

Great Western Operating Company

Marcus East 3D Seismic Survey

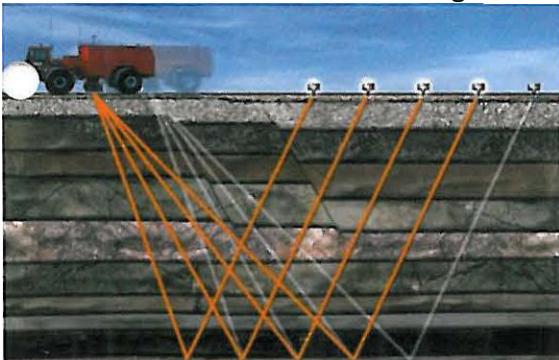
Great Western Operating Company intends to conduct a 3D seismic survey in order to develop oil & gas reserves in the most efficient and environmentally responsible manner here in Adams Counties. **We will be working in your community Wednesday August 9th thru Monday August 14th.**

What is a 3D seismic survey?

A 3D seismic survey uses state-of-the-art technology to produce detailed images of geological layers deep beneath the earth's surface. From this data, maps are created to attempt to locate the exact position of oil & gas reservoirs.

How does the surveywork?

To generate these seismic images, Breckenridge Geophysical, LLC will employ specialized mobile trucks called Vibroseis units to direct low force vibrations into the ground. These "acoustic waves" (also known as "seismic") penetrate deep into the earth, bouncing off geologic layers before reflecting back up to the surface. Arriving back at the surface, this seismic data is recorded by many small sensors called "geophones" which are temporarily planted in the soil in lines several miles long for this purpose.



2-D seismic crews have been around since the 1930's. 3D seismic crews have been around since the 1970's and produce a more precise image to cope with the diminishing size of oil & gas targets. While seismic data alone cannot detect oil & gas, this data plays a crucial role in identifying areas that may be favorable for its accumulation. Seismic surveys are used to identify the best potential drilling locations from which to extract the most oil using the fewest wells.

What safety & environmental protocols are in place?

Great Western is committed to safeguarding the environment as well as protecting the health and safety of its employees and community neighbors. Great Western and its contractors strive to meet all local, state and federal safety regulations, including OSHA requirements. Regular safety meetings are held to ensure all crew members are in compliance with these standards before entering agricultural and urban environments. Independent Peak Particle Velocity (PPV) consultants accompany each vibrator fleet throughout the *day* to ensure vibrations remain in the "safetyzone".



What can I expect during the survey?

Throughout the survey, Great Western and its contractors are committed to working closely with farmers, businesses, landowners and residents and will respond quickly to any inquiries. This 3D seismic survey is designed

to minimize impact on farming operations and communities by using "cable-free" recording equipment and by restricting the Vibroseis units to roads and trails wherever possible. By introducing "cable-free" technology for its operations in Colorado, We are committed to dramatically decrease the number of seismic cables crossing roads or properties and reduce the visual impact of its seismic activity. "Cable-free" systems allow faster operations, reducing the time the crew is spending in the field.

The purpose of the brochure is to explain the seismic survey process and timing.

Great Western contract permit agents are available to meet and discuss with you any questions or concerns that you may have about this project in your neighborhood.

We are committed to working with landowners, residents, businesses and farmers to assure that any impact this project may have are minimized.

Contract Permit Agents:

****Main office 720-688-0052**

Greg Camera, manager 607-349-3222

Dan Theriot, field agent 985-381-7515

Hank Lewallen, permit agent 662-907-1313

Great Western Operating Company, LLC
1801 Broadway, Suite 500
Denver, CO 80202

