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GOVERNOR

State of Louisiana
DEPARTMENT OF NATURAL RESOURCES
OFFICE OF CONSERVATION

STEPHEN CHUSTZ
INTERIM SECRETARY
JAMES H. WELSH
COMMISSIONER OF CONSERVATION

**REVISION TO FIFTH AMENDMENT TO DECLARATION
OF EMERGENCY AND DIRECTIVE**

Pursuant to the authority granted to the Commissioner of Conservation and Assistant Secretary of the Louisiana Department of Natural Resources under La. R.S. 30:1, et seq., particularly La. R.S. 30:6.1, this REVISION TO THE FIFTH AMENDMENT TO THE DECLARATION OF EMERGENCY AND DIRECTIVE is hereby issued;

It is hereby declared that since issuance of the Fifth Amendment to Declaration of Emergency and Directive effective December 7, 2012 and issued to Texas Brine Company LLC (T149) concerning a sinkhole formed immediately adjacent to OXY GEISMAR NO. 3 well site (Serial Number 180708) and the associated salt cavern, the following facts have been found to exist:

1) In the Third Amendment to Declaration of Emergency and Directive effective October 11, 2012, Texas Brine Company LLC (T149) was directed and ordered to both upgrade the current seismic array to allow for real-time data processing and micro-seismic data and to collect information needed to image the collapse zone from the base of the original cavern to the ground surface. In response, Texas Brine Company LLC (T149) proposed to study the feasibility of performing a 3D seismic survey of the area and estimated that due in part to property access concerns performing such a survey might take as long as three years to complete. For purposes of the seismic monitoring of the salt dome in the vicinity of the Oxy Geismar No. 3 cavern, the Texas Brine Company (T149) proposals did not include installing a seismic monitoring array into the salt itself. By early December the Office of Conservation had not been provided with a plan sufficient to meet these directive items and therefore, the second directive of the Fifth Amendment to Declaration of Emergency and Directive was issued on December 7, 2012. On Friday, January 11, 2013, Texas Brine Company LLC (T149) provided the Office of Conservation with a plan to perform a 3-D seismic survey, which would be completed in April, 2013. Additionally, Texas Brine Company LLC (T149) proposed putting a seismic monitoring array into the salt via the Oxy Geismar No. 1 wellbore (SN) in a timeframe sooner than would be accomplished by drilling the new well required in the second directive of the Fifth Amendment to Declaration of Emergency and Directive. Thereby, Texas Brine Company has committed to undertake actions to meet the requirements of the Third Amendment to Declaration of Emergency and Directive and to provide the necessary information regarding micro-seismic events in the salt, imaging the collapse zone and void spaces underneath the sinkhole, as well as gaining the information to locate potentially productive formations that can be the source of the hydrocarbons reaching surface in the sinkhole and aquifer. Finally, this commitment appears to

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expedite receipt by the State and Assumption Parish of information that is needed to respond to this on-going emergency.

Therefore, it is hereby declared that the second directive of the Fifth Amendment to Declaration of Emergency and Directive issued by the Commissioner of Conservation on December 7, 2012, is hereby amended and replaced by the following. The rest of the Fifth Amendment to Declaration of Emergency and Directive, and specifically directives/order items 1 and 3-7, remain in full force and effect. Texas Brine Company LLC (T149) is directed and hereby ordered to undertake the following actions:

- 2)a)** Texas Brine Company LLC (T149) (“TBC”) shall implement and complete the 3D seismic project described to the Unified Command Group on January 8, 2013, by Mr. Kevin Hill. This 3D seismic project shall have a final bin spacing of 37.5’. It shall be designed and implemented to image the subsurface from approximately 37.5’ to 7000’ with very high resolution, with the goal of imaging the very shallow aquifer, the sinkhole, and any associated changes to the subsurface due to the breach of the salt/sediment interface, the salt/sediment breach itself, and the collapse zone from the bottom of the Oxy Geismar No. 3 (SN 180708) collapsed cavern up to the ground surface, as well as the Big Hum oil/gas producing zone on the Northwest side of the dome. The area or footprint to be covered by this 3D seismic project shall be consistent with Figure 1. The seismic survey shall be planned and implemented to address the ongoing seismic earthquake events so that they do not interfere with the 3-D seismic survey results. Finally, any and all seismic shot holes must be properly plugged to prevent methane from coming to the surface via those holes. Field mobilization for the surveying for the shot/receiver points shall commence no later than January 21, 2013, unless a different deadline is set by the Office of Conservation or Assumption Parish Office of Homeland Security and Emergency Preparedness (“Assumption OEP”) in consideration of other emergency activities such as drilling the geophone well required by directive 3 or installing observation/vent wells in the area. 3-D seismic survey results shall be provided to the Office of Conservation and “Assumption OEP” by no later than April 21, 2013, unless a different deadline is set by the Office of Conservation or Assumption OEP in consideration of other emergency activities. If weather prevents these deadlines from being met then TBC shall coordinate the timing of the seismic survey through the Office of Conservation and the Assumption OEP.
- b)** TBC shall complete the following activities on the Oxy Geismar No. 1 (SN 151645) well:

 - i. Remove hanging strings upon completion of workover of the Oxy Geismar No. 2 (SN 151646) well.

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- ii. Run a cement bond log to check bonding behind cemented production casing to ensure that a geophone can obtain clear signal from within the salt mass. Additionally, run a variable density log (VDL) or equivalent log immediately upon completion of running the cement bond log.
 - iii. Equip the well with a temporary down-hole geophone array by no later than February 15, 2013, unless a temporary geophone array cannot be acquired within that timeframe. If one cannot be acquired by TBC within that timeframe then documentation evidencing TBC's search for and failure to locate such an array shall be submitted to the Office of Conservation and Assumption OEP and the temporary array shall be installed as soon as possible. A permanent down-hole geophone array shall be designed to replace the temporary array immediately in coordination with the Office of Conservation and Assumption OEP. The permanent array shall be designed and installed with the goal of detecting deep and shallow seismic activity within the salt and to be as sensitive, precise, and accurate as technically possible for detecting and locating the micro-earthquakes and very long period seismic events currently being observed in the vicinity of the Oxy Geismar No. 1 cavern, the Oxy Geismar No. 3 cavern and surrounding caverns. The overall goal of the Oxy Geismar No. 1 seismic array is to monitor current and future stability in the salt from the top of the salt down to the bottoms of these caverns. The data from both the temporary and permanent arrays must be made available on the existing public seismic data web site along with the existing TBC-Geophone-01, 450 foot seismic data. Based upon the results of the permanent geophone array, additional actions may be required, including, but not limited, to drilling a deeper geophone array well into the salt.
- c) TBC shall drill and complete an additional cased well to a depth of 1,000 feet at or near the location of the former Hooker Chemicals No. 1 well (SN 202913) for the installation of a geophone array outside of the salt dome. Location access and site preparation for this well shall begin as soon as weather permits. If access or site preparation is delayed by weather deadlines for drilling shall be coordinated and approved by Assumption OEP and the Office of Conservation.
- i. Drilling shall commence as soon as the location can be prepared and shall be coordinated with the acquisition for the 3-D seismic survey. Unless ordered otherwise, drilling shall commence by February 1, 2013, with target completion being within thirty (30) days following commencement of drilling or as soon as possible in coordination with the 3-D seismic survey study requirements.
 - ii. This borehole shall have a standard suite of geophysical logs including logs equivalent to the Baker tool GSLAM, XMAC, and STAR tool suites of logs.

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- iii. Geotechnical testing shall consist of a minimum of unconfined compressive strength (UCS) with continuous recording of axial stress and axial and lateral strain, Brazilian tensile strength (BRA), confined triaxial tests (TRI) with continuous recording of the axial stress and axial and lateral strain to determine cohesion and friction angle, bulk density, porosity, and permeability. At least three UCS, three BRA, and nine TRI tests shall be performed on each major lithologic unit identified in the cores. The TRI tests shall be conducted at a minimum of three different confining stresses.
 - iv. Wireline coring shall be utilized with a target zone of 500 – 1,000 feet.
 - v. The design and installation of the geophone array for this well shall begin immediately with collaboration between TBC, Assumption OEP and Conservation.
- d) TBC shall install equipment necessary to provide to the Office of Conservation and the Assumption Parish OEP with access to the pressures of the caverns associated with Oxy Geismar No. 1 and 2 and Occidental Brine No. 9 and 10 at intervals as high of a frequency as available by the computer control system. The pressure data for these caverns shall be delivered daily to the Office of Conservation and Assumption OEP in an Excel file format, starting on January 15, 2013.
- e) TBC shall complete the following activities on the Oxy Geismar No. 2 (SN 151646) well. In addition to the Mechanical Integrity Test recently completed on Oxy Geismar No. 2 (SN 151646) well:
- i. Continue the well work-over presently underway.
 - ii. Initiate a vertical seismic profile (“VSP”) upon completion of the VSP currently underway on Oxy-Geismar No. 3-A (SN 974265).
 - iii. Conduct quarterly sonar surveys for a minimum of 12 months. The sonar survey shall be conducted through the tubing to 3,800 feet and then free hole from 3,800 feet to the cavern bottom at ~5,700 feet. Frequency adjustments may be agreed upon after completion of the 3-D seismic imaging and modeling by ITASCA or based upon any other data.
 - iv. Run a cement bond log to check bonding behind cemented production casing.
 - v. Decrease inner tubing depth to ~3,800 feet –the depth above the visible portion of cavern No. 3.
 - vi. As an extra safety precaution, any mining of this well shall be performed by placing the well into reverse mining.

In no way shall this amendment to the Fifth Amendment to Declaration of Emergency and Directive be construed as limiting the authority of the Commissioner of Conservation in ordering additional or different actions be undertaken as supported by the results of the above activities or

based upon new evidence. If so supported, the Commissioner reserves the right to order additional or different actions be undertaken by TBC to include, but not limited to, drilling additional deep geophone wells or other actions deemed appropriate.

It is further declared that, consistent with La. R.S. 30:6.1.B, if Texas Brine Company LLC (T149) fails to begin the actions listed above within the deadlines set forth, orders demanding compliance and civil penalties may be issued to Texas Brine Company LLC (T149).

It is further declared that for purposes of this revised directive the required plans, reports, or other correspondence associated with the above emergency declaration shall be submitted to the Office of Conservation via e-mail at conservationorder@la.gov and to the Assumption Parish Office of Homeland Security and Emergency Preparedness. Please reference "Revised Directive 2 – Fifth Amendment to Declaration of Emergency and Directive" on any and all related correspondence. Beginning Monday, January 21, 2013, Texas Brine Company LLC (T149) shall provide daily updates to the Office of Conservation by e-mail at conservationorder@la.gov and to the Assumption Parish Office of Homeland Security and Emergency Preparedness regarding Texas Brine Company LLC's (T149) progress in implementing the Directive items found herein.

SO DECLARED, ORDERED, AND DONE this 14th day of January 2013 at Baton Rouge, Louisiana.


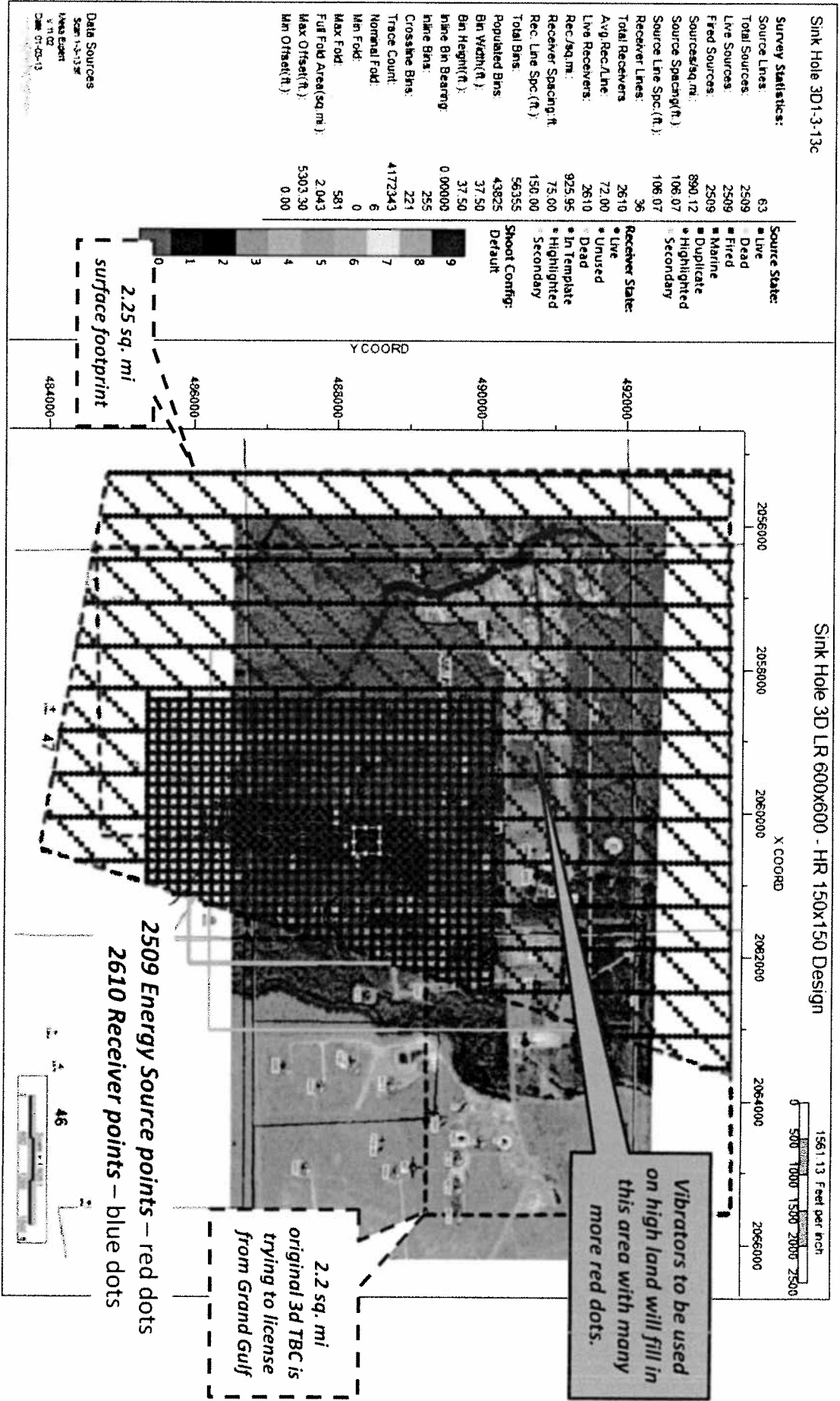

 JAMES H. WELSH
 COMMISSIONER OF CONSERVATION

FIGURE 1

3D SEISMIC DATA FIELD ACQUISITION DESIGN FOOTPRINT

FIGURE 1



This 3d reflection seismic data design will yield over 43,000 image points (bins) in the sub-surface. The size of the bins is 37.5'. The image will begin at approximately 37.5' and go down below 7,000'.

This is a pre-plot design that will change as field conditions dictate due to obstructions or other requirements.