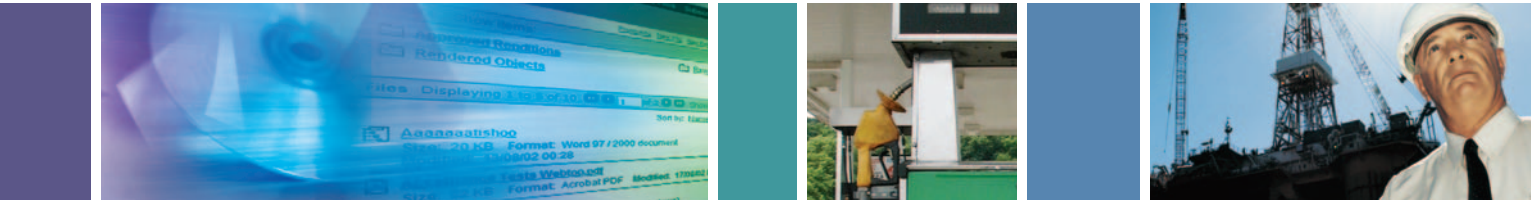


industry solutions



**Documentum Solutions for the Oil and Gas Industry**

**Documentum—Leveraging Content for the Global Energy Enterprise**

The steadily growing worldwide demand for energy is driving today’s oil and gas companies to search for cost-effective ways to boost production amidst heightened regulatory pressure, fierce competition for capital, and enormous volumes of geological and exploratory data. These organizations need technology solutions that can be applied across the content value chain—upstream and downstream—to reduce finding and development (F&D) costs, increase recovery from old wells, boost plant efficiency, and streamline compliance.

**1: Field Exploration and Development**

**2: Refining, Supply, and Distribution**

**3: Marketing, Sales, and Customer Service**

**4: Business Operations and Corporate Administration**

**SOLUTIONS**

- > Field Data Collection and Management
- > Wellsite and Facility Management
- > Engineering Standards and Procedures
- > Quality Specification Management
- > EH&S Standards and Procedures
- > Project Document Management

**SOLUTIONS**

- > Bid and Proposal Management
- > Engineering, Plant, and Facility Management
- > SOP Management
- > Quality Specification Management
- > Contract Management
- > EH&S Standards and Procedures Manuals and Training
- > Division Orders; Land Records Management

**SOLUTIONS**

- > Corporate Identity and Communications Management
- > Website Management
- > Customer Portal
- > Call Center Support
- > Distributor Portal

**SOLUTIONS**

- > Contract Management
- > Corporate Intranet
- > AP/AR Processing
- > Employee Records Management
- > Financial Regulatory Compliance

*The graphic above illustrates the ability of enterprise content management to integrate the content value chain across the primary functional areas of an oil and gas company.*

**Highlights**

- Enables efficient wellsite and downstream facility operations
- Supports effective collaboration throughout the supply chain
- Facilitates consolidated production data reporting
- Reduces product cycle time
- Ensures compliance with EH&S regulations

**Documentum—Up to the Challenge**

The content value chain describes how essential processes are related in an organization and how content moves and is used across those processes. And in every area of the oil and gas content value chain, Documentum improves decision making, streamlines collaboration, helps ensure compliance, improves safety, and increases plant efficiency.

In fact, for every content management challenge an oil and gas company faces, Documentum provides a solution. And with our standards-based platform and world-class partner integrations, the

opportunities to leverage Documentum throughout your organization are virtually unlimited. Documentum can help you exploit the natural relationships between content and processes that start in exploration and extend all the way through purchasing and refining to marketing and business operations—which means your business becomes more agile, more responsive, and more competitive.

On the following pages, we profile solutions that illustrate the varied ways in which Documentum is used in every area of organizations in the oil and gas industry.

Every major energy and petroleum company in the world has a digital oilfield initiative. It's all about precise analytical information, integrated across databases and applications, delivered to the user in real time.

### Documentum Solutions for the Oil and Gas Industry

*As oil and gas companies balance aggressive exploration and production agendas with the need to control costs and ensure regulatory compliance, they are pressed to find integrated solutions for optimizing their content value chains. Increasingly, these companies are turning to Documentum whose breadth of experience and market leadership in enterprise content management are second to none. The following solutions demonstrate the expertise Documentum can bring to the business of an oil and gas enterprise.*

#### Field Exploration and Development

- Field Data Collection and Management
- Wellsite and Facility Management
- Engineering Standards and Procedures
- Quality Specification Management
- EH&S Standards and Procedures
- Collaboration
- Knowledge Sharing
- Patent Management
- IP Management

#### Refining, Supply, and Distribution

- Bid and Proposal Management
- Engineering, Plant, and Facility Management
- Quality Specification Management
- SOP Management
- Engineering Change Management
- Exceptions Management (SAP)
- RFP/RFQ Management
- Partner Portal
- EH&S Standards and Procedures
- Manuals and Training
- Regulatory Compliance
- Division Orders and Land Records Management

#### Marketing, Sales, and Customer Service

- Corporate Identity and Communications Management
- Website Management
- Customer Portal
- Distributor Portal
- Technical Publications
- E-learning/E-training
- Contract Management

#### Business Operations and Corporate Administration

- Contract Management
- Regulatory Submissions
- Facilities and Land Asset Management
- Accounts Payable and Accounts Receivable Processing
- Corporate Portal
- Supplier Extranet
- E-learning/E-training
- Knowledge Management
- Employee Records Management
- Financial, Legal, Human Resources Compliance
- Correspondence Management
- IT Project Management

*Choosing where to drill for oil is a multimillion dollar decision. Getting a unified view of all your predictive data can mean the difference between a direct hit and a very expensive mistake.*



**Field Exploration and Development:** *Not only can integrating data stores reduce finding and drilling costs, it can also shorten the time between collection and reporting of production data. That means problems can be identified and solved more quickly, boosting well performance and increasing revenue.*

1: Field Exploration and Development

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## Solution: Project Document Management

### Anadarko Algeria

*“With the average project using 400,000 documents, document management is a significant component of oil and gas exploration and production. With Documentum, we can do it faster, more accurately, and more reliably—and that goes right to the bottom line.”*

**Gus Nodwell, Application Development Manager, Anadarko Algeria Company**

*Anadarko Algeria Company, the U.K. subsidiary of the Anadarko Petroleum Corporation, is the London office of one of the world’s major independent oil and gas exploration and production companies. Anadarko is the eleventh largest publicly traded oil and gas company in the world, with assets of more than \$20 billion. The Anadarko U.K. office supports operations in North Africa, West Africa, the Middle East, and the North Atlantic.*

#### Challenge

For Anadarko Algeria a typical exploration or production project involves 400,000 documents that include AutoCAD drawings, technical specifications, contracts, and correspondence. Many of these documents are created and held by contractors who turn them in to the company at a project’s conclusion. It was not unusual for Anadarko to receive actual truckloads of paper documents that needed to be managed and stored. With multiple projects underway simultaneously around the world, the sheer volume of documents proved difficult to handle. But even more significant in the long term was the company’s inability to effectively identify and control multiple document versions or enable efficient sharing and search.

#### Solution

The company decided on an electronic document management solution using Documentum. Now Documentum is the repository for all project documents. Contractors transfer documents to Anadarko with metadata that can be easily mapped to an existing repository. Employees can search for and retrieve documents from any Anadarko location and contractors are given secure remote access to the system as needed. All docu-

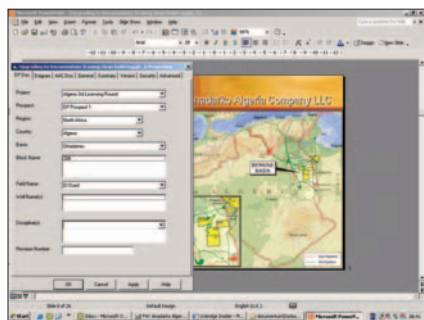
ments are subject to Documentum version control. Workflow and lifecycle management are also applied to selected documents.

#### Results

Anadarko stores hundreds of thousands of documents in Documentum, all of which are easily and quickly accessible. Project-related Documentum implementations are integrated seamlessly with distribution methods such as fax, e-mail, and secure access systems. This integration considerably shortens the project review and approval cycle and lowers administrative costs in projects whose total cost averages between \$500 million and \$1 billion. While dramatically reducing the time and expense associated with document management, Documentum has given Anadarko greater confidence in the security, reliability, and accuracy of its documents.

#### Recommended Product Suite

- Documentum Content Server
- Documentum Webtop
- Documentum Business Process Services
- Documentum Business Process Manager
- Documentum Trusted Content Services



*For Anadarko, Documentum lowers administrative costs and shortens project cycle time.*



**Refining, Supply, and Distribution:** *It's the downstream industry's mantra: "Drive down costs and unpredictability. Maximize operational efficiency." But how? Every global oil and gas company has to be a local supplier in dozens of locations, accommodating different languages and cultures. The key is repeatable systems that access the same information, in the same way, wherever they are deployed.*

1: Field Exploration and Development

2: Refining, Supply, and Distribution

3: Marketing, Sales, and Customer Service

4: Business Operations and Corporate Administration

## Solution: Division Orders and Land Records Management

### Plains All American Pipeline

*"Documentum handles an enormous volume of documents for our division orders and land records systems. We turned to Documentum for a robust, enterprise solution that we can also extend to other departments within the company."*

*Tamra Brayer, Supervisor, Process Improvement, Plains All American Pipeline, L.P.*

Headquartered in Houston, Texas, Plains All American Pipeline, L.P. is one of the largest independent midstream crude oil companies in North America, handling over 2.4 million barrels per day of crude oil through an extensive network of assets located in key producing basins and transportation gateways in the United States and Canada. It gathers, markets, transports, terminals, and stores crude oil, liquefied petroleum gas, and other petroleum products.

**With Documentum, customer service agents can pull up any division order document while handling a phone inquiry.**

#### Challenge

Plains All American Pipeline processes a large number of division orders every day. These documents record the mineral-ownership rights to oil producing properties, most of which have multiple owners. There may be as many as 2,000 changes to division orders in a single day. Nearly 50 ancillary documents, such as powers-of-attorney, change-of-address forms, gas indemnification letters, and declaration of interest notices, are part of a division order file. A legacy mainframe system tracked changes to the orders, but the volume and complexity of their supporting documents demanded an electronic solution for access, management, and storage. The company deployed a document management system some years ago, but it needed a more robust enterprise content management solution that could also manage land records and be extended throughout the enterprise.

#### Solution

The company deployed Documentum and its integration with Captiva InputAccel for scanning and imaging. After being scanned into the Documentum repository, division orders and their related documents are moved by workflow to the appropriate division order analyst. In Land Records, the group uses a custom developed Visual

Basic client server application, which Documentum integrates on the backend. Documentum stores, organizes, and provides access to any documents, such as maps or geological reports, which are related to a specific land record. These documents had been stored in hard copy form in a basement storage room many floors away from the group's main work area.

#### Results

Documentum makes it faster and easier to search for and retrieve division orders and their associated documents. Not only do company analysts have access through Documentum, but customer service agents can pull up any division order document from their desktop while handling phone inquiries, thereby improving customer service. Documentum has created the same efficiencies for the Land Records group, which was managing and distributing all of its documents manually.

#### Recommended Product Suite

- Documentum Content Server
- Documentum Business Process Manager
- Documentum Business Process Services
- Documentum Records Manager
- Captiva InputAccel



**Marketing, Sales, and Customer Service:** *Streamlining information exchange between customers, procurement managers, suppliers, distributors, and a mobile sales force enables an efficient market. CRM and ERP applications can help coordinate these interactions, but they are most effective when seamlessly integrated with unstructured content from the wellhead to the retail station.*

1: Field Exploration and Development

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## Solution: Website Management

# A Global Oil and Gas Company

*“Once we deployed Documentum, it was obvious we’d made the right choice. The pilot group spread the word and then all the business groups were beating down the door. Documentum made Web publishing faster, easier, and more accurate.”*

**Project Lead, Website Control Initiative**

*This global energy and petrochemical company is the world’s largest nongovernmental producer of oil and gas. The company has proven reserves, including tar sands, of 22 billion oil-equivalent barrels. Its downstream activities include the refining and supply of petroleum products as well as the marketing of fuels under brands known the world over.*

**Documentum enabled the company to reduce its number of websites to five and saved \$500,000 annually in site maintenance.**

### Challenge

The company wanted its corporate website to serve a variety of consumer and business needs. For example, it wanted to provide a user-friendly front end to a searchable repository of product and material safety data sheets as well as a service station locator for travelers. Product groups wanted to present information on licensing the company’s technologies. And franchise operations wanted to create a clearinghouse for dealer opportunities. Nearly a hundred individual websites had been created to serve these purposes, with no central control and no brand standards. Previous attempts to force all content through the corporate site had resulted in exploding IT costs, slow publishing time, and information remaining on the site long past its shelf life.

### Solution

After trying unsuccessfully to build a custom Web content management solution, the company turned to Documentum. It created an organizational hierarchy for the corporate site that served the company’s primary business units: consumer products and services, business products and services, technical operations, and licensing. Custom templates were created with

embedded workflows that matched the business process of each group. Content owners could self publish with confidence that their information had been reviewed and approved by the appropriate experts and would be presented in accordance with brand standards.

### Results

Within six months of deploying Documentum, the company’s total number of websites had dropped from over a hundred to just five. In addition to the corporate site, four partner and supplier portals were brought under the control of Documentum. Publishing time for the corporate site dropped from an average of five weeks to three days. The company’s IT group, which had outsourced a significant portion of content updating and site maintenance, virtually eliminated contractor Web services, saving the company \$500,000 annually. In the future, the company intends to use Documentum ECM for a solution to store, control, and distribute thousands of documents related to large capital projects.

### Recommended Product Suite

- Documentum Content Server
- Documentum Site Caching Services
- Documentum Site Delivery Services
- Documentum Web Publisher

**Business Operations/Corporate Administration:** *In the back office, many oil and gas companies are still awash in enormous volumes of paper, which continue to grow at a staggering rate. With more rigorous compliance and disclosure requirements, far-flung plants, and global exploration activities, only a common content management platform can provide relief.*



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## Solution: Contract Management

# A Major State-Owned Oil Company

*“Documentum and its seamless integration with SAP have dramatically reduced the time it takes to create, review, approve, and monitor contracts. Plus, it provides fast, secure, on-demand access to any authorized user.”*

*Vice President, Corporate Services*

*Established in 1988, this state-owned company is the world's largest oil producing company. Its array of international subsidiaries and joint ventures, including one of the industry's largest and newest fleet of supertankers, deliver crude oil and refined products to customers worldwide.*

### Challenge

This company manages over two million pages of contracts that span fifty years and represent billions of dollars in revenue. With key input contributed by a wide variety of internal organizations, creating and reviewing new contracts was slow, tedious, and difficult to manage. Regulatory requirements were equally burdensome. Federal law dictates that the company store its contracts in a secured vault with limited access and keep them accessible for 15 years. The company wanted to create an electronic contract management solution that was integrated with SAP and would accelerate contract creation, review, and approval. It would also need to ease access across the organization while maintaining compliance with applicable storage regulations.

### Solution

With the implementation of Documentum, more than two million contracts were scanned into the Documentum repository. These contracts were complex documents that could include system specifications, materials standards, quality certifications, and photographs. New contract creation and review was simplified with Documentum workflow and version control, which manages the automated transfer of information between participants, tracks

document annotations, controls the review process in real time, ensures security, and uses standard e-mail to inform users of waiting tasks. The system is also easy to use—with only a half day of training, users are productive.

### Results

With Documentum, the company uses an efficient, automated process to create, review, and manage contracts. Contracts are completed more quickly, stored securely in the repository, and accessed on demand by authorized users. The solution is integrated with SAP, which enables easy follow up at every step in the process. A typical contract that took three to five months to complete now takes only one. The company is also using a Documentum-SAP solution that delivers a 30 percent reduction in invoice processing time. In the future, it will incorporate Documentum into its engineering project system, with projected savings of \$1.5 million per year.

### Recommended Product Suite

- Documentum Content Server
- Documentum Content Services for SAP
- Documentum Records Manager
- Documentum Trusted Content Services
- Documentum Content Storage Services

**Documentum enables an efficient, automated contract management process, which is smoothly integrated with SAP.**



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## Solution: Corporate Intranet

# Petro-Canada

*“Documentum makes our intranet a tremendous asset to the company. Our information gateway allows employees to find, update, and modify critical information quickly and easily. It makes our mobile workforce more productive and our partnerships more effective.”*

*John Matthews, Manager of Corporate and Financial Systems, Petro-Canada*

*Petro-Canada is one of the largest integrated oil and gas companies in Canada and a significant international player. The company explores for, develops, produces, and markets crude oil and natural gas, refines crude oil and other raw materials, and markets and distributes petroleum products and related goods and services.*



*Powered by Documentum, the Petro-Canada intranet supports more effective collaboration with the company's business partners and between its employees.*

### Challenge

Petro-Canada wanted to leverage its intranet to achieve greater communication efficiency, but only the IT group had the ability to update internal Web content. The company needed to empower business content owners to self publish and make more business-critical content available. For example, the company's Surface Land Contracts group had staff that traveled extensively to meet with landowners and renew oil rights leases, which were stored at the Calgary headquarters. When these employees were on the road, they could obtain copies of leases only by fax, and only after the hardcopy original had been located. The solution involved removing the IT bottleneck to Web publishing and making contracts available over the intranet, saving time and significantly increasing productivity.

### Solution

The company had been a customer of Documentum since 1997 and decided to extend its enterprise content management platform to support the intranet. Now all intranet content is housed in a central repository and business users can publish content easily using a simple template created by the IT group. Content is modified and deleted using the Documentum client suite and managed with version control. Much of

the content is safety related, including emergency response documents, standard operating procedures, and material safety data sheets. Approval and publication of SOPs is controlled by Documentum workflow to ensure accuracy.

### Results

Today, with the IT group no longer a bottleneck, the intranet has grown rapidly in size and value. Over 5,000 intranet users access more than one hundred internal websites. Petro-Canada has also made its intranet available to contract partners, such as engineering process control companies that create design documents for refineries. By enabling information sharing, Documentum helps Petro-Canada ensure that joint projects run more smoothly. With Documentum, Petro-Canada's intranet has also increased the speed with which employees can search for and find information. For example, employees of company-owned gas stations in remote locations can find the latest version of an SOP as quickly as someone in corporate headquarters.

### Recommended Product Suite

- Documentum Content Server
- Documentum Web Publisher
- Documentum Portal Integration Kit

## Documentum—The Solution of Choice for Companies in the Oil and Gas Industry

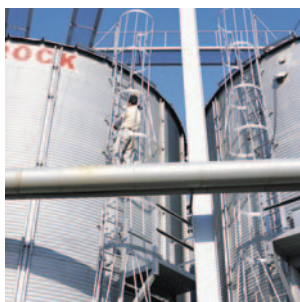
Upstream, oil and gas companies face huge F&D costs with no guarantee of return. Downstream, they must consistently lower refining costs to survive an often volatile commodity market. Continued success depends on improving predictive decision making and automating the business processes around each core activity—and that means leveraging every bit of intellectual capital from real-time geophysical data to market analysis and SOPs. That's why these organizations rely on Documentum. Award-winning Documentum solutions unite content and business processes from exploration and refining to marketing, sales, and corporate administration. When virtually all your content is business critical, there's no substitute for Documentum. To learn how Documentum can deliver improved business performance to your oil and gas enterprise, visit us online at [www.emc.com/documentum](http://www.emc.com/documentum) or call 1.800.607.9546 (outside the U.S.: +1.925.600.6754).

For more information about Documentum, visit [www.emc.com/documentum](http://www.emc.com/documentum) or call **800.607.9546** (outside the U.S.: +1.925.600.6754).

### About Documentum

Documentum, a division of EMC Corporation, provides enterprise content management (ECM) solutions that enable organizations to unite teams, content, and associated business processes. The Documentum set of integrated content, compliance, and collaboration solutions support the way people work, from initial discussion and planning through design, production, marketing, sales, service, and corporate administration. With a single platform, Documentum enables people to collaboratively create, manage, deliver, and archive the content that drives business

operations, from documents and discussions to e-mail, Web pages, records, and rich media. The Documentum platform makes it possible for companies to distribute all of this content in multiple languages, across internal and external systems, applications, and user communities. As a result, Documentum customers, which include thousands of the world's most successful organizations, harness corporate knowledge, accelerate time to market, increase customer satisfaction, enhance supply chain efficiencies, and reduce operating costs, improving their overall competitive advantage.



### A Partial List of Customers in the Oil and Gas Industry

Saudi Aramco	Texaco	Pemex
Irving Oil	Elf Exploration	Entergy Services
Sinopec Corporation	Fortum	Anonima Petroli Italiana
Petróleos de Venezuela	FMC Konsberg Subsea	Plains All American Pipeline
Institut Francais Du Pétrole	Korea Gas Corporation	BP Exploration Operation Company
Petrolera Ameriven	Kerr-McGee Corporation	EQUATE Petro Chemical
Kamigoto Oil Storage Company	British Petroleum	TotalFinaElf Exploration
Burlington Resources	Tesoro Petroleum Corporation	Union Carbide Corporation
Air Products & Chemicals	Union Oil Company of California	Czech Refinery Company
Kvaerner Oil & Gas	LG-Caltex Oil	Pride International
Anadarko Petroleum	Norsk Hydro	Reliance Petroleum
Petro-Canada	Soekor	Halliburton
		UOP

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