

RESUME- Laura Rosales Lagarde**Address:**

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Citizenship Mexican

EDUCATION

- *Ph.D.Candidate in Geology (currently enrolled)*
 New Mexico Institute of Mining and Technology, Socorro, New Mexico
 Cave and Karst Studies Program
 Advisor: Dr. Penelope J. Boston. Overall GPA: 3.66
 Expected date of completion: May 2009

Dissertation *"Investigation of the geological controls of the spring water
 title: chemistry, Tabasco and Northern Chiapas Range, Mexico"*

A geological characterization of the springs in the field area will be done, considering the possible lithologic and structural controls to the water chemistry. By studying these surface and close-surface (caves) analogues new clues of the subsurface processes may be unraveled. The relation of the springs with the regional groundwater flow, the speleogenesis and the hydrocarbon presence in the area will be reviewed.

- *Master in Science, Geology*
 Posgrado en Ciencias de la Tierra, Unidad Académica de los Ciclos Profesionales y de Posgrado del Colegio de Ciencias y Humanidades
 Universidad Nacional Autónoma de México. Mexico City, Mexico.
 Advisor: Dr. Elena Centeno-García
 Graduation date: July 2002. Grade average: 8.9 of 10

Thesis title: *"Geochemistry and stratigraphy of the volcanosedimentary
 Paleozoic sequence from Northeastern Hidalgo State, Mexico."*

A stratigraphic and structural characterization of the rocks present in the field area was done to determine the rock relationships and history. Samples were taken for geochemical analysis in order to determine their tectonic origin. A volcanic arc, probably back-arc setting was inferred for this Permian sequence. A general geologic correlation with other areas was done in order to obtain a regional picture of it.

- *Chemistry Undergraduate studies (Licenciatura en Ciencias Químicas)*
 Instituto Tecnológico y de Estudios Superiores de Monterrey. Campus Monterrey

CV- Laura Rosales Lagarde
Graduation date: May 1994
Thesis title:

November, 2008

Grade average: 8.7 of 10

"*Synthesis of the organometallic compound Cu(N, N'-(4,6-o-BDG)₂-en) Cl.H₂O and study of its catalytic effect in alkenes epoxidation*".

The synthesis and partial characterization of the organometallic compound Cu (N, N'-(4, 6-o-BDG)₂-en) Cl.H₂O was performed. A preliminary evaluation of the effect of the resultant mixture in the epoxidation of three alkenes was done.

PUBLICATIONS

- Rosales-Lagarde, L., Pullin, M., Boston, P.J., Campbell, A., Ulmer-Scholle, D., Axen, G., Stafford, K.W. Water-Rock Interactions in Sulfide and Sulfate Rich Karst Springs and Caves at Structurally Complex Northern Chiapas-Tabasco Range, Mexico al Hydrogeology Journal, *in preparation*.
- Rosales-Lagarde, L., Campbell, A., Boston, P.J., Ulmer-Scholle, D., Stafford, K.W. Subsurface sulfate reduction indicated by spring water sulfur isotopes tracers and its effects on speleogenesis and hydrogeology, Northern Chiapas- Tabasco Range, Mexico: Applied Geochemistry Journal, *in preparation*.
- Rosales-Lagarde, L., Meneses-Rocha, J., M., Boston, P.J., Campbell, A., Ulmer-Scholle, D., Scholle, P., Stafford, K.W. Comparison of H₂S generation mechanisms between oil producing wells and H₂S-rich springs and their implications to find hydrocarbon traps, Northern Chiapas- Tabasco Range, Mexico: Journal of Sedimentary Research, *in preparation*.
- Stafford, Kevin W., Ulmer-Scholle, Dana, Rosales-Lagarde, Laura, 2008, HYPOGENE CALCITIZATION: EVAPORITE DIAGENESIS IN THE WESTERN DELAWARE BASIN: Carbonates and Evaporites, v. 23, no. 2, p. 89-103.
- Rosales-Lagarde, L., Tobler, M., y Plath, M., 2008. Posibles amenazas y soluciones para la preservación de la Cueva de las Sardinas y sus formas de vida y características únicas: Mundos Subterráneos. México.
- Rosales-Lagarde, L., Boston, Penelope J., Campbell, Andrew, Stafford, Kevin W., 2008. Possible structural connection between Chichón Volcano and the sulfur- rich springs of Villa Luz Cave (a.k.a. Cueva de las Sardinas), southern Mexico. Proceedings of the X, XI and XII Symposia of Vulcanospeleology in Espinasa-Pereña, R. and Pint, J. eds.: Association of Mexican Caves Studies Bulletin 19, Sociedad Mexicana de Exploraciones Subterráneas Boletín 7, Tepoztlán, Morelos, México, 177-184.
- Stafford, K.W., Nance, R., Rosales-Lagarde, L., and Boston, P.J., 2008. Epigene and hypogene karst manifestations of the Castile Formation: Eddy County, New Mexico and Culberson County, Texas, USA. International Journal of Speleology 37(2) 83-98.
- Rosales-Lagarde, L., Centeno-García, E., Dostal, J. Sour-Tovar, F., Ochoa-Camarillo, H., Quiroz-Barroso, S., The Tuzancoa Formation: Evidence of an Early Permian Submarine Continental Arc in East-Central Mexico, 2005. International Geology Review 47 (9), 901-919.

PRESENTATIONS

- Rosales-Lagarde, L., Boston, P.J., Campbell, A., Ulmer-Scholle, D., Scholle, P., 2009. Regional Geologic Evolutionary Effects On Speleogenesis At Villa Luz Park, Tabasco, International Congress of Speleology, Kerrville, Texas, USA, July 19th to 26th.
- Rosales-Lagarde, L., Boston, P.J., Campbell, A., Pullin, M., 2009. Villa Luz Park Caves: Speleogenesis Based on Current Stratigraphic and Morphologic Evidence: International Conference "Hypogene Speleogenesis and Karst Hydrogeology of Artesian Basins", Chernivtsy, Ukraine, May 12th to 17th.
- Rosales-Lagarde, L., Boston, P.J., Pullin, M., Campbell, A., Stafford, K.W., 2009. Clasificación del agua de manantiales y su relación con la formación de cavernas en la región de la Sierra de Tabasco, Norte de Chiapas, México: IX Congreso Nacional Mexicano de Espeleología, Villahermosa, Tabasco, Enero 30- Febrero 2, 2009.
- Rosales-Lagarde, L., Campbell, A., Boston, P.J., Stafford, K.W., 2008. Sulfur and oxygen isotopes: evidence of H₂S spring sources, southern Mexico. Goldschmidt Conference, Vancouver, Canada, July 13th to 18th, 18c/14:45/1, A805.
- Rosales-Lagarde, L., Tobler, M., y Plath, M., 2008. Posibles amenazas y soluciones para la preservación de la Cueva de las Sardinas y sus formas de vida y características únicas: 1er Foro sobre el estado de la Investigación en la Región Sierra de Tabasco y Norte de Chiapas. Perspectivas Para El Desarrollo Intercultural, 25, 26 y 27 de junio, Oxolotán, Tabasco, México.
- Rosales-Lagarde, Laura, Boston, Penelope J. , Stafford, Kevin W., 2008 Characteristics of caves at the Villaluz Park, Tabasco, southern Mexico: 16th International Karstological School "Classical Karst" – Karst Sediments, Postojna, Slovenia, 16 to 20th June.
- Rosales-Lagarde, Laura, Campbell, Laura, Boston, Penelope J., Stafford, Kevin W., 2008. Groundwater Flow-Path Identification in the Tabasco-Chiapas Mountain Range, Southern Mexico: Karst from Recent to Reservoirs, Karst Waters Institute, June 6 to 11, Rapid City, South Dakota, USA, 170-171.
- Rosales-Lagarde, L., Spilde, M., Boston, P.J., Campbell, A., Pullin, M., and Stafford, K.W., 2007. Possible regional groundwater connections: Chemistry of H₂S-rich springs east of El Chichon Volcano: in Espíndola, J.M., Arce, J.L., and Macías, J.L. eds., Proceedings of the Commemorative Conference "El Chichón Volcano: Twenty-five years later". Universidad Nacional Autónoma de México, Instituto de Geología, Publicación Especial 6. San Cristóbal de las Casas, Chiapas, México, p. 95.
- Rosales-Lagarde, L., Boston, P.J., Spilde, M., Campbell, A., and Stafford, K.W., 2007. Cuevas de Tabasco: en búsqueda de la extensión de la espleogénesis hipogénica en el área. 2007 I Congreso FEPUR / V Congreso FEALC, Descubriendo el mundo subterráneo de América Latina y el Caribe, Programa de Conferencias y Actividades, p. 135-136.

- Stafford, K.W., Rosales-Lagarde, L., Nance, R., and Boston, P.J., 2007. Speleogenetic evolution from rising to descending fluids: Gypsum karst of southeastern New Mexico and far west Texas. Geological Society of America, Abstracts with Programs, Vol. 39, No. 6, accepted.
- Rosales Lagarde, L., Boston, P.J., Pullin, M., Stafford, K.W., 2007. Exploración de la extensión de la espeleogénesis por ácido sulfúrico en la región norte de Chiapas, sur de Tabasco, México. VIII Congreso Nacional Mexicano de Espeleología, Unión Mexicana de Agrupaciones Espeleológicas, Cuetzalan, Puebla, 2-5 Febrero, Memorias, p. 65-66.
- Centeno-García, E., Rosales-Lagarde, L., and Soreghan, G.S., 2005. Evidence for late Paleozoic magmatism in western Pangea (Mexico): Geological Society of America, Rocky Mountain Section, 57th annual meeting, Abstracts with Programs - Geological Society of America 37, no. 6: 43.
- Boston, P.J., Spilde, M.N., Northup, D.E., and Rosales-Lagarde, L., 2005. Subsurface Sulfur Systems for Astrobiological Applications: Salt Lake City Annual Meeting (October 16–19, 2005) ,Session No. 118, Terrestrial and Extraterrestrial Environments for Microbial Survival II, Geological Society of America Abstracts with Programs, Vol. 37, No. 7, p. 267.
- Angeles-Serrano, G., Rosales-Lagarde, L., Ramos-Leal, J. A., 2004. Características de flujos regionales, y su manifestación, tres casos en México. Topic 1: Environmental issues of groundwater-flow scaling/ Aspectos ambientales asociados con la escala del flujo de agua subterránea. XXXIII IAH Congress, VII ALHSUD Congress.
- Rosales Lagarde, L., Boston, P.J., 2005. Fuente e Importancia del Ácido Sulfhídrico en la Cueva de Villa Luz, Tabasco, México. Resumen VII Congreso Nacional de Espeleología. Resúmenes y Programa, Febrero 2-6.
- Hose, L.D., Boston, P.J., Curry, M., and Rosales-Lagarde, L., 2005. El nuevo Instituto Nacional de Investigación de Cuevas y Karst: su papel en la comunidad internacional de Cuevas y karst: VII Congreso Nacional de Espeleología, Resumen y Programa. Febrero 2-6.
- Rosales-Lagarde, L., Centeno-García, E., Dostal, J. 1998. Petrogenesis of Permo-Carboniferous volcanosedimentary rocks near Molango, Eastern Mexico. Laurentia-Gondwanan Connections before Pangea, Oaxaca City, Oaxaca Mexico, International Geological Correlation Program Project 376.
- Rosales-Lagarde, L., Centeno-García, E., Ochoa-Camarillo, H., Sour-Tovar, F. 1997. Permian volcanism in eastern Mexico-preliminary report, in México, Instituto de Investigaciones en Ciencias de la Tierra de la Universidad Autónoma del Estado de Hidalgo e Instituto de Geología de la Universidad Nacional Autónoma de México, ed., II Convención sobre la Evolución Geológica de México y Recursos Asociados: Libro-guía de las excursiones geológicas, Excursión 1: Pachuca, Hidalgo, p. 27-32.

RESEARCH EXPERIENCE

- Soil sampling for evapotranspiration remote sensing assesment- Dr. Jan Hendrickx. May to August, 2008.
- Research assistant- Dr. Penelope J. Boston. August 2004 to July 2008.

- Research assistant- Dr. Joel Carrillo Rivera, Geography Institute, National University of Mexico, 2002 to 2004. Project: *“Consulting over geohydrologic considerations of the relationship forest-water in the Sierra Gorda Region, Queretaro”* for the Environmental Office of the Ecology Institute. UNAM, Mexico. November- December, 2002.
- Research assistant- Dr. Dante Morán-Zenteno 2000.
- Participant on the Undergraduate Summer Research Program. Baylor University, Waco, Texas. June - July 1993.

SCHOLARSHIPS

- National Council of Science, Mexico. Scholarship covering tuition and stipend during my current studies (Doctorate), 4 years.
- Monterrey Technologic Institute of Superior Studies (ITESM) Campus Monterrey. Partial support of tuition payment for undergraduate level, 4.5 years.

TEACHING EXPERIENCE

- Teacher Assistant- Cave and Karst Systems, New Mexico Tech, August-December, 2007.
- Guide at the Geology Museum, Universidad Nacional Autónoma de México. November 2002 to January, 2003. Audience: General Public.
- Assistant Professor- Engineering Faculty. Universidad Nacional Autónoma de México. Subject: *“Photogeology and geologic map interpretation”*. November 2000- september 2002.
- Professor of Chemistry, Analytical Chemistry- Level High School and Undergraduate, respectively. September-june 1996.

GRANTS

2008 Marie Curie Grant
2008 Goldschmidt Travel Grant
2006 Graduate Student Association- Matuszeski Research Grant
2006 Anton and Anita Budding Research Grant
2007, 2006 Graduate Student Association- NMT Travel Grant

MEMBERSHIPS

- Member of the Mineralogical Society of America since 2004
- Member of the Geological Society of America since 2004
- Member of the American Association of Petroleum Geologists since 2006
- Member of the Society of Economic Geologists since 2006

- Member of the National Spelological Society since 2004
- Member of Bats Conservation International since 2007
- 2007 to present Science Director- Caves of Tabasco Project, National Speleological Society
- Member of the *Sociedad Mexicana de Exploraciones Subterráneas* since 1999
- Member of the *Unión Mexicana de Asociaciones Subterráneas* since 1997

• <i>Language:</i>	translate	spoke	write
English	90%	90%	90%
French	60%	10%	10%
German	20%	-	-