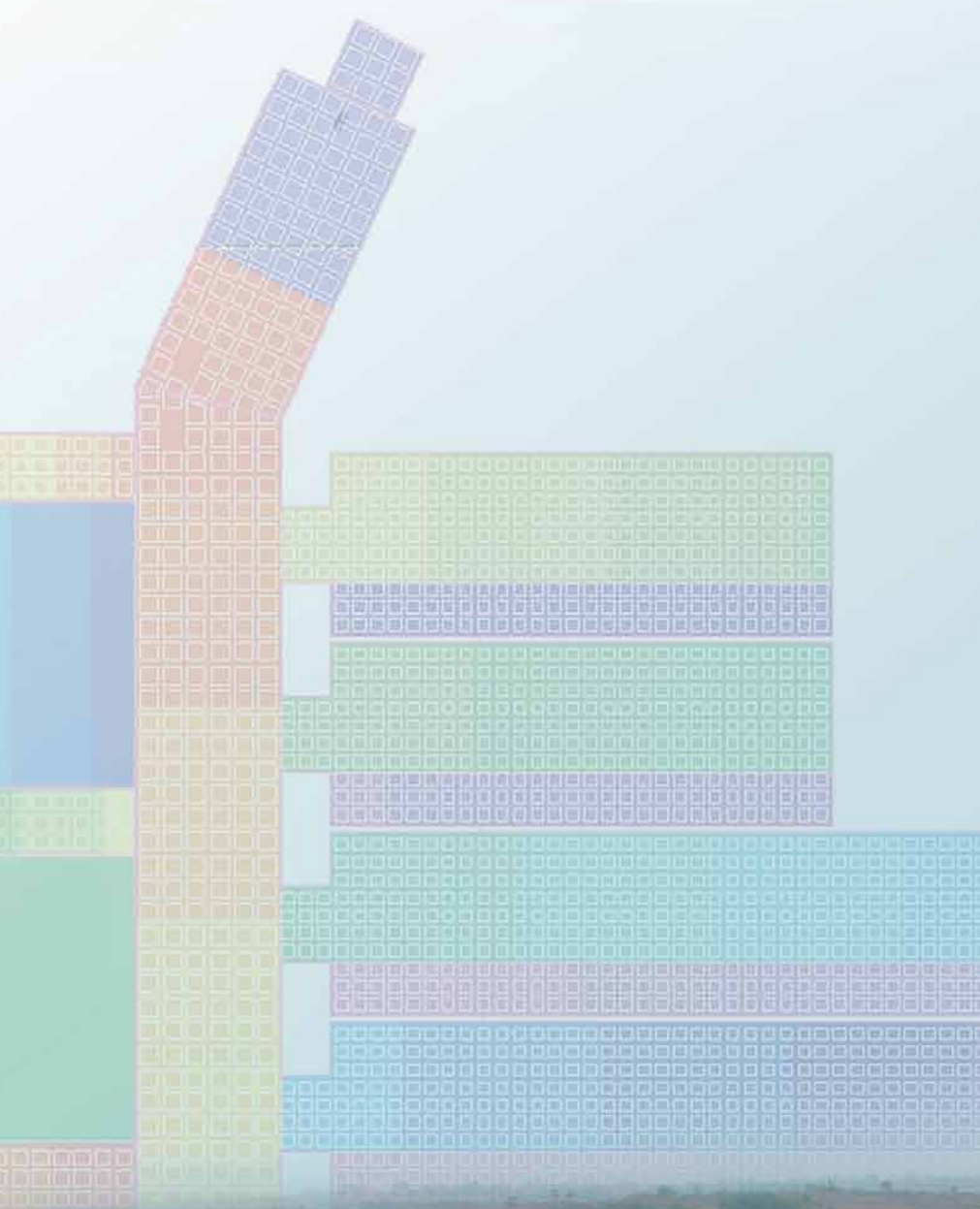
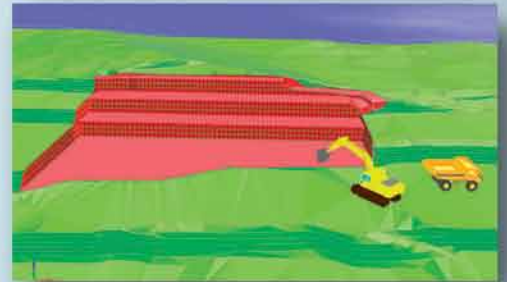


CARLSON MINING

— *Comprehensive Mining Software Solutions*

- Underground Mining
- Surface Mining
- Geologic Modeling
- Drilling/Blasting
- Permitting
- Reserve Studies
- Machine Control
- Reclamation



Carlson[®]
...The Mining Solution



Top attributes of Carlson Mining software solutions include:

- Easy to learn
- Affordable
- Fast-paced client-driven development
- Runs inside AutoCAD®; comes with IntelliCAD® built-in
- Reads existing geologic data
- Drawings can be linked to databases
- Real-time survey guidance
- Real-time remote data exchange
- On-site & remote support
- Access to a production & support team with combined 100+ years of mining software experience

Planning, Engineering or Automating a Mine – Look to Carlson

In use throughout the world, Carlson mining solutions, including machine control, have expanded beyond coal into the phosphate, trona, limestone, aggregates, granite, clay, and even the hard rock markets. Whether the application is underground mining, surface mining, permitting, geologic mapping, or reserves studies, or reclamation. Carlson provides uniquely powerful automation combined with our trademark ease-of-use.

Carlson Software listens to its customers and builds its software to meet users' needs. We consider there's a direct correlation between being the dominant software in this

market – 90 percent of the U.S. coal industry utilizes Carlson Mining software – and our commitment to both advanced technology and customer service.

Enhancements to the software continue on an ongoing basis. In recent years, improvements have included expanding 3D abilities within bench pit design, augmentation of the haul truck cycle analysis routines, new spoil placement timing, adding options for color settings for enhanced visual feedback in the underground timing sequencing, the ability to produce customized, more professional reports and much more as we move into the future.

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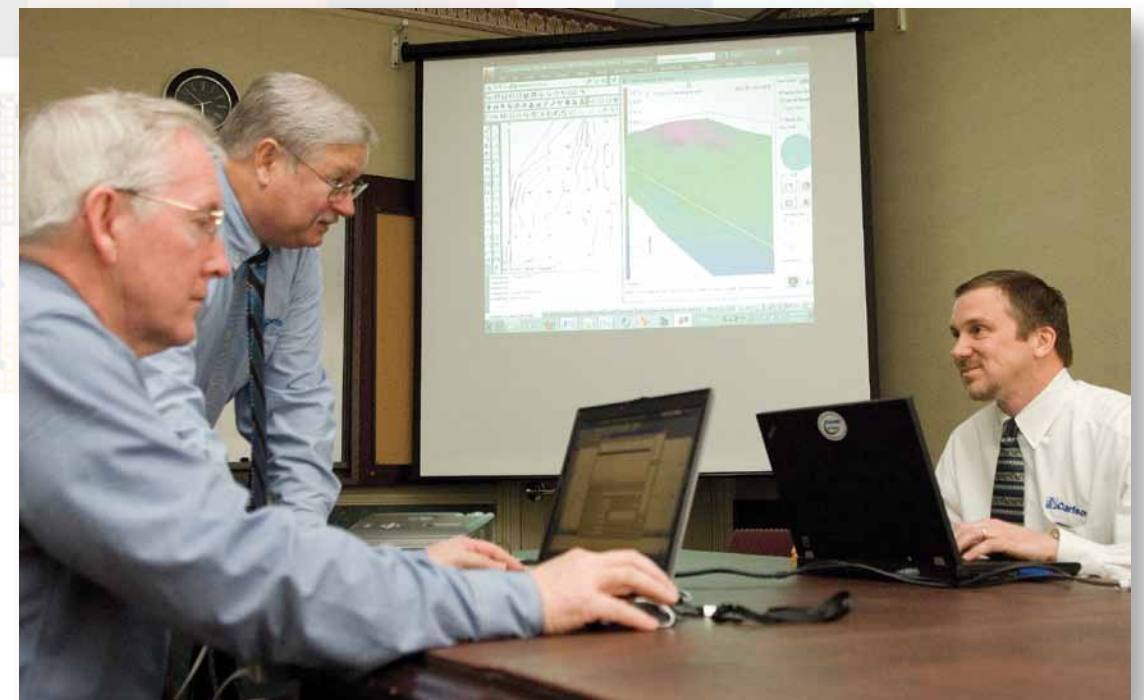
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“From the very beginning of the company, Carlson Software has focused on mining applications. Our location within a five-hour drive of virtually all mines in the U.S. Appalachian and Illinois coal basin dictated that and helped us realize the real need for automation of processes. Our goal is to ensure greater mining productivity utilizing best practices as they apply throughout the world.. Together with our software engineers, our experienced sales staff, and our valued customers, we look forward to meeting your needs.”

— R. Bruce Carlson
President & Founder,
Carlson Software

Carlson Mining: Designed to Work for You

The Carlson Mining Division receives direct attention from Carlson Software Founder and President Bruce Carlson (foreground) and is led by Steve Richards (center) and Grant Wenker (right).



Create geologic models with surfaces or block models and display in cross-section and 3D for analysis and reserve estimation

The Carlson Geology Module uses drillhole and sample data to create accurate and easy-to-use subsurface geologic models. It uses industry standard modeling algorithms to create both stratigraphic surface models and hardrock ore block models. Highlights include:

- Import any drillhole format and store data in CAD or external database such as SQLite
- Utilize fast macros to reproduce the model with new drilling, samples and surveys
- Fault automatically at any dip-angle and displacement to offset the geology
- Create geologic cross-sections and fence diagrams instantly from polylines, picking points or saved alignments
- Generate mine reserves and reserve classification for Measured, Indicated and Inferred analysis with flexible reporting directly into Excel

Stratigraphic Modeling

Drillholes

- Import from any format using custom settings, storing in CAD or linked to SQLite database
- Draw geologic columns in section or in 3D for correlation and checking
- Validate holes with queries and reports to highlight data errors
- Use tools such as Fern and Horizon Codes combined with Drillhole equations for high level model building

Cross-Sections & Fence Diagrams

- Instantly view sections from polylines or realtime with dynamic section line movement
- Hatch sections by attributes and grade with drillholes posted for model correlation
- Stack up sections in 2D, or place in 3D for visualization with mine designs and topo
- Create the initial sections for dragline range diagrams using the real geology and surfaces

Faults

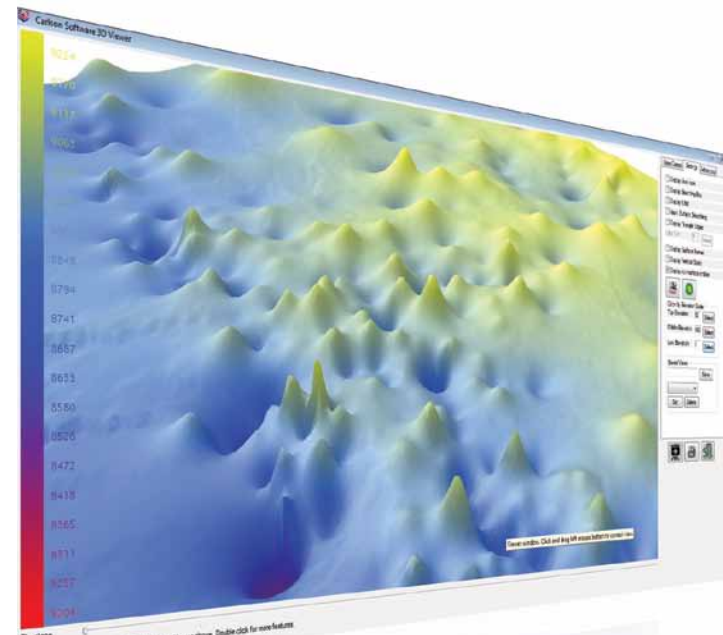
- Place fault lines at the topography with variable dip-angles and displacements to create normal or strike-slip faults
- Draw the fault plane for viewing in 3D
- Have the program find the displacement shift by analyzing the surrounding drillholes
- Apply faults to existing model with new data

Mine Reserves

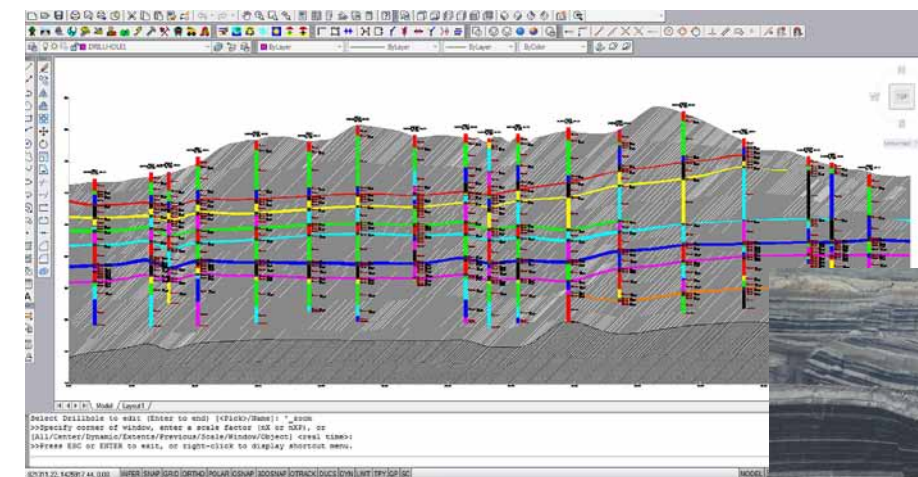
- Use the Pre-calculated model for reserves with weight-averaged quality attributes
- Create strip ratio grids to determine mineable reserves regions
- Format the reports with equations and attribute options while exporting directly into Excel
- Analyze deposits with Reserve Classification to report and hatch the measured, indicated, inferred and hypothetical results
- Fine tune the reserves with automatic options such as minimum thickness of ore and waste, dilution above and below, recovery, density and weathered depth
- Breakout the reserves by vertical quantities, overall highwall slopes, or detailed bench-by-bench designs and surface history files

Modeling

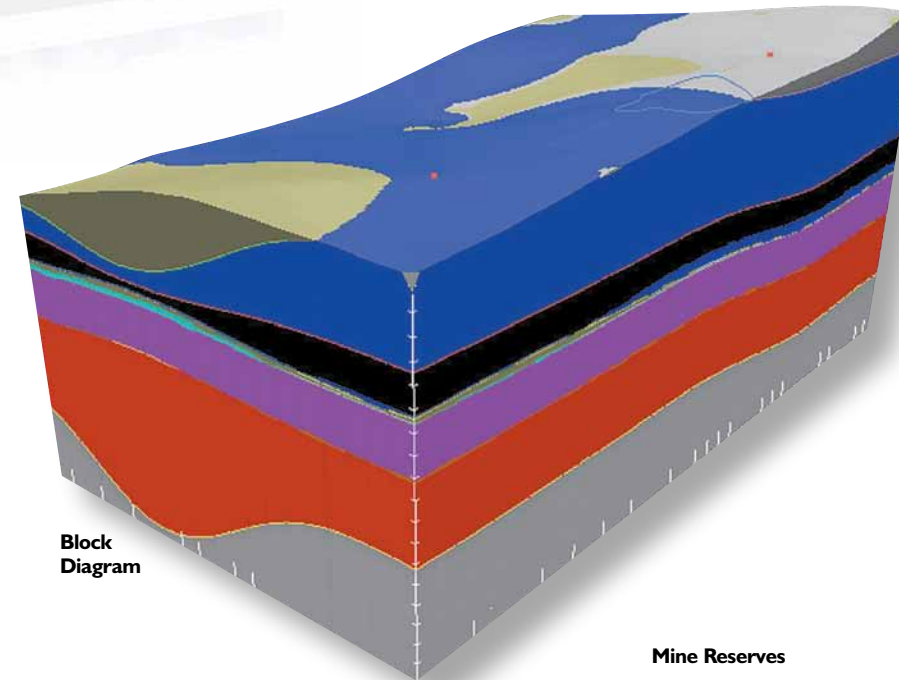
- Use industry-standard geological modeling algorithms and calculate residuals to see which method is recommended
- Create macros and utilities to reproduce the model with new data
- Check the models with inspector tools and color-hatched isopachs
- Enhance the model with limit lines, strata polylines, pit and channel samples combined with the drilling
- Add grids or TINs to the Pre-calculated model for reserves and sections



Hatched 3D Isopachs

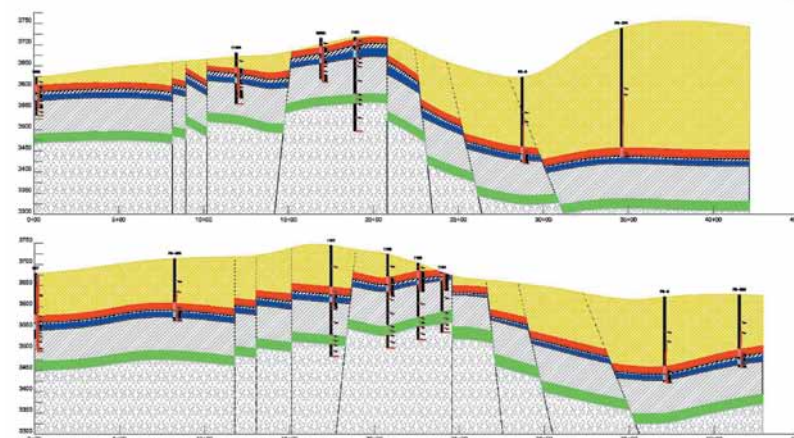


Drillholes

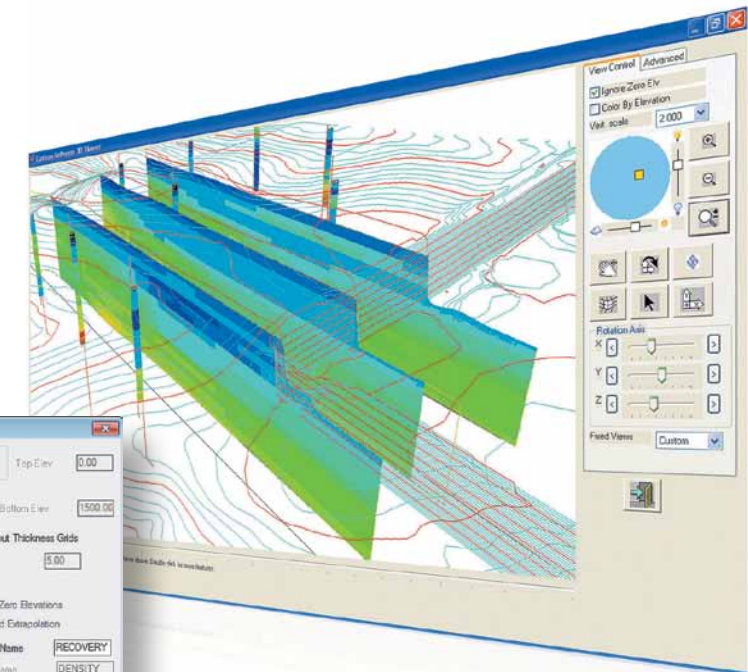
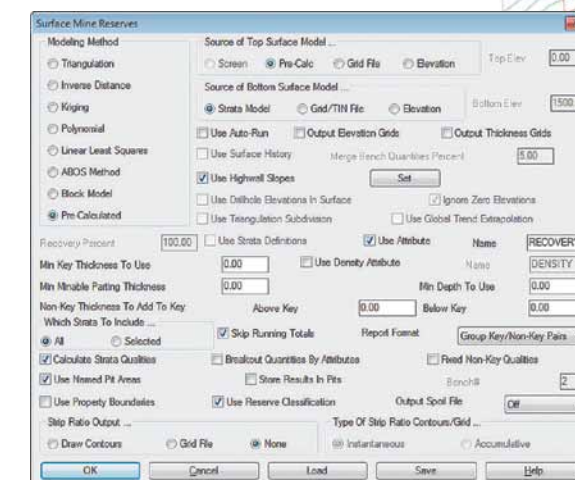


Block Diagram

Faulted Seam Modeling



Mine Reserves



3D Fence Diagram

Block Modeling

Kriging and Variograms

- Make block models by 3D Inverse Distance or Kriging
- Use the Variogram Generator to determine the nugget, sill and range
- Choose from Variogram types such as Semivariogram, Covariance and Correlogram

Grade Parameters

- Enter grade ranges to determine different classes of material for volumes and reporting
- Combine up to 50 attributes to determine just one grade
- Add cost per grade for value block model and Lerch-Grossman optimized pit design
- Set colors and intervals for smooth hatching and legend viewing

Block Viewing

- View partial or entire block model with inclusion/exclusion perimeters
- Turn blocks of similar grades on or off like layers to peel away and see inside the model
- Inspect the block model by depth or elevation with instant feedback on grades
- Add drillholes, surface topography and mine designs on top of blocks for full visualization

Fence Diagrams & Hatching

- Hatch and color by grade parameters for easy grade viewing in section or 3D
- Display drillholes in section or 3D and color by grade parameters
- Color elevation or bench grids by the block model and grade parameters
- Color hatch pits by block model

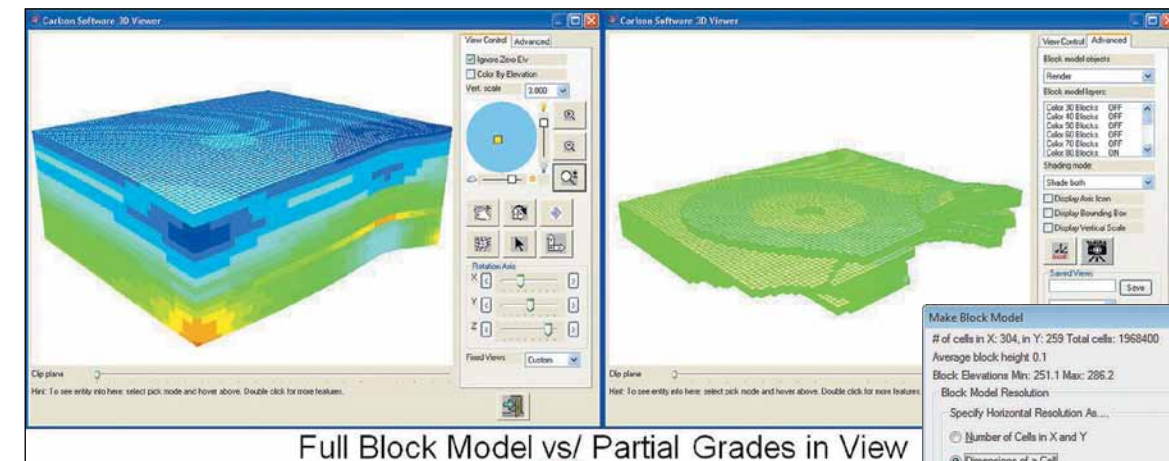
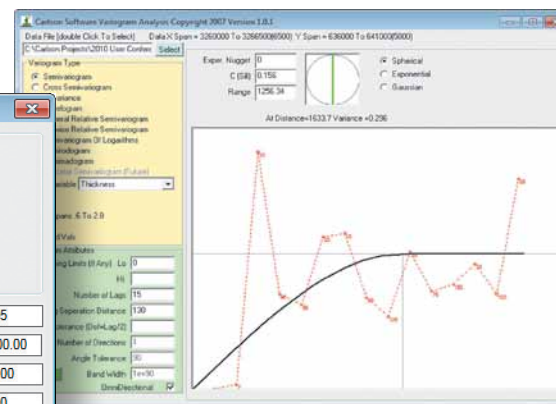
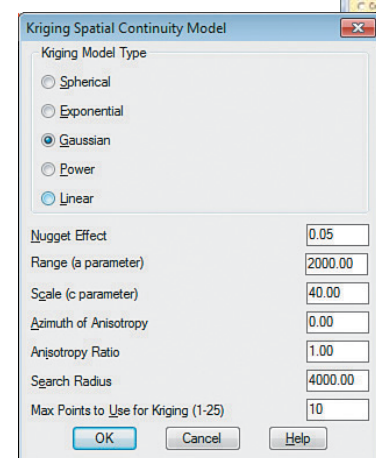
Mine Reserves

- Breakout quantities by grade attributes to report tons and volume in the various grade breakdowns
- Calculate overburden for surface mines to get to specific ore blocks

Pit with Benches & Ramps

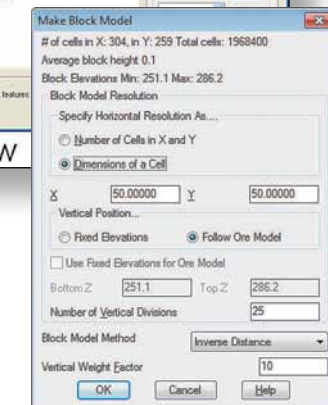
- Define grades with a specific cost amount
- Create a value block model where each block is a profit or loss calculation
- Create output grid of the optimal pit shell of profitable mining blocks
- If costs change, re-run with few changes to view the revised pit shell

Kriging and Variograms

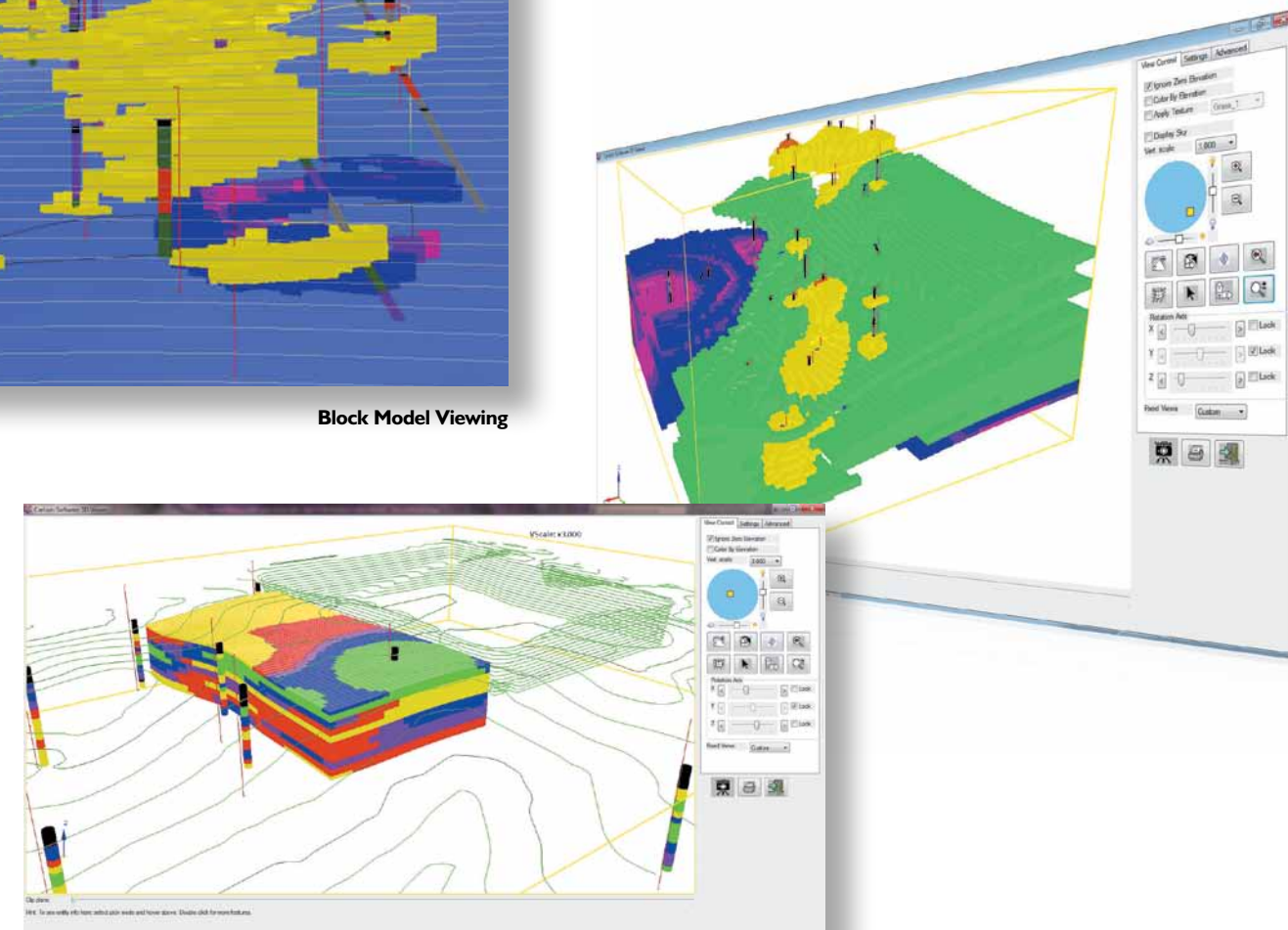


Block Viewing

Full Block Model vs/ Partial Grades in View



Block Model Viewing



Get the power to draft the mine and draw it automatically

Quickly generate volumes, generate tonnage reports, define any pattern of pillar cut, determine attributes, thickness and grades, and produce accurate individualized reports.

All of this is accomplished with Carlson Software's renowned ease-of-use, enabling most applications to be completed in minutes vs. hours, thereby increasing efficiency and savings.

Underground Mine Mapping

- Process survey data and generate the mine map seamlessly with the mine mapping features in Carlson's Basic Mining or Underground Mine Modules
- Calculate end-of-month tonnage on each section in one of three ways with Quantities either by: Average, Grid, or Centerline
- Use the full array of mining symbols from the Mine Symbol Library, or build your own library of mining symbols, pillaring plans, point symbols, or map symbols
- Automatically connect the survey data using Auto-Connect Pillars
- Layout your room and pillar mine automatically using Advanced Panel Layout features
- Draw and then view the underground in 3D

Underground Mine Reserves

Determine these complete with quality attributes, thickness and grades calculated and displayed using user-defined parameters, such as:

- tonnage
- overburden
- area mined
- qualities
- periods
- equipment
- cost

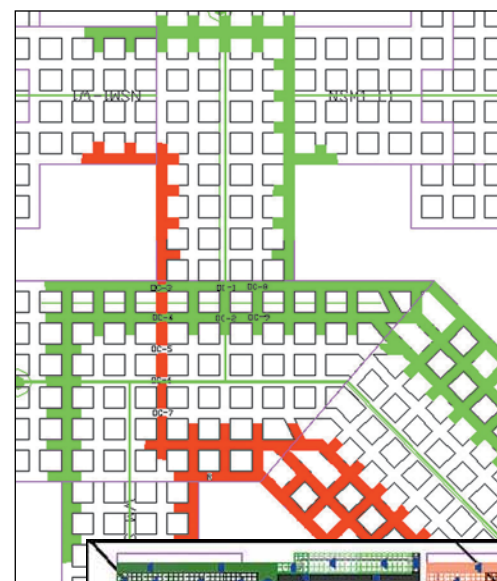
Underground Scheduling

Knowing precedence is critical in underground mining, Carlson's timing routines provide valuable information to assign equipment to reduce idle time and increase production rates by avoiding delaying or illogical layout elements and precedence.

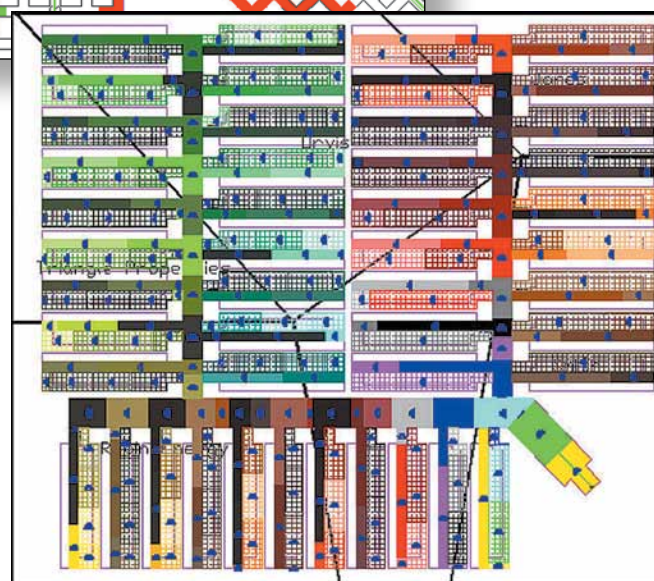
Added options for color settings enhance visual feedback in the underground timing sequencing. Retreat mining can also be included in the scheduling, splitting the panels by advance and retreat.

- Schedule timing and quality forecast, tying into the geologic model
- Individually schedule mining sections based on both productivity and operating schedules
- Forecast difficult mining areas using Difficulty Factors in several different ways, for example as a function of time, location, or thickness
- Place drawing events in the mine to accumulate specific tasks such as belt moves, belt heads, stopping points, longwall moves, etc.
- Update your mine and re-forecast quickly using one of two methods
- All reports export directly to XML Reports, ASCII text files, and more

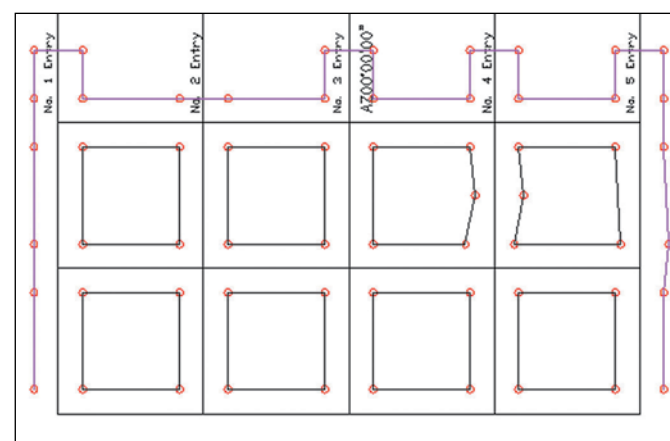
- Automatically calculate extraction ratios when pillars are drawn, or input the ratio using simple closed polylines on the PERIM layer representing the panel
- Much of the panel data can be input by just keying in text on specifically named layers such as Difficulty, Extract, Ret_Extract, and more
- Accumulate timing results by property owners



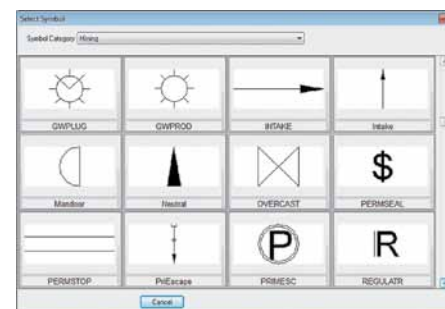
Any pattern of Pillars can be defined



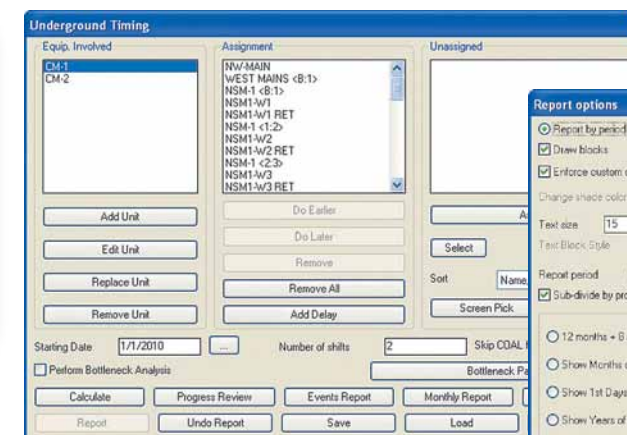
Longwall Mining



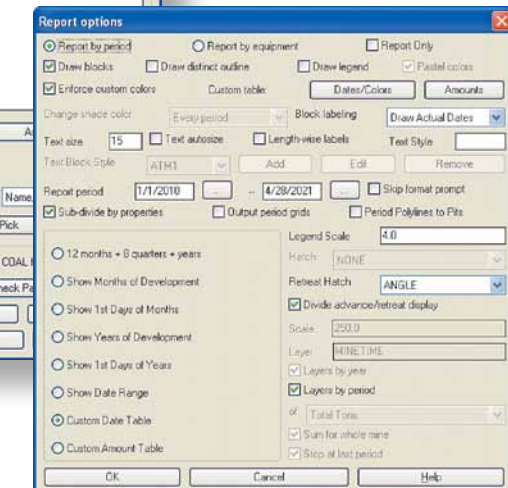
Auto-detection of Pillar Corners



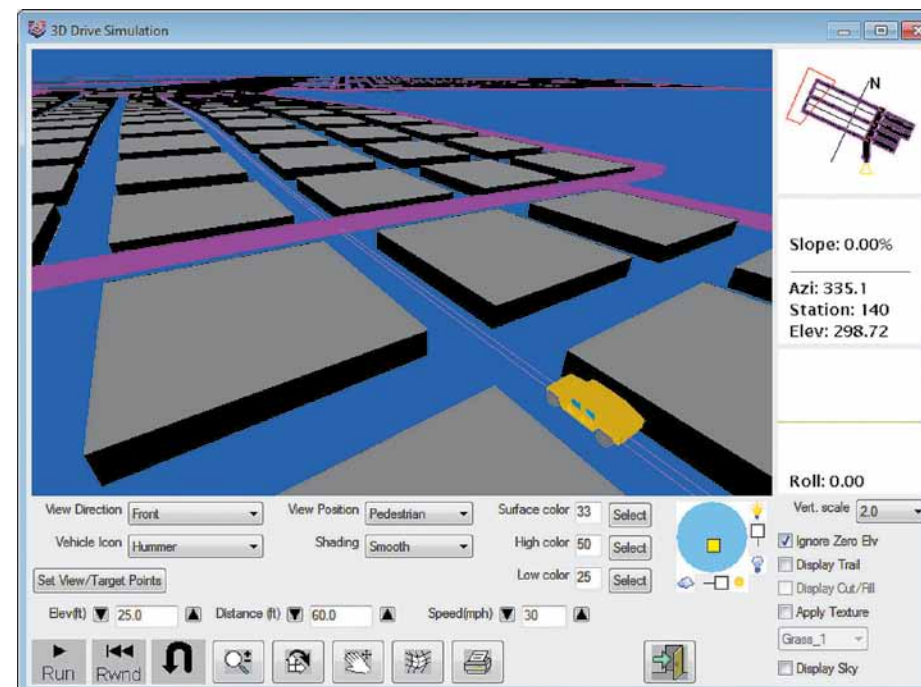
Mine Symbol Library example



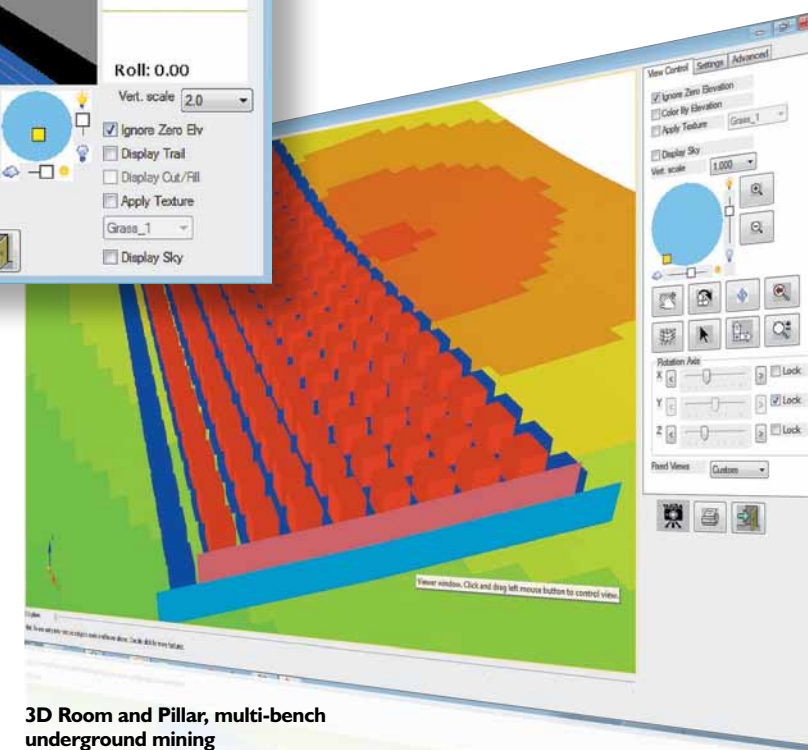
Underground Timing



Choose your report format



3D Underground Room and Pillar Simulator



3D Room and Pillar, multi-bench underground mining

For complex surface mining design and techniques with precise scheduling and timing

The Carlson Surface Mining module enables users to find the most efficient mine design by testing layouts in plan, section and 3D view. Use Carlson to:

- Integrate geologic and surface modeling with plan view, 3D view, and section view mine layout routines
- Get accurate calculations of overburden, ore quantities, strip ratios, rehandle, and ultimately, cost
- Easily convert any road or ditch centerline, dam, building pad, pit or other defined object into a final terrain

Carlson's color-coding highlights production timing and statistics and its calendars explore "what if?" scenarios and monitor equipment usage. Also get the ability to base timing on calendar periods, tonnages, or on volumes of overburden.

Multiple slope groups are now easy to define for all pit blocks globally with symbols for different slope and bench templates on different sides. You can now cut through the benches whether working from the top down or the bottom up with automatic ramp building.

3D Pits & Spoil Design

- Try varied bench parameters on different sides of the pits by tagging Slope groups
- Alter the slope, width, and height of the benches in pit through different material or depth
- Place ramps strategically by testing in design, just select slope and starting location to have ramps automatically carved into the pit even with switchbacks
- Base benches on strata, elevation, or quality for both pits and spoil

Pit, Property & Spoil Layouts

- Use several pit layout algorithms to represent actual mine pits or simply to subdivide reserves into smaller production blocks for reserves or scheduling
- Choose any shape for your layout from simple to extremely complex using commands such as Pit Matrix Layout and Layout by Advance
- Further subdivide and identify pits by ownership automatically for instant lease and royalty-calculations-by-owner using the property lines
- Create spoil location polygons for spoil timing
- Name property boundaries for use in reserves and scheduling

Surface Mine Reserves

- Calculate reserves from drillholes on the fly, or from pre-calculated grid or block models
- Choose between vertical quantities, overall highwall slopes, or detailed bench layback designs
- Store quantities or grids into the pits for scheduling
- Create full reports of volume, tons, quality, area and strip ratios
- Analyze deposits with Reserve Classification for measured, indicated and inferred results

Haul Cycle Analysis

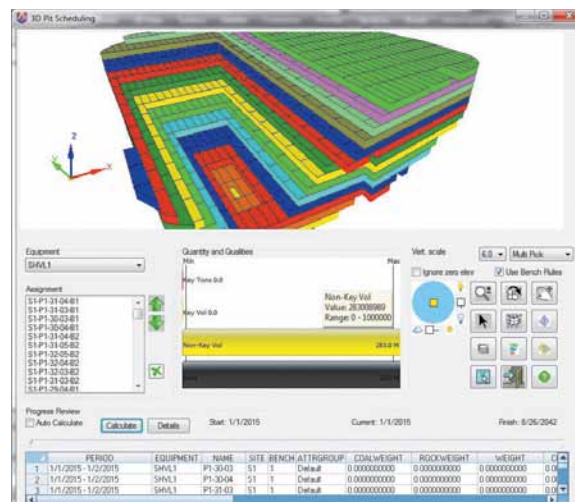
- Define truck fleet productivity (pick from 24 pre-defined trucks plus add own)
- Create haul road networks for possible routes based on color-coded 3D polylines with length and slope
- Calculate and report cycle time, overall productivity or truck fleet size required

Dragline Range Diagrams

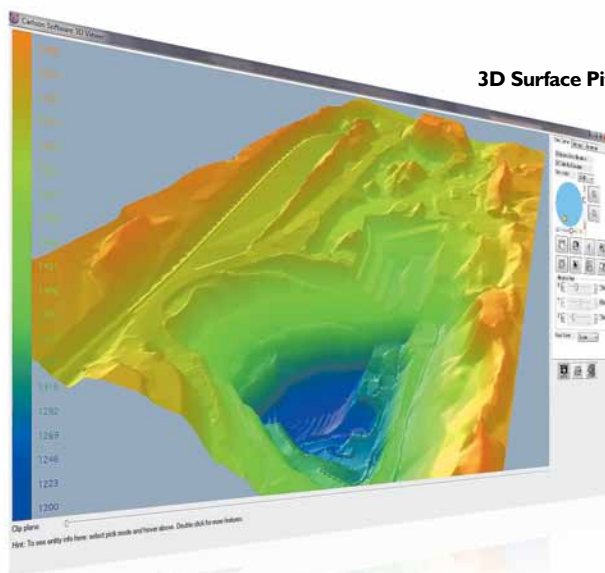
- Test interactive range diagram options for detailing dragline sequences and associated volumes
- Analyze dragline height, reach, and digging depth limits based on design
- Combine dozer push analysis with cast blasting, shovel, and dragline analysis to obtain the optimal combination of equipment and mining sequencing
- Process the section design to 3D creating pits and the spoiled surface

Scheduling & Timing

- Base surface mining rates on overburden removal or ore tonnage
- Apply equipment calendars/usage to individual or collective fleets
- Create multiple calendars to explore "what if?" scenarios
- Get color-coded view to highlight the production timing and statistics
- Base timing on calendar periods or tonnages or on volumes of overburden
- Set production requirements per user-defined time periods
- Attach precedence requirements to any timing blocks
- 3D Pick for short range sequencing with multiple select and colored benches
- Automatically create 3D surfaces of each period scheduled to simulate the mine progression and play it back for review
- Combine dozer push analyses with cast blasting, shovel and dragline analysis to obtain the optimal combination of equipment and mining sequencing
- Sequence placement of spoil given cuts and haul fleets and combine that with the mining advance to play back the entire mine progression

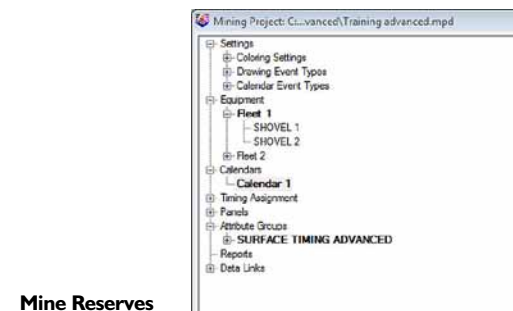
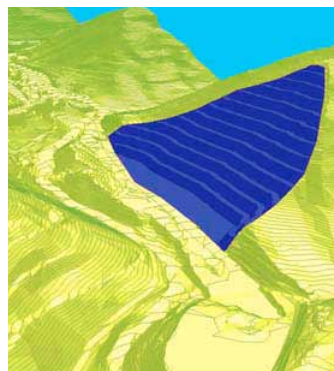


3D Pit Timing

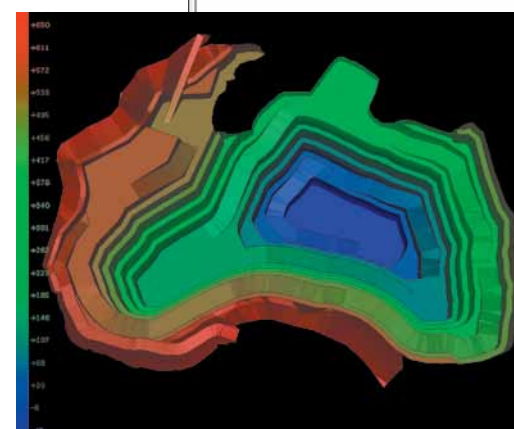


3D Surface Pit

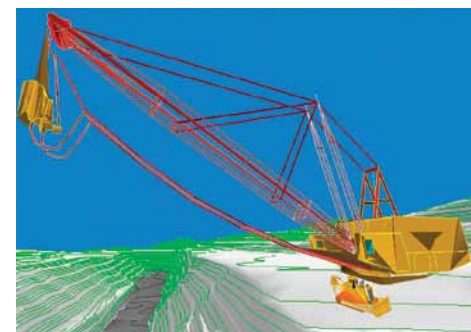
3D Benches



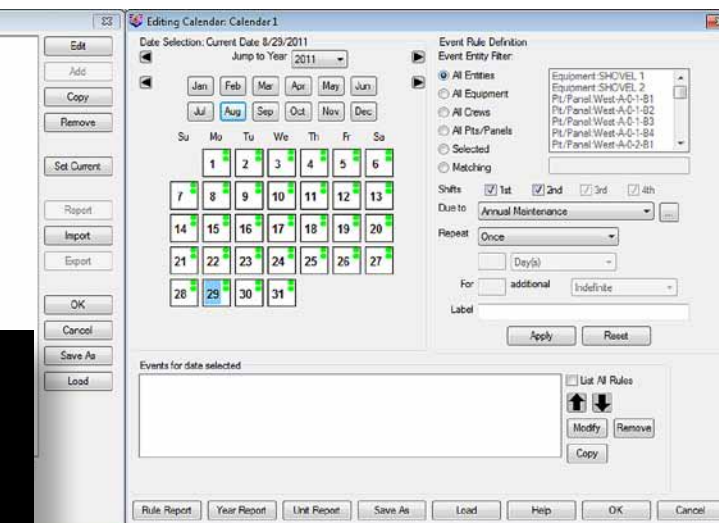
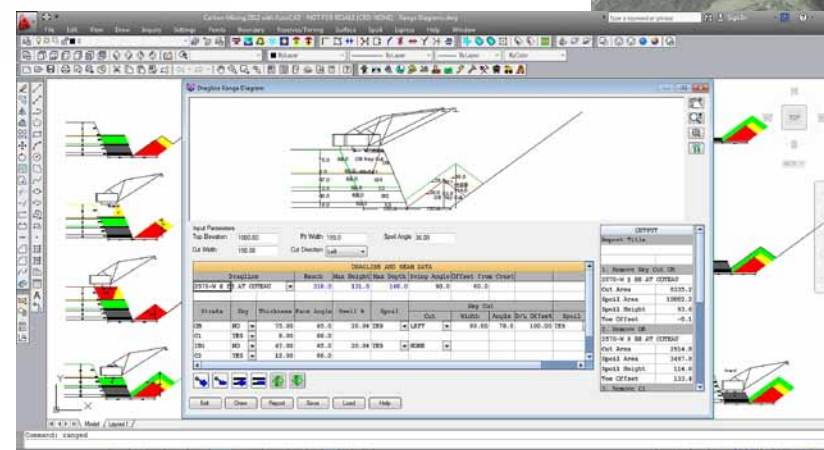
Mine Reserves



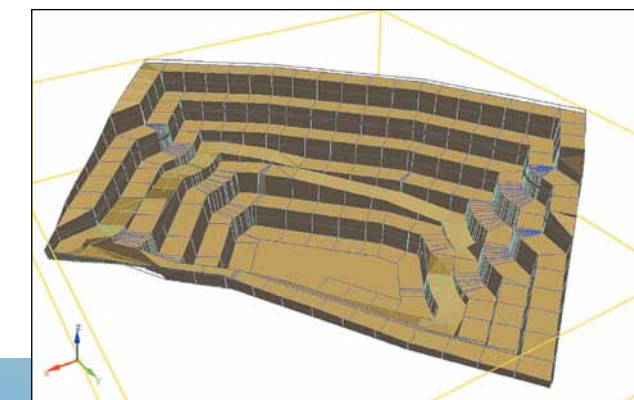
3D Dragline



Range Diagram



Pit with Benches & Ramps



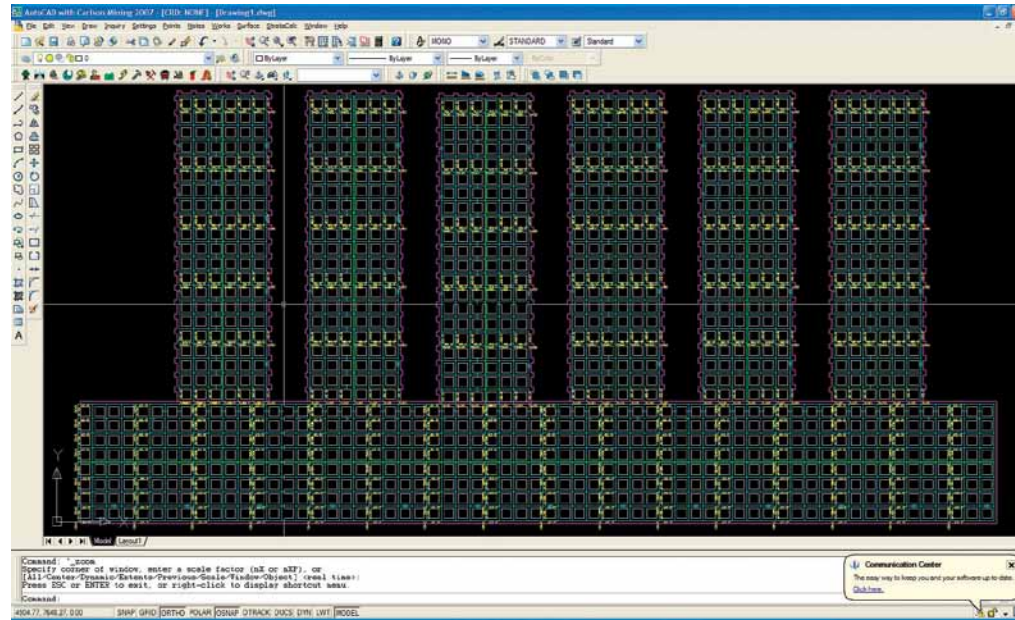
Carlson Basic Mining Module

Affordable and Upgradable

Here's the software you need to get started or for mining basics at a low cost. It's the perfect AutoCAD/IntelliCAD mining add-on to Carlson Civil and is geared to those who need a low cost tool for simple mining practices. It can be upgraded to any of the other Carlson Mining modules at any time.

Features include:

- Basic drillhole entry
- Reserves and fence diagrams (on-the-fly only)
- Underground mine mapping
- Layout
- Quantities

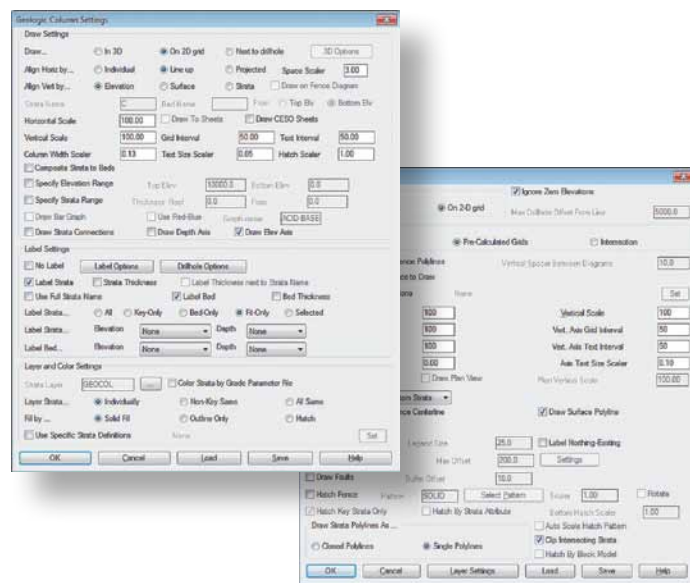


SDPS

Subsidence Deformation Prediction System

Generate isopachs and subsidence based on depth of mining, geological characteristics, and mine design parameters.

This high-end program predicts and represents the settlement of the surface topography due to underground mining. SDPS is a niche program developed through the Virginia Poly-Technical University and Carlson Software is the world's only distributor.



Get the total picture — incorporate 4D and 5D (time & cost) computing into your mine

Carlson Mine Financials is a full financial analysis program that takes its output from the underground and surface mine scheduling routines found in Carlson Mining.

- Schedule and track all mining resources and activities, including work crews, in-use and non-assigned equipment, supplies, fuel, labor and miscellaneous costs
- Compute how fast a project can be accomplished, including how many and exactly which pieces of equipment will be needed based on a hard-stop deadline
- Determine potential costs based on mine plan, mine characteristics (difficulty factors), and additional factors that control the production
- Define specific, customized budgeting and reporting periods



Carlson Mine Financials

Carlson Mining

Mining Equipment, Production Timing, Quantities and Event Reports

Other Input Data

Equipment, Labor, Supply & Material, Events, Other Costs and Unit Rates

Carlson Mine Financials

Fixed Assets | Library | Cost Centers

- Equipment
 - SCAD_EQU
 - CH_1-00
 - LW_1-00
 - CH_2-00
 - CH_3-00
 - CH_4-00
 - CH_5-00
 - LW_2-00
 - 31 BUTT
- Expense
 - Hourly
 - Salary
 - Supply
 - Event s
 - Quantit
 - Other Y
- MINE
 - CH
 - LW
 - CONVEYANC
 - TRACK & TR
 - VENT
 - GEN OUTEY
 - BELTS
 - NON-MINE

Equipment Schedule | CostCenter Schedule | Production Schedule | Event Sca

| Equipment | Quantity | Jan-2007 |
|-----------|--------------------|----------|
| 1 CM_1-00 | Continuous Miner.1 | |
| 2 | Hour | 294.86 |
| 3 | Day | 20.57 |

Financial Reports

Library reports, Schedule reports, Operating cost reports, Income statement, DCF report and Balance sheet

Coordinating MINE DESIGN with MINE OPERATIONS and MINE CLOSURE = EFFICIENCY

Do it right the first time with Natural Regrade for mine reclamation — working *with* nature brings real savings

The Natural Regrade reclamation design will:

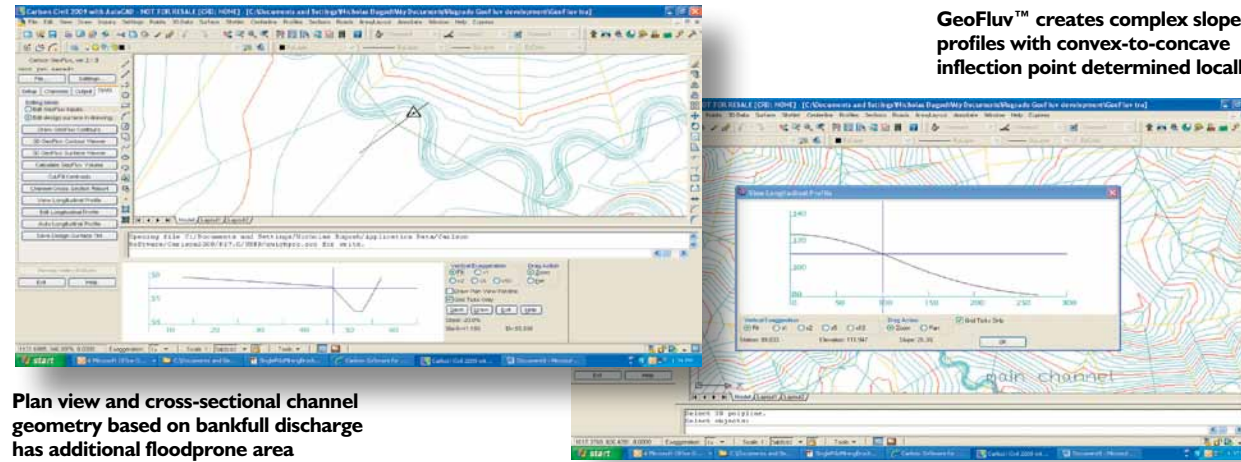
- Help meet *and* exceed environmental standards
- Provide maintenance-free stability against erosion and true sustainability
- Provide reclaimed land run-off water quality comparable to surrounding undisturbed lands.
- Encourage wildlife and plant diversity in the reclaimed land
- Enhance the local view shed by returning the natural beauty of the land



Uniform slopes & artificial water conveyances of traditional methods of land reclamation are no match for the forces of nature

“*Before even breaking ground*, savvy operators consider material placement that is needed for a reclamation plan that meets *all* requirements. Mining and reclamation plans that are designed to work together will minimize material handling and can make big savings.”

— Nicholas Bugosh, GeoFluv Developer

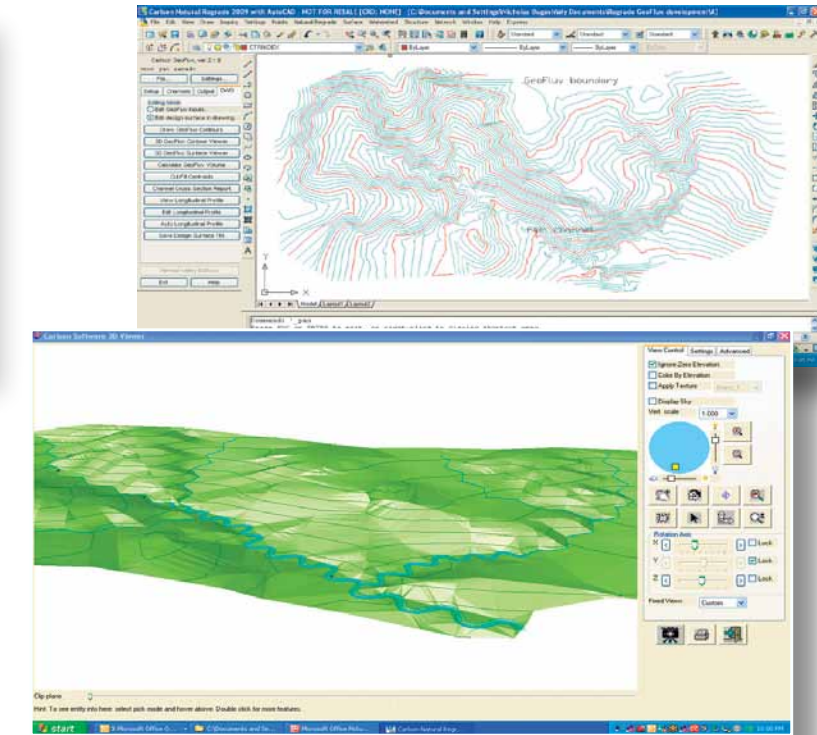


Plan view and cross-sectional channel geometry based on bankfull discharge has additional floodprone area

GeoFluv™ creates complex slope profiles with convex-to-concave inflection point determined locally



Natural Regrade makes a design for a stable landform that satisfies local empirically determined user inputs

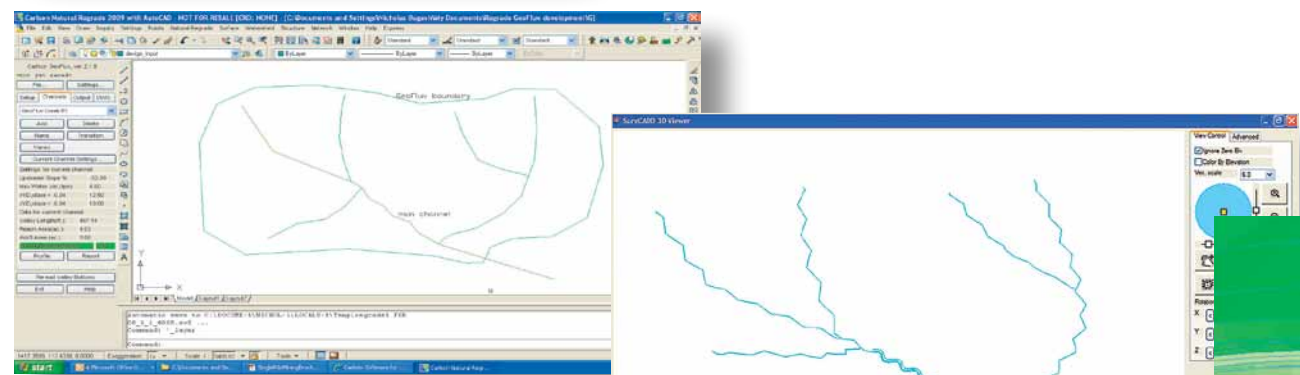


Powerful 3D viewer aids final design editing of the draft landform

Natural Regrade is ideal for integrating with Global Positioning System and machine control, for example Carlson Grade, to simplify and speed construction and reduce costs. The need to survey and stake the designs in the field is eliminated using these technologies

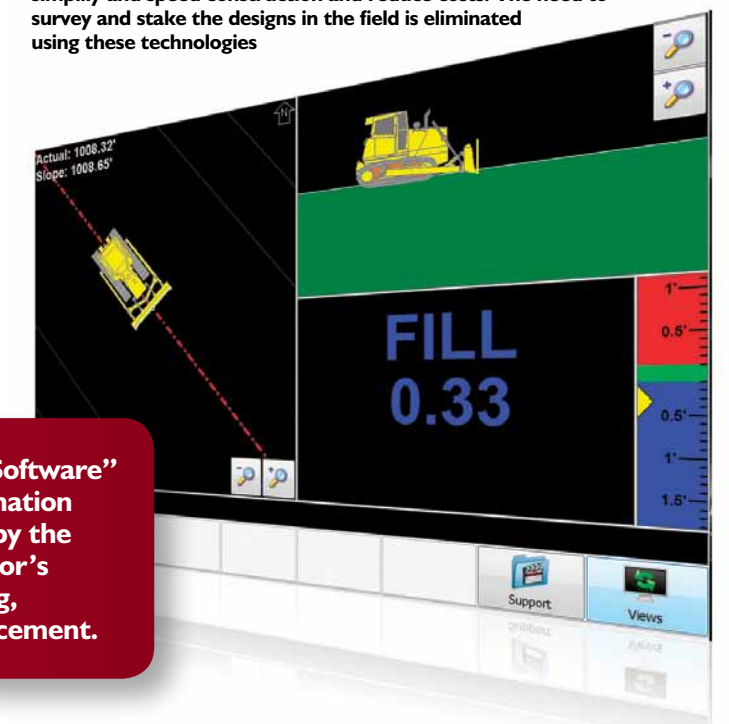
Rather than fight the natural forces that shape the land, Natural Regrade with GeoFluv creates a landscape that harmonizes with those forces and does not require expensive long-term maintenance and repair

Natural Regrade automatically sets channel confluences to grade — change one and the others adjust



GeoFluv™ dialog box leads the user through the process

GeoFluv™ integrated 3D channel network using local empirically-determined drainage density



Named a “TIPS Core Software” in 2007 for mine reclamation design and review use by the U.S. Dept. of the Interior’s Office of Surface Mining, Reclamation and Enforcement.

Look to Carlson for comprehensive data collection software with supporting hardware

Software choices:

Carlson SurvCE – A complete data collection system for Real Time (RTK) GPS and Total Stations with in-field coordinate geometry. Enhanced functionality and links seamlessly to Carlson Geology and Mining.

Carlson SurvPC – A full-screen version of SurvCE allows users to get the world's most flexible and powerful data collection software on a PC platform. Provides more graphic power, more processing power, contouring with CAD, and interface with Google Earth and Esri.®

Carlson GIS360 – A new solution utilizing both GIS and surveying technology in the field to collect data. GIS360 can seamlessly collect data for both AutoCAD® and ArcGIS® products and is also compatible with Google Earth. GIS360 provides the first use of 3D GIS in the field delivered in such a way that anyone on site can use it with minimal training.

Carlson Field – Data collection software designed for GIS work; real-time kinematic GPS and total station data collection directly in CAD. Allows users to see points and linework as data is collected with the ability to place text on the drawing and contour in the field to verify that enough points have been taken.

Hardware choices:

CarlsonMINI – rugged, compact and lightweight field computer offering lightning-quick processing with a touch screen and high-contrast color display.

Carlson Surveyor/Surveyor+ – fast, incredibly durable, and powerful data collectors yet light and easy to grip. Use with Carlson SurvCE for surveying, stakeout, construction layout and more.

Carlson Surveyor+ GPS – a dual-frequency RTK GNSS receiver and field controller fully scalable from the Surveyor+, it includes drivers for most total stations and robotics.

Carlson Supervisor & Carlson Supervisor+ GPS Tablet – a powerful, rugged PC tablet developed by Carlson Software to complement its comprehensive line of land development and mining software and allow users to bring the office to the site and vice versa.

Both feature:

- Microsoft Windows 7.0 Ultimate operating system
- Intel ultra-low-power yet super-fast 1.6GHz processor
- A massive 64GB solid-state hard drive
- A 7-inch widescreen, 1024x600 resolution, sunlight-readable, resistive touchscreen
- Works on more total stations, robots and GPS systems than any other solution

The Carlson Supervisor and the Super G can both be used with Carlson SurvPC and with Carlson Grade Supervisor, an easy-to-use software made for construction grade management.



Carlson Supervisor



Carlson Surveyor

Carlson Surveyor+



Carlson Surveyor+ GPS

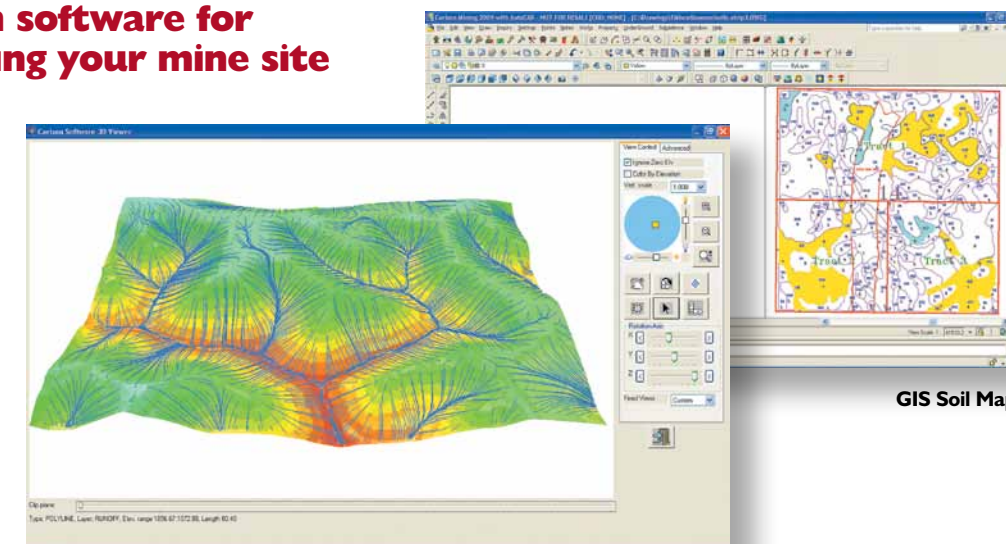
Carlson office design software for designing or upgrading your mine site

Carlson Survey. A completely intuitive survey solution provides versatile and intuitive raw data editing and processing, Network Least Squares, the easiest and most powerful Field-to-Finish, legal description and deed writing and reading, and a full complement of COGO tools for every survey application.

Carlson Civil. For all your terrain detail — roads, ramps, pits, ditches, reclamation — use your creativity to the fullest with Carlson Civil. The fully dynamic (but only when you want it to be) environment allows defining your project folder to suit your organization and your own annotation style, exploring of “what if?” scenarios with a simple drag and drop, and editing or changing the design and all surfaces and volumes automatically in real time.

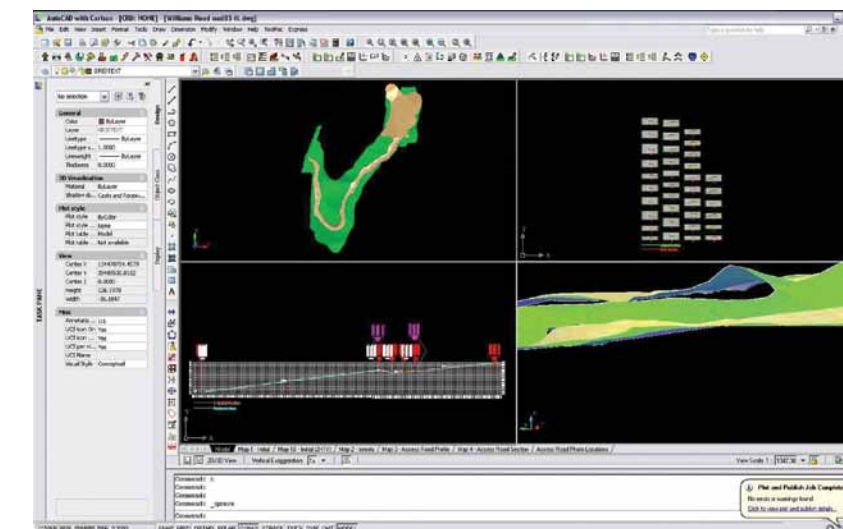
Carlson Hydrology. Get complete automation with full 3D design to compute runoff coefficients from layers, run rainfall events through your fully designed system, analyze the watershed for any storm event and then build the structures to detain and reroute the runoff, build ponds and spillways with channels, weirs, pipes and culverts, and also connect with HydroCAD® to determine stormwater chamber specifications and run rainfall events.

Carlson GIS. New linkage with Esri® allows you to immediately perform preliminary engineering and hydrological studies and planning analysis. Also get the ability to link objects in the drawing to the external database for queries in addition to linking ownership boundaries, leases, mine plans, and properties to the database in order to easily query and retrieve quantities, tonnage, and ore quality.



Runoff Tracking

GIS Soil Map



Haul Road Design



Carlson Grade Solutions: Powerful Software For All Your Needs

CARLSON Mining Grade — Connect to GNSS Systems

Maximize your Mining Operations with Carlson Software's consistent user interface across all machines, field assets, and supervisors.

Carlson's Grade solutions are made to work with all equipment in need of grade control.

- DOZERS
- LOADERS
- EXCAVATORS
- COMPACTORS
- GRADERS
- DRILLS
- SCRAPERS
- BUCKETWHEELS
- SHOVELS
- FOREMAN TRUCKS

Utilizing a ruggedized cab-mounted computer, heavy equipment operators can accurately and quickly perform cut/fill, achieving the proper grade with the first pass, with the result less maintenance and lower costs.

CARLSON TruckPRO

Haul Truck Management

Reduce idle time and increase productivity with accurate, real-time tracking of all truck-related activity. This includes road speed analysis, status (loaded-unloaded) and ore quality reporting, and all loading and dumping information.

CARLSON Fleet Manager Office

Remote Site Management

Allows all data to be at the fingertips of those in the field/mine and those in the office (any office). Efficiency and productivity can then be maximized with in-depth analysis and evaluation.

Features

- Configurable on-board display
- 3D avoidance zones and surfaces
- Proximity warnings between machines and assets
- Real time cut/fill/on-grade to multiple design surfaces
- In-cab, on-demand training movies
- User-definable tasks and delays
- Flexible user interface as simple or as advanced as the user needs
- Support for most GPS/GNSS receivers
- Collect/stakeout/as-built points
- Direct import: .dwg, .dxf, TN3, GC3, LN3, TIN, GRD
- NTRIP-compatible with most networks
- Build pads; flat, single/dual/multi-slope
- Handle large surface files up to 50MB
- XP/Win7 compatible

Overall Benefits

- Increase productivity through accurate push strategies
- Analyze single or multiple vehicles
- Easily mine to the design
- Get correct floor elevation
- Accurately track materials
- Reduce idle time
- Enable "best-practice" evaluations
- Keep personnel out of harm's way with watch and warning zones
- Reduce survey costs
- Get 24/7 survey assistance
- Determine accurate overhaul costs
- Finish reclamation areas



Heavy equipment operators: You'll know your grade and location without the need for stakes, in low or no light circumstances, and in severe weather conditions.



Carlson Commander MC Control Box



Supervisors: You'll always know what's going on with real-time position and height inspection capabilities.



CARLSON MINING USER LIST (listed by country)

Australia

ACOR Appleyard Consultants
Anglo American CapCoal
Centennial Coal Company
Echelon Mining
GijimaAst
Klipstone Pty Ltd
MineRP
Peabody Energy
Ross Seedsman Pty Ltd
Xstrata Coal Qld

Belgium

Carmeuse Group

Canada

Agrium
BGC Engineering
Bridge View Enterprises
Carmeuse Lime
Georgia Pacific Canada
GIS Matrix
Goldcorp
Grande Cache Coal
Karson Aggregates
Lafarge
Ledcor Industries Inc.
Quinsam Coal
Walter Energy Western COA

China

Asian-American Coal Inc.
Peabody Energy

Columbia

Drummond Ltd
Geologia y Geotecnia S.A.S.
MINERIA Inter American S.A.S.

El Salvador

MSC Ingenieros

Ghana

Golden Star Wassa Limited

Greece

IPI Group
Public Power Corporation S.A.

India

BLA Industries Pvt Ltd
Lawrence & Mayo I PVT LTD
Min Mec Consultancy Pvt Ltd
Shotam Instruments Pvt Ltd

Jamaica

St. Ann Jamaica Bauxite Partners

Mexico

MICARE

Mongolia

Norwest
Peabody Energy
Sapphire geo

Panama

Topoequipos S.A.

Russia

Alosa
BAIN-Zuhre Coal Co.
Bererezovsky
BKO
Borodinsky
GKM Timir
Gornaia Co.
GT MORSTROJ
IngGeo

Kaliningradskie Kar'ery

Kansky
LUTEK
Magunsky
Nazarovsky
Nerungrinsky
NIP Informatica
Severalmaz
SibNIIUgle Siberian Coal
SUEK Krasnoyarsk
Tajvola
Tugnu
Upravlenie gornyh rabot
VAMI
Vostsibugol
Yakutugol

Slovakia

Carmeuse Lime

South Africa

Cronimet Chrome Mining Pty Ltd

United Kingdom

J P Ketelaar

United States

A & G Coal
Abbott Engineering WV
Abingdon Spatial Technologies
ACME Brick Company
Adams Engineering
Advanced Land Services Inc.
Agapito Associates LLC
Aggregate Foundations and Piering
Aggregates USA LLC
Agrium
AK Steel
Alabama Surface Mining Commission
Alaska Division of Mining, Land and Water
Alden Resources LLC
Allegheny Resources Inc.
Alliance Coal LLC
Alliance Consulting Inc.
Alpha Coal
Alpha Engineering Services
Alpha Natural Resources LLC
Alpine Consulting and Engineering
Alton Coal Development LLC
Ambre Energy
AME Technologies Ltd
AMEC Environment & Infrastructure Inc.
American Colloid Company
American Gypsum Company
Anderson Mining
Ann's Run LLC
APAC
Appalachian Coal & Land Services PLLC
Appalachian Land Co.
Appalachian Mining & Engineering
Appalachian Technical
Aqua Terra Consultants Inc.
ARCELOR Mittal Midvol Cobra
Arch Coal
Arch Materials
Argus Energy
Arkansas Department of Environmental Quality
Arkansas Lime Co.
Armstrong Coal Company Inc.
Asian American Coal Inc.
Associated Engineers Inc.

Atlantic Development and Capital LLC
B & N Coal Inc.
B & W Coal
Badger Mining
Bailey Engineering
Barr Engineering
Barrett Paving Materials
Bays Inc.
Begley Lumber
Bentonite Performance Minerals
Berwind Land Company
BHP
Black Diamond Mining Co.
Black Mountain Resources LLC
Black Panther Mining LLC
Blaschak Coal Corp.
Bledsoe Coal Company
Blethen Mining Associates PC
Blue Diamond Coal Company
Blue Mountain Energy
Blue Mountain Engineering
BNI Coal Limited Center Mine
Booth Energy
Border Energy
Bowen Engineering Co./WV
Bowie Resources LLC
Boxley Materials
Bridger Coal Company
Bronco Energy
Brook Trout Coal Co.
Brown & Caldwell
Buckeye Industrial Mining Co.
Buckingham Coal Company
Bureau of Indian Affairs
Bureau of Land Management
Buzzi Unicem USA
CAM Ohio LLC
Capitol Cement Corp.
Carbontronic Fuels Management
Carmeuse Lime
CBC Engineers & Assoc.
CDR Minerals Inc.
C-E Minerals
Centennial Collaborative
Central App Consulting LLC
Central Ohio Coal Company
Centre Crown Mining LLC
Civil & Environmental Consultants
CKC Design Group LLC
CLIFFS Mining Services
Clintwood Elkhorn Mining
Cloud Peak Energy LLC
CME Engineering Inc.
Coal Contractors (1991) Inc.
Coal Productions Engineering
Coal Resources Inc.
Coal River Energy
Coal Source
Colas Inc.
Colorado Division of Minerals & Geology
Consol Energy
Cumberland Mine Service Inc.
Cumberland River Coal Co.
Cumberland Valley Engineering
Dean Word Company
Decota Consulting Company
Delta Companies
Delta Engineering & Associates
Diamond Engineering & Assoc.
Dodd & Dodd Consulting
Dolet Hills Lignite Company
Doss Engineering

Drummond Company
Duke Engineering
Dutra Materials
Dynatec Mining Corporation
Earthres Group Inc.
EarthTech Inc.
East Fairfield Coal
ECSI LLC
Edward C. Levy
EEC-Natural Resources
Ekenco Inc.
Elk Horn Coal Company LLC
Emerald Coal Resources LP
Empire Consulting
Energy Plus Services
Engineering Services Inc.
Environmental Design Consultants
Environmental Permitting Svcs.
Environmental Resource Management
Envirotech Engineering Consultants
Epp & Associates
Esmer & Associates Inc.
Essroc Cement Corp.
Evergreen Consulting Group
Fairmount Minerals Ltd
Farrell-Cooper Mining Co.
Five Star Mining Company Inc.
Floyd Engineering
FMC
Fossil Rock LLC
Fred Weber Inc.
Freelance Technical Associates
Freeman United Coal Mining
Freeport McMoRan
G Force Engineering Services
Gaddy Engineering Company
Galven Geologic Consulting
Geary Associates
General Shale Brick Inc.
Geo/Environmental Associates
GEOSERV
Geosurv
Geotechnical Consultants
Gila Geological Consultants
Glamorgan Coal Resources
Glenn F. Phillips Engineering
Global Resource Engineering
Golden Eagle Minerals
Golder Associates
GPS-Tech
Graymont Inc.
Green River Collieries LLC
Green Tree Consulting Inc.
Greenbrier Minerals
Greer Industries
Gress Engineering
H2H Associates
Halliburton
Hampden Coal Company Inc.
Hanson - Heidelberg
Hargrove
Hawkeye Contracting LLC
Heidman Mining
Highland Geocomputing
Hillsboro Energy - Patton Mining
Hollberg Professional Group
Holston River Quarries Inc.
Homestead Inc.
Howard Engineering & Geology
Hydro Logic Solutions
Illinois Dept. of Natural Resources
Indiana Dept. of Natural Resources

Indiana Limestone Company
Integrated Technical Support
Intercon Engineering
Intrepid Potash NM
Iowa Dept. of Agriculture & Land Stewards
IRTEC
J.B. Energy LLC
J.E. Stover & Associates Inc.
JAD Coal Company
James Caudill Engineering
James River Coal Service Co.
JE Black Earth Sciences
Jewell Smokeless Coal Corp.
Jigsaw Ent. LLC
JMP Holdings LLC
John T. Boyd Company
Johnson Engineering Inc.
Jones & Jordan Engineering Inc.
Justice Companies
Kanawha Eagle LLC
Kansas Dept. of Health & Environment
Kaufman Engineering
Kentucky Cumberland Coal Co.
Kentucky Fuels Corporation
Kentucky River Properties LLC
Knight Hawk Coal Company
Knight Technologies Inc.
Kopper Glo Fuels
KY-TN Clay Company
L & W Enterprises Inc.
L. Algeo
LA Gates Company
Lafarge
Land Management Associates
Laurel Sand & Gravel Inc.
LCT Energy LP
Leeco Inc.
Lewicki & Associates
Lexington Coal Company
Lhoist North America
Linn Engineering
Linwood Mining & Minerals
Lisbon Valley Mining Company
Luminant
M. Colmenares
M.I. Swaco
Macoupin Energy LLC
Madison Coal & Supply Co.
Magnetation Inc.
Manalapan Mining
Marshall Miller & Associates
Martin Marietta
McCoy Elkhorn Coal Corp.
McGehee Engineering Corp.
MDE-WMA
Mechel Bluestone Industries
MEPCO LLC
Michael Baker Jr. Inc.
Midwest Reclamation Resources
Miller Brothers Coal LLC
Mine Engineers Inc.
Mine Management Consultants
Mingo Logan Coal Company
Mississippi Lime Co.
Missouri Dept. of Natural Resources
Mitsubishi Cement Corp.
Monsanto Company
Morgan Worldwide Consultants
Morning Star Mining LLC
Mosaic Fertilizer LLC
Mosaic Potash Company
Mountain Coal Company LLC
Mountain State Company

MSHA
Mulzer Crushed Stone
Musser Engineering Inc.
MWH
NA Degerstom
Nagengast Brothers LP
National Coal Corporation
Natural Resource Partners
Navajo Abandoned Mines
Nelson Brothers Mining Service
New Mexico Land & Ranches
New Mexico Land Office
New Millenium Tech Service
New River Engineering Inc.
North American Coal
North American Reserve LLC
North Dakota State Public Service Comm.
Northern Aggregates
Norwest Corporation
Office of Surface Mining & Reclamation
Ohio AML & DNR
Oklahoma Abandoned Mine Lands
Olliver & Associates
Orica
Oxbow Mining
Oxford Mining Co. LLC
P & A Engineering
PacifiCorp
PacRim Coal Co.
Pardee Resources
Parkwood Resources Inc.
Patrick Processing LLC
Patriot Coal Company
PBS Coals
PCS Phosphate
Peabody Energy
Penn Virginia Resources
Penn-Ohio Coal Co.
Pennsylvania DEP
Pennsylvania Services Corp.
Perc Engineering
Perry Supply Co.
Phoenix Coal Corporation
Pike Letcher Land Company
Pike Technical Services Inc.
Pincock, Allen & Holt
Pine Branch Coal Sales
Pounding Mill Quarry Corp.
Prairie State Generating Co.
Preferred Sands
Premier Elkhorn Coal Co.
Prime Coal LLC
Public Service of New Mexico
Quad Three Group Inc.
R.M. Johnson Engineering
Rapoca Energy Company
Red River - Dolet Hills Mining
Reed Energy
Reed Minerals
Resource Associates
Resource Enterprises Inc.
RESPEC
Revelation Energy
Rhino Energy LLC
Rifle Coal Company
River View Coal LLC
Robindale Energy Services Inc.
Robinson Nevada Mining Co.
Rocas y Minales
Rosebud Mining Company
S & ME Inc.
S & S Ltd.
Salt River Materials Group
Sammons Law Offices PLLC

Sands Hill Coal Company Inc.
Sequoia Energy LLC
Signal Peak Energy
Simplot
Skelly & Loy Inc.
Solar Sources
Southern Services
Spectrum Engineering
Springfield Coal
Stagg Resource Consultants Inc.
Staker & Parson
Stantec Consulting
Sterling Materials
Sugar Camp Energy LLC
Summit Engineering Inc.
Sunrise Coal LLC
Svonavec Inc.
Sweeney & Bullman, Eng.
Synergy Engineering Services
Taggart Global LLC
TASK Engineering
TaTa General Chemical
TECO Coal Corporation
Tee Engineering Co. Inc.
Templeton Coal Company
Terra Tech Engineering
Texas Railroad Commission
The Lily Group
The Ohio Valley Coal Company
The Rogers Group Inc.
The Shelly Company
Thunder Peak Enterprises
TJS Mining Inc.
TransAlta Centralia
Trapper Mining Inc.
Triad Engineering Consultants
Triad Mining
U.S. Environmental Protection Agency
United Minerals Co. LLC
United States Gypsum Co.
URS Washington Division
U.S. Coal Corporation
USDA-NRCS
Usibelli Coal Mining
Vapco Engineering
Vigo Coal
Vulcan Materials Company
W.B.I. Holding Inc.
Walter Energy Inc.
Walter Minerals Inc.
Walturn Engineering
Washington Tru Solutions
Weeminuche Construction
Weir International Mining Cons
Wellford Management SVCS
West Virginia Dept. Environment
Western Fuels
Western Mesquite Mines Inc.
Western Pocahontas Properties
Western Water Consultants
Westlake Inc.
Westmoreland Coal Company
White Oak Resources
Wiley Consulting LLC
Williamson Development LLC
Wilson Creek Energy LLC
Wolf Run Mining Company LLC
Wolfe & Associates
WWMV LLC
Wyo-Ben Inc.
Wyodak Resources Dev. Corp.
Wyoming Dept. of Environmental Quality
Xinergy Corporation
Yatesville Coal Holdings Inc.

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