

# Seismic Agreements --Legal, SCM and IP Issues

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## Seismic basics

### Seismic Data – Why?

The main purpose of obtaining seismic data is to render the most accurate possible graphic representation of specific portions of the Earth's subsurface geologic structure.

## Seismic Basics - 2D, 3D

### 2D Seismic

- 2D seismic data are displayed as a single vertical plane or cross-section sliced into the Earth beneath the seismic line's location.

### 3D Seismic Visualization

## Legal Basis for Obtaining Consents for Seismic Data; Consent Documents

### Required Consent for Geophysical Operations – Basic Concept

The explorer must obtain permission from the owner of the exploration right

### Who owns the Right to Explore?

- Where the minerals have been severed from the surface:  
Consent necessary from only the mineral owner
- Where mineral owner leases the right:  
And lease grants exclusive right:  
Lessee must grant consent

And lease grants non-exclusive right:

- Where co-tenants own minerals:  
Consent from any cotenant sufficient (except in Louisiana)
- Where minerals owned in life estate and remainderman:  
Should get consent from both

- Where mineral ownership differs by depths:  
Unclear, so get consent from all owners or  
block out data
- Where different parties own different minerals:  
Get consent from owner of mineral you wish to  
explore

### Ways to Obtain Consent for Seismic Operations:

- **Permit** – Consent to seismic only
- **Option** – Consent to seismic and option to lease for drilling and development
- **Lease** – Consent to seismic and to drill and develop

### Consent Documents for Geophysical Operations

- Valid legal description
- A sufficient term
- Surface use and damages
- Use of contractors and subcontractors
- All possible types of geophysical survey
- The right, but not the obligation, to shoot

#### The Option:

- Combination of permit and option to lease
- Attach the form of lease to be used
- Consideration and mechanics of exercise
- Prohibit leasing to a third party
- No burdens
- Memorandum for recording

#### Seismic Provisions of the Oil and Gas Lease:

- Should grant the exclusive right to explore
- Avoid obligations to furnish data
- If impossible:
  - Limit to leased lands and small halo, if required
  - Prohibit competition in halo
  - Grant a license only
  - Require confidentiality
  - Limit to basic processed data (not field tapes – more costly to reproduce, and they can process in own way)