The evolution of an upstream oil & gas accounting department

IFS

Contents

About this guide

As an upstream oil and gas company grows and evolves, it travels through distinct stages of scale and complexity. This evolution drives the need for new technologies and processes to become more efficient, reduce the time to close, and improve accuracy and auditability – all while reducing errors and employee stress, and saving time and money.

This guide will explain the four typical stages of evolution that naturally occur as an upstream oil and gas accounting department grows and evolves.

The evolution of an upstream oil & gas accounting department

The four stages of evolution provide a common language, as well as a shared vision and framework for prioritizing technologies and processes that drive efficiencies during each stage.

Use these four stages to benchmark your accounting performance in comparison to the standard and best-in-class companies. You'll be able to quickly identify where you're performing well and where you're lagging, allowing you to create an action plan that prioritizes your department's most risky areas over the areas that are already in a better position.

Stage 1: Initial	Stage 2: Reactive	Stage 3: Managed	Stage 4: Optimized
Small scale; one person managing everything with manual processes, simple accounting systems, and many spreadsheets.	A few accountants with no standard processes. Using an oil and gas accounting solution, but not able to leverage all functionality to gain efficiencies because of time and resource constraints.	Standard processes are used with some automation of core business processes. Leveraging oil and gas-specific software that is integrated with other departments in the organization.	All data and processes are integrated and connected, from the field through financials. Significant automation is in place and there is standard integration across groups to manage master data and transaction data in one system of record.

Stage 1: Initial

Manual processes

In an initial stage department, there's one person managing accounting for the company. The company is a small operator, with zero or limited drilling operations and may have anywhere from five to 50 wells. Accounting tasks are manual with data stored in silos.

Characteristics of the initial stage

Some or all accounting tasks are outsourced.

Collection of field information is on paper.

Use of a simple accounting system or a limited oil and gas point solution.

Revenue is being distributed based on what is received, and the statement is assumed correct.

Filing regulatory reports directly through the regulatory portal.

Data such as ownership, wells, partners, etc. is kept in spreadsheets.

Production allocations, calculations of distribution, and JIB are all manually maintained in spreadsheets.

The same people who work in the field might also wear multiple hats in the office.

Make assumptions that people are billing the right amount.

No validation to ensure you are being paid correctly from the purchaser.

Challenges at the initial stage

Localized data

Data may be stored on someone's computer, creating excessive and unnecessary communication to simply determine which is the most up-to-date version.

Little to no focus on efficiencies

Focus is on day-to-day tasks, with no thought on how to reduce the manual effort of these tasks. Perhaps there are a small number of wells to manage, so there is no need for more efficiencies.

Impossible to scale

One additional well has a big impact on processes and timelines.

No standard reporting

Reporting is ad-hoc and not consistent. It can take a lot of time to generate requested reports because of data silos.

Poorly controlled and limited response to demands

Any requested updates, reports, or other needs are all reactive. There are currently no processes in place for requests to be easily fulfilled and manage any back log.

Siloed data

Accounting transactions are done in spreadsheets, QuickBooks, or other non-oil and -gas software.

Single source of failure

If one of the accountants is on vacation or out sick, no one can back-fill or has the knowledge of how something is done.

Numerous paths of communications

People are communicating changes or updates to data through email, text messaging, and phone calls. Handled manually and allowing for inconsistencies and miscommunication.

No auditing compliance

Distribution reports, sales statements, and other critical documentation is spread out across many different desks, file folders, and computers, and is usually saved by different people for different purposes. If an audit were to happen, it would be time consuming and laborious to get all necessary information together.

Next steps

During the initial stage, companies may see a lot of growth by increasing number of wells or drilling activities, adding more working interest partners or vendors, or having more audit requests. It is difficult to focus on creating efficiencies that are needed to address how to get things done each month and keep up with the increasing workload.

As a reaction, more working hours, and people are added, an oil and gas accounting software is implemented, and processes are beginning to be defined.
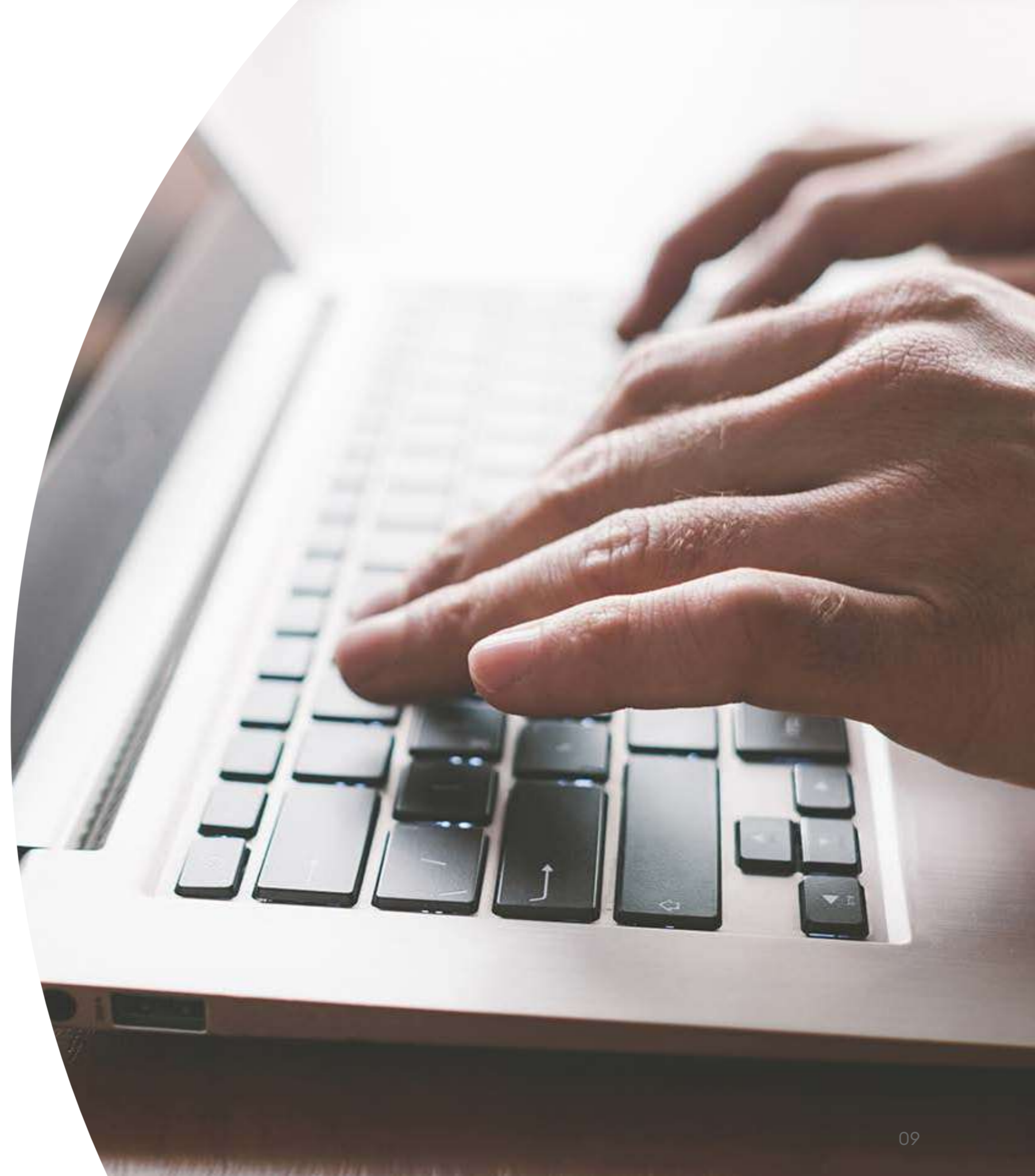
2. Reactive

1. Initial
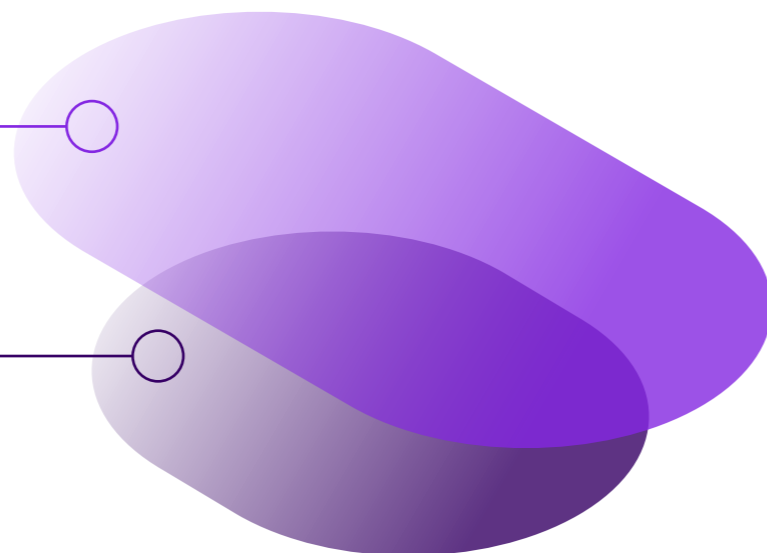
Stage 2: Reactive

Defining processes

A department in the "Reactive" stage may be comprised of two to four people using a simple oil and gas accounting package that runs on single PCs or a small server. The company may be experiencing growth, with adding new wells or drilling operations. The oil and gas accountants are extremely busy because there are no standard processes for responding to requests and added complexity.

Characteristics of the reactive stage

The number of invoices and accounting entries begins to double.

Many tasks and processes are based on institutional knowledge. Steps are being taken to define more clear processes.

Limited validation to ensure you are being paid correctly from the purchaser.

You are keeping historical data and information in spreadsheets.

Using a software designed specifically for upstream oil and gas but, because of time, you're not able to utilize the functionality of the software.

You don't have easy access to data to make decisions about where efficiencies can be added.

You might be doing very basic functions to understand the bare minimum of what you need to know, such as check stub distribution.

Land has wells that never get setup in the accounting environment.

Asset data in accounting does not match up with what production has as live.

Shut-in or abandoned wells that haven't been taken out of accounting records because there are bills still coming in for them.

Backup information is starting to be captured, but may not be complete enough for audits.

Challenges at the reactive stage

Creation of manual processes

An increase in understanding the need for processes leads people to start creating manual processes. These processes are not institutionalized; not spread across the department or across the organization.

Work done in silos

More tools are available to do the job, but they're not used consistently or in a best-practice manner, i.e. each person does their own thing.

Multiple data entry systems

Data is entered into multiple systems, creating extra work and reconciliation issues. Because there's data in many systems and that data is not consistent, there is a need to reduce multiple pieces of delivery systems.

Complex requests

Requests are more complex and take longer to gather because of the scope of data.

Limited scalability

It's difficult to scale because there are more wells, more owners, more invoices, more vendors, and more data. You can add more staff but if there is no consistency in following process, there is limitation to the size you can grow.

Not proactive

Responses to requests are reactive and create distraction from other tasks. Ultimately, a backlog of tasks begins to grow.

Preparing for audits

More risk is incurred as more wells are being managed – and part of that risk is an audit, which could result in bigger fines.

Minimal cross-department communication

Each area operates very independently of other areas because of siloed systems. There is very little communication between the different areas.

Out of sync siloed systems

There are more systems, but the data is not integrated, thus creating silos of data. This also causes data to be out of sync across the systems. There is still a lot of manual effort. Redundant entries and processes such as the revenue group will maintain and have different ownership decks than the land group and will do their own division orders.

Limited inter-department data sharing

Duplicate data is being entered into land and production systems as the accounting system is not integrated with other systems in the company.

Reactionary

Reactive approach to an email or an issue from another area.

Minimal supplier relationships

Use different suppliers for various goods or services; not receiving cost savings from exclusive vendor/supplier agreements.

Next steps

With the increasing pressure on the oil and gas accounting department, efficiencies will begin to be created so the department can begin to be proactive when it comes to audit preparation, analyzing operations, closing month end, and preparing reports.

Managing oil and gas accounting department becomes more consistent with automation of core processes, standardized reporting, and integration with land and production departments.

3. Managed

2. Reactive

1. Initial
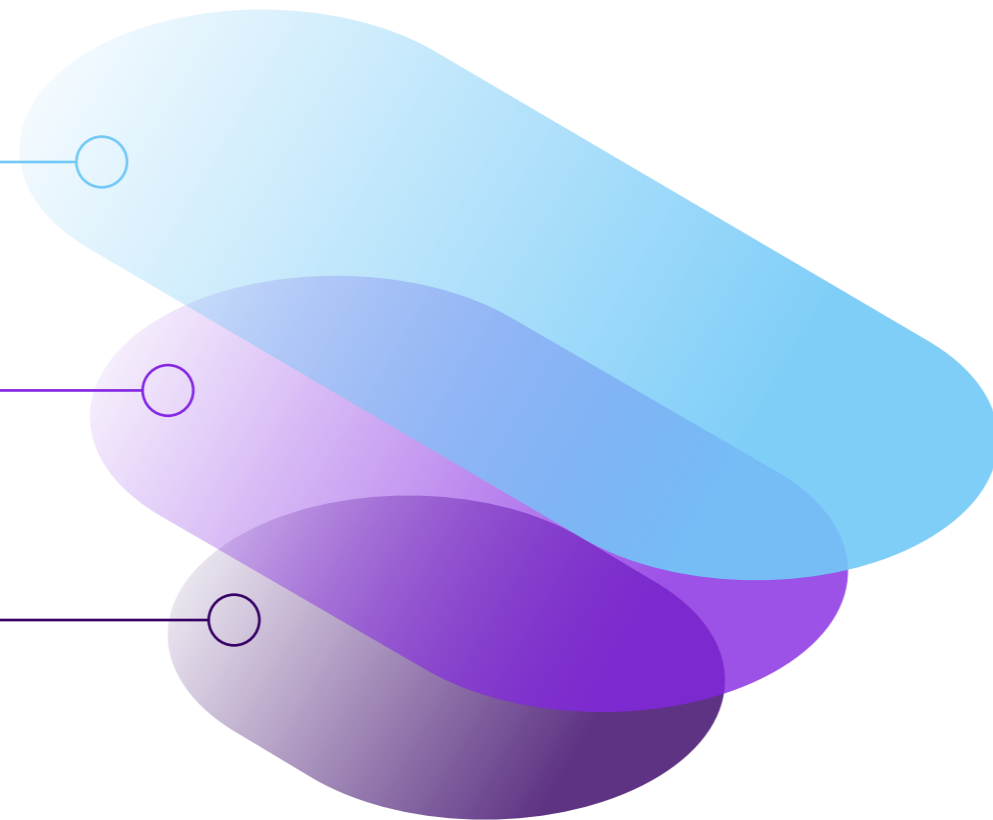
Stage 3: Managed

Automated and one central area for all accounting

In the "Managed" stage, an oil and gas accounting department uses advanced tools integrated into a built-for-upstream-oil-and-gas platform for all processes and data. The platform is integrated across departments providing consistency and full visibility across the organization. Processes and efficiencies are being managed rather than people or wells. Efficiencies are controlled by managers through analytics.

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Characteristics of the managed stage

Revenue is using a full process for accruals; booking accruals and calculating revenue based on production volumes, ownership, and current pricing.

Reversing accruals and reconciling calculations against cash received.

Netting is in place to go against your receivables, so you're not paying people who owe money.

Visibility into costs and the ability to manage them.

Maximizing JIB and ensuring that all items that can be billed are captured.

Data can be pulled into one single view for quick reporting and analysis. A single view of reporting.

Leveraging relationships with single suppliers in order to secure volume discounts.

Proactive responses.

Good efficiencies that are analytically/graphically measured. Knowledge of how much was produced and sold.

Integrated business workflows ensure that data is modified only in the system of record so that all systems stay in sync.

Division order management flows all the way through to revenue and JIB.

Processes are no longer manual or individualized. They are documented and shared among the department and/or organization. Some core business processes are enforced through automation.

Challenges at the managed stage

Continuous process improvement reviews

Getting employees to buy-in and take the time to review processes and procedures can be challenge. Teams get stuck doing what works and have a hard time adapting to the changing needs of the business.

Multiple data entry points to manage

There's no single point of entry so data is being entered in multiple places by each department. Not only does this mean theirs redundancy, but there's a greater chance of errors. Reconciliation is a challenge.

Documentation processes

It's a challenge to document processes and procedures, get approvals and share with impacted areas of the organization in a timely manner.

Some core processes are manual

As automation is being introduced, processes that are considered to be quick-wins are the first to be addressed. Core processes that are frequently repeated but don't seem to have a lot of stress on the team may be overlooked.

Next steps

With more integration between accounting and other departments, there is greater visibility across the company which allows for more opportunity to optimize processes with automation.

4. Optimized

3. Managed

2. Reactive

1. Initial

Stage 4: Optimized

One central area for all businesses

In the "Optimized" stage, the upstream oil and gas accounting department, as well as other areas of the organization, are integrated from both a business process and data perspective. With the availability of data, time, and resources, the organization can make better decisions and adapt quickly as processes are documented and standardized, and data is readily available and visible through easy-to-use dashboards.

Characteristics of the optimized stage

Master data is managed in a single system with transaction data flowing from the field through financials, and is never out of sync. Data is consistent across the entire business.

The same number of wells exist in all systems so there aren't differences in operated wells between production, reserves, accounting, land, etc.

Teams are reviewing processes on a regular basis to ensure accuracy and identifying time-intensive processes that could be improved.

People, processes, and technology are all working in harmony, as much as possible.

Software and a process governance model is in place to ensure consistency.

Business processes are documented and automated to a high degree, manual steps are reduced, and spreadsheets are no longer used as a system for processing or data storage.

Ownership is managed in one location and is tied to the lease and contracts.

Metrics around the processes are captured, including how often a process is run, how long in total, how many individual steps, the number of users, etc.

Accounting can close on time because all processes are automated. Now, more time can be spent on analysis and researching odd ownership changes.

Business objectives are written with overall targets. For example, closing revenue by the fourth business day of the month, revenue accruals within 3% of actuals, less than 25% of the transactions are PPAs, etc.

Where does your organization stand?

This evolution model provides a framework for understanding and building an efficient and best-in-class oil and gas accounting department and organization.

Instead of simply incurring a pass/fail, this evolution provides a practical, staged approach to help you establish clear short- and long-term goals that drive efficiencies in your accounting operations.

Do you want to understand how your accounting department can evolve into the next stage to improve lease operating expenses and drive better outcomes?

Visit
        to learn more.

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