



Volume 89 Number 6

November—December 2014

Established 1925

# IN THIS ISSUE

*Memorial: Al Stude - pg. 18*  Time To Vote! Meet The Candidates Page 10



# **Robert F. Walters Digital Library** The most complete source for Kansas data

# Day or Night You can get to the data <u>as you need it</u>

www.kgslibrary.com

# To Join: call 316-265-8676



# **Table of Contents**

## Features

Memorial		
Meet the Candidates	••••••	10

## **Departments & Columns:**

KGS Tech Talks	4
President's Letter	7
Advertiser's Directory	8
From the Manager	9
KGS Board Minutes	10
Professional Directory	19 & 20
Exploration Highlights	24 & 25
Kansas Geological Foundation Memorials	26

## **ON THE COVER:**

Please see page 10 and review the candidates running for Society Board of Directors. Thank you to all who are running for office—taking some time to give back to the Society.

# **CALL FOR PAPERS**

The Kansas Geological Society Bulletin, which is published bimonthly both in hard-copy and electronic format, seeks short papers dealing with any aspect of Kansas geology, including petroleum geology, studies of producing oil or gas fields, and outcrop or conceptual studies. Maximum printed length of papers is 5 pages as they appear in the Bulletin, including text, references, figures and/or tables, and figure/table captions. Inquiries regarding manuscripts should be sent to Rebecca Radford, <u>manager@kgslibrary.com</u> or mailed to 212 N. Market, Ste. 100, Wichita, KS 67202. Specific guidelines for manuscript submission appear in each issue of the Bulletin, which can also be accessed on-line at the Kansas Geological Society web site at <u>http://www.kgslibrary.com</u>

# **SOCIETY Technical Meetings**

# 2014 Technical Talks

- Nov. 19— "Lower Crustal Xenoliths from the Upper Michigan Peninsula: Evidence for Modification of an Archean Craton by Proterozoic Orogenesis and Plume Magmatism" - Pamela Kempton, Kansas State University Geology Dept. Chair
- Dec. 2— "Earthquakes in the southern midcontinent: What we know and what we need to know-Current research at KU and the Kansas Geological Survey" - Lynn Watney, Tandis Bidgoli, & Eugene Holubnyak
- Dec. 16— "On the Rocky road: a geology travel log" Catherine Rocky

For More Information or suggestions of speakers please contact Dave Clothier: dave@mccoypetroleum.com

Note: For those geologists who need 30 points to renew their licenses, there will be a sign-in sheet at each presentation and also a certificate of attendance.



Please remember to check the website for the most up to date information on Technical Talks http://www.kgslibrary.com/techtalks.cfm

# **KANSAS GEOLOGICAL SOCIETY**



## **BOARD OF DIRECTORS**

**PRESIDENT** Brian Fisher **PRESIDENT-ELECT** Frank Mize

SECRETARY Leah Kasten

**DIRECTORS** Dave Clothier Tim Hellman Frank Mize **TREASURER** Paul Ramondetta

ADVISORS Tom Hansen Larry Richardson

Kent Scribner

Tom Hansen Larry Richardson

## **COMMITTEE CHAIRMEN**

Advertising Advisory

Annual Banquet Budget Committee Bulletin Continuing Education Distinguished Awards Environmental Field Trip Fishing Tournament Future Plans Golf Historian Investment Library

Membership Nomenclature Picnic Public Relations Shooting Tournament Technical Program Ticket Sales

#### Bob Baver Paul Ramondetta Rebecca Radford Robert Cowdery Dave Clothier Kent Matson Larry Skelton Randy Teter Chuck Brewer David Barker Larry Skelton Paul Ramondetta Roger Martin Ted Jochems Larry Friend John H. Morrison, III Wes Hansen Robert Cowdery Larry Richardson Dave Clothier Bill Shepherd

## A.A.P.G. DELEGATES

Ernie Morrison 2018 Douglas Davis 2018

## **BULLETIN STAFF**

EDITOR Rebecca Radford—Interim	(316) 265-8676
ADVERTISING Kent Scribner Stelbar Oil Corp.	(316) 264-8378
PROFILES/MEMORIALS Robert D. Cowdery Consultant	(316) 267-9030
EXPLORATION HIGHLIGH John H. Morrison, III	TS
Independent O&G STATE SURVEY Rex Buchanan	(316) 263-8281
KS Geological Survey SOCIETY NEWS	(785) 864-3965
KGS Library EDITOR EMERITUS	(316) 265-8676
Wes Hansen Larry Richardson	(316) 263-7313 (316) 262-8427

## **K.G.S. LIBRARY**

PHONE 316-265-8676 FAX 316-265-1013 email: <u>frontdesk@kgslibrary.com</u> or Web: www.kgslibrary.com

LIBRARY MANAGER

Rebecca Radford 265-8676 manager@kgslibrary.com

The KGS *Bulletin* is published bi-monthly by the Kansas Geological Society, with offices at 212 North Market, Wichita, Kansas 67202 Copyright 2014, The Kansas Geological Society. The purpose of the *Bulletin* is to keep members informed of the activities of the Society and to encourage the exchange and dissemination of technical information related to the Geological profession. Subscription to the *Bulletin* is by membership in the Kansas Geological Society. Limited permission is hereby given by the KGS to photocopy any material appearing in the *KGS BULLETIN* for the non-commercial purpose of scientific or educational advancement. The KGS, a scientific society, neither adopts nor supports positions of advocacy, we provide this and other forums for the presentation of diverse opinions and positions. Opinions presented in these publications do not reflect official positions of the Society.



#### Twenty-two Trucks Serving Kansas—Colorado—Texas—Nebraska—Illinois

DST's Back Pressure testing (G1 & G2) Slick line services using the same Weatherford Electronic Pressure Gauges used on DST's



# 1-800-728-5369 FAX 1-785-625-5620

www.trilobitetesting.com trilobite@eaglecom.net

SHOPS LOCATED IN: Hays, KS Scott City, KS Pratt, KS Hugoton, KS Oberlin, KS Clay City, IL

# CAN YOU NAME THE CRITTER? Sponsored by Trilobite Testing, Inc.

Is your paleo up to date?

If you know the name of the trilobite, submit your guess via e-mail to manager@kgslibrary.com

Remember that *Trilobite Testing* is sponsoring your efforts, so be sure to thank Paul Simpson the next time you see him.

Bulletin committee members and PhD's in Paleontology are prohibited from entering.



# Watch for your ballots in the mail

Society ballots are due back by December 1st

# Kansas Geological Foundation ballots are due back by December 15th

www.kgslibrary.com

# **President's Letter**

Dear Members,

It's that time of year for me to write the finale KGS presidential letter for the bulletin. The year has gone by so quickly and the KGS Board and the Kansas oil field has been involved in several issues that have the potential to seriously impact the economics of our business and our great state of Kansas. These range from the public perception of possible induced seismicity from oil field activity and the habitat of the Lesser Prairie Chicken. In April, several members of our society provided comments to an Induced Seismicity State Task Force Meeting held here in Wichita. Also the KGS board sent out a letter requesting that the Governor have the State of Kansas take the lead in the protection and regulation of the Lesser Prairie Chicken.



The KGS Board has also negotiated the addition of more library space and remodeled the new areas into office. Rhonda, our receptionist, has been relocated and we have now a new entrance onto Market Street. The KGS board, after a lot of research and discussion, took a portion of our assets and diversified them conservatively into the stock market to achieve a higher yield. The funds are still liquid and still available while future KGS Boards will consider various options regarding the future direction and goals of the library. I also want to thank Dave Clothier and his committee who have worked hard to come with a great list of excellent candidates for the upcoming fall KGS election.

Since my last letter I went fishing in Pratt in the Annual KGS Tournament and had a great time – many thanks to Randy Teter, John Christensen and Jim Hall for organizing and running this great event. I also participated in the Fall KGS Annual Shooting Tournament - as always in my mind I can shoot a little better than what I managed to score but my excuse was the Kansas wind that day! Everyone had a great time enjoying the food and fellowship for this event. I want to thank Larry Richardson and Kent Crisler and others for running this great event for our society.

I certainly enjoyed being your president and working with the KGS Board. It has been an honor for me to serve the society and to be part of this great organization. I am looking forward to our Annual Banquet on January 30, 2015 and hope to see you there.

Respectively submitted, Brian G. Fisher - President 2014





# GRADUATE EDUCATION for active professionals

Through: Workshops Field Trips Distance Education

Leading to: Academic credits Certificates (pending) M.S. degree

With specializations in: Petroleum Geology Groundwater Exploration Geophysics Environmental Geochemistry

## Information:

KSU Continuing Education: www.dce.ksu.edu KSU Geology Department: www.ksu.edu/geology KSU Graduate School: www.ksu.edu/grad or e-mail George Clark, interim dept. head: <grc@ksu.edu>

# Log in to Walters Digital Library At www.kgslibrary.com

Log in as our guest and see the Society's Database A convenient way to see what you might want to order! Call or email your order to: 316-265-8676 <u>frontdesk@kgslibrary.com</u>

# **ADVERTISER'S DIRECTORY**

	page
Allied Cementing Company, Inc	23
American Energies Corp. Nitrogen Rejection	13
Breckenridge Exploration Company	15
Duke Drilling	23
GeoCare Services AAPG	17
GeoSteering	14
Global Geophysical Services, Inc.	15
Kansas Geological Foundation	26
Kansas State University	8
Lockhart Geophysical	23
Lone Star Geophysical Surveys	16
MJ Systems	21
MBC Well logging	23
Murfin Drilling Company, Inc	23
Neuralog	15
PARAGON Geophysical Services, Inc	13
Pratt Well Service	15
Professional Directory	19-20
Sterling Seismic Services	13
Sunrise Oilfield Supply	23
Tomcat Drilling	23
Trilobite Testing	6
Walters Digital Library	2
Weatherford	27
Well Enhancement Services	14

# ADVERTISER'S RATES: 2014

<b>Full Page</b> 6 issues 3 issues 1 issue	<b>B&amp;W</b> \$2,000 \$1,080 \$480	<b>Color</b> \$2,500 \$1,325 \$525
<ul><li>1/2 Page</li><li>6 issues</li><li>3 issues</li><li>1 issue</li></ul>	\$1,000 \$540 \$225	\$1,500 \$825 \$350
1/4 Page 6 issues 3 issues 1 issue	\$600 \$325 \$150	\$900 \$525 \$250
<ul> <li>1/8 Page</li> <li>6 issues</li> <li>3 issues</li> <li>1 issue</li> <li>Professional Ad (Brain State)</li> </ul>	,	\$500 \$325 \$185
6 issues	\$90	\$180

For one-time ads, call Rebecca at 316-265-8676

# **From The Manager**

Dear Members,

Another year is quickly wrapping up and your library has been busy with orders. We continue to add Eastern Kansas logs and plotted geos to the database and the Walters Digital Library. You can check for updates on this effort on the home page of our web page—right hand column.

The construction is finally over in the library and we are loving the extra space. If you haven't seen it, stop in and check it out.

We had a great showing at the Annual Clay shoot out at Lynbrooke Sporting clays this October. And I believe we had a record number of fishermen at the Fishing Tournament also. Thank you to all who supported these events. Thank you to **Randy Teter & Jon Christensen** for organizing the



Fishing Tournament and to Larry Richardson & Kent Crisler for the Shooting Tournament!

Our next event will be the **Annual Banquet on Friday, January 30th**. We will be honoring **Bob O'Dell** as honorary member. Please get the date reserved on your calendars.

I would like to thank **Brian Fisher and the 2014 Board of Directors** for all of their guidance and support of the library this past year. I also want to thank our great staff for all their hard work. The staff and I would like to have an **Open House in December** so please plan to stop by the library on **Friday, December 19th** for some holiday cheer!

Happy Holidays to all!

Respectfully submitted, Rebecca Radford

Manager

Holiday Hours for the KGS Library KGS Library Open House December 19th 11AM-Closing Closed November 27 & 28—Thanksgiving Closed December 25 & 26—Christmas Closed January 1 & 2—New Year's

\*



Let Us Print Your Geo Reports And Save Your Time For Finding More Oil & Gas

Top Quality <u>Color</u> Printing For Our Membership

Email your files to: <u>kgsorders@gmail.com</u>

# **Candidates For 2015 Office**

# **PRESIDENT-ELECT**



**Timothy Hellman** 

#### **Education**

B.A. Geology, 1980 Wichita State University Post Graduate Classes—Wichita State

#### **Professional Experience**

Lotus Exploration Company and Lotus Operating Company, LLC, 1997 to present Raymond Oil Co. Inc., Wichita, Kansas. 1976-1997 Exploration Manager from 1980 to 1997 Staff geologist 1976-1980

#### **Professional Affiliations:**

AAPG – Member, 1978 - present AAPG-Division of Professional Affairs, 1988-present

## KGS Board and Committees:

KGS Board of Directors: 1991-1992 KGS Board of Directors: 2012-2013, 2014 Kansas Geological Foundation – Charter member Kansas Geological Foundation Director- 2006-09 Secretary – 2008-09 Kansas Nomenclature Committee – 1989-1993 KIOGA-Board of Directors 1997 to Present Petroleum Club of Wichita – Board of Directors, 2004-2011 Petroleum Club Secretary 2004-07 Petroleum Club President – 2008-present

## **Certifications:**

AAPG-DPA, Certified Petroleum Geologist - CPG# 3978



**Paul Ramondetta** 

#### **Education:**

B.S. Geology, Brooklyn College, 1971Masters Geology, Brooklyn College, 1975Post graduate classes at University of Houston, Rice University, and University of Texas at Austin, 1975-1981.

## **Professional Experience:**

Geology Lab Instructor, Brooklyn College, 1972-1974 Seismic Processor, Western Geophysical in Houston, 1974-1976 Geology and Physics Instructor, Houston Community College, 1976-1979 Consulting Geologist in Houston, 1976-1979 Research Geologist, Bureau of Economic Geology in Austin, 1979-1981 Petroleum Geologist & Supervisor, Cities Service/Oxy, Wichita, OK City, Bakersfield, Tulsa, Doha; 1981-1998 Exploration & Exploitation Manager, Vess Oil Corp, Wichita, 1998 to present (2012).

## KGS Board and Committees:

KGS Board, Secretary/Treasurer 2013-2014

## **Professional Affiliations:**

AAPG, current Kansas Geological Society, current Many past affiliations.

# SECRETARY—TREASURER 2015-2016



**Charles Brewer** 

Education: B.S. Geology, Fort Hays State, 1982

#### **Professional Experience:**

President/Principal Geologist, Geotechnical Services 1989-Present Emergency Response Coordinator, Nebraska Dept. of Environmental Quality, 1989 Consulting Geologist, 1987-1988 Staff Geologist, Hinkle Oil, 1985-1987 Geologist, Raymond Goodin Trust, 1983-1985 Field Technician, Geometrics, Inc., 1977-1983

#### **Professional Affiliations:**

Kansas Geological Society Kansas Geological Foundation KWBA NWGA, Licensed in Kansas, Missouri, Nebraska, Texas

## KGS Board and Committees:

KGS Board President, 2006 KGS Board—Director 2011-2012 Chairman—Map Committee Chairman—Environmental Committee



**Ryan Dixon** 

Education: B.S. Geology, Wichita State University, 2007

#### **Professional Experience:**

Geologist, Dixon Energy Inc., 2007-Present Geotechnician—2004-2007

#### **Professional Affiliations:**

Kansas Geological Society AAPG SEPM GSA

## KGS Board and Committees:

KGS Board—Director 2011-2012 Bob Slamal Memorial Type Log Committee Future Plans Committee

# MEMBER AT LARGE—DIRECTOR 2015-2016



Paul Gunzelman

#### **Education:**

West Texas State University, B.S. Geology 1978 Wichita State University, Post Graduate Studies 1986-1989

#### **Professional Experience:**

Pendleton Land and Exploration Co., 1979 - 1980 Brandt Drilling Company, Inc., 1980 - 1981 Consulting Geologist, 1981 - 1984 Mull Drilling Company, Inc., 1984 - 1994 Canyon Energy, Inc., 1994 - 1997 Resource Management Group, Inc., 1997 - Present

#### **Professional Affiliations:**

AAPG Kansas Geological Foundation Kansas Geological Society KIOGA

#### KGS Board and Committees:

Board of Directors 1990 - 1991, 1993-1995 KGS President, 1994 Advisor to the Board :1998, 2000, 2009 Presidential Citation 1989 Outstanding Service Award 1991 & 1995 Honorary Member 2010 Library Committee, Bulletin Committee, Technical Programs Committee, Future Plans Committee, Honors & Awards Committee

## Kansas Geological Foundation Board:

Board of Directors (ex officio) 1993 - 1994, 1999 - 2001 2008 - 2010, President 2001

#### AAPG

House of Delegates 1991-1997 Mid-continent Section Council 1991 - 1994 Division of Professional Affairs – Advisor 1995 – 1998 Licensed Geologist - Kansas Board of Technical Professions



Ganganath "G" Koralegedara

## **Education:**

M.S. Earth, Environment and Physical Sciences, Wichita State University, 2009 B.S. Civil Engineering, University Of Peradeniya, Sri Lanka, 2000

## **Professional Experience:**

Geologist / Geophysicist, Berexco LLC. 2007 – Current Wichita State University, Teaching Assistant, 2006 - 2008 Civil Engineer, National Water Supply & Drainage Board – Sri Lanka, 2001-2004 Civil Engineer, Tropical Waste Water Engineers, Sri Lanka, 1998 - 2001

## **Professional Affiliations:**

Licensed Professional Geologist – Kansas (License #836) Member AAPG Publication Pipeline Committee (**PPC**) March-2011

KSGS officer nominee 2010

Geophysical Society of Kansas 2007

American Association of Petroleum Geologists (AAPG) 2006

Kansas Geological Society (KSGS) 2006

Geological Society of America (GSA) 2006 Society of Sedimentary Geology (SEPM) 2006



# Experience, Integrity, Innovation...



# SEISMIC SERVICES, LTD. www.sterlingseismic.com

# Renegade Seismic Studio Refraction Statics Z-White Spectral Enhancement Tsunami Pre-Stack Time Migration

Projects from one square mile "Postage Stamp" 3Ds to the 1,100 square mile nine 3D merge through PSTM we completed in 2006, no project is too small or too big. All projects are given the same attention to detail that we have become known for.

Structural or stratigraphic, we've got the experience to provide you with a superior dataset.

TSUNAMI INTERINE BUTE

303-347-9011

# WOULD YOU LIKE TO INCREASE YOUR PRODUCTION AT A FRACTION OF THE COST OF HORIZONTAL DRILLING?



<u>Well Enhancement Services, LLC</u> is jetting laterals utilizing new technology and coiled tubing. We now have the ability to place hundreds of gallons of acid hundreds of feet away from the well bore. This allows us to not only enhance existing production but to produce reserves previously unreachable. It has established itself by repeatedly increasing production in both new and existing wells. Contact us for more information, questions or to schedule your next well with **WES**.



"Tap into success.....with WES"

# **Please Contact Us:**

Phone: (785) 625-5155 Fax: (785) 625-4151 Field: (785) 259-4638

wesofhays@hotmail.com Box 87, Schoenchen, KS 67667

www.GeoSteering.com

281-573-0500 info@geosteering.com

Free introductory consultation with modeling: let us demonstrate whether images or propagation resistivity could add value to your well. Personnel with degrees & 20+ years of oilfield experience

**Proprietary software** 

TST interpretation for GR only jobs

Image displays / interpretation for jobs with azimuthal GR, resistivity or density

Resistivity modelling / interpretation for jobs with LWD propagation resistivity

**Real-time (always)** 







# Bryan Mills Regional Sales Manager

# Solutions for Today's Geoscientists

- · Scan, Print & Digitize Logs & Maps
- · Geological Interpretation
- · Master E&P Data Management

1.281.240.2525 bmills@neuralog.com · www.neuralog.com



# SEISMIC ACQUISITION

Check us out at www.breckex.com

Breckenridge Exploration Co., Inc. Highway 180 E P.O. Box 789 Breckenridge, TX 76424 Bus: (254) 559-7566 Denver Colorado Office 600 17th Street, Ste. 2800 S Denver, Colorado 80202-5428 Bus: (303) 563-5301 Mob: (254) 559-0587

Sensible Seismic Acquisition in the Mid-Continent and the Rockies



# **UNLEASH AMBIENT!**



# **AGGRESSIVE PASSIVE SEISMIC**

Ambient Seismic captures natural, continuous background seismicity and can be processed to reveal active natural fracture systems and stress regimes. The data can be collected during conventional 3D seismic surveys. Using patented processing techniques developed for microseismic monitoring, we produce highly sensitive images of cumulative seismic activity over extended time periods to identify active fracture areas, volumes and pathways.

Our objective is to help oil and gas companies identify and characterize prospectivity and productivity, reduce risk, optimize well completion techniques and monitor changes in hydrocarbon reservoirs.

# Contact AMBIENT@globalgeophysical.com

Download the White Paper at: www.globalgeophysical.com/Ambient

Cumulative image from 8 days of Ambient Seismic from the Permian Basin. Shown is a co-rendering of Semblance and Tomographic Fracture Images over 23.6 square miles. Red line is an existing horizontal well. The image identifies the active natural fracture network.



Global Geophysical Services, Inc. tel +1 713-972-9200 www.globalgeophysical.com







Security for AAPG Members & Their Families Through Group Insurance

> Life Health Dental Disability Auto and Homeowner Supplemental Plans

AAPG's GeoCare Benefits Insurance Program P. O. Box 9159 Phoenix, AZ 85068-9159 800-337-3140 E-mail: geocarebenefits@agia.com www.geocarebenefits.com

# Kansas Geological Foundation Video / DVD Collection

The KGF has an extensive collection of videos available for check-out at no charge. Only pay for shipping back.

These are ideal for classroom or general public viewing.

See the web for titles & descriptions www.kgfoundation.org

Call 316-265-8676 Ask for Janice to check out videos



*The KGS Library is pleased to announce a new service* 

Creating LAS files from our logs or yours

# \$20.00 per curve!!

Quick turn-around

Send us your log file or tell us which of ours you would like converted.

# 316-256-8676

The Kansas Geological Society maintains its ownership and copyright when converting library log files to LAS

# Memorial - Al Stude



Longtime KGS member, Al Stude, passed away on October 7, 2014. Over the years, Al was one of the premier wellsite geologists in this area. He was born in July 1924 on a farm north of Kinsley. His Dad was a farmer, who also taught math and science at the high school level, so the family moved quite often. Al became familiar with geology at an early age from field trips that his father conducted for his students. On one excursion to the field they found a the fossil remains of a teleostean fish that was 15 feet, 4 inches long. This specimen now hangs in the Peabody Museum at Yale University.

Following college graduation in 1954, Al joined Vickers Oil Co. where he worked with Lyle Thomas and in 1956 he joined Karl Becker at Sierra Petroleum. In his career as a wellsite geologist, Al watched many wells of wells for Clinton, Glickman, Sierra Barnett, Kewanee, Petroleum, Inc. and TGT.

Al was preceded in death by his daughter, Patricia Magers; and sister Marie Stude. He is survived by his son, Bob Stude of Bel Aire; 2 sisters and his grand-son Christopher. A private family services was held at Resthaven Mortuary.

#### The Society Wishes To Thank The Following For Supporting The **Annual Clay Shoot** Allied Cementing Co., Inc. McDonald Tank Andy's Mud & Chemical McLeod Exploration Basic Energy Services, LP Ernie & Pat Morrison Beredco Drilling Mud-Co/Service Mud, Inc. Breckenridge Geophysical Mull Drilling Co., Inc. Brian Fisher Murfin Drililng Co., Inc. Nabors Well Service Buckeye Supply Central Kansas Surveying & Mapping Nalco Chemical Coffeyville Resources National Oilwell COVEY, The Well Watchers NCRA **Diamond Testing Richard Neidens Duke** Drilling Stan Nelson Eagle Creek Corporation Paragon LLC **Edwards Consulting Pioneer Energy Services Egging Roustabout Service** Pratt Well Service **Empire Energy** Raymond Oil Company Grand Mesa Operating Co. Larry Richardson Gressel Oilfield Service, Inc. Don Shawver Hedke-Saenger Geoscience Summit Geophysical High Sierra Energy Sunrise Oilfield Supply The Independent Sweetman Investments, LLC Jayhawk Oil Field Supply Theis Dozer Service Lockhart Geophysical **Tidelands Geophysical** Log Tech, Inc. of Kansas Trilobite Testing, LLC Lotus Exploration Co, Inc. Thoroughbred Associates Max Lovely Trans Pacific Oil Corp. Roger L. Martin **Tucker Wireline** Maverick Drilling Val Energy, Inc. MBC Well Logging & Leasing

# **PROFESSIONAL DIRECTORY**

#### **Kirk Rundle** Consulting Geophysicist

3D Seismic Design, Acquisition to Processing QC., Interpretation and Analysis, Subsurface Integration 7340 W. 21st. N., Ste. 100 Wichita, Kansas 67205

Office: 316-721-1421 Fax: 316-721-1843 Email:kirk@rundlegeo.com

#### Blue Ribbon Drilling, LLC PO Box 279, Dewey, OK 74029

Phone and Fax: 918-534-2322 John's Cell Phone: 918-440-9639 Larry's Cell Phone: 918-440-9638 Jeff's Cell Phone: 918-440-9647 Email: johnrountree@bratco-operating.com



#### WESLEY D. HANSEN **Consulting Geologist**

Well site Supervision • Geologic Studies 212 N. Market, Ste 257 Wichita, Kansas 67202 Off: (316) 263-7313 Mobile: (316) 772-6188 whansen4651@sbcglobal.net

#### KEVIN L. KESSLER INDEPENDENT/CONSULTING PETROLEUM GEOLOGIST WELLSITE SUPERVISION . GEOLOGIC RESEARCH OIL & GAS PROSPECTS KANSAS & EASTERN COLORADO MAILING ADDRESS PHONE 1199 N. PONDEROSA RD. RES.: (316) 522-7338

BELLE PLAINE, KS 67013 MOBILE: (316) 706-6636 EMAIL: KKESSLER1199@AOL.COM

## **KGJ ENTERPRISES**

Contract Oil & Gas Accounting & **Office Management** 

Kathryn G. James MBA 4278 SW 100th ST Augusta KS 67010

(316) 775-0954 (316) 250-5989 kgjames@onemain.com

#### **ROGER L. MARTIN**

Independent Petroleum Geologist

200 E 1st St, Ste 405, Wichita, KS 67202

Office 316-833-2722 Cell: 316-250-6970 KS Field Cell: 316-655-1227 Fax: 316-425-3829 Email: rogermartingeo@yahoo.com

#### ALFRED JAMES III Petroleum Geologist Kansas - Colorado - Utah

200 W. Douglas, Ste. 525, Wichita, Kansas 67202

SIPES # 1111 Office (316) 267-7592 alfred.james55@yahoo.com

#### M. Bradford Rine Honorary Life Member—Kansas Geological Society Licensed Geologist-KS. #204 Registered Professional Geologist—Wyo. # 189 Certified Geologist—A.A.P.G. # 2647 S.I.P.E.S. # 1584 S.P.E. #109833-4 PROSPECT EVALUATION • PROSPECT GENERATION WELLSITE SUPERVISION • EXPERT TESTIMONY OPERATIONS PROPERTY EVALUATION • RESERVOIR STUDIES DRLG./COMP. CONSULTATION Office: (316) 262-5418 Fax: (316) 264-1328 Cell: (316) 250-5941 Suite 415 100 S. Main Wichita, KS 67202



Wichita, Kansas 316.634.6026 email p.gun@sbcglobal.net



Van Buskirk Geo-Consulting

15171 Ridafield Ln Colorado Springs, CO 80921

Cell: 719-393-2900 Nexlevelinc@msn.com Available for Well site work

Home: 719-487-8297

Kiowa, KS 67070

514 Rumsey

www.kgslibrary.com







# 

# We Invite You To join

# Kansas Geological Foundation

\$50.00 membership is tax deductible

Call 316-265-8676

Or send checks to: Kansas Geological Foundation 212 N. Market, Ste. 100 Wichita, KS 67202

<u>I MANNANANANANANANAN</u>

# **The Following Are For Sale**

*Kansas Completion Cards:* Several sets (call for more information)

> Oklahoma Completion Cards: 2 sets—entire state

Nebraska Completion Cards—West ranges

New Mexico Completion Cards

North Dakota Completion Cards

**Utah Completion Cards** 

Microfiche Electric Logs Kansas Oklahoma Texas

## **Geological Office Furniture:**

- 8-drawer completion card cabinets -21 available
- 7-drawer cabinets—10 available
- Map cabinets—metal—2 available
- Map racks—different sizes—6 available

# Call: 316-265-8676 Ask for Ted

The Society Wishes To Thank The Following For Supporting The Annual Fishing Tournament

Jon Christensen Alan DeGood Duke Drilling Co. Edmiston Oil Co. Gore Oil Co. Jim Hall Maverick Drilling Co. Jay McNeil Mull Drilling Co. Murfin Drilling Co. Nabors Drilling & Completion Oil Producers, Inc. of Kansas Pickrell Drilling Co. Raymond Oil Co., Inc. Ritchie Exploration, Inc. Bill Shepherd Sterling Drilling Co. Strata Exploration, Inc. Fred Stump Trek, AEC Trilobite Testing, LLC



# Society's Holiday Open House

# Friday, Dec. 19th



In the library from 11:00 AM—closing

Come join us for some food and holiday cheer!





# Kansas Geological Foundation

Web Site: www.kgfoundation.org

## 212 North Market Wichita, Kansas 67202

A not-for-profit educational and scientific corporation

# **GOALS:**

- promote geology and earth science

- preserve geological records
- establish memorials and endowments
- support field trips and seminars
- financial aid and grants to students

# PLEASE HELP SUPPORT THE FOUNDATION

# Kansas Geological Foundation Services

The Kansas Geological Foundation provides the following services as a part of the organization's commitment to educate the public regarding earth science.

# Speaker's Bureau

A list of speakers available to talk about various aspects of geology may be obtained by contacting Janice Bright at the KGS Library, 265-8676. This service is free to the public.

# DVD/Videotape Library

The KGF maintains a DVD & videotape library focused primarily on the various fields of earth science. These tapes may be checked out without charge by the public. To obtain a list of tapes, please contact the KGS Library, 212 N. Market, Ste. 100, Wichita, KS 67202, or call Janice Bright at 265-8676. The Kansas Geological Foundation was founded in March, 1989 as a not-for-profit corporation under the guidelines of section 501(c)(3) of the tax code to provide individuals and corporations the opportunity to further the science of geology. It is dedicated to providing charitable, scientific, literary and educational opportunities in the field of geology for the professional geologist as well as the general public.

KGF can receive in-kind donations through which the donor may receive a tax deduction. Of equal importance, the KGF provides the financial resources to sort, process and file this data at the KGS library. If you have a donation to make, please contact the KGF at 265-8676.

Your tax-deductible membership donation helps to defray the cost of processing donations and to support public education programs about the science of geology. Annual membership begins at \$50.00 per year. Donations of \$100.00 or more are encouraged through the following clubs:

Century Club \$500 Club Millennium Club President's Club \$ 100 to \$ 499
\$ 500 to \$ 999
\$1000 to \$5000
\$5000 and over

#### 미킹들이 WESTERN KANSAS EASTERN COLORADO **OKLAHOMA & TEXAS PANHANDLES** SOUTHERN NEBRASKA DRILLING COMPANY, INC. 10 Well Service Rigs & **Roustabout Services 10 Drilling Rigs** For contract information, please contact: For contract information, please contact: Alan Hays, Well Service Sprvsr. **Blaine Miller / Drilling Department** 785-421-2103 or 785-567-8739 (cell) 316-858-8607 (Direct) or 316-267-3241 East Highway 24—Hill City, KS 67642 250 N. Water #300-Wichita, KS 67202 **TIMOTHY J. SANDERS** tsanders@tomcatdrilling.com CELL (316) 259-1652 WWW.TOMCATDRILLING.COM TOMCAT DRILLING LLO DRILLING COMPANY CORPORATE OFFICE FIELD OFFICE AND YARD 8301 E. 21st North, Suite 360 225 NW HIGHWAY 270 WICHITA, KANSAS 67206 WOODWARD, OKLAHOMA 73801 -----PHONE (580) 254-3026 PHONE (316) 262-8554 ROTARY DRILLING CONTRACTOR FAX FAX 100 S. Main, Ste. 620 Hubbard PO Box 823 Wichita, KS 67202 Phone 316-267-1331 5 ROTARY RIGS SERVING Great Bend, KS 67530 OKLAHOMA, KANSAS AND Phone 620-793-8366 Fax 316-267-5180 THE TEXAS PANHANDLE Great Bend **Ness City Medicine Lodge** (620) 793-5861 (785) 798-3843 (620) 886-5926 GEOPHYSICAL 2D & 3D Vibroseis Acquisition CEMENTING CO., INC. ARAM\*AIRES Seismic Recording System 1600 Broadway, Suite 1660 • Denver, CO 80202-4915 Acidizing Available at Medicine Lodge District (303) 592-5220 • info@lockhartgeo.com Russell Oakley for complete information go to: www.lockhartgeo.com (785) 483-2627 (785) 672-3452 .*MBC* FULL LINE SUPPLY STORE With Pump Shop, New & Used Pipe, Equipment and Fittings WELL LOGGING & LEASING Exclusive S-55 casing source UNMANNED GAS DETECTORS MUD LOGGING OILFIELD SUPPLY CERTIFIED INSTRUMENT TECH STORES. Chanute, KS 620-431-6500 Ness City, KS 800-589-5733 AUSTIN GARNER **MARLA GARNER** El Dorado, KS 316-321-9323 Osawatomie, KS 913-755-2297 Garden City, KS 877-976-1700 Spivey, KS 620-532-5261 785-650-0199 308-345-1542 McCook, NE Hays, KS Hugoton, KS 620-428-6604 24-HOUR PHONE (620) 873-2953 SALES OFFICES: MEADE, KANSAS Wichita, KS 800-777-7672 Denver, CO 303-349-8417

Williston, ND

701-570-9255

# **Exploration Highlights**

## By John H. Morrison, III Independent Oil & Gas



1 • O'Brien Resources LLC, Shreveport (LA), is pumping 67 barrels of oil and 25 barrels of water per day at their 1 MSJ -Penner 28 (API 15-063-22184) in Gove County. The wildcat well found new reserves over one mile northeast of existing production in the Butterfield - Overland Southeast field. The MSJ - Penner well is producing oil from two zones in the Marmaton formation from 4339 to 4345 ft and 4429 to 4443 ft. Maverick Drilling tools bottomed the well at a total depth of 4610 ft. Drill site is located in the SW SE NW of section 28- T14s- R30W, about ten miles south and nine miles west of Gove, Kansas. The new field has not been named.

2 • Samuel Gary Jr and Associates, Inc., Denver (CO), has established a new unnamed oil field in Norton County, about two miles north of Lenora, Kansas. Discovery was made at the 1-2 JMNJ Farm (API 15-137-20700), located in the SW NW NW of section 2- T5s- R24W. The well found oil deposits in the Shawnee (Toronto) and Lansing-Kansas City formations. No details on production volume has been reported. Total depth was ended at 3810 ft by Discovery Drilling rig. The new field lies nearly two miles northwest of LKC oil production in the Lenora field (1976).

**3** • American Warrior, Inc., Garden City (KS), has discovered Morrow oil reserves on the Gray County - Finney County line with the completion of the 2-19 Katherine (API 15-069-20478). The wildcat pool opener was drilled in the NW SW NW of section 19 - T24s- R30W, about seven miles northwest of Charleston, Kansas. A total depth of 5150 ft was obtained by Duke Drilling tools. The new oil deposits lie nearly two miles southwest of established Morrow and Mississippian oil and gas production in the MIH field (1981). The new field is unnamed at this time.

4 • Cobalt Energy LLC, Wichita (KS), has successfully completed the 1-24 Sack Trust A (API 15-051-26724) as a new pool discovery in the SW NW NW of section 24- T13s- R19W, Ellis County. The well found oil reserves almost one mile west of multi-pay oil production in the Gatschet Southeast field (1968). Operator hired Southwind Drilling as contractor to drill the well to a total depth of 3750 ft. The discovery is located about one mile north and three miles west of Hays, Kansas.

5 • Downing-Nelson Oil Company, Inc., Hays (KS), is producing oil from the Marmaton (Pawnee) limestone at the 1-24 Kramer Unit (API 15-023-21394) in Cheyenne County, northwest Kansas. The new unnamed pool opener was drilled in the SE SW SW of section 24- T5s- R37W by Ninnescah Drilling tools. Total depth is 5129 ft. The well is located one and one-half miles northwest of the Tovrea oil field (1978), which has given up over one-half million barrels of oil from the Lansing-Kansas City and Marmaton formations. No name has been assigned to the new field. Field area is located ten miles south and five miles east of Bird City, Kansas.

6 • Independent producer Carmen Schmitt, Inc., Great Bend (KS), has completed the 1-12 Depe (API 15-193-20930) to establish a new unnamed oil field in Thomas County. The 4800-ft well is producing an undisclosed amount of crude from the Lansing-Kansas City formation at site located in the SW NE NW of section 12- T7s- R32W, almost five miles west of the town of Rexford. The deposits lie over three miles northeast of the Knudson field (1977, LKC oil).

7 • New Gulf Operating LLC, Tulsa (OK), has discovered Marmaton oil deposits at the 1-33 Baker (API 15-109-21276), located in the SW SW of section 33- T14s- R34W, in Logan County. VAL Energy rotary tools drilled the well to a total depth

of 4715 ft. The unnamed pool opener found the new oil reserves over one and one-quarter miles northeast of established production in the Lone Butte Southwest field - another New Gulf Marmaton (Altamont) oil discovery made in 2012. The Baker lease lies about eight miles south and three miles east of Russell Springs, Kansas.

8 • Merit Energy Company LLC, Dallas (TX), is producing crude oil from the Mississippian Chester Sand formation at their 1 Warner G (API 15-081-22063), spotted in the NW SW SE of section 26- T27s- R33W, in Haskell County. The new reserves were found two miles north of Atoka and Mississippian oil wells in the Santa Fe North field (2005), or about twelve miles north and three miles west of Sublette, Kansas. Operator hired Saxson Drilling to bottom the well at 5700 ft total depth. The new field has not been named.

**9** • **Ring Energy, Inc.,** Midland (TX), has successfully completed the 1 Ardery 11 (API 15-081-22045) with dual pay coming from the Morrow (perfs 5032-5036 ft) and Mississippian Saint Louis B (perfs 5189-5194 ft). The wildcat well was drilled to a total depth of 5336 ft at site in the SE NE SW of section 11- T27s- R31W, about seven miles north and thirteen miles west of Montezuma, Kansas. Closest established production in the vicinity lies over one and one-quarter miles to the southeast in the Cornfield pool (2009, Mississippian gas). The new field has not been named.

10 • Samuel Gary Jr and Associates, Inc., Denver (CO), is producing oil from the Lansing-Kansas City formations at their 1-17 Flax - a 4410 ft deep wildcat well spotted in the NW NE SE of section 17- T11s- R23W, in Trego County. The new unnamed oil field is located one and one-quarter miles east of LKC oil production in the Magnum field (2011) and is four miles north of Wakeeney, Kansas. Production details are being held confidential.

11 • American Warrior, Inc., Garden City (KS), has discovered Mississippian (Saint Louis) oil reserves at the 3-23 Irsik-Finney (API 15-055-22305), located in the SW SW NE of section 23- T24s- R31W, Finney County. The new pool discovery well found crude deposits over three miles north of Mississippian oil production in the Pierceville field, which American Warrior also established earlier this year in section 2- T25s- R31W. Details are confidential. The 3-23 Irsik-Finney was drilled to a total depth of 5000 ft about eight miles east of Garden City, Kansas. The new oil field has not been named.

12 • Tengasco, Inc., Hays (KS), has established a new unnamed Mississippian oil field slightly over one mile north of the Splitter field in Trego County. The new reserves were discovered at the 1 Howard A (API 15-195-22955), NW SE NE in section 17- T15s-R25W, approximately eight miles north and four miles west of Arnold, Kansas. Operator hired American Eagle Drilling to drill the well to a total depth of 4378 ft. The Splitter field gave up around 17,000 barrels of oil from the Marmaton and Mississippian formations from 1971 to 1977. Mississippian pay was recovered from 4392 to 4478 ft in depth.

13 • Samuel Gary Jr & Associates, Inc., Denver (CO), has completed the 1-26 Hazlett Etal (API 15-137-20698) as a commercial well producing crude oil from the Shawnee (Toronto) and Lansing-Kansas City formations. The wildcat well (new pool discovery) was drilled to a total depth of 3950 ft at site located in the NW NW SE of section 26- T4s- R24W, about four miles north of the town of Lenora, Kansas in Norton County. Closest known production in the vicinity of the new find lies over three miles away in the Lenora field (1976, LKC oil). The new field is unnamed at this time.

14 • Alton Oil LLC, Winfield (KS), is pumping an unknown amount of crude from the Mississippian formation at their 1 Jack (API 15-035-24556), spotted in the NE NW NW of section 21- T30s- R5E, in Cowley County. The wildcat pool opener was drilled to a total depth of 3190 ft by Ron Gulick Drilling tools at site located about three miles north and one mile west of Wilmot, Kansas. Lease lies three-quarters mile north of established production in the Nauman field (1982) which produces oil from both the Cherokee and Mississippian zones.

**15** • **Black Tea Oil LLC,** Hays (KS), has explored nearly one and one-quarter miles north of established multiple-pay production in the Elkader Townsite field (2012) to discover new oil reserves in the Lansing-Kansas City and Cherokee formations. The firm's 1 DFK-1 (API 15-109-21304), NW SE NW in section 2- T15s- R32W, Logan County, is pumping an unknown amount of crude at site eight miles north and seventeen miles east of Russell Springs, Kansas. Landmark Drilling tools bottomed the well at a total depth of 3190 ft.

16 • Ritchie Exploration, Inc., Wichita (KS), has discovered Lansing-Kansas City oil deposits at the 1-X Biggs 21-D (API 15-145-21759) in Pawnee County. Operator drilled the 4550 ft deep well into Pre Cambrian rocks utilizing Southwind Drilling tools. The well found the oil deposits over two miles from closest known production in the area. The Biggs well was drilled in the SW NE SE of section 21- T21s - R18W, or about one mile north and five miles east of Rozel, Kansas.







# **Kansas Geological Foundation Memorials**

KGS Member	Date Deceased	Memorial Est.	KGS Member	Date Deceased	Memorial Est.
Dan Bowles John Brewer	09/89 10/89	1990 1990	Edward B. Donnelly Richard P. Nixon	08/01 02/02	2001 2002
George Bruce	08/89	1990	Robert W. Frensley	12/01	2002
Robert Gebhart	01/90	1990	Gerald W. Zorger	01/02	2002
Ray Anderson, Jr.	11/90	1990	Don L. Calvin	03/02	2002
Harold McNeil	03/91	1991	Claud Sheats	02/02	2002
Millard W. Smith	08/91	1991	Merle Britting	2002	2002
Clinton Engstrand	09/91	1991	Harold Trapp	11/02	2002
M.F. "Ted" Bear	10/91	1991	Donald M. Brown	11/02	2003
James & Kathryn Gould	11/91	1991	Elwyn Nagel Robert Noll	03/03	2003
E. Gail Carpenter Benton Brooks	06/91 09/92	1993 1992	Benny Singleton	09/03 09/03	2003 2003
Robert C. Armstrong	01/93	1992	Jay Dirks	2003	2003
Nancy Lorenz	02/93	1993	J. Mark Richardson	02/04	2003
Norman R. Stewart	07/93	1993	John "Jack" Barwick	02/01	2004
Robert W. Watchous	12/93	1993	Richard Roby	03/04	2004
J. George Klein	07/94	1994	Ruth Bell Steinberg	2004	2004
Harold C.J. Terhune	01/95	1995	Gordon Keen	03/04	2004
Carl Todd	01/95	1995	Lloyd Tarrant	05/04	2004
Don R. Pate R. James Gear	03/95 05/95	1995 1995	Robert J. "Rob" Dietterich Mervyn Mace	08/96 12/04	2004 2004
Vernon Hess	06/95	1995	Donald Hoy Smith	04/05	2004 2005
E. K. Edmiston	06/95	1995	Richard M. Foley	06/05	2005
Jack Rine	07/95	1995	Wayne Brinegar	06/05	2005
Lee Cornell	08/95	1995	Charles B. Moore	09/96	2005
John Graves	10/95	1995	Jack Heathman	05/06	2006
Wilson Rains	10/95	1995	Charles Kaiser	09/06	2006
Heber Beardmore, Jr.	09/96	1996	Rod Sweetman	08/06	2006
Elmer "Lucky" Opfer	12/96	1996	Karl Becker	10/06	2006
Raymond M. Goodin Donald F. Moore	01/97 10/92	1997 1997	Frank Hamlin Marvin Douglas	10/06 12/06	2006 2006
Gerald J. Kathol	03/97	1997	Marvin Douglas Robert W. Hammond	04/07	2008
James D. Davies	08/88	1997	Eldon Frazey	04/07	2007
R. Kenneth Smith	04/97	1997	Pete Amstutz	05/07	2007
Robert L. Dilts	05/97	1997	Charles Spradlin	05/07	2007
Delmer L. Powers	06/72	1997	Donald R. "Bob" Douglass	09/07	2007
Gene Falkowski	11/97	1997	Vincent Hiebsch	11/07	2007
Arthur (Bill) Jacques	01/98	1998	Glen C. Thrasher	03/08	2008
Bus Woods Frank M. Brooks	01/98 03/98	1998 1998	Peg Walters	06/08	2008 2008
Robert F. Walters	03/98 04/98	1998	Theodore "Ted" Sandberg James Ralstin	07/08 11/08	2008
Stephen Powell	04/98	1998	Earl Brandt	04/09	2008
Deane Jirrels	05/98	1998	Walter DeLozier	05/09	2009
William G. Iversen	07/98	1998	Don D. Strong	01/10	2010
Ann E. Watchous	08/98	1998	John Stone	02/10	2010
W.R. "Bill" Murfin	09/98	1998	Craig Caulk	03/10	2010
Donald L. Hellar	11/98	1998	Joseph E. Moreland, Jr.	03/10	2010
Joseph E. Rakaskas Charles W. Steincamp	01/99 02/99	1999 1999	Gene Garmon James F. Dilts	03/10 05/10	2010
Robert and Betty Glover	10/96	1999	Jerry Pike	05/10	2010 2010
Howard E. Schwerdtfeger	11/98	1999	Donald Hollar	06/10	2010
W. W. "Brick" Wakefield	03/99	1999	Delbert Costa	08/10	2010
V. Richard Hoover	01/00	2000	John Tanner	08/10	2010
Warren E. Tomlinson	01/00	2000	William (Bill) Owen	09/10	2010
James A. Morris	01/00	2000	Harold (Hal) Brown	10/10	2010
Eric H. Jager	03/00	2000	Edmund G. Lorenz	11/10	2010
Kenneth W. Johnson	03/00	2000	Thomas E. Black	05/11	2011
Dean C. Schaake	03/00 05/00	2000 2000	Wayne E. Walcher Henry F. Filson	07/11 07/11	2011 2011
Fred S. Lillibridge Jerry A. Langrehr	07/00	2000	Thomas Ray	07/11	2011
Clark A. Roach	07/00	2000	Edgar E. Smith	09/11	2011
Floyd W. "Bud" Mallonee	10/00	2000	Marilyn Messinger	06/13	2013
Ralph W. Ruuwe	09/00	2000	Micheal Mitchell	9/13	2013
Robert L. Slamal	02/01	2001	Orvie Howell	11/13	2013
Jerold E. Jesperson	06/01	2001	James Thompson	11/13	2013
William A. Sladek	06/01	2001	Dick Rowland	09/13	2014
Harlan B. Dixon	06/01	2001			

# www.kgslibrary.com





# **All Around You**

# Weatherford has always been driven by your needs.

Now, with the addition of Precision Energy Services we're continuing to build a world of skills, services and technologies that revolve – and evolve – around you.

#### The result?

An expanded global network of 25,000 people, 730 service bases and 87 manufacturing facilities in 100 countries.

This increased local knowledge and service is there to support you anywhere, anytime. From midday in the Middle East to midnight in the middle of nowhere.

And with greatly strengthened capabilities in the critical evaluation skills of directional drilling and wireline logging, we can do even more to improve the profitability and productivity of your wells.

To see how our sphere of services can work for you, visit **www.weatherford.com** or contact either your Weatherford or former Precision Energy Services representative.

Drilling | Evaluation | Completion | Production | Intervention

© 2006 Weatherford International Ltd. All rights reserved. Incorporates proprietary and patented Weatherford technology.

Kansas Geological Society & Library 212 North Market, Suite 100 Wichita, Kansas 67202

#### **CHANGE SERVICE REQUESTED**

KGS BULLETIN Nov-Dec 2014

# November 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19 Tech Talk	20	21	22
23	24	25	26	27	28	29
30				Library Clo	sed Thanksgiving	
50						

# December 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 Tech Talk	3	4	5	6
7	8	9	10	11	12	13
14	15	16 Tech Talk	17	18	19 Library Open House	20
21	22	23	24	25 Library clo	26 osed Christmas	27
28	29	30	31	1 Library c	2 losed New	