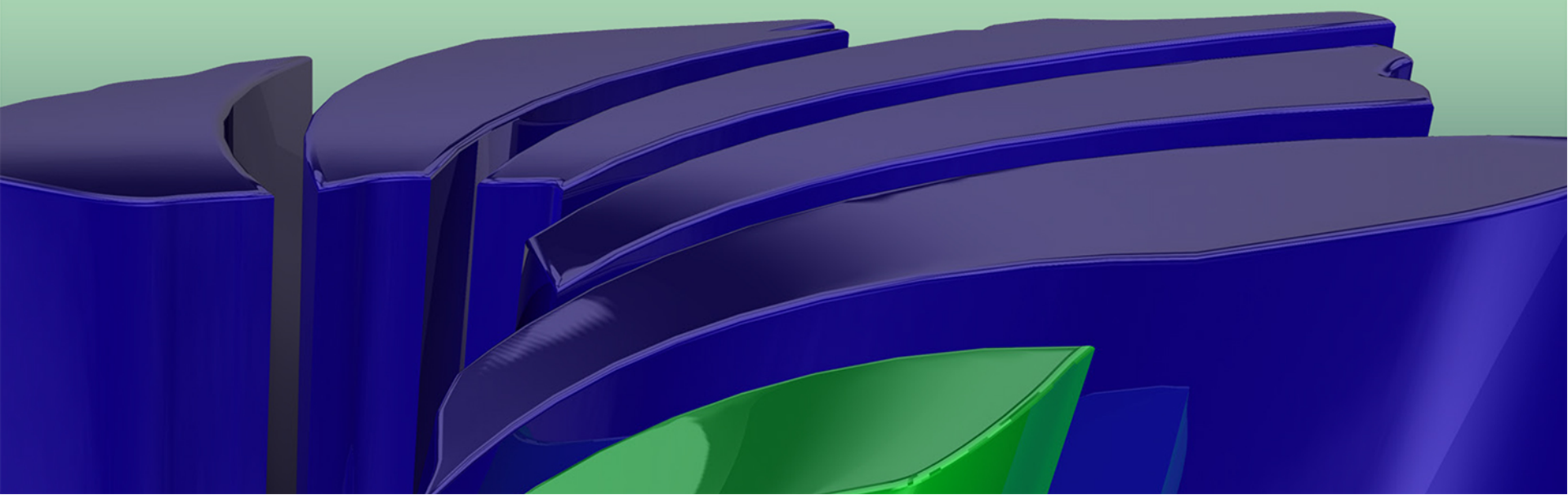




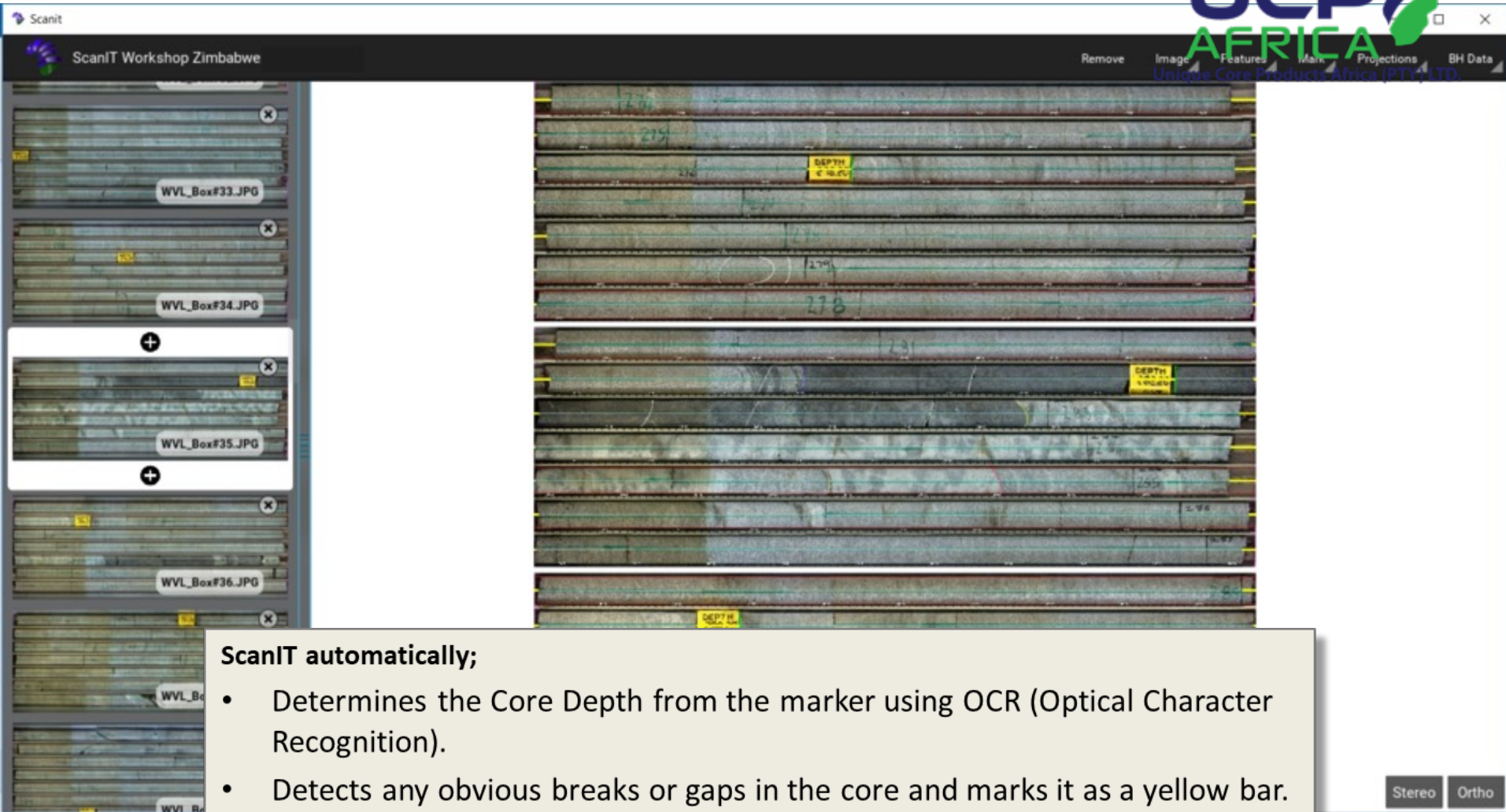
Unique Core Products Africa (PTY) LTD.

ScanIT

Core logging software



ScanIT –

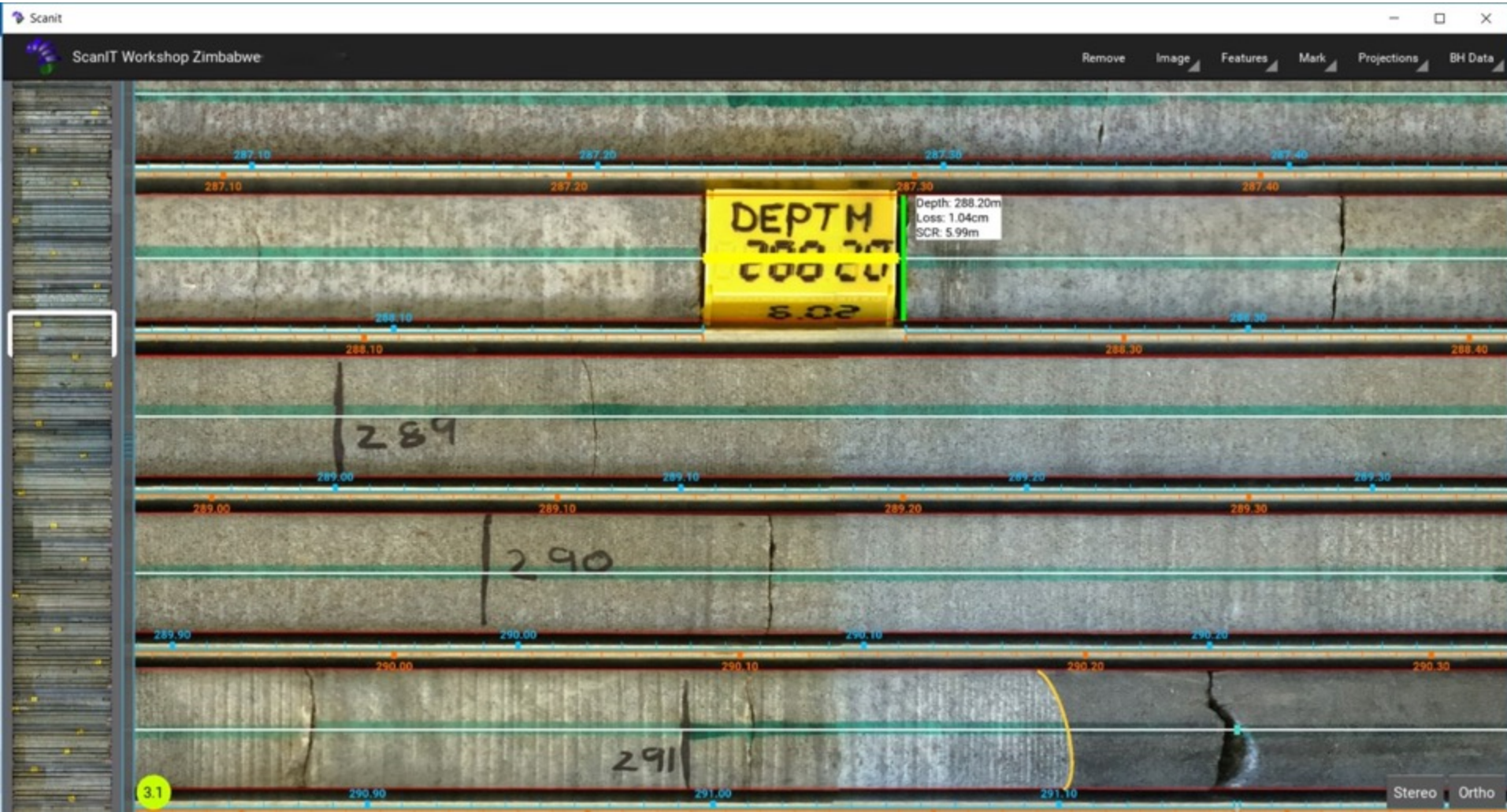


ScanIT automatically;

- Determines the Core Depth from the marker using OCR (Optical Character Recognition).
- Detects any obvious breaks or gaps in the core and marks it as a yellow bar.
- Calculates the Solid Core Recovered and the amount of Core Loss.
- Marks the temporary up-hole and down-hole depths on the image

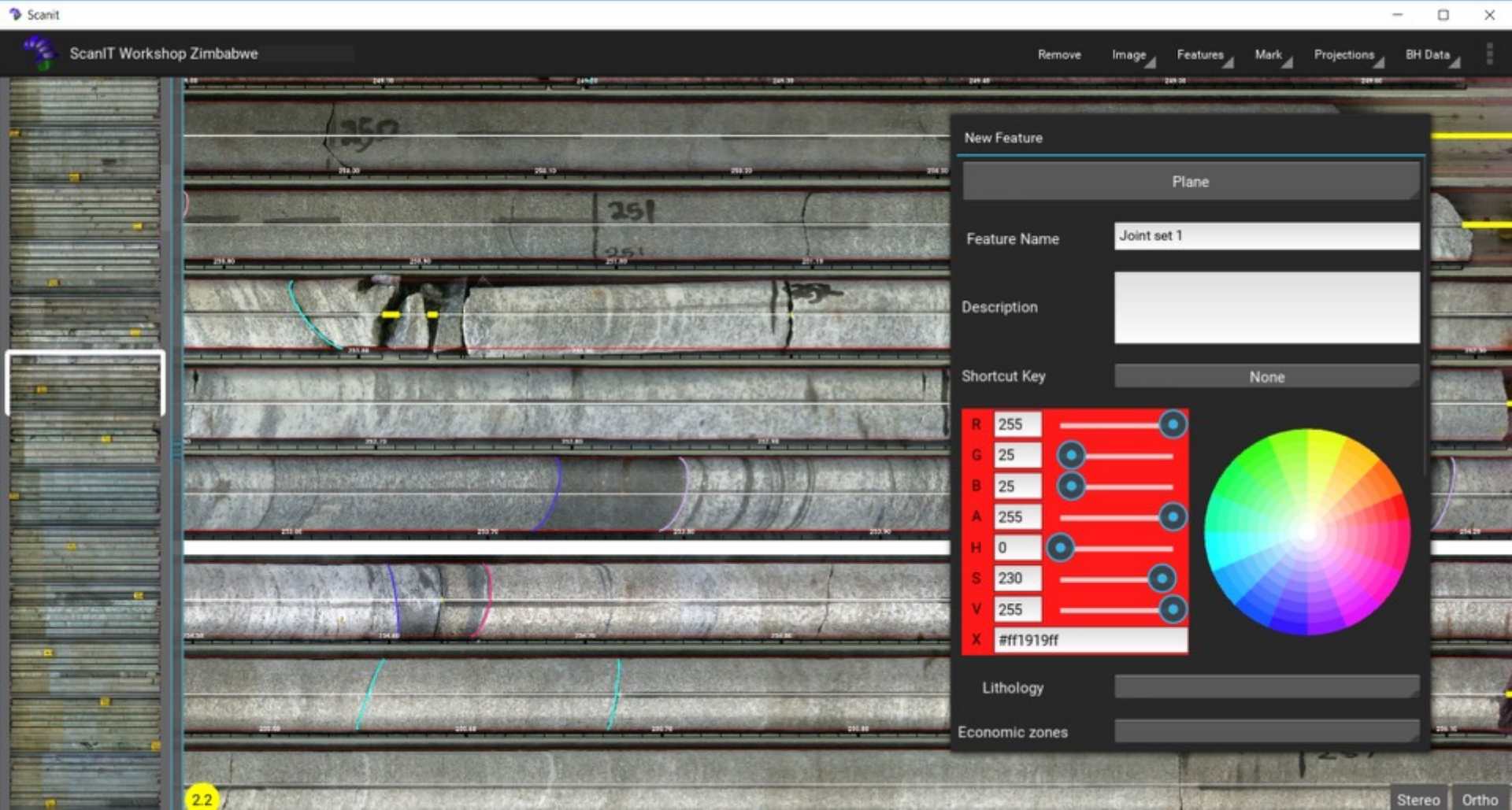
ScanIT – depth referencing

- Best logging practices
- Core depth markers
- Rulers
- Forced breaks
- Natural gaps
- Core loss
- Core gain
- Solid core recovery



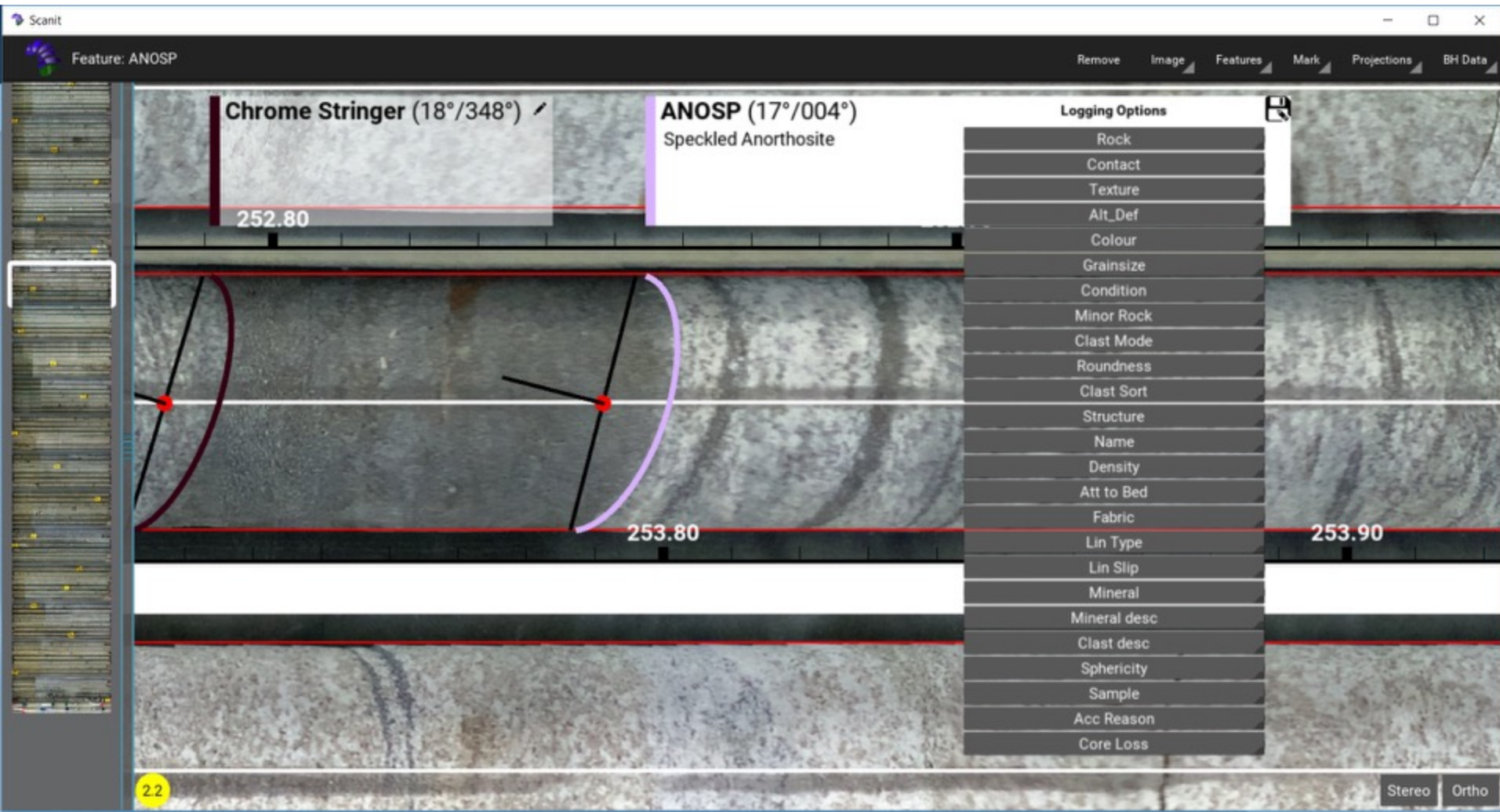
ScanIT – features

- Lithologies, planes, lineations
- Customised RGB colours
- Import project specific logging dictionaries
- Features shortcut keys



ScanIT – logging

- Best fit plane
- Dropdown parameters
- Instant editing



ScanIT – live logging

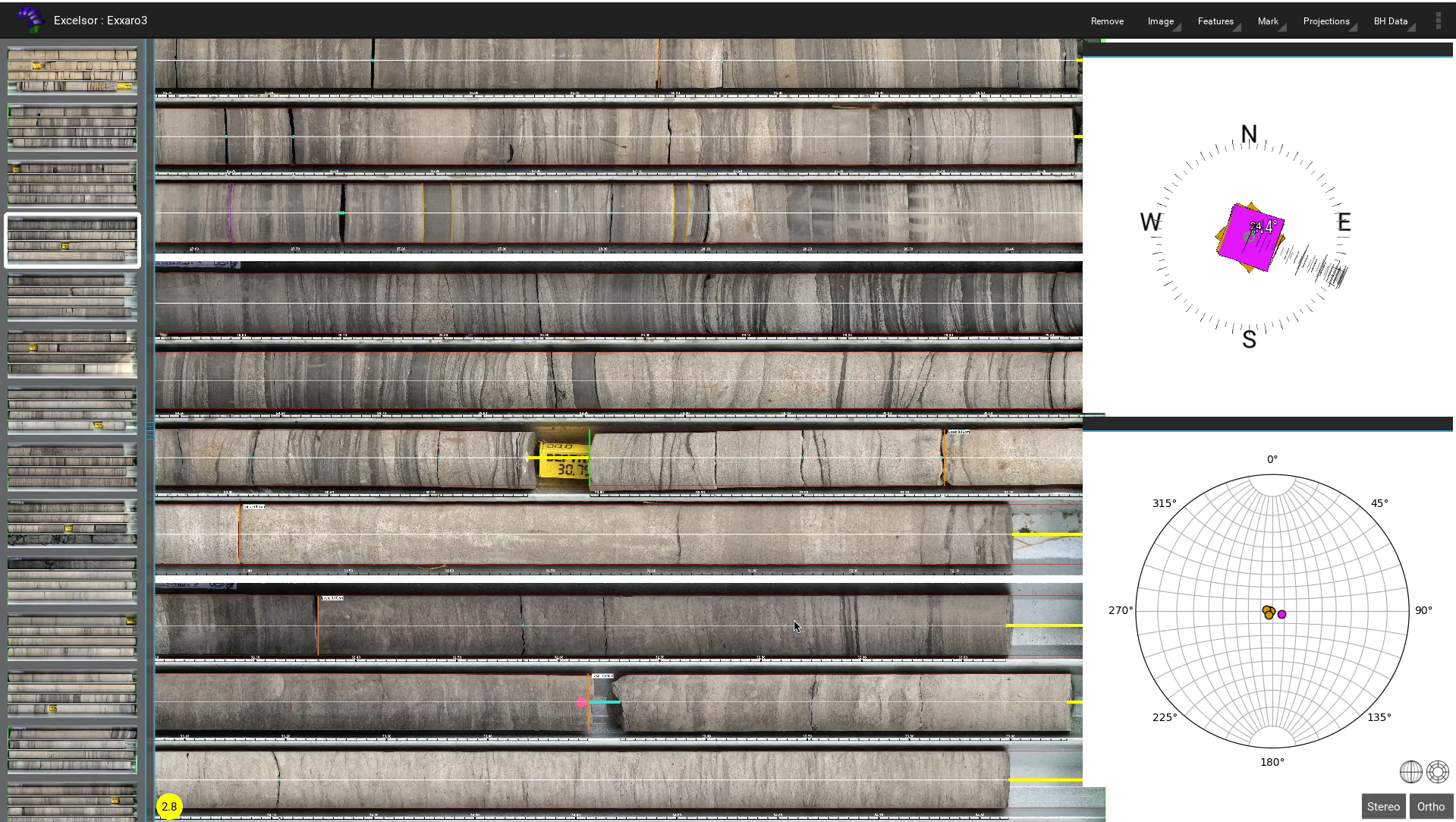
- Live stereonet
- Live orthographic projection
- Live validation

Immediate data QAQC



Excelsior : Exxaro3

Remove Image Features Mark Projections BH Data



2.8

Stereo Ortho

ScanIT – stereonet

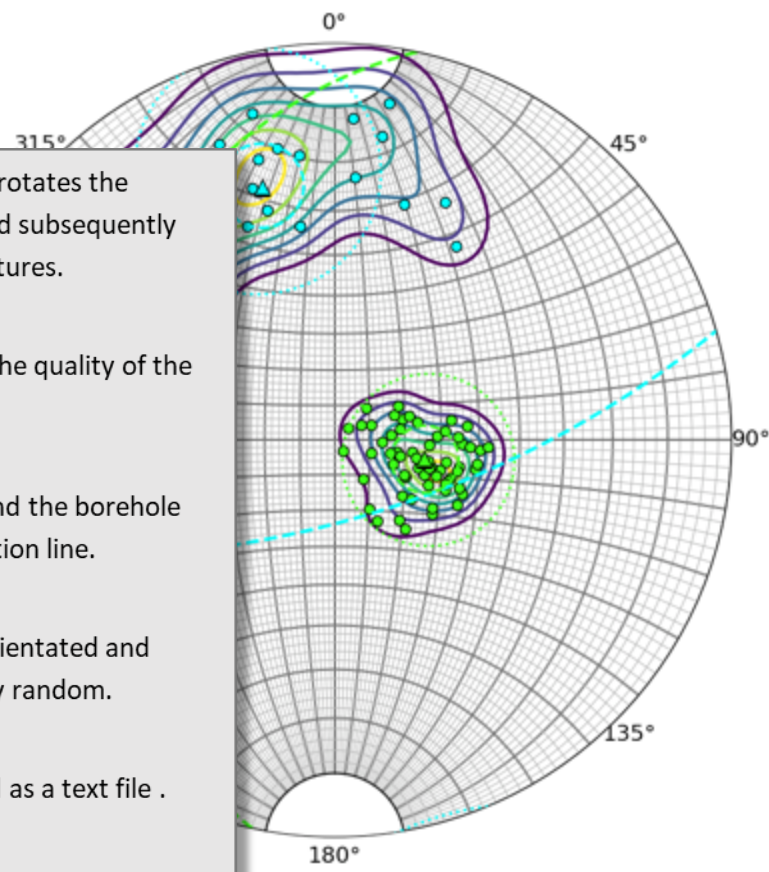
Selecting Polar projection instantly rotates the borehole to the vertical position and subsequently re-orientates all the recorded structures.

This is an invaluable tool to assess the quality of the logging.

Data plotting on a small circle around the borehole will indicate rotation of the orientation line.

In this situation the core was not orientated and subsequently the data is completely random.

The structural data data is exported as a text file .



Projection

Start (m) End (m)

Miscellaneous

Borehole

Features

Planes	P	C	M
Competent Rock	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fault	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint Set 4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint set 1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Joint set 2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint set 3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Vein	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lithological Contacts			
CHR M04A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ANOSP	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Anorthosite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHR M01	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHR M02	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
CHR M03	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chrome Stringer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Joint Zone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LG6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LG6A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
LG6PX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MG2PX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
M04B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MG6PX	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NOICML	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Norite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pyroxenite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lineations			
Lineation Test	<input type="checkbox"/>		


ScanIT – 3D orthographic

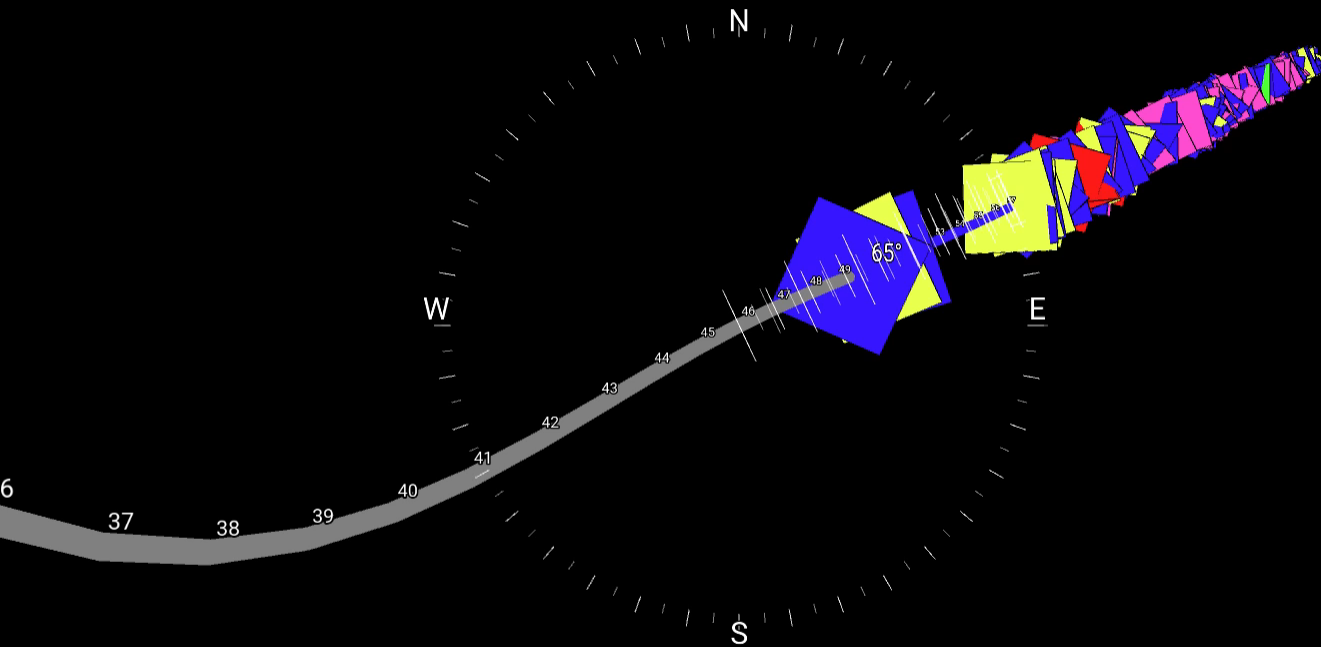
Orthographic View

Black

White

Features

	FELS_LY	<input checked="" type="checkbox"/>
	GN	<input checked="" type="checkbox"/>
	GSC	<input checked="" type="checkbox"/>
	Joint	<input checked="" type="checkbox"/>
	joint	<input checked="" type="checkbox"/>
	lin	<input checked="" type="checkbox"/>
	test joint 2	<input checked="" type="checkbox"/>

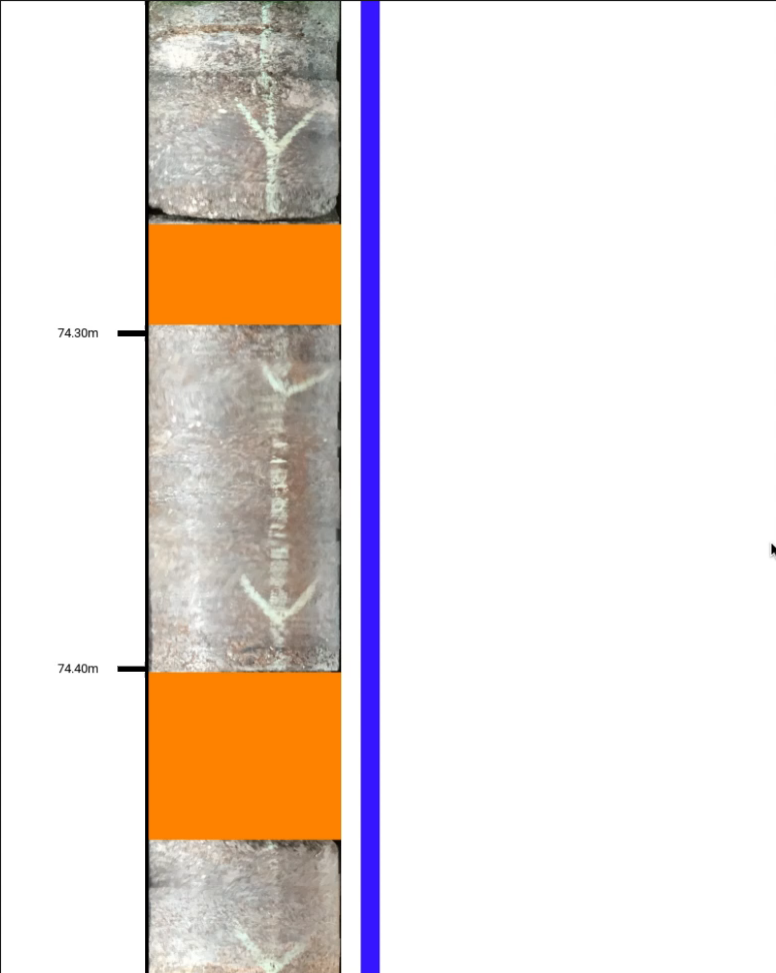


ScanIT – composite log



Scan IT

Close



Composite View

Start Depth (m)

Run Length (m)

Features

ScanIT – logging dictionary



Colour qualifier	Primary Colour	Secondary Colour	Grain size	LITHOLOGY	Description 1	Description 2	Top contact	Bottom contact	Hangingwall	Footwall	Weathering													
a	Dull	BL	black	BL	/black,	VFC	very fine grained	SS	SANDSTONE	SS	clayey soil,	SS	very soft and friable,	SSBS	Brecciated top contact	SSBS	Brecciated bottom contact	H	Competant hangingwall	H	Competant footwall	SS	highly weathered.	
l	Light	BR	brown	BR	/brown,	S	fine grained	SD	SILTSTONE	SD	intercalated with carbonaceous	SSM	with occasional gritty bands	SSBK	Broken top contact	SSBK	Broken bottom contact.	S	Hangingwall very friable and broken	H	Footwall very friable and broken	SS	Moderate weathering.	
d	Dark	CR	cream	CR	/cream,	FMC	fine-medium grained.	FR	BITUMINOUS COAL	FR	friable and highly broken in parts.	QW		CRBK	Chilled top contact	CRBK	Chilled bottom contact.							
b	Bright	GR	green	GR	/green,	F	medium grained	QW	ANTHRACITE	QW	,with upward fining cycles.	DNFC		DNFC	Diffuse top contact	DNFC	Diffuse bottom contact							
		GY	grey	GY	/grey	FCC	fine-coarse grained.	LK	DOLERITE DYKE	LK	Irregular bedding.	DNFC		DNFC	Disseminated top contact	DNFC	Disseminated bottom contact							
		OL	olive	OL	/olive,	CV	coarse-very coarse	S	SOIL	S	, with occasional minor buff coloured sandstone layers.	DSBRC		DSBRC	Disrupted irregular top contact	DSBRC	Disrupted irregular bottom contact							
		OR	orange	OR	/orange,	FX	fine crystalline	AR	ARCOSE	AR	massive with very little bedding.	ERBRC		ERBRC	Erosional top contact	ERBRC	Erosional bottom contact							
						MC	medium crystalline grained.					FAULC		FAULC	Faulted top contact	FAULC	Faulted bottom contact							
						MC	medium to coarse grained.					FRFC		FRFC	Frozen top contact	FRFC	Frozen bottom contact							
						CC	coarsely crystalline					GRADC		GRADC	Gradational top contact	GRADC	Gradational bottom contact							
												GRADCI		GRADCI	Gradational and Irregular top contact	GRADCI	Gradational and Irregular bottom contact							
												GRNDC		GRNDC	Ground top contact	GRNDC	Ground bottom contact							
												INTRC		INTRC	Intrusive top contact	INTRC	Intrusive bottom contact							
												IR		IR	Irregular top contact	IR	Irregular bottom contact							
												INTC		INTC	Jointed top contact	INTC	Jointed bottom contact							
												SC		SC	Sharp top contact	SC	Sharp bottom contact							
												SPFC		SPFC	Sharp frozen top contact	SPFC	Sharp frozen bottom contact							
												SRIC		SRIC	Sharp irregular top contact	SRIC	Sharp irregular bottom contact							
												SWYC		SWYC	Sharp wavy top contact	SWYC	Sharp wavy bottom contact							
												SHC		SHC	Sheared top contact	SHC	Sheared bottom contact							
												VAGC		VAGC	Vague top contact	VAGC	Vague bottom contact							

ScanIT allows the user to customize their project specific logging codes.

- Each project is different therefore by having the logging dictionary customizable to suite each operation.
- Structures and Lithologies can have different codes.
- ScanIT allows user to view logging descriptions while logging instead of translating codes into words.
- Codes are populated into the excel export log and are easily imported into any geodatabase or modelling program.

ScanIT export – geological log



From	To	Length	TST*	TST^alpha	Unit	Description
134.9	136.38	1.48	0.96		LEUCONORITE	70% white plagioclase, 30% dark brown orthopyroxene
136.38	136.56	0.18	0.12		PEGMATITE VEIN	Pegmatite Vein
136.56	225.22	88.66	57.36		LEUCONORITE	70% white plagioclase, 30% dark brown orthopyroxene
225.22	235.24	10.02	6.48		MELANORITE	80% dark brown orthopyroxene, 20% white plagioclase. Anhedral grain form and round grain shape. Phaneritic texture.
235.24	236.39	1.15	0.74		CHROMITITE	Black fine grained chromitite. Yellow Olivine Oikocrysts of 1cm constitute 10% of chromite.
236.39	238.09	1.7	1.10		MELANORITE	80% dark brown orthopyroxene, 20% white plagioclase. Anhedral grain form and round grain shape. Phaneritic texture.
238.09	239.23	1.14	0.74		CHROMITITE	Black fine grained chromitite. Yellow Olivine Oikocrysts of 1cm constitute 10% of chromite.
239.23	242.25	3.02	1.95		PYROXENITE	Pyroxenite with disseminated chromitite.
242.25	242.94	0.69	0.45		MG4	Chromite stringers. Sharp contact. Contains numerous Anorthosite bands as internal waste.
242.94	268.29	25.35	16.40		MELANORITE	80% dark brown orthopyroxene, 20% white plagioclase. Anhedral grain form and round grain shape. Phaneritic texture.
268.29	269.48	1.19	0.77		MG3	Black fine grained Chromitite. Solid or competent. Yellow Olivine Oikocrysts 0.5cm with 5% modal abundance. Aphanitic
269.48	270.69	1.21	0.78		MOTTLED ANOTHOSITE	1.5cm grey orthopyroxene mottles. Orthopyroxenes 10% Plagioclase 90% . Anhedral
270.69	270.69	0.02	0.01		MOTTLED ANOTHOSITE	1.5cm grey orthopyroxene mottles. Orthopyroxenes 10% Plagioclase 90% . Anhedral

The True Stratigraphic Thickness is calculated from the Lithological Contact alpha angle in un-orientated core, or the Dip and Dip Direction in orientated core.

318.16	318.32	0.16	0.10		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round
318.32	318.34	0.02	0.01		CHROMITITE	Black fine grained chromitite. Yellow Olivine Oikocrysts of 1cm constitute 10% of chromite.
318.34	319.29	0.95	0.61		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round
319.29	319.4	0.11	0.07		CHROMITITE	Black fine grained chromitite. Yellow Olivine Oikocrysts of 1cm constitute 10% of chromite.
319.4	347.8	28.4	18.37		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round
347.8	347.85	0.05	0.03		PEGMATITE VEIN	Pegmatite Vein
347.85	352.69	4.84	3.13		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round
352.69	352.84	0.15	0.10		PEGMATITE VEIN	Pegmatite Vein
352.84	366.64	13.8	8.93		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round
366.64	366.93	0.29	0.19		LG6A	Black fine grained Chromitite. Solid or competent. Yellow Olivine Oikocrysts 0.5cm constitute 20% of chromite. Aphanitic
366.93	367.61	0.68	0.44		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round
367.61	368.03	0.42	0.27		LG6	Black fine grained Chromitite. Solid or competent. Yellow Olivine Oikocrysts 0.5cm constitute 30% in modal abundance.
368.03	368.68	0.65	0.42		PYROXENITE	Pyroxenite with disseminated chromitite.
368.68	402	33.32	21.56		ORTHO-PYROXENITE	Ortho-Pyroxenite; 2% white plagioclase, 98% dark brown orthopyroxenes with 0.1mm grain size. Anhedral grain form, round

ScanIT export – survey data



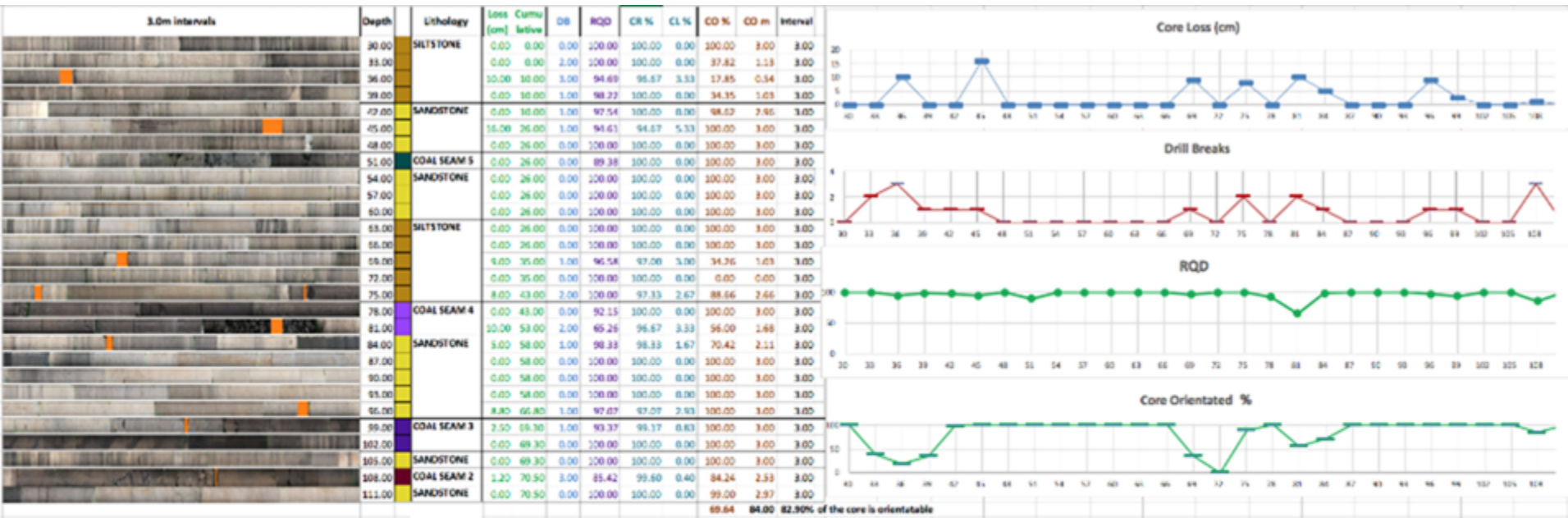
1	Drill Hole No	CollarEasting	CollarNorthing	CollarElevation	Final Length	Survey No	Depth [m]	Inclination	Azimuth	Northing	Easting	Elevation [m]
2	0	0	0	0	400	1	0	-69,90	53	0,00	0,00	0,00
3						2	24	-69,90	53	5,10	6,65	-22,49
4						3	30	-70,00	53	6,34	8,29	-28,13
5						4	36	-69,90	53	7,58	9,93	-33,76
6						5	42	-70,00	52	8,84	11,56	-39,40
7						6	48	-69,90	52	10,11	13,17	-45,04
8						7	54	-70,00	52	11,39	14,79	-50,67
9						8	60	-70,10	52	12,65	16,40	-56,31
10						9	66	-69,90	52	13,92	18,01	-61,95
11						10	72	-69,80	52	15,19	19,64	-67,58
12						11	78	-69,70	51	16,49	21,26	-73,21
13						12	84	-69,80	52	17,78	22,89	-78,84
14						13	90	-69,90	53	19,04	24,53	-84,47
15						14	96	-70,00	53	20,29	26,16	-90,11
16						15	102	-70,10	53	21,52	27,80	-95,75
17						16	108	-70,10	53	22,74	29,44	-101,39
18						17	114	-70,30	53	23,96	31,07	-107,04
19						18	120	-70,30	54	25,16	32,69	-112,69
20						19	126	-70,40	54	26,34	34,32	-118,34
21						20	132	-70,60	54	27,52	35,94	-123,99
22						21	138	-70,70	54	28,69	37,55	-129,65
23						22	144	-70,90	55	29,84	39,16	-135,32
24						23	150	-71,00	55	30,96	40,76	-140,99

ScanIT export – structural log



COORDINATES				PLANAR STRUCTURES					LINEAR STRUCTURES			
DEPTH (m)	X	Y	Z	Plane ID	Description	alpha (0)	Dip	Dip Direction	Line ID	Description	Plunge	Trend
134.90	28700.83	-41677.00	993.74	LEUCONORITE	70% white plagioclase, 30% dark	73.14	16.16	63.90				
135.56	28700.84	-41677.00	993.08	Lu	Layering in un orientated core	70.62	19.12	0.12				
135.90	28700.84	-41677.00	992.74	J1	Joint Set !	27.96	61.36	81.95				
136.38	28700.85	-41677.00	992.26	PEGMATITE VEIN	Pegmatite Vein	48.99	41.71	242.77				
136.56	28700.85	-41676.99	992.08	LEUCONORITE	70% white plagioclase, 30% dark	65.74	24.95	254.34				
137.15	28700.85	-41676.99	991.49	Lo	layoring in orientated core	58.11	31.65	137.81				
138.09	28700.87	-41676.99	990.55	Lu	Layering in un orientated core	65.99	23.76	135.27				
138.71	28700.87	-41676.98	989.93	Lu	Layering in un orientated core	68.18	21.32	110.40				
139.08	28700.88	-41676.98	989.56	J1	Joint Set !	19.65	70.99	270.45				
139.92	28700.89	-41676.98	988.72	Lo	layoring in orientated core	64.42	24.86	60.43				
140.78	28700.90	-41676.97	987.86	Lu	Layering in un orientated core	71.39	17.96	37.16				
142.98	28700.92	-41676.96	985.66	Fault Zone		24.28	64.99	59.94				
144.06	28700.93	-41676.96	984.58	J1	Joint Set !	34.33	55.12	107.99				
144.96	28700.94	-41676.95	983.69	J2		5.51	85.13	215.88				
146.58	28700.96	-41676.94	982.06	J1	Joint Set !	60.49	28.84	38.76				
148.41	28700.99	-41676.93	980.23	J1	Joint Set !	51.93	37.54	112.73				
149.84	28701.00	-41676.92	978.80	Lu	Layering in un orientated core	66.82	23.41	315.57				
150.09	28701.01	-41676.92	978.55	Lu	Layering in un orientated core	63.36	26.86	316.05				
150.84	28701.02	-41676.92	977.80	Lu	Layering in un orientated core	70.79	19.45	313.69				
151.47	28701.02	-41676.91	977.18	J1	Joint Set !	51.08	39.33	183.41				
151.87	28701.03	-41676.91	976.77	J1	Joint Set !	53.38	37.07	185.68				
152.53	28701.04	-41676.91	976.11	J2		12.96	76.97	334.16				
154.40	28701.06	-41676.89	974.24	Lo	layoring in orientated core	78.07	12.08	317.21				
156.72	28701.09	-41676.88	971.92	Lu	Layering in un orientated core	55.69	34.34	328.65				
157.16	28701.09	-41676.87	971.49	Lu	Layering in un orientated core	66.89	23.35	312.81				
157.24	28701.09	-41676.87	971.41	Lu	Layering in un orientated core	57.32	32.89	315.41				
159.98	28701.13	-41676.85	968.66	Lu	Layering in un orientated core	76.17	14.14	302.42				
170.73	28701.25	-41676.76	957.92	Lo	layoring in orientated core	71.75	17.73	349.20				
171.04	28701.25	-41676.76	957.61	Lo	layoring in orientated core	68.47	21.16	338.65				
171.78	28701.26	-41676.75	956.86	Lo	layoring in orientated core	55.81	33.44	6.76				
172.45	28701.27	-41676.74	956.19	Lo	layoring in orientated core	65.03	24.06	25.36				
172.63	28701.27	-41676.74	956.02	Lo	layoring in orientated core	60.08	29.05	18.93				
175.56	28701.31	-41676.70	953.09	Lo	layoring in orientated core	64.61	24.73	356.31				
175.63	28701.31	-41676.70	953.01	Lo	layoring in orientated core	59.24	29.97	6.77				
176.60	28701.32	-41676.69	952.04	Lo	layoring in orientated core	66.04	23.26	359.78				
178.26	28701.35	-41676.67	950.29	Lo	layoring in orientated core	62.22	27.29	242.20				

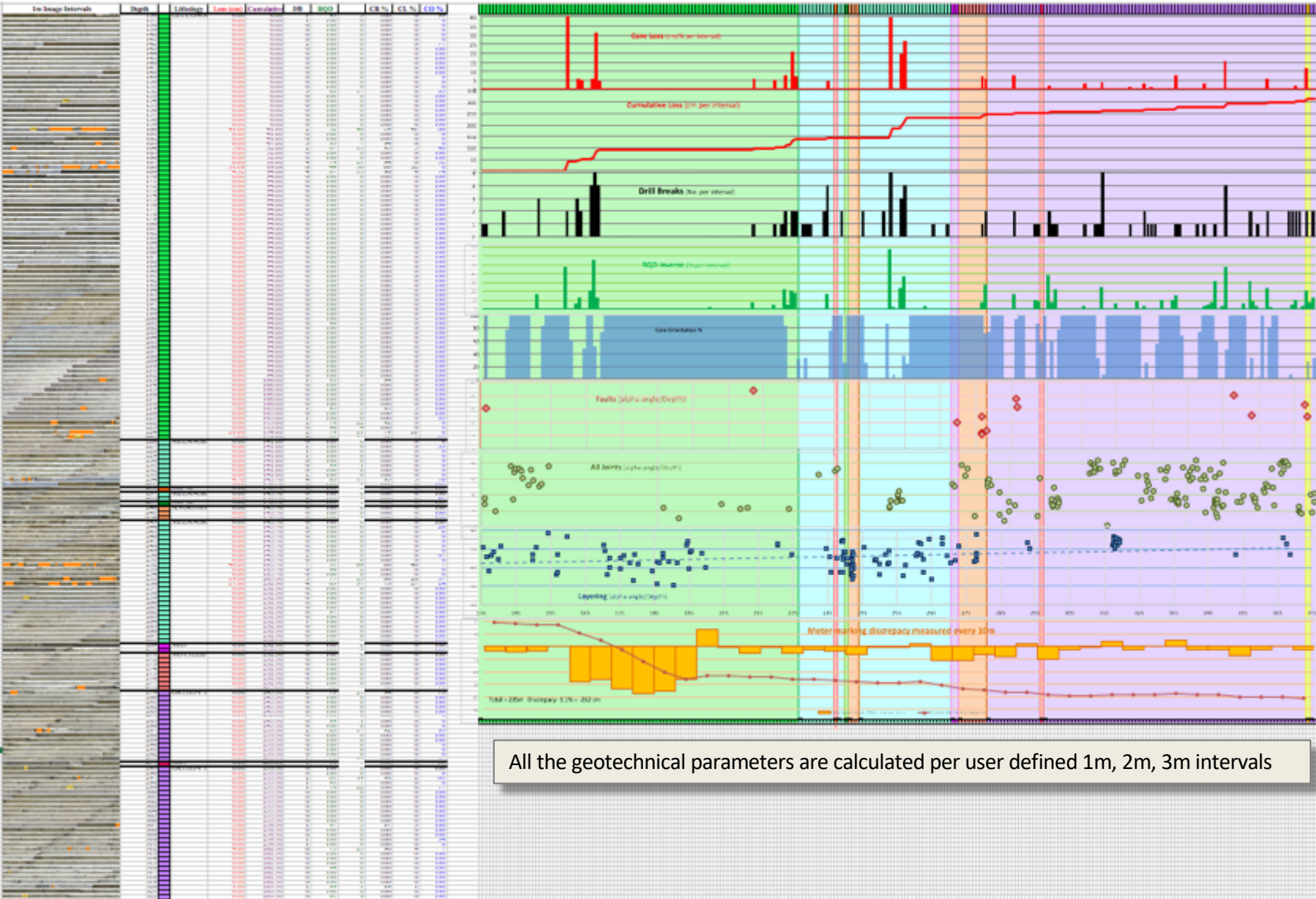
ScanIT export – geotechnical data output



ScanIT automatically calculates the basic geotechnical parameters per 1, 2 or 3m intervals:

- **COLLATED IMAGE** illustrates the composite image broken down according to the interval size.
- **CORE LOSS** refers to actual amount of core lost during drilling in cm or % per interval.
- **RQD (Rock Quality Designation)** is calculated using the Natural Breaks in the interval.
- **DRILL BREAKS** or **ORIENTATION DICONINUITES** are calculated from no. of breaks per interval.
- **CORE ORIENTATION** is the amount of core that can be reliably orientated, measured as meters or percentage.

ScanIT – borehole statistics



All the geotechnical parameters are calculated per user defined 1m, 2m, 3m intervals