
Concordance and Federated Searching

The Benefits of Alacra's Process

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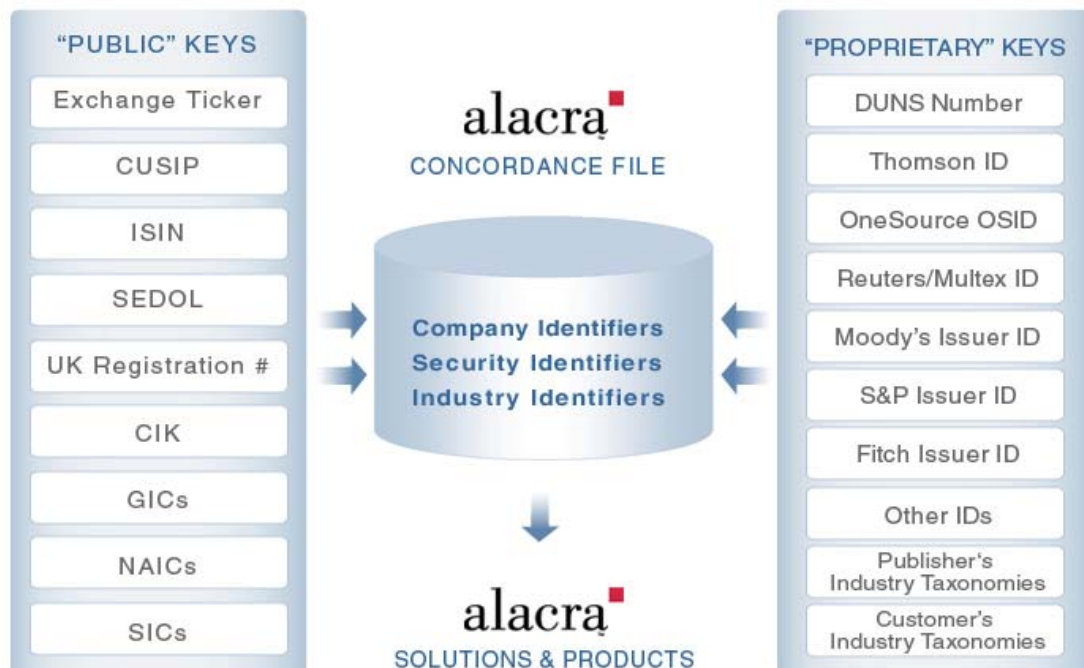
Overview

Alacra is constantly seeking innovative ways of enhancing our search results, especially when it relates to federated searching across a multitude of information provider databases. Finding the perfect balance between precision and recall enables us to provide the most relevant content to our clients. Alacra's approach to achieving this goal is through the integrated use of our propriety search algorithms and concordance methodologies which have been built, maintained, and tested by our experienced team of content analysts.

Alacra Concordance is the process of cross-referencing Alacra's authority files to the authority files of the numerous information providers available through our suite of products. This white paper illustrates how concordance (company/security, industry AND country), along with our proprietary search algorithms and syntax options, interact seamlessly to provide a comprehensive set of content via a single search interface. This unique approach to federated searching can save an organization countless hours in redundant work. It allows users to dedicate their limited time on the more crucial aspects of their research, such as relevancy analysis, and not the cumbersome task of navigating unfamiliar taxonomies and/or corporate authority files.

Alacra Concordance

When a content provider becomes part of Alacra's data warehouse, all company, security, industry, and geographical meta-data is thoroughly analyzed and cross-referenced to the corresponding authority files in Alacra; the linkages are then stored in their appropriate concordance maps. Cross-referencing guarantees search recall of all relevant content on a particular company, security or industry in our suite of databases. As part of our content acceptance process we employ rigorous quality control mechanisms, ensuring that Alacra's authority files and concordance are accurate and current.



Company / Security Authority Files

Alacra currently tracks over 46,000 global public companies, 50,000 equity securities and over 350,000 private companies in its corporate and security authority files. The corporate authority file contains the entity's primary contact information, former name history, as well as industry classification based on Alacra's taxonomy, SIC, NAICS, & GICS methodologies. If a company is publicly traded, it is linked to one or more security records containing an equity description, ticker symbol, exchange listing information, and various security identifiers (Cusip, Sedol, ISIN, CIK, etc.).

Company / Security Concordance

When Alacra performs corporate and security concordance, we cross-reference the information provider's unique corporate or security identifier (Cusip, Sedol, ISIN, Ticker, etc.) to Alacra's corporate and/or security authority files and store the linkage in our proprietary Company/Security Map platform. This platform enables Alacra to provide a single point access to corporate and/or security level information from a multitude of content providers. Alacra Concordance provides all the necessary keys to access all company/security related content or specific datasets that are used to populate company snapshots, tearsheets and portals.

The Alacra Company snapshot illustrates the integration of both Alacra's company/security files & concordance:

The Company/Security details are sourced by Alacra's master authority file.

The Reuters Identifier is used to access company financials from Reuters Fundamentals

S&P Issuer Identifier is used to source credit ratings from the S&P RatingsXpress Credit Research Database

Subsidiary information is sourced by Alacra's corporate authority file

The Edgar Charts security identifier is used to access and display stock chart

Reuters Identifier is used to provide the Reuters Fundamentals Business Description

Similarly, the TF Extel identifier is used to source and display the TF Extel Business Description

All premium database provider links are concorded via their respective identifiers. These identifiers unlock all company indexed content

Public Company Snapshot

Altria Group, Inc.
 120 Park Avenue
 New York, NY 10017-5592
 United States
 Tel: 1(212)600-5000
 Fax: 1(212)607-5430
 URL: <http://www.altria.com/>

Formerly known as:
 Philip Morris Companies Inc.

Primary Symbol & Exchange:
 MO - New York Stock Exchange

Other Symbol & Exchange:
 AXG - Australian

Primary Industry: Tobacco

SIC Industry Codes:
[2022 - Canned Specialties](#)
[2041 - Flour and Other Grain Mill Products](#)
[2092 - Malt Beverages](#)
[2111 - Cigarettes](#)
[2622 - Investment Advice](#)

NAICS Industry Code:
[312221 - Cigarette Manufacturing](#)

GICS Sub-Industry:
[Tobacco](#)

Market Cap: 175453 (\$million)
Revenue: 97954 (\$million)
P/E Ratio: 15.66
(Figures for Sep 1 2006 - Reuters Fundamentals)

S&P Credit Rating:
Long Term Rating: BBB+
(Dated Aug 10 2006 - S&P RatingsXpress)

Subsidiaries:
 • Covered by Alacra:
[Kraft Foods Inc.](#)

Thomson Financial Investext (Search Results 1 to 10 of 1150)

| Date | Title | Source | Page Count |
|--------------|---|-------------------------------------|------------|
| Aug 30, 2006 | ALTRIA GROUP INC | CITIGROUP | 9 |
| Aug 30, 2006 | ALTRIA GROUP INC | A.O. EDWARDS & SONS, INC. | 0 |
| Aug 29, 2006 | Altria Group: Kraft Spin-off Coming, But Not Tomorrow - ALERT | J.P. MORGAN | 6 |
| Aug 29, 2006 | MO: THE QUESTION OF THE DIVIDEND AT ALTRIA - NOT JUST THIS MONTH, BUT LONG-TERM | PRUDENTIAL EQUITY GROUP, INC. | 9 |
| Aug 18, 2006 | ALTRIA GROUP: FAVORABLE DOJ RULING - BOOSTING PRICE DRG. | MERRILL LYNCH MORNING MEETING NOTES | 1 |
| Aug 18, 2006 | ALTRIA GROUP: FAVORABLE DOJ RULING - BOOSTING PRICE DRG. | MERRILL LYNCH RESEARCH | 4 |
| Aug 18, 2006 | MO: DOJ - LOOKS JUST AS GOOD UP CLOSE AS IT DID AT FIRST GLANCE | PRUDENTIAL EQUITY GROUP, INC. | 8 |
| Aug 18, 2006 | MO: DOJ - Now Pop the Cork | A.O. EDWARDS & SONS, INC. | 6 |
| Aug 18, 2006 | Altria Group: Last of Big Three Oives: Green Light to Altria Break-Up - ALERT | J.P. MORGAN | 0 |
| Aug 17, 2006 | Altria Group: Creative solution emerges for KFT spin | DEUTSCHE BANK SECURITIES INC. | 0 |

Company Profiles & Financials
[Corporate Board Member](#)
[CorpTach High Tech Profile](#)
[D&B \(from Dun and Bradstreet\)](#)
[Datamonitor Profile](#)
[Harris InfoSource Manufacturing Profile](#)
[Hoover's Company Records](#)
[Media General Company Financials](#)
[Mergent Company Financials](#)
[OneSource Company Reports](#)
[Reuters Fundamentals - Common Stock](#)
[TF Card](#)
[TF Extel Company Financials](#)
[TF Worldscope - Common Stock](#)

Share Ownership
 • Common Stock
[LunShares Share Ownership](#)
[TF Share Ownership](#)
[TF/Carson Share Ownership](#)
[Thomson Insider Data](#)
[Thomson Ownership](#)
[Vickers Share Ownership](#)

News
[ABI/INFORM](#)
[Business & Industry News](#)
[News from Factiva](#)
[Newslex](#)
[SourceMedia](#)

Filings & Documents
[Edgar Online SEC Filings](#)
[Global Securities Information, Inc.](#)
[Perfect Information Company Filings](#)
[TF Disclosure Company Filings](#)

Stock Charts
 • Common Stock
[Edgar Online Charts](#)
[SunGard PowerData](#)
 • Data listed
[SunGard PowerData](#)

Credit & Investment Research
[CreditSights](#)
[First Call Notes](#)
[First Call Research Direct](#)
[FitchResearch](#)
[Investext Investment Research](#)
[Moody's Global Credit Research](#)
[Reuters Research Reports](#)
[S&P RatingsXpress Credit Research](#)
[S&P Stock Reports](#)
[SharkRepealment.net](#)
[TF Morning Meeting Notes](#)
[TheMarketsPro](#)
[Thomson StreetEvents](#)
[Value Line Tearsheets](#)

Market Research
[TableBase Statistics](#)

Deal Information
[M&A Monitor](#)
[Mergerstat M&A](#)
[TF Worldwide Joint Ventures](#)
[TF Worldwide Mergers & Acquisitions](#)
[TF Worldwide New Issues](#)

Earnings Estimates
[First Call Earnings Estimates](#)
[IB/E/S Earnings Estimates - Common Stock](#)
[Reuters Estimates - Common Stock](#)

Investment Risk Models
 • Common Stock
[Data Data Book](#)

Industry Concordance

Industry concordance enables users to access industry-specific content from publishers simultaneously by navigating a single taxonomy. Here the industry terms of the navigational taxonomy are cross-referenced to the corresponding industry terms of the content provider's taxonomy and stored in what Alacra refers to as the Industry Map. Below are some examples of navigational taxonomies utilized by our clients:

- Alacra's taxonomy consists of 100 relevant industry groupings.
- The Global Industry Classification Standard (GICS) developed by MSCI and S&P to meet the special needs of the investment banking community.
- SICs/UKSICs – specializing in a manufacturing based economy.
- NAICs – intended to be the replacement of the SIC classification system representing the transition from a manufacturing to a service economy.
- Custom taxonomy – a taxonomy built to suit an organization's business needs.

Each taxonomy's strength is determined by its focus. For example, GICS has very specialized terms for various topics within the investment community. In developing industry mapping methodologies, Alacra has gained a deep insight into the complexities involved in cross-referencing any form of standardized or custom taxonomy to extract the most relevant content from any information provider's warehouse.

In the diagram below we have included several examples of Alacra's industry concordance for Alacra's **Real Estate** industry. If you look at the mapping for S&P RatingsXpress Credit Research (in bold) you'll notice that we use S&P/MSCI's GiCS classifications methodology to link our taxonomies.

Industry Concordance for Alacra's Real Estate industry:

| Source | Industry Identifiers |
|--|---|
| ABI/INFORM | KW=(SU=(Commercial real estate or Real estate or Real estate agents & brokers or Real estate closings or Real estate developments or Real estate financing or Real estate sales)) |
| Business & Industry | IN="Real+estate" |
| Mergermarket Intelligence | (IN="realestate"+OR+IN="rentallease") |
| Mergerstat | IN="42" |
| Oxford Analytica | TI=(real estate or REIT) |
| S&P RatingsXpress Credit Research | (IN="4040" OR IN="404010" OR IN="40401010" OR IN="40401020") |
| Snapdata International Group | (IN="Personal+Services"+AND+TI=real+estate) |
| TF Investext | IN="REAL ESTATE" |
| TF Market Research | IN="REAL ESTATE" |
| TF Mergers & Acquisitions | IN="DD" |
| TF Venture Economics | IN="9220" |
| TF Worldscope | IN="4380" |

Country Concordance

When performing Country Concordance, Alacra analyzes the information provider's geographical meta-data, cross-references it to Alacra's geographical authority file and stores

the linkage in its Country Map. In addition, Alacra can customize geographical maps based on the client's geographical coverage and/or special regional groupings.

In the diagram below, we have included several examples of Alacra's country concordance for Alacra's geographical term **United Kingdom**. Again, If you look at the mapping for TF Market Research (in bold) you'll notice that they index all the constituent regions (ENG=England, NIR=Northern Ireland, SCO=Scotland, UKD=United Kingdom, WAL=Wales) of the United Kingdom separately. In order to extract all UK related content from TF Market Research we use the OR operator to join all the different region of the United Kingdom.

Country Concordance for Alacra's geographical term United Kingdom:

| Source | Geographic Identifiers |
|--------------------------------------|--|
| ABI/INFORM | ((GEO="Channel Islands" OR GEO="England" OR GEO="Falkland Islands" OR GEO="Scotland" OR GEO="United Kingdom") AND (GN="Channel Islands" OR GN="England" OR GN="Falkland Islands" OR GN="Scotland" OR GN="United Kingdom")) |
| Business & Industry | GC="UNK" |
| Datamonitor Premium Research Reports | (GEO="United+Kingdom"+AND+GN="United+Kingdom") |
| Forrester | TI=((United+ADJ+Kingdom)+OR+(UK)+OR+(U/K/)+OR+(England)+OR+(Scotland)) |
| Mergerstat | (GN="EN" OR GN="NN" OR GN="SC" OR GN="WA") |
| Oxford Analytica | (GN="Northern Ireland" OR GN="United Kingdom") |
| S&P RatingsXpress Credit Research | (GN="CHI" OR GN="GBR" OR GN="MAN") |
| TF Investext | ((GN="ENG" OR GN="NIR" OR GN="SCO" OR GN="UKD" OR GN="WAL") AND TI=(united kingdom or UK or england)) |
| TF Market Research | (GN="ENG" OR GN="NIR" OR GN="SCO" OR GN="UKD" OR GN="WAL") |
| TF Mergers & Acquisitions | (GN="GG" OR GN="ST" OR GN="UK" OR GN="WL") |
| Alacra Company Snapshots | GCODE="915" |
| TF Worldscope | GN="826" |

Keyword Search Syntax

Alacra standardizes the search syntax used to query all databases in the Advanced Database Search application. The user only needs to understand a single search syntax format to query the main search indexes (keyword, title, industry, and country). This standardization streamlines the keyword search process by providing a common language for communicating with any provider database, as well as eliminating the time-consuming process of mastering a wide range of vendor-specific syntax languages and/or acronyms. Currently, we offer both Web and Boolean searching capabilities to flexibly accommodate a wide range of user searching experience.

Web Syntax

Web syntax is Alacra's default syntax. It provides the user with basic phrase searching functionality. This syntax is commonly used by many other web-based products.

Sample searches:

Entering two words together uses ADJ5 (adjacent within 5 words) logic. **Cable modems** searches for documents with the word cable and the word modems, provided that modems follows within 5 words after cable.

"Cable modems" in quotations, searches for the exact phrase cable modems. Preceding a word with a minus sign (-) requires that the word not be found in any of the retrieved documents. For example **cable -modems** will search for documents that contain the word cable but NOT the word modems.

Boolean Syntax

Boolean syntax is available for those familiar with Boolean searching. Boolean logic operators, multiple levels of parentheses, and the ability to specify searched index are key features. Boolean syntax requires a certain level of searching sophistication yet it is unparalleled in its ability to increase the precision of searches. Below are the Boolean operators permitted in Alacra's Advanced Database Search.

| Operator | Action |
|----------|--|
| () | Parentheses are used to group terms or to override normal term precedence. For example, price and (copper or steel) . |
| AND | Finds only data sets containing all of the specified words. price AND copper finds data sets with both the word price and the word copper . |
| OR | Finds data sets containing at least one of the specified words or phrases. price OR copper finds data sets with either the word price or the word copper . The found data sets may contain more than one of the specified terms, but do not have to. |
| NOT | Excludes data sets containing the specified word or phrase. copper NOT steel finds data sets with copper but not containing steel . NOT cannot be used as a unary operator, that is, queries like NOT steel are not supported. NOT may only be used to join two parts of a query together. |
| ADJ | Finds data sets containing words in ordered proximity to one another. cellular ADJ telephones finds data sets where cellular is immediately followed by telephones . You may optionally add a number to the end of the ADJ term to allow more space between words. For example, cellular ADJ5 telephones will find data sets where telephones follows cellular by 5 words or less - cellular ADJ23 telephones will find data sets where telephones follows cellular by 23 words or less. There is no practical limit to the number of words between terms specified other than the lengths of the indexed data sets themselves. |
| NEAR | Finds data sets containing words in proximity to one another without respect to word order. For example, price NEAR copper finds data sets where price and copper are next to one another in any order. price NEAR10 copper finds data sets where price and copper are within 10 words of one another. |
| IN= | Allows searching of alternative indexes from any text-input box. Replace <i>IN</i> with the 2-character index code from the table below. Note that once an alternate index is specified, subsequent terms at the same level of precedence are searched in that index. Multiple <i>IN=</i> operators may appear in the same query. For example, the query bottled juice and ct=(market share or market size) will search for information containing bottled juice in the basic index and having market share or market size in the concept term index. |

In Boolean, you may also use any of the following search prefixes to target your search against any of the alternate indexes that Alacra offers.

| Search Prefix | Field Name | Example |
|---------------|------------|-----------------|
| KW= | Keyword | KW=mutual funds |
| TI= | Title | TI=automobile |
| IN= | Industry | IN=Automotive |
| GN= | Country | GN=France |

Federated search comparisons

This section is composed of three search queries using Alacra's Advanced Database Search application, which provides the optimal environment to analyze the benefits of Alacra's federated search capabilities. The following three examples will illustrate the decrease in recall once industry and country concordance are activated to refine a keyword search.

Search 1 – Keyword Search Only:

Advanced Database Search

This feature allows you to use a variety of criteria to search across all or a subset of the [Alacra Premium Databases](#) simultaneously.

SAVE SEARCH | RECALL SEARCH

Syntax: Web Boolean

Key Words: Search Clear

Title:

Data Category:

- Alacra Company Snapshots
- Company Profiles & Financials
- Credit & Investment Research

Published: to
enter date as mm/dd/yyyy

Industry:

- Aerospace & Defense
- Agricultural Chemicals
- Agriculture

Country:

- Afghanistan
- Africa
- Albania

TF Investext Query:
KW=(gas+adj5+reserves)

Advanced Database Search

Syntax: web
Keywords: gas reserves

SAVE SEARCH | RECALL SEARCH | NEW SEARCH | REFINE SEARCH

| | |
|---|---|
| <p>Company Profiles & Financials</p> <ul style="list-style-type: none"> Alacra Company Snapshots (42 Company Snapshots) D&B (2 Companies) Hemscott Company Reports (1 Company) IBISWorld Company Research (7 Profiles) ICC Information Limited (31 Companies) | <p>Credit & Investment Research</p> <ul style="list-style-type: none"> CreditSights (285 Reports) FitchResearch (1 Report) Moody's Global Credit Research (459 Reports) S&P RatingsXpress Credit Research (2137 Reports) SharkRepellent.net (7 Companies) TF Investext (5625 Reports) Thomson StreetEvents (928 Reports) |
| <p>Economic Data & Analysis</p> <ul style="list-style-type: none"> Datamonitor Country Profiles (7 Reports) EIU Country Analysis (4494 Reports) Oxford Analytica (196 Reports) Quest Economics (1282 Reports) | <p>Market Research</p> <ul style="list-style-type: none"> Datamonitor Industry Profiles (28 Profiles) Freedonia Focus (4 Reports) Freedonia Market Research (15 Reports) Gale Market Share Reporter (2 Tables) IBISWorld Industry Market Research - Australia (8 Reports) IBISWorld Industry Market Research - United States (14 Reports) Mintel Reports (16 Reports) SoftBase (1 Report) TableBase (256 Tables) TF Market Research (1100 Reports) |
| <p>News</p> <ul style="list-style-type: none"> ABI/INFORM (1768 Articles) Access Intelligence (27 Reports) ALM Research (4 Reports) Business & Industry (6849 Articles) Business & Management Practices (255 Articles) Congressional Quarterly (55 Stories) Newstex (2003 Reports) Reed Business Information (17 Articles) SourceMedia (53 Articles) The Economist (36 Reports) Voxant (14 Transcripts) | <p>Deal Information</p> <ul style="list-style-type: none"> Mergermarket Intelligence (254 Articles) Mergerstat (208 Deals) TF Joint Ventures (82 Deals) TF Mergers & Acquisitions (157 Deals) TF New Issues (1 Company) TF Venture Economics (40 VC Funded Companies) |
| <p>Filings & Documents</p> <ul style="list-style-type: none"> ICC Document Images (31 Companies) | <p>Executives</p> <ul style="list-style-type: none"> Corporate Board Member (7 Profiles) |

Search 2 – Keyword + Industry

Advanced Database Search

This feature allows you to use a variety of criteria to search across all or a subset of the [Alacra Premium Databases](#) simultaneously.

SAVE SEARCH | RECALL SEARCH

Syntax: Web Boolean

Key Words: Search Clear

Title:

Data Category: Any Category
Alacra Company Snapshots
Company Profiles & Financials
Credit & Investment Research

Published: to
enter date as mm/dd/yyyy

Industry: Office Equipment Oil & Gas Online Services Organic Chemicals

Country: Any Country
Afghanistan
Africa
Albania

Search Clear

TF Investext Query:
 (IN="ENERGY"+AND+KW=(oil+OR+gas+OR+drilling+OR+exploration+OR+well s+OR+oil+fields+OR+fuel))+AND+KW=(gas+adj5+reserves)

Advanced Database Search

Syntax: web
 Keywords: gas reserves
 Industry: Oil & Gas

SAVE SEARCH | RECALL SEARCH | NEW SEARCH | REFINE SEARCH

Company Profiles & Financials
[Alacra Company Snapshots](#) (32 Company Snapshots)

Economic Data & Analysis
[Oxford Analytica](#) (80 Reports)

News
[ABI/INFORM](#) (559 Articles)
[Business & Industry](#) (5266 Articles)

Credit & Investment Research
[S&P Ratings](#) (press Credit Research) (1139 Reports)
[TF Investext](#) (1021 Reports)

Market Research
[Datamonitor Industry Profiles](#) (11 Profiles)
[Freedonia Focus](#) (1 Report)
[Freedonia Market Research](#) (80 Reports)
[TableBase](#) (248 Tables)
[TF Market Research](#) (338 Reports)

Deal Information
[Mergermarket Intelligence](#) (237 Articles)
[Mergerstat](#) (103 Deals)
[TF Joint Ventures](#) (59 Deals)
[TF Mergers & Acquisitions](#) (139 Deals)
[TF Venture Economics](#) (29 VC Funded Companies)

Search 3 – Keyword + Industry + Country

Advanced Database Search

This feature allows you to use a variety of criteria to search across all or a subset of the [Alacra Premium Databases](#) simultaneously.

SAVE SEARCH | RECALL SEARCH

Syntax: Web Boolean

Key Words: Search Clear

Title:

Data Category: Any Category | Alacra Company Snapshots | Company Profiles & Financials | Credit & Investment Research

Published: to
enter date as mm/dd/yyyy

Industry: Office Equipment | Oil & Gas | Online Services | Organic Chemicals

Country: Cambodia | Cameroon | Canada | Cape Verde

Advanced Database Search

Syntax: web

Keywords: gas reserves

Industry: Oil & Gas

Country: Canada

SAVE SEARCH | RECALL SEARCH | NEW SEARCH | REFINE SEARCH

| | |
|---|--|
| <p>Company Profiles & Financials</p> <p>Alacra Company Snapshots (16 Company Snapshots)</p> <p>Economic Data & Analysis</p> <p>Oxford Analytica (1 Report)</p> <p>News</p> <p>Business & Industry (375 Articles)</p> | <p>Credit & Investment Research</p> <p>S&P RatingsXpress Credit Research (131 Reports)</p> <p>TF Investext (41 Reports)</p> <p>Market Research</p> <p>TableBase (29 Tables)</p> <p>TF Market Research (2 Reports)</p> <p>Deal Information</p> <p>Mergermarket Intelligence (31 Articles)</p> <p>Mergerstat (34 Deals)</p> <p>TF Joint Ventures (11 Deals)</p> <p>TF Mergers & Acquisitions (35 Deals)</p> <p>TF Venture Economics (5 VC Funded Companies)</p> |
|---|--|

TF Investext Query:

```
(GN="CAN"+AND+TI=(canada+or+canadian)))
+AND+(IN="ENERGY"+AND+KW=(oil+OR+gas
+OR+drilling+OR+exploration+OR+wells+OR
+oil+fields+OR+fuel))+AND+KW=(gas+adj5+
reserves)
```

This whitepaper has explained Alacra’s distinct approach to federated searching with the use of our company, industry, and country concordance developed through ten years of research and client feedback. Our integrated approach enhances the accuracy and efficiency of navigating through the plethora of business content available today. We invite you to experience the power of concordance by visiting <http://www.alacra.com> (subscribers only) or our Alacra Store at <http://www.alacrastore.com>.

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