INSURING THE OIL & GAS INDUSTRY

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REGIONAL PRESIDENT, MARKEL MID SOUTH

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How to Locate Oil Deposits the Old Fashion Way

Overview

- Overview of industry
- Review of the Parties Involved
- The Drilling Process
- Master Service Agreements & Contracts
- Insurance and Indemnification Requirements
- Working with the Underwriter
- Legal and Environmental Issues
- References & Resources
- Questions and Answers

Oil & Gas Industry Segments

- **Upstream** – Exploration and Extraction of Hydrocarbons
- **Midstream** – Transportation, Storage and Marketing
- **Downstream** – Processing Raw Materials into a Finished Product

1 Upstream

- Landman
- Geophysical/Seismic Exploration
- Site Preparation
- Drilling
- Completion
- Maintenance
- Servicing

2 Midstream

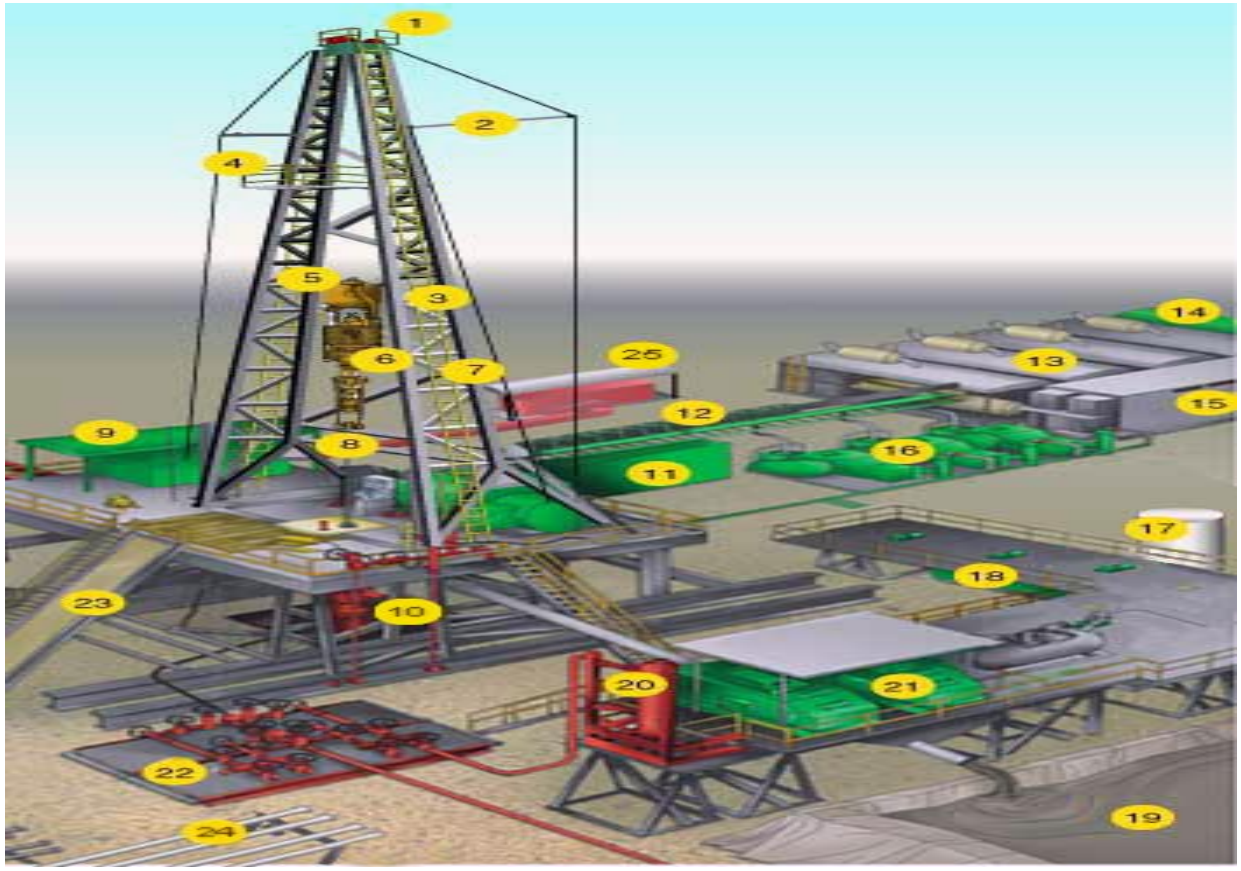
- Pipelines
- Hauling
- Rail
- Storage

3 Downstream

- Refining
- Production

Glossary of Terms

http://www.osha.gov/SLTC/etools/oilandgas/illustrated_glossary.html



THE DRILLING PROCESS

Introduction to drilling

- http://www.youtube.com/watch?v=lB3FOJjpy7s

Who are the parties involved?

- Lease Operator
- Contract Operator
- Non-Operator
- Site Preparation Contractor
- Drilling Company
- Special Service Contractors
- Workover contractor
- Pumper & Gaugers
- Salt-Water Haulers
- Roustabouts

Lease Operator

- The **lease operator** or just "**operator**". The operator has a working interest in the well or wells. The operator could be the owner of the well or wells.
- They are the party that has the money, knowledge and information to pursue a drilling venture.
- The operator is the responsible party to regulators, investors and land owners.

The Operator:

1. Plans the Well
2. Obtains Permits
3. Hires Drilling Contractor and other Service Contractors
4. Hires Well-Site Drilling and Completion Consultants

Contract Operator

- **Contract Operator**. A party other than the owner who contracts with the owner to operate the well. Quite often is an oilfield engineering company.

- Sometimes the party that wants to invest in the drilling of wells does not have the necessary expertise, time or proximity and will simply hire a “contract operator” to take care of the venture.

Non-Operator

- **Non-operator**. A party that is simply an investor. They do not operate the well. Referred to as having a "non operating working interest". (Royalty interest usually results when the land owner receives a small percentage of the income from the well. They do not own any of the well.)
- To avoid having to name all of the investors as Named Insureds, a "non-operating working interest" endorsement is used on CGL's.
  - (1) Makes Named Insureds of the non-operators
  - (2) Gives the insured coverage (for interest) on outside oil investments.

Upstream Segment

Mineral Lease Acquisition

- **Landman** - Checks records for ownership and mineral interests. Once a Mineral Lease is secured the Lessee can obtain Drilling Permits and Exploration can begin.

- **Seismic and Geophysical Services** – Applies surface methods to measure the physical properties of the subsurface, looking for anomalies in these properties, in order to detect the presence and position of hydrocarbons

Lease Work

- **Lease work** by contractor or site preparation contractor. This is the contractor that prepares the site for drilling.
- A road has to be built to it, security fences have to be made. A water supply has to be created. Large pits for the drilling mud and waste fluids have to be dug and lined with heavy plastic. A “mat” has to be built up to support the drilling platform and rig.

Site Preparation

- Once the site has been established, the area is prepared for drilling, with the following steps:
  - Leveling Site, Excavating and Trenching.
  - Conductor Hole. Rathole and Mousehole are constructed.
  - Transporting equipment by truck and unload at the drill site.

Drilling Company

- After the site is ready, the drilling contractor can now set up. They drill the initial well or a deepening of an existing well.

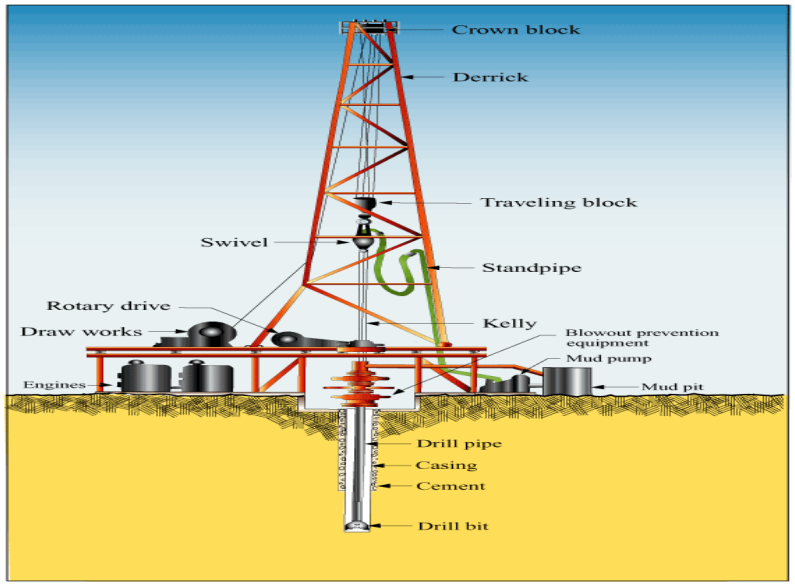
- Usually done with free standing drilling rigs that are trucked to site. The platform and derrick have to be trucked in and set up. Electrical generators and compressors are set up. Often crew and office quarters are set up on site as well. Drill pipe has to be trucked in and stacked up.

Drilling Operations

- **Drilling Contractor** – Owns and Operates the Drilling Rig. The Contractor maintains a crew to perform the work.
- **Rig Manager** – Responsible for the Rig's Operation and Performance
- **Driller** – Operates the Drilling Rig
- **Roughnecks** – Handles the Drill Pipe on the Rig Floor

Drilling Company– Rigging Up

- Often there are at least two crews working on setting up the rig.
- During the process some equipment might be handled and set by cranes, forklifts and rig up trucks.



Rigging Up *(continued)*

- Process includes the following, some which can be done at the same time:
  - Setting up the structure
  - Setting up the Rig Floor and Mast or Derrick
  - Installing Handrails, Guardrails, Stairs, Walkways and Ladders, Power Systems
  - Rigging up the Circulating Systems
  - Installing the Auxiliary Equipment
  - Inspection of the Rig

Drilling Operations

Specialty Service Providers

- **Mud Logger** – Creates a detailed record of a borehole by examining the cuttings of rock brought to the surface by the circulating drilling mud
- **Electric Log Engineer** – Monitors electric log data for fluid parameters prior to casing being installed in the borehole
- **Drilling Fluids Engineer** – Monitors drilling fluids (mud) to maintain hydrostatic pressure in the borehole.

Drilling/Completion

- If the well is determined to be a commercial one, then the next step is to complete the well.

- Sometimes a separate completion contractor is used for this stage. They work with the drilling contractor's rig.

Drill Ahead

- Drill Ahead means the actual drilling on the well. Specific procedures may vary from rig to rig, yet the general tasks are the same.

Drill Ahead Procedures

- Handling Tubulars
- Preparing Drilling Fluid
- Starting Drilling
- Preparing to Break Out Pipe
- Breaking out Pipe
- Making Up Pipe in Mousehole
- Raising the Kelly and New Joint
- Adding Pipe to the String
- Resuming Drilling

Drilling Fluid

- Drilling Fluid is the most important component in the drilling process.
- The “mud” is monitored throughout the drilling process. A mud engineer and/or the Derrickman may periodically check the mud by measuring its viscosity, density, and other properties
- Located on the site are mud pits and reserve pits.

Drilling Fluid

- A fluid is required in the wellbore to:
  - Cool and lubricate the drill bit
  - Remove the rock particles, or cuttings from the drilling area and transport them to the surface.
  - Counterbalance the formation pressure to prevent formation fluids from entering the well prematurely.
  - Prevent the uncased wellbore from caving in.

During the Drilling

- Sample logging operations might continue throughout the drilling operations.
- In some cases the operator might order a core sample.
- Core Samples are examined in a laboratory.

Drilling Maintenance

- Rig Floor
- Drilling Line Maintenance
- Wire Rope Maintenance
- Mud Circulating System
- Electrical Systems
  - Generators
  - Electric Motors
- Engines
- Derrick Equipment Maintenance

Well Completion

- Once the well is drilled to its designed depth, the formation must be tested and evaluated to determine whether the well should be completed for production, or plugged and abandoned.

- To complete the well production, casing is installed and cemented.

- The drilling rig is dismantled and removed.

Well Completion Activities

- Setting Production Casing
- Installing Production Tubing
- Starting Production Flow
- Bean Pumping Units (Pump Jacks)

Circulating & Cementing

- Circulating drilling fluid through the casing and annulus to remove residual gas and to condition the mud is a key component of completing the well.
- After circulating the fluid and conditioning the mud, the casing is cemented.
- Usually specialty contractors are hired to conduct cementing operations.

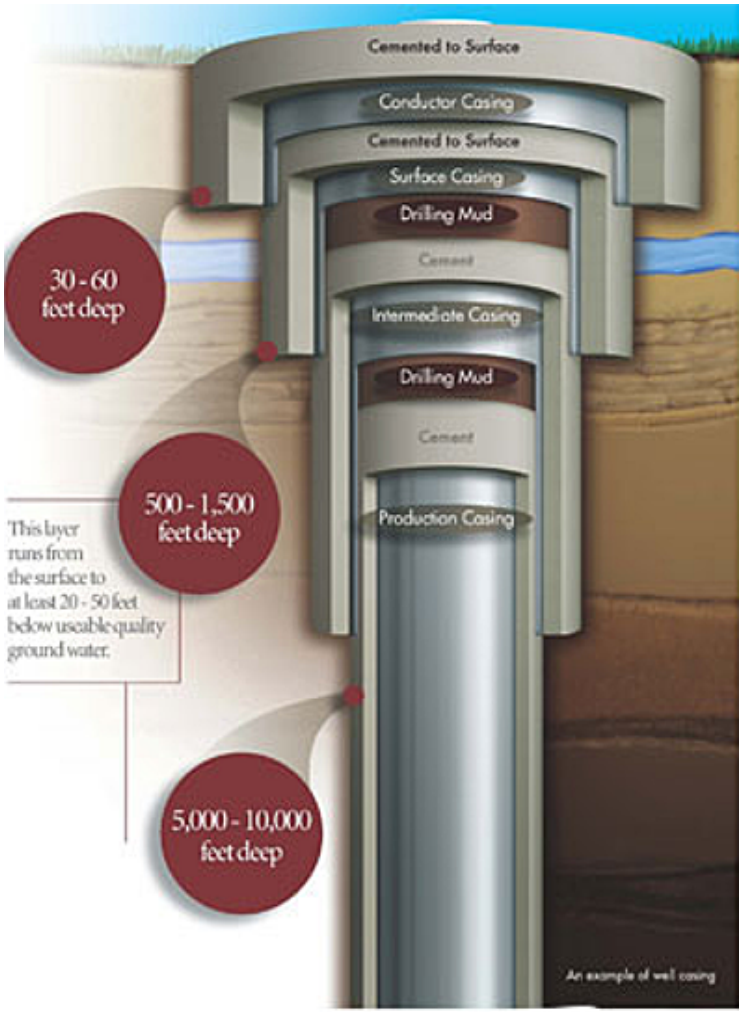
Production

Well Completion

The Well is prepared for **Production** (Completed) once drilling is finished

Casing – Multiple concentric strings of large pipe with production casing as the final string of casing.

Production Casing – The casing is cemented in place and extends through the reservoir.



Graphic Courtesy of Texas Oil and Gas Association

Production

Production Contractors

- **Casing Contractor** – Runs production casing in the hole prior to removal of the drilling rig
- **Cementing Contractor** – Mixes specialized concrete solutions and pumps a slurry down the borehole to seal each casing string to each other forming a seal.
- **Perforation Contractor** – The completion crew runs a perforating gun down the borehole and sets off multiple charges in the Production Casing

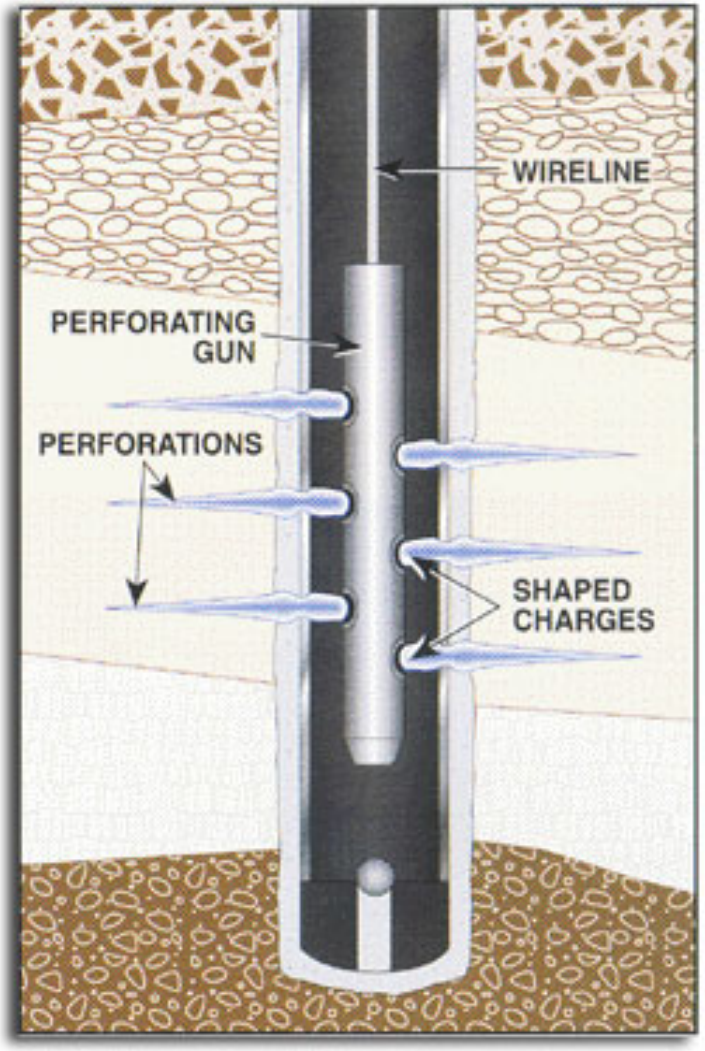
Production

- **Perforating contractors**. The final stage in getting a well to flow. There are three steps in perforating a well. This process improves the performance of the well and can be repeated if needed.

- Specialty contractors are normally hired due to the tools and expertise required for this task.

Production-Step 1

- **Perforating** uses a wireline tool with a device at the end of the tool that holds bullets. (Perforating Gun)
- These bullets are shot into the casing. This is a great way to isolate and select the zone of interest and crack the casing at a certain location.



Production-Step 2

- **Acidizing** is where acid is pumped down the well to dissolve portions of the rock in the formations. This opens up existing space to allow the flow to increase.

- Other similar operations involve injecting nitrogen or even water into formations to enhance production.

Production-Step 3

- **Fracture Stimulation** consists of injecting a fluid into the well, the pressure of which 'cracks' or opens up fractures already present in the formation. This increases the porosity and permeability of the formation.
- This is what is known as hydraulic fracing
- Today, tends to be done with horizontal drilling

Production

Flowback Contractor – Flowback is a process in which fracture fluid is recovered from the well to the surface. The purpose of the flow back is to:

1. Test the well for volume and pressure and gauge flow capacity
2. Transition the hydrocarbons of the well stream to a sales pipe line or storage tank.

Drilling- Well Control

- Blowout Prevention
- Monitoring & Maintaining Mud Control
- Installing BOP, Accumulators, and Choke Manifold
- Maintaining Surface Control System

Servicing the Well

- The drilling rig is removed and a service rig is installed before production takes place.
- This will help with servicing the well and allow the drilling rig to set up elsewhere for other potential well locations.

General Servicing

- **Workover Contractors**. Often wells will require servicing either on the surface or down the hole to help increase or restore production.
- Activities associated when using a workover/ service rig are:
  - Removing the Horsehead (Pumping Unit only)
  - Removing the Wellhead
  - Pulling and Running Rods
  - Pulling and Running Tubing

Production

Pumper Gauger

Monitors well production, schedules removal of produced fluids and maintains production metering and flow charts.

General Servicing

- **Roustabout**. Usually refers to a variety of unskilled type of work
- Jack of all trades
- Important to be specific in order for your underwriter to quote the account

Plug and Abandon

- When the well has run dry, the well is plugged & abandoned. (P & A)
- Equipment and casing is removed and salvaged.
- Cement plugs are placed in the hole to prevent movement of fluids between the different formations
- The surface is reclaimed.

Special Services

- Specialized equipment and skilled workers perform these particular operations.

- Activities include:
  - Wireline Operations - Well Logging
  - Perforating - Cementing
  - Swabbing - Hot Oiling
  - Snubbing - Coil Tubing

KNOW THE CONTRACTS!

The key to minimizing your E&O exposures and providing good customer service

Contracts

Types of Contracts

- Drilling Contracts

- Master Services Agreement

Contracts are:

- how responsibilities are delegated
- liability is allocated, and
- indemnities are arranged.

Contracts

- The **Drilling Contractor** works under one of three standard contracts developed by the International Association of Drilling Contractors contracts (IADC).
  - Daywork
  - Footage
  - Turn-Key
- As the contracts go from day-work to footage to turn-key, the drilling contractor takes on additional responsibility.
- Any insurance office that writes oil and gas risks should have copies of these contracts at their fingertips. They spell out which party is going to be responsible for what and they spell out the indemnities.

Contracts

Master Service Agreement – A long term standing contract between an Operator, Contractors and Consultants

The MSA achieves **two** important objectives:

1. to respond quickly to operational changes
2. the implementation of a risk allocation program for multiemployer work sites.

Key Sections of an MSA

- Representations and Warranties
- Responsibilities of the Contractor
- Relationship of the Parties
- Indemnity & Risk Allocation
- Insurance
- Jurisdiction, Venue, Choice of Law
- Definitions

THIS CONTRACT CONTAINS RELEASE AND INDEMNITY OBLIGATIONS.

MASTER SERVICE AGREEMENT

CONSPICUOUS AND FAIR NOTICE

BOTH PARTIES AGREE THAT THIS STATEMENT COMPLIES WITH THE REQUIREMENT, KNOWN AS THE EXPRESS NEGLIGENCE RULE, TO EXPRESSLY STATE IN A CONSPICUOUS MANNER TO AFFORD FAIR AND ADEQUATE NOTICE THAT THIS AGREEMENT HAS PROVISIONS REQUIRING ONE PARTY (THE INDEMNITOR) TO BE RESPONSIBLE FOR THE NEGLIGENCE, STRICT LIABILITY, OR OTHER FAULT OF ANOTHER PARTY (THE INDEMNITEE).

BOTH PARTIES REPRESENT TO EACH OTHER (1) THAT THEY HAVE CONSULTED AN ATTORNEY CONCERNING THIS AGREEMENT OR, IF THEY HAVE NOT CONSULTED AN ATTORNEY, THAT THEY WERE PROVIDED THE OPPORTUNITY AND HAD THE ABILITY TO SO CONSULT, BUT MADE AN INFORMED DECISION NOT TO DO SO, AND (2) THAT THEY FULLY UNDERSTAND THEIR RIGHTS AND OBLIGATIONS UNDER THIS AGREEMENT.

This MASTER SERVICE AGREEMENT, (the "***Agreement***"), made and entered into and shall be effective as of this 11th day of January, 2013, by and between [redacted]; a list of such current entities is attached hereto as Attachment 1 titled "Company Affiliates", as may be amended from time to time) ("***Company***") and [redacted] ("***Contractor***").

WHEREAS, Company is engaged in the business of exploring for, producing, and marketing oil and gas, and in the course of such operations regularly and customarily enters into contracts with independent contractors for the performance of services and provisions of goods, equipment and materials relating thereto; and

WHEREAS, Company may desire to engage Contractor to provide services,

WHEREAS, Contractor represents that it has the expertise, facilities, first-class equipment in good working order and fully trained personnel capable of safely and efficiently operating such equipment and performing services in a safe, proper and workmanlike manner for Company.

NOW THEREFORE IN CONSIDERATION of the mutual promises, conditions and agreements contained herein, the receipt and sufficiency of which is hereby acknowledged, the Parties mutually agree as follows:

1. **Agreement**.

(a) Preamble. This Agreement shall control and govern the Work (as herein defined) performed by Contractor for Company. It shall be used as the agreement between Company and Contractor in conjunction with one or more written Work Orders, or it may be referenced and incorporated as ***Exhibit A*** to one or more Work Orders between Company and Contractor. Neither execution of this Agreement, nor anything contained therein, shall (i) obligate Company to order Work from Contractor, nor (ii) obligate Contractor to accept Work from Company.

(b) The main body of this Agreement, the exhibits, attachments and schedules hereto and any Work Order shall, to the extent possible, be construed as consistent and complementary. Except for pricing, any other agreements or stipulations in any Work Order, field ticket,

Insurance

- **Master Service Agreements** require that Consultants and Service Contractors carry minimum amounts of insurance coverage

- Commercial General Liability
- Excess Liability
- Workers Compensation and Employer's Liability
- Automobile Liability
- Professional Liability
- Equipment/Property
- Watercraft (where applicable)
- Control of Well (where applicable)

Insurance

- **General Liability**

  - $1MM/$2MM Limits of Liability
  - ISO CGL Occurrence form, defense outside the limits
  - Action Over Coverage
  - Subcontractor Coverage
  - Additional Insured – Ongoing and Completed Operations
  - Per Project Aggregate

Insurance

- Explosion, Collapse and Underground Property Damage
- Blow Out and Cratering
- Automatic Primary and Non-Contributory
- DNOC
- Waiver of Subrogation
- Sudden & Accidental Pollution (7 day discovery/ 30 day reporting)

Insurance

- **Contractors Pollution Liability**
  - Coverage on a Gradual Basis
  - Claims-Made or Occurrence
  - Third Party BI/PD and Cleanup Costs

Insurance

- **Professional Liability**

- Covers economic damages resulting from errors or omissions
  - Contingent bodily injury/property damage coverage

GETTING THE INSURANCE YOUR CLIENTS NEED

Oil & Gas Industry

- 3 Major SIC Classifications:
  - SIC 1381 Drilling Oil and Gas Wells
  - SIC 1382 Oil and Gas Field Exploration Services
  - SIC 1389 Oil and Gas Field Service, Not Elsewhere Classified

SIC 1381 Drilling and Gas Wells

- Includes establishments primarily engaged in drilling wells for Oil & Gas field operations for others on a contract or fee basis.
- Examples: Directional Drilling, Redrilling wells, Reworking wells, Spudding wells, Well drilling all on a contract basis.

SIC 1382 Oil and Gas Field Exploration

- This includes establishments primarily engaged in performing geophysical, geological and other exploration services on a contract or fee basis.
- Examples: Aerial geophysical exploration, Geological exploration, Geophysical exploration and Seismograph surveys on a contract basis.

SIC 1389 Oil & Gas Services Not Elsewhere Classified

- This includes establishments primarily engaged in performing oil & gas services not elsewhere classified, for others on a contract or fee basis.

SIC 1389 Examples

- Excavating Slush Pits & Cellars
- Grading & Building of foundations at wells
- Well Surveying
- Running, Cutting, and Pulling Casing Tubing
- Cementing Wells & Shooting Wells (Perforating)
- Acidizing & Chemically Treating Wells

Insurance Points of Interests

- Texas has a “weak” anti-indemnity statute. It says that an operator can not ask a contractor to indemnify it for more than some $500,000 for its own negligence. Then it goes on to say, that if insurance is in place to cover it, then its OK.
- So operators simply insist on insurance. Louisiana and New Mexico have stronger anti-indemnity laws.

Commercial General Liability

- The coverage's at issue or “in play” are: .
  - Waivers of Subrogation
  - Mobile Equipment
  - Blowout & Cratering
  - Underground Resources
  - Underground Equipment
  - -Punitive
  - -Loss of Hole
  - -Contractual
  - -Addtl. Insureds
  - -Pollution

Commercial General Liability

- The 2001 ISO CGL has changed the “primary” clause to a “share” clause.
- This is going to affect a lot of special oil company certificates of insurance.
- The 1998 ISO CGL version should be considered instead of the 2001 ISO CGL.

Commercial General Liability

- An operator should have pollution. They are responsible for pollution on their drilling and producing sites.
- Drilling and workover contractors are typically required to have pollution.
- Subcontractors also are usually required to have pollution as well.

Commercial General Liability

- Nearly all of the current oil & gas markets can offer some form of pollution. All of the pollution wordings vary.

- You need to study them and determine:
  - What is the definition of pollution?
  - How long to discover a loss?
  - How long to report it?
  - What clean up is included?
  - What is the deductible?

Commercial General Liability

- ISO puts underground resources, underground equipment and loss of hole on one endorsement.
- It is rare for surplus lines carriers to provide underground equipment and loss of hole.
  - The thinking is underground resources (the loss of adjacent party's oil or gas) is a true 3rd party coverage. Underground equipment is damage to an active participant's equipment. That should be a business risk. Loss of hole is similar in nature.

Commercial General Liability

- Blowout & Cratering – any party that works around a wellhead should have these coverages.
  - Blowout is just that – the oil & gas is shooting up from the well and often catches fire.
  - Cratering is when the blowout is so bad that the earth around the drilling rig gives way like a large sinkhole.

Commercial General Liability Contractual

- “Action over” results when an injured employee of the contractor sues the operator. Then the contractor has to take over the claim because of his contractual obligation to do so, stated in the master service agreement
- Remember – the contractor has to protect, defend & indemnify the operator for a loss like this.

Commercial General Liability Contractual

- Make sure the carrier does not amend the contractual to exclude “sole negligence” or “action-over claims”.
- The biggest exposure of a contractor is an “action over” claim.
- Represents at least 50% of all CGL claims for oilfield contractors

Commercial General Liability
Mobile Equipment Warning

- The ISO CGL has a definition exception for oil well servicing rigs. Unless you address this, self-propelled oil well servicing rigs will not be covered as mobile equipment for over-the-road exposures.
- Most oil and gas insurance facilities will amend the mobile equipment definition to include this equipment for over-the-road exposure, but you have to ask. The alternative is to secure coverage under an auto policy.

Automobile Liability and Physical Damage

- Only comment here is that self-propelled well servicing equipment can be covered under an auto policy, but it usually is more expensive. You either have to endorse the CGL or put the exposure with the auto policy.
- Currently, physical damage for small workover rig schedules is hard to get. You may ask your auto carrier if they will cover it.

Drilling Rig Physical Damage

- This is an all risk policy, so does not require a lot of comments.
- You do have to watch out for:
  - The “open flame” warranty
  - The “blowout safeguard” warranty
  - If it can be transported over water
- It is “all risk” above ground, and “named peril” below ground.

Oil Lease Equipment Floater

- This is an all risk policy providing coverage for well site tanks and equipment.
- This coverage is readily available.

Control of Well Policy

- Coverage reimburses for expenses resulting from a well out of control.
- Who has responsibility for this coverage is determined by the MSA.
- Mainly a first party coverage.
- Policy has 3 main sections:
  - control of well
  - re-drilling
  - pollution, containment & cleanup.

Control of Well Policy

- Usually has at least a $25,000 deductible per section.
- Rating takes into consideration the depth, location of the wells and the type of wells. (vertical, slanted or horizontal).

Control of Well Policy

- Location or territories:
  - Area 1 is land U.S.
  - Area 2 is coastal U.S. or mountain regions. Area 2, wet, takes in shallow coastal waters.
  - Area 3 is Gulf of Mexico.
  - Areas 4 & 5 take in hazardous waters such as North Atlantic.

Control of Well Policy

- Depth. The underwriter will put wells into “depth bands” and assign a rate based on depth.
- Typical depth bands are 0 to 5,000’; 5,000 to 7,500’; 7,500 to 10,000’ and etc. The deeper the well, the higher the rate.

Control of Well Policy

- Common extensions of coverage:
  - Underground Blowout
  - Deliberate Well Firing
  - Extended Re-drill
  - Joint Venture Escalation;
  - Care, Custody & Control;
  - Evacuation Expense
  - Making Wells Safe.

Working with an Underwriter

In general the underwriter is looking at:

- Operations
- Revenues
- Experience/Years in Industry
- Loss Histroy
- MSA
- Rental Agreement/Sales Agreement
- Resumes (especially on newer ventures)

What Makes a Good Submission

- Complete information
- An O&G Application (not just an Environmental app)
- Resumes of the key principals, especially on a new venture
- Details of the operations
  - *Don't just say "roustabout," or "consultant"*
  - *What do they do? What do they consult upon? What type of engineer are they?*
- Know the insurance requirements of the MSA

LEGAL ISSUES


FRACK
OFF

Another asbestos?

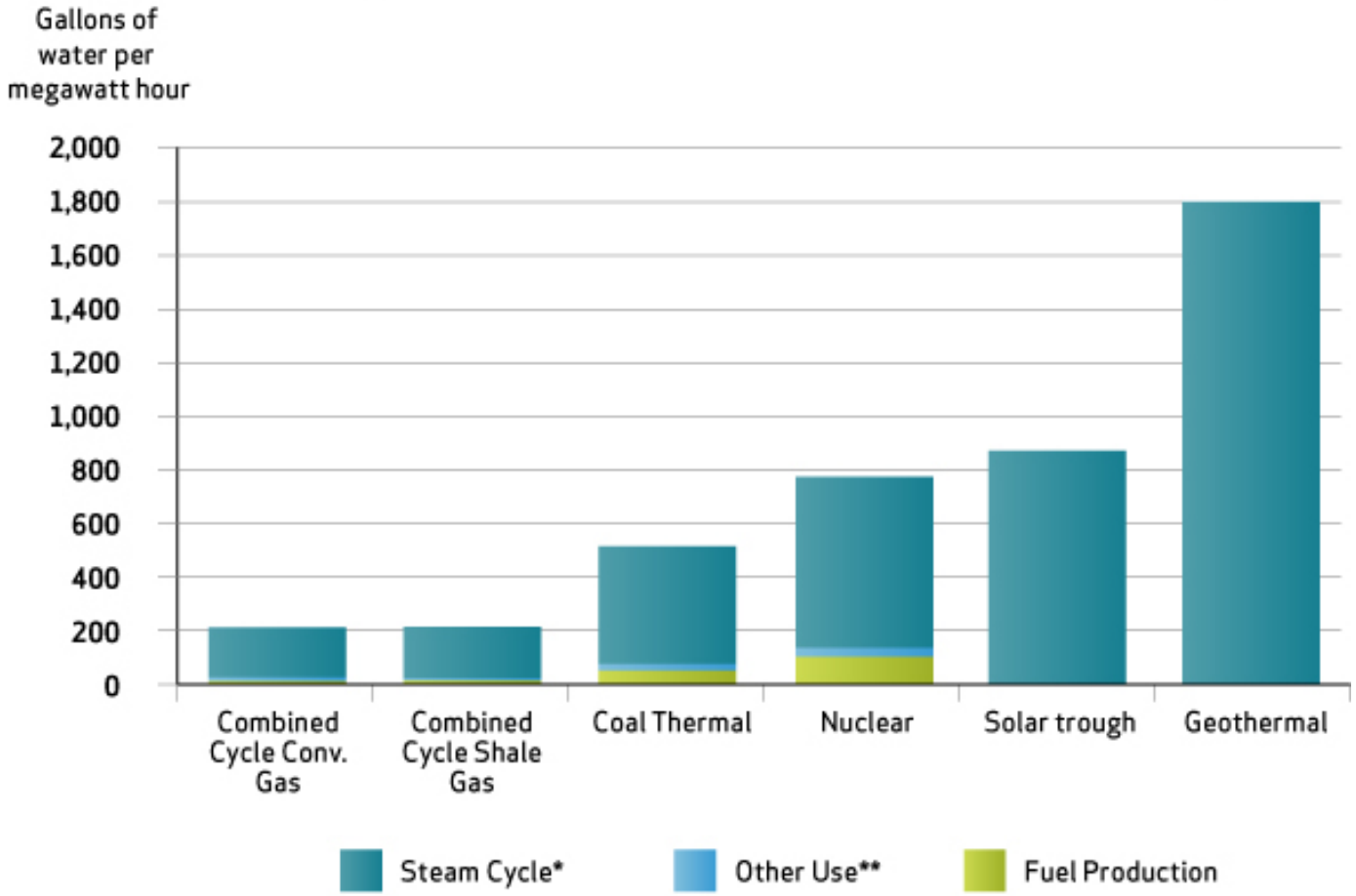
"High-volume, slick water hydraulic fracturing of shale relies on pumping millions of gallons of surface water laced with toxic chemicals and sand under high pressure to create fractures to release the flow of gas.

The process, however, has the potential to cause serious and irreparable damage to the environment and the potential for harm to human and animal health. At issue is how society should form appropriate policy in the absence of well-designed epidemiological studies and health impact assessments.

The issue is fraught with environmental, economic, and health implications, and federal and state governments must establish detailed safeguards and ensure regulatory oversight, both of which are presently lacking in states where hydraulic fracturing is allowed."

(Am J Public Health, May 2013)

Water Intensity for Various Power Generation Technologies



Gas-fired combined cycle power plants use much less water than thermal power plants with only a small contribution from gas production

Source: U.S. Department of Energy, "Energy Demands on Water Resources", December 2006; NREL, "A Review of Operational Water Consumption and Withdrawal Factors for Electricity Generating Technologies," March 2011 Chesapeake for shale gas water use

* Assumes closed loop cooling tower

**Other use includes water for other process uses such as emissions treatment, facilities

Earthquakes?

Hydraulic fracturing is known to cause very minor seismic activity when the fluids are injected into a formation. Geologists know this because microseismic geophones are placed in the ground during a fracture treatment to pick up the seismic waves, which can then be mapped to show the extent of fractures. Are these earthquakes large enough to cause damage or disturbance? Highly unlikely says the U.S. Department of Energy:

> "To our knowledge hydrofracturing to intentionally create permeability rarely creates unwanted induced seismicity large enough to be detected on the surface even with very sensitive sensors, let alone be a hazard or an annoyance."

Source: http://esd.lbl.gov/research/projects/induced_seismicity/primer.html

The future?

- EPA doing additional studies
- Plaintiffs' bar hiring attorneys
- Economic demand for cleaner, affordable energy is growing
- Potential for the U.S. to become energy independent

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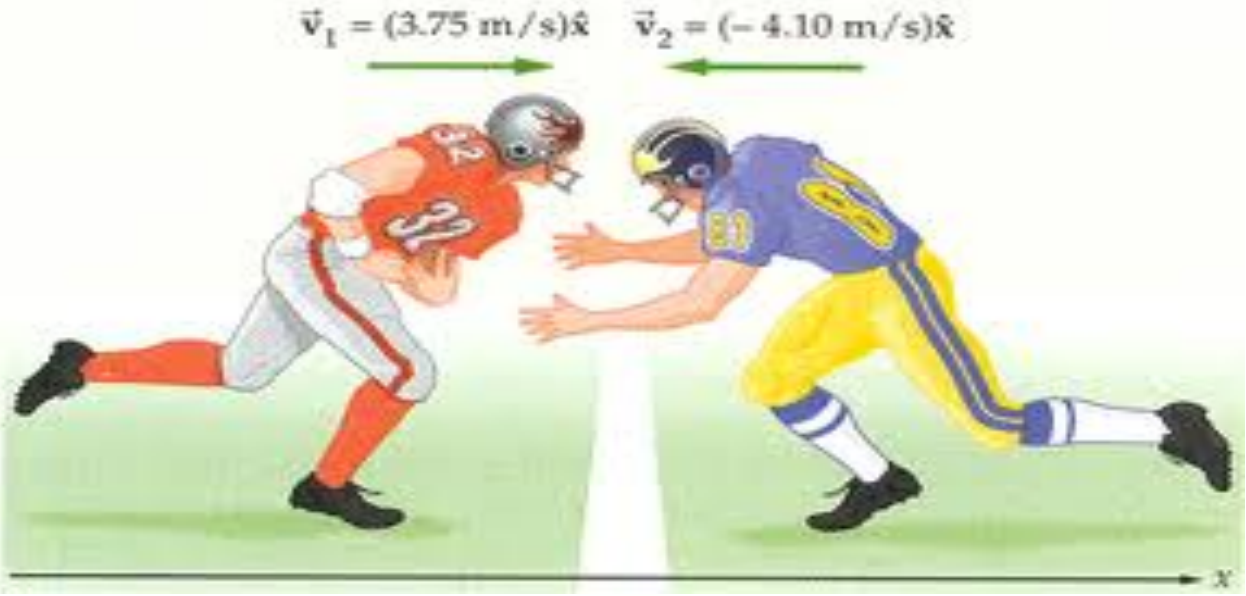

QUESTIONS & ANSWERS

Sources of Additional Information

- The University of Texas Petroleum Extension Service
  - Educational booklets on oil and gas drilling and production
  - High-level courses
  - Phone: 512-471-5949
  - Web site: petex@www.utexas.edu
- Community Colleges-check with them as they often offer introductory courses
- Museums
  - Permian Basin Petroleum Museum in Midland. *If you have a trip planned to the area, set aside 2-3 hours to tour this museum. You can learn a lot.*
  - The Texas Energy Museum in Beaumont (or Kilgore)

Sources of Additional Information

- The Offshore Technology Conference
  - Held annually in Houston

- International Association of Drilling Contractors
  - *If you write oil and gas insurance, it's best to have copies of their standard contracts in your office*
  - Phone: 281-578-7171
  - Website: http://www.iadc.org

Reference Sources and Locations

http://www.naturalgas.org/naturalgas/wellcompletion.asp

OSHA website

http://www.osha.gov/SLTC/etools/oilandgas/illustratedglossary.html

THANK YOU!

Greg Rubel

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