

## **CERTIFICATE OVERVIEW:**

The purpose of this certificate is to introduce students to the business aspects of energy land management enhanced with a better understanding of technical disciplines including oil & gas law. Geology, petroleum engineering, petroleum economics, energy finance and oil & gas accounting. Students will understand how the rule of capture and the doctrine of correlative rights have impacted the growth of state regulatory commissions and the law of pooling and unitization. They will understand the law of conveyancing, important technological advances such as hydraulic fracturing (“fracking”), the oil & gas lease and important oil & gas contracts including joint operating agreements and farmout agreements. Financial and accounting concepts such as IRR, NPV and PI will be reviewed along with pricing forecasts, decline curves, and important aspects of oil & gas tax so that effective financial results can be better predicted, negotiated and structured. As a result, students will be able to more effectively make decisions in the energy land management process and to properly interface with management, lenders and investors.

## **OVERVIEW OF THE ENERGY BUSINESS INCLUDING HISTORY, PRESENT AND FUTURE**

This course presents a broad overview of the energy business including the early history, current key issues and future projections. It includes the time before the oil industry began and how oil & gas was made. Historical developments are included such as the drilling of the Drake 101 in Titusville, Pennsylvania in 1859, the rise of Standard Oil and John D. Rockefeller, the Phillips brothers and many others from the early days of the oil business. Modern important personalities including Aubrey McClendon, Tom Ward and Harold Hamm are considered along with the impact of key constraints such as the inability to export oil & natural gas, the anti-fracking movement, the impact of OPEC and concerns regarding peak oil.

We will cover how fortunes were made and lost as well as how the changing law of oil & gas developed alongside the developing disciplines of geology, petroleum engineering, geophysics, petroleum economics, oil & gas accounting and energy finance. Each of those disciplines will be reviewed and summarized on an understandable and practical level. Students will make choices regarding data from each discipline as they get familiar with the terminology of the oil & gas business and prepare to drill their first well.

## **REGULATORY COMMISSIONS, NEW LEGAL, REGULATORY AND ENVIRONMENTAL CONCERNS**

This course explains the continuing development of the industry including the rule of capture and how the growth of regulation led to the creation of the doctrine of correlative rights. The historical role of the regulatory commissions and the present and likely future of such organizations is presented along with the critical development of the law of pooling and unitization and a growing concern for environmental matters at both the state and federal levels. This includes the limitations on flaring, venting, set-backs, allowables, water use, air quality, zoning, land use and other key issues. Students will consider when it makes sense to force pool, increase lease benefits, allow mineral owners to participate as lands are developed. As well as the procedures used when applying for drilling permits, the impact of unit size and the role of increased density and various exceptions to typical procedures, e.g. the impact of anti-dilution, retained acreage and Pugh clauses in the oil & gas lease.

## **CONVEYANCING, LEASING, CONTRACTING AND DECISION MAKING IN LAND MANAGEMENT**

In this class we will cover key ideas concerning the law of conveyancing, the evolution of the modern oil & gas lease and critical contracts widely used in oil & gas upstream development. Including assignments, joint operating agreements, AMIs and Farmouts. Students will learn when a firm should seek to monetize leases, farm them out or drill. How operators should be chosen, limited, empowered and removed are examples of issues included. Students will play the role of an oil company land division while they make choices regarding the handling of key issues as they seek to develop prospects including key options related to the geological formations, type of shale play, pricing, competition, regulations, tax and economic consequences. Students will make choices as wells are planned and drilled.

## **RAISING /SPENDING MONEY: LENDERS, INVESTORS AND OTHER DECISION MAKERS**

This course includes the financial and accounting concepts and methods that help oil & gas companies attract investors and lenders using pricing forecasts, reserve analysis, decline curves and key financial ratios unique to the oil business resulting in better cost effective debt and equity financing. Also included is the role of capital budgeting and the use of financial metrics such as IRR, MIRR, PI and NPV along with critical oil & gas tax matters such as cost and percentage depletion, depreciation, intangible drilling, completion costs and various tax credits. Students will engage in predicting, negotiating and structuring effective financial results as they develop financial and economic analysis for their own oil & gas firm as might be presented to management, lenders and investors.