EQT

Where energy meets innovation.

WHAT YOU SHOULD KNOW ABOUT SEISMIC SURVEYS

EQT Corporation, based in Pittsburgh, PA, is an integrated energy company focused on Appalachian area natural gas production, gathering, transmission, and distribution, and is a technology-driven leader in the integration of air and horizontal drilling. Through safe and responsible operations, EQT is committed to meeting the country's growing demand for clean burning energy, while continuing to provide a rewarding workplace and enrich the communities where its employees live and work.

WHY IS EQT CONTACTING ME?

EQT either owns or holds mineral interests in your area. Soon, we will conduct 3-D seismic surveys to help us determine the most efficient and environmentally responsible way to develop these natural gas reserves using the fewest number of wells. This information will help explain what we are doing and why, so you will know what to expect when the surveying begins.

WHAT IS A SEISMIC SURVEY AND WHY IS THIS NECESSARY?

A 3-D seismic survey uses state-of-the-art technology to produce detailed images of geological layers deep beneath the earth's surface. From this data, geologists create maps to attempt to locate the exact position of natural gas-bearing rock layers.

Two dimensional (2D) seismic surveys date back to the 1930s. In the 1970s, technology advances introduced three dimensional (3D) surveys that produced more precise information. Using multiple monitoring devices and vibration source points, the survey can provide a 3D picture of geological conditions underground.

EQT will use the survey data to create maps that help identify where we can extract the most natural gas quickly and with the least impact on the environment, the land and the people who live and work nearby.

HOW DOES THE SURVEY WORK?

Before survey work begins, we will obtain the necessary state/county/local permits and landowner access permissions to conduct seismic testing on, across, and below the property in the survey area.

To generate the seismic images, EQT contractors will use specialized truck-mounted Vibroseis units (also called "thumper" vehicles) to direct low-force vibrations into the ground. These "seismic waves" penetrate deep into the earth, bouncing off geologic layers before reflecting back up to the surface. We temporarily place lines of small sensors called "geophones" into the soil to record the seismic data when it arrives back at the surface. The resulting data helps to create a picture similar to an X-ray or medical sonogram, only it can cover thousands of square miles and extend miles into the earth.

WHAT CAN I EXPECT TO SEE, HEAR AND FEEL?

Your first contact may be with a permitting agent who will discuss the survey process with you and obtain a permit to access your property. Once permitting is complete, a survey crew will identify all utility lines and other areas to avoid during the seismic survey, potential physical obstacles above and below ground, and the conditions of road/trails that can be used to provide access to the survey area. If there is significant ground cover in the areas where we need to put equipment, crews will clear this vegetation, but they will not move mature trees or construct new access roads. Crews will also mark source lines to indicate placement of charges or the Vibroseis vehicles, and receiver lines to mark points where recording equipment will be placed to take readings.

We will use "cable-free" recording equipment as much as possible to reduce the number of seismic cables crossing roads or properties. These systems reduce the visual impact of our seismic activity and reduce the time the crew spends in the field. The recording equipment will arrive by truck or by helicopter, and you will notice crews on the ground placing this equipment on properties near the seismic survey, and later returning to remove them.

Wherever possible, the Vibroseis units that create the seismic waves will operate along existing roads or trails, reducing the impact on surface lands or crops. If crews or vehicles do need access to private property, this will be coordinated with the surface owners in advance. The trucks will travel along the road or trail, stopping periodically to lower the vibratory plate that produces the acoustic wave. While you will certainly notice the vehicles, in most cases, you will not hear or feel anything when the equipment directs the seismic waves into the ground.

In areas that cannot be reached by the Vibroseis unit, the survey crews may need to use small charges loaded into drilled shot holes to produce the seismic waves. When this happens, you will see crews out drilling these shot holes. The shot holes are about 20ft deep, and are backfilled, packed with gravel, and covered. We will fire the charges sequentially a few minutes apart, but they make a barely audible "pop" noise, cannot be felt, and will not harm surrounding vegetation, wildlife or buildings. No live charges will be left in the ground after surveying is complete.

HOW DO I KNOW THIS IS SAFE?

No survey activity will take place until all required permissions and permits are in place. EQT and its contractors strive to meet all local, state and federal safety regulations, including OSHA requirements. We hold regular safety meetings to ensure all EQT employees and contractor crew members are in compliance with these standards before entering agricultural and urban environments.

EQT is also committed to safeguarding the environment and protecting the health and safety of its employees and community neighbors. We consult wildlife biologists to ensure that our activities have minimal impact on natural habitats, comply with all fish and game requirements, and take steps to identify and avoid utility lines and other areas sensitive to seismic activity.

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