
Postgraduate Certificate in Petroleum Economics and Management (United Kingdom)

Reservoir Economics and Valuation

Accretion Factor – A multiplier used to project future cash flows from a reserve based on expected production decline and price escalation. Related: decline curve, reserve growth. Example: applying a 1.10 factor to a 10-year cash flow estimate to account for inflation. Challenges include selecting an appropriate factor that reflects market volatility and operational uncertainty.

Accrual Accounting – Method of recording revenues and expenses when they are earned or incurred, not when cash changes hands. Related: cash flow, financial statements. In reservoir valuation, accrual accounting aligns production revenue with the period of extraction. Difficulty arises in matching costs to the exact production period for complex projects.

Adjusted Net Present Value (ANPV) – NPV calculated after adjusting for risk, tax, and other project-specific factors. Related: NPV, risk-adjusted discount rate. Used to compare alternative development scenarios. Practitioners must accurately estimate tax shields and risk premiums, which can be data-intensive.

Annualized Rate of Return (ARR) – Simple measure of profitability calculated as average annual profit divided by initial investment. Related: IRR, ROI. Provides quick insight but ignores cash-flow timing. In reservoir economics, ARR can misrepresent projects with front-loaded costs.

Appraisal Well – A well drilled to evaluate the size, quality, and producibility of a hydrocarbon reservoir. Related: discovery well, exploratory well. Data from appraisal wells refine reserve estimates, directly influencing valuation. High drilling costs and geological uncertainty are major challenges.

Asset-Based Valuation – Valuation approach focusing on the market value of physical assets such as wells, facilities, and acreage. Related: DCF, market approach. Useful for mature fields where cash-flow forecasts are uncertain. Requires accurate asset condition assessments and market comparables.

Barrel Equivalent (BOE) – Unit that converts gas volumes to oil-equivalent volumes using a standard energy factor (typically 6,000 scf = 1 BOE). Related: MCF, Bbl. Enables aggregation of mixed hydrocarbon production. Misapplication can distort production profiles if energy content varies.

Break-Even Price – Oil or gas price at which project cash flow equals zero, covering all operating and capital costs. Related: sensitivity analysis, cost curve. Critical for investment decisions. Estimation must incorporate realistic cost escalations and tax regimes.

Cash Flow Statement – Financial report showing cash inflows and outflows from operating, investing, and financing activities. Related: income statement, balance sheet. In reservoir economics, cash flow statements are the basis for DCF analysis. Reconciliation of non-cash items can be complex.

Cash-Flow Forecast – Projection of future cash inflows and outflows over the life of a reservoir. Related: scenario analysis, Monte Carlo simulation. Drives valuation models. Accuracy depends on reliable production, price, and cost forecasts.

Cause-Effect Analysis – Structured approach to identify root causes of performance deviations. Related: sensitivity analysis, risk assessment. Applied to unexpected production declines to adjust economic models. Requires comprehensive data and cross-functional expertise.

Closed-Loop Reserve Estimation – Iterative process where reservoir simulation results are used to refine reserve estimates, which are then fed back into the simulation. Related: reservoir modelling, reserve classification. Enhances accuracy but can be computationally intensive.

Commissioning Cost – Expenditure incurred to bring a new facility or well into operational status, including testing and start-up. Related: capital expenditure, OPEX. Often underestimated, leading to budget overruns and valuation errors.

Companion Well – A well drilled near an existing well to improve drainage or increase production. Related: infill drilling, well spacing. Valuation must account for incremental costs versus expected production boost. Interference effects can be challenging to predict.

Concession Agreement – Legal contract granting rights to explore and produce hydrocarbons in a defined area. Related: royalty, production sharing. Determines fiscal terms that directly affect cash-flow models. Negotiating favorable terms is a key strategic task.

Conservative Reserve Estimate – Lower-bound estimate of recoverable hydrocarbons, often used for financial reporting. Related: P90, probable reserves. Reduces upside risk but may undervalue assets. Balancing conservatism with realistic expectations is essential.

Cost-Benefit Analysis (CBA) – Systematic evaluation of the economic pros and cons of a project. Related: net present value, internal rate of return. In reservoir development, CBA compares alternative drilling or completion strategies. Quantifying intangible benefits can be problematic.

Cost Curve – Graphical representation of the distribution of costs across wells or fields, often used to assess project economics. Related: break-even analysis, learning curve. Helps identify low-cost opportunities. Data quality and consistency are critical for reliability.

Cost Escalation Factor – Percentage increase applied to future cost estimates to account for inflation, currency fluctuation, or market conditions. Related: CPI, price index. Over- or under-estimation can significantly skew NPV results.

Cost-of-Capital – Weighted average cost of financing a project, incorporating debt and equity components. Related: discount rate, WACC. Determines the hurdle rate for investment appraisal. Accurate estimation requires knowledge of market rates and company policy.

Crude Oil Price Forecast – Projection of future oil prices based on market analysis, futures contracts, or econometric models. Related: price volatility, scenario planning. Central input for cash-flow models. High uncertainty necessitates multiple scenarios.

Cut-off Grade – Minimum hydrocarbon concentration at which production is economically viable. Related: economic limit, reserve classification. Influences reserve estimates and field development plans. Determination depends on cost structure and price forecasts.

DCF (Discounted Cash Flow) – Valuation technique that discounts projected cash flows to present value using a discount rate. Related: NPV, IRR. Core method for reservoir valuation. Requires robust assumptions on production, price, and costs.

Decline Curve Analysis (DCA) – Technique to extrapolate future production rates based on historical decline patterns. Related: hyperbolic, exponential, harmonic declines. Provides inputs for cash-flow forecasts. Accuracy diminishes for unconventional reservoirs with complex behavior.

Depletion – Reduction in reservoir pressure and volume as hydrocarbons are produced. Related: reservoir drive, material balance. Impacts future recovery and production rates. Modelling depletion accurately is essential for long-term valuation.

Depreciation – Allocation of capital asset cost over its useful life for accounting purposes. Related: tax shield, amortization. Affects taxable cash flow in valuation models. Choosing an appropriate depreciation method (e.g., straight-line vs. unit of production) can influence NPV.

Development Plan – Comprehensive strategy outlining well placement, facilities, and timelines for field development. Related: field development plan, F&D. Determines capital outlays and production schedule used in economic models. Balancing optimal recovery with cost efficiency is a primary challenge.

Economic Limit – Production rate below which operating costs exceed revenue, rendering the well uneconomic. Related: shut-in, marginal cost. Identifying this limit guides abandonment decisions. Estimating operating costs at low rates can be uncertain.

Economic Reserve Classification – Categorization of reserves based on the probability of recovery and economic viability (e.g., proved, probable, possible). Related: P90, P50, P10. Provides a framework for reporting and decision-making. Requires rigorous uncertainty analysis.

Effective Tax Rate – Average rate at which taxable income is taxed, considering deductions, credits, and fiscal regimes. Related: tax shield, royalty. Impacts cash-flow projections. Variations across jurisdictions add complexity.

Elasticity of Demand – Measure of how quantity demanded responds to price changes. Related: price sensitivity, market analysis. Influences revenue forecasts for oil-producing companies. Incorporating elasticity into price scenarios improves realism.

Enterprise Value (EV) – Total market value of a company, including equity and debt, minus cash. Related: market capitalization, EBITDA. Used to benchmark reservoir assets against peers. Requires consistent valuation methodology.

Equity Share – Portion of ownership interest held by equity investors after accounting for debt. Related: debt-to-equity ratio, shareholder value. Determines cash-flow allocation in joint-venture models. Adjusting for dilution and earn-outs can be intricate.

Escalation Index – Index used to adjust future cost estimates for inflation or other price movements. Related: CPI, cost escalation factor. Commonly applied to OPEX and CAPEX forecasts. Selection of an appropriate index is critical for accurate valuation.

Exploration Risk – Probability that an exploratory well will not encounter commercial quantities of hydrocarbons. Related: success rate, geological uncertainty. Integrated into portfolio risk models. Over-optimistic assumptions can inflate asset valuations.

Feasibility Study – Comprehensive analysis evaluating technical, economic, and regulatory aspects of a proposed project. Related: front-end engineering, techno-economic assessment. Determines go/no-go decisions. Requires multidisciplinary data integration.

Field Development Cost (FDC) – Total capital required to bring a field into production, including drilling, facilities, and infrastructure. Related: CAPEX, F&D budget. Central input for NPV calculations. Cost overruns are a frequent source of valuation error.

Fiscal Regime – Government-imposed framework governing taxes, royalties, and profit-sharing. Related: concession agreement, production sharing contract. Directly influences project cash flows. Changes in fiscal terms can materially affect asset value.

Flat-Rate Royalty – Fixed percentage of gross production revenue paid to the host government. Related: variable royalty, fiscal regime. Simpler to model but may not reflect price fluctuations. Negotiating favorable rates is a strategic priority.

Forecast Horizon – Time span over which cash-flow projections are made, typically the economic life of the field. Related: project life, terminal value. Extending the horizon captures long-term value but increases uncertainty.

Forward Curve – Plot of future commodity prices derived from futures contracts. Related: price forecast, market expectations. Supplies market price inputs for cash-flow models. Curve volatility can lead to divergent valuation outcomes.

Fracture Stimulation – Process of creating hydraulic fractures to enhance permeability. Related: hydraulic fracturing, well completion. Increases recoverable reserves but adds cost and risk. Valuation must incorporate stimulation efficiency and incremental production.

Gas-to-Oil Ratio (GOR) – Ratio of produced gas volume to oil volume, expressed in scf per barrel. Related: BOE, reservoir fluid properties. Influences revenue mix and processing costs. Accurate GOR estimation is vital for cash-flow allocation.

Geosteering – Real-time adjustment of well trajectory based on subsurface data to stay within the target reservoir. Related: directional drilling, drilling optimization. Improves reservoir contact and recovery, enhancing economic returns. Requires sophisticated drilling telemetry.

Gross Revenue – Total income from hydrocarbon sales before deducting royalties, taxes, and operating costs. Related: net revenue, cash flow. Forms the top line of cash-flow models. Over-estimation can mislead valuation.

Hydrocarbon in Place (HIP) – Total volume of hydrocarbons contained in the reservoir, both recoverable and unrecoverable. Related: OOIP, OGIP. Basis for reserve estimation. Conversion to recoverable reserves depends on recovery factor assumptions.

Incremental Cash Flow – Additional cash flow generated by a new project compared with the baseline scenario. Related: marginal analysis, scenario comparison. Used to assess the economic merit of infill drilling or enhanced recovery. Accurate baseline definition is essential.

Inflation Index – Statistical measure used to adjust future costs for price level changes. Related: CPI, cost escalation. Commonly applied to OPEX forecasts. Selecting an index that matches the project's geographic exposure improves accuracy.

Initial Production (IP) – Production rate observed during the early phase of a well's life, often used as a proxy for ultimate recovery. Related: decline curve, EUR. Influences reserve estimates and cash-flow projections. High variability makes IP a noisy indicator.

Integrated Asset Management (IAM) – Holistic approach that aligns operational, financial, and strategic decisions across the asset lifecycle. Related: asset optimization, portfolio management. Enhances value creation through coordinated planning. Implementation requires robust data integration.

Joint Venture (JV) – Partnership where two or more parties share ownership, risks, and profits of a reservoir project. Related: working interest, net revenue sharing. JV agreements dictate cash-flow allocation and decision rights. Complex governance structures can delay project execution.

Learning Curve – Phenomenon where unit costs decline as cumulative production or experience increases. Related: economies of scale, cost reduction. Captured in cost-curve analysis to forecast future CAPEX. Estimating the learning rate accurately is challenging.

Liquidity Ratio – Financial metric assessing a company's ability to meet short-term obligations. Related: current ratio, cash conversion cycle. While not a direct reservoir metric, liquidity affects financing options for development. Weak ratios may increase financing costs.

Long-Term Contract (LTC) – Agreement to sell hydrocarbon output at predetermined prices over an extended period. Related: price hedging, off-take agreement. Provides revenue certainty, reducing price risk in cash-flow models. Counterparty credit risk must be assessed.

Material Balance Equation – Fundamental reservoir engineering equation that relates changes in reservoir pressure to fluid withdrawal. Related: depletion, reservoir drive. Used to estimate remaining hydrocarbons and forecast future production. Requires accurate PVT data and pressure measurements.

Monte Carlo Simulation – Probabilistic technique that runs numerous scenarios with random input variables to produce a distribution of outcomes. Related: risk analysis, sensitivity analysis. Generates P90, P50, P10 reserve estimates. Computationally intensive and dependent on input distributions.

Net Present Value (NPV) – Difference between present value of cash inflows and outflows, using a discount rate. Related: DCF, IRR. Primary decision metric for reservoir projects. Sensitive to discount rate choice and cash-flow timing.

Net Revenue Interest (NRI) – Percentage of production revenue retained by the operator after deducting royalties and other obligations. Related: working interest, royalty burden. Determines the operator's share of cash flow. Accurate NRI calculation is critical for joint-venture accounting.

Net Smoothed Production (NSP) – Production data averaged over a set period to reduce short-term fluctuations. Related: moving average, production smoothing. Used in reserve calculations to provide stable input. Over-smoothing can mask operational issues.

Non-Operating Expenses (NOE) – Costs not directly tied to production, such as administrative, legal, and corporate overhead. Related: OPEX, SG&A. Allocation to field cash flows influences profitability assessment. Determining appropriate allocation bases is often debated.

Operating Expense (OPEX) – Ongoing costs required to maintain production, including labor, maintenance, and utilities. Related: CAPEX, cost escalation. Central to cash-flow forecasts. Fluctuations in fuel prices and labor rates can cause significant variance.

Optimal Well Spacing – Determination of the most economical distance between wells to maximize recovery while minimizing interference. Related: infill drilling, reservoir drainage. Impacts both CAPEX and ultimate recovery. Requires sophisticated reservoir simulation.

Over-riding Royalty (ORR) – Additional royalty payment imposed by the government, often based on profitability rather than production volume. Related: fiscal regime, royalty burden. Can substantially reduce cash flow. Modelling ORR requires detailed profit forecasts.

Petroleum Engineering Economics (PEE) – Sub-discipline focusing on economic analysis of exploration, development, and production activities. Related: reservoir economics, project appraisal. Provides tools such as cash-flow models, risk analysis, and valuation techniques. Integrating engineering data with financial

analysis is a core challenge.

Petroleum Revenue Tax (PRT) – Tax levied on profits from petroleum production, prevalent in certain jurisdictions. Related: corporate tax, fiscal regime. Influences after-tax cash flow. Complex calculation rules demand careful compliance.

Petroleum Share – Portion of production allocated to a partner based on contractual agreement. Related: working interest, net revenue interest. Determines cash-flow entitlement. Accurate allocation requires tracking of production volumes and contractual terms.

Petroleum Technology Transfer (PTT) – Process of applying new technologies from research to field operations. Related: enhanced oil recovery, innovation. Can improve recovery factors and reduce costs. Adoption risk and integration cost must be quantified.

Petroleum-Based Valuation (PBV) – Valuation approach that emphasizes the value of hydrocarbon reserves relative to market benchmarks. Related: market approach, reserve-based financing. Useful for lenders and investors focusing on reserve assets. Requires transparent reserve reporting.

Physical Reserve Estimate – Quantitative assessment of the volume of hydrocarbons that can be technically recovered, independent of economic considerations. Related: P90, EUR. Serves as the base for economic reserve classification. Accuracy hinges on geological and engineering data quality.

Planned Production Profile – Schedule of expected production rates over the life of a field, derived from reservoir models and operational plans. Related: cash-flow forecast, decline curve. Drives cash-flow projections. Deviations from the plan affect financial performance.

Positive Net Cash Flow (PNCF) – Period where cash inflows exceed outflows, indicating profitability. Related: break-even analysis, cash-flow statement. Identifying the timing of PNCF helps in financing decisions. Delays in reaching PNCF can strain capital.

Probability Distribution Function (PDF) – Statistical function describing the likelihood of different outcomes for a variable. Related: Monte Carlo simulation, risk analysis. Applied to input variables such as price, cost, and recovery factor. Selecting appropriate distributions is crucial for realistic risk modeling.

Projected Ultimate Recovery (PUR) – Estimate of the total recoverable volume from a field based on current data and future development plans. Related: EUR, reserve growth. Central to long-term valuation. Uncertainty grows with time horizon.

Production Allocation – Method of apportioning total production among multiple wells, contracts, or entities. Related: net revenue interest, NRI. Impacts revenue reporting and cash-flow distribution. Accurate metering and allocation rules are essential.

Production Sharing Contract (PSC) – Fiscal arrangement where the state retains ownership of hydrocarbons,

and the contractor receives a share of production after cost recovery. Related: concession agreement, royalty. Determines cost recovery ceilings and profit oil split, directly influencing cash-flow models.

Production Target – Desired production level set by management or contractual obligations. Related: planning horizon, field development plan. Guides drilling and facility decisions. Over-ambitious targets can lead to costly over-investment.

Profit Oil – Portion of production allocated to the contractor after the state has recovered its costs under a PSC. Related: cost recovery, profit share. Forms the basis for contractor cash flow. Modeling profit oil requires detailed cost-recovery schedules.

Projected Cash Flow (PCF) – Forecasted cash movements over the project life, incorporating production, price, cost, and tax assumptions. Related: DCF, NPV. The backbone of valuation analysis. Accuracy depends on the quality of underlying data.

Qualified Reserve Estimate – Reserve estimate that meets regulatory and reporting standards, often requiring third-party verification. Related: proved reserves, audit. Increases credibility with investors and lenders. The verification process can be time-consuming.

Recovery Factor (RF) – Ratio of recoverable hydrocarbons to total hydrocarbons in place. Related: EUR, PUR. Influences reserve sizing and economic value. Varies with reservoir drive mechanisms, technology, and operational practices.

Reserve Growth – Incremental increase in estimated recoverable reserves over time due to improved understanding or technology. Related: reserve revision, EUR. Can significantly boost asset valuation. Must be justified with technical evidence.

Reserve Classification – System for categorizing reserves based on certainty and economic viability (e.g., proved, probable, possible). Related: P90, P50, P10. Provides a standardized framework for reporting. Requires rigorous documentation.

Reserve Estimation Uncertainty – The range of possible reserve quantities due to geological and engineering variability. Related: Monte Carlo simulation, risk analysis. Quantified through probabilistic methods. Communicating uncertainty to stakeholders is essential.

Reserve Evaluation – Comprehensive assessment of the quantity, quality, and economic value of hydrocarbon reserves. Related: reserve classification, reserve growth. Forms the basis for investment decisions. Needs integration of geological, engineering, and economic data.

Reserve Report – Document that presents reserve estimates, assumptions, and methodology to stakeholders. Related: audit, public disclosure. Must comply with industry standards (e.g., PRMS). Errors can lead to regulatory penalties and loss of credibility.

Reserve Revision – Update of reserve estimates reflecting new data, production history, or improved methods. Related: reserve growth, reserve evaluation. Can alter asset valuation significantly. Timing and frequency depend on operational and market conditions.

Reserve-Based Financing (RBF) – Lending mechanism where the loan amount is secured against the value of proven reserves. Related: debt financing, reserve valuation. Provides capital for development but imposes covenants tied to reserve performance. Accurate reserve valuation is critical.

Reserves-Based Company (RBC) – Oil and gas firm whose primary asset is its reserve portfolio. Related: market capitalization, enterprise value. Valuation focuses on reserve metrics. Market perception of reserve quality drives share price.

Resource Potential – Estimate of hydrocarbons that may be present but are not yet proven recoverable. Related: undiscovered resources, exploration risk. Important for long-term strategic planning. High uncertainty makes valuation speculative.

Revenue Share Agreement (RSA) – Contractual arrangement allocating revenue among participants based on predefined percentages. Related: joint venture, net revenue interest. Determines cash-flow entitlement. Must be clearly defined to avoid disputes.

Risk-Adjusted Discount Rate (RADR) – Discount rate that incorporates project-specific risk premiums. Related: cost of capital, WACC. Used in NPV calculations to reflect uncertainty. Determining an appropriate RADR requires robust risk assessment.

Risk Management Plan (RMP) – Document outlining strategies to identify, assess, and mitigate risks throughout the project lifecycle. Related: contingency planning, sensitivity analysis. Enhances project resilience. Implementation requires continuous monitoring.

Running Cost – Ongoing operational expenses incurred during production, excluding capital outlays. Related: OPEX, cost escalation. Directly impacts cash flow. Accurate tracking is essential for profitability analysis.

Scenario Analysis – Evaluation of project outcomes under different sets of assumptions (e.g., price, cost, production). Related: sensitivity analysis, Monte Carlo simulation. Helps identify key drivers of value. Requires disciplined structuring of alternative scenarios.

Schlumberger Reservoir Model (SRM) – Commercial software suite for integrated reservoir simulation and forecasting. Related: simulation, reserve estimation. Provides detailed production predictions. Licensing costs and data input quality affect results.

Secured Debt – Borrowed capital backed by specific assets, such as reserves or facilities. Related: unsecured debt, loan covenants. Offers lower interest rates but imposes asset-based restrictions. Valuation must consider debt service obligations.

Sensitivity Analysis – Technique that varies one input at a time to assess impact on output metrics like NPV. Related: scenario analysis, risk assessment. Identifies most influential variables. Limited by its single-factor approach.

Shale Gas – Natural gas trapped in low-permeability shale formations, requiring hydraulic fracturing for extraction. Related: unconventional resources, EOR. Often has different cost structures and price dynamics. Valuation must incorporate higher upfront CAPEX.

Short-Term Price Forecast – Projection of commodity prices over a near-term horizon (typically 1-3 years). Related: forward curve, market outlook. Influences budgeting and cash-flow timing. Higher volatility necessitates more frequent updates.

Simulation-Based Forecast – Production forecast derived from reservoir simulation models that capture fluid flow dynamics. Related: material balance, decline curve. Provides detailed spatial and temporal production patterns. Model calibration is resource-intensive.

Strategic Reserve – Volume of hydrocarbons held for national security or market stability purposes. Related: government stockpile, policy reserve. Not directly part of commercial valuation but can affect market prices and policy risk.

Strategic Planning Horizon – Timeframe used by senior management for long-term investment decisions, often 10-20 years. Related: forecast horizon, scenario planning. Aligns capital allocation with corporate objectives. Requires balancing detail with uncertainty.

Surface Facilities – Infrastructure on the surface that processes, stores, and transports hydrocarbons (e.g., separators, pipelines). Related: CAPEX, OPEX. Integral to field development cost estimation. Design choices impact operating efficiency and cost.

Terminal Value – Estimated value of a project beyond the explicit forecast period, often calculated using a perpetuity growth model. Related: NPV, discount rate. Can represent a substantial portion of total NPV for long-life fields. Sensitive to growth assumptions.

Thermal Enhanced Oil Recovery (EOR) – Techniques that inject heat (steam, hot water) to reduce oil viscosity and improve recovery. Related: chemical EOR, miscible flooding. Increases reserves but adds significant CAPEX and OPEX. Economic viability depends on oil price and reservoir characteristics.

Third-Party Operator – External company contracted to manage field operations on behalf of the owners. Related: management contract, operator's share. Brings expertise and may reduce risk. Fees and performance incentives must be factored into cash-flow models.

Time-Value of Money (TVM) – Principle that a pound today is worth more than a pound in the future due to earning potential. Related: discounting, NPV. Core concept behind all discounted cash-flow analyses. Misapplication leads to distorted valuations.

Title Uncertainty – Ambiguity regarding legal ownership or rights to a reservoir. Related: concession agreement, leasehold. Can impede financing and development. Due diligence is required to resolve title issues before valuation.

Total Economic Value (TEV) – Comprehensive measure that aggregates consumer surplus, producer surplus, and externalities associated with a resource. Related: welfare economics, cost-benefit analysis. Rarely applied in corporate valuation but useful for policy analysis.

Travel-Time Distribution – Statistical representation of the time required for fluids to travel from reservoir to surface. Related: production lag, reservoir simulation. Affects cash-flow timing and discounting. Accurate measurement improves forecast reliability.

Turn-Around Time (TAT) – Duration required to complete a specific operational process, such as well work-over or facility maintenance. Related: downtime, OPEX. Impacts production availability and cost. Optimizing TAT can enhance profitability.

Uncertainty Quantification (UQ) – Systematic approach to assess and reduce uncertainty in model predictions. Related: Monte Carlo, probabilistic reserve estimation. Provides confidence intervals for reserve and value estimates. Requires robust statistical methods.

Undiscovered Resources – Hydrocarbons believed to exist based on geological evidence but not yet proven through drilling. Related: exploration risk, resource potential. Represents future upside potential. Valuation is highly speculative and depends on success rates.

Unit-Operating Cost (UOC) – Cost incurred to produce a single unit of output (e.g., \$/BOE). Related: cost curve, break-even price. Benchmark for operational efficiency. Fluctuations affect profitability and strategic decisions.

Value-Added Tax (VAT) – Indirect tax applied to goods and services, including hydrocarbon sales in many jurisdictions. Related: tax regime, effective tax rate. Impacts cash-flow after tax. VAT recovery mechanisms can mitigate its effect.

Variable Royalty – Royalty payment that varies with production volume or price, often expressed as a percentage of revenue. Related: flat-rate royalty, fiscal regime. More responsive to market conditions but adds modeling complexity.

Venture Capital (VC) Funding – Equity financing provided by investors seeking high-risk, high-return opportunities, often in early-stage exploration projects. Related: equity share, risk-adjusted discount rate. Dilutes existing ownership but provides needed capital. Valuation must reflect investor expectations.

Weighted Average Cost of Capital (WACC) – Composite discount rate reflecting the proportionate costs of debt and equity financing. Related: cost of capital, risk-adjusted discount rate. Central to NPV calculations. Accurate WACC estimation requires market data and company capital structure details.

Yield Curve – Graph showing interest rates across different maturities for government bonds. Related: discount rate, risk-free rate. Provides a basis for selecting the risk-free component of the discount rate. Shifts can affect project valuation.

Zero-Based Budgeting (ZBB) – Budgeting approach that starts from a "zero" base, requiring justification for all expenses. Related: cost control, capital allocation. Encourages cost efficiency in field development. Implementation may be resource-intensive.