

MINERAL IDENTIFICATION REPORT No. 67706

1. INTRODUCTION

Samples were received from Graham Teale on behalf of Rex Minerals Ltd with a request for determination of their mineralogy. They were reported to be from the Hillside Project

2. PROCEDURE

The samples were examined using a stereomicroscope. Green minerals and other minerals of interest were concentrated by hand-picking using tweezers. The particles were pulverized then analysed by X-ray diffraction to identify the minerals present.

3. RESULTS

The mineralogies of the concentrates are as follows. The other minerals detected were attached to the green particles. The Cu-bearing mineral given in brackets is of minor content

Sample	Description	Cu-bearing Mineral	Other minerals
GTDD016-48-49	Radiating dark green 'fibrous' crystals	Malachite	Quartz, barite
GTDD016-49-50	Radiating dark green crystals	Malachite	Quartz
GTDD016-50-51	Dark green	Malachite	Barite, goethite
HDD047-28-29	Dark green sugary crystals in porous iron oxides	Malachite	Quartz, goethite, barite
HDD047-35-36	A. Dark green	Malachite, (atacamite)	K-feldspar, quartz, hematite
	B. Azurite blue	Azurite	K-feldspar, kaolinite
HDD047-38-39	Green, also pale yellow elongated crystals	Malachite	Chlorite, barite
HDD047-42-43	Dark green	Malachite	Hematite, quartz
HDD058-19-20	Dark green	Malachite	
HDD058-32-33	Dark green & dark red iron oxide	Malachite	Hematite, kaolinite, quartz
HDD058-47-48	Dark green transparent crystals	Atacamite	
HDD058-49-50	Dark green	Malachite	Quartz, hematite, kaolinite, smectite, K-feldspar
HDD059-39-40	Dark green veins	Malachite	Chlorite, hematite, smectite. Goethite
HDD059-46-47	Dark green	Malachite	Chlorite, k-feldspar, hematite
HDD078-36-37	Dark green transparent	Malachite, (atacamite)	Hematite
HDD078-52-53	Whitish blue-green	Malachite	Kaolinite, quartz, plagioclase, K-feldspar

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HDD078-55-56	Green	Malachite	K-feldspar, quartz, hematite
HDD095-46-47	Earthy green & yellow-stained green	Atacamite	Quartz, kaolinite, goethite
HDD095-76-77	Dark green transparent & frosted crystals	Atacamite	Quartz, kaolinite, mica
HDD095-77-78	Green, disseminated	Atacamite	Kaolinite, barite, mica
HDD095-82-83	A. Green, transparent & frosted crystals	Atacamite	Quartz, kaolinite
	B. Dark brown	Atacamite	Quartz, k-feldspar, kaolinite, barite
HDD098-62-63	Green crystals (dark brown in vughs)	Malachite	Quartz, chlorite
HDD098-69-70	A. Green	Atacamite	Chlorite, quartz
	B. Dark green, transparent	Atacamite	Quartz, goethite
HDD098-72-73	A. Green acicular crystals	Malachite	
	B. Mixture of dark red, green & dark yellow	Malachite	Quartz, hematite, chlorite
HDD098-74-75	Scaly green masses, disseminated	Malachite	Quartz, goethite, hematite, chlorite
HDD098-75-76	Dark green elongated crystals	Malachite	Chlorite, K-feldspar, quartz
HDD157-63-64	Dark green	Malachite	
HDD157-73-74	Dark green	Malachite, (atacamite)	Quartz, plagioclase
HDD157-74-75	Dark green	Malachite	
HDD181-82-83	Dark green	Malachite	Smectite, quartz, hematite
HDD181-83-84	Dark green	Malachite	Smectite, quartz, hematite, chlorite
HDD181-84-85	Dark green	Malachite	Smectite, quartz, chlorite
HDD190-22-23	Dark green transparent crystals	Atacamite	Goethite, quartz
HDD190-23-24	Dark green transparent crystals	Atacamite	Smectite, quartz, goethite
HDD190-25-26	Dark green	Atacamite	Smectite, goethite
HDD190-33-34	Dark green	Atacamite	Smectite
HDD205-62-63	Green in hard layer in a white clay stone	Atacamite	Quartz, kaolinite
HDD205-64-65	Green in hard layer in a white clay stone	Atacamite	Quartz, kaolinite
HDD205-70-71	Hard green area	Atacamite	Quartz, kaolinite
HDD205-74-75	Green in hard layer in a white clay stone	Atacamite	Quartz, kaolinite, mica
HDD211-23-24	Mixture of green/Fe-oxide/quartz	Atacamite	Kaolinite, quartz, k-feldspar
HDD211-31-32	Disseminated green	Malachite	Hematite, kaolinite, magnetite
HDD211-42-43	Dark green	Malachite	Quartz, kaolinite, hematite
HDD211-45-46	Green, also pale green clay	Malachite	Plagioclase, chlorite, quartz, hematite
HDD211-47-48	A. Green	Malachite	Smectite, kaolinite, hematite, talc
	B. Yellowish green scaly clay		Smectite

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HDD217-53-54	Dark green	Atacamite	Quartz
HDD217-54-55	Dark green, also pale green clay	Atacamite	Smectite
HDD217-55-56	Dark green	Atacamite	Smectite
HDD217-56-57	Green	Atacamite	Kaolinite, k-feldspar, quartz
HDD235-89-90	Dark green transparent crystals	Atacamite, (malachite)	Quartz, kaolinite
HDD235-97-98	Dull green (hard to pulverise)	Malachite, (atacamite)	
HDD235-98-99	A. Dark green tough layer	Malachite, (atacamite)	
	B. Pale blue crystals in feldspar	Malachite	K-feldspar, quartz
HDD259-44-45	Green patches	Malachite	Plagioclase, quartz, chlorite, hematite
HDD259-47-48	Earth green veins	Malachite	Chlorite, quartz, hematite
HDD260-18-19	Dark green	Malachite	Hematite, talc, quartz, smectite, magnetite
HDD260-23-24	Dark green transparent crystals	Malachite	Hematite, talc
HDD260-26-27	Thin layers in a soapy rock	Malachite	Talc, smectite, quartz, kaolinite
HDD264-35-36	Dark green crystals	Malachite	Chlorite, K-feldspar, quartz
HDD264-36-37	Dark green translucent crystals	Malachite	Quartz, chlorite, kaolinite
HDD264-37-38	Dark green translucent crystals	Malachite	Chlorite
HDD264-38-39	Dark green veins	Malachite	Chlorite, quartz
HDD280-45-46	Dark green massive	Malachite	Chlorite
HDD280-46-47	Dark green massive & yellowish green clay	Malachite	Chlorite
HDD285-35-36	Dark green	Atacamite	Quartz, smectite
HDD285-38-39	Dark green	Atacamite	Smectite, K-feldspar, quartz
HDD290-37-38	Whitish green feathery crystals	Malachite	Smectite
HDD290-38-39	Whitish green feathery radiating crystals	Malachite	Quartz
HDD285-37-38	Green	Atacamite	Quartz, plagioclase
HDD290-42-43	Dark green crystals	Malachite, (atacamite)	Quartz, kaolinite
HDD290-51-52	Dark green & whitish blue green	Malachite	Hematite
HDD298-48-49	Dark green	Malachite	Chlorite, quartz, plagioclase
HDD300-14-15	Transparent dark green crystals	Atacamite	Smectite, kaolinite, quartz, hematite
HDD300-15-16	A. Dark green	Atacamite	Kaolinite, quartz, K-feldspar
	B. Olive green/yellowish green scaly areas	(Atacamite)	Smectite, kaolinite, quartz, hematite
HDD300-17-18	Dark green	Atacamite	Kaolinite
HDD316-51-52	Dark green transparent crystals	Atacamite	Goethite, kaolinite
HDD316-55-56	Dark green	Atacamite	K-feldspar, quartz
HDD316-56-57	Dark green transparent	Atacamite	

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HDD316-58-59	Dark green	Atacamite	K-feldspar, hematite, quartz
HDD316-75-76	Dark green, also yellowish green clay	Malachite, (atacamite)	Smectite, quartz
HDD341-65-66	Dark green	Malachite	Kaolinite, smectite, quartz, hematite
HDD342-63-64	Transparent dark green crystals & dull green masses	Malachite	
HDD342-64-65	Transparent dark green crystals & dull green masses	Malachite	Kaolinite
HDD342-65-66	Dark green transparent crystals, some lining vughs	Malachite	Quartz
HDD342-66-67	Dark green – massive to crystalline	Malachite	
HDD342-68-69	Transparent stubby green crystals	Malachite	
HDD344-14-15	Massive green	Atacamite	Kaolinite, quartz
HDD344-15-16	Thin green layer in orthoclase/quartz	Atacamite	Quartz, k-feldspar, kaolinite
HDD344-18-19	Thin green layer in orthoclase/quartz	Malachite	K-feldspar, quartz, kaolinite
HDD344-26-27	Dark green	Malachite	K-feldspar, quartz, kaolinite
HDD347-49-50	Dark green transparent crystals	Malachite	Quartz, chlorite, k-feldspar
HRC002-51-52	Green & dark green	Malachite	Kaolinite, k-feldspar
HRC002-52-53	Dark green transparent crystals	Malachite	K-feldspar
HRC002-55-56	Dark green	Malachite	Quartz, kaolinite
HRC002-56-57	A. Dark green	Malachite	K-feldspar, kaolinite
	B. Dark red transparent	Cuprite	Kaolinite
HRC004-14-15	Green	Atacamite	Quartz, kaolinite, k-feldspar
HRC004-15-16	Green	Atacamite	Quartz, kaolinite, k-feldspar, mica, goethite
HRC226-49-50	Dark green	Atacamite	Kaolinite, quartz, k-feldspar, smectite
HRC226-50-51	Dark green	Atacamite	Kaolinite, smectite
HRC226-52-53	Dark green & bluish green	Atacamite, (malachite)	K-feldspar, kaolinite, mica
HRC226-53-54	Dark green	Atacamite, (malachite)	Quartz, kaolinite, goethite