

Oil & Gas Modeling: Course Outline

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The topics in Oil & Gas Modeling teach you everything you need to know about accounting, industry jargon, operating models, valuation, and merger and LBO models for **natural resource companies** – businesses that earn money by extracting energy or minerals from the ground.

- In total, there are **95 lessons** with accompanying Excel files as well as **15 quick reference guide PDFs** on key topics. That amounts to **nearly 36 hours of video** altogether – but you also get **full transcripts** (over 400,000 words total), so you can quickly skip to anything you need to review.
- **All the content is downloadable to your preferred device** (desktops, laptops, tablets, smartphones, etc.).
- **Easily keep track of your progress:** As you move through the lessons, you can check off what you've completed and what's still on your "to-do" list.
- **Fast answers to all your questions:** Our expert support team is standing by to answer any questions you have about any of the content, for up to 24 months after you sign up.
- **Quizzes and Certifications.** After you have completed the course, you will be eligible to take our challenging Certification Quiz. Once you pass the Quiz, you'll be issued a Certificate that you can add to your resume / CV and refer to in interviews.
- **Lifetime Access:** You also get **lifetime access**, so you can come back to the course whenever you need it – whether that's in 1 month, 1 year, or 10 years.
- **BONUS Major Case Study:** Explore an investment / stock pitch of Ultra Petroleum [UPL] and its \$650 million acquisition of acreage in the Uinta Basin of Utah (*it's not an exaggeration to say this bonus case study really is an entire new course!*)

What Others Are Saying About Our Modeling Courses...

"I was originally looking for a way to familiarize myself with upstream oil and gas modeling when I found BIWS but ended up with much more than I paid for."

CC Recipients: +

None listed

Hi Brian,

Would be my pleasure! Would prefer anonymous though if you don't mind, find my praises below:

For some background I'm a 1st year analyst at a regional investment bank operating in the MENA region. I was originally looking for a way to familiarize myself with upstream oil and gas modeling when I found BIWS but ended up with much much more than I paid for. I've already recommended the service to everyone/anyone who wants to get their modeling/accounting right. This really is the place. The lessons are incredibly thorough, the 24/7 help on specific questions is fantastic, and the interactive nature of the courses, with excel sheets, section by section coverage and pdf course notes were all great. I ended up buying another package and will be well on my way to packages #3 and #4. The industry-specific courses were particularly important, would love to see more of those! Thanks so much for this truly great service!

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Module 1: Overview, Accounting & Key Metrics

- In this module, you'll learn why and how natural resource companies operate differently from normal companies, and why you can't rely on traditional metrics when analyzing them.
- We'll compare the **financial statements** of XTO Energy and Exxon Mobil to those of normal companies, and you'll learn how each item is projected and how resource production drives the 3 statements.
- You'll also learn how to **measure reserves and production**, and how successful efforts accounting differs from full cost accounting.
- We conclude the module by analyzing key operating metrics and ratios for oil & gas companies.

Module 2: Oil & Gas Operating Model

- In this module, you'll construct a detailed operating model for XTO Energy, starting with its **production, price hedging, and per-unit expenses**, and then moving into its 3 financial statements.
- XTO has a significant amount of debt, so we will also create detailed debt schedules similar to what you see in advanced LBO models.
- Once the XTO model is complete, we'll jump into Exxon Mobil's filings and create a revenue and expense model for their upstream business on a region-by-region basis, and then look at a **complete operating model for the company**.
- Everything is based on the real SEC filings of both companies as well as equity research from Deutsche Bank, Credit Suisse, and RBC.

Module 3: Oil & Gas Valuation

- You'll learn how to value XTO Energy using public company comparables, precedent transactions, a DCF, and a **Net Asset Value (NAV) model** in this module.

- We'll start by covering the key differences in **public comps and precedent transactions** for oil & gas companies, including an example of how to adjust for non-recurring and one-time charges.
- Then you'll learn how a **DCF** is different and why it's not that useful when valuing an E&P-focused oil & gas company such as XTO.
- We'll wrap up the module by looking at the **Net Asset Value (NAV)** model in detail, including the concept, assumptions, revenue and expense projections, and other business segments to include.

Module 4: Oil & Gas Merger Model

- In this module, you'll complete a detailed merger model for Exxon Mobil and XTO Energy and learn how both companies thought about this record \$41 billion transaction.
- After learning how to make the **transaction assumptions**, allocate the purchase price, and adjust the balance sheet, you'll learn how to modify the debt schedules and the financial statements to support combining all 3 financial statements.
- We will also examine **oil & gas-specific synergies** and go through **oil & gas-specific accretion / dilution metrics** such as NAV per share – before concluding with a contribution analysis, sensitivities, and commentary on the deal.

Module 5: Oil & Gas LBO Model

- This module will present a hypothetical scenario where a private equity firm, rather than Exxon Mobil, acquires XTO Energy in a leveraged buyout.
- We'll go through all the key steps from the assumptions, purchase price allocation, and debt schedules to how to modify the 3 financial statements and point out the key **differences between oil & gas LBOs and those of normal companies**.
- The module will conclude with an analysis of the **key credit statistics and ratios** for XTO as well as the returns to equity and debt investors under different assumptions – and you'll learn why natural resource companies are not the best LBO targets, based on the analysis here.

Module 6: Complex NAV Model: Data Gathering and Assumptions

- In the first module of the Ultra Petroleum [UPL] complex NAV model case study, you'll review investor presentations, SEC filings, equity research, earnings call transcripts, and other documents issued by the company itself and 3rd party sources.
- Using these sources, you will determine the proper numbers for **key assumptions**, such as the acreage and reserves in each region, the average EUR per well, the D&C and LOE costs, the price differentials, and the working interests and royalty rates.
- You'll also project **future net wells drilled by location**, and you'll think through the proper reserve credits and sensitivity toggles to set up for use later on in the case study.

Module 7: Complex NAV Model: PDP and PDNP Reserves and Production Forecasts

- In this next module of the case study, you'll consider all of **UPL's Proved Developed (PD) Reserves** together – it is impossible to analyze these on a per-well basis because no company, UPL included, discloses enough information to do so.
- For both the **PDP and PDNP segments**, you will assume an overall production decline rate and project how the reserves change over time.
- Once you've plotted the **production decline curves**, you'll use that information to calculate revenue, expenses, CapEx, cash flow, and discounted cash flow from the PD Reserves.

Module 8: Complex NAV Model: PUD, PROB, and POSS Reserves and Production in WY and PA

- In this module of the case study, you'll analyze **UPL's more speculative reserves** in Wyoming and Pennsylvania and make assumptions for future CapEx related to new wells drilled.
- You will modify the existing formulas from the PDP and PDNP segments and make them suitable for this segment of the company's business; you'll also have to support different regional assumptions for the annual decline rates, revenue, and expenses.
- We'll also teach you how to **approximate the decline rates** in the absence of company-provided figures; "risking" these reserves will be critical since they are more speculative, so we'll look at different approaches to that as well.

Module 9: Complex NAV Model: Uinta Acquisition

- Once you've analyzed the company's existing reserves and production prior to its acquisition, you'll turn your attention to the **Uinta Basin acquisition** in this next module of the case study.
- This region is 100% oil, so you'll have to make different assumptions for the price differentials, royalty rates, working interests, and per-well expenses.
- You'll also have to analyze **PD Reserves and the PUD, PROB, and POSS Reserves** all on the same spreadsheet since UPL had not yet grouped the region together with its existing reserves.

Module 10: Complex NAV Model: Calculating NAV and Making an Investment Recommendation

- In this final module of the case study, you'll put together all the pieces to calculate **UPL's Implied NAV per Share** under different scenarios, and you'll use the output of that analysis to make an investment recommendation for the company.
- You'll also answer the original question we posed at the start of this case study: Was the market right to penalize Ultra Petroleum for its acquisition of the Uinta Basin acreage?
- In addition to answering those questions, you'll also build in support for other features critical to an oil & gas model, such as hedges, book vs. cash tax differences, NOLs, accelerated depreciation, and tangible vs. intangible drilling costs (IDC).
- **This final module helps you answer the question that all other financial modeling training programs miss entirely:** what the point of a model is, and how to use its output under different scenarios to make high-stakes decisions that involve large amounts of money.

Our Promise to You...



- ✓ **Get Immediate Access.** The instant you sign up, you'll have immediate access to 95 lessons, 36 hours of video, 15 PDF Quick Start Guides, and full, word-for-word transcripts of all the lessons.
- ✓ **365-Day-Per-Year Expert Support.** We have a team of experienced bankers standing by to respond to your questions, comments, and emails 365 days per year. We will answer detailed career/technical/course questions for up to 24 months after you sign up.
- ✓ **Money-Back Guarantee.** *Breaking Into Wall Street* is the **first and only** financial modeling training program that comes with an unconditional 90-day money-back guarantee.
- ✓ **Course Certifications.** After completing the course material, you're eligible to take our Certification Quiz. Once you pass the quiz, you'll be issued a Certificate that you can add to your resume / CV and refer to in interviews.

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