# Coalbed Methane Producer Trident Exploration, Solves Business Problem with Information Technology

Presenter:

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# Overview

- **IHS Enerdeq™**
- Trident Exploration Corp.
- Trident Requirements
- Workflow Examples
- Summary

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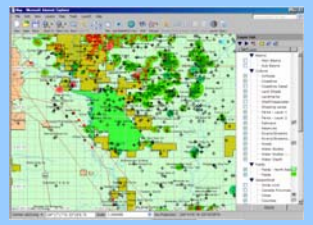
# IHS Enerdeq Offerings

## Most Current Data & Notification

### Browser

- Easy-to-use
- Browse
- Map
- Query
- Reports
- Graphs
- Export



***Casual users, Techs, Finance, Midstream***

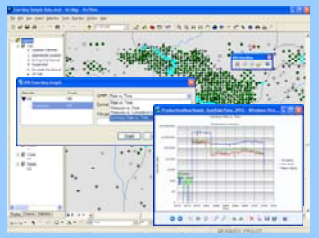
### Desktop

- Client Data Blend
- Full-featured data mining
- Advanced mapping
- Customizable graphs
- Basic geologic interpretation

***Casual to Power users, Engineers, Geologists***

### Web Services

- 3rd party application integration
  - ESRI ArcMap
  - Google Earth
  - Excel
  - Upstream Vendors
- Automatic Project & Database update



***Developers, Data Managers, IT***

## Common “Look & Feel”

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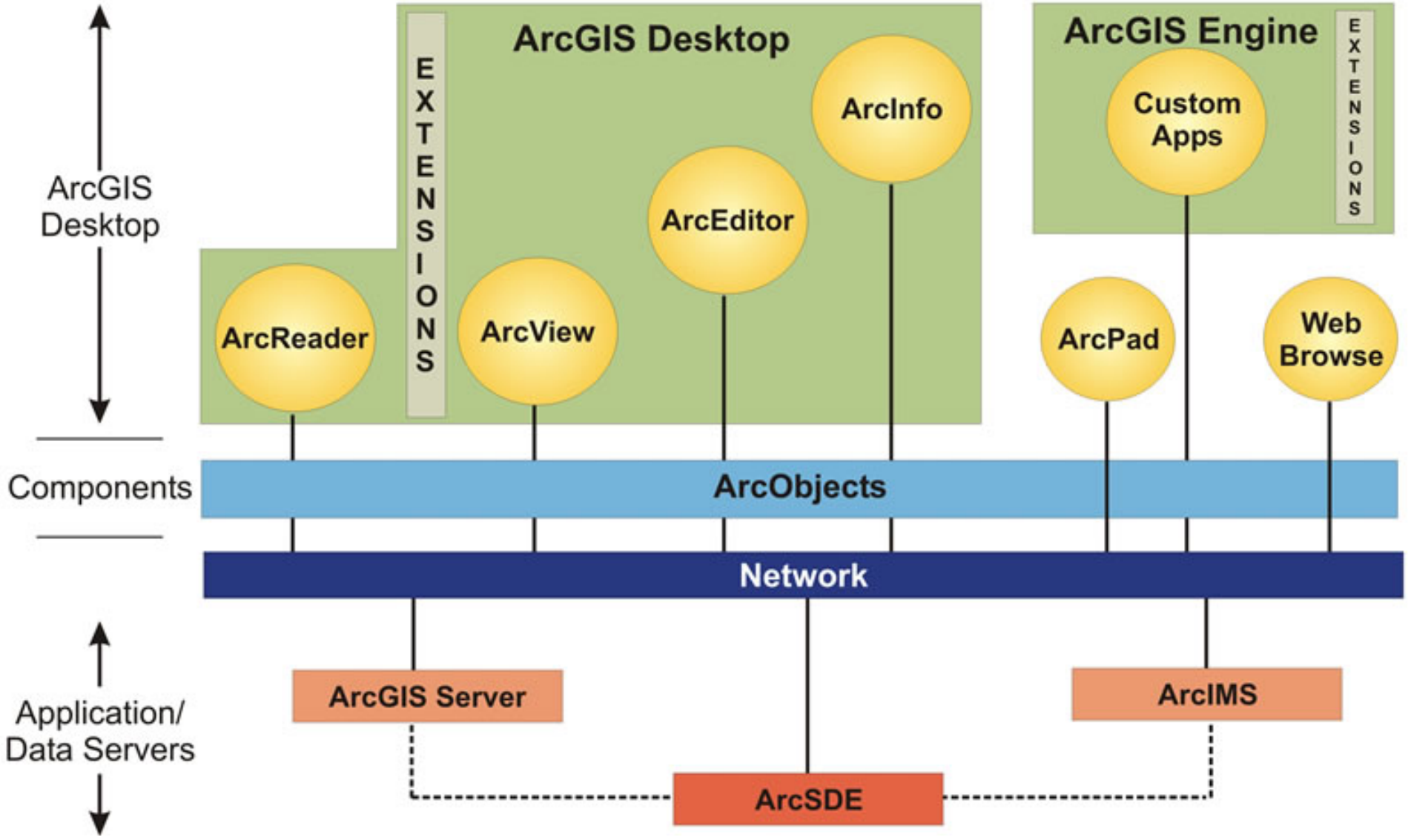
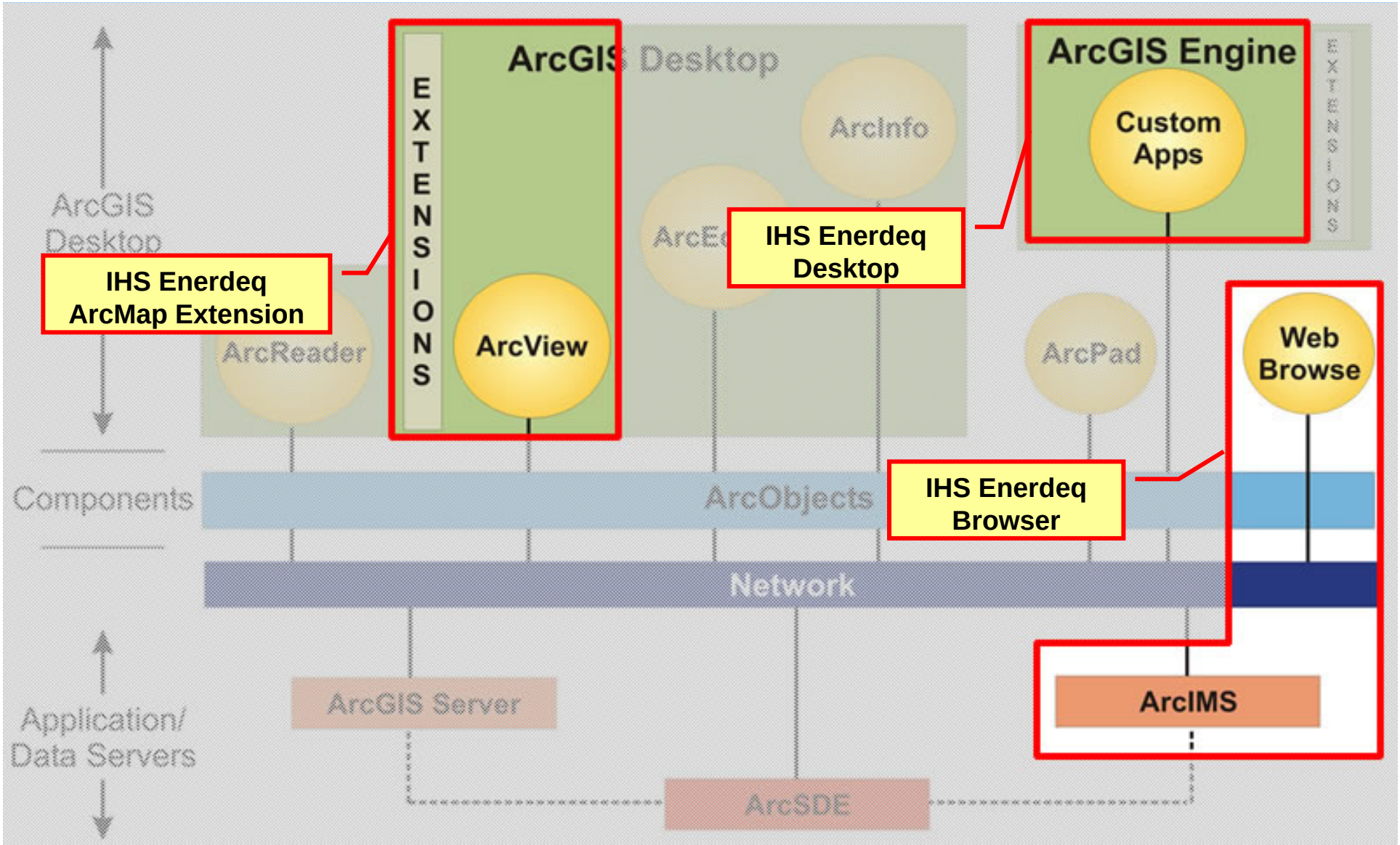
# ESRI GIS Product Suite



# IHS Enerdeq related to ESRI GIS Products



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# Trident Exploration Corp.

- Privately-held, Calgary-based company founded in 2000.
- Focused primarily on Western Canadian Basin (WCSB). Largest pure-play Coal Bed Methane (CBM) company in WCSB. CBM focus expanding into tight sands, gas shales, and more
- Fast drilling pace, Trident was 2nd most active Canadian explorer in 2005 behind only EnCana. In 2005 drilled more than 800 wells, over 500 more wells in 2006
- Trident's 2006 budget ranks 11th in size of all Canadian E&P companies

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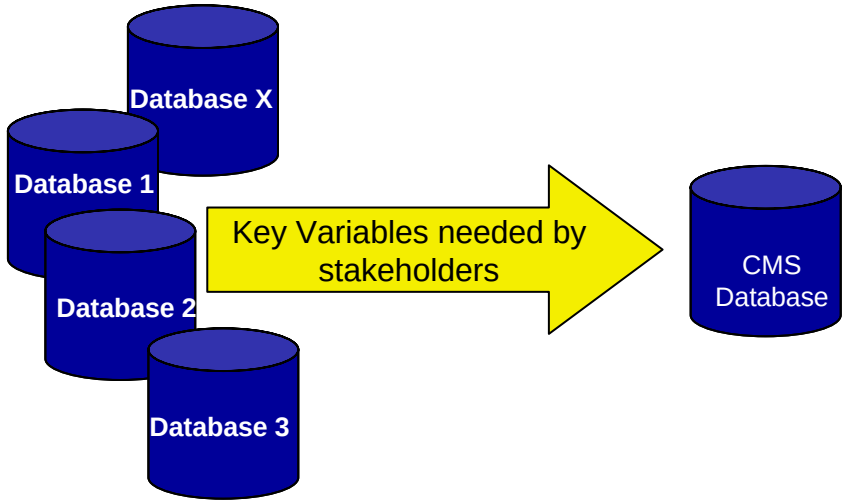
# Trident's Corporate Management System

- Stakeholders need to use most recent well information on a daily basis:
  - Management
  - Engineering
  - Geology
  - Regulatory
  - Community Relations
  - Environment
  - Joint Venture Partners
  - Field Operations
  - Surface and Mineral Land




- To enable stakeholders to see current status of operations, Trident's approach is to aggregate key information from different systems into a Corporate Management System (CMS)

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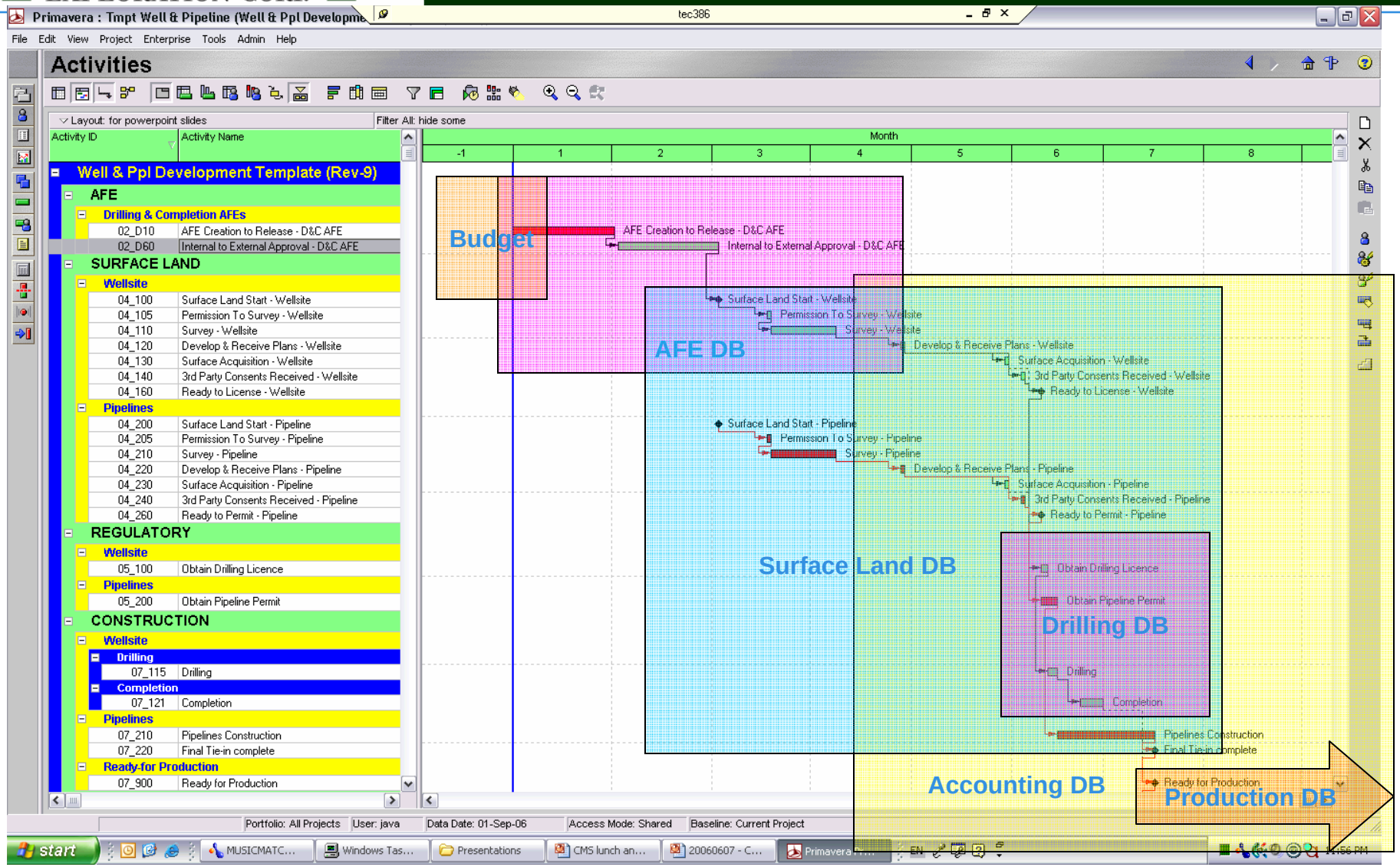
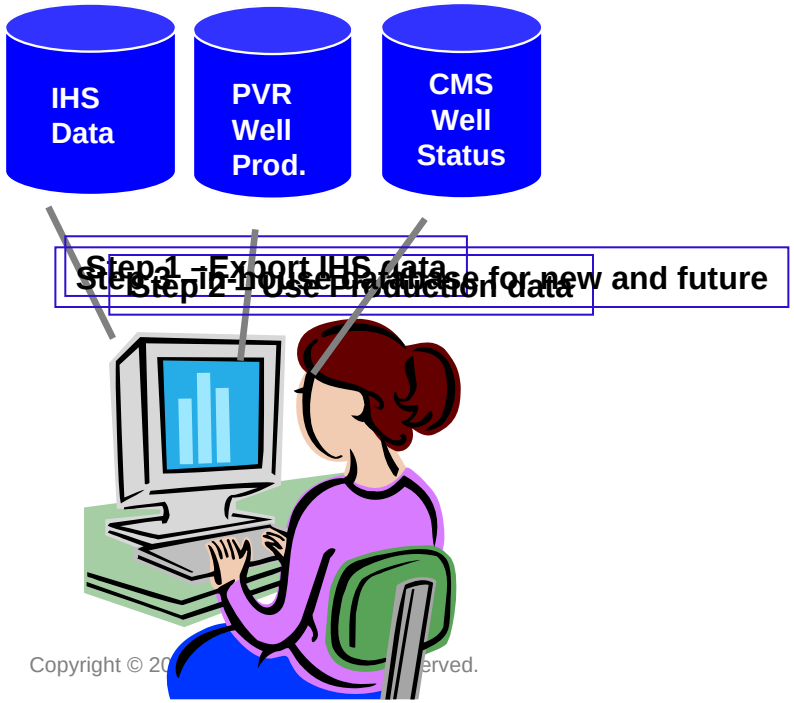
# Aggregation



# Trident's Workflow Example

- Depending on the discipline they work, employees at Trident had to interface with a number of software applications to collect all pertinent data.
- Example: Collecting data to determine pool production
- Problem: Employees expend too much time collecting data from disparate databases, instead of focusing in solving problems




1) Access <u>historical</u> production on Trident and non-Trident wells from public data.
2) Access "up-to-the-day" <u>current</u> production information on Trident wells with in-house daily field production capture system
3) Access <u>forecast</u> and newly drilled wells data from in-house database.

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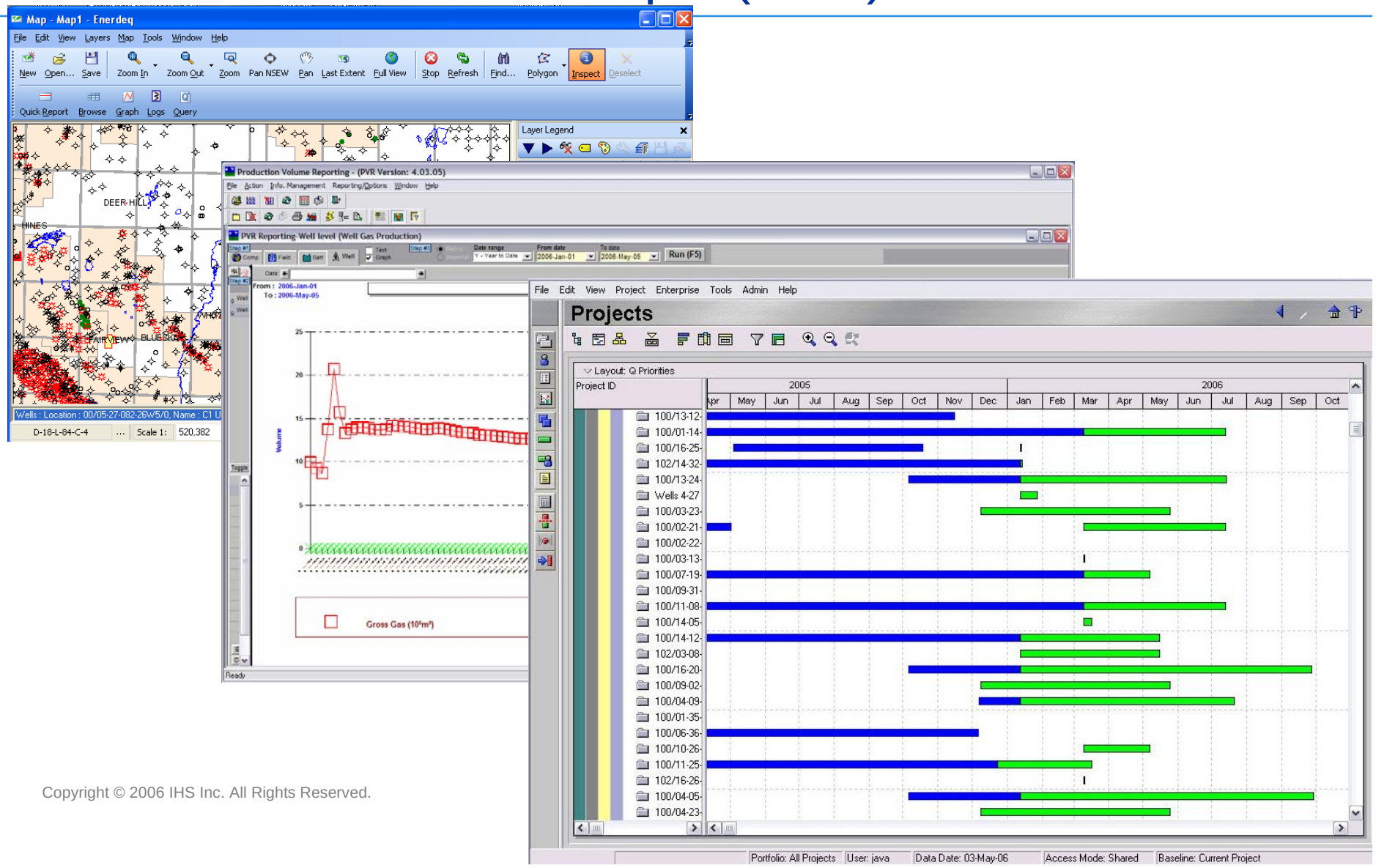
# Trident's Workflow Example (con't)

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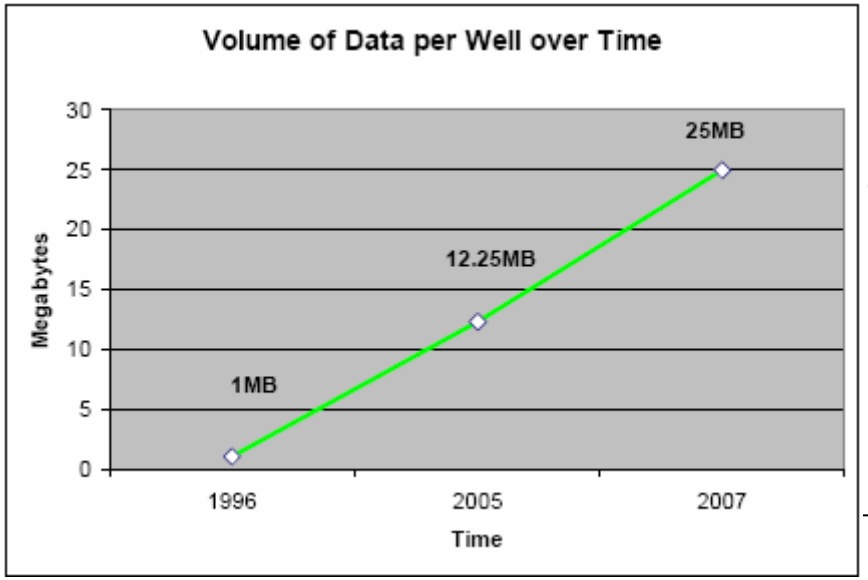
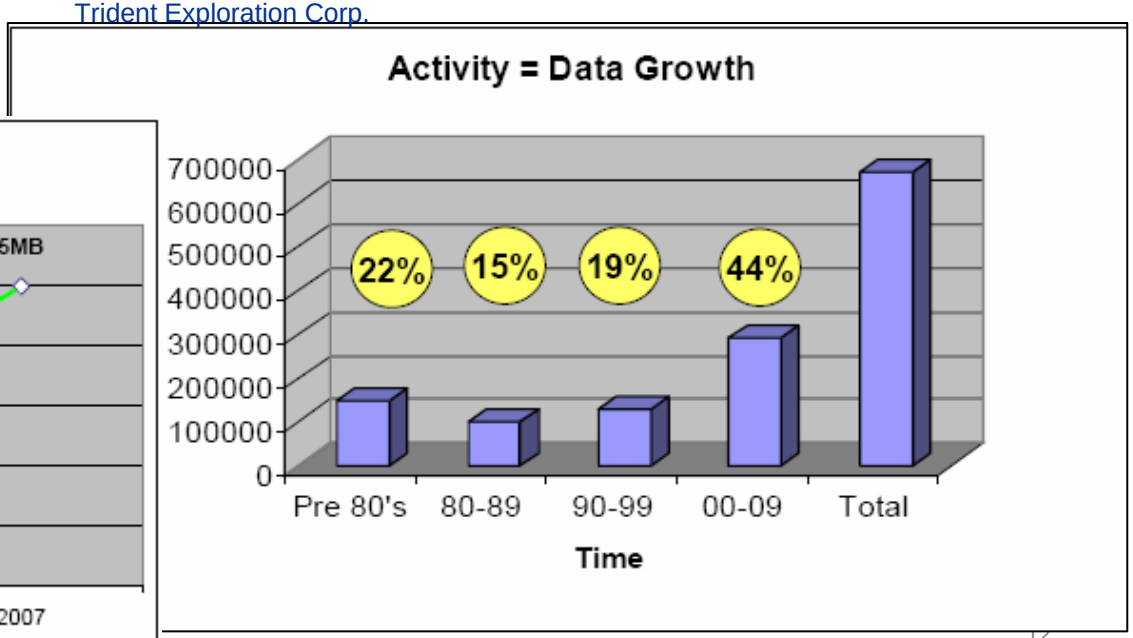
# Data Growth … Explosion?

- **IHS predicts growth of data per well to double by 2007**
- More data available for each well (digital, image)
  - In 1990, a good size hard drive was 40 MB
  - Today, this is enough room for 3 –4 wells
- With this increasing data volume, manual merging of data will be difficult
  - Employees will require more sophisticated tools to present and merge data

Trident Exploration Corp.



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# Requirement

- IHS Data is viewed daily by many stakeholders
  - Management, Engineering, Geology, Regulatory, Community Relations, Environment, Joint Venture Partners, Field Operations, Surface and Mineral Land, etc.
- IHS Data is one part of the data required by key stakeholders
- Key value is access to IHS "public" data & Trident "in-house proprietary" data in one application
- "Shrink-wrapped" solution:
  - Flexible to show variety of data
  - Low cost to implement & maintain
  - Data Currency

| IHS Public Data | Trident's Proprietary Data |
|---|---|
| Basic production data, around 3 months old on non-confidential wells | Comprehensive daily production data |
| Existing licensed wells | All wells, including planned and not licensed yet |
| Other (pipelines, gas plants, facilities, land, etc.) | Pipeline tie-ins, land, holdings, plants, etc |

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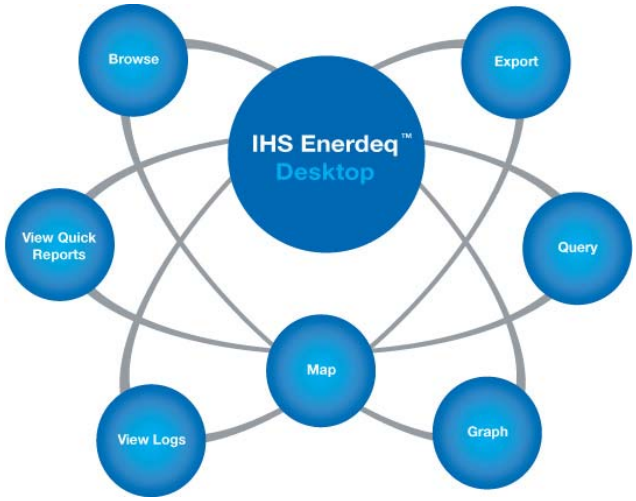
# How Does Enerdeq Desktop address Trident's Requirements?

- Enerdeq Desktop is the next generation Accumap, enabling engineers to quickly view and analyze public & in-house data
- Flexible system to display corporate layers from ESRI SDE/Shapefile, enables users to automatically view in-house data on Map
  - Administrator sets layer properties (color, symbol size)
  - Shapefile/SDE can be created from any oracle table, .csv, Excel, etc.
  - More than 250 data attributes can be stored for each map feature (map features; points, lines and polygons)
- Enerdeq Desktop accesses Oracle views of CGI's PVR (Production Volume Reporting) Database
  - PVR is popular Production reporting tool in Canada

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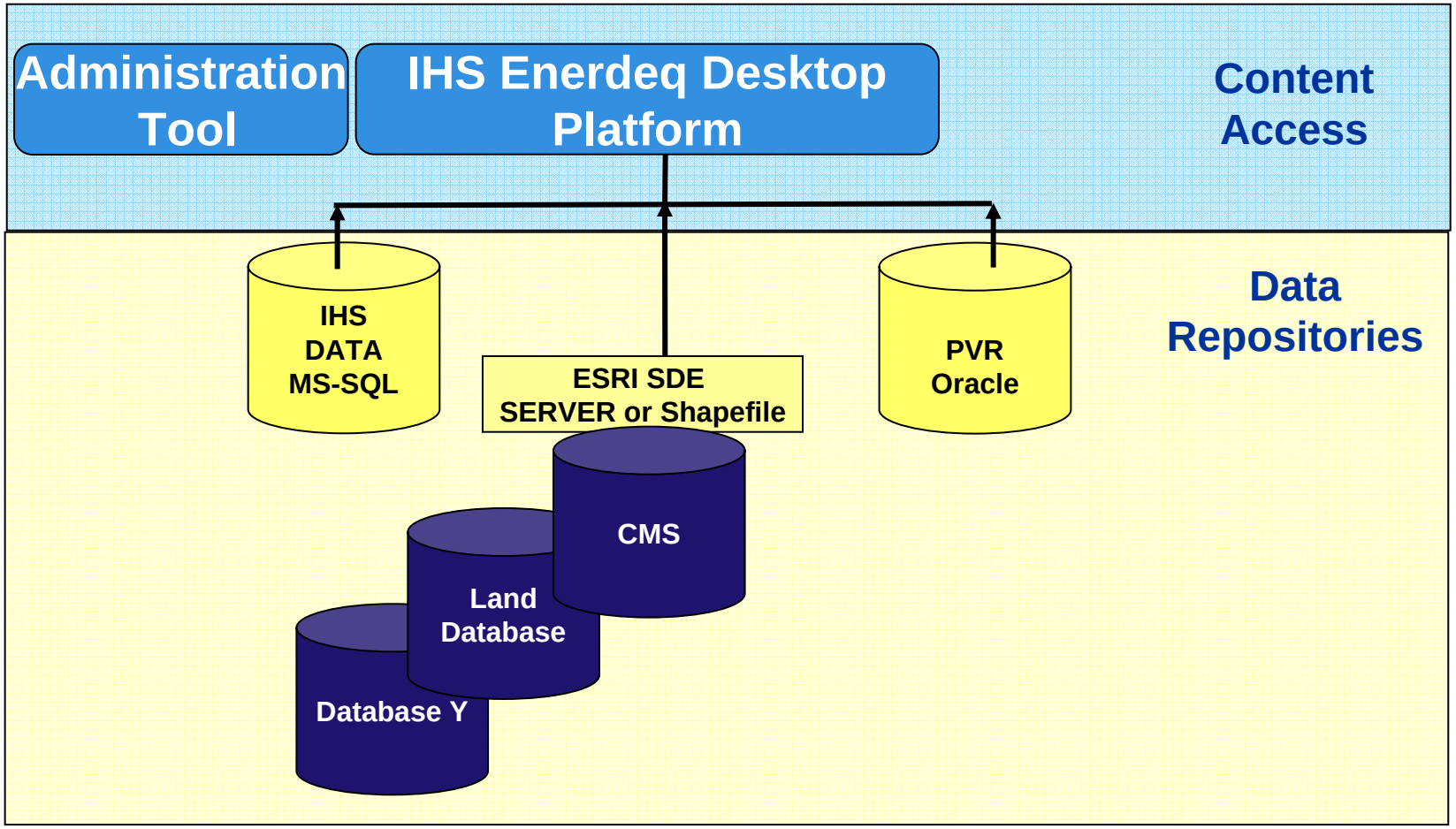
# Version 1.1 Framework

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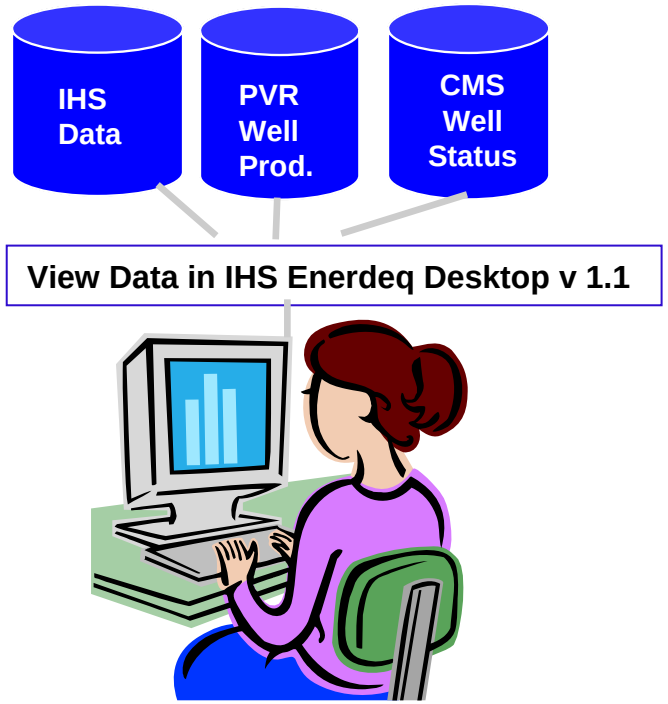
# Trident's Workflow Example with Enerdeq Desktop

Example: Employee collecting data for a determined pool production




Benefits:

- One step - view, analyze, sort all pertinent data in Enerdeq Desktop
- Streamline workflow for all stakeholders (Management, Engineering, Geology, Regulatory, Community Relations, Environment, Joint Venture Partners, Field Operations, Surface and Mineral Land, etc.)
- Add new value to existing workflows by combining IHS and in-house data with spatial context
- Decrease room for error - less manual steps
- Aggregate in-house data though Mapping interface

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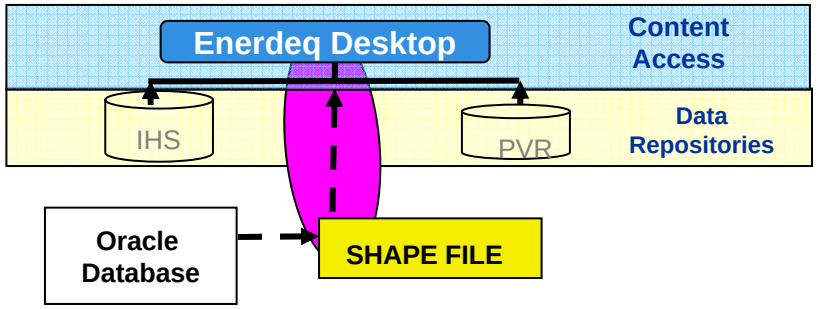
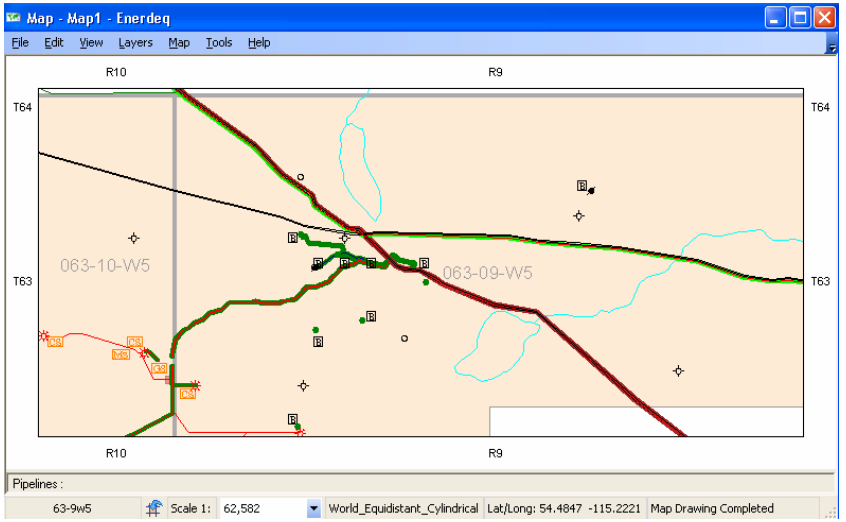
# Workflow Example 1: IHS + Company layers

- Analyze options for well tie-in by viewing proprietary well data and public pipeline & facility data on Map

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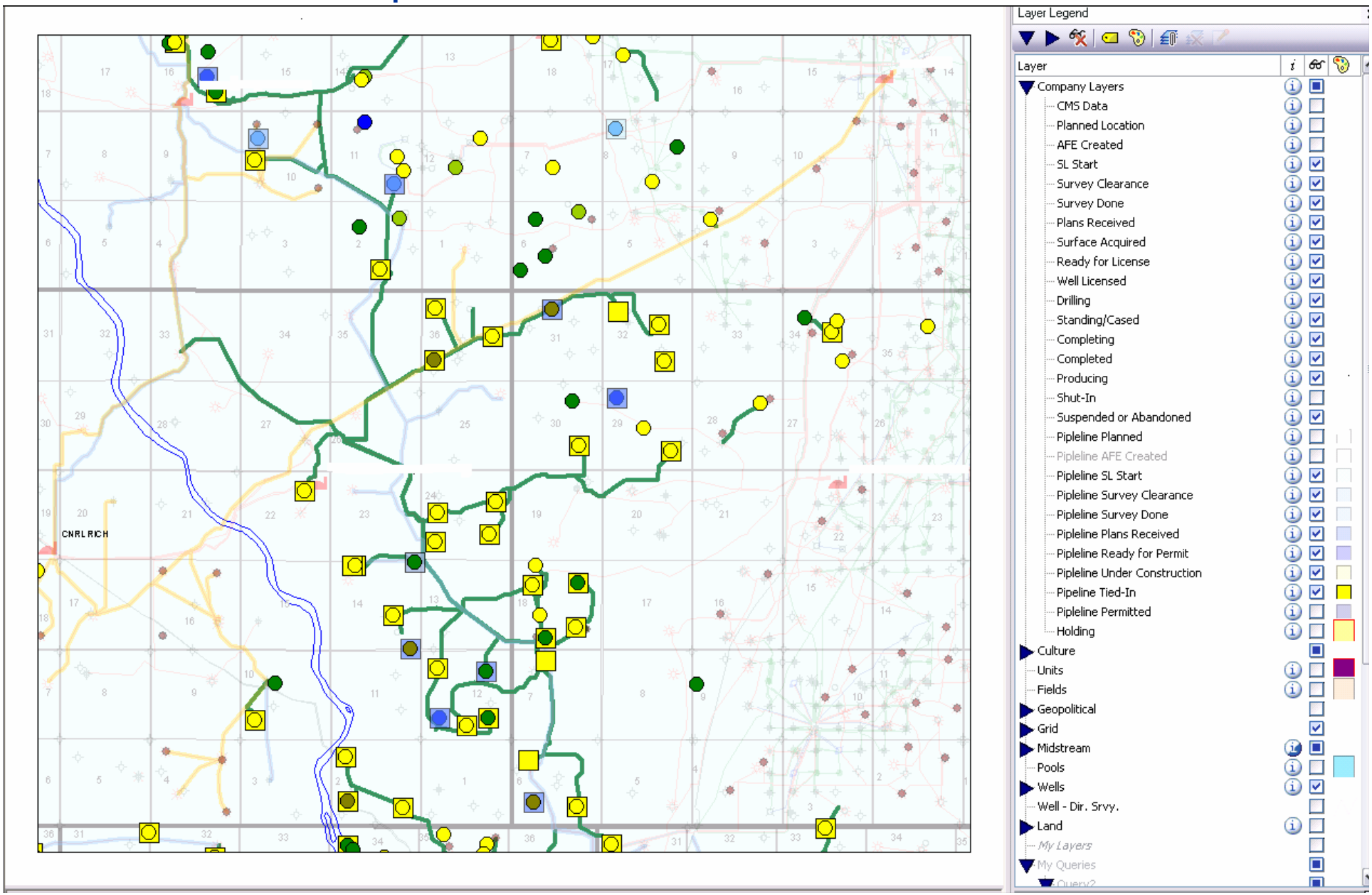
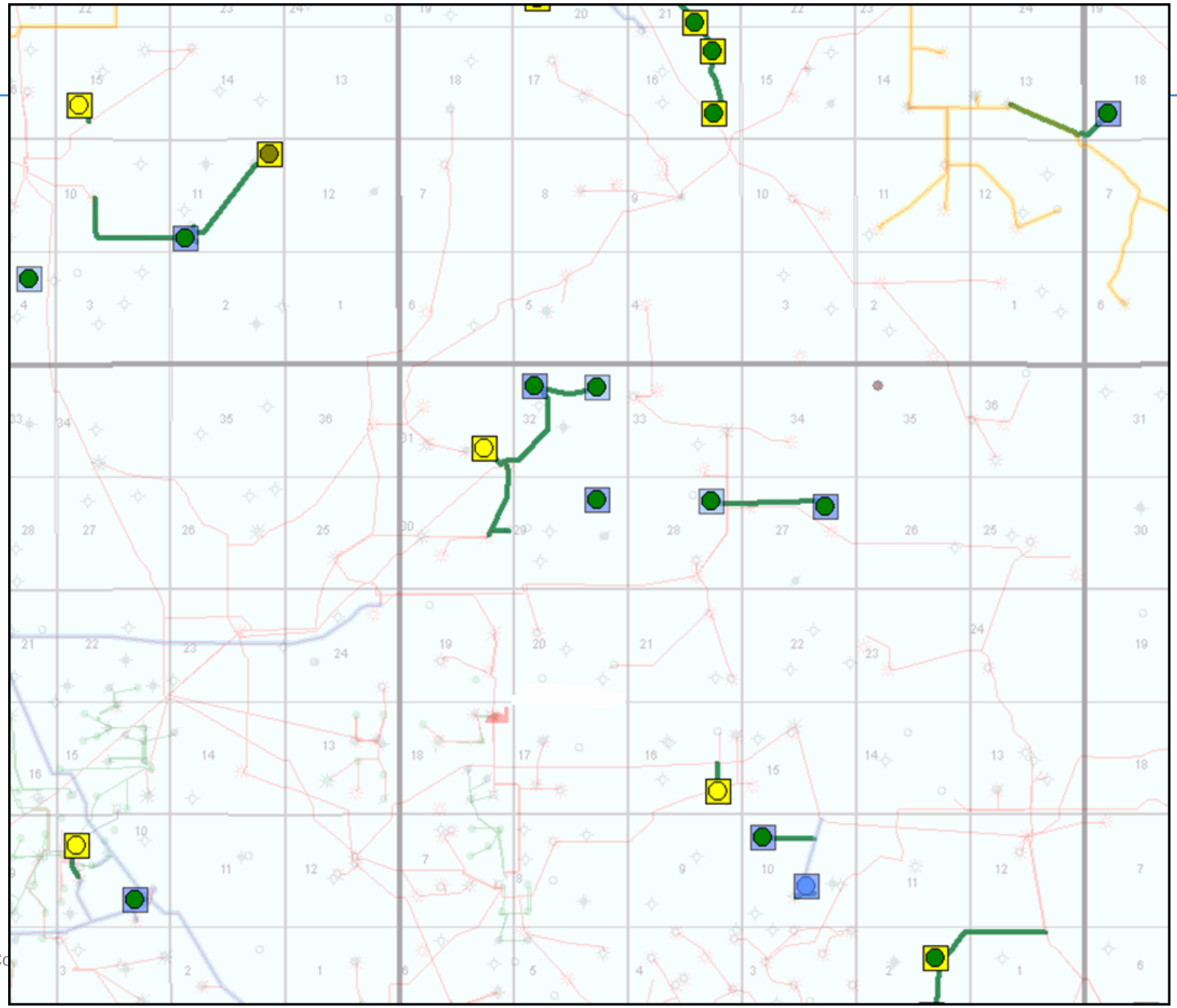
# Customized Map

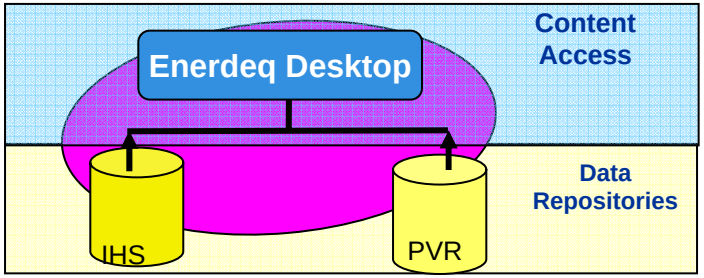


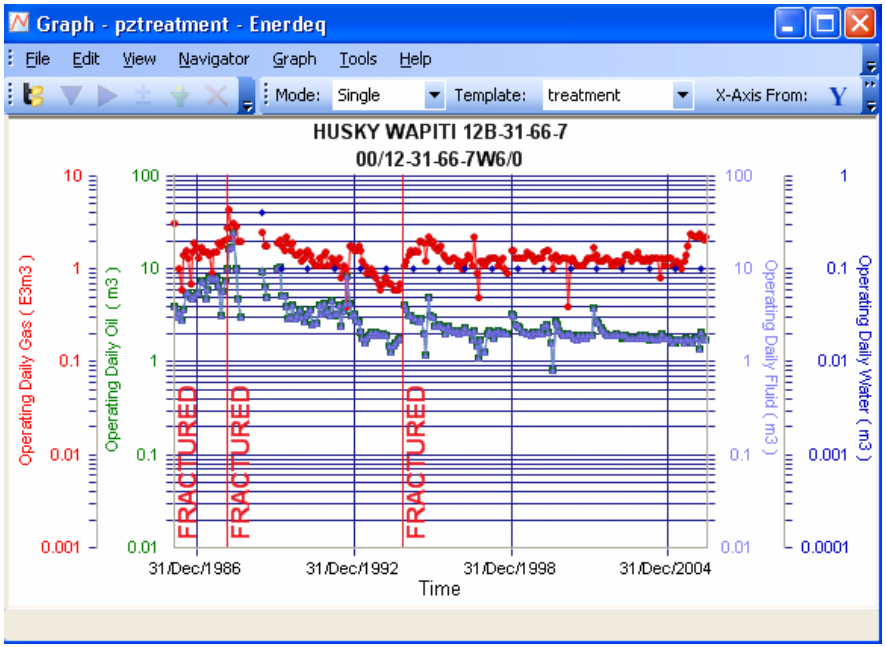
# Well Tie-in



# Workflow Example 2: IHS + PVR

- Analyze well & pool performance with production graphs combining in-house and public production and treatment data

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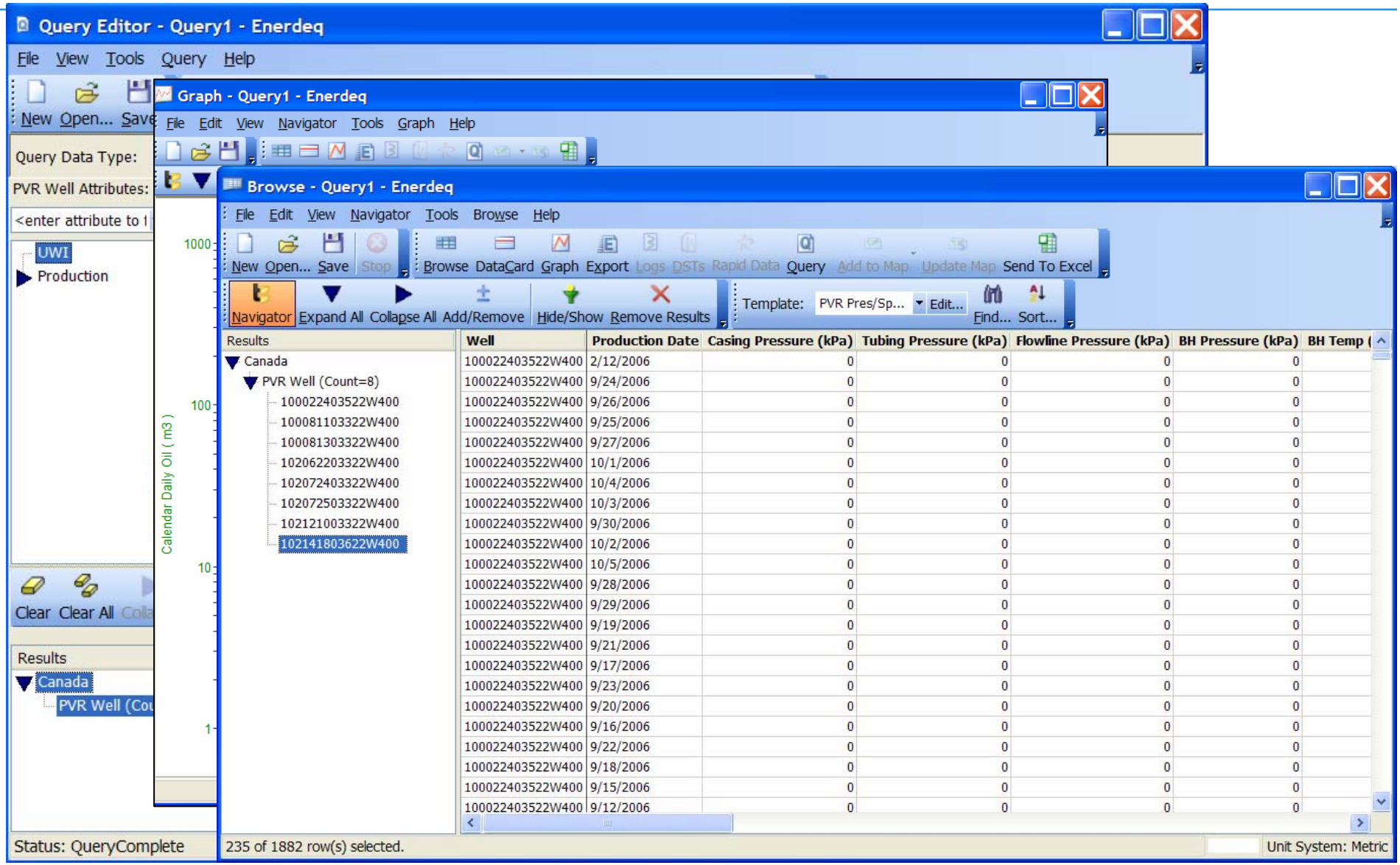
# Link to in-house Production Data (PVR)



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# Summary

- Flexible solution for access and handling in-house data from multiple sources
- Today, E&P employees tend to spend too much time gathering and validating data
- Today O&G data is growing at an exponential rate
- As both public & propriety O&G data continues to grow, IT systems which aggregate & analyze data on a real time basis will become more critical in:
  - Increasing productivity
  - enhancing decision making
  - increasing communication
  - decreasing errors

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Questions?

Thank you!

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IHS Enerdeq™

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