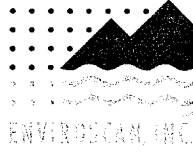


APPENDIX 5

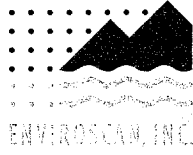
**ENVIROSCAN, INC.'S
GEOPHYSICAL SURVEY**

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**Final Report
Geophysical Survey
Big Branch Slurry Impoundment
Martin County Coal Corporation
Martin County, KY
Enviroscan Reference Number 120015**

**Prepared For: Triad Engineering, Inc.
Prepared By: Enviroscan, Inc.
January 23, 2001**



January 23, 2001

Mr. John Nottingham
Triad Engineering, Inc.
4980 Teays Valley Road
Scott Depot, WV 25560

RE: Geophysical Survey
Big Branch Slurry Impoundment
Martin County Coal Corporation
Martin County, KY
Enviroscan Reference Number 120015

Dear Mr. Nottingham:

Pursuant to our proposal, dated December 11, 2000, Enviroscan, Inc. completed a geophysical survey of the above-referenced site between December 18 through 20, 2000. The methods and results of the survey are described in the following text and figures.

Survey Purpose

The geophysical survey area lies in a dammed valley that has been used by the Martin County Coal Corporation as a coal washing slurry impoundment. According to information provided by Triad Engineering, Inc. (Triad) and the Mine Safety and Health Administration (MSHA), the impoundment bottom failed, releasing semi-liquid coal slurry into nearby mine workings. The purpose of the geophysical survey was to determine whether there is geophysical evidence to constrain the location of the presumed conduit or breakthrough from the impoundment into the mine workings. The survey area consists of a recently constructed earthen drilling pad extending out into the slurry impoundment. The locations of selected recent boreholes (by others) within the survey area are depicted on Figure 1.

Mr. Nottingham
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Survey Method

Based on the site conditions and survey purpose, Enviroscan performed a mise-a-la-masse electrical profiling survey. The mise-a-la-masse method is commonly used in the mining industry to map the extent of conductive ore bodies. The principles of the mise-a-la-masse method are depicted in Appendix A, and are described in detail in e.g. Telford, W.M., Geldart, L.P., and Sheriff, R.E., 1990, Applied Geophysics, Cambridge University Press. The method is based on the idea that an electrically conductive subsurface body (in this case the slurry-filled mine working and conduit/breakthrough area) will radiate the signal from an inserted current electrode. Concentrations of current flow at the ground surface are expected to mimic the footprint of the conductive body.

In this case, mine workings containing electrically conductive slurry were energized by a current source electrode inserted through borehole DH1-11. A current sink electrode was placed on the far western shore of the impoundment – at a distance of over 1500 feet representing essentially electrical infinity. The approximate footprint of the slurry-filled mine workings, and the possible breakthrough zone were then delineated by mapping the current flow from the energized mine workings. Current flow was mapped as voltage using a pair of voltage electrodes (with a constant 20-foot spacing) attached to a high-impedance microvolt meter. The voltage electrodes were walked along linear profiles radiating from the current electrode borehole, with the voltage electrodes arranged collinearly with the borehole. For each measurement, the midpoint of the voltage electrodes was measured using a backpack-mounted Trimble Pathfinder global positioning system (GPS) receiver in contact with 6 to 8 position-fixing satellites. Real-time communication with OmniStar resulted in differential GPS (DGPS) positioning with an accuracy of plus or minus approximately two feet. The applied signal was generated by an Advanced GeoSciences Sting R1-IP earth resistivity meter. The voltage measurements were also collected and digitally recorded by the Sting R1-IP.

The field survey was conducted on the nights of December 19 and 20, 2000. Nighttime work was necessitated by the contemporary drilling efforts on the site. In order to minimize “leakage” of electrical current from the mine workings, drilling steel was removed from any active holes prior to commencement of the electrical survey, and readings were spread across two nights, to allow avoidance of the drill rigs themselves. Note that a drill rod is reportedly stuck in borehole DHX-2 (see Figure 1), but it extends no closer than approximately 10 feet to the top of the coal seam.

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January 23, 2001
Page 3

The field voltages from the survey stations depicted in Figure 1 were subjected to removal of a geometric factor derived from standard equations for a gradient array (see e.g. Telford et al., 1990). The corrected voltages were contoured using the statistical kriging algorithm in SURFER by Golden Software, and are depicted in Figure 2. Note that Figures 1, 2 and 3 also depict a depression that was GPS-surveyed by Enviroscan in the field, and which the drillers reported was suffering active subsidence during the drilling operations.

The main feature of Figure 2 is a zone of high voltage that mimics the reported westward extent of mine workings near the surficial depression. This high voltage zone presumably mimics the footprint of a subsurface electrically conductive zone in contact with the electrode inserted through DH1-11. A portion of the mine workings containing slurry (or other wet and therefore electrically conductive earth materials) would produce such a zone. The footprint of this zone is shown in gray on Figure 3. Note that it presumably extends some distance eastward (beyond the geophysical survey data coverage).

Superimposed on the overall high voltage anomaly are two distinct peaks (and a third subtle peak). The footprints of the two main peaks are highlighted on Figure 3. These peaks should represent areas where a portion of the electrically conductive target extends closer to the ground surface – e.g. areas of current leakage from the electrified mine workings. Such current leakage would certainly occur through the breakthrough/conduit from the slurry impoundment, and could also occur along natural mineralized or oxidized near-vertical joints or fractures intersecting the mine workings. Note that none of the three anomaly peaks coincide with contemporary drilling operations or features, and are therefore interpreted as representing actual subsurface conditions rather than artifacts or interference.

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January 23, 2001
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Limitations

The geophysical survey described above was completed using standard and/or routinely accepted practices of the geophysical industry and equipment representing the best available technology. Enviroscan, Inc. does not accept responsibility for survey limitations due to inherent technological limitations or unforeseen site-specific conditions. However, we make every effort to identify and notify the client of such limitations or conditions.

We have appreciated this opportunity to work with you. If you have any questions, please do not hesitate to contact me.

Sincerely,
Enviroscan, Inc.



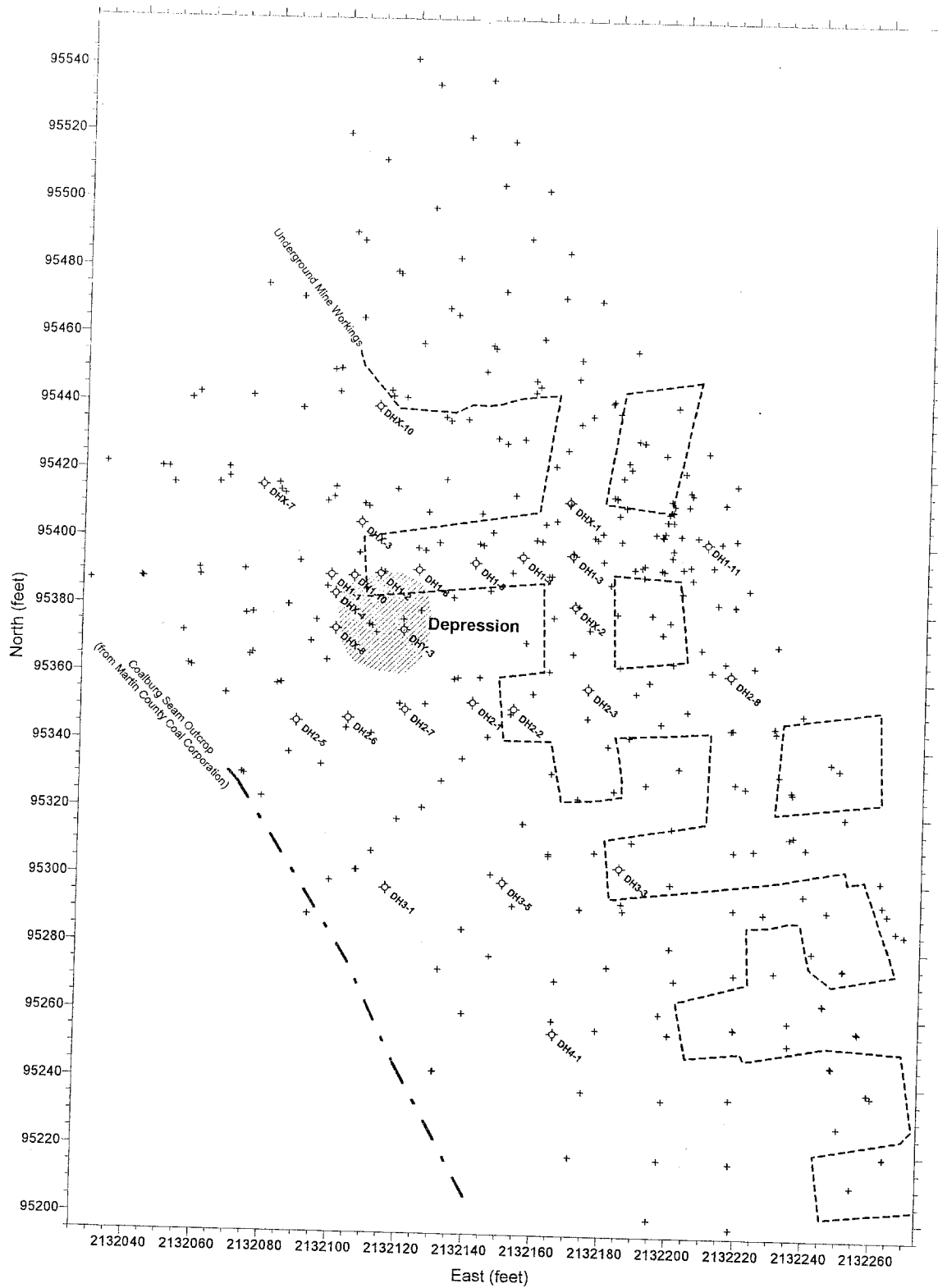
Timothy D. Bechtel, Ph.D., P.G.
Principal Geophysicist

Technical Review By:
Enviroscan, Inc.



Felicia Kegel Bechtel, M.Sc., P.G.
President

enc.: Figure 1: Geophysical Survey Data Coverage
Figure 2: Mise a la Masse Survey Data
Figure 3: Mise a la Masse Survey Interpretation
Appendix A: Mise-a-la-Masse Method Schematic



Legend:

- + Mise a la Masse Survey Station
- x Drill Hole (by others)

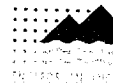
Notes:

Coordinates in KY North State Plane Grid, NAD-83 geodetic datum.
 Survey stations and drill hole locations from DGPS survey by Enviroscan, Inc.
 Mine plan and coal outcrop lines digitized from portions of "MSHA Drilling Program" map provided by MSHA.

Figure 1 Geophysical Survey Data Coverage

Big Branch Slurry Impoundment
 Martin County Coal Corporation
 Martin Co., KY

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 Project No. 120015
 Rev. 01/03/01



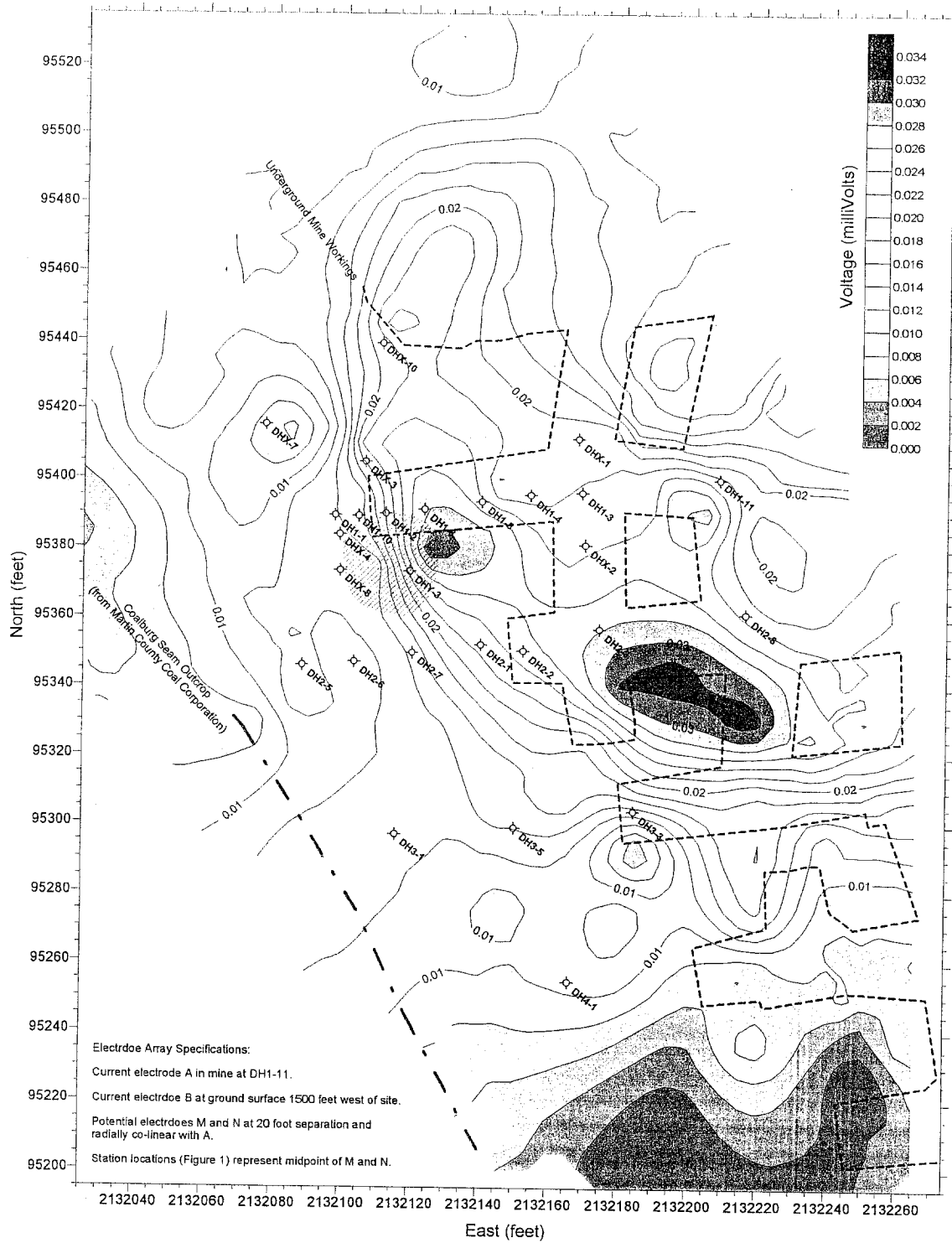


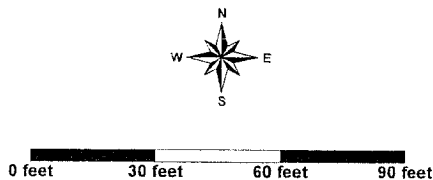
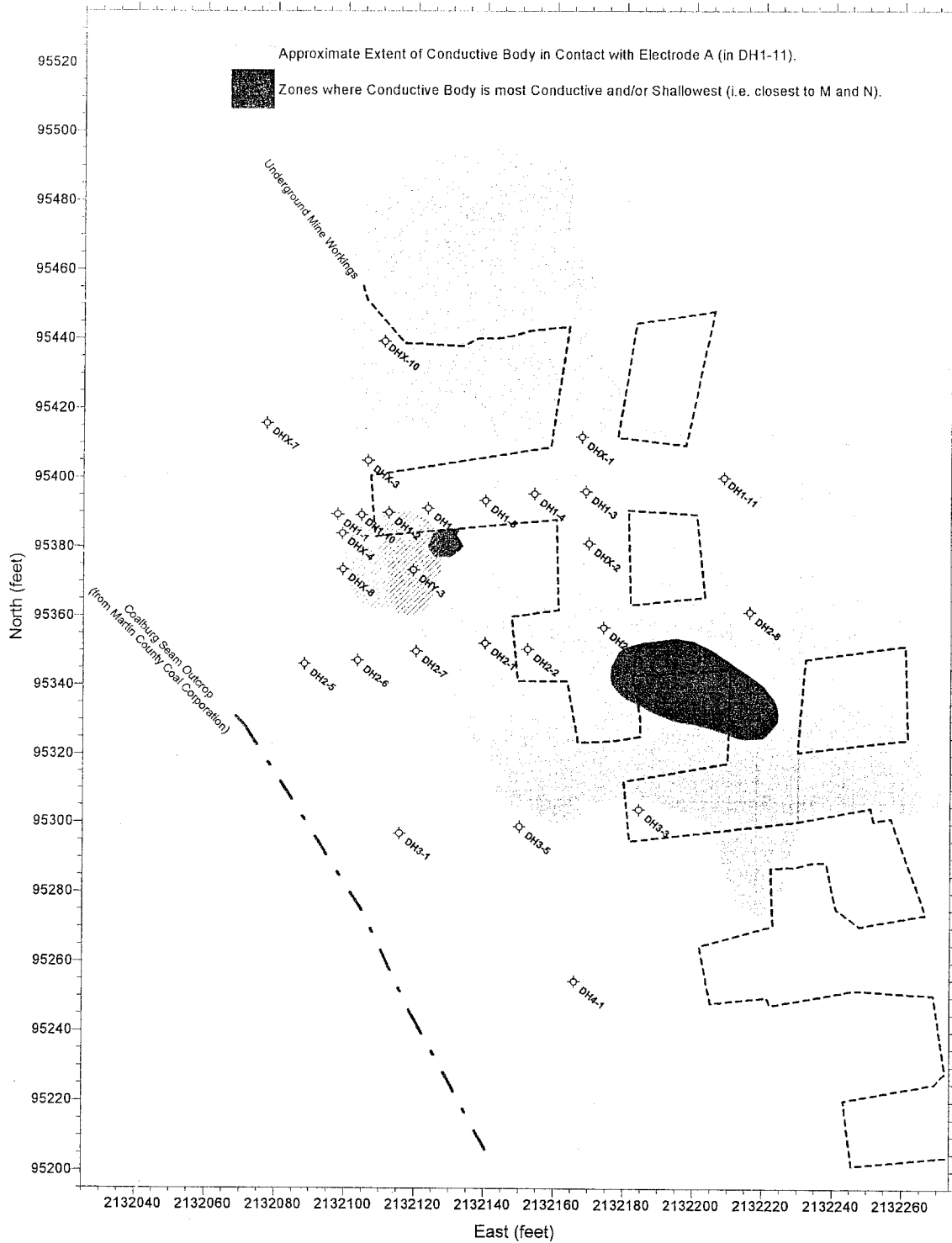
Figure 2

Mise a la Masse
 Survey Data

Big Branch Slurry Impoundment
 Martin County Coal Corporation
 Martin Co., KY

Enviroscan, Inc.
 Project No. 120015
 Rev. 01/03/01





Legend:
 + Mise a la Masse Survey Station
 ⬠ Drill Hole (by others)

Notes:
 Coordinates in KY North State Plane Grid, NAD-83 geodetic datum.
 Survey stations and drill hole locations from DGPS survey by Enviroscan, Inc.
 Mine plan and coal outcrop lines digitized from portions of "MSHA Drilling Program" map provided by MSHA.

Figure 3 Mise a la Masse Survey Interpretation

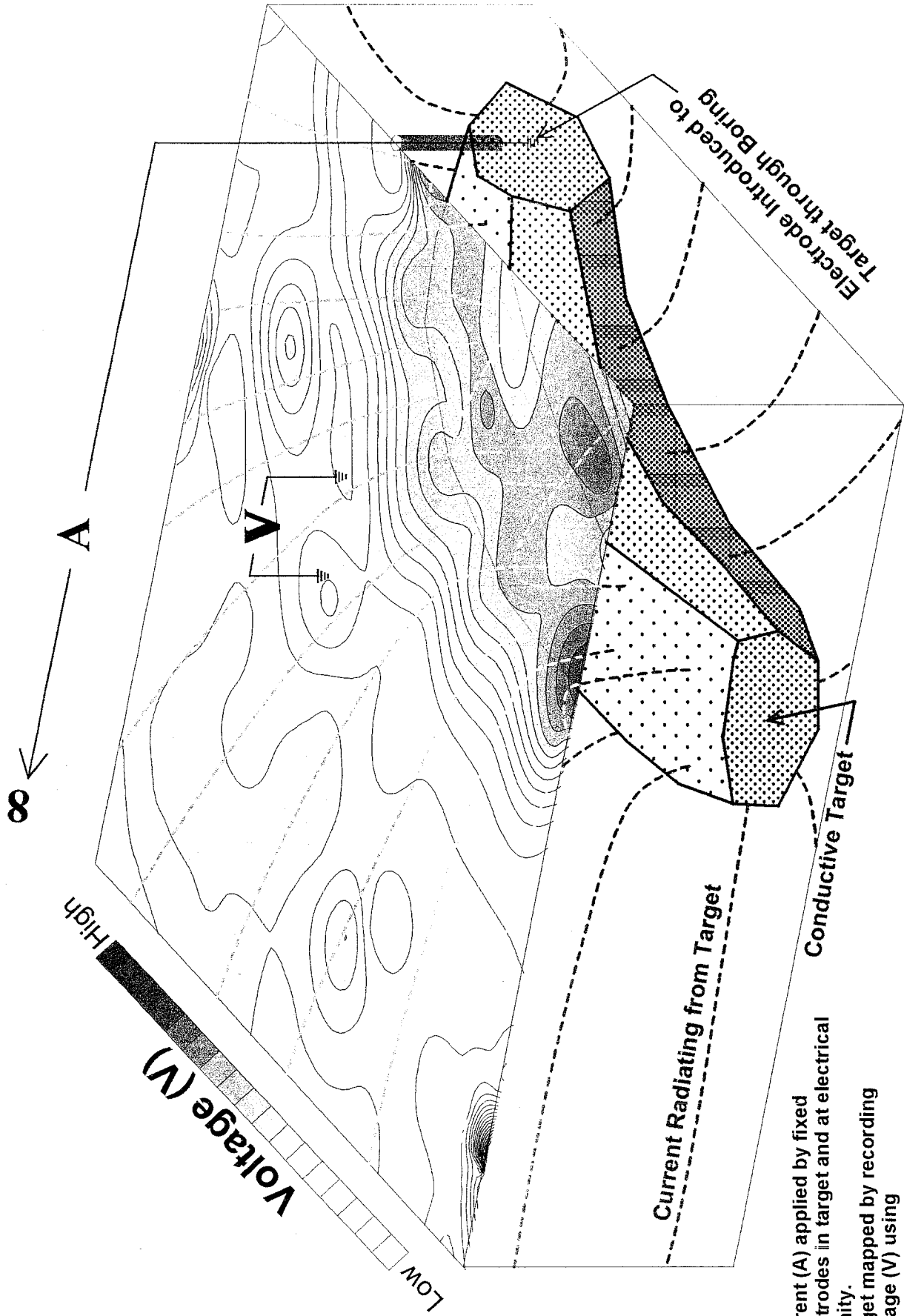
Big Branch Slurry Impoundment
 Martin County Coal Corporation
 Martin Co., KY

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 Project No. 120015
 Rev. 01/05/01



Appendix A

Mise a la Masse Method Schematic



Current (A) applied by fixed electrodes in target and at electrical infinity.
 Target mapped by recording Voltage (V) using mobile electrodes.

Mise a la Masse Method Schematic

Rev. 01/2001

