

What the latest research adds.

Pilot details, operating foundations and lessons from how companies buy and use AI.

This companion contains 21 new or updated research notes. Each one separates what the source establishes from what remains unknown. It supplements the main report; it does not add 21 AI deployments to the register.

Read these three distinctions carefully.

- Operating use versus a plan.
- A saving versus net return.
- A publication date versus the period measured.

Open the interactive research and source previews

Main disclosure window: October 2024-October 2026. Historical, adjacent-industry and non-AI technology cases are labeled. Performance is source-reported, not independently validated. This is targeted public-source research, not an exhaustive census.

Find the evidence that matters to you.

COMPANY	WHAT TO READ	TYPE OF EVIDENCE
Ascent Resources	Ascent connects leak inspections with an emissions-data workflow.	Operating technology
Bison Oil & Gas IV	Bison rechecked emissions assumptions against field measurements.	Plan / collaboration
Occidental	Oxy tested whether cameras could help identify construction hazards.	Plan / collaboration
Society of Petroleum Engineers	SPE found that some customers wanted its content more than another AI service.	Lead / lesson / source check
ConocoPhillips	ConocoPhillips reported drilling savings from a model built with engineers.	Historical case / source
Convergent Energy and Power	Convergent shows what it takes to run an optimizer around the clock.	Adjacent industry
Seatrium	Seatrium is working with PhysicsX on engineering decisions.	Plan / collaboration
Oceaneering	Oceaneering changed how employees learn to use AI.	Lead / lesson / source check
KODA Resources	KODA connected old field equipment before adding more software.	Historical case / source
Seatrium	Seatrium planned field twins after testing Petrobras FPSO models.	Plan / collaboration
Seatrium	A separate Seatrium program will test designs with AI.	Plan / collaboration
Energy Capital Partners	ECP's latest report discusses AI demand, rather than a new operating tool.	Lead / lesson / source check
Warburg Pincus	Warburg added a GenAI adviser, but names no energy workflow here.	Lead / lesson / source check
ExxonMobil	The Exxon gas-lift case has a direct conference-paper reference.	Historical case / source
Gulfport Energy	Gulfport's older GIS case is a useful reminder to fix the field workflow.	Historical case / source
Rockcliff Energy (historical)	Rockcliff's legacy drilling case links at-bit data to a design change.	Historical case / source
Rockcliff Energy (historical)	Rockcliff engineers described how live completion data changed their work.	Historical case / source
Ascent Resources	SLB also names Ascent in an at-bit data case, without dating it.	Lead / lesson / source check
Presidio Production	DOUG points engineers toward underperforming wells.	Operating technology
Presidio Production	Presidio describes a broader program than surveillance.	Plan / collaboration
Presidio Production	Presidio's own disclosures need reconciliation.	Lead / lesson / source check

Ascent connects leak inspections with an emissions-data workflow.

Operator-reported monitoring workflow / not AI

WHAT THE SOURCE DESCRIBES

Certified technicians inspect operated pads with FLIR cameras. Quarterly helicopter LiDAR adds detection, location and quantification data. Ascent says the data help check operating practices and its near-real-time emissions tracking.

WHAT WAS MEASURED

For calendar 2024: 862 pad-level surveys, 237,475 components inspected, a reported 0.08% leak-detection rate and 78% of leaks repaired the same day. The report describes 223 operated pads and counting.

WHAT WE CANNOT CONCLUDE

This is operating technology and data context, not a disclosed AI initiative. Calendar 2024 extends before the main disclosure window; these are not October 2026 measurements. Software architecture, costs and independently validated impact are missing.

WHAT TO ASK NEXT

How are inspection findings joined to well records and work orders, and who checks that repairs are complete?

ORIGINAL SOURCES / CLICK TO OPEN

1. Ascent Resources 2024 Sustainability Report

Published 2025-07-23; reporting year 2024

2. Ascent Resources releases 2024 Sustainability Report

2025-07-23

Read the full source locators, access notes and related records online

Bison rechecked emissions assumptions against field measurements.

Data review operating / software use planned / projection

WHAT THE SOURCE DESCRIBES

In early 2025, its air team reviewed heater runtime, engine load and equipment efficiency using vendor data and metered readings. It evaluated reduction options and described plans to use Validere for current and projected emissions intensity.

WHAT WAS MEASURED

The June 2025 sponsor report projects 2025 GHG intensity below a 10.94 mtCO2e/kBOE target. It does not report the realized full-year result.

WHAT WE CANNOT CONCLUDE

The projection reflects data corrections and multiple operating initiatives. It is not an AI result or a measured Validere benefit. Planned use of the software does not establish deployment scope or timing. Costs and software coverage are undisclosed.

WHAT TO ASK NEXT

What did the realized inventory show, and when did the software become part of the reporting process?

ORIGINAL SOURCES / CLICK TO OPEN

- 1. Quantum Capital Group 2025 Stakeholder Report
- 2. Emissions Management Software for Air & GHG

2025-06 (report file/version date)

Undated; observed 2026-10-09

Read the full source locators, access notes and related records online

Occidental / Construction safety

Oxy tested whether cameras could help identify construction hazards.

Two-phase pilot / later outcome unknown

WHAT THE SOURCE DESCRIBES

An SPE event description reports a two-phase pilot at a Permian oil-processing construction site. Video observations were categorized in a dashboard for operations teams. The second phase explored sites with limited communications.

WHAT WAS MEASURED

Phase one is described as having high accuracy, without a percentage, sample or false-alert rate.

WHAT WE CANNOT CONCLUDE

No injury reduction, rollout scale, cost or phase-two outcome is supplied. The linked recording returned a different event, so the talk was not verified. This is evidence of a pilot and a connectivity question, not proof of success at scale or failure.

WHAT TO ASK NEXT

Did the low-connectivity version work, and how did crews respond to false alerts?

ORIGINAL SOURCES / CLICK TO OPEN

1. Identifying Construction Hazards with AI Vision - Lessons Learned, SPE Research and Development Technical Section event page

Event scheduled 2025-10-23, 10:00-11:00 CT

Read the full source locators, access notes and related records online

Society of Petroleum Engineers / Technical knowledge & product strategy

SPE found that some customers wanted its content more than another AI service.

Reported commercial lesson / product remains available

WHAT THE SOURCE DESCRIBES

SPE reported that companies with foundation models or internal tools preferred access to OnePetro content over a standalone EnRG-LLM service. EnRG-LLM remained available for licensing.

WHAT WAS MEASURED

No customer count, conversion rate, revenue, cost or comparative outcome is disclosed.

WHAT WE CANNOT CONCLUDE

This is a reported product-strategy adjustment, not an abandoned product or failed oilfield deployment. It suggests a question about integration and trusted content; it does not establish an industry-wide buying preference.

WHAT TO ASK NEXT

Would users rather access licensed technical content inside tools they already use?

ORIGINAL SOURCES / CLICK TO OPEN

1. SPE/JPT: Industry executives discuss modern AI models

10 September 2026

Read the full source locators, access notes and related records online

ConocoPhillips / Drilling & motor reliability

ConocoPhillips reported drilling savings from a model built with engineers.

Historical company-reported test results / 2023

WHAT THE SOURCE DESCRIBES

Its 2023 Eagle Ford account describes a program begun in 2020 to predict motor failures and improve vertical drilling speed. Engineers, analysts and IT teams worked together on the data and operating parameters.

WHAT WAS MEASURED

Company-reported: more than \$3 million saved, about \$30,000 per well; 65% fewer premature motor failures during tests and 20% higher vertical penetration rate.

WHAT WE CANNOT CONCLUDE

Historical, outside the main window. Costs and a controlled baseline are missing, so this is not net ROI. The 116-well model-training dataset is not a disclosed savings cohort. Real-time cloud and closed-loop control were plans or trials in that source.

WHAT TO ASK NEXT

Which recommendations persisted in regular rig use, and what did support and maintenance cost?

ORIGINAL SOURCES / CLICK TO OPEN

1. How ConocoPhillips is leveraging data to optimize its Lower 48 operations

2023-08-09

Read the full source locators, access notes and related records online

Convergent Energy and Power / Power & storage dispatch

Convergent shows what it takes to run an optimizer around the clock.

Company-reported operating use / adjacent industry

WHAT THE SOURCE DESCRIBES

PEAK IQ combines forecasts, tariffs, prices and battery conditions to choose when storage should charge or discharge. A remote control platform sits alongside a 24/7 operations center, field maintenance and data-science teams.

WHAT WAS MEASURED

Convergent claims up to 40% lower electricity bills with PEAK IQ. Its December 2024 article describes existing operations; current pages also claim more than 150 million data points analyzed per day.

WHAT WE CANNOT CONCLUDE

This is an adjacent power/storage case. The maximum bill-saving claim does not isolate AI from battery investment, tariffs and operating expertise. Data volume is not a financial result. Costs, customer denominator and dispatch approval boundaries are missing. Shell's named storage project is historical (2019); nearby aggregate savings cannot be assigned to Shell.

WHAT TO ASK NEXT

What does the optimizer add over a simpler dispatch rule, after battery and support costs?

ORIGINAL SOURCES / CLICK TO OPEN

1. PEAK IQ® Energy Storage Intelligence - Convergent	undated; current page carries 2025 copyright; accessed 2026-10-09
2. Energy Storage in Ontario - Convergent	undated; current page carries 2025 copyright; accessed 2026-10-09
3. Optimizing Energy Storage: How Operations Drives Maximum Value - Convergent	2024-12-19 2:57 PM (page timestamp)
4. Convergent - ECP portfolio profile	undated; accessed 2026-10-09

Read the full source locators, access notes and related records online

Seatrium / Engineering & design

Seatrium is working with PhysicsX on engineering decisions.

Named engineering collaboration / results not disclosed

WHAT THE SOURCE DESCRIBES

The 8 October announcement names a collaboration to apply physics AI to engineering design. Seatrium describes opportunities across project delivery, product development and lifecycle services.

WHAT WAS MEASURED

No project-specific cycle-time saving, cost, usage denominator or production result is supplied.

WHAT WE CANNOT CONCLUDE

An active collaboration is described, but no specific production workflow is established. NGP's investment in PhysicsX is a sponsor connection, not evidence that NGP runs the deployment. The separate S\$40 million A*STAR partnership must not be attributed to Seatrium.

WHAT TO ASK NEXT

Which design task is being tested, against what validation standard, and who signs off?

ORIGINAL SOURCES / CLICK TO OPEN

- 1. PhysicsX launches Asia-Pacific hub; names Seatrium collaboration
- 2. NGP Energy Transition portfolio

2026-10-08
undated current portfolio page; accessed 2026-10-09

Read the full source locators, access notes and related records online

Oceaneering changed how employees learn to use AI.

Reported training-program change / no operating failure established

WHAT THE SOURCE DESCRIBES

Its data executive told an SPE panel that the company ended its internal AI training program and uses vendor instruction and online resources instead.

WHAT WE CANNOT CONCLUDE

A change in training delivery is not evidence that an operating AI deployment failed or that the company stopped using AI. The source is firsthand panel reporting, without a company transcript.

WHAT WAS MEASURED

The report supplies no training cost, employee coverage or adoption outcome.

WHAT TO ASK NEXT

What learning support stays current, and how does the company check that staff can use the tools safely?

ORIGINAL SOURCES / CLICK TO OPEN

1. SPE/JPT: Industry executives discuss modern AI models

10 September 2026

Read the full source locators, access notes and related records online

KODA connected old field equipment before adding more software.

Historical operating data foundation / 2021 / not AI

WHAT THE SOURCE DESCRIBES

A 2021 vendor-authored case describes shared field data and mobile screens for KODA's Red Wash and Williston operations. It bridged legacy devices into a common data structure instead of replacing them all.

WHAT WAS MEASURED

The source reports a six-month implementation and roughly 300,000 tags. Red Wash had approximately 1,000 wells; that is asset context, not an AI deployment count.

WHAT WE CANNOT CONCLUDE

Historical digital infrastructure, outside the main window. No AI use, current system status, cash saving or complete project cost is established. KODA's current website identifies Quantum backing; that does not date the technology project.

WHAT TO ASK NEXT

Is the system still in use, and which decisions or models now depend on its data?

ORIGINAL SOURCES / CLICK TO OPEN

- 1. Digital transformation for 1,000 oil and natural gas wells
- 2. Ignition Customer Projects
- 3. KODA Resources

2021-04-30
Undated; observed 2026-10-09
Undated; observed 2026-10-09

Read the full source locators, access notes and related records online

Seatrium / Offshore engineering & digital twins

Seatrium planned field twins after testing Petrobras FPSO models.

Engineering R&D / field twins planned

WHAT THE SOURCE DESCRIBES

Its November 2024 release describes completed scaled-model tests and plans to develop twins for real-field scenarios. P-84 and P-85 are named future Santos Basin assets. AI and analytics appear in the broader research agenda.

WHAT WAS MEASURED

No AI-specific accuracy, operating result or financial return is reported.

WHAT WE CANNOT CONCLUDE

Completed physical testing does not establish a deployed AI twin or autonomous FPSO control. Petrobras is an asset customer here, not a confirmed beneficiary of a realized AI result.

WHAT TO ASK NEXT

Have the twins reached field use, and which predictions have been validated?

ORIGINAL SOURCES / CLICK TO OPEN

1. Seatrium and TCOMS: floating energy production assets

28 November 2024

Read the full source locators, access notes and related records online

Seatrium / Virtual testing & offshore wind

A separate Seatrium program will test designs with AI.

Research collaboration / adjacent offshore wind

WHAT THE SOURCE DESCRIBES

The May 2026 CATALYST collaboration with TCOMS and NUS AI Institute proposes virtual testing, motion forecasts and digital twins. Its initial Seatrium focus includes floating offshore wind.

WHAT WE CANNOT CONCLUDE

Research collaboration and MOU, with prospective benefits. This adjacent wind program is separate from the Petrobras FPSO work and the later PhysicsX collaboration. Do not count them as three proven operating AI systems.

WHAT WAS MEASURED

No realized time saving, deployed asset denominator or production outcome is supplied.

WHAT TO ASK NEXT

Which design or operating decision will the first validated tool support?

ORIGINAL SOURCES / CLICK TO OPEN

1. Seatrium, TCOMS and NUS AI Institute: CATALYST

19 May 2026

Read the full source locators, access notes and related records online

Energy Capital Partners / Research coverage

ECP's latest report discusses AI demand, rather than a new operating tool.

Completed report text screen / no new internal deployment substantiated

WHAT THE SOURCE DESCRIBES

The AI discussion in ECP's 50-page report concerns demand for power and digital infrastructure. It does not establish a new internal AI deployment. Convergent's separate product sources describe its optimizer.

WHAT WAS MEASURED

Firm-overview data default to March 2026; the weighted EBITDA-growth calculation uses a December 2025 boundary. Neither is an AI adoption measure.

WHAT WE CANNOT CONCLUDE

A text screen of this report does not show that ECP's portfolio lacks AI. Not every figure was visually checked. Data-center demand and financial growth must not be counted as internal AI deployments or AI returns.

WHAT TO ASK NEXT

Which portfolio companies disclose named tools, operating users and measured results?

ORIGINAL SOURCES / CLICK TO OPEN

1. ECP 2025 Responsible Investing Report	2025 report; exact publication day unknown
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Read the full source locators, access notes and related records online

Warburg Pincus / Portfolio value creation

Warburg added a GenAI adviser, but names no energy workflow here.

Sponsor advisory capability / operating case not named

WHAT THE SOURCE DESCRIBES

The May 2025 appointment gives SK Sharma a remit to help evaluate investments and advise portfolio companies on GenAI value creation.

WHAT WE CANNOT CONCLUDE

Sponsor capability evidence only. The appointment does not establish an operating AI project at an energy portfolio company.

WHAT WAS MEASURED

No energy-company user, tool, deployment scale, cost or result is supplied.

WHAT TO ASK NEXT

Which energy company has used this support, for what job and with what result?

ORIGINAL SOURCES / CLICK TO OPEN

1. SK Sharma Joins Warburg Pincus as Senior Advisor

2025-05-28

Read the full source locators, access notes and related records online

ExxonMobil / Artificial lift / source trail

The Exxon gas-lift case has a direct conference-paper reference.

Existing case / historical abstract / source reference

WHAT THE SOURCE DESCRIBES

The operator-authored SPE abstract is another route to the existing 1,300-plus-well Permian case. It describes remote tests, data quality checks and model-based uplift tracking.

WHAT WAS MEASURED

The abstract's approximately 2% average oil uplift is already in AI-235. It is not a new result or another deployment.

WHAT WE CANNOT CONCLUDE

The paper dates to August 2024, before the main window; later JPT coverage is separately dated. Only the abstract was available to the agent; the editor's direct recheck returned 403. Full methods, costs and eligible-well population remain unavailable.

WHAT TO ASK NEXT

Can we obtain the full paper and the deployment's later operating and support record?

ORIGINAL SOURCES / CLICK TO OPEN

1. Gas Lift Optimization in the Permian Using Machine Learning and Artificial Intelligence (SPE 219553-MS)

2024-08-19

Read the full source locators, access notes and related records online

Gulfport Energy / Field forms, GIS & water

Gulfport's older GIS case is a useful reminder to fix the field workflow.

Historical operator-attributed digital workflow / 2018 / not AI

WHAT THE SOURCE DESCRIBES

Mobile forms and maps supported pad siting, waterline rights-of-way and sump-pump inspections. Field staff could send water-quality data to the office instead of relying on paper forms and some outside collection services.

WHAT WAS MEASURED

A 2018 vendor case describes nearly 270 well-pad sites and quotes Gulfport's GIS manager attributing at least \$2 million of first-year cost reduction to GIS technology.

WHAT WE CANNOT CONCLUDE

Historical software use, not AI or a current deployment confirmation. Savings are not allocated to an individual app. Existing ArcGIS access covered the apps, but enterprise, configuration and labor costs are not disclosed.

WHAT TO ASK NEXT

Which of these processes remain in use, and where do staff still re-enter or reconcile data?

ORIGINAL SOURCES / CLICK TO OPEN

1. Apps Are the New Workflows: Gulfport Energy Saves Time and Money with ArcGIS Apps for Field Data Collection
- 2018 copyright; exact publication day unknown
2. Daily Automated Mobile Data Collection Reporting (Petroleum User Conference 2018 paper)
- 2018 conference material

Read the full source locators, access notes and related records online

Rockcliff Energy (historical) / Drilling & bit design

Rockcliff's legacy drilling case links at-bit data to a design change.

Historical supplier-reported application / 2021

WHAT THE SOURCE DESCRIBES

SLB reported that Synapse measurements informed a bit-design workflow for a Haynesville application. The redesigned bit was compared with a nearby offset.

WHAT WE CANNOT CONCLUDE

Historical supplier comparison, with no full project cost, controlled trial or independently validated return. It does not establish AI use. The current Rockcliff Energy III entity was formed in 2024; continuity with the legacy operator is not established.

WHAT WAS MEASURED

Supplier-reported in April 2021: 69% higher penetration rate, more than 40 hours saved and 55% lower vibration in the cited application.

WHAT TO ASK NEXT

Can the operator confirm the comparison and whether the data-to-design workflow is still used?

ORIGINAL SOURCES / CLICK TO OPEN

- 1. Schlumberger Announces First-Quarter 2021 Results
- 2. Rockcliff Energy

2021-04-23

Undated; observed 2026-10-09

Read the full source locators, access notes and related records online

Rockcliff Energy (historical) / Completions & wireline

Rockcliff engineers described how live completion data changed their work.

Historical operator/vendor workflow / August 2020 / AI not established

WHAT THE SOURCE DESCRIBES

A 2020 operator/vendor account describes cloud monitoring of frac and wireline activity, chemical set points, pressure response and pad progress. Wireline traces helped investigate a lost gun string.

WHAT WAS MEASURED

No quantified savings, software coverage or later operating status is supplied.

WHAT WE CANNOT CONCLUDE

Historical analytics workflow, not an established AI project. The account is coauthored by Rockcliff and Corva engineers. It cannot be assigned to the current Rockcliff Energy III without evidence of entity continuity.

WHAT TO ASK NEXT

Which recommendations became standard practice, and how were their effects measured?

ORIGINAL SOURCES / CLICK TO OPEN

1. Data Mining Technology Helps Haynesville Operator Optimize Completion Design

2020-08

Read the full source locators, access notes and related records online

SLB also names Ascent in an at-bit data case, without dating it.

Undated supplier case / AI use not established

WHAT THE SOURCE DESCRIBES

The supplier describes joint analysis of at-bit, surface and formation data to change drilling recommendations on subsequent pad runs.

WHAT WE CANNOT CONCLUDE

The page is undated and does not identify the exact subsidiary or a confirmed current deployment. It cannot establish an in-window rollout. Data-informed drilling and bit design do not by themselves prove AI use.

WHAT WAS MEASURED

Three similar wells with roughly 7,300-foot intervals are described; no quantified saving or AI-specific result is established.

WHAT TO ASK NEXT

When did the work take place, and what changed relative to comparable drilling runs?

ORIGINAL SOURCES / CLICK TO OPEN

1. Ascent uses at-bit data, improves drilling efficiency and performance while reducing bit damage

Undated; observed 2026-10-09

Read the full source locators, access notes and related records online

Presidio Production / Production surveillance

DOUG points engineers toward underperforming wells.

Company-reported operating use

WHAT THE SOURCE DESCRIBES

The agent monitors well data, flags deviations and routes recommendations to the responsible field engineer. The August 17 filed deck says its surveillance tool is deployed to all operators and engineers, without a user count.

WHAT WAS MEASURED

Management reports ~400 boe/d incremental over three months and 1.4 percentage points of uplift.

WHAT WE CANNOT CONCLUDE

Company reported. The stated 400 boe/d does not directly reconcile with 1.4% of stated company production; the denominator and attribution method are missing.

WHAT TO ASK NEXT

What baseline and event log establish the production recovered after an alert?

ORIGINAL SOURCES / CLICK TO OPEN

1. Presidio Q2 prepared earnings remarks	12 August 2026
2. Presidio filed investor presentation	17 August 2026

Read the full source locators, access notes and related records online

Presidio Production / Budgeting, acquisitions & lift

Presidio describes a broader program than surveillance.

Mixed current capability / roadmap

WHAT THE SOURCE DESCRIBES

The presentation includes budget agents, automatic M&A screening, a lease-level pumper knowledge base and broader lift and decline optimization.

WHAT WE CANNOT CONCLUDE

Slide 21 separates NOW from 2026 AI DEPLOYMENT; slide 23 is headed GOAL. Do not infer completed fleet-wide autonomous control from the future-state language.

WHAT WAS MEASURED

Its 3-5% uplift remains a goal; \$2.5m revenue per 1% uplift at \$30/boe is an illustrative sensitivity.

WHAT TO ASK NEXT

Which tools are live, who uses them and what approvals remain?

ORIGINAL SOURCES / CLICK TO OPEN

1. Presidio current IR-linked presentation

August 2026 presentation; filed 17 August 2026

Read the full source locators, access notes and related records online

Presidio's own disclosures need reconciliation.

Conflicting disclosure / costs missing

WHAT THE SOURCE DESCRIBES

The August 11 release says ~1% uplift. The August 12 call says 2.3%, with \$4.5m annualized revenue across AI initiatives.

WHAT WE CANNOT CONCLUDE

Do not silently merge these populations or dates. Revenue is not net cash or ROI. The presentation's no-capex language and no-new-drilling goal do not disclose software, controllers, staff or support costs. Workover returns and acquisition cost cuts are not wholly attributable to AI.

WHAT WAS MEASURED

The call describes ~2,000 platform wells. The deck describes a >2,300-well asset base and uses ~2,300 platform wells on its GOAL slide; full-fleet agentic orchestration remains a target.

WHAT TO ASK NEXT

Can management reconcile the baselines, populations, measurement dates and full project costs?

ORIGINAL SOURCES / CLICK TO OPEN

1. Presidio Q2 prepared earnings remarks	12 August 2026
2. Q2 issuer release	11 August 2026
3. Q2 presentation	August 2026; filed 17 August 2026

Read the full source locators, access notes and related records online