Input Assumptions
Wells, Prices, Royalty

↓

Production Forecasting
Decline Curves

↓

Revenue & Costs
Prices, Taxes, Costs

↓

Cash Flow & Discounting
NPV, PV10, PV15

PUD (Proved Undeveloped): Proved reserves categorized as undeveloped—hydrocarbon resources requiring new wells or further investment for recovery.

Strip Pricing / Futures Strip: A pricing approach using futures contracts in sequential delivery months to lock in commodity prices over a specified time frame.

Step-by-Step User Guide

Enter Your Wells: Specify number of wells and input well type (PDP, PUD, or Future), first production date, initial rates, decline parameters, royalty decimal and NRI.

Upload or Define Pricing: Choose Flat pricing or upload a Market Strip from the sidebar. Enter price differentials for oil, gas and NGL.

Set Global Assumptions: Specify the model start date, forecast horizon, discount rate, tax rates, and optional post-production costs in the sidebar.

Generate Future Wells: Use the auto-generate tool to schedule future wells based on acreage and spacing assumptions. Set spacing (e.g., 660/880 feet) and months between wells.

Run the Forecast: Click the Run forecast button. The model calculates monthly production, revenue, taxes, costs, and net royalty cash flows, then computes NPV, PV10, PV15 and payback period.

Review Results: Check summary metrics, present value by well type, and cumulative cash flow chart. Expand the detailed table or download CSV.

Perform Risk Analysis: Enable Monte Carlo simulation to see P10/P50/P90 NPVs based on price and volume variability.

Decline Curve Analysis (DCA) Guidance

Decline Curve Analysis (DCA) Guidance Upload historical production data with columns date, well_id, and rate into the DCA tab. Select a decline model (Exponential, Hyperbolic, or Harmonic) and optionally override the b-factor. The model fits the curve using non-linear regression, reports qi, Di and b, and displays goodness-of-fit metrics (R^2 and RMSE). Use the chart to compare exponential, hyperbolic and harmonic decline behavior and adjust parameters accordingly.