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IN THIS ISSUE





On the Cover

Kilauea is an active shield volcano in the Hawaiian Islands. Historically, it is the most active of the five volcanoes that together form the Big Island of Hawai'i. Wikipedia Last eruption: December 20, 2020 Elevation: 4,091' Prominence: 60' Volcanic arc/belt: Hawaiian–Emperor seamount chain Location: Hawaii, United States Age of rock: 210,000 to 280,000 years old

From the Editor...

I want to begin my first Editor's Note by thanking my predecessor, Charlie Miller, for the gift of his time and patience to prepare me to become your Editor. I'm very excited about the opportunity to bring diverse, interesting information to your attention that I hope you will find helpful in your professional work and relevant to your career development.

In future issues of the LOG I will be asking for your opinions, ways to improve the newsletter and what you want to see in future. Until then, let's start some conversations amongst ourselves, here are a couple of conversation starters for you:

Be cautious when interpreting marine ecosystems from fossils. <u>The climate is changing, is the Earth's core lopsided too?</u> *Click links to access web*

Mult



Emmitt Lockard 2021/2022 NOGS LOG Editor



To members and friends of the New Orleans Geological Society:

The oil and gas prices continue to remain strong, with WTI above \$71 per barrel, and natural gas at \$4. US drilling activity is still strong with 484 rigs drilling now, compared to 253 last year.

This last week we have seen a resurgence in COVID cases increasing from fewer than 500 new cases per day in June to over 5,000 per day this week. This increase emphasizes the need for us all to follow the safety guidelines. According to Dr. Joseph Kanter, State Health Officer, "COVID-19 cases are surging among the unvaccinated in Louisiana. It's not one outbreak, it's not one region. This is a statewide problem, and because our statewide vaccination rate is too low, everyone is at elevated risk and should take precautions immediately for the safety of themselves and their families." We hope that there will be a decrease in new cases and that in-person meetings can resume in the near future.

The NOGS virtual presentations will continue for the present time. All are encouraged to virtually attend the presentations by the excellent series of speakers scheduled for the virtual audience of NOGS attendees. Again, we hope that if the COVID cases decrease we may be able to resume in-person meetings.

I would again like to thank all of those who served last year and for the excellent job they did during a difficult virtual year.

As always, a reminder of dues renewal - if you haven't already done so, is \$35.00 for Active membership and \$15 for Student membership. Please be reminded that we haven't been able to have a lot of fund raisers this year, so I encourage you to pay your dues and to consider adding a special donation to the Memorial Foundation to help us continue our worthwhile local community, university, and education programs.

I am looking forward to this next year as we hopefully return to a more normal time. Thanks everyone and stay well!

Regards, Doug Bradford



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Mike Fein and Ed Picou are shown "hawking" tickets for raising money for NOGS at the 1992 Kick Off Party at the Petroleum Club in the City Energy Building.

Submitted by Ed Picou, Chairman - Historical Committee

The New Orleans Geological Society was organized on October 3, 1941, as a nonprofit organization for the purpose of facilitating the development of the profession and science of Geology, with specific emphasis to exploration and production of petroleum and natural gas. Secondary related objectives include the dissemination of pertinent geological and environmental technological data, and the maintenance of a high standard of professional conduct of its members. The full history of the Society can be found at nogs.org

The NOGS LOG is now a digital magazine with live links to your site to reach NOGS Members and support your Society. Please contact Christy Himel admin@nogs.org for placement availability. Full page NOGS LOG advertisers will have their Company LOGO posted on the NOGS Website front page. All advertisers are included on the Society's monthly PowerPoint and listed on the website with a link to their home page. Please check out our website www.nogs.org

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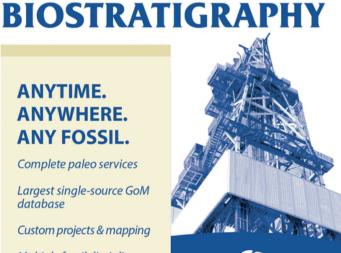
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OFFSHORE GULF OF MEXICO SHELF AND DEEPWATER ACTIVITIES BY AL BAKER



During June 2021, the U.S. Department of the Interior Bureau of Safety and Environmental Enforcement (BSEE) approved 51 Gulf of Mexico (GoM) drilling permits. Nine of the permits were for shelf wells, and the remaining 42 permits were for deepwater wells. Of the total number of permits, there were 2 new well permits issued in deepwater, none on the shelf.

The two deepwater new well permits were for one exploration and one development well. BP Exploration & Production received the exploration permit for their Mississippi Canyon 562 #3 well. Shell Offshore was given the development permit for their Mississippi Canyon 809 #P-12 well.

On June 25th, IHS-Petrodata indicated that the GoM mobile offshore rig supply stood at 56, which is same as last month. The marketed rig supply consisted of 31 rigs, of which 25 were under contract. The marketed rig supply number is same as last month, whereas the contracted rig supply number is 1 more than last month. The marketed contracted versus total rig supply utilization rate was 53.6%, and the marketed contracted versus marketed supply utilization rate was 80.7%. By comparison, the June 2020 total fleet utilization rate stood at 65.9% with 41 rigs under contract out of the 68 rigs in the fleet.

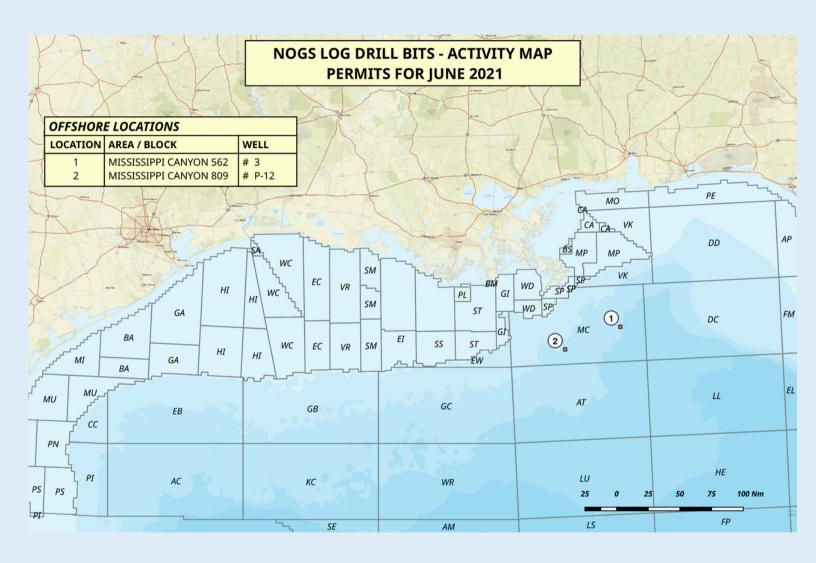
On June 25th, Baker Hughes reported that there are 14 active mobile offshore rigs in the GoM, which is 1 more than last month and 56% of the rigs under contract mentioned above. Currently, 2 rigs are drilling on the shelf, and 12 rigs are drilling in deepwater. They include 7 rigs in the Mississippi Canyon Area, 2 rigs in the Green Canyon Area and 1 rig each in the Alaminos Canyon, Walker Ridge, Viosca Knoll, Eugene Island and Main Pass Areas.

On June 25th, the Baker Hughes total U.S. rig count stood at 470 rigs, which are 13 more rigs than reported at the end of May 2021. Of the 470 rigs, 372 (79.1%) are oil rigs and 98 (20.9%) are gas rigs. A year ago, there were 265 rigs working in the U.S. inferring that the current rig figure represents a 77.4% increase in rigs year over year. Presently, Texas continues to have the largest number of rigs with 221, which is 47% of the total number of rigs in the U.S. Louisiana currently has a total of 52 rigs, which is 1 less than last month. Nationwide, Louisiana continues to rank third in the rotary rig count. New Mexico ranks second with 75 rigs.



DRILL BITS offshore gulf of mexico shelf and deepwater activities map by kevin trosclair









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PHOTOGRAPHY BY ARTHUR

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arthur_shalimar@yahoo.com

985-893-2013



GEM Consulting, LTD

Michael Louis Merritt admin@gemconsultingltd.com

VISITNOGS CONSTRUCTION CONSTRUC



NEW ORLEANS GEOLOGICAL SOCIETY MEMORIAL FOUNDATION INC.

Founded March 14, 1978, the mission of the New Orleans Geological Society Memorial Foundation is to promote earth science related or scientific purpose by granting of scholarships to outstanding Geology students at the universities in Southeast Louisiana having a comprehensive curriculum and offering a degree in Geology. The Bill Craig Memorial Fund provides for any earth science related educational or scientific purpose that is a direct benefit to grades K-12 teacher or teachers within the Greater New Orleans Area. This area is defined as the area encompassing New Orleans, Jefferson, Plaquemines, St. Bernard and St. Tammany Parishes.



THE MEMORIAL FOUNDAION IS AN IRS TAX EXEMPT CODE #501(C)(3) ORGANIZATION. THE FEDERAL ID IS 72-1220999. PLEASE CONSIDER MAKING A DONATION TO THE FOUNDATION. YOUR INDIVIDUAL SUPPORT IN ANY AMOUNT WILL HELP MEET THE IRS GUIDELINES FOR OUR FOUNDATION. THANKS!

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Recent Oil Industry HeadlinesJuly 2021

7/1/2021 (Rigzone) BSEE Revises Maximum Daily Civil Penalty Fine Regs - The U.S. Bureau of Safety and Environmental Enforcement (BSEE) has announced revisions to the regulations for maximum daily civil penalties (MDCP) that may be imposed on producers for violations under the Federal Oil and Gas Royalty Management Act (FOGRMA). <u>Read Full Article</u>

7/7/2021 (Natural Gas Intelligence) Rigs Added in Gulf of Mexico as U.S. Count Continues Steady Ascent - An uptick in drilling activity in the Gulf of Mexico (GOM) helped lift the U.S. rig count four units higher to 479 during the week ended Friday (July 9), according to updated numbers from oilfield services provider Baker Hughes Co. (BKR).<u>Read Full Article</u>

7/12/2021 (World Oil) Biden continues his anti-U.S. oil and gas push while crude demand rises - The Biden administration is preparing to release a blueprint for limiting sales of U.S. drilling rights as rising oil and gasoline prices highlight the risks of curtailing domestic crude production. Recommendations are set to include key changes to the government's sale of oil and gas leases on federal lands and waters, including the boosting of royalty rates companies pay to extract fossil fuels and overhauling financial bonding requirements to ensure U.S. taxpayers don't pay for any future cleanup. <u>Read Full Article</u>

7/12/2021 (Rigzone) Oil Prices Loom Over Biden Drilling Rights Blueprint - The Biden administration is preparing to release a blueprint for limiting sales of U.S. drilling rights that falls short of the outright ban sought by some environmentalists, as rising oil and gasoline prices highlight the risks of curtailing domestic crude production. <u>Read Full Article</u>

7/13/2021 – (OilPrice.com) Oil Price Volatility Spikes On OPEC+ Uncertainty - Growing uncertainty over the OPEC+ agreement and warnings from the IEA of another oil price war has caused volatility in oil markets to spike. <u>Read Full Article</u>

7/20/2021 - BHP said to seek an exit from its petroleum business - BHP Group is considering getting out of oil and gas in a multibillion-dollar exit that would accelerate its retreat from fossil fuels, according to people familiar with the matter. The company has long said the oil business was one of its strategic pillars and argued that it will make money for at least another decade. But as the world tries to shift away from fossil fuels, BHP wants to avoid getting stuck with assets that become more difficult to sell, the people said. <u>Read Full Article</u>

TOP 10 REASONS TO JOIN NOGS

Proclaim your professionalism

With an 80 year history and over 300 active members, NOGS is the premier professional organization for geologists in New Orleans. Adding your name to the ranks declares your pride in the profession you have chosen.

Advance your career

NOGS members enjoy educational opportunities and top speakers designed to increase knowledge and keep up with the newest trends in geoscience, both on the national and local levels.

Advertise your integrity

NOGS has a reputation of over 75 years for upholding high standards. Align yourself with like-minded geologists and related fields.

4

1

2

Further your cause

NOGS was organized for the purpose of facilitating the development of the profession and science of Geology, at the time with a focus on production of oil and gas. Since Hurricane Katrina our objectives expanded to include the dissemination of the geological facts of flood control, engineering and environmental geoscience.

5

Network with others who do what you do

Making connections, between people and ideas, is an important part of any scientific endeavor. Meet others who can help you make those connections.



Advocate for your profession

Serious-minded professionals know that serving the profession means responding to calls for action from those who represent the profession. NOGS monitors trends in geoscience education, regulation, and practice standards and periodically advises members on required action.



Serve your profession and community

Opportunities for individuals to serve on NOGS committees that work on a variety of issues from building educational programs to sharing knowledge with others to providing scholarships to young geologists in our area.

8

Don't reinvent the wheel ... use available resources

NOGS members can provide you with the resources you need to do your job well. Long-time members remain active and are happy to share their knowledge and best practices.

9

Play a part in elevating the status of geosciences.

Your membership in NOGS and your dedication to geoscience elevates the entire profession.

10

Do it for YOURSELF!

It's all about YOU! NOGS' educational, networking, and career planning programs will take you where you want to go!



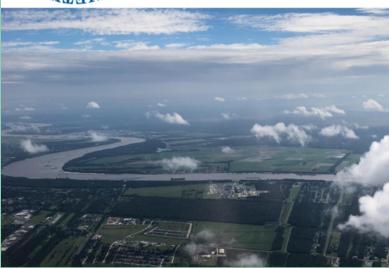
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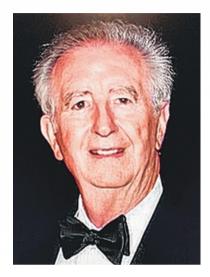
To purchase these publications, go to the NOGS website at <u>www.NOGS.org</u> <u>Click the</u> <u>"NOGS Store"</u> link at the top

More NOGS Store Items Coming Soon! Stay Tuned!



www.nogs.org

Remembering NOGS Members...



Carlo C. Christina

Carlo (Chris) Christina was an accomplished and passionate geologist, my first boss, and a lifelong friend. We met in 1959 working at Southern Natural Gas Company and remained connected personally and professionally for over six decades. Allow me to share a bit with you about this impressive man and friend.

With his best friend, wife Beverly by his side, Carlo leveraged his Bachelor's Degree in Geological Science and his experience as a First Lieutenant in the U.S. Air Force to build an impressive career in Louisiana's Oil & Gas industry. These roles included President and Co-Founder of C&R Exploration, Senior Vice President of Exploration at Martin Exploration Company, Senior Vice President of Exploration at Exchange Oil and Gas Corporation, District Geologist at Southern Natural Gas Company, and Geophysical Computist at Western Geophysical Company and Marine Exploration Company.

Recognized for his significant contributions to our industry and region, Carlo was inducted into the LSU Hall of Distinction of the College of Science in 2011. His involvement ranged from being a Certified Geologist with the American Association of Petroleum Geologists, Certified Member of the Society of Independent Professional Earth Scientists, President and Honorary Life Member with the New Orleans Geological Society, and Honorary Life Member with a Distinguished Service Award with the Gulf Coast Association of Geological Societies. He was a devoted member in his community and at LSU as the President of the LSU Geology Alumni Association, President and Chairman of the Jefferson Parish Alumni Fund, Founding Chairman of the LSU Geology Endowment, Charter Member of the College of Basic Sciences Council Trustees, and Track Member of the LSU National "L" Club. Carlo had a profound presence and involvement with East Jefferson General Hospital Foundation as a member of the Board of Directors, Executive Committee, Investment Committee, Special Gifts Committee, Golf Committee, and Secretary of Funds.

Carlo passed away peacefully at his granddaughter's home in Diamondhead, MS, on June 15th, 2021, a few short months after the passing of his wife, Beverly. He is survived by his sons Thomas B. Christina (Jane) and Michael Christina; his brother Joseph Christina; his grandchildren Thomas J. Christina, Amanda Gruber (David), Jessica Moskowitz (Harry), Cameron Christina, and Connor Christina; and great-grandchildren Kandice Christina, Preston Gruber, and Jemma Moskowitz. He is preceded in death by his parents Emile and Rosalie Christina, his son Robert Christina, and his wife of 69 years, Beverly Christina.

Carlo will be sorely missed by his loving family, many friends, his civic and professional associates.

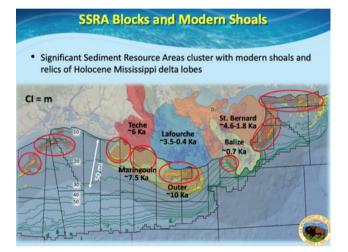
Submitted by James W. Yeldel, Jr.

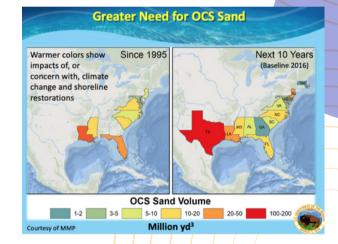
NOGS July Meeting

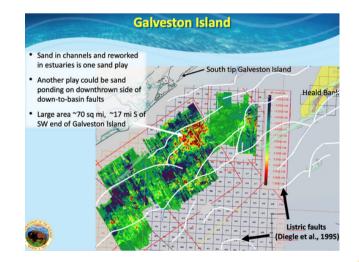


USE OF EXPLORATION 3D SEISMIC FOR BOEM MARINE MINERALS PROGRAM

Thomas W. Bjerstedt Ph.D.

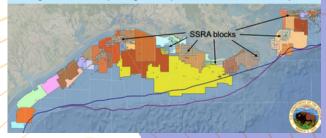






Inshore 3D Seismic Evaluated

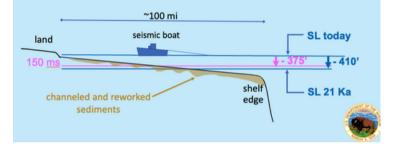
- These surveys accessed; most have no useful data <150 ms (~375 ft bsl). A small subset have data to <100 ms (~250 ft bsl), and the rare survey had data preserved at 50 ms (~125 ft bsl)
- 150 ms is a compromise between slicing as shallow as possible across a large area that is deep enough to sample some data from most surveys



USE OF EXPLORATION 3D SEISMIC FOR BOEM MARINE MINERALS PROGRAM

Inshore Near-Surface Geology

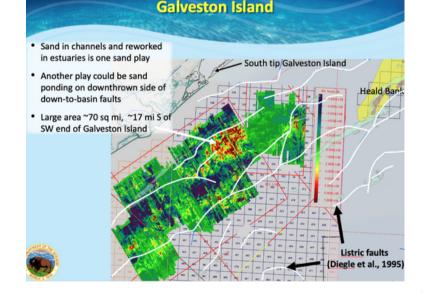
- Prepared time slices of 35 3D surveys of 10 ms thickness at 150 ms TWTT
- Sea level was ~410 ft lower during last glacial maximum (21 Ka)
- 150 ms (~375' bsl) should sample through channels/overbank sands reworked during sea level rise after LGM



Decide What Seismic Attribute Indicates

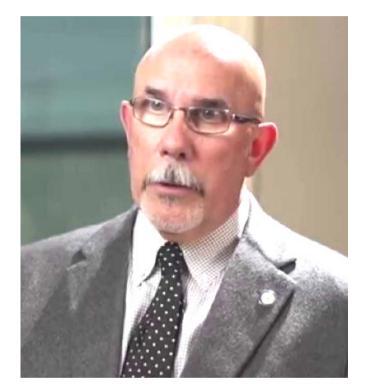
- Amplitude should be a good indicator for substrate firmness in unconsolidated shallow sediments
- Used <u>amp_min</u> attribute; seemed inherently conservative and less likely to show false positives
- Experimented with the amplitude ranges and color bar within each survey to make them roughly eye-equivalent
- "Firmgrounds" are warmer colors (positive amplitude) = sandy or sand-prone
- "Soupgrounds" are cooler colors (negative amplitude) = soft muddy sediment.
- Middle of the spectrum (green) = silty or possibly mixed





NOGS MEMBER'S NOTEWORTHY ANNOUNCEMENT

Michel Bechtel, NOGS member and Louisiana State University in New Orleans graduate with a B.S. in Geology & Geophysics and a M.S. in Petroleum Geology, has been appointed to the Gulf Coast Protection District (GCPD) Board of Directors by Texas Governor Greg Abbott. The GCPD is responsible for the operation and leverage of funding to build flood control and storm surge protection structures to protect coastal communities and the ports of Beaumont, Harris County and Galveston from storm surges. Lowering the risk of property damage in coastal communities and disruptions to commerce at the ports are the major goals of the Directors.



In addition to being the founder and President of Bechtel Exploration Company, he is also the Mayor of the coastal town of Morgan's Point, TX, making Michel uniquely qualified to serve on the GCPD Board.



NEW ORLEANS GEOLOGICAL SOCIETY PAST TREASURER REPORT, FY20 (unaudited) (JULY 1, 2019 – JUNE 30, 2020) By: David B. Culpepper, Immediate Past-Treasurer

This document serves as the Fiscal Year 2020 (July 1, 2019 – June 30, 2020) report submitted by the immediate Past-Treasurer. A Fiscal Year 2019 Report was not filed by the 2018-2019 Board.

Background

The Bylaws of the New Orleans Geological Society (Revised May 2002) stipulate that an Audit Committee shall be formed as follows: 5. Finance and Audit Committee: This committee shall consist of the President, the President-Elect, the Chairman of the NOGS Memorial Foundation, the Treasurer, the immediate Past-Treasurer, and one appointee from the active NOGS membership. The President shall select the appointee for a one-year term. The immediate Past-Treasurer shall be chairman of this committee and call regularly scheduled meetings.

The immediate Past-Treasurer shall be responsible for conducting yearly audits of the Treasurer's reports and the Society's books and submitting to the Board of Directors an annual written report of the findings and recommendations. (e.g., The Treasurer from fiscal year 2003-2004 would audit the books of fiscal year 2004-2005 by the September Board of directors meeting.) Traditionally NOGS Boards have not conducted complete financial audits, but have filed an end-of-fiscal year financial summary.

NOGS was organized on October 3, 1941, as a non-profit organization, as defined under IRS Code section 501(c)(6) and is a supported primarily by membership dues. Membership in this Society shall be available at the discretion of the Executive Committee to all interested persons directly involved in hydrocarbon and mineral exploration and exploitation, environmental geoscience, geoscience and geotechnical services, and geoscience education. Various classifications of memberships and the qualifications thereof shall be established by the Bylaws of the Society.

<u>Membership</u>

Membership categories include Active, Associate, Student and Honorary Lifetime members. NOGS membership at the end of FY 19 was 151 at the end of FY19, and 295 at the end of FY20.

Financials

Numerous changes have been implemented by NOGS within the last two years. NOGS operating income and expenses are now tracked with Intuit QuickBooks (QB) Online to produce monthly reports for the NOGS Treasurer. NOGS maintains a checking account with Hancock Whitney Bank that covers month-to-month operations. Both the NOGS President and Treasurer have view only access, and the Administrator has edit control, over both the QB and HW accounts.

NOGS maintains an investment account and a banking account. Previous Directors and Treasurers of NOGS had the foresight to establish an investment portfolio, which is managed by Morgan Stanley (MS). The NOGS President and Treasurer also have view only access to MS, and the Treasurer has edit control. At the beginning of FY20, NOGS had four accounts managed concurrently, which resulted in additional annual and monthly reporting requirements. Since elimination of the NOGS physical office, in an effort to provide greater transparency and efficiency, the four NOGS MS investment accounts have been combined into one account

- 1. Income from Operations \$49,418.59
- 2. Expenses for Operations \$67,861.52
- 3. Net Income Operations (Loss)1 (\$18,417.93)
- 4. Beginning MS Investment Value2 \$402,128.10
- 5. Ending MS Investment Value3 \$370,219.28

See footnotes for date of these figures.

The NOGS monthly operating bank account was migrated from Hibernia to Hancock-Whitney (HW) to allow greater accessibility. The NOGS President and Treasurer have view only access to HW, and the Administrator has edit control.

1 As of June 30, 2020.

- 2 As of July 31, 2019.
- 3 As of June 30, 2020.

MS for the period July 1-31, 2019

CLIENT STATEMENT For the P Account Summary		Active	Page 3 of 10 Assets Accesses NEW OFILEAMS GEOLOGICAL SOCIETY 327 DEEXATORIS ACCOUNT
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Net Credits/Debits/Transfers	\$230,995.42	\$222,995.42	8 10
Change in Value	1,314.75	25.267.82	
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MS for the period June 1-30, 2020

CLIENT STATEMENT For	the Period June 1-30, 2020			Morgan Stanley	Pag
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ASSET ALLOCATION Includes	accrued interest)				

	Market Value	Percentage
Cash	\$27,037.25	7.30
Equities	287,789.99	77.74
Fixed Income & Preferreds	55,392.04	14.95
TOTAL VALUE	\$370,219.28	100.00%
FDIC rules apply and Bank Deposits are eligible and securities (including MMHs) are eligible for		

Unit take appropriate that is depined on integrate for Full, instance for an indication of yours, to one source in relevance (MM) and an explore for STO coverage. See Legended Declinations, interesting include assess ensembly held which are provided to you as a covering, and may not be interest by SPC. For additional information, refer to the coveragending sociate of this statement.



This and affocation represents holdings on a trade date basis, and projected social CaA/BDP and MMP balances. These classifications do not consultate a vecommendator and may differ from the classification of instaments for segulatory or tra juopans.