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# **Land Management Strategy**

**Land Management Presentation**  
**October 2008**

# Overview

- > **Petroleum Accounting - Overview**
- > **Land Leasing – Overview**
- > **Land Leasing – Past, Present, and Future**

# PETROLEUM ACCOUNTING

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# PETROLEUM ACCOUNTING

**Petroleum Accounting involves keeping track of 4 types of costs incurred by companies:**

- ✓ **Acquisition Costs – costs incurred in acquiring property.**
- ✓ **Exploration Costs – costs incurred in exploring property.**
- ✓ **Development Costs – costs incurred in preparing proved reserves for production.**
- ✓ **Production Costs – costs incurred in lifting the oil and gas to the surface and in gathering, treating, and storing such oil and gas.**

# PETROLEUM ACCOUNTING

- ✓ **Property may be acquired through the purchase of mineral rights or the purchase of the fee interest (both surface and mineral rights).**
- ✓ **Leasing is the typical method of acquiring property.**
- ✓ **This presentation focuses on the processes (past, current, and future) of managing property acquisition.**



# LAND LEASING



**In the United States, ownership of minerals initially resides with the owner of the surface land.**

**Mineral rights represent the legal rights to explore for and produce the resources below the surface. In the petroleum industry, mineral rights can also be referred to as "land."**

**Owners of the minerals may then lease out to a "lease operator," the right to produce the minerals, retaining a royalty interest.**

# LAND LEASING

## HOW MUCH *LAND* IS THERE TO LEASE?

### Let's Take One State – Texas – for Example:

- Texas has 254 Counties - state lands and mineral-right properties total over 171.9 million acres.
- **BLOCK:** A subdivision of land by the State of Texas consisting of a group of surveyed tracts, each having a section number.
- **SECTION:** The unit of subdivision of a block, traditionally containing 640 acres of land, more or less, and having an assigned section number. In Texas, a section is not restricted to 640 acres and can be any size and shape.
- 171.9 million acres divided by 640 acres per Section = almost 269 thousand Sections.

***THERE IS A LOT OF LAND TO LEASE!***



# LAND LEASING

## Process Overview

**The following legal steps are taken by companies to secure mineral rights:**

**Mineral ownership is determined - companies hire people to research mineral titles in order to determine who owns the minerals that they want to develop. In some cases, this work involves researching land and mineral deeds that date back to the 1800s.**

**Mineral owners are contacted by the company - Once mineral ownership is determined, the company will approach the mineral owner. Negotiations begin on the purchase or lease of mineral rights. The most widely utilized method is the negotiation of a mineral lease, not the purchase of minerals.**

# LAND LEASING

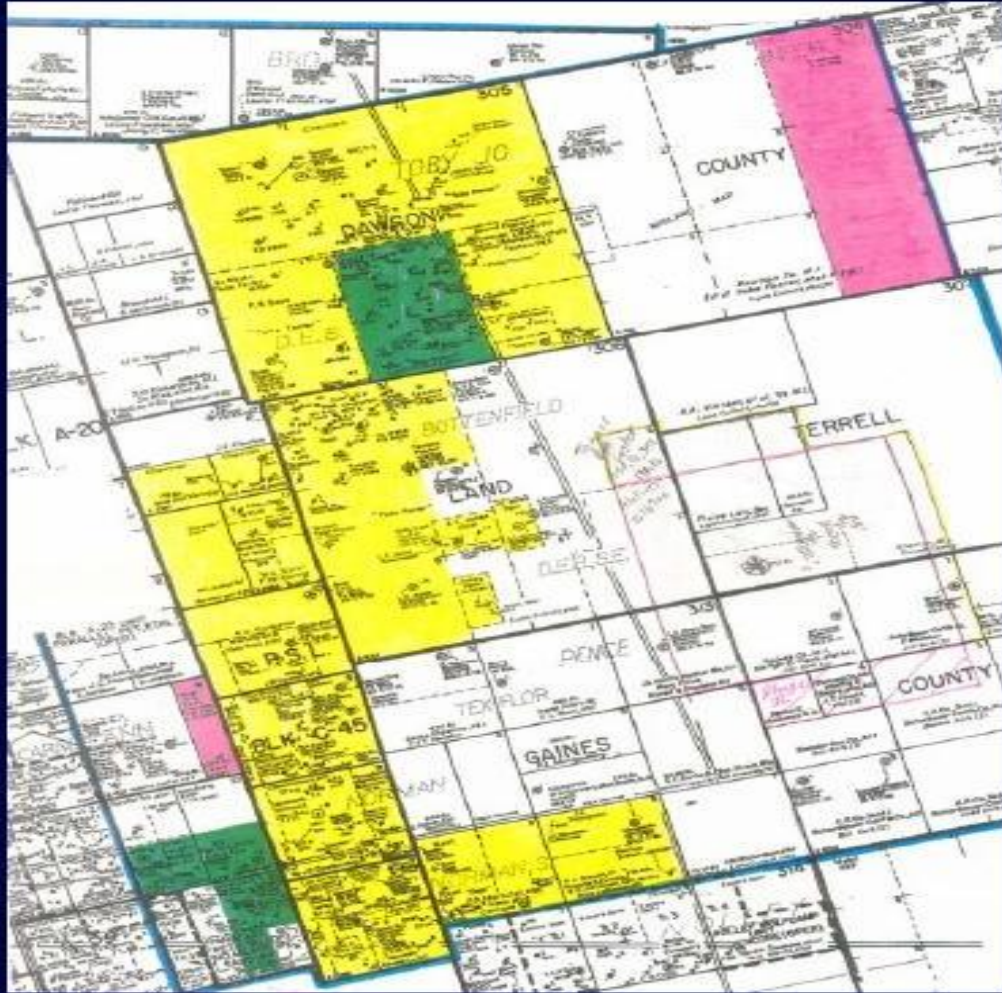
## Process Overview

(Continued)

**Company may contact the drillsite owner (if different from the mineral owner, to be used as a drillsite). Companies are legally required to inform surface owners that they have leased the mineral rights and intend to search for and possibly develop the oil and gas under the drillsite owner's property. Surface Use Agreements (contracts) or less formal agreements may be negotiated with the drillsite owners at this stage.**



# LAND LEASING



## STATIC METHOD

**Paper based, labor intensive process.**

**Hand drawn, not easily reproducible, prone to interpretation differences, transcription errors.**

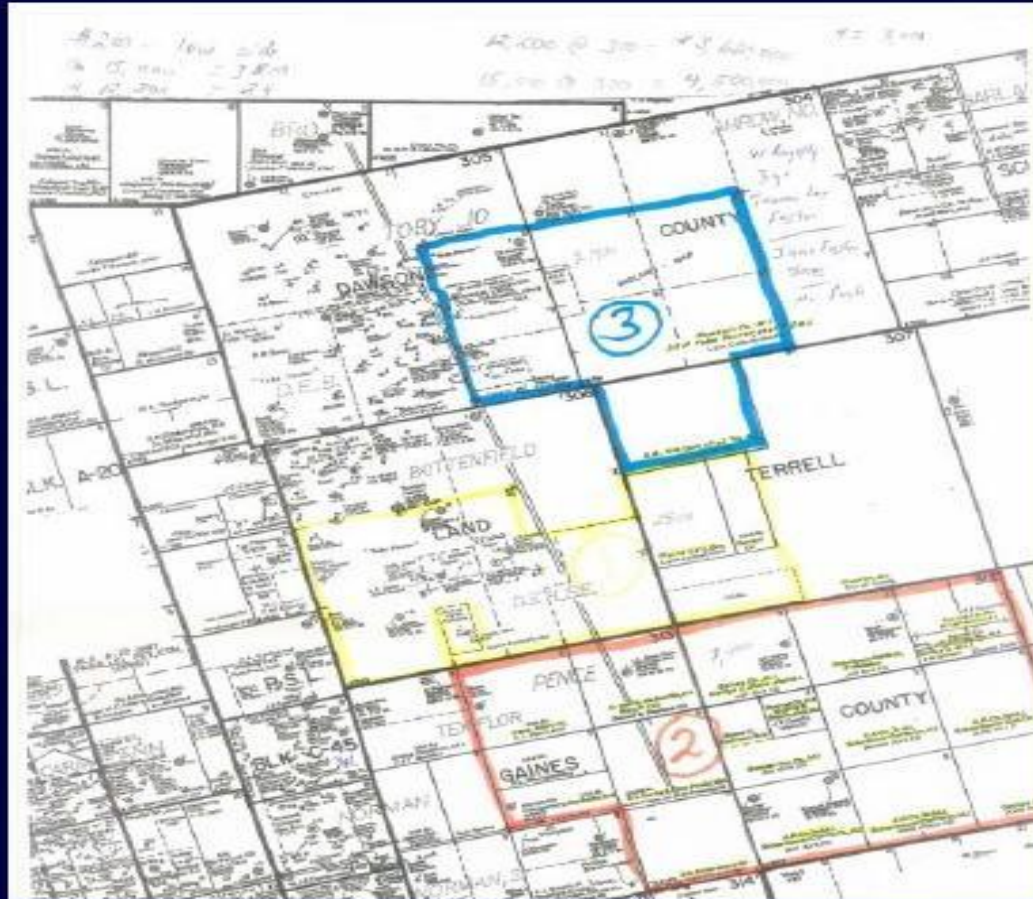
**Traditional methods of locating acreage (e.g. courthouse research) today take anywhere from two to three weeks per person.**

**Only way to “speed up” the process is by adding more personnel.**



# LAND LEASING

## STATIC METHOD



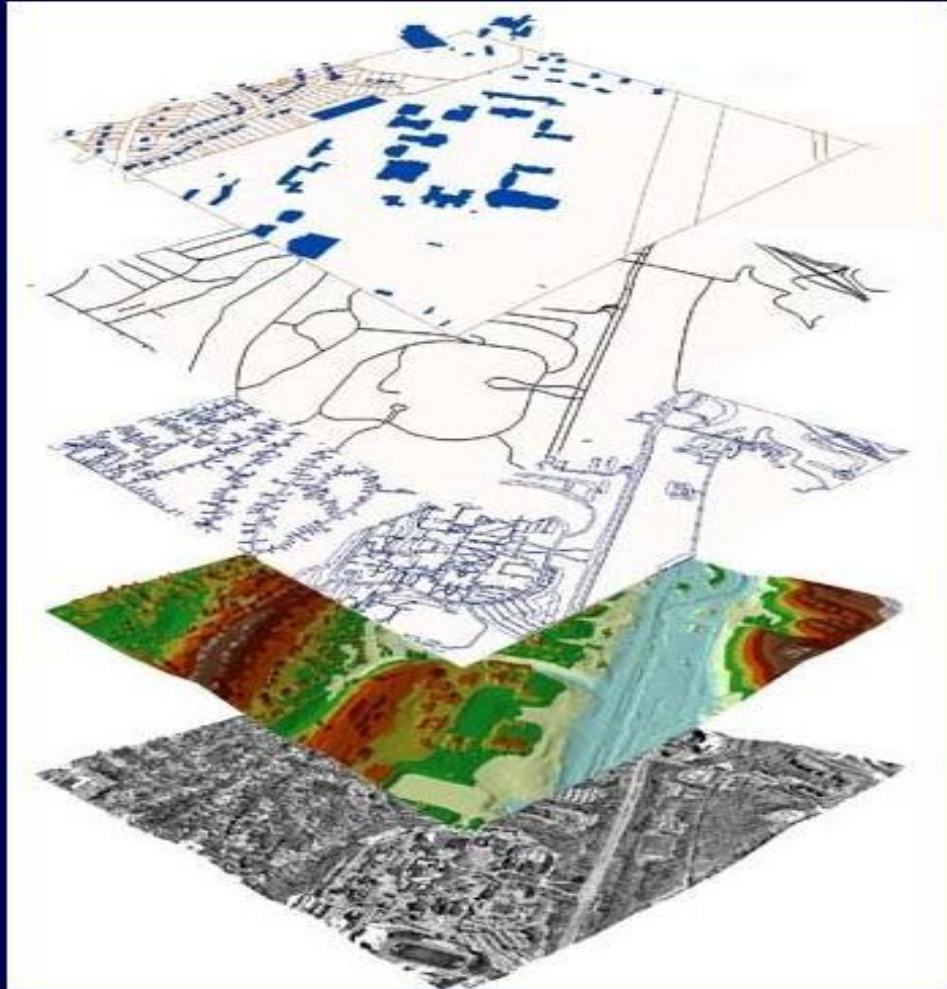
**Land Negotiators have difficulty in analyzing the lease data – prone to interpretation differences.**

**Information updates are often hardcopy markup maps from other Land Negotiators.**

**Land Negotiators do not normally have training in database management and querying.**

**They rely mostly on the hardcopy maps generated by technical support personnel for analyzing the data.**

# LAND LEASING



## DYNAMIC METHOD

**Geographic Information Systems (GIS) technology is an excellent tool for the land lease management.**

**GIS has multi-function capabilities that empower the user to create maps, charts, and reports. It also enables the users to access and perform analysis on the database through a map driven interface.**

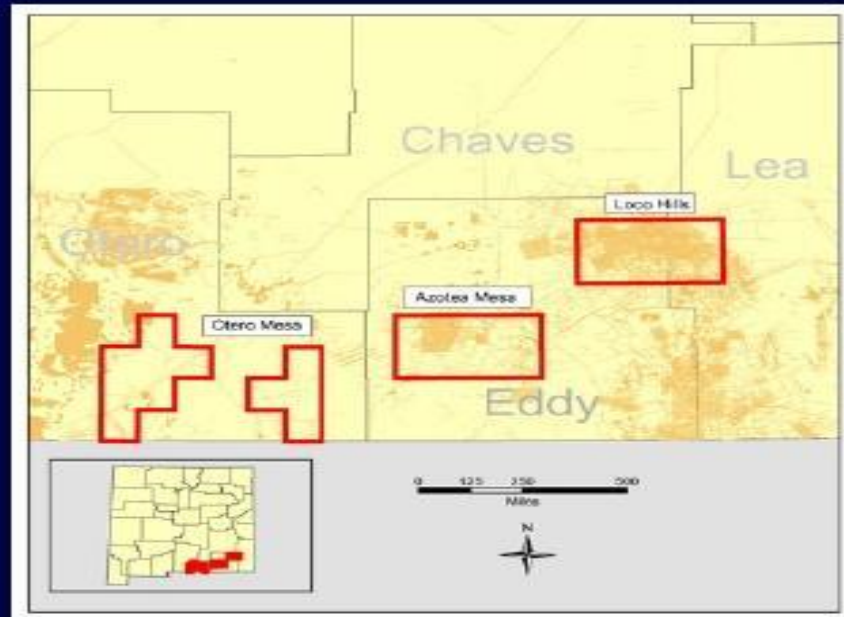


# LAND LEASING

## Creating a GIS Land Map

The following types of data are required to create a complete GIS Land Map

- Survey Data (County Line, Block, Section)
- Lease Data (County Courthouse)
- Well Data (Well Locations from In-House Production Systems)
- Regulatory Data (Proration Units)





# LAND LEASING

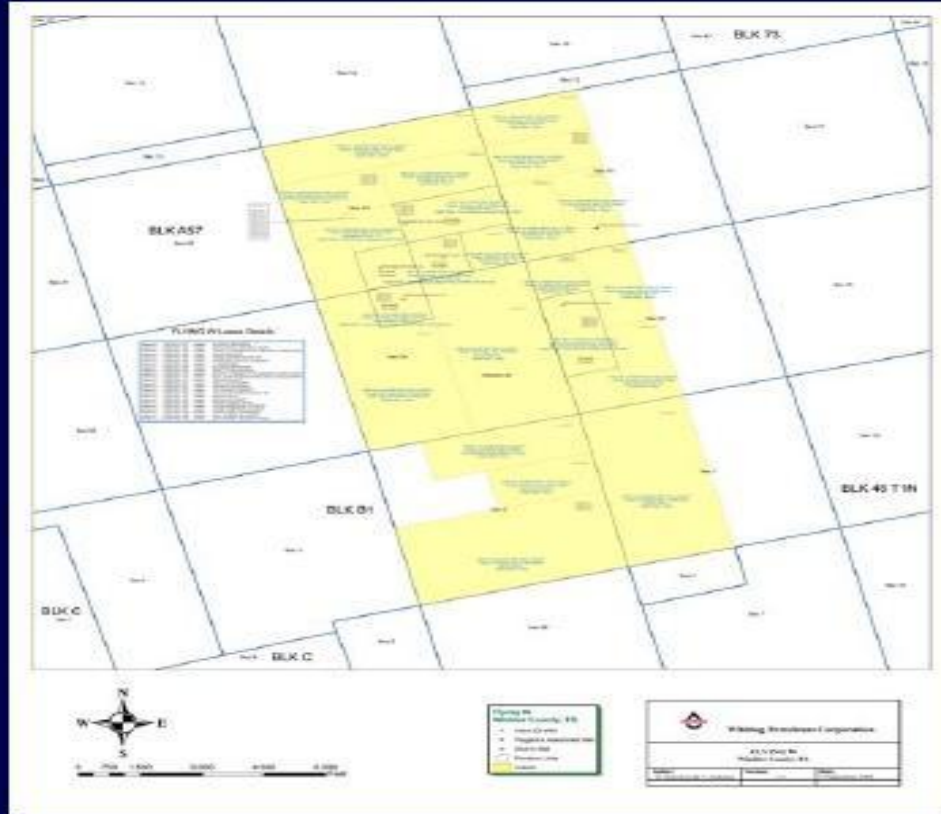
## GIS Land Map

**Any form of annotation or information can be added to the map. The data remains with the map - not in a hardcopy stuck to the wall or in some Land File.**

**Facilitates the upkeep of lease information.**

**Once the lease data is created, it can be electronically shared with other company departments (Exploration, Production) to be incorporated into other maps.**

**Lease data can also be accessed remotely via a web browser.**



# LAND LEASING



## LAND ACCOUNTING

There are several important accounting annotations in every lease in a land map:

- Lessor Name
- Lease Expiration Date
- Working Interest (WI)
- Overriding Royalty (OR)
- Overriding Royalty Interest (ORRI)
- Net Revenue Interest (NRI)
- Gross and Net Acreages



# LAND LEASING

**Working Interest (WI) – A percentage of ownership in an oil and gas lease granting its owner the right to explore, drill and produce oil and gas from a tract of property. Working interest owners are obligated to pay a corresponding percentage of the cost of leasing, drilling, producing and operating a well or unit.**

**Overriding Royalty (OR) - A percentage share of production, or the value derived from production, which is free of all costs of drilling and producing, and is created by the Lessee or working interest owner and paid by the Lessee or working interest owner.**

**Overriding Royalty Interest (ORRI) – Ownership in a percentage of production or production revenues, free of the cost of production, created by the Lessee, company and/or working interest owner and paid by the Lessee, company and/or working interest owner out of revenue from the well.**

**Net Revenue Interest (NRI) – A share of production after all burdens, such as royalty and overriding royalty, have been deducted from the working interest. It is the percentage of production that each party actually receives.**



# LAND LEASING

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## Other Factors to Consider

- ✓ **Data Accuracy**
- ✓ **Government Oversight**

# LAND LEASING

## DATA ACCURACY

- ✓ **Data accuracy is one of the most pervasive issues affecting lease management.**
- ✓ **The most common source of mistakes come from transcribing errors from document to document.**



# LAND LEASING

## DATA ACCURACY – *Starts Here*

THE S/2 OF SECTION 3, BLOCK 31, T-1-S,T & P RR CO. SURVEY, ABSTRACT 105, HOWARD COUNTY, TEXAS,  
CONTAINING 320 ACRES MORE OR LESS

LESSOR	LESSOR INTEREST (PERCENTAGE)	LESSOR NET ACRES	NET ACS. LEASED	BONUS	S/ACRE LEASED	NET ACS. COM-MITTED	BONUS COMMITTED	S/ACRE COM-MITTED	NET ACS. TO BE LEASED	NET ACS. LEASED TO THRD PARTY	REMARKS ON LEASE STATUS
	20.813334%	66.6666680							0.0000000	66.6666680	
	16.666667%	53.33333440							0.0000000	53.33333440	
	0.284289%	0.9094560							0.0094680	0.0000000	OPEN
	0.007588%	0.18428160							0.18428160	0.0000000	OPEN
	9.341797%	1.06075040							1.06075040	0.0000000	OPEN
	0.170880%	0.54687360							0.54687360	0.0000000	OPEN
	0.170885%	0.54687360							0.54687360	0.0000000	OPEN
	0.170888%	0.54687360							0.54687360	0.0000000	OPEN





# LAND LEASING

## DATA ACCURACY – *And Finally Here*

**Add XY Data** [?] [X]

A table containing X and Y coordinate data can be added to the map as a layer.

Choose a table from the map or browse for another table:

'Sec 19 21 29 33\$'

Specify the fields for the X and Y coordinates:

X Field: Long

Y Field: Lat

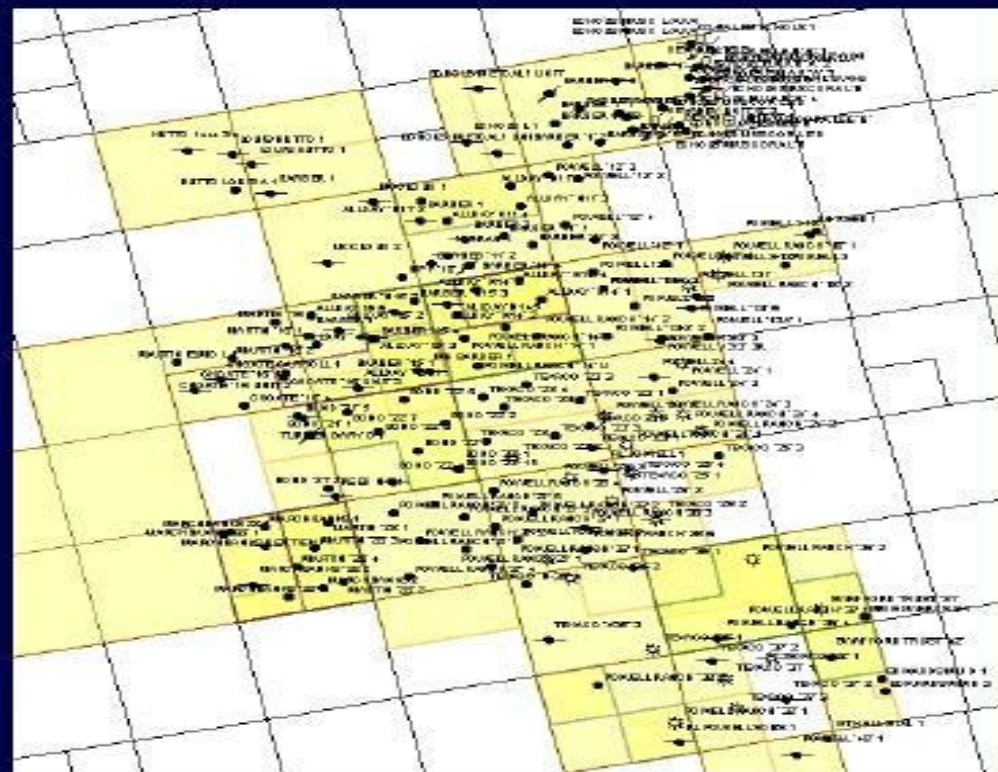
Coordinate System of Input Coordinates:

Description:

Geographic Coordinate System:  
Name: GCS\_North\_American\_1927

# LAND LEASING

**DATA ACCURACY – *To Create This***





# LAND LEASING

## Government Oversight – Rules & Regulations

**State Agencies Regulate where you can explore (well permits and well spacing), how much you can extract (production limits), and monitor all activities (reporting).**

**State Agencies require monthly reporting on all activities – huge impact on Accounting Departments.**

*Texas Railroad Commission*

*New Mexico Oil Conservation Division*

*Oklahoma Corporation Commission*

**Q & A**

**Q & A**



**Thanks for attention**

**Q.Dauletkhan.(3y 3-курс)**