



## Oil and Gas News

by Steve Spencer and Ed Garrett

Oil and gas production began in Collier County, Florida in 1943 with the discovery of the Sunniland Field (Permit 42). In 1946 the Florida Geological Survey (FGS) began to regulate oil and gas (O&G) production, and to implement rules designed to prevent waste, insure safety and protect the environment. South Florida production expanded to 14 fields in Lee, Hendry, Dade and Collier counties. To date, cumulative production in South Florida

has yielded 103 million barrels of oil and 9 billion cubic feet of gas.

In 1970 oil and gas were discovered in Jay, Florida (Permit 417). Northwest (NW) Florida soon became one of the largest O&G producing regions in the United States. Ultimately, seven fields were discovered in NW Florida and more than 400 wells were drilled. The Jay Oil Field is located in Escambia and Santa Rosa counties. Over the years the O&G fields of NW Florida have produced 475 million barrels of oil and 613 billion cubic feet of gas.

Florida's O&G reserves and production continued to steadily decline throughout 2005. There are currently 47 producing wells in three fields in NW Florida compared to 18 producing wells in eight fields in South Florida. During the first five months of 2005, production in NW Florida has yielded 881,047 barrels (bbls) of oil and 1,553,391 (x1000 cubic feet) of gas. The South Florida fields have yielded 363,261 bbls of oil and 38,743 (x1000 cubic feet) of gas for the same time period. The field offices remained busy conducting a total of 1,667 inspections on wells and facilities through the first half of 2005. Although there haven't been any new drilling applications this year drilling operations were initiated on three wells, Permits 1320, 1321 and 1322.

## Geophysical

Geophysical permitting began in 1985 as a result of heightened concern for public safety and environmental issues. This year, one geophysical permit was issued, to Zinke and Trumbo, Inc. from Houston, Texas. They plan

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**Oil and Gas Statistics through August 2005  
(unless otherwise stated):**

	<b>South Florida</b>	<b>North Florida</b>
Number of active-fields	8	3
Number of wells currently producing oil and gas	18	47
Amount of oil and gas produced through May 2005	<ul style="list-style-type: none"> <li>•363,261 bbls oil</li> <li>•38,743x1000 cubic feet gas</li> </ul>	<ul style="list-style-type: none"> <li>•881,047 bbls oil</li> <li>•1,553,391x1000cubic feet gas</li> </ul>
Number of inspections in 2005 through June 2005	1200	466
Number of new applications statewide:	0	0
Number of wells spudded in 2005	0	3
New geophysical permits issued	0	1

**Plugging Program Results:**

1. Permit 222, HOHR, J. A. Currey #1, Collier County, 1955, TD 11,937 (sec 8, T47S, R29E)
2. Permit 8, HORC, N. R. Carroll #1 Osceola County, 1946, TD 8,045 (sec 10, T27X, R 34E)

to conduct a Vibraseis operation instead of the more traditional exploration techniques using explosives and geophones. Trucks will vibrate a small section of the ground for a short increment of time and record reflection times using geophones. The work will be conducted in Santa Rosa and Okaloosa counties along an 18-mile stretch of Interstate 10. Using the same permit and technique, they will explore an eight mile segment along a north-south corridor near the Yellow River. There are no other approved geophysical permits in Florida at this time.

*Plugging Program*

This year the O&G section's engineer oversaw the completion of a plugging project which began in 2004 on Permit 222. The Humble Oil and Refining Company (HORC), J.A. Currey #1 well, which was originally drilled in 1955 to a depth of 11,937 feet below land surface (BLS) in Collier County, was re-entered and plugged in accordance with modern plugging procedures. Additionally a second well, Permit 8 (HORC, N.R. Carroll #1) that was drilled in 1946 to a depth of 8,045 feet BLS, was plugged. The total 2005 cost for plugging the two wells was about \$206,000 and insures that the potable zones of the aquifer are properly sealed off from potential salt-water contamination.

*Offshore Program*

Years of prolonged litigation ended in 2005 with the \$12.5 million state buyout of Coastal Petroleum's offshore mineral rights in state waters. Coastal had retained drilling leases since 1947 for exploration within 10 miles of the coast from Franklin to Collier counties. The buyout eliminates the possibility of drilling for oil and gas within a 10-miles of the west Florida coastline. No other drilling leases for offshore submerged lands have been granted by the state.

## *Springs Initiative Update - by Harley Means*

In April and July 2005, the Florida Geological Survey's springs sampling teams conducted sampling and discharge monitoring at 54 first, and selected second, magnitude springs as part of the Florida Springs Initiative. Data collected quarterly are utilized to look at trends in water quality and quantity in Florida's springs. Once collected, the water quality samples are analyzed by the Florida Department of Environmental Protection (DEP) lab and the data are entered into a water quality database. These data will soon be accessible via a web portal that is currently being designed by DEP staff.

The Springs Swallet Inventory team has continued its work cataloging swallets in first magnitude springsheds throughout the state. Data collected from this project are entered into a database and will ultimately be used to create an ARCGIS coverage that will allow the creation of custom maps. To date the teams have cataloged 115 swallets from Holmes County

in the panhandle, to Hillsborough County in central Florida. The work will continue through June 2006.

The Springs Quarterly Sampling Project recently lost two long-time employees, **Ryan Means** and **Rebecca Meegan**. Ryan and Rebecca were the original sampling team hired to conduct the sampling and inventory for the update to the Springs of Florida. They continued as springs samplers until the completion of Bulletin 66, The Springs of Florida. Their dedication and hard work earned them a Springs Protection Award from the Florida Springs Task Force along with other accolades.

In June 2005, **Mike** and **Anita Nash** were hired to perform Springs Quarterly Sampling Project duties. Anita comes to us from DEP where she was a surface water/groundwater sampler. Mike was formerly with DEP as a Park Ranger at Wakulla Springs. They recently completed July/August quarterly sampling and discharge monitoring. Their duties include as much as eight months of field work during the course of the year.



**Diana Thurman-Nowak** (center of boat) training **Mike & Anita Nash** (front and rear of boat)

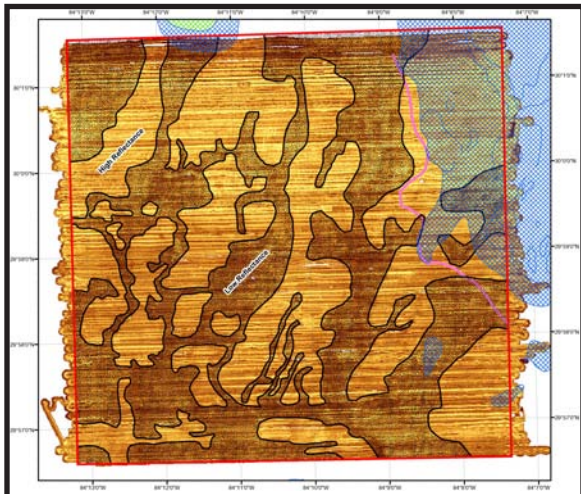


**Ryan Means & Rebecca Meegan** win Springs Protection Award (photo by **H. Means**).

## *Coastal Research Program - by Dan Phelps*

### *The Apalachee Bay Coastal Area Management Project*

A recent investigation, conducted by the Florida Geological Survey's (FGS) Coastal Research Program, with funding from the Coastal and Aquatic Managed Areas (CAMA) program, involved mapping seabed features on state submerged lands in a selected portion of Apalachee Bay. A Marine Sonic Sea Scan System operating at 600 kilohertz (kHz), a Garman 168 Global Positioning and Bathymetric System operating at 50 kHz and an ORE Geopulse seismic profiler operating at 4.5 kHz were used for data collection. This study examined an approximate 25 square-mile area of seabed using bathymetric charting and side scan sonar mosaics. Over 500 miles of side scan sonar and approximately 15 miles of seismic profiler data were collected offshore of Wakulla County, Florida. This data was subsequently processed and interpreted. A total of 36 seabed sampling locations were visited and 34 grab samples collected and described. Of those locations, 10 were also photographed with an underwater camera and characterized.



Enhanced side scan sonar mosaic. Drowned channels are represented by dark areas.

A number of narrow, relatively linear, features lying at more or less right angles to the coast and exhibiting a strong correlation with bathymetric lows were noted. These features are interpreted to be drowned channels and estuarine complexes associated with streams that existed prior to the St. Marks and other rivers which currently drain into Apalachee Bay. In the eastern portions of the survey area are regions of more uneven and rough seabed suggestive of submarine outcrops of consolidated, more resistant strata.

The data discussed above is accessible on a CD within the report supplied to the Coastal and Aquatic Managed Areas program. The bathymetry is provided as a bathymetric chart. The side scan sonar and seismic data are provided as processed images. The side scan data are also displayed as mosaics at various resolutions. The resolutions selected are useful in investigating features best expressed at differing scales. Highest resolution provided in the report is 1.6 feet (0.5 meter). This report will form the basis of

the FGS's Report of Investigation 105.

### *Offshore Sand Search Investigation*

The Coastal Research Program began the fourth year of a comprehensive study to identify potential sand resources for beach replenishment off Florida's northeast shore. Over 275 miles of seismic data was collected in July, while over 1000 miles of seismic data has been collected to date offshore of Nassau, Duval, St. Johns, Flagler and Volusia counties. As part of the investigation, samples have been collected at intervals approximately one-mile from all of the beaches in these counties. Grain size analyses for all counties except Volusia have been completed.

The Year 3 Report for this project is currently being prepared. It will contain seismic data supplied as processed images and 57 line miles of electrical resistivity data. Results will be reported for vibracores collected offshore of Nassau and Duval counties. Granulometric analyses of beach sands from Flagler County and offshore sediments from northern St. Johns County will be included in this report.

### *X-ray Diffractometer - by Jim Sparr*

The Coastal Research Program recently completed repair and testing of an X-ray Diffractometer (XRD). The XRD, a modified Rigaku Miniflex, was assembled from two partially functional units donated to the FGS by the U. S. Geological Survey, and a Amptek XR-100T Xray Detector System on loan from the Florida State University's Physics Department. Two desktop computers run data acquisition and data interpretation programs.

X-ray diffractometry is a method of either determining the atomic spacing and structure of a crystal or identifying a crystalline (mineral) substance when the spacing and structure are already known.

The XRD represents a significant addition to FGS's analytical capabilities.



X-ray Diffractometer

## *Hydrogeology Section - by Jon Arthur*

The Hydrogeology Section web pages have been redesigned. To learn about research and activities of the Hydrogeology Section, please visit: <http://www.dep.state.fl.us/geology> and select "Hydrogeology" under the "Programs" heading on the left side of the page. Watch the site for updates on ASR research, water quality in Florida Springs, aquifer vulnerability and many other projects.

## *In other news*

FGS staff have been presenting research at a variety of workshops and conferences:

- ☞ A paper by **Dr. Jon Arthur, Alex Wood, Alan Baker, James Cichon** and **Dr. Gary Raines**, titled “Application of Weights of Evidence to Predict the Contamination Potential of Florida’s Principal Aquifers” was presented at the International Association of Mathematical Geology 2005 Conference on August 21-26, 2005 in Toronto, Canada. Due to FDEP travel restrictions, Dr. Raines (U.S. Geological Survey) presented the paper.
- ☞ **Dr. Arthur** gave a presentation on the “Florida Aquifer Vulnerability Assessment” at the 2005 Florida Environmental Health Association Annual Education Meeting and Trade Show on August 11, 2005 in Jacksonville Beach, Florida.
- ☞ At the multi-sponsored workshop “Solving Water Pollution Problems in the Wakulla Springshed of North Florida” held in Tallahassee on May 12 and 13, 2005, FGS staff served as moderators over the two-day period. Workshop sessions on Stormwater Runoff and Septic Systems were moderated by **Drs. Jon Arthur** and **Rodney DeHan**, respectively.
- ☞ **Drs. Walt Schmidt** and **Jon Arthur** attended the 97<sup>th</sup> Annual meeting of the Association of American State Geologists in St. Charles, IL on June 12 – 15. At the meeting **Dr. Arthur** was affirmed as Chair of the Associates Caucus for 2007.

## *Education and Outreach - by Paulette Bond*

### *Tallahassee School of Arts and Sciences Water Celebration*

The FGS was invited to participate in a Water Celebration at the Tallahassee School of Arts and Sciences last February. **Paulette Bond** designed and led several interactive activities for mixed age groups ranging from kindergarten to 8<sup>th</sup> grade, demonstrating some of the ways that water interacts with rocks .

### *Sabal Palm Science Carnival*

The FGS participated in a March 15<sup>th</sup> event organized to get 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> grade students excited about science. **Paulette Bond** presented several activities with able young assistants introducing students to Florida’s rocks, water and its fragile environment.

### *Wakulla Watershed/Springshed Field Survey*

On March 16, the FGS staff participated in a workshop, hosted by Department of Environmental Protection’s Office of Environmental Education, designed to introduce park rangers to the hydrogeology of springsheds. **Paulette Bond** presented short discussions of karst features and their relationship to the Wakulla Watershed/Springshed.

### *Earth Day at the Capitol*

On April 22, the FGS staff joined with Department of Environmental Protection’s Office of Education and Outreach in an Earth Day celebration at the Florida Capitol. The FGS brought its mobile GEOLAB and **Jackie Lloyd, Frank Rupert, Walt Schmidt** (State Geologist) and **Dave Taylor** directed students in interactive activities, discussed Survey programs with guests and handed out selected publications to interested participants.



The FGS GeoLab at the Capitol on Earthday.

## *Wakulla Wildlife Festival*

FGS staff members, **Carol Armstrong**, **Brie Coane**, **Sarah Ramdeen** and **Tom Scott**, with guest **Nada Stauffer**, represented FGS at the Wakulla Wildlife Festival held on April 23 at Wakulla Springs State Park. In keeping with the event's focus on conservation of Florida's environment and its wildlife, the exhibit focused on Florida's springs and their protection.

## *State Instructional Materials Committee*

**Paulette Bond**, Professional Geologist with the FGS, was appointed by Commissioner of Education **John L. Winn** to the 2005-2006 State Instructional Materials Committee for Science, Grades 6-8, effective April 1, 2005 for a term of 18 months. The 10-member committee, selected from the entire state, is responsible for evaluating instructional materials submitted by various publishers and recommending appropriate materials for adoption. Committee members received 12 hours of training in preparation for the work. Instructional materials are used for six years following adoption.



Kate Sullivan Science Fair Judges; left to right: **Clint Kromhout**, **Cindy Fishler**, **Tom Greenhalgh** (kneeling) and **Harley Means**

## *Kate Sullivan Science Fair*

**Tom Greenhalgh** of the Hydrogeology Section has chaired Kate Sullivan Elementary's Science Fair Judging for the past several years. In April, he recruited **Cindy Fishler**, **Clint Kromhout** and **Harley Means** to assist with judging the school's Science Fair projects. This is a wonderful opportunity for staff to interact with, and encourage, children in their study and understanding of science and its process. This event is an exciting and fulfilling experience for students and judges.

## *Earth Science Week 2005*

On Friday, October 14, 2005, the Florida Geological Survey will hold its annual Open House celebrating Earth Science Week at the Gunter Building. The Open House is from 10:00 am to 5:00 pm. Earth Science Week is organized each year by the American Geological Institute to focus on the science of the various earth processes that affect all of us. The theme for this year's event is "Geoscientists Explore our Earth". Governor Bush recognized Earth Science Week with a proclamation

that can be viewed at <http://www.dep.state.fl.us/geology/events/govproc2005.htm> .

We will be joined for this year's celebration by the U.S. Geological Survey: Tallahassee office, Northwest Florida Water Management District and the Department of Environmental Protection's Office of Environmental Education. Interactive activities appropriate for various age groups are planned and the local home-schooling community will be our special guests. The general public is also invited for facility tours and brief discussions of ongoing projects.

We have also planned special activities to assist Webelos Scouts earn their Geology Badges. Scout Night is planned for the evening of October 18 from 6:30 p.m. to 8:30 p.m. to accommodate Scouts who usually meet in the evening.

## *Cooperative Training*

The FGS is beginning its third year of a cooperative project with the Leon Advocacy and Resource Center (LARC) and the Leon County School (LCS) system. The program provides special needs students with the opportunity to experience different types of entry-level jobs in many different fields including nursing, office/clerical, landscape maintenance and the computer field.

This year, a new group of students will be coming to our main facility -- the Gunter Building. They will be accompanied by LARC and LCS job coaches and will spend two days each week scanning the Survey's collection of lithologic logs. This information will help the students improve their computer skills. During the two years that students have been participating they have scanned more than 8,000 documents.

The compilation contains thousands of lithologic descriptions collected over approximately 75 years and maintained in 141 large, green loose-leaf binders, which for obvious reasons were labeled the "Greenbooks." Although much of the data from the logs have been entered into an electronic database, the database is not designed to accommodate the large amount of information available in driller's logs, early records and historic letters. The well logs provide essential data for understanding groundwater resources and related environmental issues. Earth science professionals and students use this material to study geology and hydrogeology, and to prepare surface and sub-surface maps for numerous environmental and scientific applications. Scanning the logs into digital books gives all DEP employees access to this wealth of information. The scanned Greenbooks will be available on the FGS intranet by going to <http://depnet/geo/> as they are completed.

LARC coordinator **April Merritt**, along with LCS Employment Consultant, **Jim Barnard** manage the program with FGS staff **Carol Armstrong** and **Paula Polson**.

## Florida's Mining Industry - by Jim Balsillie

Based on preliminary U. S. Geological Survey data, in 2004 the estimated value of non-fuel mineral production for Florida increased \$141.7 million over the 2003 amount (a 6.8 percent increase). Florida's non-fuel mineral production decreased in value during 2002 to 2003 by 1.5 percent after increasing in value by 13 percent from 2001 to 2002.

In 2003, the State ranked fifth among the 50 states in total non-fuel mineral production value and accounted for more than 5 percent of the U.S. total.

Florida continued to lead the nation in phosphate rock mining by yielding approximately 75 percent of U.S. production and 25 percent of the world's production. Phosphate rock is mined in only four states. In terms of value, phosphate rock, crushed stone, cement (Portland and masonry) and construction sand and gravel continued to be the most important raw, non-fuel mineral commodities mined in Florida. The dollar value of these four mineral commodities accounted for 91 percent

of Florida's 2004 mining industry while Fuller's earth, magnesium compounds and heavy mineral production accounted for an additional 8 percent.

Mined Commodity	2002		2003		2004	
	Quantity	Value	Quantity	Value	Quantity	Value
Proprietary Mined Commodities <sup>4</sup>	W	\$962,685	W	\$917,801	W	\$935,432
Cement						
Masonry	591	\$64,000 <sup>e</sup>	674	\$82,900	700	\$87,000
Portland	3,949	\$297,000 <sup>e</sup>	4,190	\$322,500	4,190	\$322,500
Clays						
Common	W	W	94	\$1,284 <sup>e</sup>	104	1,284
Fuller's Earth	W	W	W	W	W	W
Kaolin	32	\$3,367	31	\$3,245	35	\$3,345
Collectable minerals and fossils	NA	\$200 <sup>e</sup>	NA	\$200 <sup>e</sup>	NA	\$200 <sup>e</sup>
Peat	559	\$11,523	373	\$7,440	372	\$7,317
Sand and Gravel						
Construction	26,434	\$113,512	30,883	\$140,964	30,700	\$142,931
Industrial	645	\$8,637	624	\$7,270	529	\$7,354
Stone, crushed	97,731	\$573,297	97,535	\$591,557	100,000	\$620,000
Totals:	129,941	\$1,673,021	134,404	\$2,073,677	136,630	\$2,127,163

<sup>1</sup>Commodity assessments are made by mine shipments, sales, or marketable production including consumption by producers.  
<sup>2</sup>Data are rounded to no greater than three significant digits.  
<sup>3</sup>2004 data are preliminary.  
<sup>4</sup>Valuation of mined commodities for Fuller's earth, magnesium compounds, phosphates, staurolite, titanium minerals (ilmenite and rutile), and zirconium products are subject to private industry proprietary or national security constraints.  
<sup>e</sup>Estimate.  
W = withheld information subject to proprietary constraints.  
SOURCE: U. S. Geological Survey, Reston, VA.



### **GEOHAZARDS – FLORIDA STYLE!**

Recently, for a lecture given to an Environmental Hazards course at FSU, I was compiling a list of natural and human induced (anthropogenic) geohazards that impact Floridians. Most people immediately think of earthquakes and volcanoes as geohazards that impact human society, and most people, also, do not think Floridians have to worry about these kinds of events. However, there are many different geohazards that can affect us, most related to our close proximity to the coast, low topographic elevation, carbonate geology and abundant water resources. These hazards arise from the dynamic interaction of the Solid–Earth system with the Hydrologic and Atmospheric systems. We must understand these three systems in order to plan for and mitigate potentially hazardous situations that can endanger our population, damage our environment and lead to the loss of our natural resources. Some examples (in no particular order) include:

- » **Coastal impacts from hurricanes and storms.** These impacts include geologic consequences of water associated with run-off in drainage basins resulting from large amounts of rain, storm surge, wind damage and sediment loading and scouring. Gradually changing sea-level may exacerbate these impacts.
- » **Erosion and accretion of sediment.** Riverine and coastal areas may be dramatically impacted by the effects of erosion, or in other locations sediment accumulation. Often these processes have both natural and anthropogenic causes related to poor infrastructure design. Gradually changing sea-level may exacerbate the impacts of erosion.
- » **Flooding of uplands.** Areas close to lakes, rivers, karst depressions and wetlands are commonly flooded. The topography of these features makes them susceptible to flooding and the problem is exacerbated by natural run-off, anthropogenic storm water run-off associated with development, ground water discharge, and pavement and construction that interfere with aquifer recharge.
- » **Landslides.** Landslides are extremely rare in Florida; only one has occurred during recorded history. Typically they are associated with steep slopes where poorly consolidated soils and sediments move downward, influenced by gravity. Flooding rains are thought to play a role.
- » **Soil loss from oxidation.** Soil loss from oxidation occurs when carbon from highly organic soils combine with oxygen resulting in the loss of the soils. These processes often accompany dewatering associated with agriculture and development. Oxidation of soils can cause dramatic localized land subsidence.
- » **Pipe clay.** Pipe clay is a general term for clays that can retain water and swell, or in times of drought, release water and shrink. The presence of these clays can cause foundation damage and wall cracking due to shrinking and swelling.
- » **Geochemical hazards.** Some elements in the Florida environment may pose health hazards by virtue of radioactivity (uranium and its decay daughters including radon) and toxicity (mercury and arsenic). Uranium and its decay daughters, including radon, have natural sources in Florida while mercury and arsenic have mainly anthropogenic sources. The individual chemistry of each element governs its behavior in the environment.
- » **Salt water encroachment.** This problem is typically associated with coastal areas as a result of excessive ground water use. In some parts of Florida, it also occurs when salt water moves up from below the fresh water aquifer.

- » **Contamination of surface water bodies and ground water.** Florida's ground and surface water resources are vulnerable to contamination. Human activities such as poor well construction or placement, septic tanks, landfills, leaking underground tanks, surface spills and contaminated run-off, can have a long-lasting affect on potable water resources, coastal waters and public health.
- » **Rip currents.** Rip currents arise when weather conditions cause large amounts of water to accumulate behind offshore sand bars. When the waters finally breach the bars, swift currents transport waters far offshore. In Florida's tourist-driven economy these currents take the lives of a number people each year.
- » **Tsunamis.** Due to Florida's position on the trailing edge of the North American plate, the possibility of a tsunami is considered remote. In light of the 2004 Indonesian earthquake and tsunami we must recognize the possibility. The eastern Caribbean/Puerto Rican trench is an active plate boundary and volcanic islands in the eastern Atlantic have been identified as having the potential for submarine landslides.
- » **Earthquakes.** With Florida's location on the trailing edge of the North American plate, earthquakes are also rare. However 17 "shocks" were felt during the last century, although they may not all have been earthquakes.
- » **Sinkholes.** Different kinds of sinkholes occur because the depth of the limestone and the type of sediment covering the limestone varies. Different types of sinkholes are associated with different amounts of damage. The process of sinkhole development is natural and continuing but may be triggered by human activities. Sinkholes are associated with safety, economic and environmental concerns.



The Winter Park Sinkhole developed suddenly on May 8, 1981

This list demonstrates the interaction we as a human species have with the dynamic earth. We are subject to all its hazards and forces, and we must be knowledgeable and informed to best prepare and plan our societal response.

## *STATEMAP Program - By Rick Green*

The STATEMAP Program is a cooperative project funded jointly by the FGS and the National Cooperative Geologic Mapping Program (NCGMP) under the State Geologic Mapping Component (STATEMAP).

In September of 2004, the FGS staff began working on production of a bedrock geologic map and several geologic cross sections for the eastern portion of the 1:100,000 scale Gainesville Quadrangle. Field mapping began in October 2004, with a planned completion date of October 2005. The maps and cross sections for this area will be available through the FGS's Open File Map Series beginning November 2005.

Following input and an October workshop with the Florida Geological Mapping Advisory Committee, the western portion of the USGS 1:100,000 Lake City Quadrangle in north-central Florida was selected for the next area to be mapped under the STATEMAP program. The NCGMP awarded the FGS \$108,780 for geologic mapping in the western portion of the Lake City quadrangle. The project will begin September 1, 2005 and run through August 31, 2006, with the resulting geologic map published as part of the FGS's Open File Map Series in the Fall of 2006.

## *New Core Drilling Rig - by Craig Berninger*

The Florida Geological Survey took delivery of a new Schramm T450MIIA drill rig during the first week of June 2005. Two drill manufacturers, Schramm Rotadrills of West Chester, Pennsylvania and Universal Drilling Rigs (UDR) of Australia, partnered to design and build the one of a kind, state of the art drill. The base of the drill is a Schramm T450M; the tophead, pipe spinner and hydraulic table clamp were supplied by UDR.

The Schramm T450MIIA is mounted on an International 7400 6x6 Chasis with a Power Take-Off (PTO) to run the drill. The new drill has four different pumps: a Gardner and Denver 5x6 mud pump, Moyno 3L8, Flowmax centrifugal and a Mission centrifugal pump, all hydraulically driven. A Sullair 300/200 air compressor is included for air rotary drilling or well development. A jib boom that rotates 270 degrees is located at the top of the 36' mast with a single 15,000 pound winch line. A wireline winch is also mounted on the backside of the mast with a capacity of 3,200' of 3/16" cable for wireline coring operations.

Before acquisition of the Schramm, the FGS's deep core drilling program used a Failing 1500 rig purchased in the 1980s. When the Failing 1500 was new, it had a coring capacity of 1,500 feet. However in recent years, as the rig aged, drillers were limited to a maximum drilling and coring depth of approximately 1,100 feet. The Schramm T450MIIA allows for a total coring depth of 3,000 feet, more than doubling the total coring depth of the previous drill rig. The Schramm also allows for safer drilling operations due to better control design and newer technologies for handling casing and drill rod.



## *Legislation Impacting Geologists - by Jon Arthur*

This past spring a Senate staff analysis by the Environmental Preservation Committee stated: "DEP reports that section 403.0877, F.S., recognizes the professional geologist as an appropriate professional to conduct work under Chapter 373 F.S., however, this section of statute is subject to interpretation and as a result often excludes professional geologists from performing services under Chapter 373, F.S. The present situation also results in professional geologists unable to submit proposals for projects that Chapter 492, F.S., recognizes them as licensed to perform. This restriction on "who can perform this work under Chapter 373, F.S.," causes financial hardship both on the affected geologists and those needing geology-related work performed."

As a result of the above concern, during the last legislative session, representatives from the Florida Association of Professional Geologists worked toward adding Professional Geologists to the Water Resources Act (403 F.S.). On June 08, 2005, Governor Bush signed into law HB 1289 - Signing and Sealing by Professional Geologists. The bill, which was sponsored by **Representatives Jordon** and **Goldstein** and **Senator Saunders**, authorizes the Department of Environmental Protection and the governing boards of water management districts to require signing and sealing of appropriate documents and reports by professional geologists, effective, July 1, 2005.

## Conferences:

- ☞ 4th Annual Marion County Springs Festival - September 24-25, 2005 - Rainbow Springs State Park, Dunnellon, Florida
- ☞ The Geological Society of America - Annual Meeting and Exposition - October 16-19, 2005 - Salt Lake City, Utah
- ☞ Aquifer Storage Recovery V - October 20, 2005 - Tampa, Florida

Visit the American Geological Institute website at <http://calendar.agiweb.org/> for a complete listing of Geology-related Conferences.

## Employee News - *by Jackie Lloyd*

### *Ed Garret Wins Askew Award*

**Ed Garrett**, Oil and Gas Section Administrator and a 21-year veteran with the Department, received the Askew Award at graduation ceremonies for Florida State University's Certified Public Manager (CPM) program. Ed attended the nationally-recognized training and development program for two years completing 13 outside projects and was one of 146 graduates. His winning project was based on developing and implementing a work plan which slashed the Department's costs for recertifying oil and gas well operating permits. Ed will represent the State at the National CPM Convention in New Hampshire in September.

### *Employee Changes*

On July 21, 2005, the FGS bid a fond farewell to **Cris Poarch** as he left to pursue his career goals at Municipal Bond Corporation. Cris began working at the FGS in October 24, 2001 as an IT Assistant. He quickly became an invaluable and integral part of our team and was promoted to the full time System Programmer I position, managing the entire FGS's computer system and local area network. We wish Cris the best of luck in his new job. Fortunately, shortly after departing his full-time position, Cris agreed to return as a part-time employee, allowing the FGS to continue benefiting from his IT experience and talent.

We congratulate **Jeremy Poarch** on his promotion from staff IT Assistant to full time System Programmer I, filling the vacancy left by **Cris Poarch**. Jeremy began working at the FGS as an IT Assistant in October 2002. Like his predecessor, Jeremy proved to be a quick study. Before long he was independently handling many of the IT tasks and became more of a partner than an assistant to the computer system manager. Jeremy has proven to be extremely competent, motivated and customer oriented. We are fortunate that, with his experience from the previous 2 years and 9 months, Jeremy was ready to "hit the ground running" in his new position.



**Ed Garrett** accepts the Askew Award from **Stacy Reese** of the Florida Society of Certified Public Managers. Photo by **Ryans Lee**/FSU Photo Lab

## *New Publications*

- \* MS 149 Potentiometric Surface of the Upper Floridan Aquifer in Florida, May 2000, by R.L. Marella and A.A. Sepulveda, 2004. Scale: 1:2,027,520. \$2.00.
- \* SP 57 Geological and Geotechnical Investigation Procedures for Evaluation of the Causes of Subsidence Damage in Florida, compiled by W. Schmidt, 2005, Online only.

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