Louisiana Geological Survey
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Coal Bed Methane in North Louisiana Reaching Its Potential

Warren Schulingkamp

When one thinks of the mineral resources of Louisiana, with its riches of conventional oil and gas, coal is not the first thing to come to mind. However, it has long been known that coal seams do occur in several formations of Tertiary age in north Louisiana (Meager and Aycock, 1942; Roland *et. al,* 1976; Coates, 1979; Coates, *et. al.,* 1980). Indeed, coal (in the form of lignite) is being surface mined and burned as fuel in an electric-generating plant in northwest Louisiana (Haque, 2000).

In many coal-bearing basins around the United States, coal bed methane (CBM) has become an important new source of energy, and thousands of wells have been drilled especially for CBM. Such has not been the case in Louisiana, but indications are that this is changing. Over the past five years, several operators have drilled over 100 wells in north Louisiana specifically for CBM. About one third of these wells were drilled in 2007 alone.

The Torch Operating #1 Greer (Fig. 1) was the first well in Louisiana to produce CBM from a coal seam. Recompleted from a conventional gas well, this well initially flowed 50 mcfd and 65 bwpd from the Russell Coal seam. However, it was abandoned shortly afterward (Echols, 2000).

There wasn't very much CBM activity during the following decade. Several studies by the Louisiana Geological Survey helped promote interest in CBM (Echols, 1995; 2000; 2001). Later several studies under the auspices of the US Geological Survey appeared as well. (Breland, *et. al.,* 2004; Warwick *et. al.,* 2000, 2004a, 2004b, 2004c).

With the coming of a new decade, interest in Louisiana CBM increased and new CBM drilling began within the state. Since 2001 over 100 such wells have been drilled, most of them within the last two years. The area of interest is in north central Louisiana. During the years 2001 – 2005, drilling activity focused on Winn, LaSalle, Caldwell, and Ouachita Parishes. In 2006 – 2007, the area of active drilling was in Caldwell and Richland Parishes, with one well drilled in Ouachita Parish.

Frank Spooner
Greer #3
Wildcat
Caldwell Parish, Louisiana
150'FSL & 990 FEL of Sec 21 T14N R4E

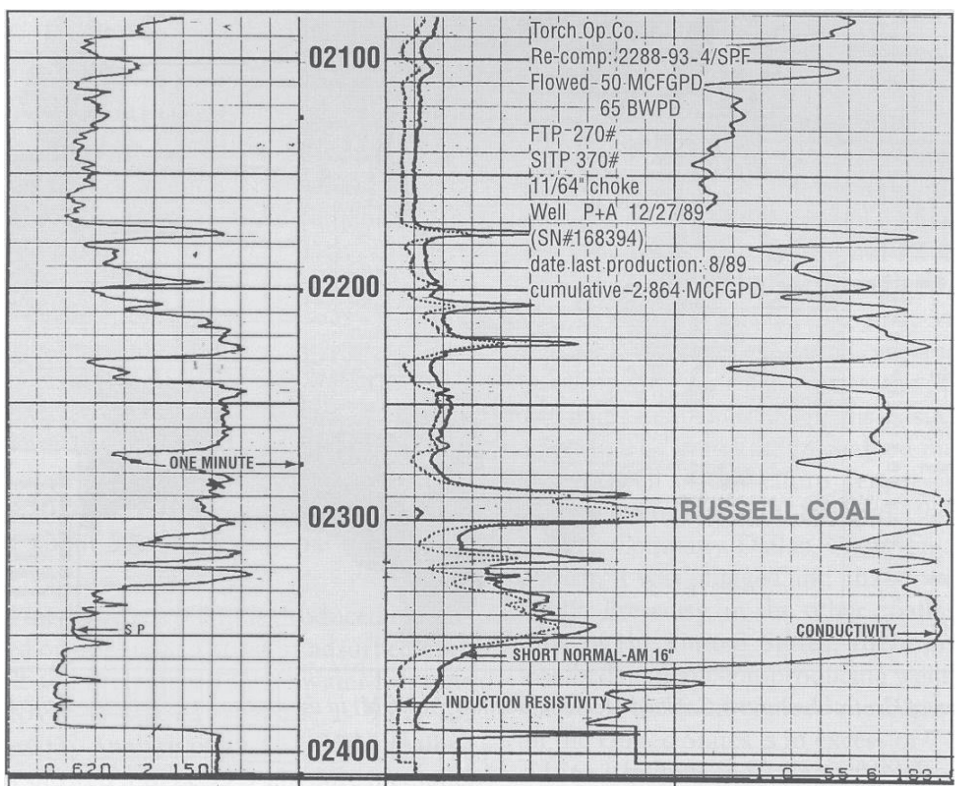

Figure 1. *Torch Operating Co., No. 3 Greer, is the first coalbed methane completion in the Tertiary Coalbed Methane Basin. (Echols, 2000)*

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LGS Mission Statement

The goals of the Geological Survey are to perform geological investigations that benefit the state of Louisiana by:

(1) encouraging the economic development of the natural resources of the state (energy, mineral, water, and environmental);

(2) providing unbiased geologic information on natural and environmental hazards; and

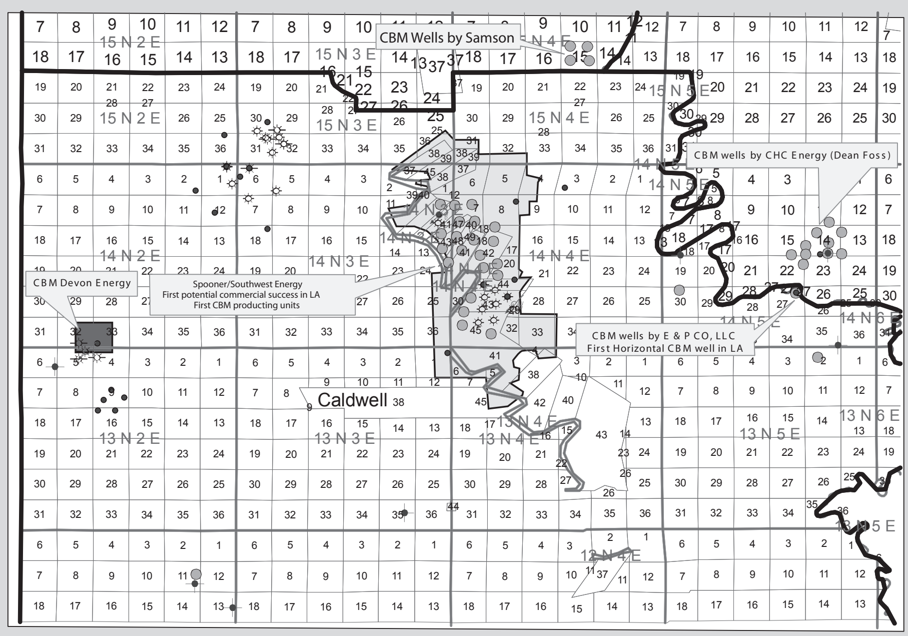
(3) ensuring the effective transfer of geological information.

The Louisiana Geological Survey was created by Act 131 of the Louisiana Legislature in 1934 to investigate the geology and resources of the State. LGS is presently a research unit affiliated with the Louisiana State University and reports through the Executive Director of the Center for Energy Studies to the Vice Chancellor for Research and Graduate Studies.

The year 2007 saw a marked increase in CBM drilling activity. (Fig. 2) According to reports from the Louisiana Department of Conservation's SONRIS online data system, in 2007, a total of 38 CBM wells were drilled. The majority were in Caldwell Parish (25 wells); others were in adjacent Richland Parish (12 wells) and Ouachita Parish (1 well). Permits for a number of additional wells were filed but the wells have not yet been drilled (as of this writing in May, 2008). One of the wells included in 2007's total is the first known horizontal (80 degrees from vertical) CBM well in Louisiana.

Some of the 2007 wells were put into production shortly after they were drilled. Others were listed as "inactive dry hole – future utility". Beginning in November 2007 and continuing to the present, seven of these "inactive dry holes" have been completed and put on line. Initial production from these wells varies greatly, from a low of 1 mcfd to a high of 275 mcfd. A numerical average for initial production of gas is about 45 – 50 mcfd. Water production also varies greatly, from a reported low of 45 bwpd to a high of 1200 bwpd. Water is generally disposed by reinjection into water disposal wells.

While the volume of CBM production in Louisiana is still small compared to conventional gas wells and even to CBM wells in other North American basins, it still has plenty of potential to increase. Indeed, the level of interest in Louisiana CBM, measured by the increasing number of inquiries for CBM information to the Louisiana Geological Survey, is increasing. CBM in Louisiana is beginning to reach its potential as an additional energy source for Louisiana and the nation.



CBM Well Activity in 2007 (modified from Smith, unpub 1)

Figure 2. Coal Bed Methane Well Activity, 2002.

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Hurricane Katrina's Impact on New Orleans Water Pumpage and Use

Douglas Carlson

Introduction

On August 29, 2005 Hurricane Katrina struck the southeast coast of Louisiana near Buras (Figure 1), Louisiana (Graumann et al., 2005). Within a few days approximately 80% of Orleans Parish (New Orleans) was flooded, due to breaks in various levees (Graumann et al, 2005; and Koningsmark, 2006a). This flooding and destruction drove out approximately 520,000 people or about 40% of the New Orleans metropolitan area population (Koningsmark, 2006b; and World Almanac, 2007). Orleans Parish (New Orleans) lost 50 % of its population (U.S. Bureau of Census, 2007a) between July of 2005 and July of 2006. Those who left New Orleans were dispersed throughout the United States. States located near Louisiana and other areas within Louisiana received the largest share of the dispersed population (Nasser and Overburg, 2006).

Historical Population and Water Use 1960-2000

Orleans Parish population and public supply water use have generally trended in opposite directions between 1960 and 2000. For Orleans Parish between 1960 and 2000, generally there is increasing water use at the same time population was declining (Figure 2). Orleans Parish population has declined by 23 percent between 1960 and 2000 from 627,525 in 1960 to 484,674 in 2000 (U.S. Bureau of Census, 1960 and 2007b). Between 1960 and 2000 the public supply water use increased 31% (Figure 2).

Figure 1. Satellite photo is of Hurricane Katrina. Eye is passing over the Mississippi coastline (source of photo is photosfromkatrina.com, 2005).

Why is this happening? Is this maybe an artifact of an old system (over 100 years old) where maintenance has been deferred as evident by an usually large loss of water (Sewerage and Water Board of New Orleans, 2005). In Orleans Parish between 2000-2004 average daily production of water was 126 millions of gallons per day (mgd), but daily sales of metered water is only 60 mgd (Black & Veatch, 2005), thus indicating a loss of approximately 52%. There are also three trends that could account for public supply water use that increases at a faster rate than population. First, there has been a slow increase in per capita consumption of water between 1950 and 2000 (Hutson et al., 2004). Second, in many communities businesses that start with an "off-the-shelf" supply system, need replacement of wells to meet expanding needs they find it more cost effective to hook up to a public supply system rather than invest in larger, deeper or more wells. Third, as communities expand they include areas that were initially rural where homeowners were self-supplied with water from a private well. These owners typically hook up to a community system due to the cost advantage of not replacing old wells and/or old pumps and whenever the well fails to meet their water needs.

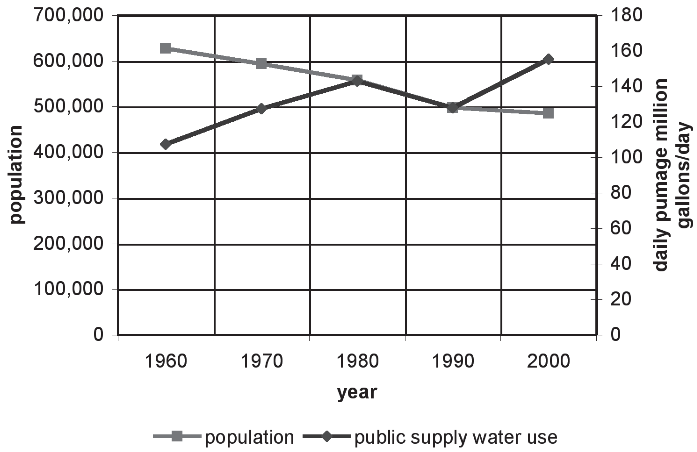

Figure 2. Population and public supply water use for Orleans Parish 1960 to 2000 (source for population is Anonymous, 2006 and for public water supply use are: Snider and Forbes, 1961; Dial, 1970; Walter, 1982; Lovelace, 1991; and Sargent, 2002).

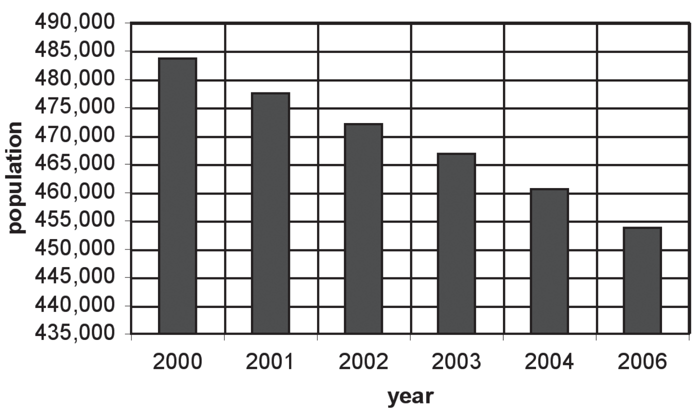

Figure 3. Population estimates of Orleans Parish (New Orleans) between July of 2000 and July 2005 (U.S. Census Bureau, 2008).

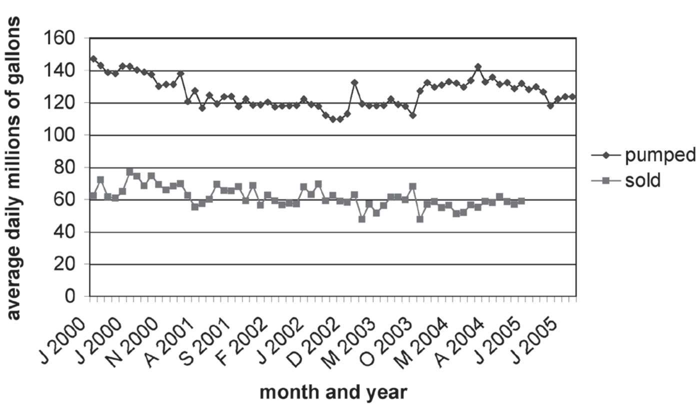

Figure 4. Public water pumped and sold January 2000 to July 2005. Values are daily averages for a given month (Williams, 2000 to 2004, and Sewer and Water Board of New Orleans 2007a).

Population, Water Pumpage and Sales (2000 to 2004)

In the years between 2000 and 2004 population decline was typically about 1 to 2% (Figure 3). During this same time interval water pumpage and sales have remained approximately constant (Figure 4). During the time interval of the last five years prior to Hurricane Katrina approximately 44% of the water pumped for use is sold with approximately 2% going to other non profit institutional users such as fire department, libraries, parks system, police department, and schools, 1% to the sewerage and water board for various uses and the remainder 52% is used for fire extinguishment, street cleaning, flushing sewers, cleaning markets and public buildings and leaks within the distribution system, etc (Figure 5).

Population, Water Pumpage and Sales after Katrina

An unexpected result after Katrina was the Orleans Parish public water supply pumpage. Orleans Parish suffered a loss of population of approximately 50% between July 2005 and July 2006 (Figure 6) and yet there has been an increase in public water supply pumpage (Figure 7) during this period. This is different from two other water systems of Plaquemines and St. Bernard Parishes which experienced significant decreases of pumpage after Katrina as a result of demand reduction due to major losses of population (Carlson and Sargent, 2008).

Why did Orleans Parish experience a significant increase in public water supply production of approximately 25 mgd or 19% above pre-Katrina pumpage (Black & Veatch, 2006)? It has been estimated that water-line breaks associated with Katrina damage caused distribution system losses of water between 50 and 90 mgd, which has been added to the pre-Katrina losses estimated by the Sewerage and Water Board of New Orleans of 60 mgd (Burnett, 2008). The storm induced leakage can account for the need of increase production even though there are fewer consumers, because of the need to maintain water pressure to ensure adequate supply for fire hydrants throughout the parish (Burnett, 2008). These results agree with the results of Williams (2006), who noted post-Katrina loss of water increases to 115 mgd, a 55 mgd increase from pre-Katrina conditions. The post-Katrina losses account for approximately 75% of all pumpage, while water sold for consumption decreased to 36 mgd, which is a 40% decrease from pre-Katrina sales (Figure 8). This reduction of water sales is similar to the population decrease of approximately 50% (U.S. Bureau of Census, 2008).

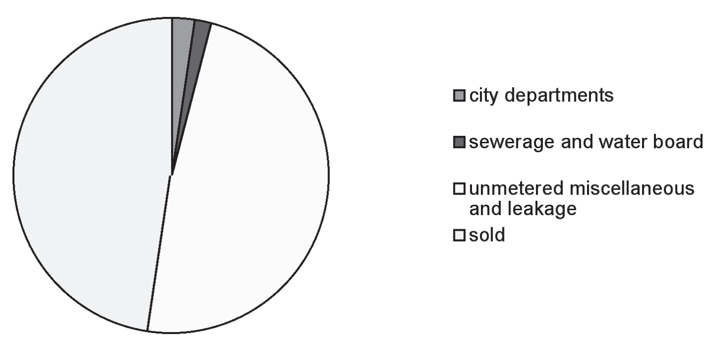

Figure 5. Distribution the pumped water for the New Orleans water system, average of 2000 to 2004 (Williams, 2000 to 2004).

Cost of water lost due to Katrina's damage

The estimated increase of leakage due to Katrina is approximately 55 mgd. On a daily average this leakage exceeds the pre-Katrina pumpage of water for the Baton Rouge Water Company which is 47.26 mgd (Sargent, 2007), the third largest public supply system in Louisiana and the largest dependent on groundwater. For New Orleans the water in the distribution system must be at a pressure to maintain fire production, but it also must still be high quality drinking water.

New Orleans water supply is treated with a variety of chemicals before being sent out through the distribution system. The value of these chemicals added for each 1 million gallons per day processed is $48.29 (Williams, 2006). Thus the typical daily loss due to leakage as a result of Katrina's damage will cost New Orleans approximately $2,660 per day. This is an ongoing expense without any end in site of approximately $80,000 per month, and has already cost New Orleans approximately $2,500,000 in the 32 months since Katrina.

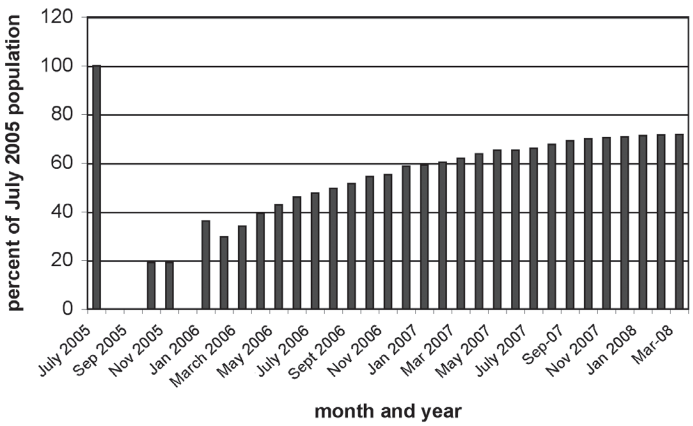

Figure 6. Population estimates for Orleans Parish (New Orleans) January 2006 (Demographia, 2008); October 2005 (Claritas, 2007); November 2005 (Mc Carthy et al., 2006); between February 2006 and July (Brookings, 2008); and between August 2006 and March 2008 (Greater New Orleans Community Data Center, 2008).

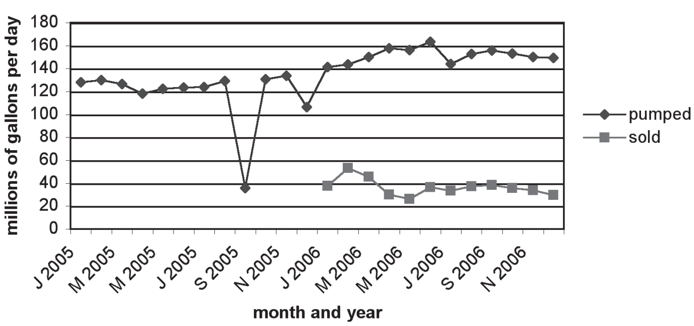

Figure 7. Public water pumped and sold from January 2005 to December 2006. Values are daily averages for a given month (Williams, 2006, and Sewerage and Water of New Orleans 2007a). Low point for pumped water is September (S) 2005, the month after Katrina passed over New Orleans.

However, the value of water and associated costs are more thatjust chemicals used to treat the water, which is approximately 5 cents per 1,000 gallons. The current rate for water sold by the Sewerage and Water Board of New Orleans is between $1.94 and $3.31 per 1000 gallons of water (Sewer and Water Board of New Orleans, 2007b). Thus, the estimated 55 mgd of water lost is a loss in sales of approximately $107,000 to $182,000 per day. The total loss of revenue from water sales over the past 32 months since Katrina would be approximately 105 to 180 million dollars. Even at the wholesale rate for water, which is $2.08 per 1,000 gallons (Sewer and Water Board of New Orleans, 2007b) the loss of sales revenues due to Katrina's damage (leakage) is approximately 110 million dollars over the past 32 months.

Summary

There has been a long standing trend between 1960 and 2000 that New Orleans has been losing population while at the same time public supply water pumpage has generally been increasing. Between 2000 and 2004 the trend of population loss for New Orleans continued, however increases in public supply water pumpage end with a five year period of approximately steady pumpage. During the five years prior to Katrina water sales accounted for approximately 50% of the water supply pumpage.

Hurricane Katrina's impact on population, water pumping and water sales were significant. The initial impact on New Orleans population was an approximately 80% reduction between July and October of 2005. By July of 2006 population increased to approximately 50% of that of July, 2005. The recovery of population has continued into 2008, but more slowly. Public supply water pumpage and sales went in opposite directions after Katrina impacted New Orleans. Pumpage of water increased approximately 25 mgd or 19% from pumping prior to Katrina. By contrast sales decreased from approximately 60 mgd to approximately 36 mgd after Katrina. The leakage as a result of Katrina's damage to the water distribution system has increased by approximately 55 mgd. This is almost a doubling of the water losses prior to Katrina. The combination of increased pumpage and decreased sales has reduced sales to only approximately 25% of total water pumping after Katrina.

This increase of leakage is significant. The increase of water loss is more than the total pumpage for the Baton Rouge Water Company the third largest water utility in Louisiana. New Orleans has been losing over $100,000 each day for water sales since Katrina hit New Orleans, which over the past 32 months amounts to a loss of approximately 110 million dollars.

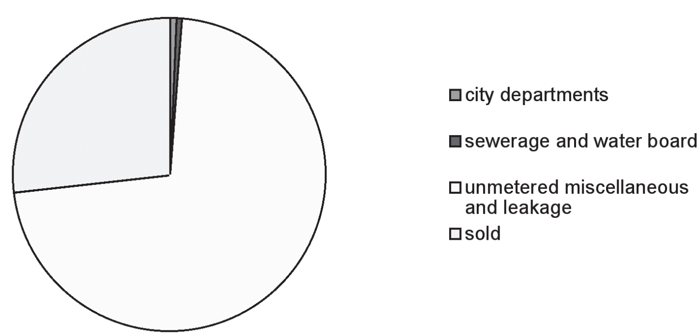

Figure 8. Distribution of the pumped water for the New Orleans water system by category of use in 2006 (Williams, 2006).

Acknowledgement

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The Potential of Soils Mapping for Delineation of a Natural Boundary Between Undifferentiable and Differentiated Wilcox Group Strata on Surface Geologic Maps of Northwest Louisiana

Richard P. McCulloh

The Wilcox Group in Louisiana undergoes a transition from a comparatively thin updip formation-rank unit that previous investigators have left undifferentiated to a much thicker downdip group-rank unit that has been differentiated into formation-rank members (Figure 1). This change should correspond to a transition from distal alluvial-plain to deltaic and coastal-marine depositional environments in the Wilcox. Nearly the entire transition in surface strata, including the only portion of it within continuous Wilcox outcrop, occurs within the extent of the Shreveport South 30 x 60 minute quadrangle, the surface geology of which is scheduled for digital compilation at a scale of 1:100,000 for the FY 2008 investigation funded by the STATEMAP component of the National Cooperative Geologic Mapping Program (NCGMP). A support investigation for this project will involve exploring the potential use of soils as a proxy for distinguishing between undifferentiable and differentiated Wilcox Group strata in this area. Over most of its reach the course of this transition lies beneath Holocene alluvium and/or Pleistocene strata, such that Wilcox exposures updip and downdip may simply be attributed differently. Existing sources show the two realms meeting at a political boundary, however, within continuous Wilcox outcrop at the Caddo–De Soto parish line in the western Shreveport South quadrangle. Essential to this compilation, therefore, will be the determination of a natural placement of the transition from undifferentiable to differentiated Wilcox Group strata in this area.

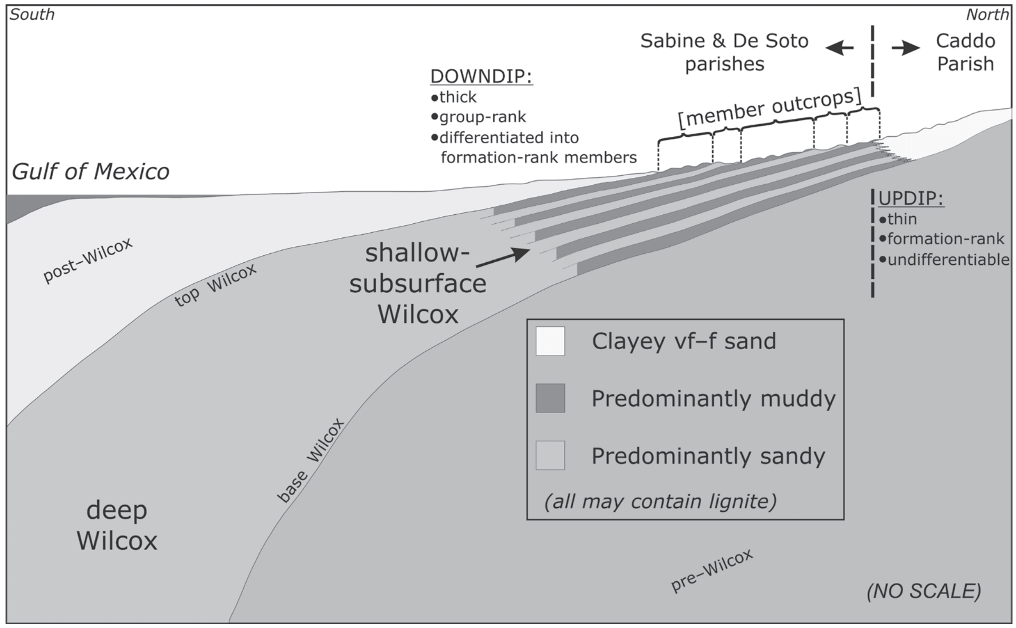

Figure 1. Schematic section of Wilcox Group strata in Louisiana (vf = very fine, f = fine).

Murray (1948) defined and established the formational members of the Wilcox Group in De Soto and Red River parishes. In adjacent parishes, all of which were mapped in subsequent years, investigators mostly have applied Murray's schema where they were able, and otherwise have mapped the Wilcox as undifferentiated. In Caddo (Smith, 1970), Bossier (Jones, 1960), Webster (Martin et al., 1954), and Bienville (Echols, 1970) parishes, north of Murray's study area, investigators mapped the Wilcox as undifferentiated. In Sabine Parish, to the south, Andersen (1960) differentiated the Wilcox using Murray's subdivisions, albeit with minor adaptation (i.e., he was compelled to add an additional member that he named the Converse Formation). In Natchitoches Parish, to the east and southeast, Andersen (1992) differentiated the Wilcox within the parish except in its northernmost extent, with distributions that essentially accord with those of undifferentiated and differentiated Wilcox in adjacent parishes.

Figure 2 shows undifferentiated and differentiated source mapping of the Wilcox in northwestern Louisiana, along with a draft line of transition between undifferentiable and differentiable Wilcox in the western portion of the Shreveport South quadrangle (in Caddo and De Soto parishes) based on a preliminary analysis of soils mapping.

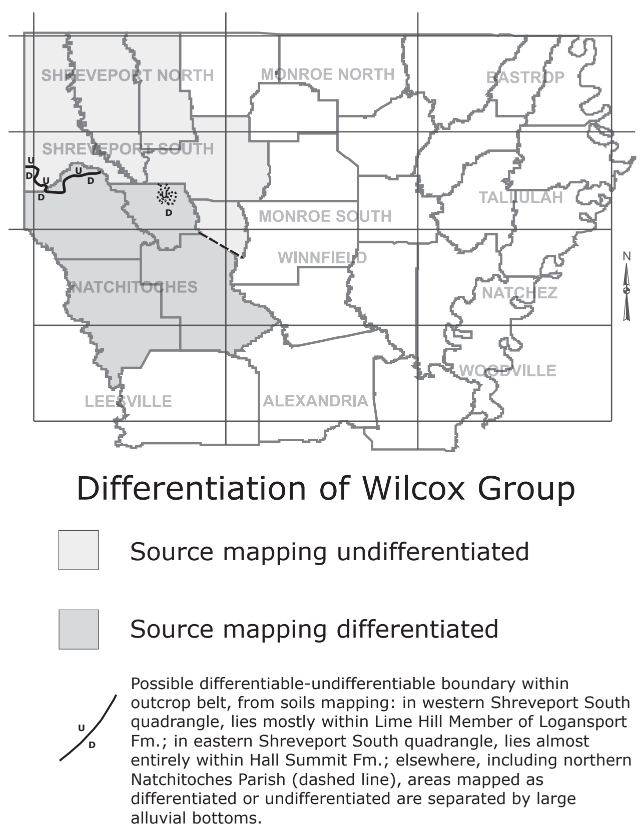

Figure 2. Differentiability of Wilcox Group in Shreveport South 30 x 60 minute quadrangle according to existing sources.

In the eastern portion of the quadrangle (in Red River Parish), the "undifferentiable" areas based on this preliminary review of soils information fall entirely within Murray's (1948) Hall Summit Formation, which also was tentatively identified in the adjacent portion of Bienville Parish by Echols (1970, p. 46), though he mapped the Wilcox uniformly as undifferentiated in his study area.

Based on existing sources as outlined above it is possible to trace a draft interpretive boundary between undifferentiable and differentiable Wilcox Group strata near the Caddo–De Soto parish boundary as shown in Figure 3. The basis for a more substantive delineation of this transition in surface Wilcox strata from soils information currently is being investigated by David C. Weindorf, Assistant Professor of Soil Classification Land Use, Louisiana State University School of Plant, Environmental & Soil Sciences, Department of Agronomy and Environmental Management, Agricultural Center Research & Extension. The STATEMAP FY 2008 project will include a small level of support for his investigation, which entails strategic sampling of the subsoil across the likely transition zone in this area, with a view toward incorporating a better-researched delineation of the Wilcox transition into the compilation of surface geology for the Shreveport South quadrangle. The new boundary will appear on the 1:100,000-scale draft compilation, and will eliminate the parish-line change in classification that is an artifact of available source maps.

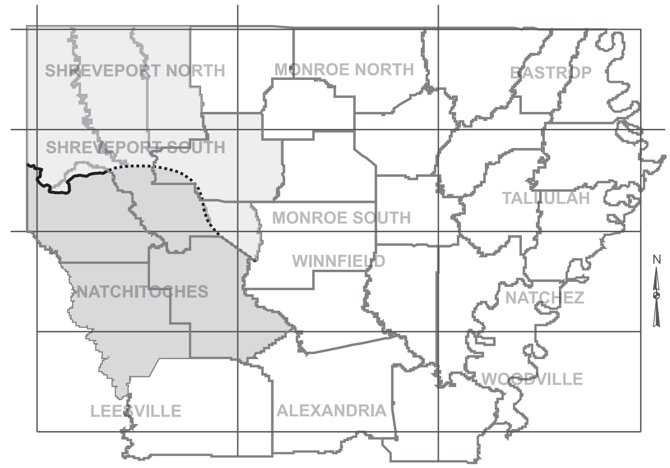

Figure 3*. Interpreted differentiability of the Wilcox Group in the Shreveport South 30 x 60 minute quadrangle. Only a comparatively short reach of the boundary between undifferentiable and differentiated surface Wilcox must be traced within an extent of continuous Wilcox outcrop, which courses relatively near the boundary between Caddo and De Soto parishes. The remainder falls between discontinuous outcrops separated by sizable areas of Pleistocene and Holocene units at the surface, and does not pose any issues to the compilation of surface geology for the Shreveport South quadrangle.*

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LGS Samples Water Supply Wells in Caddo Parish

LGS personnel, funded through a grant from the Louisiana Department of Transportation and Development - Water Resources Section, have collected samples from ~140 water wells in northwest and southeast Louisiana. The water samples are being collected to assess the impact lignite (e.g. low grade coal) has on the general water quality within the Carrizo-Wilcox Aquifer in Caddo Parish. Samples collected in SE Louisiana are completed in the Southern Hills Aquifer System representing background conditions that lack coal seams. The water samples are being analyzed on LGS' Hach DR/2500 spectrophotometer and new Dionex ICS-1000 ion chromatograph, as well as the LSU-Wetland Biochemistry Lab's Varian ICP-OES and Shimadzu TOC analyzer. The results were provided to the property owner at no cost and will be included in a report and LGS publication later this year.

LGS Personnel sampling water at a private residence's wellhead (hidden within the cedar structure.

LGS RESOURCE CENTER

The LGS Resource Center is located on the LSU Campus and consists of a core repository and well log library. The core facility has over 30,000 feet of core from wells in Louisiana, Alabama, Arkansas, Florida, Mississippi, and Texas. The well log library contains over 50,000 well logs, most of them from Louisiana. The LGS Resource Center is available for use by industry, academia, government agencies and those who may be interested. Details of current holdings are posted on the LGS website www.lgs.lsu.edu under Publications and Data. For more information contact Patrick O'Neill at 225/578-8590 or by email at poneil2@lsu.edu.

LGS Documents Spring Flooding in Southern Louisiana

Since March 24th, LGS personnel have been documenting the 2008 Mississippi River flood. Information was collected from the Old River Structure to Bonnet Carré Spillway. Photographic documentation of the rising stage, opening of the Bonnet Carré diversion and sand boils were taken along both the Mississippi and Atchafalaya Rivers, and along the levee near the LSU – Baton Rouge campus.

Opening of the Bonnet Carré Spillway, April 11, 2008.

Morganza Spillway, Pointe Coupee parish, Louisiana.

LGS personnel documenting the sand boil located near Brightside Lane and River Road in Baton Rouge.

Approximately 9 million cubic yards of sediment are deposited within the 8,000 acre floodway between the Mississippi River and Lake Pontchartrain.

Discharge structure installed to discharge the sand boils near the LSU Vet School.

Corps of Engineers Opens Bonnet Carre' Spillway

On April 11, 2008 at 12:00 noon the Bonnet Carre' Spillway was opened for the first time in 11 years. The last time the spillway was opened was in 1997. The 1.3 mile long weir is opened to relieve the volume of the Mississippi River flow at New Orleans to 1.25 million cubic feet per second and prevent potential flooding from the river. When fully operational (i.e all 350 bays are opened) the spillway can handle a water volume flow of 250,000 cubic feet per second that is diverted through the Bonnet Carre' Spillway to Lake Pontchartrain. Only 160 bays were opened and remained open until April 30, 2008 when the Army Corps of Engineers began closing the bays. The spillway is operated only when …"existing conditions, combined with predicted discharges, reach the operational level as prescribed in the approved Bonnet Carre' Spillway Operations Manuel and Mississippi Valley Division Operations Plan 2007-02

The 1.3 mile long weir is opened to relieve the volume of the Mississippi River flow at New Orleans.

for Floods." The responsibility whether to open the spillway is that of the president of the Mississippi River Commission, established in 1879 headquartered in Vicksburg, Mississippi. The president has the board jurisdiction over the entire Mississippi River and Tributaries Act of 1928 (MR&T). The MR&T established the design and construction of improved levees plus spillways. The levee system was increased in height in 1928 as a result of MR&T, and enlargement of the levees occurred from 1942 to 1972. In 1973 the levee system was improved once again to what is in place today. It was the MR&T that mitigated the construction of the Bonnet Carre' Spillway at the 19th century Bonne Carre' Crevasse where, between 1849 and 1882 four major crevasses occurred flooding a 7,000-foot-wide break which flowed more than six times. The Bonnet Carre' Spillway has been opened eight times since it was completed in 1931 (i.e. 1937, 1945, 1950, 1973, 1975, 1979, 1983, and 1997), and all 350 bays have been opened only 5 times in 1945, 1950, 1973, 1979, and 1983. Each bay has 20 creosoted timbers called "needles". Each time the spillway is opened approximately 9 million cubic yards of sediment are deposited within the 8,000 acre floodway between the Mississippi River and Lake Pontchartrain.

The Bonnet Carre' Spillway is the southern most control structure on the Mississippi River. The northern most control structure is the Old River Control Structure Complex located about 50 miles north of Baton Rouge which is used to divert normal flow of the Red River and 30 percent of the Mississippi River flow to the Atchafalaya River. The second control structure down stream of the Old River Control Structure is the Morganza Spillway located approximately 30 miles north of Baton Rouge. It has been opened only once during the 1973 flood diverting flood waters from the Mississippi River to the east Atchafalaya Basin.

The Morganza Spillway is located approximately 30 miles north of Baton Rouge.

Spring 2008

LGS Initiates New Public Information Series

A new LGS Publication Series on State Parks and Lands has been initiated with the first one being on the Fountainbleau State Park. The purpose of this series is to make a variety of geological information for State owned parks accessible to the public. Rick McCulloh is the author of this first publication and he made an excursion to the park with Patrick O'Neill on April 3, 2008 to acquire information and photographs for enclosure in this document.

Sugar mill ruin (built ca. 1829) at Fontainebleau State Park, the sole remnant of the area's early days as a sugar plantation developed by Bernard de Marigny de Mandeville, who also founded the nearby town (photograph by Patrick O'Neill).

New LGS Publications

Louisiana Shoreline Change 1937-2000. Snead, John, R. Hampton Peele, and S. Ahmet Binselam, 2008. 26 x 60-inch multicolored thematic physical relief map, scale: 1:380,160. $10.00

Oil and Gas Fields of Louisiana 2008. Harder, Brian and Asheka Rahman, 2008. 54 x 60-inch multicolored oil and gas field wall map with metal hanging strips, scale 1:380,160. $50.00

Woodville 30 x 60 Minute Geologic Quadrangle. Heinrich, Paul V., 2008. 28 x 46-inch multicolored geologic map, scale: 1:100,000. $10.00

Loess Map of Louisiana. Heinrich, Paul V., 2008. LGS Public Information Series No. 12. Color booklet with photographs and a small-scale map, 8.5 x 11 inches, 4 pages. $9.00

The Scotlandville, Denham Springs, and Baton Rouge Faults: A Map Guide for Real Estate Buyers, Sellers, and Developers in the Greater Baton Rouge Area

McCulloh, Richard P., 2008. LGS Public Information Series No. 13. Color booklet with large-scale maps, 8.5 x 11 inches, 38 pages. $9.00

Please contact Patrick O'Neill (poneil2@lsu.edu or 225-578-8590) for LGS publications.

LGS Map Wins Design Award

The map *Louisiana Shoreline Change 1937-2000* compiled and prepared by John Snead and Hampton Peele of the Cartographic Section and Ahmet Binselam of the Hurricane Center for the Center for the Study of Public Health Impacts of Hurricanes won the Best Thematic Map in the Professional Category in the 2007 Cartography and GIS Society/American Congress of Surveying and Mapping in Map Design Competition. This is the 5th national map design award won by the LGS cartographic section since 2000.

Conferences

The American Association of Petroleum Geologists (AAPG) Annual Conference was held in San Antonio, Texas from April 20-23. LGS Faculty and Staff who attended the meeting was Riley Milner, Douglas Carlson, Marty Horn, Chacko John, and Warren Schulingkamp. Carlson and Schulingkamp presented research papers mentioned in the Papers Published Section.

The LGS exhibit booth at this conference displayed LGS publications and maps together with information on ongoing LGS Research projects. The booth was prepared by Riley Milner.

Robert Pausell attended two digital mapping workshops. Both workshops had invaluable oral presentations accompanied by professionally designed posters and maps. The 24th Annual Louisiana Remote Sensing and Geographic Information Systems (RSGIS) Workshop was held April 8-10, 2008 at the Lindy C. Boggs International Conference Center on the University of New Orleans campus. The workshop focused on geospatial information technology through a two and a half day lecture series and poster session. Talks ranged from flood assessment to habitat/land loss monitoring and web mapping applications. The workshop yields a plethora of information on mapping projects and initiatives within the state of Louisiana.

Digital Mapping Techniques '08 was held at the University of Idaho campus in Moscow, Idaho. Cosponsored by Association of American State Geologists and the U.S. Geological Survey, this forum invites state geological surveys to share their experiences with mapping techniques and projects. Topics presented here include developing cartographic standards to share with the geologic community worldwide, data archiving/collections, 3 dimensional geologic mapping, and the development of internet based geologic maps. Also presented was an interesting paper on the first published USGS geologic maps and their production using engraving techniques that have not been used since the mid 1940's.

LGS Co-sponsors Two Symposiums

2nd Annual Louisiana Groundwater Symposium

The Louisiana Geological Survey co-sponsored a one-day symposium titled "Louisiana Groundwater a Valuable Resource" with the Baton Rouge Geological Society on March 6, 2008 at the Dalton J. Woods Auditorium, in the Energy, Coast and Environment Building-LSU, Baton Rouge. The symposium was organized and coordinated by LGS staff members, Douglas Carlson and Thomas Van Biersel.

This well attended symposium had papers that were presented by LGS staff members Douglas Carlson and Thomas Van Biersel, as well as Jason Griffith, John Lovelace, B. Pierre Sargent, and Dan Tomaszewki from the USGS Baton Rouge Office, and David Freiwald from the USGS Little Rock office; Professor Jeffrey Hanor, Geology and Geophysics Department at LSU; Dr. Professor Frank Tsai and Xiaobao Li from Civil Engineering Department at LSU; and Dale Nyman (independent hydrogeologist). The symposium provided a unique forum to discuss Louisiana groundwater in terms of its values as resources, as well as the characterization of this resource in terms of its chemistry and hydrodynamics to address management issues.

Symposium on Substance Impact on the Louisiana Coast

This symposium titled "Natural and Anthropogenic Subsidence Impact on Louisiana Coasts Symposium" was co-sponsored by LGS with the Baton Rouge Geological Society and the Petroleum Technology Transfer Council (PTTC) on January 24, 2008 at the Dalton J. Woods Auditorium, in the Energy, Coast and Environment Building-LSU, Baton Rouge.

Organized and coordinated by LGS staff members, Douglas Carlson and Thomas Van Biersel, it was very well attended and included papers presented by Professor R. Eugene Turner, Department of Oceanography at LSU; Professor Michael Blum, Clint Edrington, and Professor Jeffrey Nunn, Geology and Geophysics Department at LSU, Dr. T.A. Meckel from the Bureau of Economic Geology at University of Texas at Austin; Juan Gonzales, Professor Alexander Kolker, and Professor Torbjorn Tornqvist, Department of Earth and Environmental Sciences at Tulane University; and Professor Mark Kulp from the Department of Earth and Environment Sciences at University of New Orleans. The symposium provided a forum to consider a variety of causes of subsidence and subsequent impact on Louisiana Coasts at a variety of scales both temporally and spatially.

Papers Published

Carlson, Douglas A., 2008, Paleo-Currents in Eocene to Jurassic Strata of North Central Louisiana: American Association of Petroleum Geologists, Abstracts Volumes, no. 17, p. 28.

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Carlson, Douglas A., 2008, Anatomy of Saltwater Fronts observed within geophysical logs in East Baton Rouge Parish: Proceedings of 2nd Annual Louisiana Groundwater Symposium [CD].

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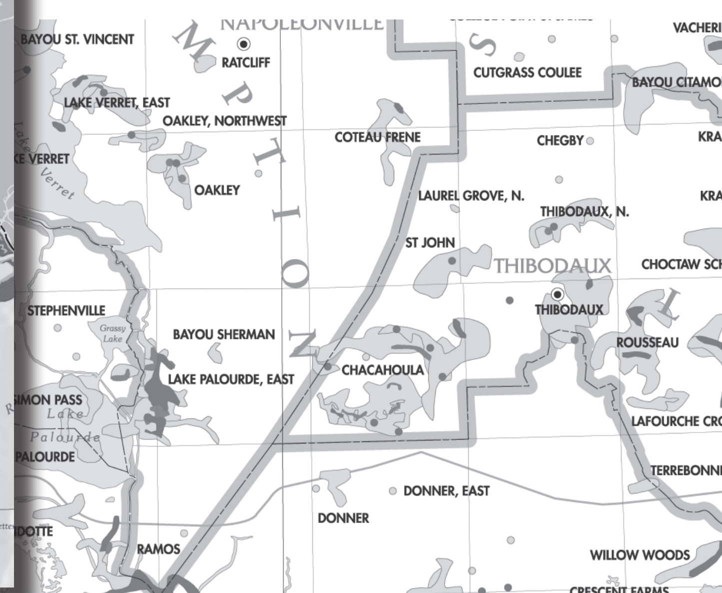

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