37 Kensington Street
East Perth
WA 6004

Client:	Watheroo Dolomite		
Client address:	PO Box 665 Durien Bay WA 6516		
Job number:	21_0983	**Date received:**	15/06/2021
Lab ID:	21_0983_1	**Date analysed:**	30/06/2021
Client ID:	Dolomite	**Date reported:**	30/06/2021
Revision number:	0		
Analysis :	Semi-quantitative XRD analysis		
Comments:	None		

Sample preparation

The sample was supplied by the client to Microanalysis Australia on 15/06/2021 for the above mentioned analyses. A representative sub-sample was removed and lightly ground such that 90% was passing 20 µm. Grinding to this size helps eliminate preferred orientation.

Analysis

Only crystalline material present in the sample will give peaks in the XRD scan. Amorphous (non-crystalline) material will add to the background. The search match software used was Eva 4.3. An up-to-date ICDD card set was used. The X-ray source was cobalt radiation.

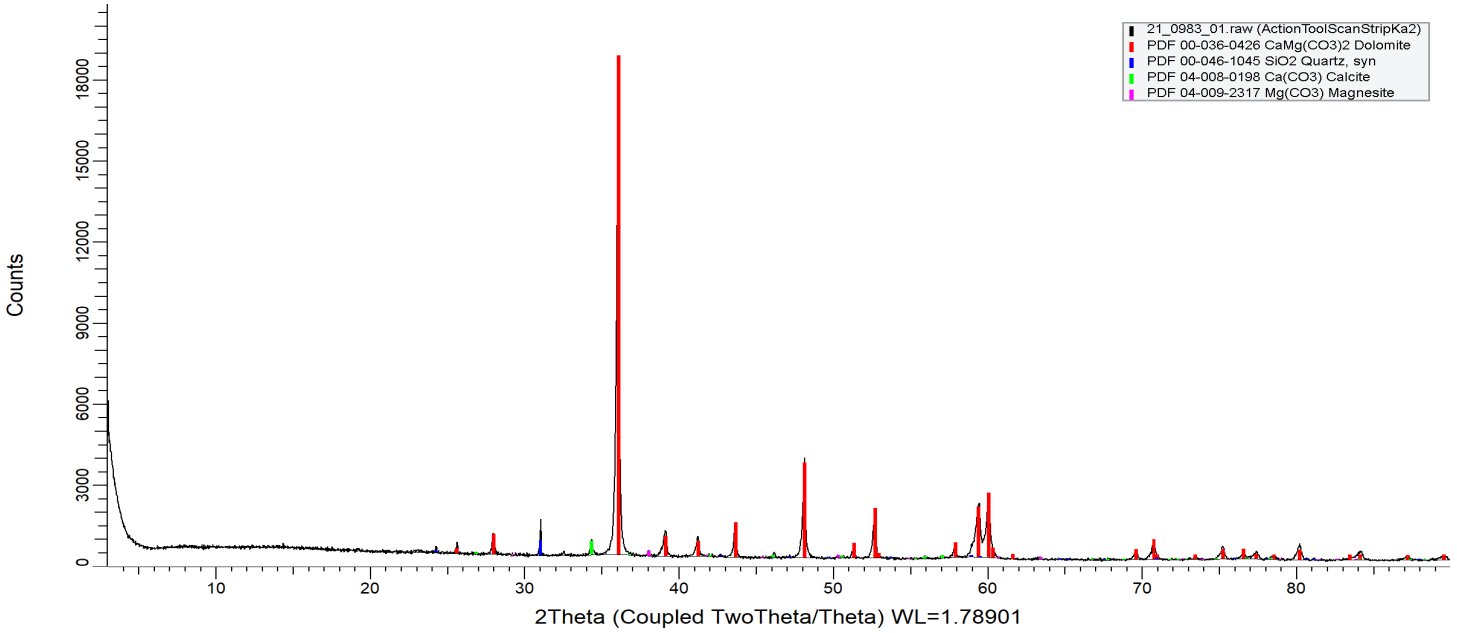
No standards were used in the quantification process. The concentrations were calculated using the normalized reference intensity ratio method where the intensity of the 100% peak divided by the published I/Ic value for each mineral phase is summed and the relative percentages of each phase calculated based on the relative contribution to the sum. This method allows for slight attention to be paid to preferred orientation but is limited in considering other factors including but not limited to; variable crystallinity, alteration, fluorescence, substitution and lattice strain.

Summary

The phases are listed in order of interpreted concentration:

Crystalline mineral phase	Concentration (%)	ICDD match probability
Dolomite (CaMg(CO3)2)	98	Good
Quartz, syn (SiO2)	1	Low
Calcite (Ca(CO3))	1	Low
Magnesite (Mg(CO3))	1	Low

The ICDD match probability is reported as an indication as to how well the peak positions and relative intensities for the sample matched those in the published literature (www.icdd.org) for that particular compound.



Analyst:	Jack van der Pal, B.Sc.(Applied Geology), B.Sc.(Geophysics)
Reported:	Jack van der Pal, B.Sc.(Applied Geology), B.Sc.(Geophysics)
Approved:	Ian Davies, B.Sc.(Chemistry)

XRD

Enter data only in blue shaded areas

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Notes:	<Comments>	

Choose the relevant options from the purple drop-down menus

Search/Match:	Eva 4.3
Source:	cobalt

Copy Column View data here

Show	Icon	Color	Index		Name	Parent
Yes		Red		1	PDF 00-036-04	Pattern List #1
Yes		Blue		2	PDF 00-046-10	Pattern List #1
Yes		Lime		3	PDF 04-008-01	Pattern List #1
Yes		Magenta		4	PDF 04-009-23	Pattern List #1

Table

Dolomite (CaMg(CO	0.977	Good
Quartz, syn (SiO2)	0.009	Low
Calcite (Ca(CO3))	0.009	Low
Magnesite (Mg(CO3	0.006	Low
()		0
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()		0

					Name		S-Q
Pattern #	Quality	Compound N	Formula	Y-Scale	I/Ic	I/Ic User	S-Q
PDF 00-036·	Star (*)	Dolomite	CaMg(CO3)2	102.88%	-1	0	97.70%
PDF 00-046·	Star (*)	Quartz, syn	SiO2	3.17%	3	0	0.90%
PDF 04-008·	Star (*)	Calcite	Ca(CO3)	2.88%	3	0	0.90%
PDF 04-009·	Star (*)	Magnesite	Mg(CO3)	1.07%	2	0	0.60%

Operators	Search/Mat	Source
Ian Davies, B.Sc.(Chemistry), Grad. Dip. Ed.	Eva 4.2	cobalt
Rhiannan Horton, B.Sc.(Forensic and Analytical Chemistry)(	Eva 4.3	copper
Greta Brodie, B.Sc.(Applied Chemistry)	Sieve+	
Dan Cukierski, B.Sc.(Geology), M.Sc.(Geoscience)	Xplot	
Nimue Pendragon, B.Sc.(Nanotechnology)		
Jack van der Pal, B.Sc.(Applied Geology), B.Sc.(Geophysics)		