

**USE CASE**



# **DETERMINE THE VALUE OF YOUR ASSETS**

Determine the value of assets in minutes with well-level production and economic data

## USE CASE – WELLCAST - DETERMINING THE VALUE OF YOUR ASSET

In mainstream economics, one of the most effective means of measuring benefits to the consumer through the purchasing and consuming of goods and services is called the consumer surplus – the difference between the amount a consumer is willing to pay for a good or service and the price. In order to create consumer surplus, the consumer must receive significant added value from the good/service they receive.

In this paper we look at how two customers used Wellcast – our well-level production and economics solution – to generate consumer surplus by determining the value of assets quickly, accurately, and cost-effectively. WellCast turns a workflow that traditionally takes weeks into one that takes minutes.

# WHAT IS MY ASSET WORTH?

What is my asset worth? This is the key question any operator or investor must ask themselves when it comes to making significant investment decisions around target wells and fields. Answering that question and determining the underlying production figures for fields, reservoirs, and wells can be a challenge.

### Question and Answers

*Q: What is my current production and how is it going to decline moving forward?*

*A: This is your Proved Developed Producing (PDP) reserves and the foundation on which business development teams tend to build their forecasts.*

*Q: What is going to be the production profile of the new wells drilled moving forward?*

*A: This question leads to type curves that provide a representative production profile of a well in a specific play and/or area.*

*Q: How many new wells will be drilled moving forward?*

*A: The answer to that will form your drill schedule.*

## USE CASE – WELLCAST - DETERMINING THE VALUE OF YOUR ASSET



Add the PDP and the combination of your type curves and drill schedules to get your expected production. You are now much closer to accurately determining the value of your asset, but still not quite there. Let's examine the challenges in getting the right answers in these three areas and how Wellcast delivers while saving time and money.

# PDP – RELEASING RESERVOIR ENGINEERS FROM A CONTINUOUS PROCESS

When it comes to calculating PDP reserves, it's vital to understand the production streams of all active existing wells, as this will become the base volume on which all future predicted volumes are built.

To calculate PDP, you must identify the set of wells associated with the asset by filtering down and targeting Areas of Interest (AOI) and then forecasting each well's production.

## USE CASE – WELLCAST - DETERMINING THE VALUE OF YOUR ASSET

With potentially hundreds of wells, reservoir engineers have to go through each well to forecast production, align dates, and pull all the individual forecasts together. This is a highly labor-intensive task and can be very expensive. Wellcast users, however, can seamlessly generate PDPs and associated economic values for all AOIs and sets of wells within the portfolio of opportunities or existing assets.

The solution enables you to pick a set of wells by filtering from any well header attribute, identifying the wells on a map, using pre-identified API numbers, or through an AOI uploaded to or built web application. Wellcast uses Enverus' proprietary decline curve analysis (DCA) tool to pre-generate a forecast for every active well in the country.



### Wellcast in Action – Minerals Company

**A mineral rights acquisition start-up was looking to answer the 'What are my assets worth?' question as quickly and as accurately as possible. Initially, they compared the results from Wellcast versus reserves evaluation software that their contracted reservoir engineer had been using.**

**While there was only a 3.6 percent difference in PV-10 from the two analyses, the time it took to generate the numbers was vastly different. Wellcast calculated the answer in 15 minutes versus two days with alternative software. With reservoir engineers charging upwards of \$375 an hour, not only did the minerals company save \$6,000, but the work got done faster with the inconsistency of the human element being taken out of the equation.**

# TYPE CURVES – IDENTIFYING THE NUANCES OF HOW TO PICK REPRESENTATIVE WELLS

Calculating type curves and answering the question – what is going to be the production profile of new wells drilled moving forward? – is another challenge to operators of all sizes.

In order to predict the future productivity of an asset, you must be able to understand what the productivity of representative wells looked like historically. This requires you to build a representative type curve.

To generate such curves, reservoir engineers must identify wells that are representative of wells that are going to be drilled moving forward, such as horizontal, newer vintage, or high proppant loading wells. They must also normalize time, lateral lengths, and completions practices to create an average production profile and fit a type curve.

Wellcast allows you to go through this exercise in a quick, repeatable fashion.



### Wellcast in Action – Midstream Company

One of the largest midstream companies in the U.S. was evaluating the acquisition of an asset in the Permian Basin. The company used Wellcast to generate drilling schedule forecasting and economics alongside a third-party reservoir engineering company which focused on PDP volumes and type curves.

When questions about the sellers' PDP forecast came up, Wellcast was used to double-check the figures and came up with very similar projections. The difference was that Wellcast delivered the figures in a matter of hours rather than two weeks.

Since then, Wellcast has been used by this midstream company to forecast PDP volumes and type curves, saving them the financial and logistical burden of contracting with two different third parties. Given average projects sizes, this results in savings of at least \$25,000 a project. The company may also be involved in multiple deals like this every month, so the overall cost savings are significant.

# DRILL SCHEDULES – CALCULATING TIME- NORMALIZED INCREMENTAL VOLUMES IN SECONDS

The final part of determining the expected production from the asset is drill schedules – these are paired with type curves to calculate incremental volumes.

Questions that must be addressed include: How many new wells will be drilled moving forward? Can I calculate expected incremental production for every period in which new wells are drilled?

The calculating of incremental volumes from new drilling (known as a waterfall calculations) can be highly time-consuming and labor intensive.

Where traditional reservoir engineering software falls short, Wellcast delivers by calculating time-normalized incremental volumes in seconds which ultimately make up Proved Undeveloped Reserves (PUD).

Wellcast can also calculate economics (eg. NPV, IRR, breakeven figures) for each part of the production stream taking into account commodity prices, costs, royalties, and prevailing state, local, and federal tax structures.

# LET WELLCAST DO THE MATH

This workflow demonstrates that Wellcast has a significant impact for customers by making important workflows easy to conduct and reduce costs.

- PDP - Wellcast quickly calculates how currently active wells will decline moving forward.
- Type Curve - Wellcast builds a representative production profile(s) for new wells that are going to be drilled moving forward.
- Drill Schedule - Wellcast pairs the profile with a drill schedule(s) to quickly calculate the forecast of incremental volumes moving forward.

The solution does all the math to save you time and money. It integrates all the crucial information to provide you with the expected production from the asset moving forward.

Wellcast transforms the traditionally resource intensive production forecasting and economics workflow into one that takes minutes. To find out more, visit <https://www.enverus.com>