

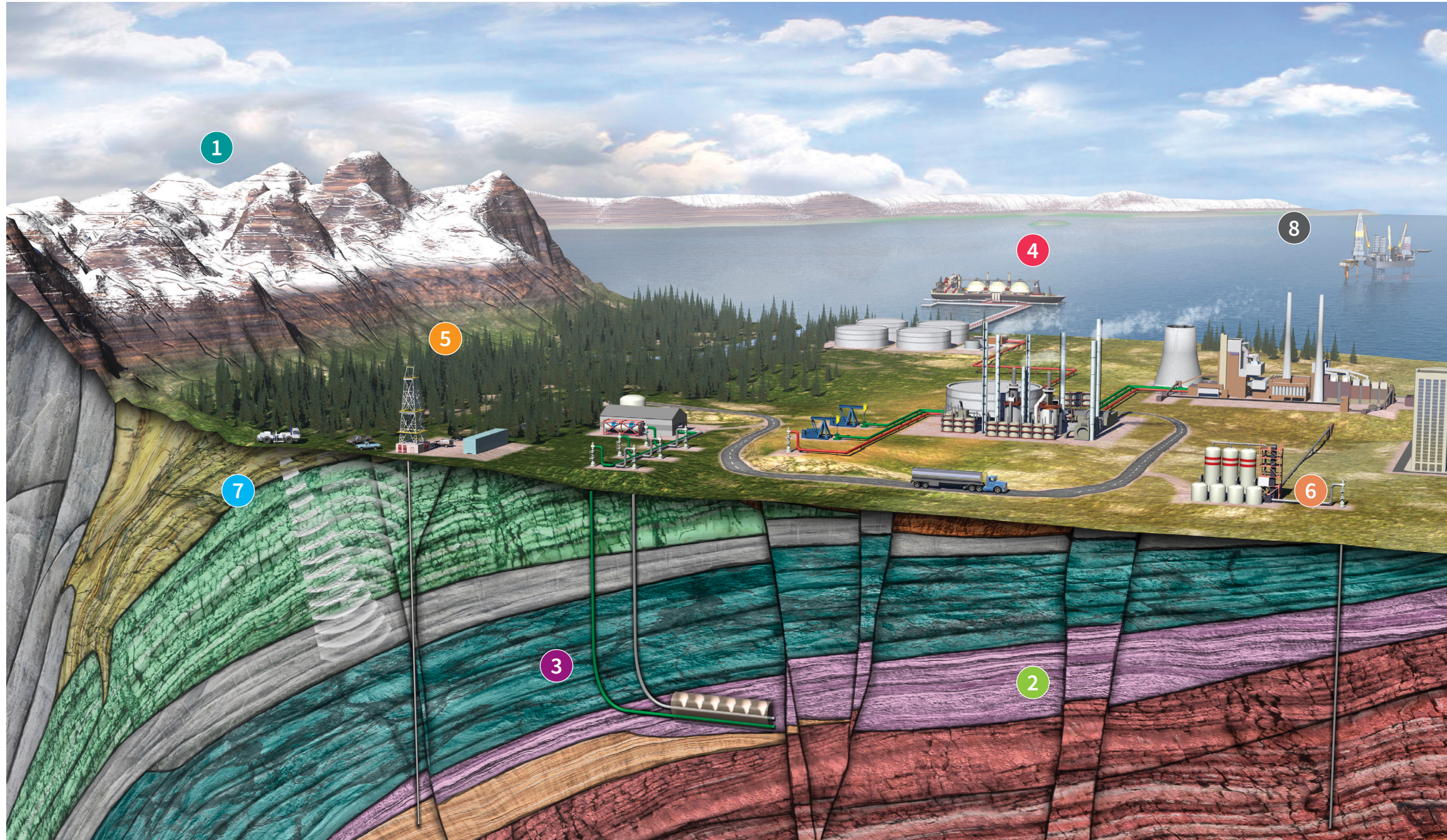


IHS Markit®

AccuMap™

Shaped by industry and powered by IHS Markit information, AccuMap is a powerful and intuitive interpretation solution for the Canadian Energy Industry.





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Through AccuMap, you can access the best-quality data in an easy-to-use interface to generate accurate, presentation-quality maps that enable faster decision-making.

Customer feedback has provided the foundation to deliver functionality that complements your daily workflow.

Regardless of your discipline, AccuMap is the industry-standard mapping solution that helps you find opportunities and make critical business decisions faster.

Offering an interpretation solution that can be tailored to your workflow, AccuMap features customizable navigation and increased flexibility.

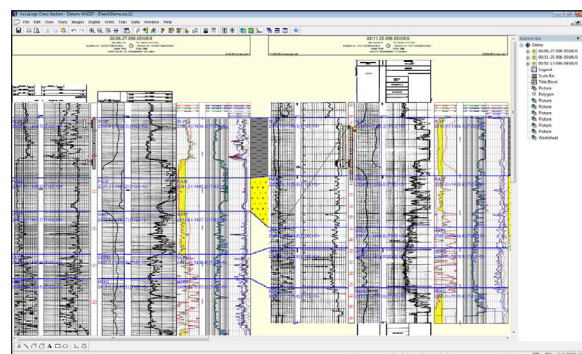
Complementary Access Tools

AccuLogs

- View over 2.8 million depth registered raster well log images and digital LAS files, annotated with DSTs, perfs and cores scanned from source documents in addition to digital logs
- Import proprietary images, create new wells or evaluate log thickness

Energy Documents: Wells

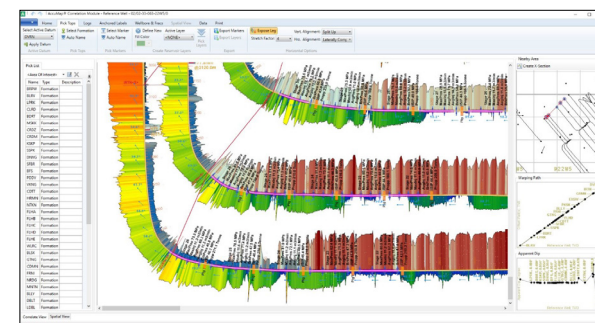
- An online library of original government well file information that is updated daily and contains current and historical documents captured directly from provincial government regulatory agencies in British Columbia, Alberta, Saskatchewan, Manitoba and the Territories



Examine a cross-section with both raster and digital logs in AccuLogs 8.x

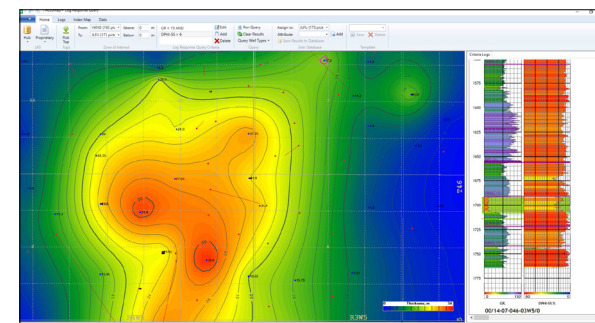
Correlation Module

- Integrate geologic data that includes formation tops, hydraulic frac data, and well log data to confidently identify trends and expedite interpretation more accurately



Log Response Query

- Quickly compute large amounts of LAS data to generate cutoff-based thickness maps. Utilizing proprietary or IHS Markit digital well log data, specify what well log or core criteria to query against to create cut-off contour maps



Land Data

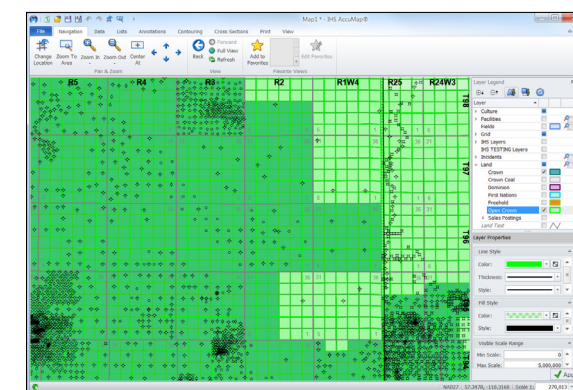
- Access the most complete and accurate crown and detailed freehold land ownership database
- Includes Mineral Land, Crown, Freehold, Frontier Lands, Well Spacing, Land Text Data and First Nations Lands as well as reference to all land sales

Land Text

- Assess interests and rights held in any area of your map with automatically drawn layers for plotting and viewing
- View interest holder, rights, price/ha and expiry date on leased crown, rights on open crown, or results on sale notices and outline lease boundaries

Well Spacing Data

- See what has already been approved in your area of interest for pools of similar characteristics
- Encompasses all types of spacing orders in Alberta and is updated on a daily basis for Information Hub™ customers, and weekly in other software applications



Control the way you see your information through enhanced transparency in AccuMap



Well

General Well

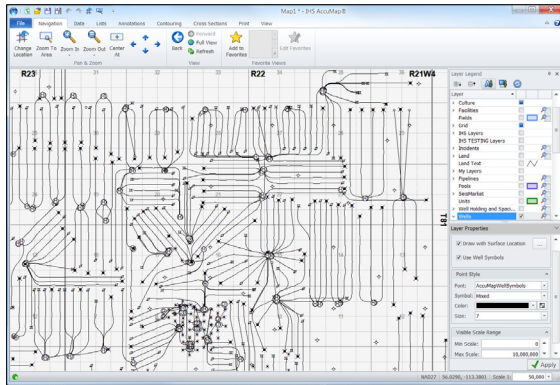
- Query and inspect tops, DSTs, cores, perforations, casings and logs run
- Manage your tops with AccuMap's Tops Manager, including formation tops, drill stem tests, cores, logs and completions

Core Analyses

- Access all current and historical data from provincial government regulatory agencies

Directional Surveys

- Provides the most accurate subsurface orientation of the path of a deviated well bore
- View directional surveys to see information including true vertical depth and measured depth, northing and easting, inclination and azimuth, vertical section and dogleg severity



Determine the exact bottom hole and surface location to monitor reservoir performance with Directional Surveys



Midstream

GDM Enhanced Pipeline and Gas Plant & Facility Data

- In partnership with GDM, effective management and planning of midstream assets to determine the most economical well placements by examining proximity to established pipelines and facilities
- Used for evaluating and locating pipeline and facility assets, environmental impact and monitoring, implementing integrity and risk management systems

GDM Low Pressure Gas Pipelines

- Spatial locations of lines, operators, status and the outside diameter and pipeline material
- Franchise boundaries and service points are also captured and supplied

GDM Oil & Gas Incident Manager

- In partnership with GDM Pipelines, understand your current and historical incident data for wells, pipelines and facilities



Engineering

Drill Stem Test (DST) Data and Images

- Determine potential productivity, pressure, permeability, and extent of an oil or gas reservoir or formation in an open well bore
- Linked with the Well and Engineering datasets to assess a reservoir or formation's complete geological configuration

Field, Pool & Unit Boundaries

- Perform economic evaluations and determine well productivity and reservoir properties
- Estimate reserves and optimize production

Fluid Analyses

- Understand the requirements and techniques best suited for development, optimization and transportation of assets in the widest geographical area and to maintain ongoing recovery plans for the life of those assets
- Updated regularly to ensure you receive the most relevant information to aid in your decision making

Pressure Test Data

- Identify reservoir characteristics relating to future performance, compare pressure points to see if wells are producing from the same reservoir, monitor pressure conditions for signs of depletion

Production History Data

- Access well production summaries, comprehensive well production and injection histories, production summaries and simple decline analysis graphs and reports
- All production history of any well in the database, including visualization tools

Frac Data

- Access in-depth, accurate data that will lead you to make the best possible decisions
- Compare and analyze performance, optimize your recovery, plan future completions and understand best practices



Rigs

Rig Location

- Follow Rig activity on a daily basis
- Query and report Rigs by rig-id, operator, contractor, status, depth capacity or location
- Show Rig locations spatially in AccuMap
- Export entire dataset to Excel for further analysis



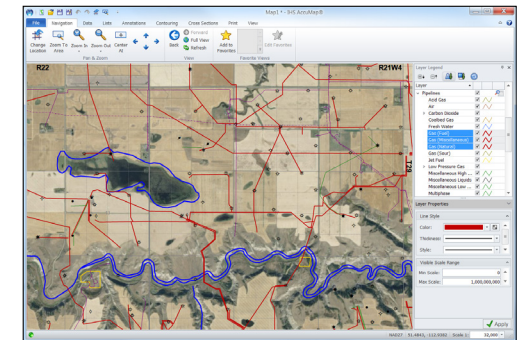
Seismic

Proprietary Seismic Database

- Import your proprietary seismic data and create a shot point map

Seismic Location Data

- Access the most complete seismic locational database
- Harness the power and flexibility of the database with a dynamic data layers showing 100% available seismic location data, comprised of over 600,000 km of 2D and 3D data with detailed attribute information including vintage, fold, source, shot and group intervals, spread geometry and more



View your area of interest through pipeline, culture and Valtus Ortho imagery in AccuMap



Spatial

Extended Base Culture

- View natural and man-made surface features that portray the topography and shape of the provincial landscape, including railways, lakes, rivers, administrative boundaries, and parks

Extended Surface Contours

- Alberta contour data spaced at 10m intervals (20m in mountain regions) illustrating the varying elevations of the earth's surface and defining the topography of the landscape

Transportation Infrastructure Data

- In partnership with GDM, access to data and data attributes, supplementary wellsite road access coverage, and application-ready spatial data distribution capability
- Create custom maps showing this information in your area of interest

Valtus Ortho Imagery

- Clearly see details such as pipeline right of ways, roads, muskeg, lakes, streams and other surface features
- Obtain a true representation and accurate photographic base map of the earth's surface within 40 cm - 2m, with scalable images and uniform scale for accurate measurements and printing of standard to large format maps

DigitalGlobe Satellite Imagery

- View your area of interest using the largest energy-specific streaming geospatial satellite 30cm imagery repository
- Obtain an unbiased, foundational picture of what is on the ground, featuring the most accurate, most recent and best resolution imagery available
- Four imagery services available to meet your needs:
 - DigitalGlobe Basemap
 - DigitalGlobe Basemap+VIVID
 - DigitalGlobe Most Recent
 - DigitalGlobe Best Resolution

For more information

www.ihsmarkit/accumap

CUSTOMER CARE AMERICAS

T +1 800 447 2273
+1 303 858 6187 (Outside US/Canada)

CUSTOMER CARE EUROPE, MIDDLE EAST, AFRICA

T +44 1344 328 300

CUSTOMER CARE ASIA PACIFIC

T +604 291 3600

E CustomerCare@ihsmarkit.com