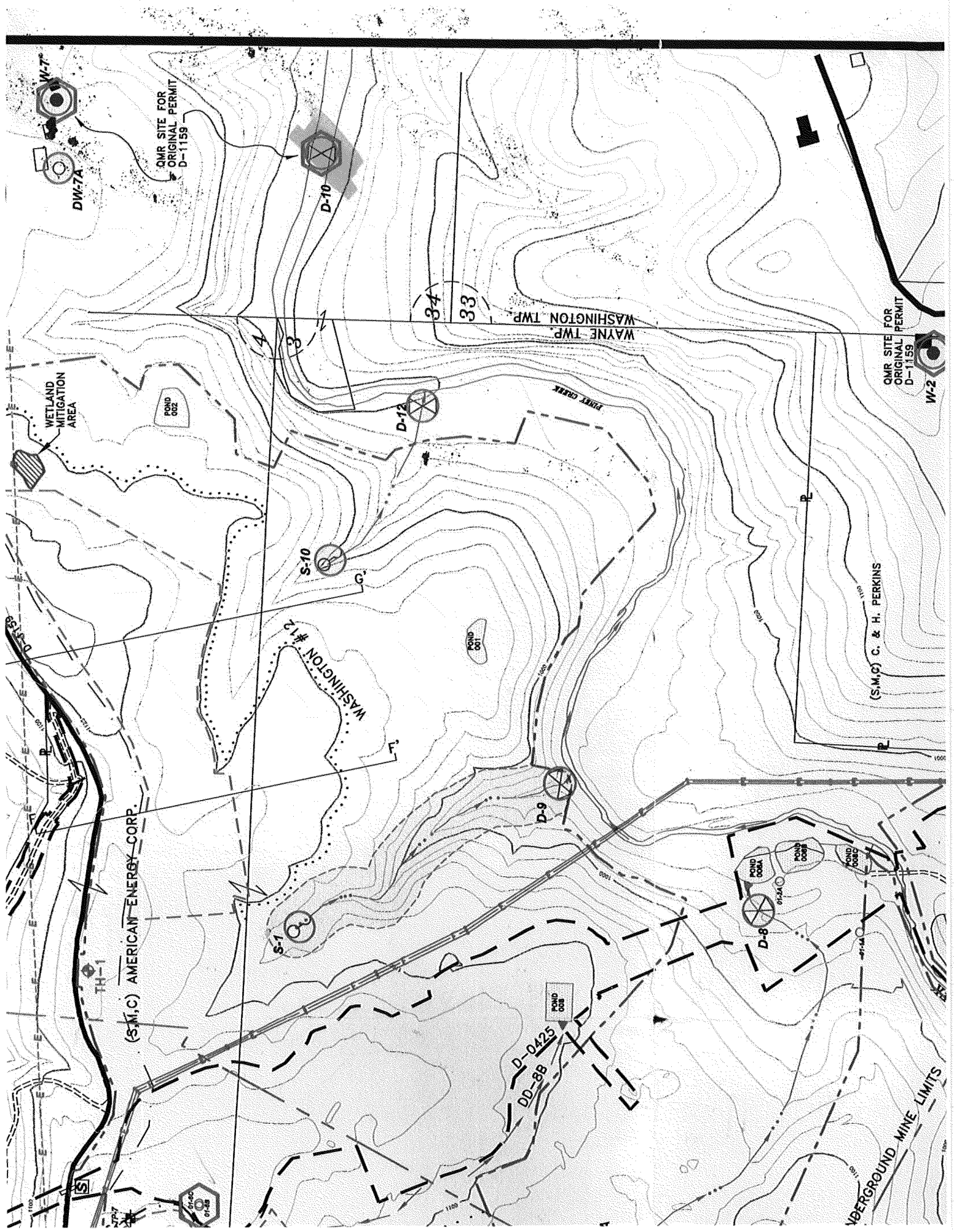

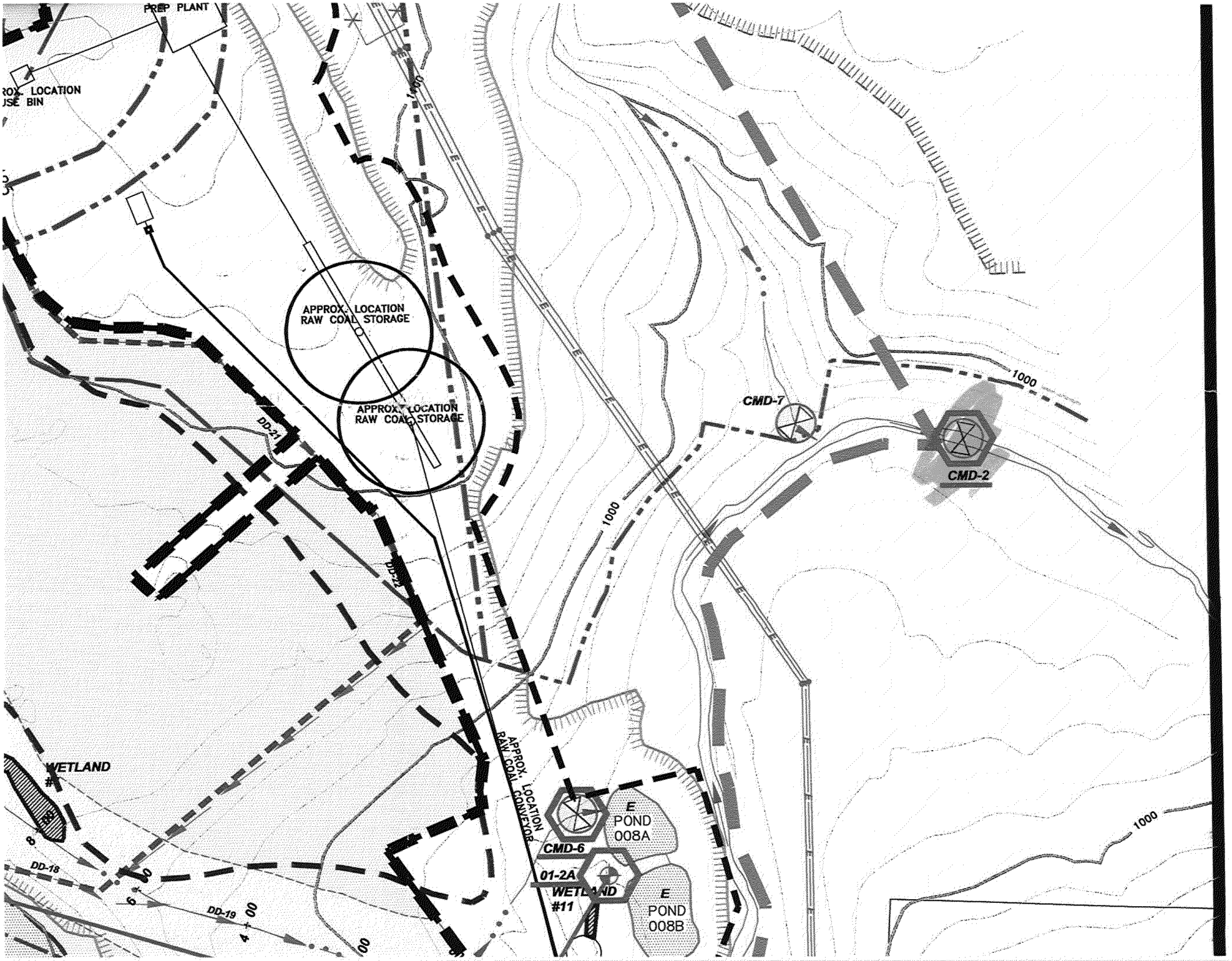


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**OHIO DEPARTMENT OF NATURAL RESOURCES**
**DIVISION OF MINERAL RESOURCES MANAGEMENT**

**Quarterly Monitoring Report Sheet**
**(Submit in Quadruplicate)**

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DIVISION OF MINERAL RESOURCES
CAMBRIDGE

Permittee **American Energy Corp.**, Permit No. **D-0425** **Page 1 of 2**

☐ 1st Quarter, ☐ 2nd Quarter, ☐ 3rd Quarter, ☒ 4th Quarter ( "X" appropriate box)

☐ Pre-mining, ☒ Mining, ☐ Postmining ("X" appropriate box for mine status)

| Monitoring Site Identification No. (i.e., S-1, W-3) | D-8A | D-10 | U-3 | U-10 | S-23 |
|---|---|---|---|---|---|
| State Plane X-Y Coordinates | X 2,413,624 Y 695,395 | X 2,417,484 Y 696,454 | X 2,411,287 Y 693,468 | X 2,413,435 Y 691,110 | X 2,411,937 Y 696,728 |
| State Whether Site was monitored for Quality, Quantity or Both | BOTH | BOTH | BOTH | BOTH | BOTH |
| Surface Elevation of Monitoring Site | 1080 | 898 | 960 | 942 | 1125 |
| Depth of Well Below Land Surface (feet) | -- | -- | -- | -- | -- |
| Static Water Level of Well Below Land Surface (ft) | -- | -- | -- | -- | -- |
| Stream or Spring Discharge (gpm) | 1.2 CFS | 33.3 CFS | 6.9 CFS | 12 CFS | 60 GPM |
| Date Measured | 12-10-12 | 12-10-12 | 12-10-12 | 12-10-12 | 12-10-12 |
| pH (Standard Units) | 7.92 | 7.45 | 7.41 | 7.59 | 7.89 |
| Total Acidity (mg/l $CaCO_3$) | 11.16 | 6.39 | 8.08 | 6.38 | 20.36 |
| Total Alkalinity (mg/l $CaCO_3$) | 171.70 | 79.08 | 64.24 | 54.11 | 402.44 |
| Total Iron (mg/l) | 1.09 | 0.89 | 0.63 | 0.78 | 2.38 |
| Total Manganese (mg/l) | 2.02 | 0.07 | <0.03 | 0.07 | 1.93 |
| Total Aluminum (mg/l) | 0.21 | 0.91 | 0.82 | 0.84 | 0.50 |
| Total Suspended Solids (mg/l) | 23.0 | 26.0 | 19.0 | 22.0 | 21.0 |
| Total Hardness (mg/l as $CaCO_3$) | 831.0 | 107.0 | 77.0 | 67.0 | 651.0 |
| Total Sulfates (mg/l) | 1983.0 | 80.0 | 27.0 | 32.0 | 2049.0 |
| Specific Conductance ( at 25°C umhos/cm) | 6880 | 352 | 171 | 163 | 7470 |
| Other: **Lab Id** | 12-12-407 | 12-12-406 | 12-12-403 | 12-12-408 | 12-12-405 |

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Permittee's Signature Ellen M. Green Date 1-8-13

Laboratory Name **INDUSTRIAL LAB ANALYSIS** COLUMBUS

Analyst's Signature [illegible] Date 01-03-13

Revised 04/06
DNR-744-9057