



CAREERS IN ENERGY

ENGINEERING

AVERAGE SALARY: \$107,020 - \$124,388

TYPE OF WORK: Petroleum or Environmental Engineering

OTHER POSSIBLE JOB TITLES: Reservoir Engineer, Drilling Engineer, Environmental Analyst, Hazardous Substances Engineer

MIN. EDUCATION LEVEL NEEDED: Bachelor's Degree

GOOD IF YOU'RE INTERESTED IN/ENJOY: Finding ways to improve processes; coming up with ideas for new things, protecting the environment, public health, government relations

DESCRIPTION: Petroleum Engineers devise methods to improve oil and gas extraction and production and determine the need for new or modified tool designs. Environmental Engineers research, design, and implement engineering plans to protect the environment, workers, and surrounding communities.

CORPORATE

AVERAGE SALARY: \$90,020 - \$109,110

TYPE OF WORK: Information Technology (IT)

OTHER POSSIBLE JOB TITLES: Software Engineer, Business Analyst, Systems Administrator, Data Architect, Security Specialist

MIN. EDUCATION LEVEL NEEDED: Bachelor's Degree

GOOD IF YOU'RE INTERESTED IN/ENJOY: Computers, technology, meticulously tagging all your Facebook photos

DESCRIPTION: Working in IT, you can design and build software systems that make companies work, build and create databases for companies to store their information, or protect companies from ongoing outside digital threats.

TECHNICIANS

AVERAGE SALARY: \$67,410

TYPE OF WORK: Electronics Engineering Technician

OTHER POSSIBLE JOB TITLES: Electronics Technician, Electronics Test Technician, Failure Analysis Technician (FA Technician)

MIN. EDUCATION LEVEL NEEDED: Associate's Degree

GOOD IF YOU'RE INTERESTED IN/ENJOY: Electronics, technology, electrical circuits, constructing things based on visual instructions, troubleshooting problems

DESCRIPTION: Electronics Engineering Technicians build, test, troubleshoot and modify electronic components, equipment, and systems used in oil and gas extraction and production.

EXTRACTION

AVERAGE SALARY: \$59,570

TYPE OF WORK: Earth Drillers

OTHER POSSIBLE JOB TITLES: Driller, Blaster, Blasting Production Technician, Drill Operator

MIN. EDUCATION LEVEL NEEDED: High School Diploma or equivalent

GOOD IF YOU'RE INTERESTED IN/ENJOY: Geology, drilling

DESCRIPTION: Earth Drillers use a variety of drills to tap into the earth, remove core samples and facilitate the drilling of oil wells.



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Changing lives.*

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ENERGY
INDEPENDENCE

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DID YOU KNOW?

At **\$84,451**, the average wage of someone working in the oil and gas industry is about **40% more** than other private industries in California.

LEARN ABOUT THE EDUCATION AND CAREER PATH OF THREE ENERGY INDUSTRY EMPLOYEES

MICHAEL WILLIAMS

MECHANICAL INTEGRITY ENGINEERING LEAD WITH CALIFORNIA RESOURCES CORPORATION



BACKGROUND

- Native Angelino; didn't know an engineer until he attended college
- Did well in math and physics in high school; counselor encouraged him to study engineering

EDUCATION

- B.S. Mechanical Engineering, UC Irvine
- M.S. Materials Science, UC Irvine

ORGANIZATIONS

- Alpha Phi Alpha Fraternity, Inc.; National Society of Black Engineers; Center for Opportunities and Diversity in Engineering
- These organizations connected him to his first internship at ConocoPhillips

CAREER

- Mechanical Integrity Engineering Lead, California Resources Corporation

PASSION

- Teaching; taught engineering at Cypress College from 2009-2013

ESMERALDA MACEDO

PROCESS AND WATER QUALITY ENGINEER WITH CALIFORNIA RESOURCES CORPORATION



BACKGROUND

- Mexican-born, California raised, Latina Engineer
- Inspired to pursue STEM by her high school chemistry teacher

EDUCATION

- B.S. Chemical Engineering, Cal Poly Pomona
- M.S. Chemical Engineering, CSU Long Beach

ORGANIZATIONS

- Maximizing Engineering Potential program, Society of Women Engineers, Society of Hispanic Professional Engineers

CAREER

- Process and Water Quality Engineer, California Resources Corporation

PASSION

- Mentoring and passing on knowledge to others
- "You don't need to be a genius to become an engineer, everything can be learned."

ESTUARDO IRIARTE

OPERATIONS ENGINEER WITH CALIFORNIA RESOURCES CORPORATION



BACKGROUND

- Born in Guatemala and raised in South Central Los Angeles by a single mother
- Fascinated by science; discovered engineering in his junior high's MESA program

EDUCATION

- Started his collegiate career at El Camino College and transferred to CSU Long Beach
- M.S. Mechanical Engineering, CSU Long Beach

ORGANIZATIONS

- After serving in the Navy he participated in a mentoring program for returning Veterans
- Maximizing Engineering Potential, MESA, and Society of Hispanic Professional Engineers
- Participated in internship programs for multiple companies

CAREER

- Served in the U.S. Navy as an aviation machinist
- Operations Engineer, California Resources Corporation

PASSION

- Spending time with his wife, three sons and three dogs