

Natural Gas Seismic Considerations

This document is not a substitute for legal advice.

**It serves as a listing of negotiating points for discussion with your legal advisor.
It is not all inclusive.**

**Seismic agreements are provided in the presenter's favor.
Remember that this process is a negotiation and must include terms and
language to protect your interests.**

Always retain contact information for seismic / lease agents / landmen.

If seismic testing is being done, you, as the surface property owner, need to set limits and notify the seismic company of sensitive areas (springs, wells, water & sewer lines, wetland areas, animals present, etc.). You definitely should not give verbal approval. Only sign permission with conditions attached.

Conditions you may want to include are provided below.

Some conditions listed below may not apply to your property but they are items which have appeared as conditions and have been accepted by some seismic companies.

Note: The word "grantor" is synonymous with the surface property owner.

General Considerations for Every Surface Property Owner:

1. Limit time to 18 months, after which permit expires.
2. Operator should agree to indemnify and hold Grantor harmless from any personal injury or property damage that may result from Operators' operations.
3. Surveyors shall meet with grantor(s) 48 hours to one week prior to surveying to locate springs, wells and other areas where safe distances must be established.
4. Use only grantor-designated access points.
5. Grantor to be notified prior to initial entry and subsequent entry.
6. If payment is offered, payment shall be made "prior to entry", which includes work by surveyors.
7. Property to be left in same or better condition.
8. Grantor can specify areas where no motorized vehicles are allowed.
9. No motorized vehicles permitted on ponds/ lakes/ dams.
10. No fences to be cut without prior approval.
11. Any oil spills or other hazard damage are to be promptly reported to surface owner and repaired according to existing state & federal environmental laws.
12. Any damages to property shall be repaired and/or grantor will be paid within 15 days of such damage.
13. Rutting to roads or land shall be promptly repaired back to normal conditions, excessive rutting (greater than 3" tracks) must be repaired to grantor's satisfaction.
14. Vehicles not to exceed 10 miles per hour.
15. Smaller tracts, less than 3 acres, grantor may limit access to walk only cable only.
16. No work dusk to dawn.

17. Where clearing is necessary, no trees greater than 3" diameter breast high (DBH) will be cut or damaged. Any damage will be valued by a professional forester and paid accordingly.
18. Designate areas not to be traversed with equipment (ex. deer pens, food plots, wetlands, etc.).
19. Special care must be taken in crossing creeks to not alter flow or create erosion. No large motorized vehicles shall cross creeks without adequate Erosion and Sedimentation controls.
20. Grantor is not precluded from allowing other seismic activities on his property.
21. No equipment to be parked on grantors property without permission.
22. All flagging, stakes and other debris will be promptly removed upon completion of seismic work.
23. Grantor will be supplied with map of location of all source points (vibe & explosive charges) and receiver cable lines prior to execution of seismic agreement.
24. Seismic shot holes or other seismic activity will not be permitted within 300 feet of any water well or spring used for domestic or farm water supplies.
25. Terraces, unless used for agricultural purposes, and other raised earth/rock barriers will not be crossed with motorized vehicular equipment.
26. Grantor will be contacted when activities are completed.
27. Perimeter cutting where grantor's property adjoins a route of travel (township roads, railroad right-of-way, cartways – both pedestrian and vehicular) should be eliminated in order to limit unwanted ATV and pedestrian access to the property.
28. Backfilling of shot holes – upon detonation of explosives and collection of seismic data, shot holes are to be rendered to a condition where there is no pathway present for surface or subsurface contaminants to travel to and between water-bearing zones. To prevent runoff or other contaminants from entering the shot hole, recommend use of proper abandonment procedures specified for a water well in an unconsolidated material.

Special Agricultural Considerations:

29. Crop damages shall be paid using highest yield paid in last 3 years on property and if not available, then Farm Service Agency (FSA) county average for the last 3 years will be the basis for determining payment for crop damage, payable to Grantor.
30. Seismic activity will leave gates as found. If open leave open. If closed leave closed. If locked leave locked.
31. A roundup, catch, sort and haul fee will be the responsibility of the seismic company for any animals escaping due to operators actions.
32. Seismic company must provide notification, 48 hours in advance of any phase of seismic work, to the property owner to ensure grantor or grantor's tenant has sufficient time to implement cautionary measures for the protection and safety of cattle, horses or other livestock.
33. Property owners of grazing livestock shall be give 48-hour advance notification, to permit removal of livestock from any pasture where testing is to occur. Livestock should be moved as far away as possible especially lactating dairy cattle and pregnant livestock.
34. Water resources that may feed watering troughs or similar devises may be impacted by seismic testing resulting in increased sediment or new or expanded sink holes which may impact water flow.