



# Geological Data Design

# gNeric

## gPick Generic Features and Functions

Volume D00.20.07

## Integrated Use of Images in the Database



G E O L O G I C A L   D A T A   D E S I G N



**GNERIC APPLICATION INFORMATION****GEOLOGICAL DATA DESIGN**

Address	<b>41 Abbey Street, Forestdale QLD 4118 Australia</b>
Phone	<b>+617 3800 1565</b>
Website	<b>www.gdd.net.au</b>
Email	<b>info@gdd.net.au</b>
ABN	<b>75 010 597 305</b>

**DOCUMENT CONTROL**

*(Vision, version, revision and rear-vision control)*

Authors	<b>Tony Shellshear, Robyn Morley, Christophe Louis</b>
Phone	<b>+617 3800 1565</b>
Email	<b>tony@gdd.net.au</b>
Project	<b>gNeric Generic Application Functionalities</b>
Volume #	<b>D00.20.03</b>
Volume Title	<b>Integrated Use of Images in the Database</b>
Revision	<b>3.1.1</b>
Revision Date	<b>8 March 2021</b>
Date Printed	<b>6 July 2021</b>
Filename	<b>Document2</b>

## DOCUMENT CONVENTIONS

The following conventions relate to formatted text and other content -

- Text – read it...
- **Bold Text** – read it **carefully**
- **Italic text** – Read it with your head on an angle; they are generally internal draft notes and should not be in here if you are an end user...
- **Curious terms, odd words, flippant comments and various attempts at geological humour** are inserted to provide light entertainment, and to find out who actually reads this stuff... (Examples – The **NBN** and **CTC** approach to our systems design philosophy...)

## SPECIAL NOTICE ICONS

GDD's marginal icon family - Throughout our documentation you will find various icons designed to draw you attention to ideas, suggestions, strong suggestions, baseball bats and other various forms of reader encouragement, direction, belittlement or abuse. These include –



**Tip !** – You might find it worthwhile to consider ...



**Note !** – You WILL find it worthwhile if you...



**Shortcut !** – Instead of following all the dribble above, a faster way to achieve this may be...



**Important !** – Please observe the following or you may have to come back here and do some of these boring bits again.....



**Warning!** – Doing this, or failing to do this, could have unexpected ramifications...



**Danger !** – Doing, or failing to do this WILL have dire consequences that may lead to the end of the Universe as you know it!

So, get it? ... **Got it!** ... **GOOD!!!!**

Please read on !!!

## ABBREVIATIONS USED

The following abbreviations are used within this document, mostly with reference to keyboard actions –

- (RC) – Right Click

- (Shft-...) – Shift key
- (Ctrl-....) – Control key
- (Alt-...) – Alt key

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## INTRODUCTION

Why go to all the trouble to crop and dissect your technical data images? Why collect them in the first place? Where can they be used, how do they add value, and reduce risk during data evaluation exercises?

Glad you asked! Here are a selection of uses you can put the images to, and some examples of how **GDD's gPick** applications can integrate and use them in the technical database.

## MANUAL GENERIC USES

The cropped images have a very broad range of potential uses in both technical evaluation and reporting exercises.

As a general observation, the cropped images will be smaller and will focus more accurately on the intended subject, which is an immediate advantage.

A few of the broader application areas might include the following -

- For individual or selected images –
  - As content in technical reports, documentation and research or conference papers
  - As a reference source for analysis, evaluation, interpretation work related to a resource
  - As an audit tool for the checking of lithology, assay, geotechnical or other technical data sets
- As image sets –
  - For assembly into statutory period activity reports, drillhole summary reports, graphic logs and so on
  - For inclusion in data packages ('data warehouses') for evaluation by joint venture partners or prospective investors

## DATA TAG ENTRIES

'Data Tags' are additional information entries that can be attached to specific data records or items in the database

In gPick there are three types of data tags -

- A **'Note'** – General additional information that can be attached to a database table record, or to a specific item in the record.
- An **'Alert'** – A note attached to a data record that raises an alert status, making it clearly visible and optionally affecting the availability of that data record in reports or exports as an example.
- A **'Task'** – A note, again attached to specific data records, which raises a task that is communicated to an individual or group for some action to be undertaken. The task will also communicate the relevant data from the record with the task note.

All three data tag types allow the inclusion of images to illustrate or clarify the information provided

Cropped core tray, slice or chip tray images provide useful images for inclusion in data tags raised for example in the lithology, geotechnical, assay or other drillhole datasets

Additional functions allow the user to see all current data tags, and manage and report on them as appropriate.

**ADD NOTES**

- Create and attach notes on individual data items

**ASSIGN TASKS**

- Assign, email and track tasks related to your data.

**RAISE ALERTS**

- Raise visible alerts on specific records



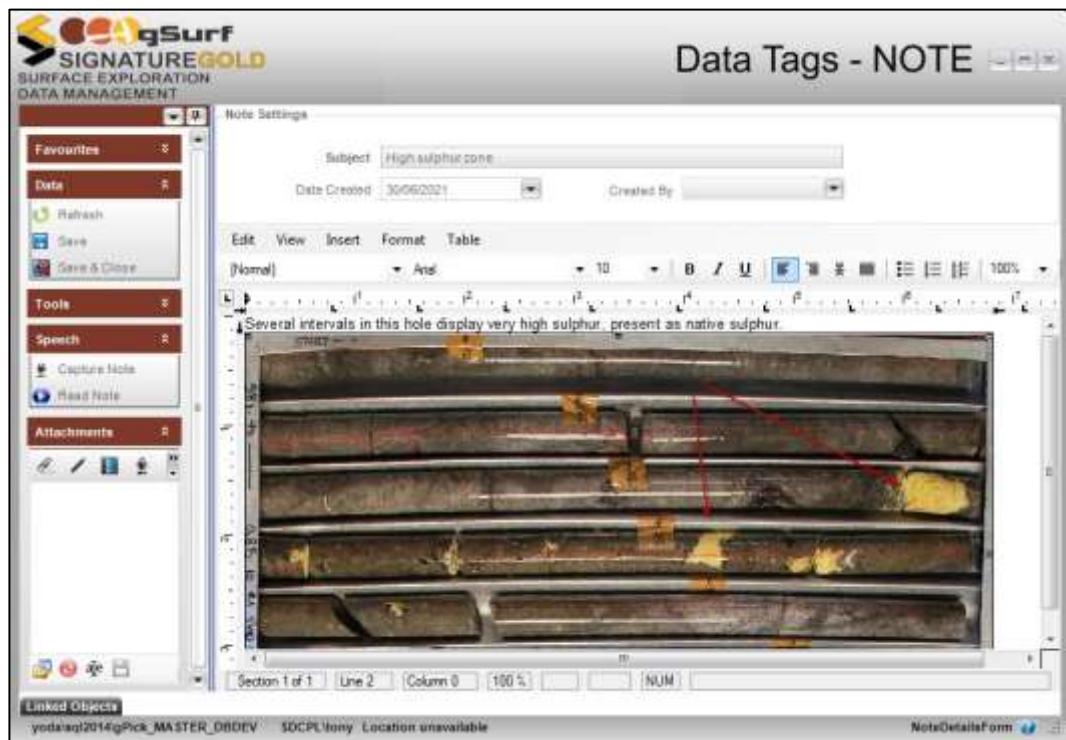
## DATA TAG NOTES

A Data Tag 'Note' can be created against any cell in a data record, and is flagged as a green triangle in the top right of the cell

The screenshot shows a data table with columns: Project, Prospect, Site No, and Site Type. A red arrow points to a green triangle in the top right corner of the cell containing 'Streams' in the Site Type column for the record with Site No 119679.

Project	Prospect	Site No	Site Type
Z_SG_Biloela	Last Chance Day D...	119673	Streams
Z_SG_Biloela	Last Chance Day D...	119674	Streams
Z_SG_Biloela	Last Chance Day D...	119675	Streams
Z_SG_Biloela	Last Chance Day D...	119676	Streams
Z_SG_Biloela	Last Chance Day D...	119677	Streams
Z_SG_Biloela	Last Chance Day D...	119678	Streams
Z_SG_Biloela	Last Chance Day D...	119679	Streams
Z_SG_Biloela	Last Chance Day D...	119680	Streams

The note created is 'rich text', enabling you to both embed images in the note, and attach images or other relevant files to the note. An example is shown below



## DATA TAG ALERTS

A Data Tag 'Alert' can be created against any data record, and is flagged by highlighting the row RED

Project	Prospect	Site No	Site Type	Site Description	Rec Date	Rock Type	Alteration M
Z_SG_Bitola	Specimen Hill	100720	Soils		01/02/2018 00:00:00		
Z_SG_Bitola	Specimen Hill	100730	Soils		01/02/2018 00:00:00		
Z_SG_Bitola	Specimen Hill	100721	Soils		01/02/2018 00:00:00		
Z_SG_Bitola	Specimen Hill	100732	Soils		01/02/2018 00:00:00		
Z_SG_Bitola	Specimen Hill	100733	Soils		01/02/2018 00:00:00		

The Alert status is tagged to the database data record, not the current form. Once raised, the alert status is shown not just in the current data form, but also whenever the record is displayed in any form, by any user.

**gNeric**  
SIGNATURE GOLD  
SURFACE EXPLORATION  
DATA MANAGEMENT

### Data Tags - ALERT

Alert Settings

Subject: Trays photographed inverted

Date Created: 30/05/2021      Created By: [ ]

Status: Active      Category: Unknown

Duration: 0 Months, 0 Days

Start Date: 30/05/2021      End Date: (none)

Edit View Insert Format Table

[Normal]      Arial      10      B      I      U      [ ]      [ ]      [ ]      [ ]      [ ]      [ ]

Several photos of core trays in this hole have been taken with the trays upside down, i.e. 'Start' at the bottom

Take care when cropping and processing these

Section 1 of 1      Line 7      Column 0      100%      NUM

Linked Objects  
yodraql2014gPick\_MASTER\_DBDEV      5DCPL:tony Location unavailable      AlertDetailsForm

## DATA TAG TASKS

A Data Tag 'Task' can also be created against any data record, and is flagged by highlighting the row BLUE

Project	Prospect	Site No	Site Type	Site Description	Rec Date	Rock Type	Alteration M
Z_SG_Bileale	Specimen Hill	100726_1	Ecological Observ...		01/02/2016 00:00:00		
Z_SG_Bileale	Specimen Hill	100727	Soils		01/02/2016 00:00:00		
Z_SG_Bileale	Specimen Hill	100728	Soils		01/02/2016 00:00:00		
Z_SG_Bileale	Specimen Hill	100729	Soils		01/02/2016 00:00:00		

In addition to the ability to add images and attach files to the task, the new task is automatically emailed to the person assigned to undertake the task, along with the pertinent data record details.

Once the task is completed its status can be changed to completed, following which it is archived and the highlight removed.

**gNeric SIGNATURE GOLD**  
SURFACE EXPLORATION  
DATA MANAGEMENT

### Data Tags - TASK

**Task Settings**

Subject: Request for assay

Date Created: 30/05/2021 | Category: Unknown

Status: Active | Created By: Geology - Markus Mau

Start Date: 30/05/2021 | Staff Responsible: Lab - Mike Smith

Due Date: 30/05/2021 | Assigned To: Lab - Viv Rachel

Edt View Insert Format Table

[Normal] Arial 10

Hi Mike,  
Have a concern with the Au assay for this sample. It returned 0.6g Au.  
Core photo shows some visible gold which would indicate this may be on the low side have

gold\_m\_core\_2.jpg

Section 1 of 1 | Line 2 | Column 52 | 100% | NUM

TaskDetailsForm

## LINKED OBJECTS

The term '**Linked Objects**' refers to data or file objects that relate directly to the database data to which they are linked.

These linked objects are commonly **images or photos** of the item from which the data was collected, which might include for example –

- Drill core or chip tray photos related to drillhole logging data, geotechnical and assay data
- Field photos of observation or sample sites from surface exploration activities
- Detail photos, photomicrographs, slabbed surfaces or polished sections from specific surface or drill core samples
- Drilling operational site photos ('before / during and after') related to drilling activity data for performance and statutory environmental reporting purposes

More broadly however, linked objects can be **any type of digital file** that relates to the data record in question.

A few examples include –

- A drawing or diagram related to geological site observation data or, open cut bench or underground face mapping data
- PDF or other document types related to the tenure of specific project, prospect or tenement data records
- Scans of original written data logs and used for data entry, for data verification, and as an audit trail for JORC review and reporting purposes
- The assay lab results report and analysis certificate for the batch to which assay data records belong, for similar purposes.

Linked objects can be attached to data records, viewed, opened directly, or accessed for inclusion in other documents or applications in a number of ways

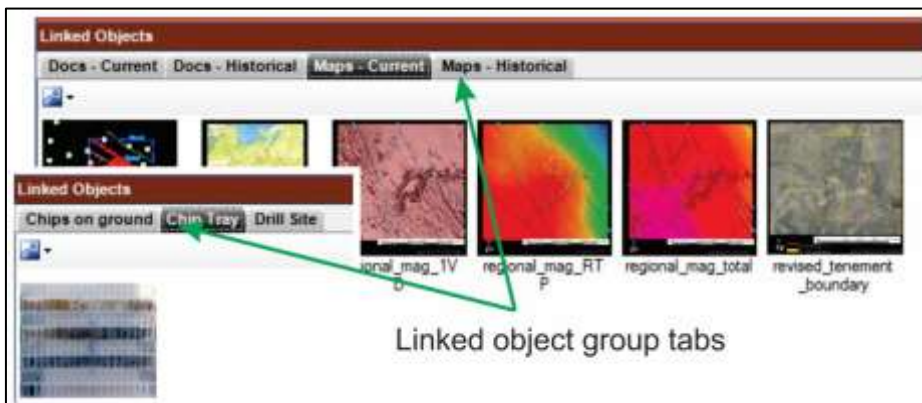
## LINKED OBJECTS ACCESS

Once linked, images and other objects can be accessed in a number of ways depending on the database application in use.

The gPick applications provide a Linked Objects panel at the base of every data grid form for which they are enabled. This panel displays the linked objects relevant to the data record(s) currently selected

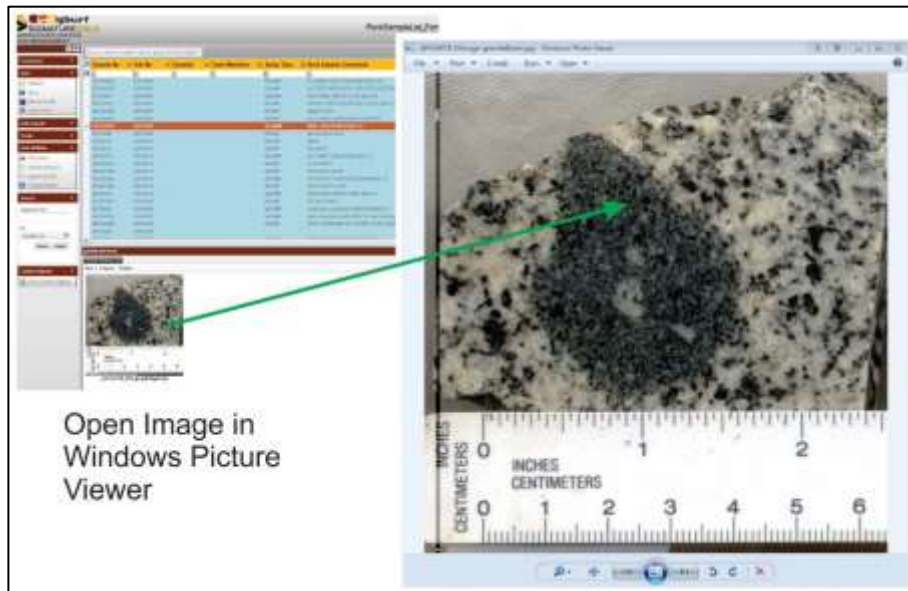


The panel may be also configured to provide a number of tabs which assist in grouping the linked object types available for a given data set such as lithology data.



## VIEW LINKED IMAGES

Images can be viewed in (by default) Windows Picture Viewer directly from the linked objects panel



## OPEN LINKED OBJECTS

Other linked object types can similarly be opened in their native application directly from the linked objects panel. This is determined by your current system file type associations as they do in Windows Explorer.

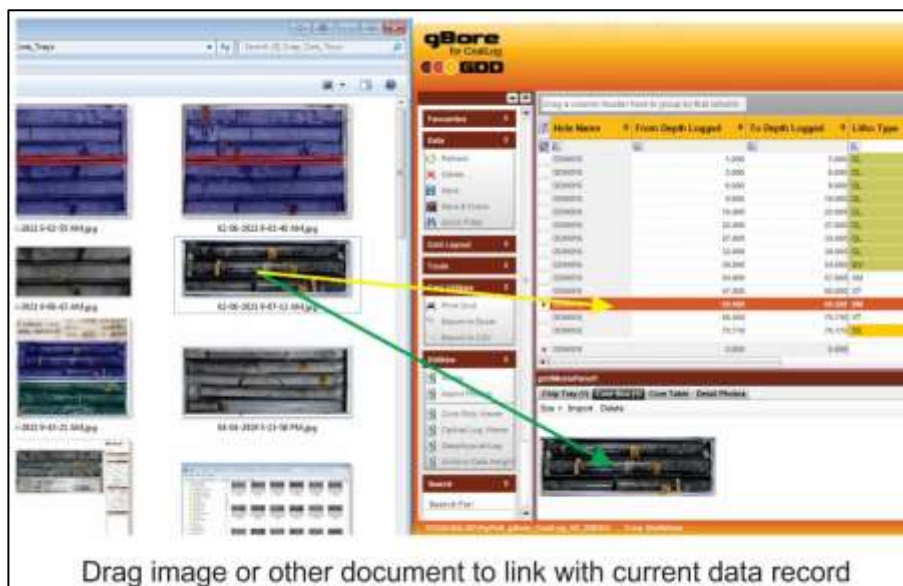
For example –

- .DOC and .DOCX documents will open in Microsoft Word
- .PDF documents will be opened in Adobe Acrobat
- .VSD and .VSDX documents will open in Microsoft Visio

## LINK NEW OBJECTS TO DATA RECORDS

Adding linked objects to the database and associating them with their related data records is commonly done in two ways.

Individual photos or other file types can be added by selecting the data record to which they relate and then dragging the file from Windows Explorer into the relevant tab group in the Linked Objects panel

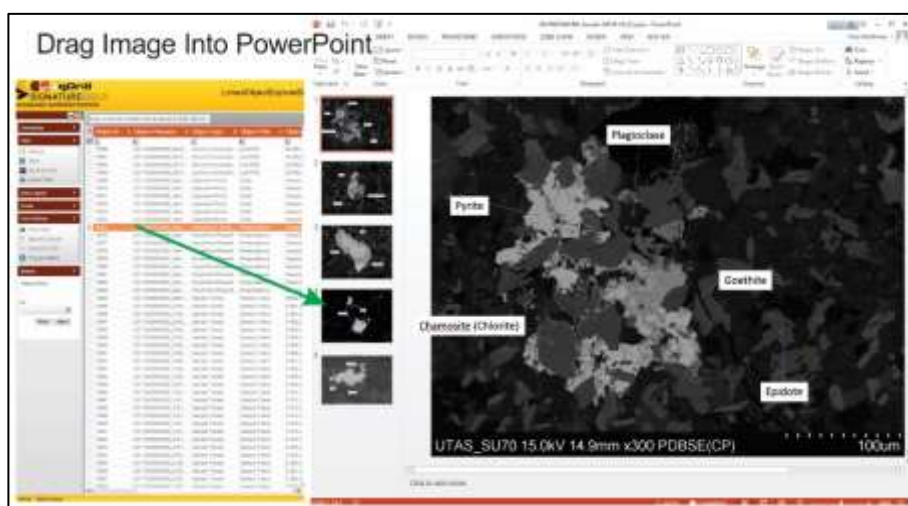
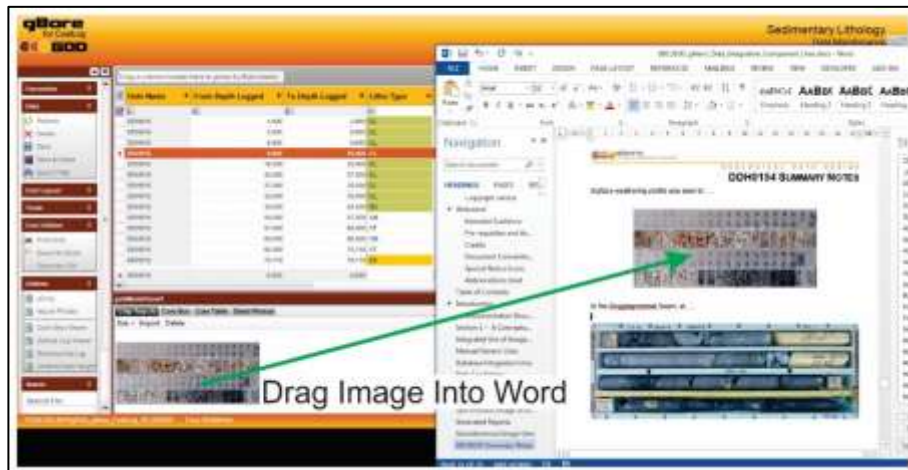


Large numbers of linked objects, such as cropped core tray, tray slice or chip tray images can be loaded by preparing a data load table that provides the file path and relevant key data ( hole no., depths, sample no.s etc.) for each image.

This load file is then used by the gPick data loading function to import the file and create the required table and data record associations.

## COPY LINKED OBJECTS INTO OTHER APPLICATIONS

In addition to viewing and opening the linked objects, images and photos can be directly accessed and copied to documents or drawings being created.



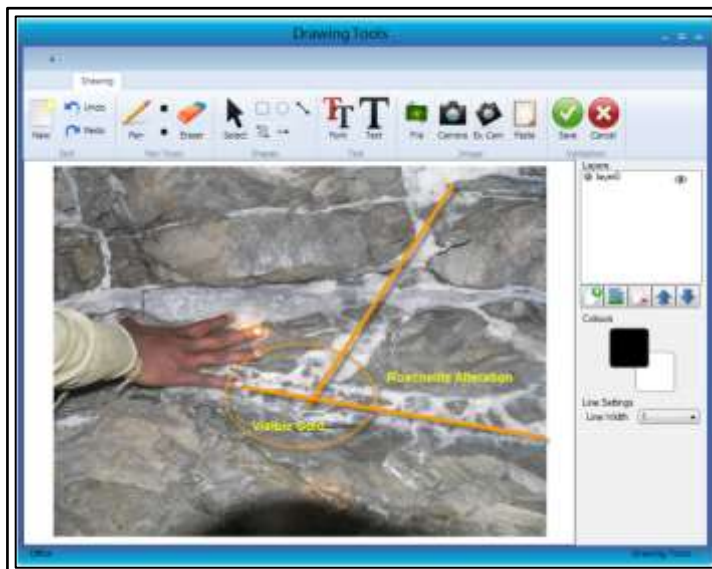


## IMAGE ANNOTATION

Often it is useful to be able to annotate and draw on images or photos to clarify or illustrate a feature or observation.

Within the gPick applications linked object images can be suitably defaced to achieve this...

For file system images and photos not linked to database records, geoUte uDraw provides a simple tool to annotate existing images, or create simple drawings to illustrate a point or field observation for instance.



# SYNCHRONOUS IMAGE SCROLLING

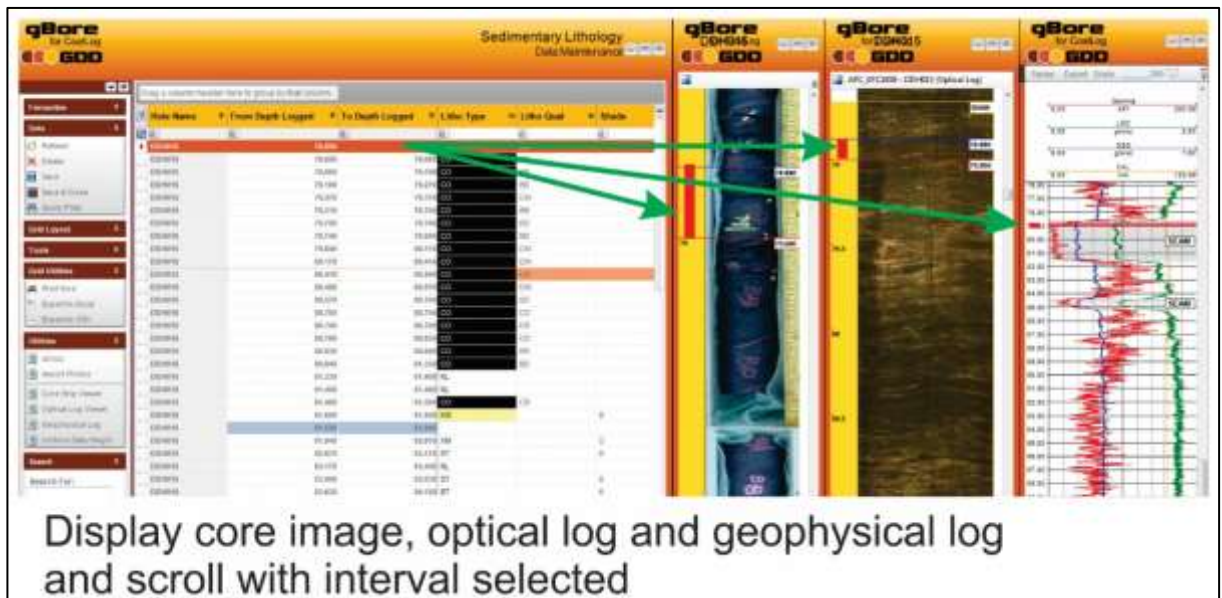
Another powerful use for the cropped core tray slices is for the synchronous display of the core images against related drillhole data such as lithology, geotechnical and assay data, and against other graphical drillhole information such as geophysical or SWIR spectral contribution data.

## VIEW SYNCHRONOUS CORE IMAGERY

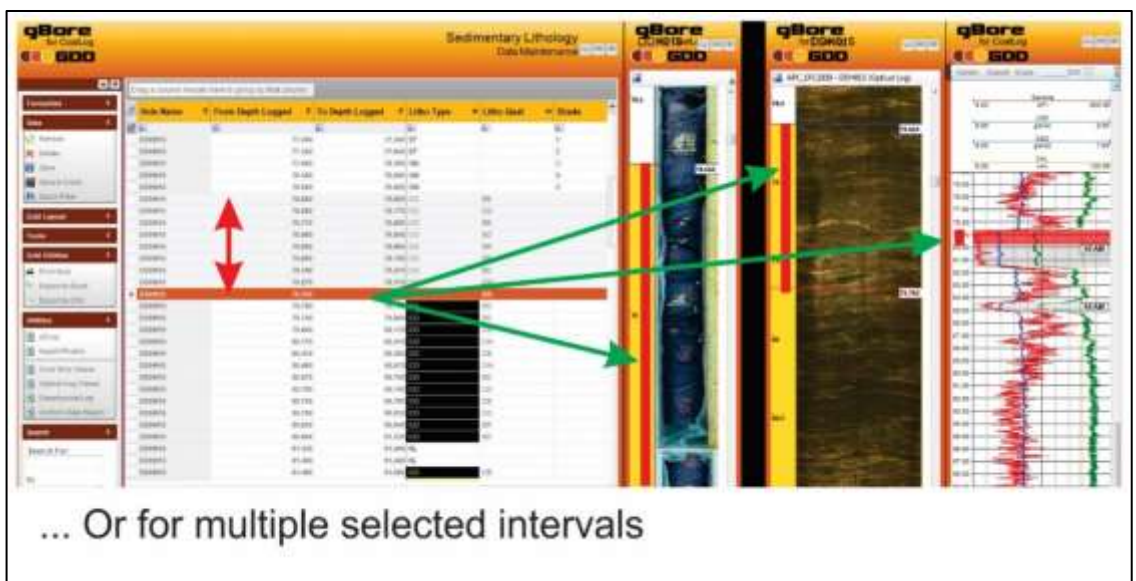
Cropped core tray slices, or optical logs can be used in scrollable image viewers

This provides a dynamic display of the images against lithology, assay or other down-hole data. The displays scroll to data record selected

Markers indicate the top and bottom of the selected interval, which may be one or more records



Selecting multiple records will indicate the relevant sections in each display

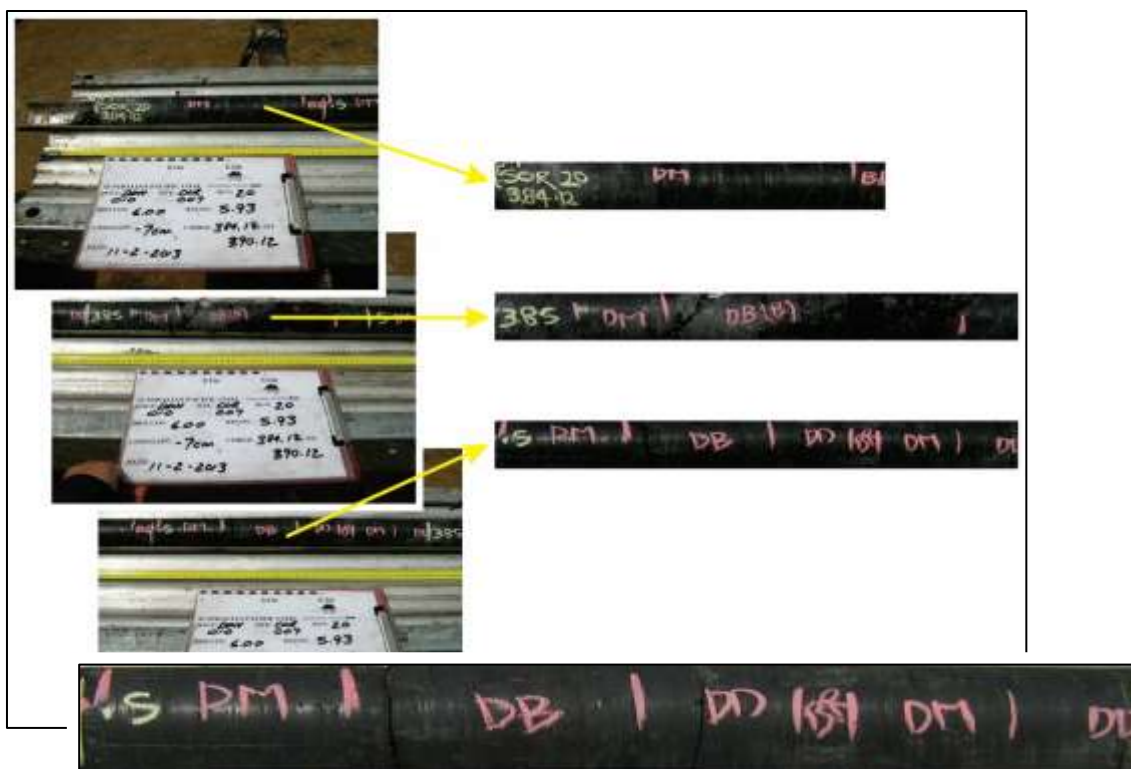


Display of multiple image sets is enabled side by side, for example wet and dry core images

The screenshot shows a software interface with a table of data on the left and two vertical image panels on the right. The table has columns for 'SAMPLE ID', 'DEPTH (m)', 'SAMPLING', and 'Relevant Assay ID'. A red double-headed arrow indicates a selected interval in the table. The image panels on the right show 'WET' and 'DRY' core images for the selected interval, with another red double-headed arrow indicating the image height.

Display and scroll dry and wet core images for selected interval(s)

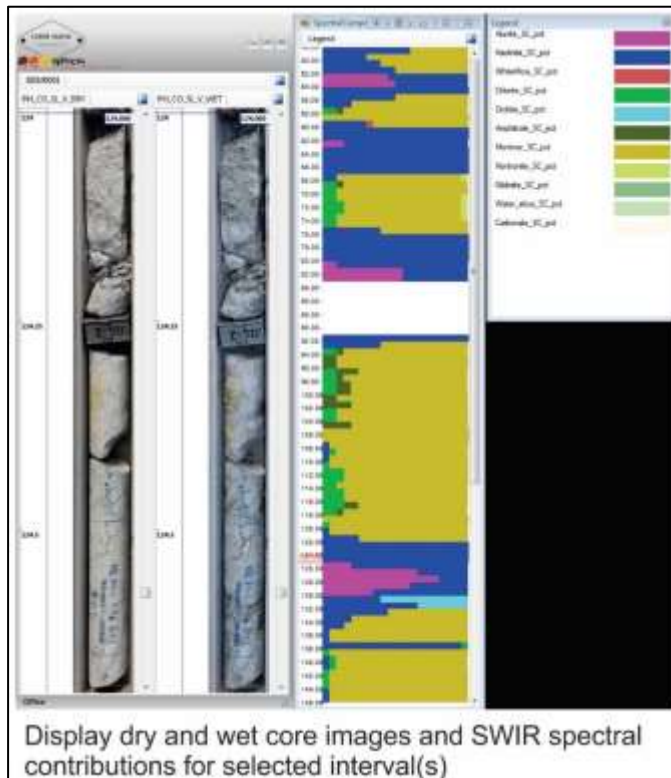
Core table photo images can also be cropped and used. These often present a different view to the core tray images, and may be of a higher resolution as it is conventional to photograph core in the barrel at 0.5m intervals



## VIEW WITH OTHER GRAPHICAL DATA

Display core images dynamicall against other data graphic log elements, with synchronous scrolling, for example –

- Geophysical logs
- Acoustic logs
- Spectral contribution data percentages (SWIR, VNIR, TIR(?))



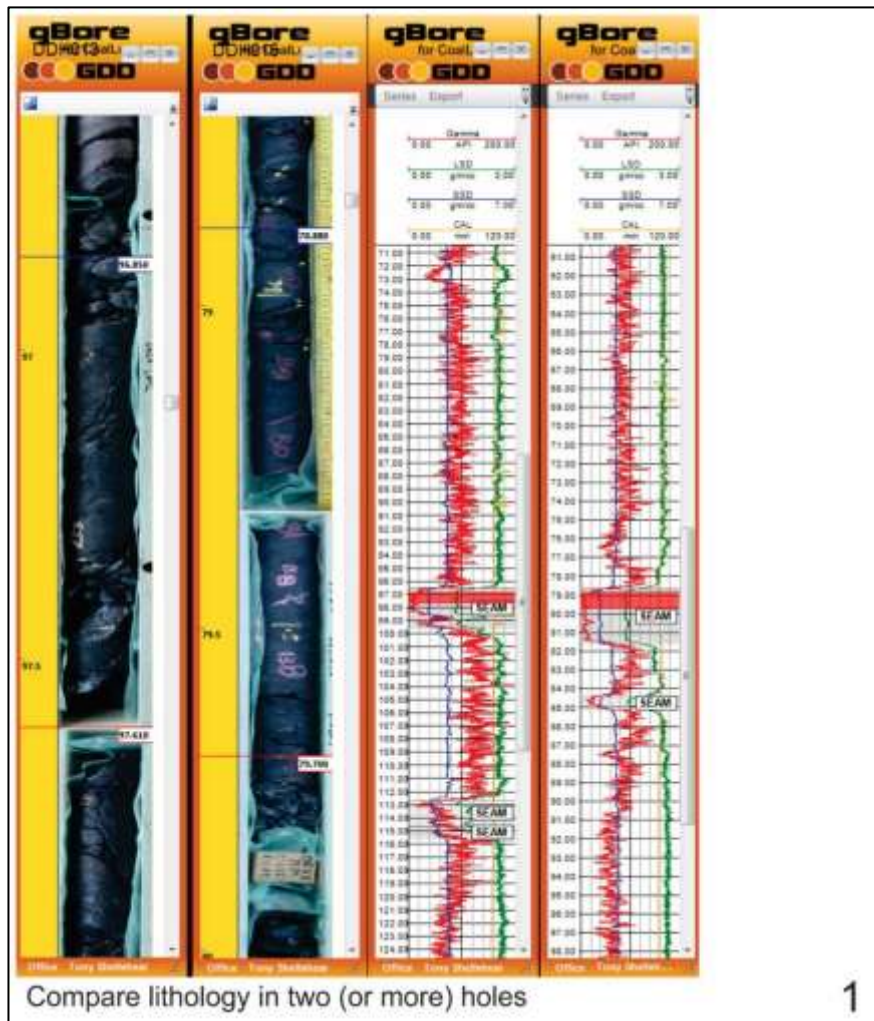
Stretching the image display window provides a zoom function for the images, valuable where high resolution photos have been recorded



## COMPARE IMAGES FROM DIFFERENT DRILLHOLES

Display core image sets from different holes side by side for comparison and correlation

Open two or more lithology logs and place scrolling images side by side

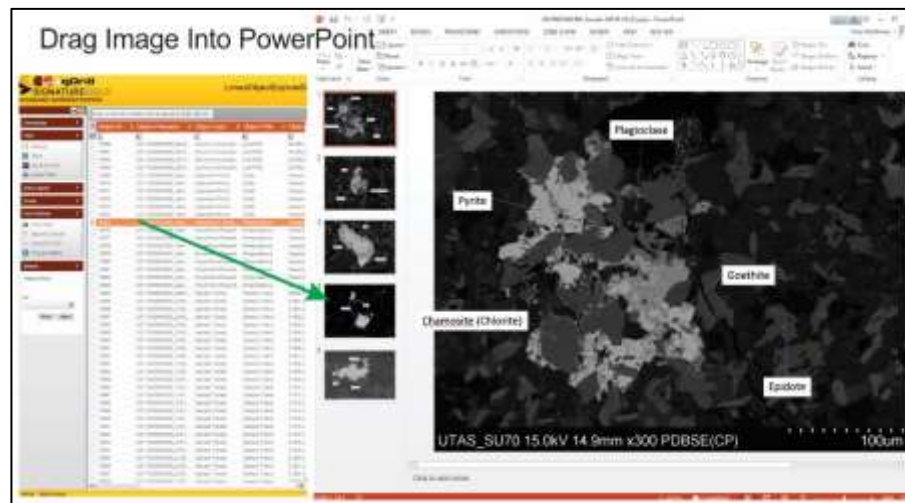
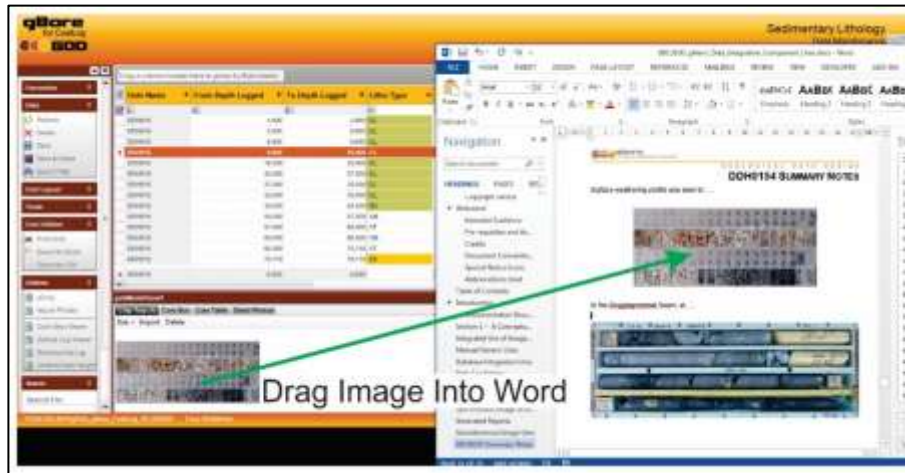


# GENERATED REPORTS

One of the most compelling reasons for cropping your drillhole images and linking them in the database is the ability to then generate consistent and potentially complex technical and management reports which include these images.

## INCLUDE SELECTED INDIVIDUAL IMAGES IN DOCUMENTS

As indicated above, individual images can be dragged from the database linked objects panel directly into MS Word, Visio or other documentation or drawing applications.



## GENERATE GRID-STYLE DATA REPORTS

**geoUte uSemble** is a standalone utility that allows you to generate simple and complex documents in Word, drawing both database data and linked object images into a template.

Images can be included in simple grid-style data reports, the most obvious example being the 'English Log' widely used in the coal sector, examples of which appear below.

**DRILL HOLE DDH015**

Depth	Thick	Sample Number	Lithology
1.00	1.00		SOL: medium brown, sandy, ss
3.00	2.00		CLAY: medium yellowish brown, well sorted, medium dense
6.00	3.00		CLAY: mottled purplish white, silty sandy, weathered, medium dense
9.00	3.00		CLAY: mottled purplish white, silty sandy, weathered, medium dense
10.00	7.00		CLAY: mottled yellowish white, silty, occasional fine grained fragments dense
22.00	6.00		CLAY: light pinkish white, minor fragments throughout, well sorted
27.00	5.00		CLAY: light creamy white, slight weathered, dense
32.00	5.00		CLAY: light purplish white, rare fragments, well sorted, dense
38.00	7.00		CLAY: light yellowish white, silty, well sorted, medium dense
54.00	15.00		GRAVEL: light to medium greyish clayey in part, weathered, some rounded to sub angular gravel

**LITHOLOGICAL LOG DETAILS**

Top	Base	Thk	%	Lithology	Sample
0.00	0.48	0.48		SOL, medium brownish soil matrix in part with complete weathered (clayey with silty) fabric	
0.48	0.81	0.33		SOL, light brownish soil matrix with clayey throughout fabric completely weathered (clayey with silty) fabric	
1.01	0.10	0.09		SAND medium yellowish brown medium grain size silty throughout silty matrix in part brown clayey complete weathered	
1.10	3.00	1.90		CONE LOSS	
3.00	4.07	1.07		SAND light yellowish brown medium grain size silty matrix throughout clayey throughout silty matrix medium dense complete weathered	
4.07	4.07	0.00		SAND light yellowish brown medium grain size silty matrix throughout clayey throughout silty matrix medium dense complete weathered	1000, 1000
4.07	6.10	2.03		SAND light yellowish brown medium grain size silty matrix throughout clayey throughout silty matrix medium dense complete weathered	
6.10	6.10	0.00		SAND light yellowish brown medium grain size silty matrix throughout clayey throughout silty matrix medium dense complete weathered	

**Project: DDH015 - Hole No. DDH015**

Depth From	Depth To	Thick	Sample Number	Lithology
63.97	65.72	1.75		SILT, fresh, medium strength rock, broken into, sporadic calcite in veins, SOL 5 C: 1.50m @ 1.50m Loss: 0.05m
				SANDSTONE, fine grained, light to medium grey, silty, fresh, medium strength rock, shaly bedded (undifferentiated) dipping at 80°, fracture (undifferentiated) dipping at 80°, blocky calcite in veins, 00 (log bedding plane)?
64.88	64.88			
65.72	66.09	0.37		SILTSTONE, medium grey, fresh, medium strength rock, massive (blocky bedding, fracture (undifferentiated) dipping at 30°, broken into
66.09	66.09			
66.09	66.80	0.40		SANDSTONE, fine grained, medium grey, silty, silty in part, fresh, medium strength rock, fracture (undifferentiated) dipping at 80°, dipping at 80°, sporadic calcite in veins, 00 (log bedding plane)?
66.45	66.50	0.05		SANDSTONE, fine grained, medium grey, silty, silty in part, fresh, medium strength rock, fracture (undifferentiated) dipping at 30°, broken into, sporadic calcite in veins, SOL 6 C: 1.50m @ 1.50m Loss: 0.05m
66.60	67.79	1.19		SANDSTONE, fine grained, medium grey, silty, silty in part, fresh, medium strength rock, fracture (undifferentiated) dipping at 40°, sporadic calcite in veins
67.68	67.68			
67.68	68.07	0.39		SILTSTONE, medium grey, sandy in part, fresh, medium strength rock, blocky calcite, sporadic calcite in veins
68.00	68.18	0.18		CONE LOSS
68.18	69.49	1.32		SILTSTONE, medium grey, somewhat sandy, fresh, medium strength rock, massive (blocky bedding, fracture (undifferentiated) dipping at 40°, dipping at 80°, sporadic calcite in veins, SOL

## GENERATE COMPLEX REPORTS

Some database applications provide more complex report generation capabilities that enable the creation of reports with multiple sections and sub-sections, with provision for the inclusion of images, tables and drawings in relevant places.

### EXAMPLE 1 - DRILLHOLE SUMMARY REPORT


Consider as an example a Drillhole Summary Report, which may include various sections and information such as –

- Drillhole Master Details
  - Hole No.
  - Planning and purpose information
  - Location data
  - Drilling history dates etc.
- Drillhole Survey Data
- Drilling Information
  - Hole size, type by depth etc.
  - Core runs
  - Cementing and related data etc.
- Lithology and related alteration, mineralisation, veining, structural feature logs or summaries etc.
- Geotechnical logs or summaries
- Geophysical survey graphical images
- Assay results or summaries
  - OR perhaps an integrated lithology / mineralisation / assay interpolated summary tables
- Geologists evaluation and interpretation notes
- Environmental and statutory compliance information and data
  - Site photos before, during, on completion and following rehabilitation
  - Land owner and cultural heritage related clearances and so on...
- Appendices –
  - Scans of original data collection forms, assay reports and certificates
  -

The generated report can also be used to create the template for various management and statutory reports, including all of the base data required in the report, which can then be completed by the responsible geologist.

Extracts from a sample report appear below, and these illustrate the potential value of including linked images, photos and other object types in the database.





Dead Sea Coal Exploration

**Borehole Report  
13585D**

Volume 1  
**Borehole Raw Data**

**GDD**  
GEOLOGICAL DATA DESIGN

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Dead Sea Coal Exploration - NER1214

**LITHOLOGICAL LOG REPORT**

**DRILLHOLE - 13585D**

<b>IDENTIFICATION</b>	Project	BETA
	Title	
	Well Name	13585D
	Date Start	1-Aug-11
	End Date	10-Aug-11
	Data Source	
<b>LOCATION</b>	State	Queensland
	County	
	Parish	
	Portion	
	Geological Province	Dead Sea Basin
	Zone	NSU099
	Map Zone	
<b>DRILLHOLE LOCATION</b>	Bearing	348.152.64
	Heading	8.401.184.87
	Elevation	121.39
<b>DRILLING</b>	Contractor	Drill Search Australia
	Drill Type	Diamond Core
	Drill Rig	FD 2545C1
	Drilled To	89.07
	Well Size	90mm
	Core Size	65mm (Ø) Core
<b>GEOPHYSICAL LOGS</b>	Contractor	GEOLOG
	Probe Depth	48.1
	Probe Type	Collar - 011
		Gamma-Gamma-Density
		Gamma
		Sonic
		Neutron
		Temperature
<b>LITHOLOGICAL LOG</b>	Logger's Initials	LSA-FORRELL,CHN
	Date Logged	10-AUG-11 17:42:51
	Interval Logged	0 to 89.07

11 December 2011 Lithologic Report - 13585D Page 1 of 8

Top	Base	Thk	%	Lithology	Sample
44.97	44.99	0.02		SILTSTONE dark grey minor sandy bands in part uniform Medium fresh	
44.96	45.00	0.04	00	SILTSTONE dark grey coherent Medium fresh	
			40	SANDSTONE grey fine grained coherent Medium	
48.00	48.00	0.00	00	SILTSTONE dark grey calcareous bands in part coherent Medium fresh	
			40	SANDSTONE grey fine grained coherent Medium	
50.04	50.20	0.16		SILTSTONE ash grey sandy bands throughout <del>Medium</del> Medium fresh	15500_OT000
50.20	54.00	0.21		SILTSTONE dark grey sandy bands throughout <del>Medium</del> Medium fresh	
54.00	54.11	0.09		SILTSTONE medium grey coherent Medium fresh	15500_OT000
54.11	54.10	0.01		TUFF light weedy grey weedy Low fresh	15500_OT000
54.00				*** BASE OF Coal Seam Level 1 Seam ***	
54.90	54.40	0.50		STONY COAL (NOFO 201) black <del>Medium</del> weedy in part brittle Low fresh	15500_OT021
54.42	54.80	0.08		COAL, bit 1% bright black brittle Low fresh	15500_OT022
54.50	54.50	0.00		CARBONACEOUS SILTSTONE dark blackish grey coherent Medium fresh	15500_OT022
54.51	54.70	0.19		COAL, bit 1% bright black brittle Low fresh	15500_OT022
54.70	55.00	0.00		STONY COAL (NOFO 201) black brittle Low fresh	15500_OT020
55.00	55.07	0.07		CARBONACEOUS SILTSTONE ash blackish grey coherent Medium fresh	15500_OT024
55.07	55.00	0.00		TUFF light weedy lower weedy Low fresh	15500_OT004
55.00				*** BASE OF Coal Seam Level 1 Seam ***	
				*** BOUNDARY THICKNESS 1 METER ***	

Drill Site Core Exploration - MDL12345 - 125000 Page 8

**DOH013 Box 15 112.84m - 116.15m**

**DOH013 Box 16 116.15m - 119.73m**

**DOH013 Box 17 119.73m - 123.30m**

**DOH013 Box 18 123.30m - 126.98m**

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**APPENDIX 4 – CORE AND CHIP PHOTOGRAPHS**

**SITE DIN002 - DRILLHOLE RDH011**

RDH011 Core - 80m

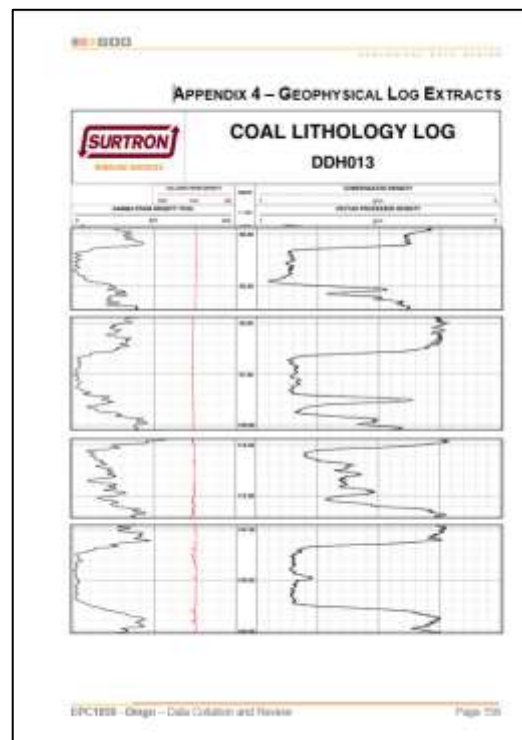
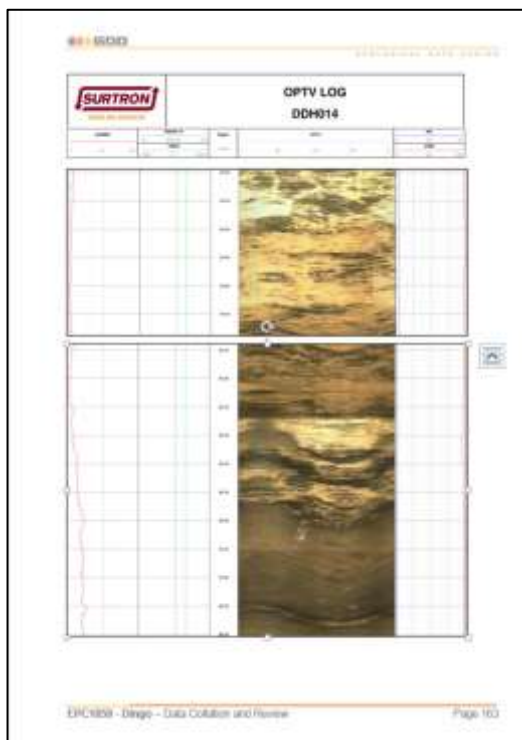
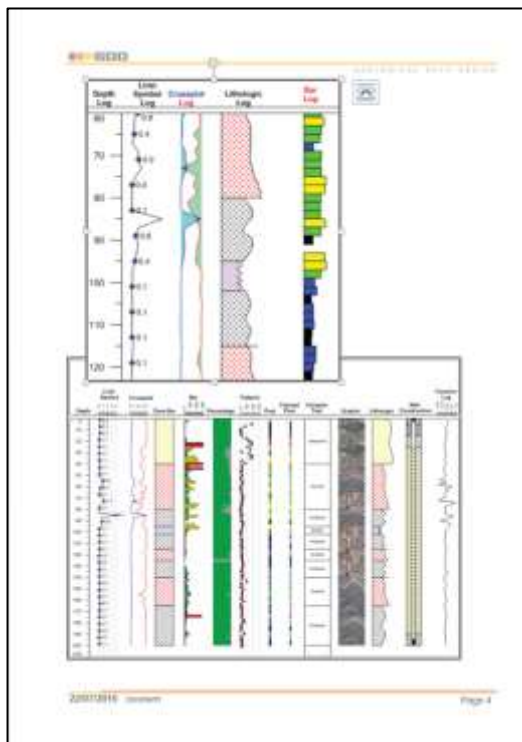
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**BANAMA - DRILLHOLE DW0007**

DW0007\_47.26\_47.50

DW0007\_47.50\_48.00

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**APPENDIX 1 – DRILLING OPERATIONS DAILY SUMMARIES**

Date	Day	Site	Well	Team / Well Interventions	Work completed / Comments
14/05/2014	Friday	DR003	RD411 (Prod)		<ul style="list-style-type: none"> <li>* Collected pore water from Reservoir</li> <li>* Crew and Rig arrive at Ongo</li> <li>* Aided inspections and travel to site</li> <li>* Set up on site</li> </ul>
15/05/2014	Saturday	DR003	RD411 (Prod)	Team / Well Interventions: 1. 21.5m to 29m (1.5.00) Daily Interval - 20% cut	<ul style="list-style-type: none"> <li>* Toolbit / Fresh bit</li> <li>* Drilled 5.5' PCD to 34.2m (using depth)</li> <li>- Some tool bit deterioration required 7.5m where flow to coarse sand was extracted - collapsing into hole.</li> <li>- Hole was mudfilled with liquid polymer.</li> <li>- Daily interval intersected 127.5m to 129m (10% only recovered) - 1.5m</li> <li>* Cased hole with 4" PVC to 34.2m - no issues running casing through sand zone.</li> <li>* Reamout chipping with 89mm PCD to 12m.</li> <li>* Compressor started cutting out when chipping resumed.</li> <li>* Driller managed to get compressor operating for about an hour.</li> <li>* Job stopped at 15pm with unsuccessful</li> </ul>
16/05/2014	Sunday	DR003	RD411 (Prod)	Team / Well Interventions: 1. 21.5m to 29m (1.5.00) Daily Interval - 20% cut 2. 29m to 30m (1.5.00) Daily Interval - 20% cut 3. 30m to 305.5m (1.5.00) - 10% cut 4. 129m to 130m (1.5.00) - 10% cut 5. 130m to 305.5m (1.5.00) - 10% cut	<ul style="list-style-type: none"> <li>* Toolbit / Fresh bit</li> <li>* Compressor malfunctioning 7.30 to 20min - extended issue.</li> <li>* Reamout chipping past hole with 89mm PCD to 30m - final depth</li> <li>* Fuller rods out of hole and changed</li> <li>* Moved rig forward to commence casing hole (for casing)</li> <li>* Drilled with 5.5' PCD to 30m - casing depth</li> </ul>

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The following is a summary of work completed today on site DR003:

Date	Day	Site	Well	Team / Well Interventions	Work completed / Comments
15/05/2014	Saturday	DR003	RD411 (Prod)	Team / Well Interventions: 1. 21.5m to 29m (1.5.00) Daily Interval - 20% cut	<ul style="list-style-type: none"> <li>* Drilled to 34.2m</li> <li>* Mud moisture 1.5% (using) intersected at 42m - pulled rods to inspect and change bit bit.</li> <li>* Cased hole at 30.2m in first competent horizon - this was re-worked some.</li> <li>* Drilled to 34.2m without intersecting 1st competent horizon.</li> <li>* Since drilling at 1st to 75.00m - if such a steep dip angle, a 7m rise from plus hole site would place the 1st seam at 62m to 70m (if down dip) or it is possible it has been eroded away (if up dip) - the closer seam should be at 129 to 134.5m (if down dip) or 120m to 127.5m (if up dip).</li> </ul>

- Drills dip angle are again very steep, and although not a surprise after DR002, the steep (7%) angles are rendering pilot holes less useful (indicative only)
- We will require casing in the morning to max depth of 100m - deeper if 1" seam is intersected (as per indicated above)
- Redfire completed preparation of site DR003 - having arrived and was installed around pits after completion.

Down-time:

- 1 hour slow drilling and changing bit bit due to very hard quartzite / hard at 70m.

Weather:

- Fine - partly cloudy - 12°C

Safety:

- No incidents

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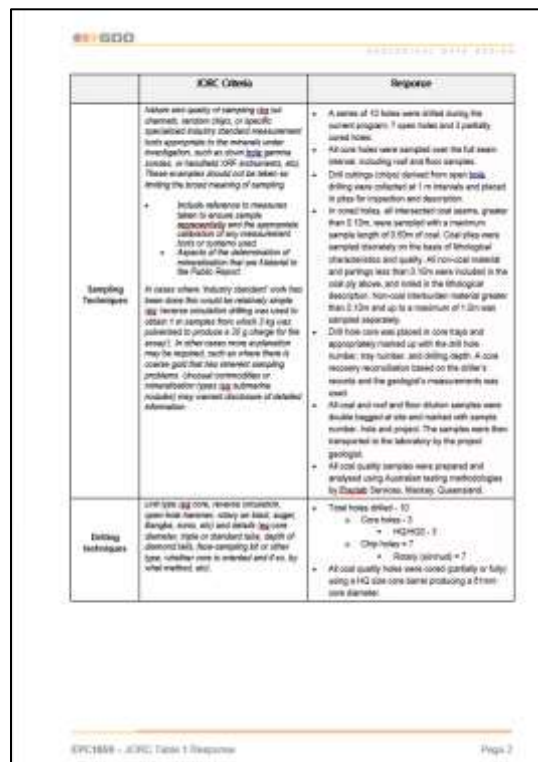
## EXAMPLE 2 – JORC TABLE 1 REPORT

As a second pertinent example, consider the JORC Table 1 report, a statutory requirement in ASX and ASIC announcements and reports

Much of the data required in this report can be drawn from the database and related linked objects. As such, the draft report can be generated for a given project or tenement containing this data, for the responsible CP geologist to complete and ‘fill in the blanks’

This ensures that the data in the report is consistent, complete and accurate, assuming the database is correct to begin with)

Again a few sample pages are shown to illustrate the concept....



**EPIC1888 - JCRG Table 1 Response**

**Drill hole information**

A summary of all information available to the understanding of the exploration results including a tabulation of the following information for all Mineral Unit holes:

- location and numbering of the drill hole collar
- elevation or RL (Reduced Level) - reduction datum and level or method of the drill hole collar
- DR and azimuth of the hole down hole length and interpretation depth
- hole length

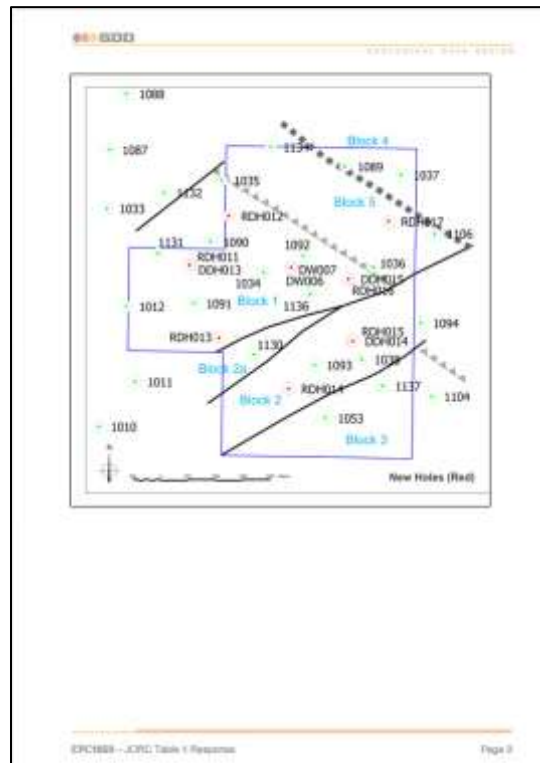
If the acquisition of this information is confirmed on the basis that the information is not complete and the acquisition does not detract from the understanding of the report, the Computer Editor should clearly explain why this is the case.

A list of the holes drilled during the current program, and other holes used during the evaluation and interpretation, are provided below.

All drill holes have been excluded from vertical and hole deviation (from vertical) has been recorded and used during the exercise.

Hole	Hole Type	MIN Case	ARNG Easting	ARNG Northing	Elev.	Start	Complete	Test Depth
RD4011	DC	SI	738222.50	7384277.06	100.87	11/01/2014	10/01/2014	104.00
RD4012	DC	SI	738221.41	7384283.93	100.85	10/01/2014	11/01/2014	104.00
RD4013	DC	SI	738225.47	7384275.24	100.74	11/01/2014	11/01/2014	118.00
RD4014	DC	SI	738222.45	7384282.16	101.74	24/01/2014	24/01/2014	254.00
RD4015	DC	SI	738226.91	7384282.97	101.87	24/01/2014	24/01/2014	252.00
RD4016	DC	SI	738229.13	7384242.43	127.54	4/04/2014	4/04/2014	212.00
RD4017	DC	SI	738225.56	7384287.94	127.42	4/04/2014	7/04/2014	208.00
RD4018	DC	SI	738247.38	7384284.82	130.79	7/04/2014	8/04/2014	184.00
RD4019	DC	SI	738241.52	7384282.94	120.48	13/04/2014	14/04/2014	212.00
RD4020	DC	SI	738240.30	7384281.10	128.79	8/04/2014	8/04/2014	194.00
								218.00
<b>Additional Drilling Data Obtained From Relevance</b>								
DW006	DC	SI	738248.88	7384281.88				251.00
DW007	DC	SI	738247.00	7384289.12				211.00

EPIC1888 - JCRG Table 1 Response Page 7



**EPIC1888 - JCRG Table 1 Response**

**Relevance reporting**

Where appropriate, reporting of all Exploration Results is not possible. Representative reporting of both low and high grades and/or results should be provided to avoid misleading reporting of Exploration Results.

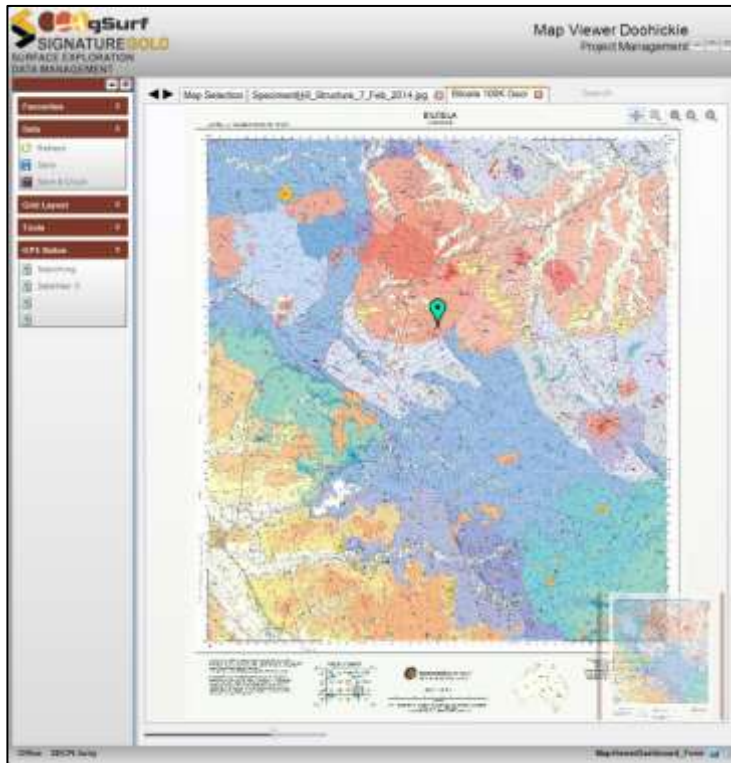
All available exploration data for the benchmark has been captured and reported. Summary color and stain interaction data can be found in the table below.

Hole	Swath	From	To	Track	Cost	Perfor	Class	Count
RD4011	SEAM	27.00	28.00	1.00	1.00	0.00	0.00	0.00
RD4012	SEAM	60.65	62.55	2.90	1.90	0.00	0.72	
RD4013	SEAM	50.43	59.80	3.12	2.90	3.27	1.30	
RD4014	SEAM	112.84	119.84	2.90	2.25	0.58	0.00	
RD4015	SEAM	148.51	151.98	3.02	3.02	0.00	0.00	
RD4016	SEAM	140.00	148.84	2.89	2.89	0.00	0.00	
RD4017	SEAM	61.41	67.81	4.88	4.28	1.27	1.49	
RD4018	SEAM	70.88	81.38	2.00	2.95	0.00	0.25	
RD4019	SEAM	84.42	88.11	8.88	8.88	0.00	0.00	
RD4020	SEAM	109.81	108.30	4.78	4.38	0.00	8.52	
RD4021	SEAM	83.71	88.71	5.00	4.58	0.48	N/A	
RD4022	SEAM	121.90	126.40	4.80	4.40	0.60	N/A	
RD4023	SEAM	127.20	128.28	2.88	1.88	0.00	N/A	
RD4024	SEAM	131.88	136.28	2.88	1.60	0.00	N/A	
RD4025	SEAM	142.50	144.40	3.90	0.90	0.00	N/A	
RD4026	SEAM	74.50	76.80	1.10	1.10	0.00	N/A	
RD4027	SEAM	90.88	100.90	1.13	1.13	0.00	N/A	
RD4028	SEAM	87.00	87.80	10.00	10.00	0.00	N/A	
RD4029	SEAM	102.20	108.30	5.80	5.80	0.00	N/A	
RD4030	SEAM	150.00	157.50	2.50	2.50	0.00	N/A	
RD4031	SEAM	81.40	86.90	2.90	2.90	0.00	N/A	
RD4032	SEAM	101.62	110.80	4.90	4.90	0.00	N/A	
RD4033	SEAM	140.20	150.80	2.90	1.90	0.00	N/A	

EPIC1888 - JCRG Table 1 Response Page 10

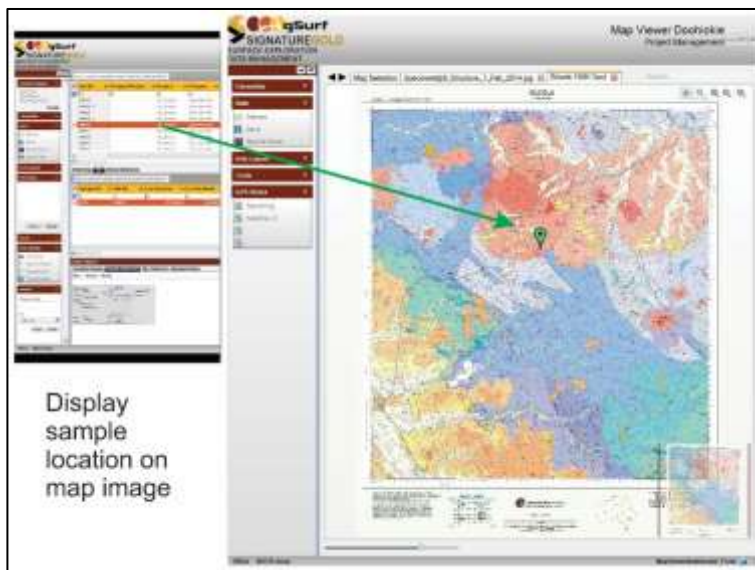
## GEOREFERENCED IMAGE USES

Georeferenced images (maps with spatial coordinates) can be utilised with the database as a basis for the display of the location of selected data relative to the geological or other features on the map image.



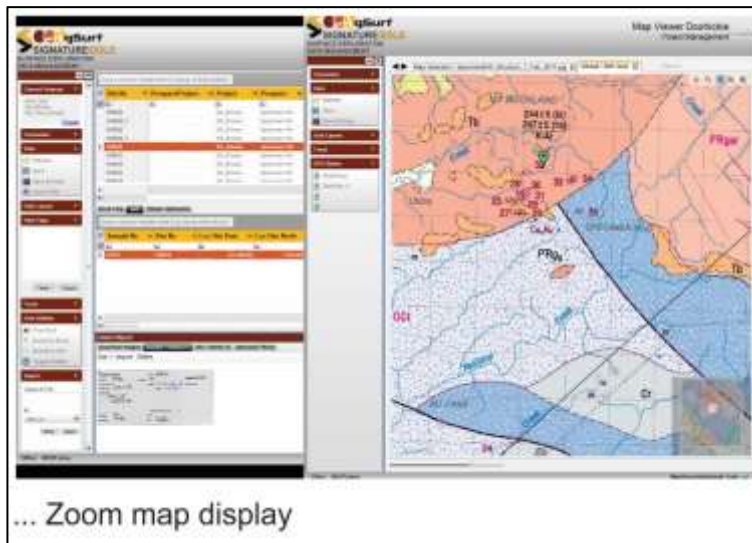
### DISPLAY DATA LOCATION

A map image can be opened in the Map Viewer. When a data record that has location coordinates is selected, its location is shown on the map.

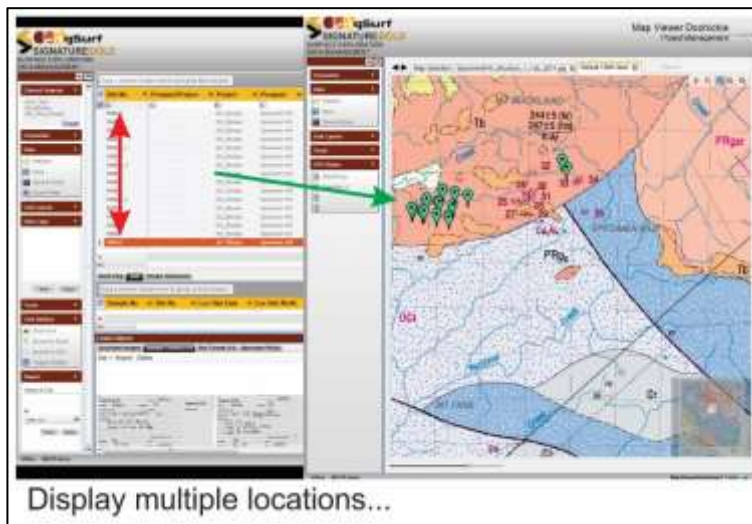


The maps can be zoomed as required to show more detail





When multiple records are shown, all are displayed on the maps



**Important !** – This functionality is **NOT** intended as a replacement for any GIS system which provide a vastly deeper capability. It is designed to simply ‘show you where stuff is’ in relation to the map images linked.

## DISPLAY AGAINST MULTIPLE MAPS

Multiple maps can be opened, for example a topographical, a geological and a geophysical magnetic image, and the location is displayed on each

