

WellCAD Data Sheet

WellCAD is a modular processing and interpretation package for borehole logs. The software permits the user to process on a well by well basis, making it quick and simple to combine and compare logs recorded by multiple probes. The software also boasts a large suit of processing and analysis tools for calculating specific rock properties or correcting data.

Processing an Analysis modules:

- Image & Structure Interpretation (ISI) workspace for image processing.
- FWS (Full Waveform Sonic) Module for Sonic log processing, semblance, CBL, etc.
- Multiwell Module for fence diagrams, log cross-sections, etc.
- Deviation Module for 3D deviation plots.
- CoreCAD for wellsite logging of cuttings and drill bit returns.
- LIS/DLIS Import-Export Module for Schlumberer data import & export.
- Automation Module for enhanced data processing.
- WellCAD Browser Module for real-time logging into WellCAD Window.

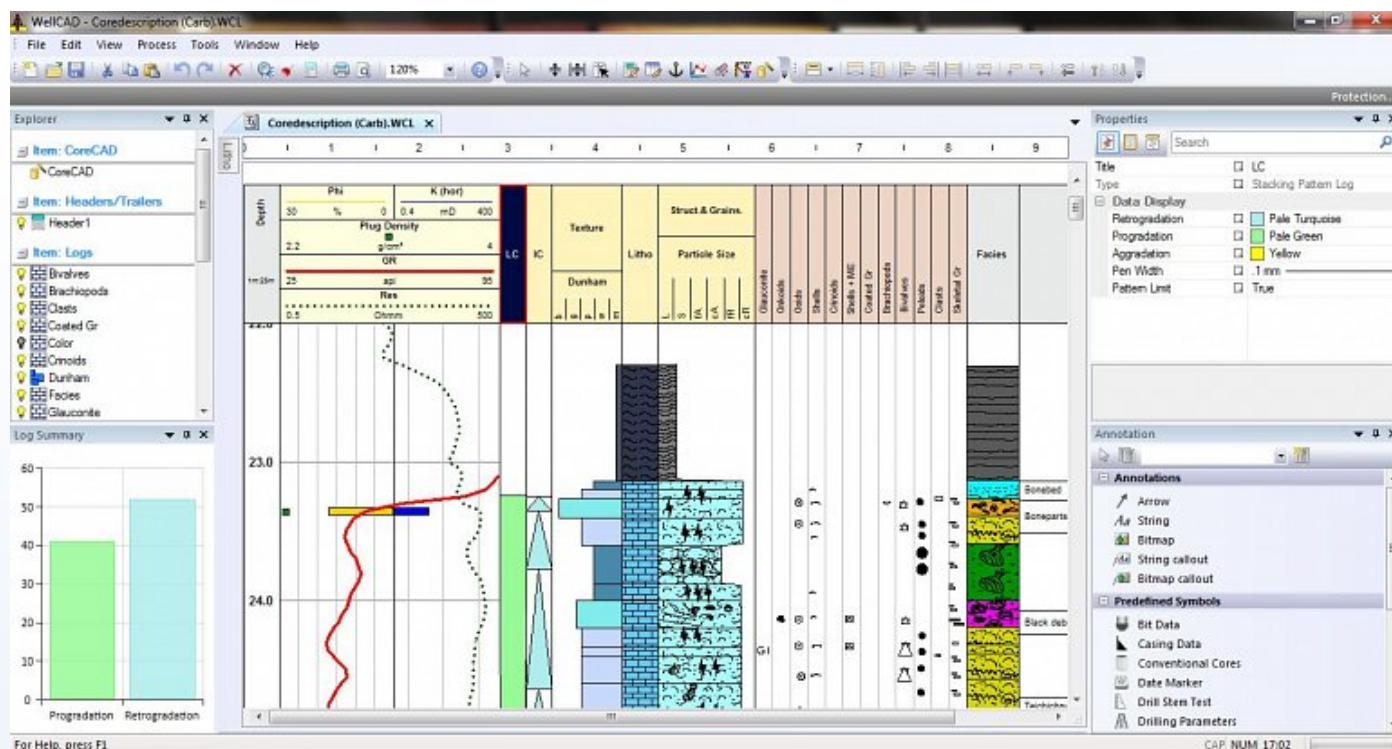


Fig.1. Screen Capture from a WellCAD Project. Image courtesy of Mount Sopris Instruments.

This Log acquisition and processing software, allows the user to import, edit, process and display standard log composite data/ well data for a variety of customers in the mining, hydrogeological and geotechnical sectors. The current upgraded version (V5.3) includes the reader and crossplot modules LAS 3.0 support, CoreCAD and the new groundwater package.

The CoreCAD module allows the user to extrapolate images (RGB or OLE Log) from the core box depth regulation, via interactive labelling and box calibration. This allows the user to analyse and describe petrophysical results in a detailed manor (Fig.2), producing thorough results and reservoir modelling through the core image cropper tool.

		WELLSITE LITHOLOGY LOG		WellCAD®																																		
OPERATOR : COUNTRY : AREA : CLASSIFICATION : LATITUDE : LONGITUDE :		LITHOLOGY SYMBOLS <table><tr><td> Sandstone</td><td> Limestone</td><td> Shale</td></tr><tr><td> Siltstone</td><td> Argillaceous limestone</td><td> Chalk</td></tr><tr><td> Claystone</td><td> Dolomite limestone</td><td> Mudstone</td></tr><tr><td> Gypsum</td><td> Crystalline limestone</td><td> Siltstone</td></tr><tr><td> Claystone</td><td> Dolomite</td><td> Marble</td></tr><tr><td> Salt</td><td> Crystalline limestone</td><td> Limestone</td></tr><tr><td> Carbonaceous claystone</td><td> Opal</td><td></td></tr><tr><td> Steel</td><td> Gravel</td><td></td></tr><tr><td> Clash</td><td> Rubble</td><td></td></tr></table>		 Sandstone	 Limestone	 Shale	 Siltstone	 Argillaceous limestone	 Chalk	 Claystone	 Dolomite limestone	 Mudstone	 Gypsum	 Crystalline limestone	 Siltstone	 Claystone	 Dolomite	 Marble	 Salt	 Crystalline limestone	 Limestone	 Carbonaceous claystone	 Opal		 Steel	 Gravel		 Clash	 Rubble		OPERATIONAL SYMBOLS  Well Deviation  Sidewall Core  RFT/FMT  Conventional Core  Oil/Gas Shows  Casing Shoe/Liner							
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ELEVATION : 84m AMSL WATER DEPTH : 325m																																						
RIG : SANTA FE 136 RIG PICK UP : 27th MARCH 1989 SUPD DATE : 29th MARCH 1989 T.D. REACHED : 10th AUGUST 1989 COMPLETED : 14th AUGUST 1989 RIG RELEASED : 19th AUGUST 1989 TOTAL DAYS : 142 DAYS																																						
T.D. DRILLER : 3,254m MD T.D. LOGGER : 3,254m MD 3,260m MD 3,260m MD																																						
COMPLETION STATUS : P & A - DRY HOLE																																						
MUD LOG CONTRACTOR : GEOSERVICES EASTERN																																						
GEOLOGISTS : ANDREW KING MATHEW KEITH CHRIS LYNCH		ACCESSORY SYMBOLS <table><tr><td> Stringer</td><td> Flint</td><td> Bentonite</td></tr><tr><td> Gravel</td><td> Gneiss</td><td> Gravel</td></tr><tr><td> Silt</td><td> Pegmatite</td><td> Siltstone</td></tr><tr><td> Argillaceous</td><td> Petro</td><td> Siltstone</td></tr><tr><td> Shale</td><td> Opal</td><td> Siltstone</td></tr><tr><td> Mud</td><td> Marble</td><td> Shale</td></tr><tr><td> Calcium</td><td> Pegmatite</td><td> Shale</td></tr><tr><td> Siltstone</td><td> Pegmatite</td><td> Shale</td></tr><tr><td> Limestone</td><td> Opal</td><td> Shale</td></tr><tr><td> Argillaceous limestone</td><td> Siltstone</td><td> Shale</td></tr><tr><td> Gravel</td><td> Siltstone</td><td> Shale</td></tr></table>		 Stringer	 Flint	 Bentonite	 Gravel	 Gneiss	 Gravel	 Silt	 Pegmatite	 Siltstone	 Argillaceous	 Petro	 Siltstone	 Shale	 Opal	 Siltstone	 Mud	 Marble	 Shale	 Calcium	 Pegmatite	 Shale	 Siltstone	 Pegmatite	 Shale	 Limestone	 Opal	 Shale	 Argillaceous limestone	 Siltstone	 Shale	 Gravel	 Siltstone	 Shale		
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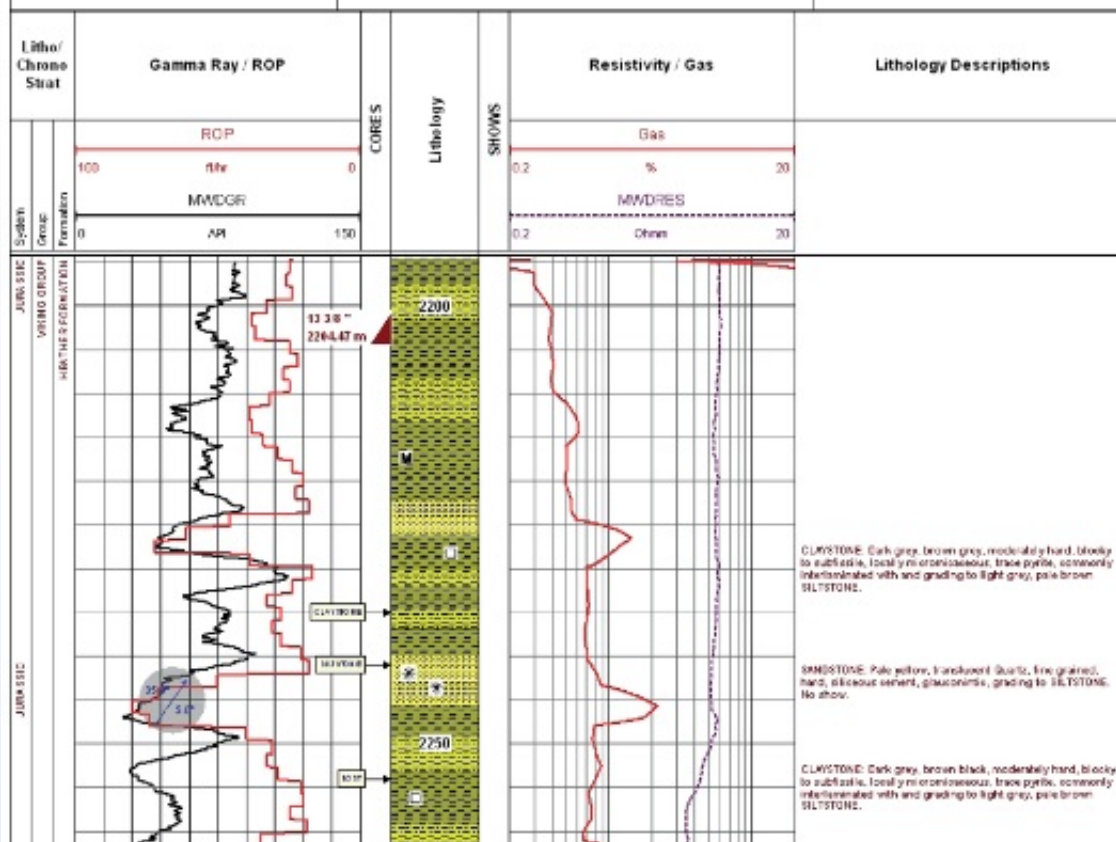


Fig.2. An example of a finished annotated dataset which was created using the WellCAD software package (Image Courtesy provided by Mt Sopris)

By incorporating the Groundwater module, the user can estimate salinity, shale volume and porosity (e.g. Neutron shale) changes along with hydraulic conductivity and permeability. No flow zones can be picked out and displayed as a percentage; any lithological logs can then be added to aid interpretation using the flowmeter data processing module.

The new LAS 3.0 Syntax Support allows the user to import and export the data as depth/ time-based data, allowing the raw number, display styles and no data value to be highlighted via the tabular editor review bar. In addition to this the number of data min/max (%), Gauss distribution and cumulated frequency overlays can be calculated.

The software comes as a tailored package with a USB dongle for 32/64-bit version of WellCAD along with the installation CD + Docs. They allow for a rich graphical display, complex interface cross plot and chart log with batch processing and advanced algorithm development.