

EXAMINER

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Digging up the past



PAUL BEAVER/The Examiner

Some members of the UMKC class study the results of ground penetrating radar looking for a fountain drain on the Vaile Mansion grounds Saturday. In the group at left is Dr. Lee Slater, the class professor.

Finding hidden treasure at Vaile Mansion

By DARLA MCFARLAND
The Examiner

A team of geophysicists visited the Vaile Mansion in Independence this weekend, using high-tech equipment to plumb the grounds for evidence old structures.

The team, a group of nine students from the University of Missouri-Kansas City and

their professor, Lee Slater, used radar and electrical conductivity equipment to map the underground layout around the 120 year-old structure.

"What they basically do is measure the properties of the ground and then use those measurements to determine what is under the surface," said Slater, a professor of geophysics.

"It is a bit like treasure hunting, I sup-

pose."

The treasure in question is the remains of buildings, walkways, plumbing systems and other original elements of the estate. Vaile historians know from old photos and historical accounts that several structures once stood on the grounds, but they do not know exactly where.

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Vaile: Searching for hidden treasure

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Archeologist Jim Feagins, who last summer uncovered a fountain on the Vaile property, heard Slater talk about the technique at a meeting of the Kansas City Archeological Society last fall and invited the professor and his team to survey the grounds.

"This (technology) is great because it conserves the resource," Feagins said. "Every time you dig, you destroy a little bit, and this way we can look without digging."

Feagins hopes the team can pinpoint locations for another dig this summer, probably in July.

One of the sites Feagins hopes to locate is an old wine cellar thought to be on the southwest corner of the property. To search for the cellar, students deployed a line of cable 150 feet long, dotted every few feet with thin metal rods thrust in the ground, stretching from the corner of the house to the street.

The rods, connected to the cable and to each other by loops of wire like short jumper cables, pumped pulses of electricity into the ground and recorded the path of the current.

"Basically, we are inducing an electrical current into the ground and measuring the voltage change over an area," said Dan Glaser, a native of Maine and a graduate student of geosciences at UMKC.

Glaser and two other students set the line four different times Saturday, moving about 15 feet over each time. Each cycle of data collection takes about 45 minutes.

The data collected will be put

in a computer modeling program and analyzed by students over the next week or two.

On the other side of the property, at the northwest corner, another team used a radar system to map out the edge of a lake that used to cover that corner.

Historians are hoping to use that information to locate several small chalets that originally dotted the lake edge.

When the project is done, Slater said, the data should produce a map of the physical structures in the ground to a depth of about nine feet.

There was some excitement in the late afternoon Saturday when students using a conductivity measure located what they believed to be the drainage pipe running from the old fountain to the lake area.

"We knew it went that way but we weren't sure exactly where," Feagins said.

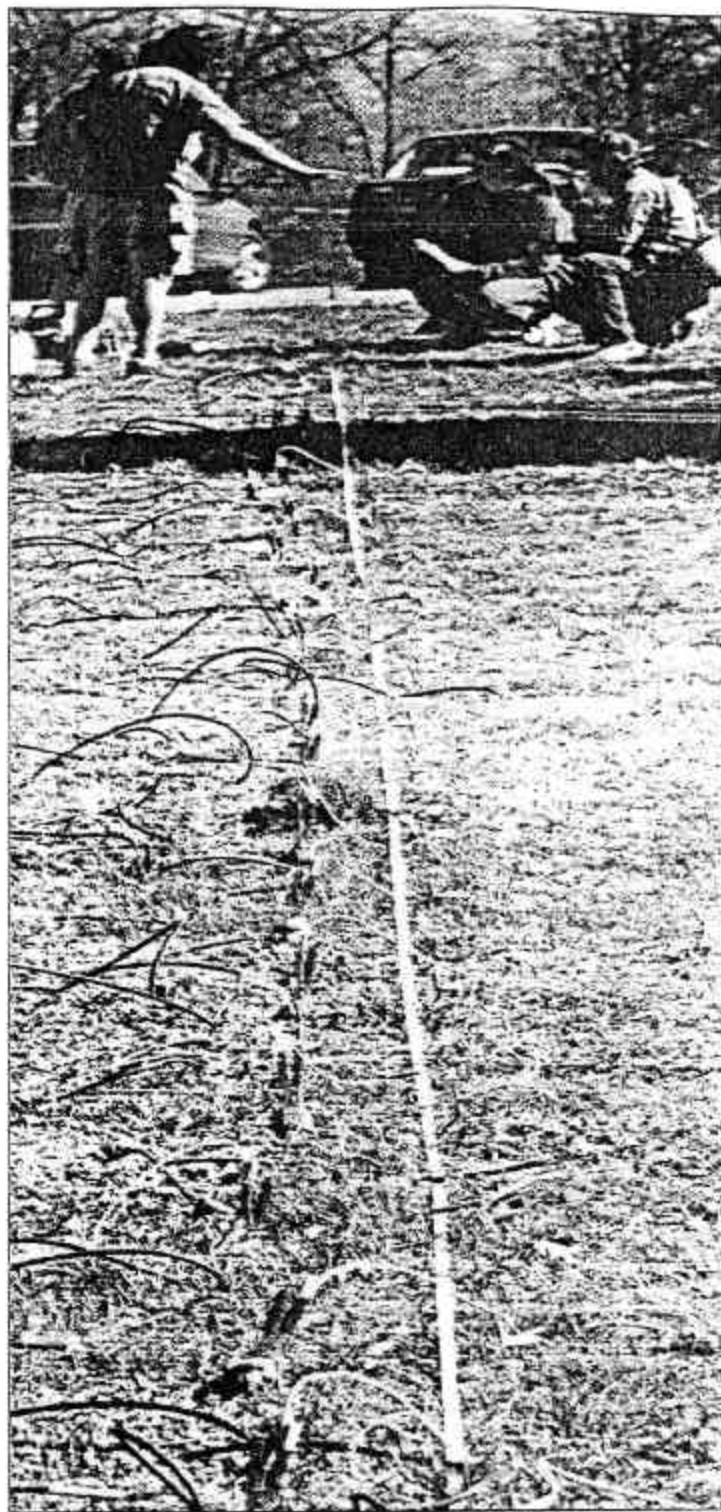
All together, the students deployed about \$100,000 worth of equipment this weekend, most of which was originally developed to look for oil and petroleum reserves.

Slater has applied similar techniques at archeological sites in Ireland and Maine but this is the first time he has used the equipment in Kansas City.

Slater said he expects to have an underground map ready in a few weeks.

"This is a win-win situation," Slater said. "My students get a few days of field experience, and we might be able to help the historians."

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PAUL BEAVER/The Examiner

Students in Lee Slater's UMKC class monitor the ground resistance test underway on the Vaile Mansion grounds Saturday.