GeoNeurale

announces:

The Fundamentals of Upstream Petroleum Economics and Risk Analysis

at the

GeoNeurale training center

Munich

30 March ➔ 3 April 2009 - Munich, Germany

The Fundamentals of Upstream Petroleum Economics and Risk Analysis

MUNICH

30 March – 03 April 2009

INSTRUCTORS : Tim James - Fugro Robertson Limited Beardall, Parry & Associates Department

AUDIENCE : Managers, Engineers, Explorationists, Supervisors, Personnel in a career development who need to improve the theory of economic analysis in the petroleum exploration and production

COURSE FEES : Euro 2950 + VAT (MwSt: 19%)* * INFORMATIONS FOR VAT TAX REFUND

REGISTRATION DEADLINE : 25 February 2009

ONLINE REGISTRATION : www.GeoNeurale.com

The Fundamentals of Upstream Petroleum Economics and Risk Analysis

30 March – 03 April 2009

Munich

This five-day course describes the fundamentals of international oil and gas asset valuation and economic risk assessment and is designed to enhance the contribution that delegates make to the investment decision mechanisms and processes within industry. It describes the theories and practices of discounted cash flow applied in the global oil industry to exploration prospects, field developments and producing assets including descriptions of the different international petroleum fiscal terms, combined with risk assessment techniques up to Monte Carlo analysis.

The course contains real world case studies to demonstrate the full suite of evaluation techniques plus a comprehensive workshop in which delegates build Microsoft® Excel-based economic models and make investment decisions.

The course is designed for all those seeking an understanding of the economic valuation and risk assessment processes and techniques within the global oil and gas industry and is of particular use to those wishing to gain a practical working knowledge of the subject. Throughout the course delegates will undertake worked examples in relation to real world economic modeling algorithms, problems and issues. The course is suitable for delegates of all technical and commercial disciplines.

COURSE PROGRAM

Day 1 – Morning

Introduction & Cash-flow Analysis

- Objectives of undertaking an economic analysis
- What makes the oil and gas industry different?
- Cash-flow equations
- Real vs. Nominal cash-flows

Discounted Cash Flow

- The time value of money, compounding & discounting
- Discount rate, discount factor & discount method
- The cost of capital and the hurdle discount rate

Day 1 – Afternoon

Capital Budgeting Techniques

- Undiscounted methods (PIR, Payback, Exposure)
- Discounted methods (e.g. NPV, IRR, DPIR)
- Valuing an asset, making development & investment decision

Oil and Gas Asset Net Cash Flow – Project Components

- Reserves, production and sales profiles
- Tariff income
- Capital, operating, transportation & abandonment Costs
- Working interests, carried interests, ORR's & NPI's

Day 2 – Morning

Oil and Gas Asset Net Cash Flow – Economic Components

- Inflation, cost escalation
- Oil and gas prices
- Interest rates & exchange rates

Day 2 – Afternoon

Oil and Gas Asset Net Cash Flow – Taxation and Government Take Components

- Production sharing contracts
- Royalty & taxation systems
- Risk service & other systems
- Calculating royalties, taxes, cost recovery and profit oil splits

Day 3 – Morning

Oil and Gas Asset Net Cash Flow Determination

- Oil company (investor) net cash flow
- State oil company net cash flow
- Government net cash flow

Day 3 – Afternoon

Upstream Economics Workshop: The Taxation Case Study

- Introduction to the European gas field, taxation based case study
- Establishing the economic model framework, structure & calculation flows
- Understanding the taxation structure & algorithms
- Determining the field, economic & fiscal data and building the input decks
- Step by step construction and audit of the taxation model
- Running the economic cases & evaluating the results
- Summary and closing remarks

Day 4 – Morning and Afternoon

Upstream Economics Workshop: The PSC Case Study

- Introduction to the West African oil discovery, PSC based case study
- Establishing the economic model framework, structure & calculation flows
- Understanding the PSC fiscal structure & algorithms
- Determining the field, economic & fiscal data and building the input decks
- Step by step construction and audit of the PSC model
- Running the economic cases & evaluating the results
- Summary and closing remarks

Day 5 – Morning

Advanced Petroleum Economic Techniques

- Aggregation and consolidation analysis
- Ring Fences
- Incremental analysis

Petroleum Economic Models

- Introduction
- Self-build models
- Tailor made models
- Third party models

Discrete Economic Solutions

- Sensitivity analysis
- Spider & Tornado diagrams
- Minimum economic reserve & break-even oil price

Probabilistic Economic Solutions

- Introduction to probability analysis
- Expected value (EMV)
- Farm-In and Farm-Out analysis
- Exploration prospect portfolio management
- Decision tree analysis
- Exploration prospect analysis example

Day 5 – Afternoon

Continuous Economic Solutions

- Risk versus uncertainty
- Histograms and relative frequency distributions
- Predictive probability distributions
- Central Limit theory
- Monte Carlo simulation

Exploration Prospect Valuation Workshop

- Calculation of the prospect minimum economic reserve
- Establishment of the prospect commercial reserves distribution
- Construction of the Risk Tree of all outcomes
- Determination of the geological and commercial chance of success factors
- Calculation of the success case expected value and the prospect EMV
- Drill or no-drill decision?

Summary and Closing Remarks

Notes:

- A comprehensive course manual with model answers to the workshop questions will be provided.
- A working knowledge of Microsoft® Excel is required.
- Delegates will require a PC or laptop with Excel loaded to undertake the workshops.

Course Director:

Tim James:

Tim James joined Beardall, Parry & Associates, a UK based petroleum reservoir consultancy, in January 2004 and is now a Principal Economist in the BP&A Department of FRL. During this time he has undertaken a range of economic evaluations across the Middle East, North and West Africa, Pakistan, India and NW Europe. He has also provided upstream economics and risk analysis training courses in the UK and Norway.

Tim trained and qualified as a Chartered Management Accountant and moved into the oil and gas industry with Premier Oil plc in 1995 working in both Pakistan and London. For the two years to the end of 2003 he worked as their UK Commercial Analyst in an analytical and management role covering a wide range of commercial activities including field valuations for development, acquisitions and disposals, asset management, gas contract management and the administration of the Sales and Marketing function. Prior to that, he was UK Finance Manager with responsibilities for the maintenance of economic models, management of budgets and half and full year financial reporting. Tim spent time in Premier's Islamabad office where experience was gained in both financial and project accounting.

Registration Details

•Course fee: Euro 2950 + VAT (MwSt: 19%)* * INFORMATIONS FOR VAT TAX REFUND

•Registration deadline : 25 February 2009

Payment and Registration

The course fee should be paid by bank transfer to the bank account given below. **Please make sure that we receive the full amount of Euro 2950 + VAT (MwSt: 19%) before the 25 February 2009**.

To register to the course fill in the registration form and fax or mail it along with the confirmation of your bank transfer to:

GeoNeurale Am Nymphenbad 8

81245 Munich

T +49 (0) 89 8969 1118

T +49 (0) 176 6666 5403

F +49 89 8969 1117

ONLINE REGISTRATION: www.GeoNeurale.com

Bank Information: Genossenschaftsbank EG Muenchen

Bank Account N. 519618 BIC – Code : GENODEF 1M07

BLZ 701 694 64 IBAN : DE19 7016 9464 0000 5196 18

Please clearly indicate your name and the purpose: "THE FUNDAMENTALS OF UPSTREAM PETROLEUM ECONOMICS AND RISK ANALYSIS

*VAT (MwSt: 19%) . The added value tax (VAT) can be fully refunded to your company from the German Finance Ministry provided that the company has an International Tax ID Number. This can only apply for companies outside Germany.

•PLEASE READ or DOWNLOAD the INFORMATIONS : INFORMATIONS FOR VAT TAX REFUND

Course Provisions

Tuition fees are due and payable in Euro upon enrollment in the course. Unless otherwise indicated, fees do not include student travel costs and living expenses.

Payments are also accepted via personal or company check, traveler's check, credit card, and Company Purchase Orders.

Cancellations by Participant:

All cancellation are subject to a 100 Euro non-refundable cancellation fee.

Cancellation have to be notified to our office, at least 30 days prior to the course start date to receive a refund (less the 100 Euro cancellation fee).

If the participants are unable to cancel prior to the 32 days notification date, they may substitute another person at their place in a course by notifying us prior to the course start date.

Course Cancellations:

GeoNeurale reserves the right to cancel the courses if necessary. The decision to cancel a course is made at least two weeks prior to the course start date. If a course is cancelled, the participant will receive a full reimbursement of the tuition fees (but not of the plane ticket or hotel expenses or any other costs), or will be enrolled in another course upon his decision (the cost of the original course will be applied to the cost of the replacement course).

GeoNeurale can not be responsible for any penalties incurred for cancellation or change of airline or hotel reservations .

Refunds:

GeoNeurale will promptly remit all refunds of tuition fees due to cancellations or annullment (less any appropriate non-refundable cancellation fee) within 30 days of the course cancellation.

Force Majeure:

GeoNeurale can not be responsible for cancellations due to “force majeure” events : airplane or airport strikes, emergency situations, natural catastrophes and all situations and incidents independent or outside the human control that can delay or cancel the course. In case of such events related cancellations the course tuition fees will be refunded to the client .

Geoneurale is not responsible for any delay or absence caused by the training instructor or training instructor company for reasons which are independent or out of the control of GeoNeurale´s decisions.

AGREEMENT: Upon enrollment all parts accept the above mentioned provisions. The above specified provisions shall regulate the agreement between GeoNeurale and the participant and the participant company and will enter into force upon enrollment.

REGISTRATION FORM

Please fill out this form and Fax to +49 89 8969 1117

or Email to Courses@GeoNeurale.com

Incomplete forms cannot be handled correctly by our sales office.

THE FUNDAMENTALS OF UPSTREAM PETROLEUM ECONOMICS AND RISK ANALYSIS

Munich, 30 March - 03 April 2009

Course Fee: Euro 2950 + VAT (MwSt: 19%)

Name:

Company:

Address:

Job Title:

Phone:

Fax:

Email:

SIGNATURE: _____

Gate

GeoNeurale

Office

and

Training Location

•Munich, the capital of Bavaria with a population of 1.5 million is the third largest city in Germany. Headquarters to industrial giants like BMW, Siemens, MAN, EADS, Eurocopter, Infineon and Epcos it also hosts two of the most important universities in Germany: the "Technische Universitaet Muenchen" and the " Ludwig Maximilian Universitaet" , with international research centers such as the "Max Planck Institut" and the " Fraunhofer Gesellschaft" .

•Geologically important is the presence of carbonate formations in the subsoil that are very favourable for low enthalpy geothermal exploitation, which requires the solution of complex petrophysical problems, similar to Oil Exploration.

•GeoNeurale, the society for the Geosciences applications of Geostatistics and Neural Networks promotes the development of modern interpretation methods for reservoir analysis.

www.GeoNeurale.com