## Gary Vancil, Jr.

### Project Director/Geologist

### Education

MS Geology – Southern Illinois University of Carbondale

BS Geology – Southern Illinois University of Carbondale

### Specialty Certifications/Experience

Illinois Department of Natural Resources

* First Class Miner Papers
* Surface Supervisor Papers

Kentucky Department of Natural Resources

* Certified Macroinvertebrate Sampler

Mine and Health Safety Administration

* Impoundment Certification
* 40-hour Surface and Underground Miner Training

### Professional Affiliations

American Association of Petroleum Geologists

National Mining Association

Illinois Oil and Gas Association

### Professional Experience

Gary Vancil Jr is a Project Director for SCS Engineers’ Carbon Sequestration and Deep Well Injection practice. He earned both his MS and BS in Geosciences with emphasis in resource geology at Southern Illinois University of Carbondale. Mr. Vancil’s early career focused on resource development and extraction for the nation’s largest privately held coal company (2009 to 2021). Since joining SCS in 2021, he has worked with clients on various projects including deep well CO2 sequestration and mining sub-surface investigations. Examples of his project experience follow:

### Project Experience

Carbon Sequestration

**Confidential Clients: California.** Mr. Vancil is the project manager of a multi-disciplinary team tasked with development and submission of a Class VI permit application for a large-scale CO2 sequestration project in California. He was responsible for managing costs, scope and schedule, led daily regulatory and client updates, GSDT upload, and weekly client progress meetings.

Mr. Vancil also worked closely with the Environmental Protection Agency (EPA) Region 9 and well as the California Air and Resource Board (CARB).

Sub-Surface Investigation

**Confidential Clients: Illinois.** Project Director tasked with determining the source of non-compliant seeps that developed on a landowner’s property after being subsided by longwall mining. The project consisted of an evaluation of the hydraulic behavior of subsurface soils, previous oil and gas activities, as well as constructing a conceptual site model.

### Relevant Job Experience

#### Environmental Compliance

**Emergency Response Sugar Camp Energy & Hillsboro Energy - Illinois.** Mr. Vancil led efforts to fight two underground mine fires that occurred in 2020 - 2021. He managed all drilling preparations and designed specialty tools, enabling the use of multiple surface drill rigs to aid in firefighting. A total of eighteen boreholes, each at over 800’ in depth, were drilled in just three weeks to extinguish the underground fire. He was also the lead contact for state and federal agencies.

**Permitting and Design: Williamson Energy - Illinois** Assisted with designing and completing a mixing zone permit to allow Williamson Energy to successfully discharge decant waters to the Big Muddy River. Total cost of project was $4.7 million.

**Environmental Remediation and Compliance: The American Coal Company – Illinois.**  Gary served as lead geologist on a remediation effort to clean 3.7 miles of stream impacted by a significant slurry spill. He was main point-of-contact for Environmental Protection Agency (EPA), Department of Natural Resources (DNR) and the Attorney General’s Office (AGO). In this lead role, Gary managed two teams working 24/7 to successfully clean the stream and remove downstream wildlife in order to avoid further impacts. **Total remediation efforts were two and a half months – a month and a half sooner than the AGO’s deadline. Mr. Vancils responsiveness led the AGO to reduce the initial fine of 1.7M down to $375,000.**

#### Mining

**Geologic Hazard Mitigation: The American Coal** **Company– Illinois.** Mr. Vancil developed geologic plans to successfully longwall mine through three different fault systems with displacements of more than 24 feet. **His team was able to save more than $2.4 million by mining through the faults VS moving their operations around them**. He designed the model and roof control plans enabling successful and safe mining of these areas. Gary worked closely with the Mine Safety and Health Administration (MSHA), Illinois State Geological Survey (ISGS) and Southern Illinois University of Carbondale (SIUC).

**Geologic Mine Design: KenAmerica - Kentucky.** Gary developed mine plans while considering horizontal stresses associated with the Illinois Basin. He was responsible for making major changes to mine layout and design while considering these stresses and the local geology. The implemented changes led to a sharp decrease in roof fall related injuries as well as an increased production rate. **The increased production rate led to a lower cost per ton resulting in the mine acquiring additional lucrative contracts.** The mine was successful in mining the #9 seam for several years before reserves were exhausted.

**Mine Equipment Design: Lila Canyon, Utah.** Mr. Vancil worked with mine engineers to research and purchase new longwall shields and shear to allow the mining of the Sunnyside coal seam in Northeast Utah. The mine known for its coal bursts will be over 2,700’ deep and to safely mine the coal more robust shields were needed. The new equipment is currently in use.

### Publications

*“A compositional data analysis approach to understanding trace element distribution during beneficiation of an Illinois Basin coal.” -* Nicholas Geboy, Allan Kolker, Liliana Lefticariu, Gary Vancil Jr.; 2015.