

# LSU's Program in Applied Depositional Geosystems

September 24, 2007

# Student Demographics

Spring Hill College, AL

Northern Arizona University, AZ

Dillard University, LA

Louisiana State University (2), LA

University of New Orleans, LA

Colby College, ME

Millsaps College, MS

Pennsylvania State University, PA

University Tennessee, TN

Southern Methodist University, TX

Texas Tech University, TX

- 12 Students
- Average UG GPA 3.6
- 11 Colleges/Universities
- 8 States
- 6 men
- 6 women
- 1 minority
- 1 foreign national

# ADG Student Thesis Topics

- Jill Womack - Modeling Late Quaternary conditions to estimate fluvial sediment supply to shelf-margin deltas along the northern Gulf of Mexico
- Robin Murray - Quaternary Sea Level Change in the Northern Gulf of Mexico
- Chad Phillips - Analysis of Hydrocarbon Migration in Southern Sabine Uplift
- Angela Pell - Evolution of an allochthonous salt system, Mars-Ursa Basin, northern Gulf of Mexico
- Sam Gray - The Middle Miocene Climate Shift on the Ross Sea Continental Shelf : A First Order Test of the Marine Oxygen Isotope Record
- Anna Marie Belanger – Regional Fluid Flow of the North Slope Foreland Basin, Alaska
- Clint Edrington - Subsidence in South Louisiana
- Matt Garvin - Stratigraphic and sedimentologic architecture of the Trinity River Incised Valley Fill
- Vincent Adams - Do deep-sea sedimentary cycles at ODP Leg 178 drift sites record Antarctic Peninsula Ice Sheet grounding events?
- Rhonika Robinson - Glacial erosion rates, Olympic Mountains
- Corine Armstrong – Provenance of Santa Fe Formation sediments, western U.S.
- Eric Prokocki - Holocene Mississippi River Avulsion History: Yazoo Basin, Mississippi

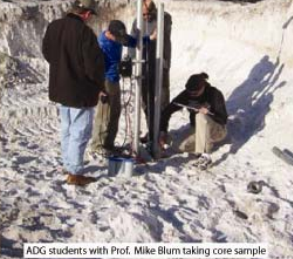
# LOUISIANA STATE UNIVERSITY

## Master's Program in Applied Depositional Geosystems

**\$25,000** Stipends  
plus Tuition to well  
qualified students

This special program provides a focused curriculum of classes, cross-training with petroleum engineers, and thesis research projects pertinent to oil exploration and production. Fifteen Oil Companies recruited at LSU in fall 2006

ADG student Chad Phillips at a drill rig during his internship



ADG students with Prof. Mike Blum taking core sample



ADG Students Robin and Clint gather GPR data for Robin's thesis in Florida

Inquires: Graduate Coordinator  
Department Geology & Geophysics  
Louisiana State University  
Baton Rouge, LA 70803  
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www.geol.lsu.edu/ADG

# Recruiting Efforts 2006-2007

This full size recruiting poster was distributed to 250 schools across the U.S. last fall

Information on ADG is also available on our website, Department Recruiting Poster and Department Booth at AAPG and GSA Meetings

# Recruiting Site Visit

- 3-4 ADG applicants are brought in each spring for a 2 day group visit with 3-4 other top candidates. Each visitor is assigned a student host.
- Day One
  - Overview of Department/Program
  - Tour of Laboratories
  - 10 short presentations by faculty on research topics
  - Individual interviews with 3 faculty members
  - Graduate Student Forum on Careers/Recent Graduates
  - TGIF/Dinner with Graduate Students
- Day Two
  - Crawfish Boil
  - St. Patrick's Day Parade

# Faculty Participation

## ■ Major Professors

- Phil Bart
- Mike Blum
- Jeff Hanor
- Darrell Henry
- Jeff Nunn
- Jonathan Tomkin

## ■ Taught in Curriculum

- Brooks Ellwood
- Zaki Bassinoui, PE
- Steve Sears, PE

# ADG Curriculum

- **Section 1 - Common Courses (12 hours).** Courses address (a) fundamentals of petroleum geology, and (b) quantitative geophysical and geochemical skills required in the industry.
  - Formation Evaluation (taught by PE)
  - Geochemistry of Natural Waters & Sediments OR Physical Hydrogeology
  - Exploration and Environmental Geophysics
  - Seismic Stratigraphy OR Subsurface Geology

# ADG Curriculum

**Section 2 - Specialized Courses (12 hours).** Courses selected by student and advisor based on research interests and thesis topic. Examples of appropriate courses are listed below. Other courses can be substituted as appropriate. New classes are in bold face.

- Petroleum Geology
- Plate Tectonics
- **Stratigraphy**
- Reflection Seismology
- Advanced Structural Geology
- Deltaic Processes and Products
- Deepwater Depositional Environments
- **Fluvial Processes and Systems**
- Numerical Methods in the Geological Sciences
- Dynamics of Sedimentation
- **Sedimentary Provenance**
- Geodynamics
- Carbonate Systems
- **Reservoir Characterization**
- Clay Mineralogy
- Sequence Stratigraphy

# ADG Curriculum

- Section 3 - Seminars (4 hours)
- Section 4 - Thesis (6 hours)

# Graduate Classes 2005-2006

- Earth Systems
- Geomicrobiology
- Tectonics
- Coastal & Shallow Marine Deposition
- Reflection Seismology
- Geochemistry of Sediments & Natural Waters
- Isotope Geochemistry
- Reservoir Characterization
- Advanced Hydrogeology
- Special Topics: Sedimentology
- Exploration & Environmental Geophysics
- Deltaic Geology
- Sequence Stratigraphy
- Numerical Methods in the Geological Sciences
- Special Topics: biogeochemistry
- Special Topics: Geochemistry

# Graduate Classes 2006-2007

- Earth Systems
- Plate Tectonics
- Geomicrobiology
- Geochemistry of Sediments & Natural Waters
- Basin Analysis
- Carbonate Systems
- Formation Evaluation (PE)
- Chemical Oceanography
- Earth Materials & Environment
- Physical Stratigraphy
- Vertebrate Paleontology
- Subsurface Geology
- Physical Hydrogeology
- Fluvial Processes & Systems
- Clay Mineralogy
- Special Topics:  
Biogeochemistry methods

# Outside Speakers/Short Courses

- Mike Liebelt & Scott Szalkowski, Marathon
- Mark Rowan, Rowan and Associates
- Charles Oliver, Devon
- Rebecca Latimer, Chevron
  
- Eric Zimmerman, Dominion
- Chester Young, BakerHughes
- Landmark training

# Support Received

- Clarence P. Cazalot, Jr. - \$90,000
- Shell - \$95,000
- Chevron - \$75,000
- Marathon - \$30,000
- Dominion - \$80,000

# Other Sources of Support

- 7 out of 12 students supported by non-ADG funds (e.g., TA/RA)
- LSU pays tuition for all ADG students

# Pledged Support

- Marathon - \$120,000 (over 4 years)
- Dominion - \$100,000 (over 2 years)
- Shell - \$25,000
- Chevron - \$25,000

# Future Recruiting Options

- Other countries (e.g., UK or Norway)
- Recruiting visits to other schools
- Other curriculum (physics, chemistry, biology or Honors College)
- More involvement with SEG/SPE
- Add a Department booth at the American Geophysical Union meeting
  - 14,000 attendees last month
  - all abstracts accepted (large student attendance)

# Future Faculty Hires

## ■ Funded Positions

- Harrison Chair in Sedimentology
- Near Surface Geodynamics/Geophysics
- McCord Chair in Petroleum Geology
- John Franks Chair (Discipline Open)

## ■ Potential Cluster Positions (joint with PE, G&G, CE, CEE, ME, CCT)

- Borehole Geophysics
- Seismic Inversion/Attributes

# Pending/Planned Proposals

- Devon Foundation (now funded)
- ConocoPhillips
- EnCana
- Resubmit to BP
- ExxonMobil
  - 1 or 2 alumni donations of \$5,000 to \$7,500
  - 3 to 1 ExxonMobil Foundation match

# Other Funding Options

- Smaller companies provide a project specific Research Assistantship in the second year of the MS program
- ADG Endowment

# Managed Growth

- Our Undergraduate and Graduate Enrollments will go up in the next 5 years
  - More hires
  - Higher salaries
- LSU G&G in 1981
  - 90+ graduate students
  - 350+ majors
- How do we increase our enrollments while maintaining or even increasing quality of students and quality of training?