



EXPLORATION AND PRODUCTION (E&P) FOR THE INSURANCE MARKET: UNDERSTANDING RISK IN E&P DRILLING



Marsh's Energy Practice provides specialist energy risk and insurance training at beginner, intermediate, and advanced levels, at various locations around the world throughout the year. This year Marsh's Energy Practice will work jointly with TRAC AGR – a leading provider of training to the oil and gas industry – to run the first exploration and production fundamentals and insurance training course.

THE COURSE

This course provides a high level, end-to-end overview of the E&P business, from how we find hydrocarbons, to how we produce them and get them to market. The course is tailored to the interests of the insurance industry and therefore provides a focus on procedures and regulations unique to offshore petroleum exploration, drilling, and production. Definitions and quantifications of E&P risks are examined to support a common understanding of risk between the worlds of E&P and insurance. The course includes a visit to Weatherford's rig facility in Aberdeen (pending activities on the day) and to North Sea reservoir analogue rock outcrops on the Moray Firth.

SPEAKERS

The course will be led by drilling engineering and geoscience professionals who are active consultants in the field of E&P. Delegates will also be given the opportunity to network with energy specialists during the course's social events.

SUITABILITY

This specialist course is designed for those who wish to develop an insight into upstream E&P, particularly in the field of risk management. This is likely to include risk engineers, risk managers, insurance advisors, underwriters, treasurers, and accountants. Awareness of the energy industry is beneficial but no technical E&P knowledge is required for the course.

STRUCTURE AND ASSESSMENT

The course is delivered through formal presentations, case-based working, and discussion. Delegates will be expected to actively participate in the wrap-up sessions and team exercises.



COURSE DATES AND LOCATION

| LOCATION | Aberdeen, Scotland |
|---------------------------|------------------------------|
| DURATION | Four days |
| FEE | £3,195 plus VAT per delegate |
| DATE | April 18-21, 2016 |
| NUMBER OF PARTICIPANTS | Maximum 25 – minimum 15 |

INCLUDED

The price of the course includes:

- Transport from Aberdeen Airport to the Hotel.*
- A visit to Weatherford's rig facility in Aberdeen.
- Bed and breakfast, evening meals, and light refreshments (alcoholic beverages are borne by the delegate).
- Lunch for each of the four days, including packed lunches for the field-based segments.
- Two evening social events.
- Transport back to Aberdeen Airport on the final day.
- All course material, including the reference text Hydrocarbon Exploration & Production.

*Travel costs to Aberdeen Airport are borne by the delegate.

LEARNING OBJECTIVES

DAY ONE

DRILLING RIG TOUR

- Identify what basic drilling equipment looks like.
- Understand the health, safety, and environment (HSE) aspects of drilling rigs.

DAY TWO

FUNDAMENTALS - THE SUBSURFACE

- Identify what hydrocarbon reservoirs look like.
- Explain how oil and gas flows to a well and what drives well productivity.
- Learn how to work out the hydrocarbon resource in a field the 'size of the prize'.
- Understand why there is inherent uncertainty in all subsurface predictions.

FUNDAMENTALS - HOW TO DRILL A WELL

- Understand the well design, planning, and construction process.
- Identify the equipment required to construct a well.
- Learn about the hazards associated with drilling.
- Understand how those hazards are mitigated.
- Identify and explain the origin of both HSE risk and risk to project success and cost.



DAY THREE

FUNDAMENTALS - CONSEQUENCE MANAGEMENT IN DRILLING

- Understand what is involved in 'consequence management'.
- Explore and understand the industry standards pertinent to the drilling process.
- Understand the reason for the current focus on well integrity.
- Explore how and why the management of drilling varies between companies and countries.

FUNDAMENTALS - THE SURFACE

- Understand the engineering process of getting hydrocarbons from the well head to the market.
- Learn what happens in a production facility.
- Identify and explain the difference between onshore and offshore production, and the implications on cost and HSE or project risk.

APPLICATION - RISK AND UNCERTAINTY IN E&P

- Establish and understand the difference between 'risk' and 'uncertainty' in the context of E&P.
- Identify the common behavioural heuristics that impact on decision-making in E&P particularly our ability to make estimates and to quantify probability.
- Understand how and why attitudes to risk vary between different E&P disciplines (geoscience, petroleum engineering, drilling, surface engineering) and between different E&P companies (small companies versus majors; IOCs versus NOCs).

DAY FOUR

APPLICATION - TIME, MONEY, AND THE MARKET

- Understand the fundamentals of the E&P lifecycle petroleum economics.
- Explain the time value of money and how this impacts E&P financing.
- Explain how drilling costs are worked out.
- Account for the uncertainty in those estimates.

APPLICATION - RISK IN PRACTICE

- Quality control costing for a proposed well.
- Quantify the uncertainty in that estimate.
- Explore and identify the risks associated with a well.
- Update this view as new information becomes available during the drilling of the well.



REGISTRATION FORM

Please complete this form and post, email or fax it to:

Carol-Joan Smart, Training Officer Marsh Ltd, Energy Practice Tower Place London, EC3R 5BU England

Email: carol-joan.smart@marsh.com Fax: +44 (0)20 7929 2705

I would like to register to attend the E&P Course for the Insurance Market (Intermediate) held on April 18-21, 2016 in Aberdeen, my details are as follows:

| Delegate Name: |
|---------------------|
| Company: |
| Job Title: |
| Address: |
| |
| Post Code/Zip Code: |
| Country: |
| Tel: |
| Email: |

Method of payment:

Cheque payable to Marsh Ltd. For companies requiring invoices, please give billing address and to whom such invoices should be sent, if different from above.

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SELF ASSESSMENT FORM

This form is designed to help you assess your current skills to see if they match the level of training offered by each course.

1 = Very competent

- 2 = Competent
- 3 = Would like more training
- 4 = No knowledge of this subject

Using the ratings above please rate your knowledge of:

| Knowledge of the energy industry |
|----------------------------------|
| Basic principles of insurance |
| Energy insurance principles |
| Risk management principles |
| Command of English Language* |

Do you hold the CII Certificate of Insurance? YES NO

*All courses are conducted in English.

We will contact you if we believe the course you would like to attend is not suitable for your knowledge.

Please read the conditions and cancellation policy prior to submitting this form.

Conditions: Provisional bookings are accepted, but must be confirmed within 14 days by completion of a course registration form. Shortly after confirmation of the booking an invoice will be sent to you. Payment is required no later than eight weeks before the course starts, or immediately for bookings made within the eight weeks of the beginning of the course. The course cost is exclusive of VAT. We reserve the right to change details of the programme and speakers if the need arises. Whilst every effort has been made to verify the accuracy of the information presented at the course, neither Marsh Ltd nor its affiliates can accept any responsibility or liability for reliance by any person on this information.

Cancellations: Bookings may be cancelled at any time up to two weeks before the start of the course and a refund will be made, less a 20 percent administration fee. No refund will be made for cancellations made after that date, although a substitute delegate will be accepted at any time in place of the person booked. If Marsh has to cancel the event for any reason, a full refund will be made. Marsh Ltd accepts no liability if this event does not take place for whatever reason.

In the United Kingdom, Marsh Ltd is authorised and regulated by the Financial Conduct Authority.