

CASE STUDY

Automating Finance & ERP Reconciliation for Premier Petroleum

How CTC eliminated manual back-office bottlenecks with an end-to-end AI-powered document extraction and automation platform — cutting processing time and freeing operations teams to focus on growth.

<p>Industry Petroleum Distribution</p>	<p>Project Type AI Extraction + RPA + Dashboarding</p>	<p>Systems QuickBooks · ERP · Dashboard</p>	<p>Delivered by CTC — Atlanta, GA</p>
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Executive Summary

Premier Petroleum was managing critical finance and operations workflows through manual effort — spreadsheets, copy-paste between QuickBooks and their ERP, and ad-hoc email chains to resolve exceptions. Every incoming document — BOLs, invoices, trip tickets, and driver tickets — required an employee to manually read, interpret, and key data into their systems. The process was slow, error-prone, and impossible to scale.

CTC designed and delivered a fully automated, end-to-end AI document extraction and reconciliation platform. The system reads incoming documents, intelligently extracts all critical data fields — including handwritten information — and maps that data directly into QuickBooks and the ERP system, with a structured exception workflow and a real-time operations dashboard.

<p>AT A GLANCE</p> <p>Challenge Manual document processing & ERP reconciliation causing delays and errors</p> <p>Solution AI extraction + end-to-end automation with exception handling</p> <p>Timeline 8 – 12 Weeks</p> <p>Stack Serverless, QuickBooks API, ERP connectors, Dashboard</p>	<p>TECHNOLOGIES USED</p> <ul style="list-style-type: none"> • AI Document Extraction (OCR + LLM) • Handwriting Recognition • QuickBooks API Integration • ERP Connector Layer • Serverless Backend Functions • Exception Workflow Engine • REST API + Operations Dashboard
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What the AI Extracts from Every Document

The AI engine identifies the document type automatically and extracts all relevant fields — including handwritten entries on driver tickets and trip tickets. Every field below is captured, validated, and mapped directly into the appropriate system with no manual keying required.

BOL # BOL Number Bill of Lading number for tracking and audit trail	CUST Customer Name Full customer name and account identifier	TERM Terminal Terminal name, location, and terminal code
PROD Products / Grade Fuel grade, product type, and commodity class	INV # Invoice Number Invoice ID for billing matching and reconciliation	CARR Carrier Carrier name, DOT number, and vehicle information
VOL Volume / Quantity Net gallons, gross gallons, and unit of measure	AMT Invoice Amount Total invoice value and all line-item amounts	DATE Delivery Date Date of delivery or transaction date
HW Handwritten Fields Handwritten quantities, signatures, and field notes	ROUTE Route / Location Delivery address, route number, and region	PO # PO Number Purchase order reference for cross-matching

[HW] Handwriting Recognition Included: Our AI handles handwritten fields on driver tickets and trip tickets — including quantities, signatures, odometer readings, and field notes — with the same accuracy as printed documents.

Solution Architecture

The platform is built as a modular, event-driven pipeline. Each stage is independently scalable and monitored, with automatic routing between standard and exception paths.

01 INGEST	02 EXTRACT	03 VALIDATE	04 ROUTE	05 SYNC	06 DASHBOARD
Email, upload, fax, or scan	OCR + LLM field extraction	Field checks & confidence scoring	Standard path or exception queue	QuickBooks + ERP data mapping	Real-time status & audit trail

EXCEPTION PATH: Any document where the AI confidence score falls below threshold — or where field values conflict — is automatically routed to a structured manual review queue. Reviewers see the original

document alongside the extracted fields, correct as needed, and the corrected data flows into the system with full audit history.

Documents Processed

The AI engine handles any logistics document Premier Petroleum receives or generates — printed or handwritten:

Bills of Lading (BOLs) Primary shipping document — terminal, carrier, product, and volume data	Invoices Vendor and carrier invoices matched to BOL and PO records
Trip Tickets Driver trip records including route, mileage, and delivery details	Driver Tickets Field-completed tickets — including handwritten entries
Proof of Delivery (PODs) Delivery confirmations with customer signatures	Rate Confirmations Carrier rate agreements matched to shipments

The Problem

Manual Data Entry	Staff manually read every BOL, invoice, and driver ticket and typed data into QuickBooks and the ERP — consuming hours per day with no scalability.
No Exception Workflow	Edge cases were handled informally via email with no audit trail, ownership, or resolution tracking.
Zero Visibility	Leadership had no real-time view of processing status, backlog size, or failure rates.
Handwriting Bottleneck	Handwritten driver tickets required dedicated staff time to decipher and enter — creating a daily backlog and frequent errors.

Results & Business Impact

75%+ Reduction in Manual Processing	60% Faster Job Turnaround Time	50% Fewer Errors & Rework Loops	100% Real-Time Job Visibility
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✓ Teams shifted from data entry to exception-based decision making

✓ Handwritten driver tickets now processed automatically

✓ Finance and operations coordination improved through shared real-time status

✓ Leadership gained instant visibility into backlog, bottlenecks, and health

✓ BOL, invoice, and ERP records reconciled automatically — billing delays eliminated

✓ Scalable process foundation without adding back-office headcount

"The automation platform completely changed how our back office operates. What used to take our team hours every day now happens automatically — and it even handles the handwritten tickets our drivers fill out in the field."

— Operations Leadership, Premier Petroleum

Ready to Automate Your Document Processing?

CTC helps petroleum distributors, trucking companies, and logistics operators eliminate manual document processing using AI. Book a 30-minute demo to see how it works for your operation.

[Book a Demo](#)