

Fundamentals of Energy, Oil and Gas in NZ

one day training course

This full one day course is a must attend for all new entrants to the New Zealand Energy, Oil and Gas industry. It covers essential aspects of how the industry operates in New Zealand and provides delegates with a fundamental understanding of today's environment. The course includes an introduction to New Zealand's producing fields, economics, regulatory and legislative requirements, public and social policy and community engagement. This is a discussion-based interactive course that will keep you engaged throughout the day.

Our Trainer Mike Oakes

Vast experience in Upstream Oil and Gas Held various Senior Management roles in E&P Companies

Mike has worked in the oil and gas industry for 40 years in Canada, Brunei, Australia and New Zealand. Commencing his career as a field technician for Shell on the Maui field in New Zealand, he has advanced to hold various operational, technical, safety and Management positions within E&P companies. His vast experience and technical background has resulted in him overseeing design,



commissioning and startup of four Oil and Gas production facilities, in New Zealand and abroad. During the three years in Canada Mike was involved with acquisitions and mergers, and developing strategies for development of marginal oil and gas plays. Following Canada, Mike moved to Brunei where he formed his own consultancy company working for French E&P Giant Total. He was responsible for Commissioning, Production, Engineering and Safety for the Maharaja Offshore and Onshore facilities. After completing six years in Brunei, Mike returned to New Zealand to take up a role with Origin Energy as Operations Manager for the Kupe Project, where he oversaw the design, development and the commissioning of Origin's new asset. He later assumed the role of NZ Asset Manager for Origins

production facilities in New Zealand and then the new role of overseeing the Quality Assurance across existing and new operational plants in New Zealand and Australia. Mike was elected onto the board of Energy Skills New Zealand in 2014 and remains as a director.

Mike joined New Zealand Energy Corp in August 2012 and held the position of General Manager Operations, where he led a dynamic team through the acquisition of the TWN facilities previously owned by Origin Energy, and provided leadership for the ongoing operations.

Mike retired in Mar 2017 and after a break, is now back consulting part time to a Major company in Taranaki as they work through a major re-structure.

Key Areas Covered:

- The Importance of Energy, Oil and Gas
- The New Zealand industry
- Upstream, Midstream and Downstream Concepts
- The Energy, oil and gas System
- Drilling and interpreting a Well
- Developing and Producing Fields
- Unconventional
- Health and Safety
- Petroleum Economics
- New Zealand's Regulatory and Fiscal regime
- Public and Social Policy Issues
- Community and social Engagement

Date: Wednesday 3 July 2019
9.00am - 4.00pm

Venue: One Burgess Hill Conference Facility, New Plymouth.

Delegate Profile: Anyone wanting to learn more about how the industry operates in NZ - Any new entrants to the industry.

Content:

The Importance of Oil and Gas

- Impacts - pros and cons of petroleum development
- Oil and Gas within the primary energy supply mix
- Who's got it, who uses it
- What is oil and gas
- History and global context

The Petroleum Industry

- The Value Chain
- Scale of E&P companies
- Upstream, midstream, downstream
- Service Sector
- Industry Bodies
- Contribution to New Zealand economy
- New Zealand activity

The Petroleum System

- Basins, basin formation, plate tectonics
- Components - source, seal, reservoir, trap, migration
- Risking

New Zealand's Policy and Legislative framework

- Acquiring acreage and access
- New Zealand's Policy and Legislative framework
- Different permit types
- Blocks releases and consenting
- The Joint Venture

Exploration

- Methods and Objectives
- Geophysical methods - Gravimetry, Magnetometry, Seismic
- Prospect Generation
- Estimating Hydrocarbon In Place volumes
- Risking reserves, reducing uncertainty
- Valuing a prospect

Drilling the Well

- Rig types - onshore and offshore
- HSE regulation
- The rig components and drilling functions
- Well integrity
- Casing and cementing
- Mud system
- Directional drilling
- Exploration vs Appraisal drilling

Interpreting, testing, and completing the well

- Logging methods
- Wireline units
- Testing the well
- Well completions
- Suspending or abandoning the well

Reservoir Engineering

- Fluid Behaviour
- Drive Mechanisms
- Artificial Lift Systems
- Enhanced Recovery Systems
- Reserves vs Resources - the classification system
- Reservoir modelling and simulation

Developing and Producing the Field

- Defining requirements and specifications
- Surface facilities
- Basic processing
- Land based facilities
- Offshore facilities
- Onshore/ Offshore development concepts
- Managing HSE - the safety case
- Managing the decline

Downstream Concepts

- LNG
- GTG
- Refining
- GTM

Petroleum Economics

- Commercial risks, uncertainties and opportunities
- The project lifecycle
- Stand alone Project Economics vs Portfolio Economics vs Other objectives

Unconventional Oil and Gas

- Coal Seam Gas
- Shale gas and shale oil
- Underground coal gasification
- Methane Hydrates
- Gas storage

Public Policy Issues

- Risk analysis
- Risk mitigation and residual risk
- Hydraulic fracturing
- Carbon sequestration
- Offshore exploration



Course Fees:

EnergySkills Director Company Staff:
\$690.00 per person

Non-members: \$850.00 per person

Four or more staff: \$750.00 per person

To register:

**Email: sheree.long@energyskills.co.nz or
Telephone: 06 757 5995**

**On registration you will be invoiced directly
All fees are in NZD and exclusive of gst**

***(Private Company course delivery available,
please enquire)***