



REGULATORY AND LEASING ISSUES

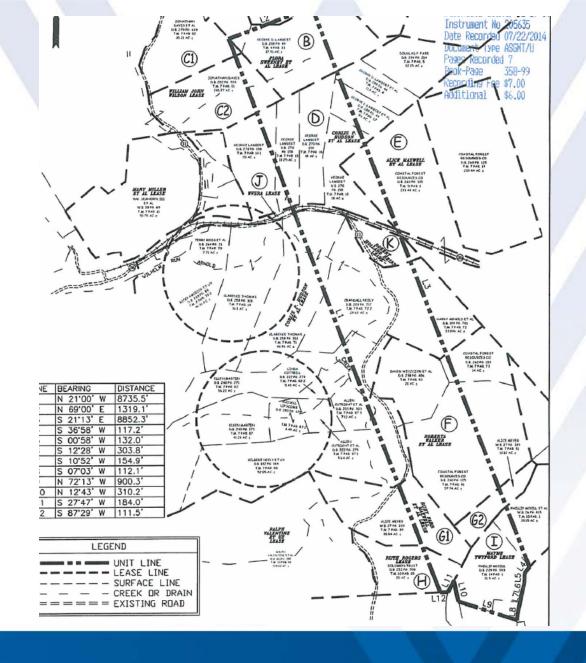


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Audience and Date February 19, 2016

Declaration of Photosophology Unitization



ease Information

| | UNIT LEASE INFORMATION | TOTAL = | 280.1 ACRE | 2 |
|----|--------------------------|-----------|------------|---------------|
| | LESSOR | UNIT AC. | % IN UNIT | LEASE # |
| Α | JOHNATHAN L. DAVIS ET AL | 0.6 AC. | 0.22 % | ARAC-DAVIS |
| В | FLORA SVEENY ET AL | 26.7 AC. | 9.53 % | 21435 |
| CI | WILLIAM JOHN WILSON | 0.3 AC. | 0.11 % | ARAC-SMITH |
| CS | VILLIAM JOHN VILSON | 5.5 AC. | 1.96 % | ARAC-SMITH |
| D | CORLIS P. HUTSON ET AL | 119.6 AC. | 42.70 % | ARAC-KEY-164 |
| Ε | ALICE MAXVELL ET AL | 7.3 AC. | 2.61 % | FARR |
| F | ROBERTA WALKER ET AL | 59.1 AC. | 21.1 % | 3RD PARTY XTO |
| G1 | RUBY FARR MAXWELL ET AL | 13.4 AC. | 4.76 % | KEY-209 |
| G2 | RUBY FARR MAXWELL ET AL | 6.1 AC. | 2.18 % | KEY-209 |
| н | RUTH ROGERS | 4.2 AC. | 1.5 % | 21927 |
| 1 | MAYME TWYFORD | 25.5 AC. | 9.1 % | WV09029 |
| J | WVSRA | 3.7 AC. | 1.32 % | WVSRA |
| K | ROBERT HOLLAD HEIRS | 8.1 AC. | 2.89 % | |

Landowner Economics



- Mineral owner lease bonus per acre \$1,000 - \$25,0000
- Royalties 12.5 % 20%
- Average IP 5.0 MMCF
- First month ~\$120,000 @ \$4.00
 NYMEX, 20% Royalty, entire unit
- Has meant millions to mineral owners
- Easy right?

The other side of drilling, completion, and production – title and contracts

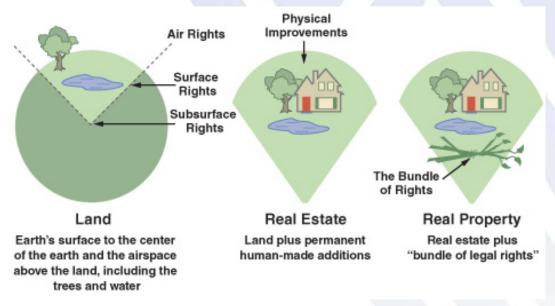
- Must secure rights through leasing or purchase
- Identify drilling location must take technical and nontechnical factors into account
- Permit
- Drill and Complete
- File DPU
- Division orders
- Redefine Unit (for new wells or secondary stimulation
- plugging & reclamation



Real property rights

- Largest classification hereditaments includes lands, tenements
- Hereditaments divided into corporeal and incorporeal rights

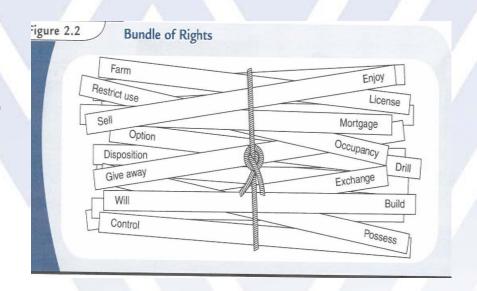
Ownership



Realstreetblog.files.wordpress.com

Real Property - Private ownership

- Gives owner right to possess and use land to the exclusion of others
- All legal rights attached to property are the owners
- Include:
 - Possess, exclude, sell, lease, mortgage, give away, exchange, and will.
- Combination of privileges is referred to as "bundle of rights"



Ownership broken down

- Surface rights
- Sub-surface rights
- Air rights

Surface rights

- Rights to the land and the improvements on the land
- Improvements include structures, pipeline, pavement, fences
- Ownership also includes rights to use the land and its improvements



Sub-surface rights

- Include anything that is below the land such as coal, water, ore, mineral deposits, etc.
- Typically included in the bundle of rights during a real estate transfer
- Term sub-surface right is defined as the right to all or certain specific natural resources that lie beneath a parcel of land
- Include the right to enter beneath the surface of the land and explore the area beneath the surface of the land for natural resources and extract the natural resources from the land (enter, explore, extract)



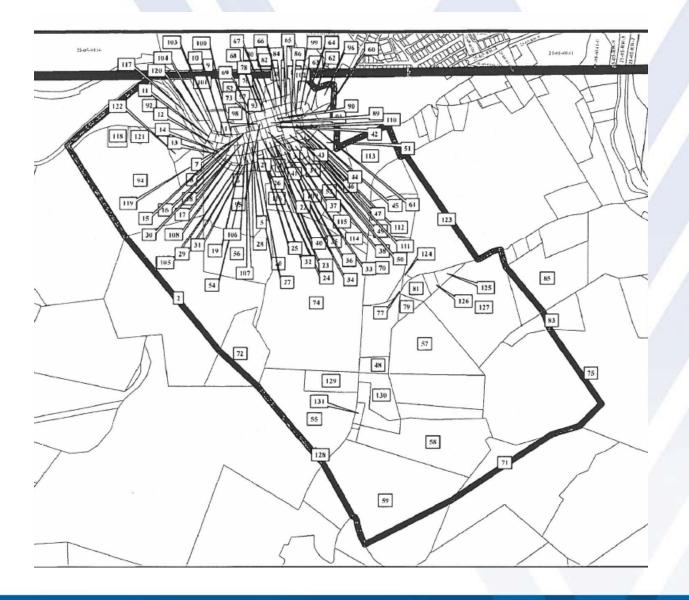
Air rights

- Air rights include anything that is directly above a parcel of land
- Rights of ownership in land include the rights to occupy and use the airspace above the surface
- Air rights subject to conveyance the same as any other rights
- Also subject to any lien or encumbrance that impacts the land



Fee landowner

- Fee simple no restrictions, person has right to
 - divide or sever the estate into separate estates
 - Exploit and benefit the estate
 - Lease the estate
 - Convey the estate (devise the estate)



Lease Basics

- Contractual arrangement that pays owner for use of asset (in this case enter agreement with lessor to develop mineral or gas/oil estate)
- Leases have been used since mid 1800s for oil and gas rights in WV – many older leases still in effect
- Lease elements similar, but lease language varies extensively from operator to operator

Important Lease Elements

- Names Lessor and Lessee
- Granting Clause
- Consideration (in cash and in kind)
- Legal Description
- Mother Hubbard
- Habendum
- Royalty
- Delay Rental
- Shut-in Royalty
- Assignment
- Force Majeure
- Pooling/Unitization
- Pugh Clausee

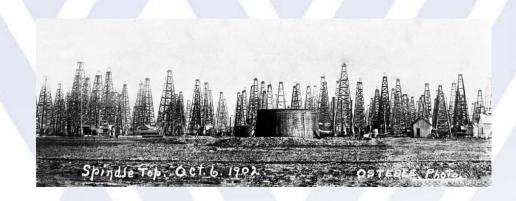


Pooling and Unitization

- Pools tracts combined into unit big enough to meet regulations for drilling (typically spacing)
- Allows lessees to develop tracts more efficiently
- Allows lessee to pay fewer delay rentals
- Allows smaller parcels to be pooled
- Unless lessor specifies a well anywhere on the unit will also hold the leases on each pooled tract through primary and secondary terms
- Unitization more efficiently recover products from large reservoir
 - Unitization requires ratification by substantial majority of owners
 - Pooling requires no consent but requires consent of nonparticipating royalty owners

Pooling

- Can be voluntary under contractual agreements
- Can be involuntary forced via legislation written to promote efficient production and development of natural resources

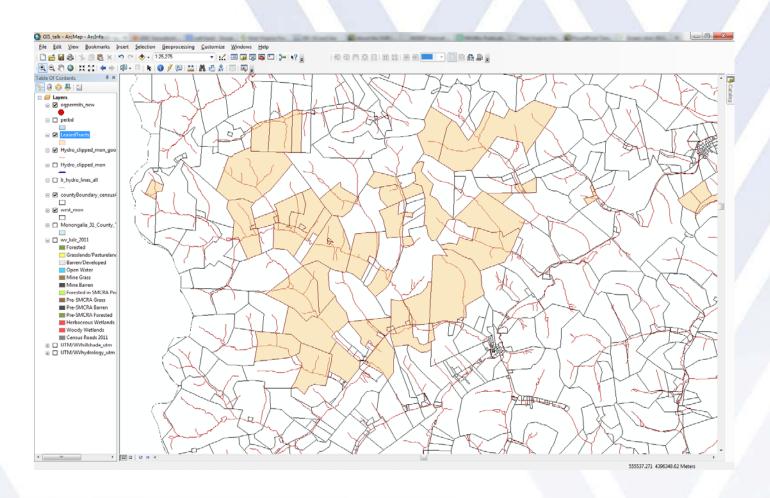


WV

- <3000' min 1000' from nearest existing well
- >3000' min 1500' from nearest existing well
- Existing well any well not plugged within 9 months of being drilled to TD and completed in same target formation or those permited for same target formation
- If coal owner objects, must establish need if nearest existing well is between 1500-2000'
- Deep wells below Onondaga oil and gas conservation commission determines spacing

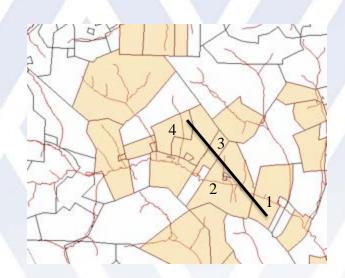


Example - Leasehold



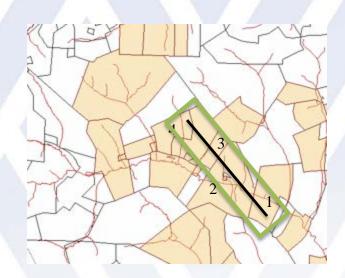
Example

- 55 acre lease tract
- Hold with 1-4 with lease, no pooling in 3 (20 acres)
- 10 owners in 3
 - Lease modifications signed by 5
 - Can't locate 4
 - 1 won't sign
- Hinders development of 3 and 4 – reserves not produced
- Legislation currently being debated



Example – Pugh Clause

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