

**JOSEPH LEE ISLAS**  
GEOLOGIST/CONSULTANT

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**EDUCATION**

Western Kentucky University, Bowling Green, Kentucky, M.Sc. Geosciences, Thesis: "Identification, Characterization and Analysis of Wrench Related Faulting in Southwestern Warren County, Kentucky," Dec. 2006. (intra-plate tectonics)  
U.S. Environmental Protection Agency, Introduction to Environmental Geophysics (165.20), 2001.  
University of Memphis, Memphis, Tennessee, Geology Field Camp, Spearfish, South Dakota, 1994.  
Austin Peay State University, Clarksville, Tennessee, Geology, Chemistry and Mathematics, 1993-1996.  
Austin Peay State University, Clarksville, Tennessee, B.S. Geology, 1981.

**CONTINUING EDUCATION**

AAPG Pre Convention Field Trip: Iles-Williams Fork Field Trip, Southern Piceance Basin, Colorado, June 5-7, 2009.  
AAPG Pre Convention Short Course: AAPG EOR and the Expanding Field of Carbon Dioxide Flooding, Sept. 15-19, 2007.  
AAPG Post Convention Field Trip: Stratigraphic and Structural Controls on Fracture Distribution: Examples from California's Coastal Basins, Long Beach, CA, April 4-6, 2007.  
AAPG Post Convention Short Course: Introduction to Mud logging. AAPG Annual Convention, Houston Texas, April 13, 2006.  
AAPG Post Convention Short Course: PTTC Appalachian Region Workshop: Rocks to Models: An Introduction to 3-D Reservoir Characterization and Modeling, Morgantown, WV, September 21, 2005.

**AWARDS**

WKU, Department of Geography and Geology, Certificate of Achievement for Outstanding Service 2002.  
WKU, Department of Geography and Geology Research Award, 2001.

**ACCOMPLISHMENTS**

- ◆ Certification in Geographic Information Systems (GIS), Western Kentucky University, 2003-present.
- ◆ Completion of geologic research in the Appalachian (Devonian Shale), Illinois and Cherokee Basins, 2005-present.
- ◆ Planning and completion of geologic mapping projects in the Appalachian, Illinois and Cherokee Basins, 2005-present.
- ◆ Completion of field data and mapping of installed gas-line with attributes, Eastern Kentucky 2005-present.
- ◆ Innovative usage of geologic and geographic shapefiles with attributes in 2D and 3D formats, 1999-present.
- ◆ Concurrent usage of ESRI ArcView, 3D Analyst and Lithotect for geologic basin characterization, 1999-present.
- ◆ Successful utilization of SRTM/RADAR mapping of geologic surface lineaments with subsurface faulting, 2000-present.
- ◆ Ongoing geophysical well-log and drill cuttings analysis for 3D and cross section construction, 2000-present.
- ◆ Successful training and supervision of geological staff in research techniques and data acquisition, 2005-present.
- ◆ Ongoing success in technical post-well and geologic report writing, 1994-present.
- ◆ Successful completion of research and presentations to scientific peers, investors and the public, 1994-present.
- ◆ Successful completion with analysis and mapping of geophysical resistivity and microgravity projects, 1999-2001.
- ◆ Completion in planning and implementing hydrogeologic inventories, dye traces injections and analysis, 1999-2001.
- ◆ Successful operation and supervision of geological laboratory, 1991-1996.
- ◆ Successful training and certification of government laboratory dosimetry and spectroanalysis techniques, 1984-1991.
- ◆ Extensive field experience in stream sediment and stream water acquisition and mapping, 1978-1979.

**CAREER EXPERIENCE Years Experience 10+**

- ◆ American Southern Energy LLC, Bowling Green, Kentucky, 2008-Present, CEO/Consultant. [asenergyconsulting.com](http://asenergyconsulting.com)
- ◆ Petroleum Geologist, Heartland Resources Inc. Bowling Green, Kentucky, 2004-2008.
- ◆ Park Ranger, National Park Service (NPS), Mammoth Cave National Park, Mammoth Cave, Kentucky, 2002-2005.
- ◆ Data Entry Operator, United States Postal Service (USPS), Bryant Way, Bowling Green, Kentucky, 2002-2004.
- ◆ Substitute Teacher, Bowling Green Independent Public Schools, Bowling Green, Kentucky, 1999-2003.
- ◆ Hydrogeologist, The Center for Cave and Karst Studies, WKU, Bowling Green, Kentucky, 1998-2001.
- ◆ Physical Science Technician, (GS-7), Department of Defense (DOD), Lexington/Fort Campbell, Kentucky, 1984-1991.
- ◆ Field Geologist/Technician, Department of Energy (NURE), Missouri, Arkansas and Texas, 1977-1979.

**PROFESSIONAL ORGANIZATIONS**

Kentucky Board of Registration for Professional Geologists, Certified P.G. #2503.  
American Association of Petroleum Geologists (AAPG), 2005-present.  
Geological Society of America (GSA), 2001-Present.  
Kentucky Oil and Gas Association, 2005-Present.  
Notary Public, 2005-present, Exp. Date: 7/06/2013.  
Strathmore's WHO'S WHO, 2007-Present.

### PROFESSIONAL PAPER PRESENTATIONS

Islas, J.L. and Kuehn, K.W., 2008. GIS Modeling Applications in Petroleum Exploration. Geological Society of America, Abstracts with Programs, 42<sup>nd</sup> Annual Meeting of the North-Central Section, April 24-25, Evansville, IN.

Islas, J.L. and Kuehn, K.W., 2005. GIS Applications in Modeling & Interpretation of Geologic Faults in Warren County, Kentucky. Kentucky Division of Geographic Information, Abstracts with Programs, Kentucky GIS Conference, "A Spatial Commonwealth," August 23-24, Bowling Green, KY.

Islas, J.L. and Kuehn, K.W., 2003. Characterization and Significance of a Flower Structure in Warren County, Kentucky. Geological Society of America, Abstracts with Programs, 37th Annual Meeting of the North-Central Section, March 24-25, Kansas City, MO, v. 35, no. 2, p.58.

Islas, J.L. and Kuehn, K.W., 2001. A Small-scale, Positive Flower Structure Located in Southwestern Warren County, Kentucky. Kentucky and Tennessee Academy of Science, Middle Tennessee State University.

Crawford, N.C., Islas, J.L., Ray, C., Glass, M., Fogle, C. A., Littell, P. D., Oakes, T.D., Peveler, M., Tibbs, J.A., 2001. Dam Construction and the Problem of Subsurface Meander Neck Cut-offs in Karst Terrain. Kentucky and Tennessee Academy of Science, Middle Tennessee State University.

Crawford, N.C., Islas, J.L., Croft, L., Ray, C., Peveler, M., Howard, J., Glass, M., Brunton, C., Kambesis, P., 2001. Karst Subsurface Investigation Along a Proposed Section of Route 27 Near Somerset, Pulaski County, Kentucky. Kentucky and Tennessee Academy of Science, Middle Tennessee State University.

Islas, J.L. and Crawford, N. C., 2000. Resistivity and Microgravity Techniques for Locating and Mapping the Lost River Cave from the Ground Surface. Kentucky Academy of Science, University of Kentucky, 2000.

Islas, J.L. and Bhatia, D.M.S., 1994. Preliminary Investigations of the Wells Creek Structure with Transmitted Light Microscopy, Tennessee Academy of Science, David Lipscomb College, 1994.

### TECHNICAL REPORTS

Crawford, N.C., Islas, J.L., and Croft, L.A., 2001. Microgravity Subsurface Investigation of the Washington County Regional Landfill, Salem, Indiana. Crawford and Associates Inc., Bowling Green, Kentucky. Report prepared for Washington County Solid Waste Management District, Salem, Indiana.

Crawford, N.C. and Islas, J.L., 2001. Dye Tracer Study of Groundwater Flow in the Vicinity of the Sludge-drying Beds at the Waste Water Treatment Plant, Fort Knox, Kentucky. Crawford and Associates Inc, Bowling Green, Kentucky. Report prepared for Jacobs Engineering Corporation Inc., Maryland Heights, Missouri.

Crawford, N.C., Islas, J.L., 2001. Dye Tracer Study of Groundwater Flow at the Glasgow Regional Landfill, Glasgow, Kentucky. Crawford and Associates, Inc., Bowling Green, Kentucky. Report prepared for Southern Sanitation Services, Glasgow, Kentucky.

Crawford, N.C., Islas, J.L., 2001. Dye Tracer Study of Groundwater Flow at the Russellville Regional Landfill, Russellville, Kentucky. Crawford and Associates, Inc., Bowling Green, Kentucky. Report prepared for Southern Sanitation Services, Russellville, Kentucky.

Crawford, N.C., Islas, J.L., Croft, L.A., Meredith, J., 2000. Resistivity and Microgravity Investigation of the Glasgow Regional Landfill, Glasgow, Kentucky. Crawford and Associates, Inc., Bowling Green, Kentucky. Report prepared for Southern Sanitation, Glasgow, Kentucky.

### REFERENCES

Dr. Kenneth W. Kuehn, Distinguished Professor of Geology  
Western Kentucky University  
1 Big Red Way  
Bowling Green, KY 42101  
(270) 745-3082, [kenneth.kuehn@wku.edu](mailto:kenneth.kuehn@wku.edu)

Dr. Michael T. May, Professor of Geology  
Western Kentucky University  
1 Big Red Way  
Bowling Green, KY 42101  
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Dr. D.M.S. Bhatia, Professor of Geology  
Austin Peay State University  
Clarksville, Tennessee.  
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Dr. Marvin Russell, Distinguished Professor of Physics  
Dean Emeritus, Ogden College of Science and Technology  
Western Kentucky University, 1 Big Red Way  
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## **CARRER SUMMARY**

A long term research in geology has enabled me to process a technique of combining traditional data gathering and research methods with modern GIS mapping, to assist in a well balanced interpretation of geologic phenomena. New techniques in research with available digital datasets and attributes can now be used to create spatial 2D/3D maps with cinematic formats, including available attribute information. Extending GIS techniques to the subsurface complete with cinematic 3D models allows characterization of horizons and structural phenomena in the mineral/petroleum and related industries. Current research projects applying these methods include areas of the southern Appalachian Basin, the southern Illinois Basin and the Cherokee Platform in northeastern Oklahoma.

Datasets can range from surface to subsurface horizon attribute information combined in a process for spatial orientation in multiple research projects where intensive analysis is required. Database networks are instituted and administered with continual data influx from many differing sources including state geological and government surveys and private information sites. Data can then be processed using ESRI ArcView, 3D-Analyst, Lithotect and various other programs designed to assist in the interpretation of complex subsurface geology.

Information regarding surface lineament (RADAR/SRTM), structural, isopach and production can initially be reviewed in any given region of interest. Datasets may then be combined with research from other teams producing geophysical, geochemical, radiometric, magnetic, gravity, tellurics and multispectral satellite imaging for advanced geologic analysis. All combined techniques with 2D and 3D models are uniquely advantageous at presentations for inter-group and scientific meetings.

**Best Regards,**

**Joseph Islas B.S., M.Sc., CEO**  
**Exploration Geologist, PG KY #2503**  
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