SLS 18RS-359 **ENGROSSED**

2018 Regular Session

SENATE CONCURRENT RESOLUTION NO. 86

BY SENATOR HEWITT

COASTAL RESOURCES. Requests the oil and gas industry in Louisiana to support the construction of the Louisiana Geological Survey Coastal Geohazards Atlas by providing access to interpretations from 3-D seismic data.

A CONCURRENT RESOLUTION

To urge and request the oil and gas industry in Louisiana to support the construction of the Louisiana Geological Survey (LGS) Coastal Geohazards Atlas by providing access to interpretations of faults and other geological features from 3-D seismic data.

WHEREAS, the United States Army Corps of Engineers (USACE) report entitled "Active Geological Faults and Land Change in Southeastern Louisiana - A Study of the Contribution of Faulting to Relative Subsidence Rates, Land Loss, and Resulting Effects on Flood Control, Navigation, Hurricane Protection and Coastal Restoration Projects" reached five fundamental conclusions:

(1) Submergence of coastal wetlands due to a combination of compaction, sea level rise and fault slip has been the major cause of land loss in the delta plain during the twentieth century.

(2) Fault movement in the area of the modern delta plain has been continual and episodic for millions of years. Episodes of active fault movement are separated by dormant periods when movement persists as slow creep. An episode of fault slip between 1964 and 1980 appears to be associated with significant land loss on downthrown sides of faults.

(3) There is a relationship between faults and salt structures. Ductile, incompressible, low density salt moves relative to surrounding compacting sediments; and this movement

of salt interacts with faults associated with the salt structures.

(4) Continual episodic and slow creep fault slip may cause preferentially thicker accumulations of compactible organic clays and peats on the downthrown side of the faults, thereby delineating areas where subsidence rates may be higher due to the greater compactibility of the soil column.

(5) Faulting poses a natural hazard in southeastern Louisiana, and the findings of the report have direct applications to the planning and design of coastal restoration efforts, including infrastructure element; and

WHEREAS, a research initiative by the New Orleans Geological Society (NOGS) has resulted in six research projects at the University of New Orleans (UNO), the University of Louisiana at Lafayette (ULL), and Tulane University that have used oil and gas industry seismic data to study several aspects of the conclusions of the USACE report; and

WHEREAS, the preliminary conclusions of these research projects, some of which have been presented at the annual meetings of the Geological Society of America and the American Geophysical Union, and several of which are scheduled for presentation at the State of the Coast Conference in June 2018, have shown conclusively that oil and gas industry seismic data can be used to extrapolate the location of faults at the land surface and to study patterns of episodic fault slip; and

WHEREAS, the Restore Act Center of Excellence for Louisiana in coordination with the Coastal Protection and Restoration Authority awarded a research grant on June 22, 2017, for the project entitled "An Evaluation of Faulting in Holocene Mississippi River Delta Strata through the Merger of Deep 3-D and 2-D Seismic Data with Near Surface Imaging and Measurements of Vertical Motion at Three Study Areas" to researchers from UNO, ULL, Tulane University, the Lake Pontchartrain Basin Foundation (LPBF), and the University of Kentucky, which is underway, and is making use of oil and gas industry seismic data; and

WHEREAS, research supported by the University Transportation Consortium, the Transportation Consortium of South-Central States, and the Louisiana Transportation Research Center is underway to start the process of assessing the use of oil and gas industry seismic data to study the impacts of subsurface geological faulting on transportation

infrastructure; and

WHEREAS, LPBF has conducted research on subsidence rates from faulting determined by Real-Time Kinematic (RTK) Elevation Surveys of bridges in Lake Pontchartrain showing that recent fault movement is both causing subsidence and impacting infrastructure; and

WHEREAS, a presentation by NOGS at the upcoming 2018 State of the Coast Conference will examine the use of oil and gas industry data to help assess the potential for faults to impact Mississippi River levees; and

WHEREAS, LGS and NOGS have joined to lead the development of a Louisiana Coastal Geohazards Atlas, and the focus of the atlas will be on the landforms developed in a variety of underlying geologic settings and which are affected by faulting, subsidence, and flooding; and

WHEREAS, the atlas will provide valuable technical data to inform the state's planning and prioritization of integrated coastal protection projects, infrastructure projects, and statewide flood control projects; and

WHEREAS, construction of the Coastal Geohazards Atlas will rely heavily on the contributions of interpretations of faults from oil and gas industry seismic data.

THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby urge and request the oil and gas industry in Louisiana to support the construction of the Louisiana Coastal Geological Survey Geohazards Atlas by providing access to interpretations of faults and other geological features from 3-D seismic data.

BE IT FURTHER RESOLVED that a copy of this Resolution be transmitted to the presidents of the Louisiana Mid-Continent Oil and Gas Association and the Louisiana Oil and Gas Association, the secretary of the Department of Transportation and Development, the governor's executive assistant for coastal activities, and the executive director of the office of community development within the division of administration.

The original instrument and the following digest, which constitutes no part of the legislative instrument, were prepared by Alan Miller.

DIGEST

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