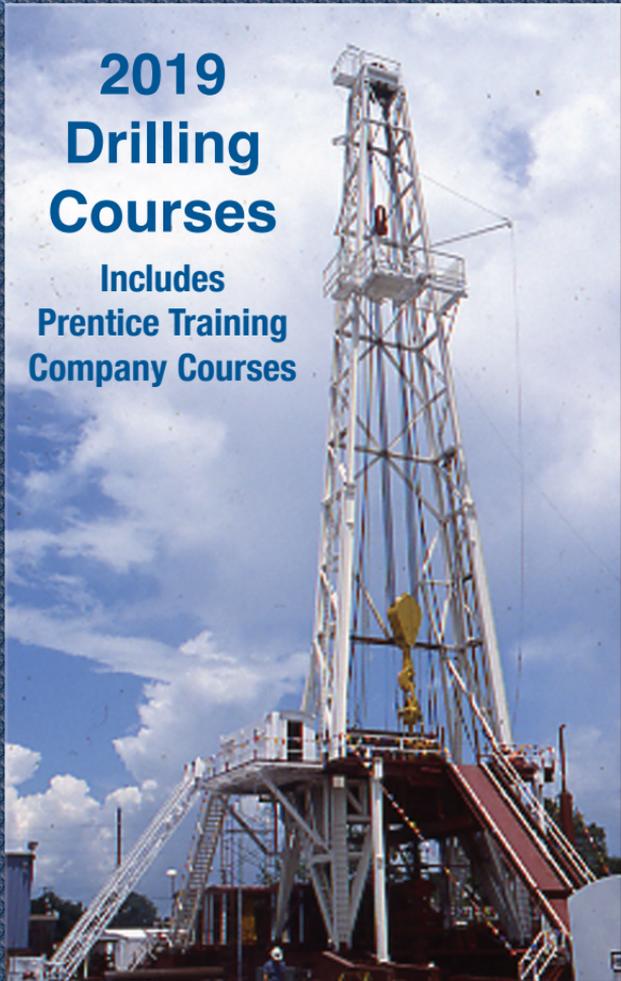


NORTHSTAR TRAINING

2019 Drilling Courses

Includes
Prentice Training
Company Courses



NORTHSTAR TRAINING

Northstar Training is very excited to be able to continue to teach the “Prentice Training Company Courses”. I have known Charlie Prentice for over 35 years, having taught and worked with Charlie on multiple projects during that time. My goal is to offer the same quality courses created and taught by Charlie and to continue Charlie’s goal of offering the best training in the drilling industry.

Instructors

Calvin Barnhill: I hold both undergraduate and graduate degrees in Petroleum Engineering from Louisiana State University (LSU) and am a member of the Petroleum Engineering Honor Society. After graduating from LSU, I became licensed as a registered professional petroleum engineer and have maintained my license in full force and effect since that time.

My work career spans over 40 years in the oil and gas industry. Over my career, I have worked on a wide variety of drilling, production and reservoir projects both domestically and internationally for a wide assortment of companies. These companies include major and independent oil companies, drilling contractors and service companies. I have worked on both onshore and offshore projects worldwide. The offshore projects have ranged in water depths from shallow bay work to deepwater projects in water depths approaching 9,000 feet. Well projects have ranged in depth from 500 feet to 32,000 feet and have included HTHP environments, acid gas environments and ERD/horizontal projects. Further, I have been heavily involved in well control projects throughout my career, having worked on multiple well control projects, surface blowout projects and subsurface blowout projects worldwide.

Training has also been an integral part of my career as I have taught well control and various other drilling courses worldwide. I have taught for LSU, the University of Texas through its PETEX division, the University of Louisiana at Lafayette and various industry training services to include the original Prentice and Records Enterprises, Inc., which was a forerunner of Prentice Training Company. While with Prentice and Records, I was part of the first federally certified well control school and was one of the first certified well control instructors recognized by the US federal government. I was also actively involved with many of the other drilling courses offered by Prentice and Records.

Perrin Roller: Mr. Roller has 39 years of domestic and international oil and gas operations experience, both onshore and offshore. Upon graduation in 1980, he began his career as a Drilling Representative for Chevron USA, Inc. and performed wellsite supervision of drilling, completion and workover projects in South Louisiana and offshore Gulf of Mexico. He also worked as a staff drilling engineer in Lafayette, Louisiana and Ventura, California prior to assignments with Chevron Overseas Petroleum in Spain, Yugoslavia and India.

Mr. Roller was promoted to Sr. Drilling Engineer in Chevron's subsea engineering group where he specialized in well control equipment and control systems for deepwater operations and was an instructor for Chevron's well control school and deepwater operations schools. He later spent several years as a Sr. Engineer and Supervisor for drilling operations offshore Angola.

Following his engagement with Chevron, Mr. Roller spent a brief period of time with the Red Adair Company organizing well control engineering and planning relief wells. He then spent a number of years a drilling consultant for major oil companies planning and supervising deepwater operations.

Mr. Roller became the global deepwater drilling manager for a large global independent operator in 1998 and managed offshore operations in the Gulf of Mexico, West Africa and Brazil, eventually taking a position as the Sr. Vice President of Well Operations for a Gulf of Mexico shelf operator.

Mr. Roller has been associated with Northstar Training since 2018. He has a BSc in Geological Engineering (Petroleum Emphasis) from the University of Missouri – Rolla (now the Missouri University of Science & Technology). From 2005 to the present Mr. Roller has been an adjunct professor of Petroleum Engineering at Missouri S & T. He also is a licensed professional engineer in the states of Texas, Louisiana and California. Mr. Roller has written, developed and taught a number of classes for corporate schools, overseas government petroleum ministries and regularly gives lectures for petroleum and geological engineering classes at Missouri S & T.

Phil Amy: Mr. Amy is a registered professional engineer having 44 years of domestic oil and gas operations experience, both onshore and offshore. Upon graduation in 1975, he began his career as a Drilling Representative for Chevron USA, Inc. and performed wellsite supervision of drilling, completion and workover projects for the Western Region based in Denver, and, for the Eastern Region based in Lafayette. While in Lafayette, Mr. Amy was promoted to Drilling Engineer with the primary responsibility of assisting the Senior Drilling Engineer in the ongoing planning and management of six marine drilling rigs working along the Louisiana and Texas Gulf Coast.

Following his engagement with Chevron, along with a brief period working as a Drilling Engineer for Borden Energy, Mr. Amy joined Prentice & Records, Inc. as a Technical Trainer and Consultant. Mr. Amy served as an instructor for Prentice & Records' Well Planning, Drilling Problems and Practical Solutions, Drilling Optimization, Drilling Practices, Abnormal Pressure Detection and Well Control courses.

Beginning in the mid-eighties, Mr. Amy broadened his experience base while serving as the Operations Manager for several independent producers with offices in Houston and Oklahoma City. In addition to the planning, costing, execution and oversight of drilling/completion/workover capital projects, he was also responsible for management of the companies producing assets. In addition to the onshore and offshore Gulf Coast, his geographic experience covers the major Texas arenas; the Rocky Mountain states; and, the Mid-Continent regions.

Mr. Amy has been associated with Northstar Training since 2016. He has a BS in Petroleum Engineering from the University of Southwestern Louisiana, and, an MBA from the University of Houston. Mr. Amy maintains professional engineering licenses in Louisiana and Texas.

PRENTICE TRAINING COMPANY'S ADVANCED CASING DESIGN

This short course is one of our most popular courses. It provides explanations and examples of all the aspects of oilfield tubular design. Both uniform and non-uniform loading is covered. Combination loading considerations are envisioned and design procedures are outlined and practiced. Design of tubulars for use in a corrosive environment is a new addition.

What You Will Learn

- The basis for the published API tubular strengths.
- How to design drive pipe to sustain a compressive load.
- How to design conductor, intermediate, drilling liners, and production casing strings for burst, collapse and tension.
- How to select connections.
- How to take biaxial and triaxial loading into account.
- How to perform complete buckling analysis.
- How to design for bending, point loading and ballooning.
- How to take wear into consideration.
- How temperature reduces yields strength.
- Recommended sequence for combination considerations.
- A complete integrated procedure for designing oilfield tubulars.

What Will You Take Away

- Complete knowledge of tubular design.
- Confidence that a casing string you design will stand up to practical applications.
- Design considerations and applications for H₂S, CO₂, and high CI individual and combine corrosion environment
- A manual with notes for reference.
- Software to make all pertinent tubular related calculations and to aid total design.

Who Should Attend

Engineers and engineering aids involved in tubular design, as well as practical supervisors who want to understand the basis for the design of the tubulars being run in their wells.

Midland, TX
Oklahoma City, OK

October 7 - 11, 2019
October 7 - 11, 2019

\$2,500 USD
\$2,500 USD

PRENTICE TRAINING COMPANY'S ADVANCED WELL CONTROL

This Advanced Well Control School offers the student a higher level of well control training as compared to what is offered in conventional well control schools. Northstar Training recommends that students extend and enhance their well control training by attending the Advanced Well Control School in the intervening year between the years attending a standard well control school for a well control card.

The Advanced Well Control School's curriculum is based on a combination of advanced well control concepts and actual real life well control situations. This adaptive approach does not lend itself to the standardized cookie cutter conventional well control school approach.

To maintain control of the Advanced Well Control course curriculum and to be able to adapt that curriculum to cover multiple real world well control situations, Northstar Training (as did its predecessor Prentice Training Company) has made the conscientious decision not to offer this course under the guise of a standard well control school that has a fixed and regulated curriculum.

While the student will receive advanced well control training and have the benefit of actual real-world experience from an instructor who has been involved with many of the highest profile well control incidents, the purpose of the school is not to issue a well control card. The purpose is to advance well control knowledge and understanding.

Calvin Barnhill, the instructor, has been involved with many actual well control incidents worldwide. These incidents include well kicks, well pressure situations, surface blowouts, underground blowouts and surface explosions. They involve land based and offshore operations including shallow water, deep water and ultra deep water situations.

The best-known incident is the Deep Water Horizon – Macondo Well blowout. However, this is only one of many different well control situations that Mr. Barnhill has worked and can present in the Advanced Well Control School.

Furthermore, Mr. Barnhill has full access to the extensive well control information and data base of Prentice Training Company, which also has information and data from Drilling Well Control. This company was involved with the control of thousands of wells and with the well control planning for many more wells.

The combination of real-world experience coupled with actual information and data and advanced well control concepts makes this Advanced Well Control School a powerful addition to the well control training for any student serious about well control.

This short course picks up where basic well control stops. Topics such as volumetric well control (monitored, non-monitored, lubrication and bleeding), deep water well control (bubble chopping - riser kills), underground blowouts (dynamic and “sandwich” kills), gas solubility in oil muds, hydrates, and many other special considerations are identified and explained. Horizontal well control including gain rate and special considerations is covered. Slim Hole well control is discussed. A practical knowledge for safe application of these “trouble well control” concepts is transmitted.

What You Will Learn

- How to minimize surface pressures and downhole equivalent mud weights.
- How to kill an underground blowout.
- How to minimize hydrate problems in deepwater well control.
- How to maximize your chances of killing any kick.
- How to minimize any kicks chances of killing you.
- How to use a horner plot to determine accurate kill mud density in tight kicks.
- How to choose a safe kill rate considering all five (5) controlling factors.
- Why the “Soft Shut In” is dangerously foolish.
- Why the “Drillers Method” is never better than the Wait and Weight.

What Will You Take Away

- The reasons why you should kill a well in a particular manner.
- The logical sequence to follow in the determination of which procedure to implement.
- How to maximize your chances of killing the well.
- How to recognize when standard well control has become trouble well control.
- Comprehensive knowledge of well control.
- The ability to recognize well control situations for the dangers they present and the knowledge of how to proceed.
- A confidence in dealing with well control situations that only knowledge can promote.

Who Should Attend

All personnel involved in drilling, completion, and workover operations who might be involved in a well control situation and want to know as much as possible about it.

PRENTICE TRAINING COMPANY'S DRILLING PRACTICES

Drilling Practices is a five (5) day applications short course. The course covers all of the drilling systems, and is designed both for the new hire in drilling and as a refresher for the experienced hand. The Drilling Practices short course was created to provide "State of the Art," practical procedures for the operational driller.

The course is presented in the same sequence as the well is drilled. Planning, equipment selection, design, operations systems, and troubleshooting are the essence of the successive topics.

Calculations are part of the course. However, these are the same calculations which must be made while drilling a well.

What You Will Learn

- Formation characteristics including pressures, stresses and strengths.
- Casing point selection procedure.
- Tubular design considerations for casing and the drill string.
- Rig selection and specification.
- Hydraulic considerations:
 - Friction Loss
 - Swab And Surg
 - Cuttings Transport
 - Optimization
- Drilling Problems:
 - Stuck Pipe
 - Lost Circulation
 - Crooked Hole
 - Well Control
 - Slow Penetration Rate

What Will You Take Away

- A complete understanding of the drilling process, drilling systems, and drilling problems.
- Confidence to make decisions regarding drilling systems or problems.
- A means for optimizing drilling parameters.
- The knowledge of how drilling systems interact, and how best to compromise solutions.
- Confidence that you are current in your knowledge of drilling practices.

Who Should Attend

Drilling Practices is a must for anyone in a responsible rig-based occupation, including drilling engineers, foremen and managers, directional drillers, tool pushers, mud engineers, drillers and mud loggers.

Midland, TX
Oklahoma City, OK

November 4 - 8, 2019
November 4 - 8, 2019

\$2,500 USD
\$2,500 USD

PRENTICE TRAINING COMPANY'S DRILLING PRACTICES/SUPERVISION

This five (5) day course covers the drillstring including components, configuration, wear, loading, directional control and design. Drilling fluids with regards to type, how to run, and drilling considerations are discussed. The hydraulics section includes friction loss and pressure surge determination, cutting transport considerations and optimization procedures. Abnormal pressure detection is covered. Drilling problems and solutions including lost circulation, stuck pipe, kicks, slow penetration base, and crooked hole are covered.

What You Will Learn

- The reasons drilling problems occur.
- The warning signs of drilling problems.
- How to recover from problems.
- How to prevent the problems occurring.
- How to optimize a system to maximize drilling minimize lost.

What Will You Take Away

- Knowledge of what can happen and why.
- The understanding of state of the art technology available to help you.
- A logical sequence of steps to take to recover from stuck pipe or loss of circulation or crooked hole, etc.
- Confidence that you understand the pitfalls of drilling and how to avoid or handle them.

Who Should Attend

Drilling foremen, drilling engineers, toolpushers, drilling supervisors and drilling managers.

What is the Difference Between Drilling Practices and Drilling Supervision

- There is some duplication of subject matter, but Drilling Supervision is taught as an operational “how to” course where Drilling Practices covers theory much more deeply.
- Drilling Supervision is more an experienced practical personnel course.
- While some subject matter is duplicated, more subjects are addressed in Drilling Supervision than in Drilling Practices.
- Drilling Practices covers subjects more deeply than does Drilling Supervision.
- Drilling Practices is more an engineering introductory course.

Midland, TX
Oklahoma City, OK

November 11 - 15, 2019
November 11 - 15, 2019

\$2,500 USD
\$2,500 USD

PRENTICE TRAINING COMPANY'S PRIMARY AND REMEDIAL CEMENTING

The Primary and Squeeze Cementing short course is a four (4) day course that covers the well cementing process. It is designed as a practical applications course. It covers all aspects of primary and remedial cementing and is reinforced with a problem set of "real job" cementing problems.

What You Will Learn

- What oilwell cement is, how it is made, what it contains and how it works.
- The API classification system for cement.
- Non-API cements and their applications.
- Cement equipment and accessories, what they do and when and how to use them.
- The complete range of cementing operations.
- What cement additives do.
- How to design a cement slurry.
- How to design a cement job.
- How to maximize the success of a cement job.
- Which cementing squeeze procedures to use and how.
- How to successfully set a cement plug.
- How to evaluate a cement job.

What Will You Take Away

- A complete understanding of oilwell cementing.
- The confidence and knowledge necessary to plan and supervise the execution of a cement operation.
- A course manual, completed problem set and class notes covering and reinforcing cementing from A to Z.

Who Should Attend

Service personnel, technicians, engineers, foremen, and supervisors in drilling, completion, production and workover application who in any way deal with cementing operations.

Midland, Texas
Oklahoma City, OK

November 18 - 20, 2019
November 18 - 20, 2019

\$1500 USD
\$1500 USD

TUBING STABILITY AND BUCKLING

The Tubular Stability and Buckling Analysis short course provides explanations and examples for the aspects of oilfield tubular design related to tubular stability and buckling. Both uniform and non-uniform loading is covered. Combination loading considerations are envisioned and design procedures are outline and practiced.

What You Will Learn

- The basis for tubing instability and buckling.
- How to determine Axial Force.
- How to determine Stability Forces and their effect on tubular strings.
- How to determine Buckling Force.
- How to determine Effective Pipe Weight (We) and directional Effective Pipe Weight (Wa).
- An understanding of how Effective Pipe Weight affects the running of casing strings in Extended Reach (ERD) Wells (to include horizontal wells)
- How to determine Buckling Criteria: no Buckling; Sinusoidal Buckling; Helical Buckling.
- Dawson Paisley Buckling analysis.
- Juvkam-Wold Buckling Analysis for vertical wellbores, inclined straight wellbores (to include horizontal wellbores) and inclined curved wellbores.
- How to determine Buckling Pitch Length.
- How to determine Buckling Bending Moment.
- How to determine Buckling Bending Stress.
- How to determine Buckling Strain.
- How to determine Buckling Induced Shear.
- How to determine Buckling Wall Contact Force.
- How to determine change in length due to buckling – tubular movement.
- How to determine total buckled length.
- How to determine minimum helical buckled length.
- How to determine maximum helical buckled length.
- How to determine sinusoidal buckled length.
- How to determine how changing wellbore loading conditions can affect tubular stability and buckling.

What Will You Take Away

- Knowledge of how tubular stability and buckling affects tubular design and installation.
- An understanding of the practical applications of tubular stability and bucking analysis.
- A class manual, complete real-time information and data from actual tubular runs coupled with work problems based on actual field operations for reference.

Who Should Attend

Engineers and other technically orientated persons involved in tubular design, as well as practical supervisors who want to understand the basis for the design of the tubulars being run in their wells.

Midland, Texas
Oklahoma City, OK

October 21 – 23, 2019
October 21 – 23, 2019

\$1500 USD
\$1500 USD

PRENTICE TRAINING COMPANY'S WELL PLANNING I

Based on over 40 years of student evaluations, this short course is rated as the "Best in the Business". It is an applications short course covering the design of a well. As in any engineering design, the objective is to affect a "safe" design for minimum "expense". By attending this short course, you will learn how to choose the criteria for design, how to logically and efficiently perform the design sequence, and how to present the resulting well plan in a usable form.

This short course is presented in lecture form and reinforced first with practical example solutions and finally with a question - response discussion. A final project is performed in class to tie all aspects of the course together.

What You Will Learn

- The sources of abnormal formation pressures and how to quantify their magnitude.
- The models available for fracture gradient determination.
- The ethics of design.
- The criteria of design for any well.
- The actual selection of the casing points for a mechanically sound well program.
- The basics of casing design.
- The actual design of conductor, surface, intermediate, drilling liners, production liners, and the back casing strings.
- The basis for understanding and using API BULL 5C3, API Spec 5C5 and NACE MRO 175-90.

What Will You Take Away

- A working knowledge of how to quantify the formation pressure/fracture gradient system for a well you plan to drill.
- Full understanding of why casing needs to be set at certain points in a well as well as how to determine those points based on your specific criteria for design.
- Comprehension of the strengths of casing and how a specific area/well casing design is performed.

Who Should Attend

Certainly everyone who might be called upon to contribute any portion of a well program or prognosis should attend this course. Also, anyone in the operations, contract, or service industry who might have cause to follow parts of a well plan or prognosis will benefit from attending the course.

Midland, TX
Oklahoma City, OK

September 9 - 13, 2019
September 9 - 13, 2019

\$2,500 USD
\$2,500 USD

PRENTICE TRAINING COMPANY'S WELL PLANNING II

Well Planning II short course is designed to complete the well planning procedure. Information previously presented in Well Planning I is used as a basis for rig selection, cement program, mud program, logging program and AFE generation.

What You Will Learn

- To design the drillstring for the planned well.
- To describe the ideal rig specifications for the well being planned.
- To write a request to bid letter to drilling contractors specifying minimum rig requirements.
- To identify potential problems on a hole section basis.
- To write a general well program.
- To select the right drilling fluid for the well being planned, and generate a complete mud program.
- To design and specify a complete cementing program.
- To generate a logging program.
- To estimate all associated costs involved in drilling the planned well, and to generate an AFE (Authorization for Expenditure) for the well.

What Will You Take Away

- Comprehension of the sequence and procedure of well planning.
- A complete example problem, done by you, of a well plan.
- The foundation on which your future experience in well planning can successfully build.
- The confidence to take on and complete any well planning assignment.

Who Should Attend

Personnel involved in well planning on a day to day basis and those who must execute the plan after its development. It provides further training to those individuals who have previously completed Well Planning I.

Midland, TX
Oklahoma City, OK

September 16 - 20, 2019
September 16 - 20, 2019

\$2,500 USD
\$2,500 USD

WELL COMPLETION (WELL PLANNING III)

This short course picks up where Well Planning II stops. The student will be introduced to the concepts of basic well completion. This course will cover topics that range from understanding the basic reservoir concepts that are needed to design a successful completion to the design of the completed wellbore.

What You Will Learn

- The various types of completions.
- Basic reservoir mechanics to include drive mechanisms, damage issues and formation deliverability.
- The well completion interface between the wellbore and the reservoir to include perforation operations and damage control.
- The design of the well's tubulars and selection of the associated downhole equipment; completion cementing design and evaluation, to include zonal isolation; completion fluid selection; an introduction to the issues of sand control, acidizing, fracking and water control; and an understanding of the AFE process for budgeting the completion.

What Will You Take Away

Upon completing the Basic Well Completion course the student should have an understanding of the planning process, complete with plan preparation.

Who Should Attend

The short course is presented in lecture form and reinforced first with practical example solutions and then with question and response feedback. The class will participate in a class project designed to tie all of the topics discussed together so that the student better understands the concepts of actual well completion design.

Midland, TX
Oklahoma City, OK

September 23 - 27, 2019
September 23 - 27, 2019

\$2,500 USD
\$2,500 USD

2019 TRAINING SCHEDULE

Advanced Casing Design

Midland, Texas – October 7 – 11, 2019

Oklahoma City, OK - October 7 - 11, 2019

Advanced Well Control

Midland, Texas – October 14 - 18, 2019

Oklahoma City, OK - October 14 - 18, 2019

Drilling Practices

Midland, Texas – November 4 – 8, 2019

Oklahoma City, OK – November 4 - 8, 2019

Drilling Practices/Drilling Supervision

Midland, Texas – November 11 - 15, 2019

Oklahoma City, OK – November 11 - 15, 2019

Horizontal Drilling and Completion

Midland, Texas – December 9 - 13, 2019

Oklahoma City, OK – December 9 - 13, 2019

Primary and Remedial Cementing

Midland, Texas – November 18 - 20, 2019

Oklahoma City, OK – November 18 - 20, 2019

Tubing Stability and Buckling

Midland, Texas – October 21 - 23, 2019

Oklahoma City, OK – October 21 - 23, 2019

Well Planning I

Midland, Texas – September 9 - 13, 2019

Oklahoma City, OK – September 9 - 13, 2019

Well Planning II

Midland, Texas – September 16 - 20, 2019

Oklahoma City, OK – September 16 - 20, 2019

Well Completion

Midland, Texas – September 23 - 27, 2019

Oklahoma City, OK – September 23 - 27, 2019

How To Register

Website: www.NorthstarTrainingInc.com

Email: office@NorthstarTrainingInc.com

Telephone: (337) 269-1662

NORTHSTAR TRAINING

“Worldwide Petroleum Training”

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United States of America

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