A photograph of an oil rig at sunset. The rig is a tall, complex structure of metal scaffolding and pipes, with a dark vertical column in the center. The sky is filled with dramatic, dark clouds, and the sun is low on the horizon, casting a warm glow. In the foreground, there are rows of large, cylindrical pipes or tanks. An American flag is visible on the rig. The text "CAREERS IN THE OIL & NATURAL GAS INDUSTRY" is overlaid on the image in large, bold, colorful letters.

**CAREERS**  
**IN THE OIL**  
**& NATURAL GAS**  
**INDUSTRY**

**OERB.com**

# THE INDUSTRY IN OKLAHOMA



As Oklahoma's energy industry continues to grow, oil and natural gas producers are seeking qualified professionals. From accountants to engineers to floorhands, the industry is looking for people with all types of skills.

It is never too early to start thinking about your future career and what steps you need to take in order to start preparing. There are many classes you could be taking now that will put you a step ahead of the rest and help you gain insight on what you want to do once finished with high school.

Whether you plan to attend college, technical centers or professional trainings, this guide will help you determine what a job in the energy industry could look like for you. It will tell you what skills you need, what educational requirements may be necessary and what a potential work environment would be like.

As you start to investigate your options, remember that salary is only part of the entire package that a company can offer a potential employee. Many companies cover at least a portion of your health and dental insurance, and will contribute to your retirement savings. These are very important benefits to consider as you enter the work force.

The oil and natural gas industry welcomes young Oklahomans. The future is bright and there are many jobs available for innovative thinkers and hard workers. There are scholarships offered through various oil and natural gas companies along with internships and other opportunities to prepare you for your future. To learn more about opportunities in Oklahoma's oil and natural gas industry, visit [OERB.com](http://OERB.com).

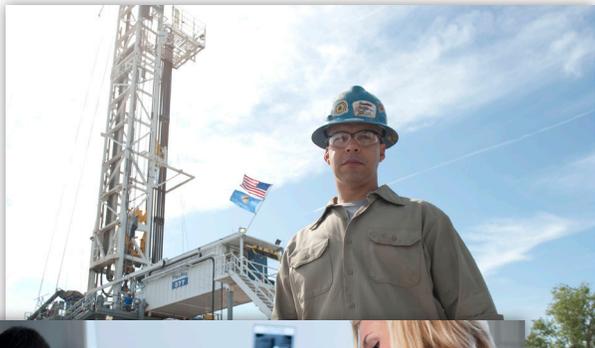


# THE FACTS

In Oklahoma, approximately

# \$32.6 billion

(27%) of total state household earning are supported by the energy sector.



# \$104,000

is the average salary of a worker in the oil and natural gas industry in Oklahoma, which is more than double the state average.

Oklahoma has more than

# 190,000

producing oil and natural gas wells, producing more than 157 million barrels the United States would otherwise have to import each year.

Number of jobs directly or indirectly supported by the oil and natural gas industry

# 1 in 6

(That's 398,798 jobs!)

More than a

# DOZEN

of the 100 largest crude oil and natural gas fields in America are located in Oklahoma. These massive collections of crude oil and natural gas reserves have yet to be fully extracted or produced.



# HOW DO I PREPARE FOR A CAREER IN OIL & NATURAL GAS?

## CONSIDER A STEM CAREER PATH

Science, technology, engineering and math (STEM) are all very important content areas for current and future jobs in the energy industry. The oil and natural gas industry provides a variety of jobs for people interested in problem solving, designing and building new projects, recording and reporting data, studying the earth and environment and learning the latest technology applications. In Oklahoma, jobs in the energy sector are available to people of all ages throughout the state.

- STEM jobs are projected to increase by 9 million by 2022, which equates to 26 million STEM jobs in the US (20% of all jobs)
- In Oklahoma, STEM jobs will produce \$14.5 billion in wages by 2020.
- STEM majors earn more than any other field.
- Oklahoma has the 2nd highest overall concentration of oil and natural gas activity in the nation and the U.S. Energy Information Administration (EIA) projects that Oklahoma's energy sector will continue to grow for many years to come.
- In the last 15 years, the number of oil and natural gas businesses have increased by 75%.

## DO YOUR RESEARCH BEFORE DECIDING WHICH JOB IS RIGHT FOR YOU

This guide is just one of the many resources available to help you learn more about different career paths.

U.S. Energy Information Administration | [eia.gov/about/careers](http://eia.gov/about/careers)

U.S. Department of Energy | [energy.gov](http://energy.gov)

National Science Foundation | [nsf.gov](http://nsf.gov)

Center for Energy Workforce Development | [cewd.org](http://cewd.org)

Learn to Become | [learnhowtobecome.org](http://learnhowtobecome.org)

Bureau of Labor Statistics | [bls.gov](http://bls.gov)

Energy 4 Me | [energy4me.org](http://energy4me.org)

American Petroleum Institute | [api.org/careers](http://api.org/careers)

Oklahoma Works | [oklahomaworks.gov](http://oklahomaworks.gov)

Oklahoma Career Guide | [okcareerguide.org](http://okcareerguide.org)

American Association of Petroleum Geologists | [aapg.org/career](http://aapg.org/career)

Society of Petroleum Engineers | [spe.org](http://spe.org)

# CAREERS THAT REQUIRE A DEGREE



Whether finding new oil fields or creating new equipment for oil and natural gas exploration and production, there are many opportunities within the oil and natural gas industry for individuals who are considering going to college. If you enjoy math, there are many careers for you. Math is essential in creating new developments within the oil and natural gas industry. Engineers are just some of the people that use math everyday to design methods for extracting oil and natural gas. While many professionals in the industry use math, they use science just as often. If you also enjoy science, you may want to look at a career in geoscience, like geology. Regardless of your skill set or interest, there is a job for you in this growing industry!

## ENGINEERING

If you enjoy both math and science, engineering may be a perfect fit for you. Engineers incorporate design, technology, math and science to develop new equipment, chemicals, pipelines and buildings to solve a problem. Ultimately, engineers in the oil and natural gas industry work to create more effective tools and processes to make the exploration and production of oil and natural gas easier, safer and more efficient.

### Chemical Engineer

A chemical engineer uses the principals of chemistry to solve problems and design new methods involving the **refining of oil and natural gas**. A chemical engineer would likely work at a refinery, developing new and more efficient refining processes. Chemical engineers are essential in creating new and improved synthetic fibers, plastics and chemicals that make our lives better. A key responsibility of a chemical engineer in the oil and natural gas industry is to develop cleaner and safer chemicals to help protect the environment and keep its workers safe.

**Classes to focus on in high school:** Math, chemistry and physics

**Education:** Bachelors degree in Chemical Engineering

**Work environment:** Mostly office, refinery or laboratory setting with **occasional trips into the field**

**Average starting salary:** \$60,000-\$80,000

### What does refining mean?

When oil is refined, it is taken to a refinery and heated to different temperatures and separated to create materials we use everyday such as: rubber, plastic, diesel, gasoline and tar.

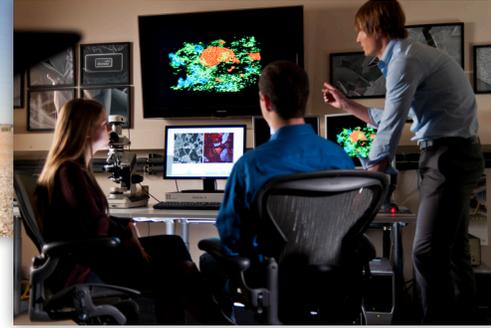
**Fact: Gasoline has to be heated to 158°F and diesel has to be heated to 450°F.**

### What does “working in the field” mean?

When someone in the oil and natural gas industry refers to “working in the field”, they simply mean working out of the office on a drilling rig, well site or refinery. Though a lot of work can be accomplished in the office, it’s important to visit a location in person when needed.

“Engineering is a fast-paced environment, but the thrill of the oil and natural gas industry makes it very exciting.”

-Steve Slawson  
Petroleum Engineer



## Drilling Engineer

A drilling engineer is in charge of supervising the drilling and completion process as well as estimating the costs and minimizing the risks associated with drilling wells. The responsibility of a drilling engineer is to drill the well as economically as possible while at the same time protecting the employees, the public and the environment. A critical part of the fast-paced drilling engineering position is to fully research well conditions and anticipate potential hazards or situations which could have an impact on drilling operations, safety or economics and have possible solutions for those situations. Many recent technological advances have been made in the drilling industry with a high emphasis on **directional drilling**. These advances require significant skills in computers, advanced math and science. Another responsibility for this fast paced engineering job is to design and implement new drilling procedures that make the process faster and save money.

**Classes to focus on in high school:** Math, science and physics

**Education:** Bachelors degree in Petroleum, Chemical or Mechanical Engineering

**Work environment:** Mostly field with some office. Drilling engineers typically spend a lot of time on drilling rigs. Depending on the company, this job may also require travel.

**Average starting salary:** \$70,000-\$90,000

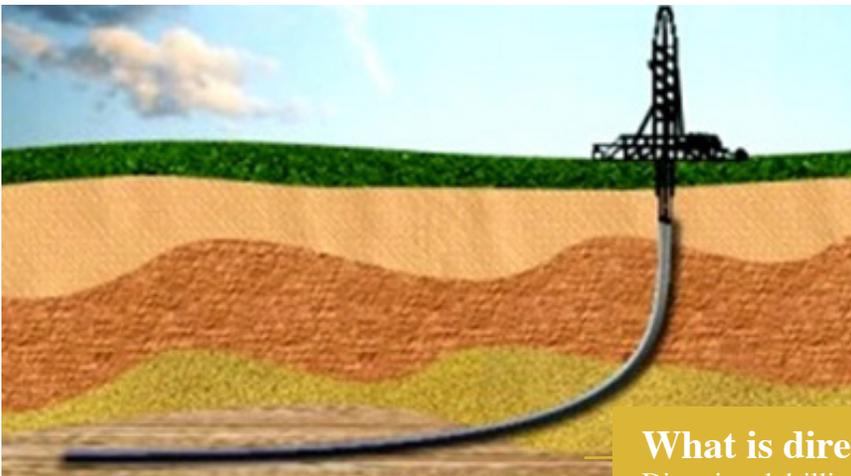


Photo credit: Amerex Co.

### What is directional drilling?

Directional drilling or horizontal drilling is the practice of drilling a well from the surface vertically to a certain depth and then angling or deviating the well bore and drilling horizontally to encounter more of the producing formation. More oil and natural gas can be recovered using this technological advancement while reducing the surface footprint.

## What is Viscosity?

Viscosity is the resistance to flow. Professionals in the oil and natural gas industry use viscosity to determine the quality of crude oil.

### Production Engineer

After drilling has been completed, a production engineer typically oversees the production and processing of oil and natural gas from the ground. Based on the rock formations, **viscosity of crude oil** and the depth of the hole drilled, the production engineer will decide the most effective method to recover the oil and natural gas. Throughout the production process, production engineers have the responsibility of deciding what equipment will be used to separate the oil, natural gas and water by analyzing the oil to natural gas composition and ratios. The longer a well site has been in operation, the less oil it produces, so production engineers are also responsible for creating new methods to enhance production in older wells and maintain their economic viability for as long as possible.

**Classes to focus on in high school:** All math and science classes including calculus, chemistry and physics

**Education:** Bachelors Degree in Petroleum Engineering

**Work environment:** Office and Field with some travel

**Average starting salary:** \$50,000-\$70,000

### Facilities Engineer

There are many jobs for a facilities engineer in the oil and natural gas industry. Facilities engineers usually work closely with production engineers to design equipment for oil and natural gas fields. He or she also designs pipeline systems to transport oil and natural gas from the field to separation facilities and refineries. Some facilities engineers design refineries where the oil and natural gas is processed before it is turned into different useful products. Most facilities engineers are involved in the mechanical aspect of the facility such as piping, equipment design and construction. Mechanical engineers who work in the oil and natural gas industry typically work as facilities engineers.

**Classes to focus on in high school:** Math, chemistry and physics

**Education:** Bachelors degree in Petroleum, Chemical or Mechanical Engineering

**Work environment:** Mostly office or laboratory setting with occasional travel or trips into the field

**Average starting salary:** \$50,000-\$65,000

### Reservoir Engineer

A reservoir engineer is responsible for estimating the amount of oil and natural gas that can be recovered from a certain area. A reservoir is an underground rock formation where oil and natural gas might be trapped. Reservoir engineers also study the pressure and fluid characteristics of the rock formation and then decide the best method to recover the oil and natural gas. These methods could include waterflood, CO2 flood and other enhanced oil recovery techniques. A reservoir engineer typically works closely with other engineers, geologists and geophysicists to effectively produce oil and natural gas.

**Classes to focus on in high school:** Math, science (specifically earth science) and physics

**Education:** Bachelors Degree in Petroleum Engineering

**Work environment:** Mostly office with occasional trips into the field

**Average starting salary:** \$90,000-\$110,000

# CAREERS THAT REQUIRE A DEGREE



## GEOLOGICAL SCIENCES

If you enjoy studying elements like rocks, minerals, water and soils than the geosciences are right for you. From analyzing seismic maps to see if a certain area might contain oil and natural gas to studying samples of rock layers, geosciences is a fast paced area with many different jobs offered.

### Geochemist

A geochemist studies the chemical elements in minerals, rocks, soils, water and petroleum. A geochemist in the oil and natural gas industry studies petroleum and how it moves and where it gets trapped underground. He or she uses data and methods to increase the effectiveness of finding oil and natural gas. Geochemists study rocks, sediment and oil and natural gas chemical makeup to better understand how these resources can be explored and produced. A geochemist may also work with an environmental/regulatory specialist and several different kinds of engineers to complete a job.

**Classes to focus on in high school:** Math, chemistry, geography, computer science and physics

**Education:** Bachelors degree in Chemistry with an emphasis on Earth Science

**Work environment:** Office, field and laboratory setting

**Average starting salary:** \$65,000-\$80,000

### Geophysicist

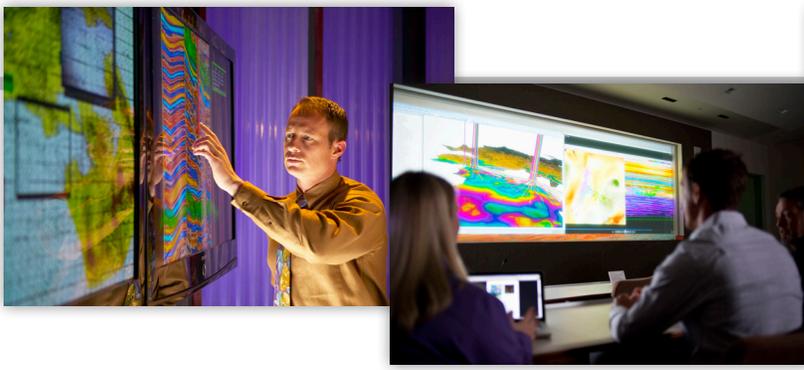
Geophysicists study the earth utilizing reflection seismography and other geophysical techniques such as electrical magnetics, infrared, heat flow and radioactivity. A geophysicist working in the oil and natural gas industry typically spends most of their time acquiring, processing and interpreting seismic data. They often work closely with geologists to study the earth's magnetic and gravitational forces and combined with the seismic information, they locate potential locations which could possibly hold oil and natural gas reserves. Many recent advances have been developed in seismic acquisition and processing, but these advances require a high degree of computer aptitude to be able to be successful in this career.

**Classes to focus on in high school:** Math, science, physics and all computer classes

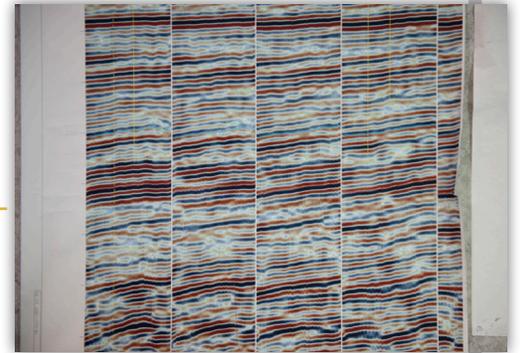
**Education:** Bachelors Degree in Geophysics and a Masters Degree in Geophysics is preferred

**Work environment:** Office and field

**Average starting salary:** \$85,000-\$95,000



This is a seismic profile used to help professionals determine if an area underground might contain oil and natural gas.



## Geologist

A petroleum geologist studies the Earth's history through rocks and how it relates to the discovery and production of oil and natural gas. Geologists use many tools such as computers and **seismic profiles** to determine whether a certain area might contain oil and natural gas. He or she also examines underground rock samples to decide whether the area should be explored further. Geologists usually work on teams with reservoir engineers, production engineers, geophysicists and landmen.

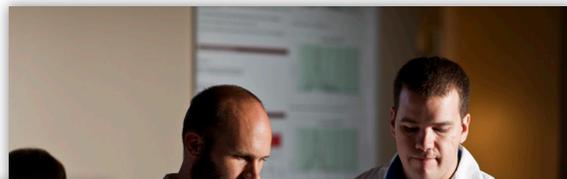
Geologists with a Bachelors degree are often employed as Field/Well-Site Geologists. This job is done almost entirely in the field and will require travel.

**Classes to focus on in high school:** All math and science courses including earth science, physics, chemistry, calculus and trigonometry

**Education:** Bachelors and Masters Degree in Geology

**Work environment:** Office with some field work and travel

**Average starting salary:** \$45,000-\$60,000 (Masters Degree: \$75,000-\$110,000)



“I often tell students that geologists are basically detectives. We leverage our education in science, math and engineering to assist us on our quest to discover new, economical oil and natural gas resources.”

-Tim Munson  
Geologist

# CAREERS THAT REQUIRE A DEGREE



## LAND & LEGAL

### LAND AND LEGAL

From negotiating land leases to ensuring the safety of everyone on and around oil field equipment, individuals in both land and legal are very important. Whether you enjoy science, math or writing, there are several very diverse careers in this area of the oil and natural gas industry.

#### Environmental Regulatory Specialist

The environmental regulatory specialist is a very important position within the oil and natural gas industry. He or she is responsible for reviewing and interpreting regulations concerning oil and natural gas drilling, production and refining and make recommendations on how to comply with the regulations. Many environmental/regulatory specialists have an environmental science education while others have a law degree, as this job deals directly with both science and law. They may also be delegated responsibilities such as creating eco-friendly procedures to dispose of waste and control emissions in emerging oil and natural gas areas.

**Classes to focus on in high school:** Physical science, chemistry, biology, english and math

**Education:** Bachelors Degree in Environmental Science, Engineering or a Juris Doctorate in Law

**Work environment:** Office and field, depending on the company

**Average starting salary:** \$50,000-\$60,000

#### Landman

After geologists and engineers determine oil and natural gas might be in a particular area, it is up to a landman to identify the individuals who own the surface and subsurface rights and gain permission from them to drill on their property as well as negotiate a reasonable price. They might spend a lot of time at a local court house trying to find land and mineral ownership records and to communicate and negotiate terms with the landowners to allow drilling on their property. Landmen draft management agreements and contracts as well as act as the main liaison between the oil and natural gas company and the land and mineral owner. Communication, research and negotiation skills are essential for this position.

**Classes to focus on in high school:** Speech and communication, geography and writing

**Education:** Bachelors Degree in Energy Management. Sometimes landmen will study law to further their careers as landmen.

**Work environment:** Office and Field. Depending on the company, travel may be required.

**Average starting salary:** \$40,000-\$60,000

**“As a dedicated safety person in the oil and gas industry, it’s my job, my responsibility, my obligation and my commitment to each employee to ensure that each and every person goes home at the end of the day safe and sound.”**

-Vince Tatum  
Safety Specialist

## Safety Specialist

The oil and natural gas industry views safety as a top priority. In addition to the numerous governmental safety regulations, every company has additional corporate regulations they implement to ensure the safety and well being of everyone who comes in contact with the production and processing of oil and natural gas. A safety specialist’s job is to ensure the company is complying with all applicable safety regulations. A safety specialist conducts classes and trainings to educate all employees on safety procedures based on each person’s job in the industry. A safety specialist must not only implement, verify and document compliance, but he or she must also create an environment that encourages and focuses on the attitude that safety is very important and must be considered at all times.

**Classes to focus on in high school:** Math and science, specifically algebra, chemistry and health and safety

**Education:** Bachelors Degree in Industrial Safety, Environmental Science or Engineering

**Work environment:** Mostly field with some office. This job requires travel.

**Average starting salary:** \$40,000-\$65,000

## Attorney

As an attorney in the oil and natural gas industry, you must know the state, federal and international regulations and laws that affect how oil and natural gas businesses operate. Attorneys are responsible for the preparation and execution of production agreements and contracts while also handling lawsuits that may occur. Attorneys working in oil and gas law must be very knowledgeable about contract and mineral laws as well as all the laws involving tax payments, royalties, sales and income taxes.

**Classes to focus on in high school:** English, speech, writing

**Education:** Bachelors degree with a Juris Doctorate in Law

**Work Environment:** Office

**Average starting salary:** \$80,000-\$90,000



# CAREERS THAT REQUIRE A DEGREE

## CROSS OVER CAREERS



## CROSS OVER CAREERS

The oil and natural gas industry needs business people just as much as it needs geologists and engineers to work effectively. Whether you enjoy crunching numbers or communicating directly with customers, there is a place for you in the oil and natural gas industry.

### Accountant

An oil and natural gas accountant handles the book keeping, auditing and other monetary issues for an energy company. An important responsibility for an accountant is to maintain in-depth knowledge regarding tax laws with regard to energy. Accountants can be a valuable asset as an analyst for many departments like Drilling, Production Operations or Marketing where they assist engineers with analysis needed to monitor costs. You will find most oil and natural gas accountants in the Revenue, Joint Interest Billing, Accounts Payable, Tax, Audit and Financial Reporting departments where there are many roles, each with its own focus.

**Classes to focus on in high school:** Speech and communication, accounting, business math, computer classes and knowledge in Microsoft Excel and Word are essential.

**Education:** Bachelors Degree in Accounting

**Work Environment:** Office

**Average starting salary:** \$45,000-\$55,000

### Communications Specialist

A communications specialist assists in all areas related to media for an oil and natural gas company. He or she is responsible for the creation and delivery of new information pertaining to the company including press releases and online/website content. Communications specialists often plan and coordinate media and marketing events to increase the public's awareness of their company. He or she is responsible for maintaining all media contacts, answering inquires from the media, and may also maintain the company's social media platforms. Public relations and advertising may also be incorporated into the job of a communication specialist.

**Classes to focus on in high school:** Public speaking, writing, english

**Education:** Bachelors Degree in Marketing, Public Relations or Communications

**Work Environment:** Office

**Average starting salary:** \$35,000-\$40,000



## Graphic Designer/Website Designer

Print and web graphics are very much needed within the oil and natural gas industry. A graphic designer has the responsibility of designing all graphic materials pertaining to an energy company including logos, posters, billboard advertisements and all promotional items. A graphic designer may also be the web designer depending on the company. A web designer works closely with graphic designers to design and maintain a company's website.

**Classes to focus on in high school:** All art and computer classes

**Education:** Bachelors Degree in Web Design or Graphic Design

**Work Environment:** Office

**Average starting salary:** \$40,000-\$50,000

## Human Relations Specialist

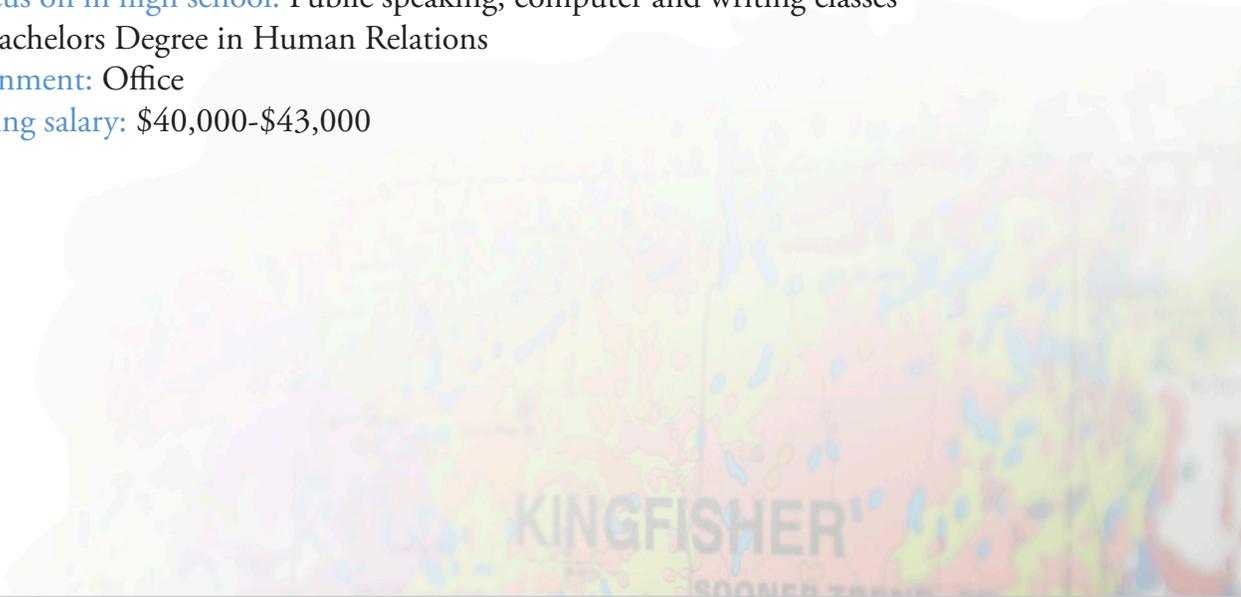
A human relations specialist is responsible for interviewing potential new employees, checking references and possibly extending job offers. He or she maintains up-to-date information regarding company employees. A human relations specialist must be very knowledgeable about company policies, benefits, wages, working conditions and promotional opportunities. They might also be part of a team who handles the company's payroll system.

**Classes to focus on in high school:** Public speaking, computer and writing classes

**Education:** Bachelors Degree in Human Relations

**Work Environment:** Office

**Average starting salary:** \$40,000-\$43,000



## Information Technology Specialist

An IT person is responsible for many important tasks regarding company computers and software. Most importantly, he or she designs, maintains and operates technology-related products for a company to manage large amounts of information. This job is very different from a web or graphic designer in that it uses coding to input the graphic designer's designs into a website, database or other digital medium. IT professionals may also design software specific to the oil and natural gas industry and provide technical support to employees.

**Classes to focus on in high school:** Computer classes and programming

**Education:** Bachelors Degree in Computer Science or Management Information Systems (MIS)

**Work Environment:** Office

**Average starting salary:** \$50,000-\$60,000

## Information Security Professional

This professional is tasked with maintaining and improving all information security within an energy company, which can include but is not limited to researching security software and hardware, overseeing monitoring of network traffic for malicious activity, reviewing current policies and updating as necessary and managing security resources within Information Technology. Information Security can often lead to digital forensic investigations, in which the professional will work with the Legal and HR Department in litigation surrounding land and royalty disputes. The Information Security Professional will need to be able to communicate with Information Technology Professionals as well as all other Business Personnel and Management in order to keep up a first-rate security culture.

**Classes to focus on in high school:** Computer classes and programming

**Education:** Bachelor's Degree in Cyber-Security or Technology/Certifications for Ethical Hacking and Computer Certified Examiner

**Work Environment:** Office

**Average Starting Salary:** \$60,000 - \$85,000

## Marketing Representative

An oil and natural gas marketer trades and markets oil and natural gas to merchants, end-use consumers and wholesalers. Marketers may be affiliates of producers, pipelines, local utilities or a separate unaffiliated business entity. Marketers, in whatever form, find buyers for their commodities, ensure secure supplies, and provide a pathway for these commodities to reach the end-user. Marketers monitor the swings in commodity prices on the national and international stock exchange and identify the best markets for their product on a day-to-day basis. Marketing can include all intermediate steps that a particular purchase requires; including negotiating contract terms, arranging transportation, storage and any other step required to facilitate the sale. Marketers work with many other departments including pipeline operators, accounting, tax and legal.

**Classes to focus on in high school:** Public speaking and writing

**Education:** Bachelors Degree in Marketing, Economics or Business

**Work Environment:** Office

**Average starting salary:** \$50,000-\$60,000

# CAREERS IN OILFIELD SERVICES

*(Technical Training or On-the-Job Training)*



Those who work in oilfield services play a key role in oil and natural gas exploration and production. Many oilfield service careers begin as entry-level field positions. Working in the oilfield can often times require intense physical labor and hands-on work. Field work may also require travel for long periods at a time. Most field careers include great benefits like health and dental insurance and great pay. In many oilfield service careers there will be opportunities to move up from an entry-level position. Employers will provide you with safety and on the job training.

## Floor Hand

The floor hand is an entry-level position on a drilling rig. A floor hand can also be called a roughneck or roustabout. He or she is responsible for moving large pipes and equipment using various vehicles. The floor hand helps others on the rig as needed with repairs, cleaning, painting, loading and unloading of trucks. The floor hand is responsible for keeping the site clean and hazardous free. This is an outdoor job that often requires travel.

**Suggested skills:** Knowledge of tools and strong communication skills

**Education:** High school diploma or equivalent

**Work environment:** Outdoor job with long hours, heavy lifting and travel required. This job typically requires two weeks working 12 hour shifts and then two weeks off.

**Average salary:** \$17.00-\$21.00 per hour working 12 hour shifts.

## Motor Hand

The motor hand is usually promoted from a floor hand. The motor hand is in charge of all the maintenance and operations of the rig's motors. This person must be good with mechanics as he or she is responsible for the moving equipment on the rig. The motor hand might assist the driller and derrick hand as needed.

**Suggested skills:** Knowledge of machinery and tools, good organizational skills and detail-oriented

**Education and qualifications:** High school diploma or equivalent, prior rig experience required

**Work environment:** Outdoor job with long hours, heavy lifting and travel required. This job typically requires 2 weeks working 12 hour shifts and then 2 weeks off.

**Average salary:** \$18.00-\$23.00 per hour working 12 hour shifts.

## Ever heard of a roughneck?

Roughneck is a unique term given to all rig personnel. Whether a floorhand or toolpusher, they sometimes all refer to themselves as roughnecks.



## **Derrick Hand**

A derrick hand is responsible for maintaining the fluid pumps and circulation systems and repairing the equipment on a drilling rig. Usually promoted from a motor hand, the derrick hand is responsible for monitoring and maintaining the drilling fluids and sometimes works on the rig's derrick, guiding pipe in and out of the elevators. This is an outdoor job with heavy lifting. The job of a derrick hand typically requires travel and long hours.

**Suggested skills:** Ability to work as part of a team, knowledge of machines and tools and strong communication skills

**Education and qualifications:** High school diploma or equivalent, prior rig experience required

**Work environment:** Outdoor job with long hours, heavy lifting and travel required. This job typically requires 2 weeks working 12 hour shifts and then 2 weeks off.

**Average starting salary:** \$23.00-\$28.00 per hour working 12 hour shifts.

## **Driller**

A driller is most likely promoted from the derrick hand position and is responsible for moving and setting up drilling rigs at new locations, then disassembling them once a job is complete. The driller is in charge of the day-to-day operations on the rig, conducts safety meetings and makes sure all procedures are being met. The driller keeps track of all daily rig activity, and organizes duties for personnel. The driller works directly with the rig manager.

**Suggested skills:** Strong communication and organizational skills, knowledge of safety procedures and regulations, ability to handle machinery and able to work on a team

**Education and qualifications:** High school diploma or equivalent, prior rig experience required

**Work environment:** Outdoor job with long hours, heavy lifting and travel required

**Average starting salary:** \$28.00-\$32.00 per hour

## Tool Pusher/Rig Manager

The tool pusher oversees every aspect of the rig. Their most important responsibility is the safety of all employees. The rig manager ensures all operations meet environmental and governmental regulations. Rig managers often work their way up by starting out as a roughneck, which allows them to become familiar with every aspect of the rig. The rig manager is also responsible for the set up and take down of rigs, handling personnel issues, management of day-to-day drilling activities and coordinating different drilling crews.

**Suggested skills:** Close attention to detail, knowledge of machinery, tools, safety procedures, regulations and very strong organizational skills.

**Education and qualifications:** High school diploma or equivalent, prior rig experience required. This is not an entry-level position. Most tool pushers have worked their way up with years of experience working on rigs.

**Work environment:** Long hours and travel required

**Average starting salary:** \$100,000-\$130,000 based on experience

## Engineering Technician

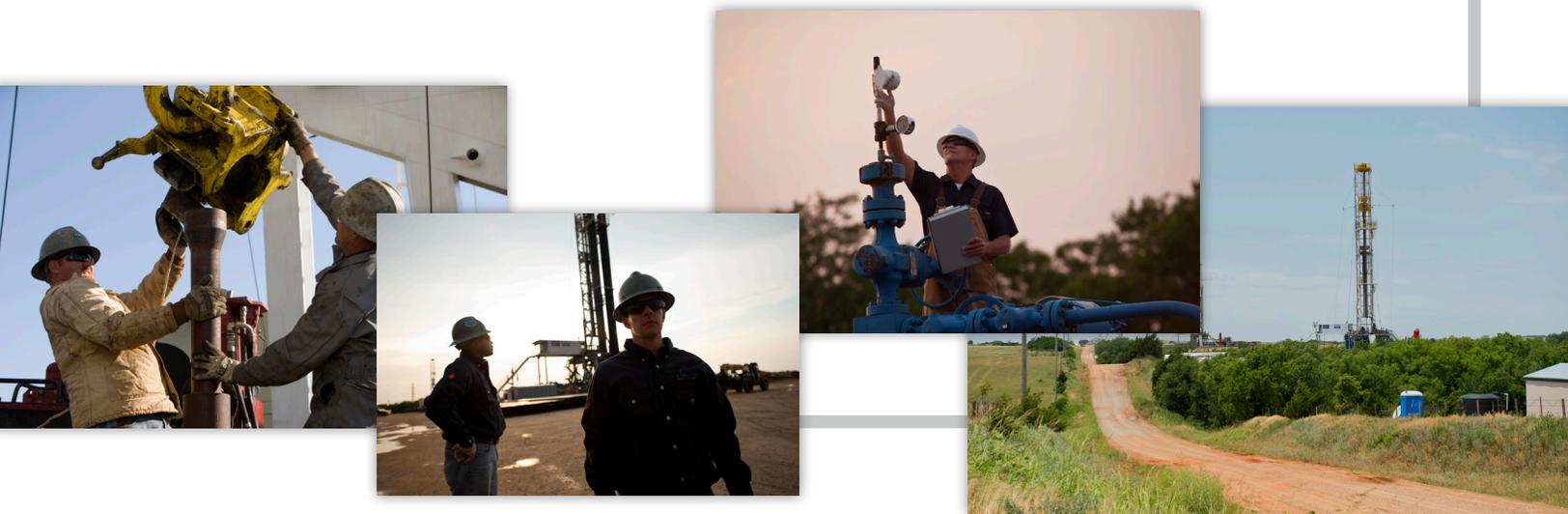
An engineering technician assists various types of engineers with technical tasks and data management. He or she might gather data, assist coworkers with technical reports, presentations, backup data based on research and database information. An engineering tech also uses research from various databases to create plots, displays and maps for drilling sites. Often an engineering tech will also prepare reports that are used to manage budgets.

**Suggested skills:** Strong communication and organizational skills, close attention to detail and strong math and computer skills.

**Education and qualifications:** High school diploma or equivalent, Engineering Technician certification suggested but not required. Visit [oerb.com/careers](http://oerb.com/careers) to learn more about the OERB PetroTech certification program.

**Work environment:** Office or laboratory setting with some work in the field, some travel may be required

**Average starting salary:** \$40,000- \$50,000



Many oilfield service employees work a slightly different schedule. Since most drilling rigs are only at a location for about 60 days, the rig will run 24 hours a day with crews working 12 hour shifts. Many times there will be housing on site for employees who are off shift. Since many oilfield service jobs require travel, many employees will work two straight weeks out in the field and then have two weeks off.



## **Geologic Technician**

A geology technician assists with the management and distribution of technical data including: database management, preparation of presentations, filing documents, software upgrades/management, geo-referencing images and assisting geological staff. He or she might also send updates on current rig activity, collect survey data, assist petroleum technologists and engineers in creating maps of petroleum deposits and develop diagrams of drilling sites.

**Suggested skills:** Strong communication, computer/software, math and science skills

**Education and qualifications:** High school diploma or equivalent, Geological Technician certification suggested but not required. Visit [oerb.com/careers](http://oerb.com/careers) to learn more about the OERB PetroTech certification program.

**Work environment:** Office or laboratory setting with some work in the field, some travel may be required

**Average starting salary:** \$40,000-\$50,000

## **Laboratory Technician**

A laboratory technician aides geochemists in research and data interpretation to locate oil and natural gas. A lab technician may also assist in analyzing drilling mud and cuttings. Though most lab technicians assist scientists, some lab technicians work under chemical engineers, assisting them in creating new solutions and chemicals used in drilling.

**Suggested skills:** Strong in science and math, close attention to detail and strong communication skills.

**Education:** High school diploma or equivalent, Laboratory Technician certification suggested but not required.

**Work environment:** Office or laboratory setting with some travel in the field.

**Average starting salary:** \$40,000-\$50,000



## Land Technician

Land technicians assist landmen with preparation of documents needed to initiate and maintain a drilling program. This includes things such as operating agreements, documents called “farmouts”, letter agreements, purchase and sales agreements, and other related land contracts. Duties may vary depending upon the energy company, but often land techs also monitor leasing activity, payment of drafts, process new leases and more. A land tech may also be involved in gathering research on specific land lots or property prior to a lease agreement.

**Suggested skills:** Strong communication skills, knowledge of lease agreements, contracts and good with computers.

**Education:** High school diploma or equivalent, Petroleum Landman certification suggested but not required. Visit [oerb.com/careers](http://oerb.com/careers) to learn more about the OERB PetroTech certification program.

**Work environment:** Mostly office with some travel in the field. Some positions require more travel based on the company and exact job requirements.

**Average starting salary:** \$40,000-\$50,000

## Lease Operator

A lease operator typically works for the oil company and attends to producing wells. They perform operational checks on wells and ensure all equipment is working properly and all mechanics are running as efficiently and safely as possible. The lease operator conducts production tests and monitors the well’s progress. They are in charge of general lease site upkeep and maintain regulatory, environmental and safety compliance.

**Suggested skills:** Knowledge of machinery and tools, good organizational skills and close attention to detail.

**Education and qualifications:** High school diploma or equivalent, prior rig experience recommended

**Work environment:** Long hours and travel required

**Average starting salary:** \$45,000-\$70,000 per year working 12 hour shifts.



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