ROGUE RESOURCES INC.

NI 43-101 TECHNICAL REPORT

ON THE

SNOW WHITE SILICA PROJECT

DEAGLE TOWNSHIP

MASSEY, ONTARIO, CANADA

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Page

Table of Contents

Page

Page

Page

Page

APPENDIXES

Page

List of Tables

Page

Page

Page

List of Figures

Page

1.0 SUMMARY

1.1 GENERAL

At the request of Rogue Resources Inc. (Rogue), M.Plan International Limited (M.Plan) was retained to provide an independent mineral resource estimate and a Technical Report on the Snow White Silica Project (Snow White Project or the Project). The Snow White Project is located in Deagle Township, near Massey within the Province of Ontario, Canada. This report follows the guidelines and format of Canadian National Instrument 43-101 (NI 43-101).

M.Plan does not have, nor has it previously had, any material interest in Rogue or related entities. The relationship with Rogue is solely a professional association between the client and the independent consultant. This report was prepared in return for fees based upon agreed commercial rates and the payment of these fees is in no way contingent on the results of this report.

This report includes technical information that requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, M.Plan does not consider them to be material.

The conclusions and recommendations in this report reflect the authors' best independent judgment in light of the information available to them at the time of writing. The authors, and M.Plan reserve the right, but will not be obliged, to revise this report and conclusions if additional information becomes known to them subsequent to the date of this report. Use of this report acknowledges acceptance of the foregoing conditions.

This report is intended to be used by Rogue subject to the terms and conditions of its agreements with M.Plan. That agreement permits Rogue to file this report as a Technical Report with the Canadian Securities Administrators pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at that party's sole risk.

The requirements of electronic document filing on SEDAR necessitate the submission of this report as an unlocked, editable PDF (portable document format) file. M.Plan accepts no responsibility for any changes made to the file after it leaves its control.

1.2 PROPERTY DESCRIPTION AND LOCATION

The Snow White Project property comprises 10 claim units within eight mining claims totaling approximately 149 ha centred around latitude, 46° 21′ 34′′ N and longitude, 82° 21′ 14′′ W or UTM coordinates 595865E 5134875N, NAD 83, Zone 17.

The term Snow White Project refers to the area within the mineral claims where the mineralized deposits or zones are located, while the term Snow White property refers to the entire land package (mineral claims) under Rogue's control.

On October 20, 2017, Rogue agreed to purchase the Snow White Project. Although in the October 20, 2017 press release Rogue stated that the property was comprised of two staked mining claims representing 96 ha, Rogue and the vendor have subsequently agreed to add an additional staked mining claim to the north of the Property, adding an additional 64 ha to the Property package to total 160 ha and otherwise not altering the terms of the acquisition agreement. The property comprises title to three mining claims (SSM 1229647, SSM 1231116, and SSM 4280824, and the Pit-Quarry Licence 71715) which have since been converted to eight mining claims (SSM 101210, SSM 205670, SSM 206327, SSM 291130, SSM 272909, SSM 196885, SSM 335359 and SSM 219782) with the Mining Lands Administration System (MLAS) implementation that occurred on April 10, 2018.

On December 14, 2017, Rogue announced that it had closed the acquisition of the Snow White Project.

On June 18, 2018, the Company announced an agreement to amend the payment terms for the Snow White Project.

1.3 Accessibility, Climate, Physiography, Local Resources and Infrastructure

The property is approximately 27 km northwest of the town of Massey, 105 km west of the city of Sudbury and 500 km north-northwest of Toronto. It is accessible by travelling north on Highway 533 from Massey with the total distance from Massey being 41 km including 25.7 km along Highway 533 and 15.3 km along logging roads.

The climate in the Massey region is generally suitable for exploration, development and operation of a quarry throughout the year. The average winter temperature (December to February) is -9.1°C and the average summer temperature (June to August) is +17.5°C. The cumulative average annual snowfall is 200.9 cm and the average cumulative annual rainfall is 689.2 mm.

During spring breakup, the access roads to the Project are subject to reduced load restrictions during the months of March, April, and May. The logging roads to reach the property would be expected to require snow maintenance during the winter months to maintain property access.

Rogue holds an active Quarry Permit (No. 71715) to conduct quarry operations for unlimited silica production. No permanent infrastructure is currently envisioned for the Project other than the already emplaced portable steel bridge near the quarry site.

Manpower to run the quarrying can be located either locally or within the region. Active logging on the property and in the area began in the spring of 2018 which will further assist Rogue in clearing the property prior to any planned active quarrying.

1.4 History

In 1965, government geological mapping identified two trends of quartz-rich exposures in northern Deagle Township. These exposures were acquired jointly by Mrs. Mai Ward and Mr. Jim Vance by staking of claims 1231116 and 1229647 in 1998 and 1999, respectively. In 1999, they subsequently optioned the claims to Rapier Resources Inc. (Rapier).

In 2000, Rapier completed a site survey plan and built access roads to the property from the power line logging road, including a bridge over the small creek at the site. Rapier conducted drilling, sampling, and blasting culminating in the delivery of an 846.394 MT bulk sample to Globe Metallurgical Inc. (Globe) in Niagara Falls, New York, for metallurgical testing in 2000.

In 2006, the property ownership reverted to Ward and Vance and, in 2008, they optioned the property to Verbina Resources Inc. (Verbina).

In 2008, Verbina completed work over 200 m of strike length on the main exposure area of the Snow White quartz vein, which they termed the Vanward Main Zone, including diamond drilling and detailed mapping of the Main Zone outcrop. Between October 1, 2008 and mid-November 2008, Verbina mined and processed approximately 2,900 t of high purity quartz that were then trucked by Sitec s.e.c. (Sitec) to Bécancour, Quebec for metallurgical testing.

In the summer of 2009, following further testing of silica samples from the Vanward property, and along with changes made to the acceptable levels of impurities for certain elements by Sitec, Verbina agreed to sell a second bulk sample of approximately 2,100 t. Ultimately a total of 2,300 t was shipped.

In 2012, the property ownership reverted to Ward and Vance and, in 2016, the title to the property was transferred to Steven Gossling who added an additional claim to the north of the original property package in the fall of 2017 (SSM 4280824).

Rogue acquired the property package including claims 1231116, 1229647, and 4280824, and the aggregate permit No. 71715 in December, 2017.

1.5 Geological Setting and Mineralization

The property and the host granite to granodiorite complex has been only cursorily explored since the discovery of massive quartz at the Snow White Project in the mid-1960s by Ontario government geologists. The geological terrains to the north, west and northwest have been extensively explored, including the Whiskey Lake Greenstone Belt for its nickel, copper, gold, platinum, palladium, zinc, silver and uranium potential, among other commodities. This goes for the Paleoproterozoic supracrustal rocks of the Huronian Supergroup present within the Quirke Lake syncline which are host to the Elliot Lake region uranium deposits.

The property area is regionally situated within a broad suite of intermediate intrusive granodioritic to tonalitic rocks attributed to the late Archean-aged Ramsey-Algoma Granitoid Suite (2,690 to 2,670 Ma). These rocks are cross-cut by Proterozoic diabase dyke swarms, typically trending northwest-southeast, and one of the numerous mafic dykes cross-cutting the Snow White property has been identified as part of the Matachewan swarm. Matachewan dykes are regionally dated at 2,473-2,446 Ma. The recently staked northern portion of the property position is interpreted to be underlain by the southern margin of the Archean-aged Whiskey Lake Greenstone Belt, a 40 km long by 10 km wide, metamorphosed Archean greenstone belt that has seen significant exploration for various commodities including uranium, copper, zinc, nickel, platinum, palladium and gold.

The quartz mineralization is interpreted to be an Archean-aged composite vein precipitated along a north-south trending structure within the host granitoids, both of which are cross-cut by northwest trending early Proterozoic-aged mafic dykes. The quartz mineralization is identified intermittently over at least a 1,000 m strike length. The Main Zone is separated from the Mirror Zone by approximately 300 m of vegetated lowlands and forest with the Pure White Zone located near the southern boundary of the quarry permit.

The structure along which the Snow White quartz vein appears to be emplaced is a regionally prominent north-trending structure, likely a fault, that extends as far north as Whiskey Lake, and which offsets magnetic trends in the Whiskey Lake greenstone belt.

Diamond drilling along 200 m of the Main Zone portion of the quartz mineralization at the Snow White property indicates that the deposit strikes 020°, dipping 55°

to 75° to the east. The Main Zone been interpreted to be a composite zone of quartz veins intruding the host granitoid with a massive quartz vein at the core of the structure. The massive quartz vein was interpreted from drilling results to vary in true thickness from 10 m to 28 m in the core area, crosscut by several near-vertical diabase dikes. The Main Zone is comprised of a massive high silica core (QTZ) which is flanked by a transitional zone (TRN) on both its eastern and western margins. The TRN which is comprised of multiple phases of quartz veining with granitoid restite or raft inclusions has been identified as varying in thickness from a few metres to tens of metres, locally.

The massive quartz core of the Main Zone has been identified in assays and in initial metallurgical work as well as in later verification work to be nearly pure silica, with very low impurity elements such as aluminum, iron, titanium, phosphorous and calcium.

1.6 Rogue Exploration Programs

The initial verification exploration work conducted by Rogue on the Project began in October, 2017, as part of the due diligence process to determine if the Snow White quartz zone was suitable for use in silicon production. The completed exploration work included verification of historic mapping, a drone photo survey, sampling of the quartz unit, and included sampling for Thermal Stability Tests with Dorfner Analysenzentrum und Anlagenplanungsgesellschaft mbH (ANZAPLAN) in Germany.

In 2018, after Rogue acquired the Snow White Project, exploration work included:

1. A 2018 Three-Dimensional orthomosaic drone survey to provide detailed topographic data for the quartz mineralization near the quarry face.
2. A 2018 drilling program designed by Rogue to gather sufficient data to assist in the preparation resource estimate compliant with the 2014 Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards.

1.6.1 2018 Drilling Program

Rogue undertook its initial drill program between May 1, 2018 and June 3, 2018 on the Main Zone quartz unit. The diamond drill program consisted of 36 holes for a total of 1,910 m. The diamond drilling was completed with one rig equipped to retrieve NQ (47.6 mm) diameter core. Prior to May, 2018, Rogue has not completed any drilling on any other areas either within the Snow White property boundaries or regionally in the area surrounding the property.

The drill program was designed to define the geometry, width, depth extension and quality of that portion of the quartz unit located primarily above the water table at 303 masl. Drilling has identified that the Main Zone quartz mineralization extends along a strike length of 225 m and remains open both along strike and at depth.

The results of the 2018 drill program demonstrated the continuity of the quartz mineralization and assisted in identifying the distribution of the impurities within the unit (Al, Fe, Ti, Ca, and P). Drilling confirmed the association of higher impurity content with increased content of granitic inclusions and alteration associated proximal to the contacts with the mafic intrusions.

The diamond drilling confirmed that the deposit strikes 020° and dips from 55° to 75° to the east and has undulating eastern and western contacts. It also confirmed that the Main Zone is comprised of a high silica massive core (QTZ) is flanked by transitional zones (TRN) on both the eastern and western margins, which are comprised of multiple phases of quartz veining with granitoid restite or raft inclusions. The volume percentage of granitoid restite and raft inclusion increases as the contacts with the granitoid host are approached. The TRN, as identified, varies from a few metres to tens of metres thick with the majority of the transition zone being found on the eastern contact of the massive quartz vein.

1.7 MINERAL RESOURCE ESTIMATE

1.7.1 Discussion and Parameters

The Snow White Project mineral resources are estimated based on two mineralization zones, the Main Quartz Zone (QTZ) of high quality and the Transition Zone (TRN) of medium quality. The two zones are vein type structures disposed contiguously, exposed at surface and approximately bearing 020° and dipping to the east. The Snow White quartzite resource has been estimated assuming an open pit mining scenario, more commonly known as a quarry when dealing with industrial minerals.

The Snow White Project database provided to M.Plan is comprised of 36 drill holes, with a total of 1,910 m of drill core and containing 830 samples. This database was the starting point from which the two mineralized envelopes, QTZ and TRN, were modelled.

For the purpose of mineral resource estimation, M.Plan used only the data contained within the wireframes, so that the effective number of drill holes and samples used were 35 drill holes and 831 m of core.

No trench samples or any other samples were used in the resource estimate.

A total of 17 measurements were delivered to M.Plan, from which average densities were calculated for major lithologies at the Snow White deposit, including waste rock. The overall average density value of the Snow White mineralized zone is 2.644 g/cm^2.

The Snow White deposit is a deposit of quartz (SiO_2) and different from a typical resource estimation where the aim is to estimate the contained metal in the rock. The Snow White deposit targets high purity quartzite and it deals with maximum allowed cut-off or top cuts for contaminants including aluminum oxide (Al_2O_3), iron oxide (Fe_2O_3), potassium oxide (P_2O_5) and titanium oxide (TiO_2); the lower their values the better the quality of the quartz. Basic statistics were performed for the entire database and for selected intervals of the mineralized envelopes.

Rogue provided M.Plan with the lithology logs and surface mapping as the basis to interpret and construct the mineralized envelopes for the Snow White QTZ and TRN zones. M.Plan and Rogue had various review sessions and discussions to achieve the final wireframes. M.Plan modelled the two mineralized zones as vein type structures as well as the intrusive dacite dykes using Leapfrog Geo®. The wireframes are based on geology and not grade.

The selected intercepts for the Snow White Project were composited to 1.5 m equal length intervals, with the composite length selected based on the most common original samples length.

No meaningful variogram models were achieved to support any Kriging interpolation methods, hence, the Snow White deposit silica and contaminants were interpolated by inverse distance squared (ID^2) method.

The QTZ and TRN zone geometry is well defined by geology in outcrops and drill holes intercepts giving enough support to be confident on its continuity along strike and down dip, both QTZ and TRN have a 20° bearing and an average dip of -68° dip to the east.

The drilling is primarily spaced within 20 m centres and the quartz mineralization trends are clear in the Snow White deposit, despite the intrusive dacitic dyke structures that cross-cut and split the QTZ and TRN, the continuity of the quartz body is well demonstrated.

1.7.2 Mineral Resource Estimation

The economic interest of the Snow White Project relies on the high purity quartz that is within the maximum cut-off grade for the contaminants as specified by metallurgical work conducted by ANZAPLAN. Those limits are: <2.4% Al_2O_3, <0.53% Fe_2O_3 and <0.054% TiO_2. Although phosphorus was present, it was not used in the selection of the cut-off criteria due to its very low presence which was well below the cut-off grade. Finally, the grade of the silica (SiO_2) was estimated to report the overall silica grade of the saleable quartz.

1.7.2.1 Block Model

A block model was constructed to contain the rock types, contaminant grades and density.

1.7.2.2 Prospects for Economic Extraction

This mineral resource has been constrained by a pit shell using economic assumptions of an open pit mining scenario. The pit shell is conceptual in nature and are based on the Lerchs-Grossman algorithm using Geovia Whittle™ software.

The mineral resource estimate and open pit optimization have been prepared with some reference to surface constraints like public infrastructure as there is a 30 m buffer from lakes and streams as designated by the quarry permit and the water table is noted as there are different permitting requirements based on if it is below or above the water table.

The Snow White deposit (QTZ and TRN) has been evaluated using only quartz material that meet the contaminants selection criteria.

Operating costs were supplied by Rogue. It is the QP’s opinion that the costs for the purposes of the mineral resources are considered to be reasonable.

For the open pit scenario, the maximum pit slope angle was set at 55^0.

Table 1.1 summarizes the open pit economic assumptions upon which the resource estimate for the Snow White Project is based.

Table 1.1
Summary of the Snow White Project Economic Assumptions for the Conceptual Open Pit Scenario

Description	Units	Value
Quartz Product Price	CAD/t	85.00
Mining Cost (Quartz and Waste)	CAD/t	5.50
Processing Cost (Crushing)	CAD/t	7.85
Processing Cost (Optical Sorting)	CAD/t	12.35
General & Administration	CAD/t	2.00
Quartz Recovery (Sorter)	%	90.00
Overall Pit Slope Angle	o	55.00

The open pit parameters noted in Table 1.1 were input into the pit optimization software and a series of nested pit shells representing varying revenue factors (quartz prices) were generated.

The pit optimization was done in two stages, first above water table (aggregate already permitted) and second, below water table. The water table was set by Tulloch Engineering Inc. (Tulloch) from Sudbury, Ontario, in 2000, at an elevation of 303 masl and current aggregate permit allows to mine material 2 m above water table. The water table reference elevation is 305 masl.

M.Plan has classified the mineral resource estimate of the Snow White Project in the Indicated and Inferred category. No Measured resources are declared at this time. The TRN is entirely Inferred due to sampling gaps for the contaminants.

The mineral resource statement for the Snow White Project is summarized in Table 1.2.

Table 1.2
In-pit Mineral Resources for the Snow White Project as of August 4, 2018

Entire Deposit (QTZ & TRN Zones)						
Source/Phase	**Category**	**Metric Tonnes**	**SiO_2 (%)**	**TiO_2 (%)**	**Al_2O_3 (%)**	**Fe_2O_3 (%)**
Permitted (Above Water Table, 305 masl)	Indicated	236,000	96.89	0.008	0.195	0.113
	Inferred	75,000	92.91	0.010	0.384	0.177
Unpermitted (Below Water Table, 305 masl)	Indicated	251,000	97.21	0.010	0.254	0.149
	Inferred	196,000	94.89	0.009	0.361	0.195
Total	**Indicated**	**486,000**	**97.05**	**0.009**	**0.225**	**0.131**
Total	**Inferred**	**271,000**	**94.34**	**0.009**	**0.368**	**0.190**

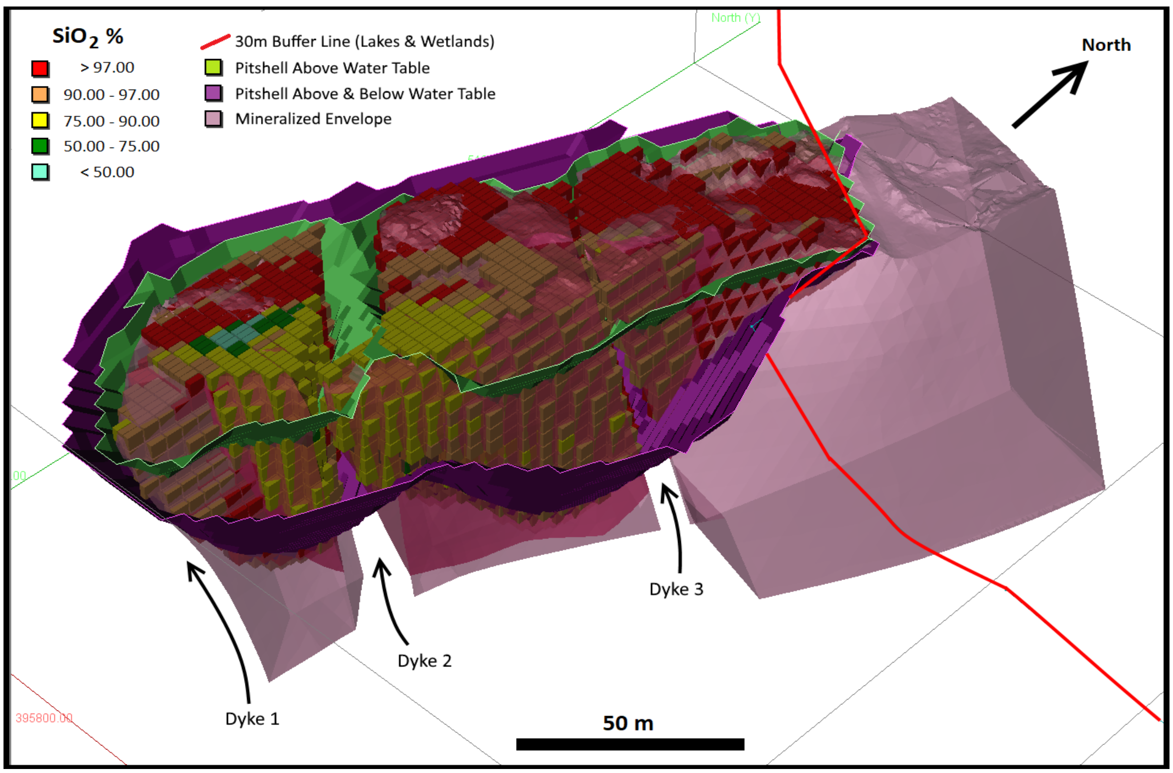
Mineral resources which are not mineral reserves do not have demonstrated economic viability. At the present time, M.Plan does not believe that the mineral resource estimate is materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

M.Plan considers that the resource estimate for the Snow White Project has been reasonably prepared and conforms to the 2014 CIM Definition Standards for estimation of mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive subtotals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, M.Plan does not consider them to be material.

The mineral resources summarized in Table 1.2 above are shown graphically in Figure 1.1.

Figure 1.1
Snow White Resource Blocks Isometric View



1.8 CONCLUSIONS AND RECOMMENDATIONS

Since acquiring the Snow White Project, Rogue has completed its first exploration drilling program on the property. This program has assisted in identifying the extent and quality of the quartz mineralization on the Main Zone of the Project area.

The quartz mineralization remains open in both north and south strike directions as well as at depth, and further drilling will be needed to define the true extent of the quartz mineralization.

The mineral resources also remain open in all directions, providing Rogue with the opportunity to further expand upon the current mineral resource estimate with further exploration.

1.8.1 Exploration Budget and Recommendations

Rogue has outlined a conceptual two-phase exploration program on the Snow White Project for the remainder of 2018 and for 2019. Phase I includes channel sampling of the Main and Mirror zones, stripping of overlying material and vegetation on the zones, sample analysis and geological mapping. Phase II includes a resource expansion component with diamond drilling.

Phase I for the remainder of 2018 consists of a total expenditure of CAD131,800 and Phase II in 2019 consists of a total expenditure of CAD1,000,000. The budget as proposed for the Phase II work is not necessarily dependent on the results of the Phase I work.

M.Plan agrees with the direction of Rogue's exploration Phase I and II programs and regards the expenditures and studies as appropriate. M.Plan realizes that the nature of the programs and expenditures may change as the program advances due to various causes and that the final expenditures and results may not be the same as originally proposed.

1.8.2 Further Recommendations

M.Plan understands that Rogue will conduct further exploration programs in order to gain knowledge regarding the true extent of the quartz mineralization on the property and expand on the current resource estimate. In that context, M.Plan makes the following additional recommendations:

1. Continue to identify other quartz outcrops on the property and conduct geological mapping to see how they relate to each other and if they are potentially part of the same quartz mineralizing event.
2. Surface trenching should be conducted not only to gain a better understanding of the extent and grade of the quartz mineralization but also to generate a larger sample for further metallurgical testwork. The lump size should be suitable to confirm the recent sorting testwork and offer the opportunity to improve yields by testing larger samples used to optimize the recent sorting parameters within the strike direction.
3. Infill drilling should be conducted for the sole purpose of acquiring whole core on which to conduct further metallurgical testwork with a lump size adequately suited to confirm current sorting testwork and offer the opportunity to improve yields by testing larger samples used to optimize the recent sorting parameters with depth.

2.0 INTRODUCTION

2.1 Terms of Reference

At the request of Mr. Paul Davis, Vice President Technical and Corporate Secretary of Rogue Resources Inc. (Rogue), M.Plan International Limited (M.Plan) was retained to provide an independent mineral resource estimate and a Technical Report on the Snow White Silica Project (Snow White Project or the Project). The Snow White Project is located in Deagle Township, near Massey within the Province of Ontario, Canada. This report follows the guidelines and format of Canadian National Instrument 43-101 (NI 43-101).

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The conclusions and recommendations in this report reflect the authors' best independent judgment in light of the information available to them at the time of writing. The authors, and M.Plan reserve the right, but will not be obliged, to revise this report and conclusions if additional information becomes known to them subsequent to the date of this report. Use of this report acknowledges acceptance of the foregoing conditions.

This report is intended to be used by Rogue subject to the terms and conditions of its agreements with M.Plan. That agreement permits Rogue to file this report as a Technical Report with the Canadian Securities Administrators pursuant to provincial securities legislation. Except for the purposes legislated under provincial securities laws, any other use of this report, by any third party, is at that party's sole risk.

The requirements of electronic document filing on SEDAR necessitate the submission of this report as an unlocked, editable PDF (portable document format) file. M.Plan accepts no responsibility for any changes made to the file after it leaves its control.

2.2 Description of Corporation

Rogue is a reporting issuer in British Columbia and trades on the TSX Venture Exchange under the symbol RRS. Rogue's primary offices are located in Toronto, Ontario, Canada.

2.3 Qualified Persons, Site Visit and Areas of Responsibility

All of the QPs for this Technical Report are employees of Micon International Limited (Micon), based in Toronto, Canada. M.Plan is a joint venture corporation between Micon and Dorfner Analysenzentrum und Anlagenplanungsgesellschaft mbH (ANZAPLAN).

The primary authors of this Technical Report and Qualified Persons (QPs) are:

- William J. Lewis, B.Sc., P.Geo., Senior Geologist and Director.
- Ing. Alan J. San Martin, MAusIMM(CP), Mineral Resource and Mine Planning Specialist.
- Richard Gowans, P.Eng., President and Principal Metallurgist.

Mr. Lewis conducted the site visit on May 17, 2018 in the company of Mr. Paul Davis.

During the site visit, the main quartz vein on the property was inspected along with the historical and current drill sites and the current drilling program was reviewed. Rogue's facilities in Massey, where the core is logged and prepared for testing, were also visited during the site visit.

During the site visit, five random grab samples were taken which covered both the Main quartz vein as well as the transition zone with the granite on either side of the vein and the stockpile at the site entrance. These were shipped out for independent assay analysis to confirm the nature of the mineralization at the Snow White Project

Mr. Lewis conducted the M.Plan site visit on May 17, 2018 with the assistance of Mr. Paul Davis of Rogue.

2.4 Units and Abbreviations

All currency amounts are stated in Canadian dollars (CAD), with commodity prices typically expressed in US dollars (USD). Quantities are generally stated in metric units, the standard Canadian and international practice, including metric tonnes, (t) kilograms (kg) and grams (g) for weight, kilometres (km) or metres (m) for distance, hectares (ha) for area. Wherever applicable, Imperial units have been converted to Système International d'Unités (SI) units for reporting consistency. A list of abbreviations is provided in Table 2.1.

Table 2.1
List of Abbreviations

Name	Abbreviation
Adsorption/desorption/reactivation	ADR
ALS Global	ALS
Aluminum oxide, alumina	Al_2O_3
Canadian dollar	CAD
Bull Surveying Corp.	Bull Surveying
Canadian Institute of Mining, Metallurgy and Petroleum	CIM
Canadian National Instrument 43-101	NI 43-101
Canadian Securities Administrators	CSA
Centimetre	cm
Certified Reference Materials	CRMs
Chartered Professional	CP
Cubic metre	m^3
Degree, Degrees Celsius	°, °C
Digital elevation model	DEM
Digital Global Positioning System	DGPS
Digital Terrain Model	DTM
Discovery Drilling & Exploration Ltd.	Discovery Drilling
Dorfner Analysenzentrum und Anlagenplanungsgesellschaft mbH	ANZAPLAN
Foot, feet	ft
Globe Metallurgical Inc.	Globe
Grams per cubic centimetre	g/cm^3
Grams per metric tonne	g/t
Hectare	ha
Identification	ID

Name	Abbreviation
Induced polarity	IP
Inductively Coupled Plasma – Emission Spectrometry	ICP-ES
Inductively Coupled Plasma Mass Spectroscopy	ICP-MS
Internal diameter	ID
Internal rate of return	IRR
Inverse distance squared	ID^2
Iron oxide	Fe_2O_3
Kilogram	kg
Kilometre	km
Laboratory Information Management System	LIMS
Lerchs Grossman	LG
Litre	L
Loss on ignition	LOI
Metres above sea level	masl
Metre	m
Management Discussion and Analysis	MDA
Metallurgical grade silicon	MG-Si
Micon International Limited	Micon
Micron	µ
Million (e.g., million tonnes, million years)	M (Mt, Ma)
Milligram	mg
Millimetre	mm
Ministry of Natural Resources and Forestry	MNRF
Ministry of Northern Development and Mines	MNDM
M.Plan International Limited	M.Plan
National Topographic System	NTS
North American Datum	NAD
Net smelter return	NSR
Not available/applicable	N/A
Orbit Garant Drilling Inc.	Orbit
Parts per billion, part per million	ppb, ppm
Percent(age)	%
Phosphorus pentoxide	P_2O_5
Qualified Person	QP
Quality Assurance/Quality Control	QA/QC
Rapier Resources Inc.	Rapier
Rock quality designation	RQD
Rogue Resources Inc.	Rogue
Silica	SiO_2
Sitec s.e.c.	Sitec
Specific gravity	SG
Square kilometre	km^2
Square metres per gram	m^2/g
System for Electronic Document Analysis and Retrieval	SEDAR
Three-dimensional	3D
Titanium dioxide, titania	TiO_2
Tonne (metric)/tonnes per day	t, tpd

Name	Abbreviation
Tonnes per cubic metre	t/m^3
Tonnes per day	t/d
Tulloch Engineering Inc.	Tulloch
United States Dollar	USD
Universal Transverse Mercator	UTM
Verbina Resources Inc.	Verbina
Weight percent	wt%
X-ray Fluorescence	XRF
Year	y

2.5 INFORMATION SOURCES

The descriptions of geology, mineralization and exploration used in this report are taken from reports prepared by various organizations and companies or their contracted consultants, as well as from various government and academic publications. The conclusions of this report are based, in part, on data available in published and unpublished reports on the region, property, and information supplied by Rogue and its consultants which was contained in the previous Technical Report dated January 8, 2018. The information provided was by Rogue and M.Plan has no reason to doubt the validity of the information provided by Rogue where it has been supplied by reputable sources. M.Plan has used the information where it has been verified through its own review and discussions. The sources for the information contained in this report are listed in Section 28.0.

M.Plan is pleased to acknowledge the helpful cooperation of Rogue management and consulting field staff, all of whom made any and all data requested available and responded openly and helpfully to all questions, queries and requests for material.

Some of the figures and tables for this report were reproduced or derived from historical reports written on the property by various individuals and/or supplied to M.Plan by Rogue. Most of the photographs were taken by Mr. Lewis during his site visit. In the case where photographs, figures or tables were extracted from other works, supplied by other individuals or Rogue they are referenced below the inserted item. Figures and tables supplied by M.Plan have no references below them.

3.0 RELIANCE ON OTHER EXPERTS

In this report, discussions regarding royalties, permitting, taxation and environmental matters are based on material provided by Rogue. M.Plan is not qualified to comment on such matters and has relied on the representations and documentation provided by Rogue.

All data used in both this report was originally provided by Rogue. M.Plan has reviewed and analyzed these data and has drawn its own conclusions therefrom, augmented by its direct field examinations during M.Plan's 2018 site visit.

M.Plan offers no legal opinion as to the validity of the title to the mineral concessions claimed by Rogue and has relied on information provided to it by Rogue.

4.0 PROPERTY DESCRIPTION AND LOCATION

4.1 Property Location

The Snow White property totals 149 ha centred around latitude, 46° 21′ 34″ N and longitude, 82° 21′ 14″ W or UTM coordinates 595865E, 5134875N, NAD 83, Zone 17. The property is located on the Canadian National Topographic System (NTS) map sheet 041J08 in northern Deagle and southern Gaiashk Townships, District of Algoma, within the Sault Ste. Marie Mining District of Ontario.

The property is approximately 27 km northwest of the town of Massey, 105 km west of the city of Sudbury and 500 km north-northwest of Toronto. Figure 4.1 shows the location of the Snow White Project in relation to Massey, Sudbury and Toronto.

The term Snow White Project refers to the area within the mineral claims where the mineralized deposits or zones are located, while the term Snow White property refers to the entire land package (mineral claims) under Rogue's control.

4.2 Property Description and Ownership

The Snow White property is comprised of 10 claim units within eight mining claims totaling approximately 149 ha and an overlying quarry licence.

On October 20, 2017, Rogue agreed to purchase the Snow White Project in exchange for: a cash payment of CAD25,000 and issuance of 150,000 Rogue common shares at closing, plus additional post-closing cash payments aggregating to CAD725,000 and the issuance of a further 900,000 shares during various milestones and anniversaries within the payment period. Also, the seller was granted a 2% net return on all quartz/silica from the Project, which Rogue can repurchase for CAD2,000,000. Rogue's October 20, 2017, press release stated that the property was comprised of two staked mining claims representing 96 ha but, Rogue and the vendor subsequently agreed to add an additional staked mining claim to the north, adding an additional 64 ha to the property for a total of 160 ha. However, none of the remaining terms of the acquisition agreement were altered by the addition of the additional mining claim. Additionally, a 3% net smelter royalty on all non-silica production is payable to a previous vendor underlying the Rogue agreement and timber rights were not included in the purchase. As a result, the Snow White Project is comprised of the following three Legacy mining claims: SSM-1229647, SSM-1231116, and SSM-4280824 and the Pit-Quarry Licence 71715.

Figure 4.1
Snow White Property Location

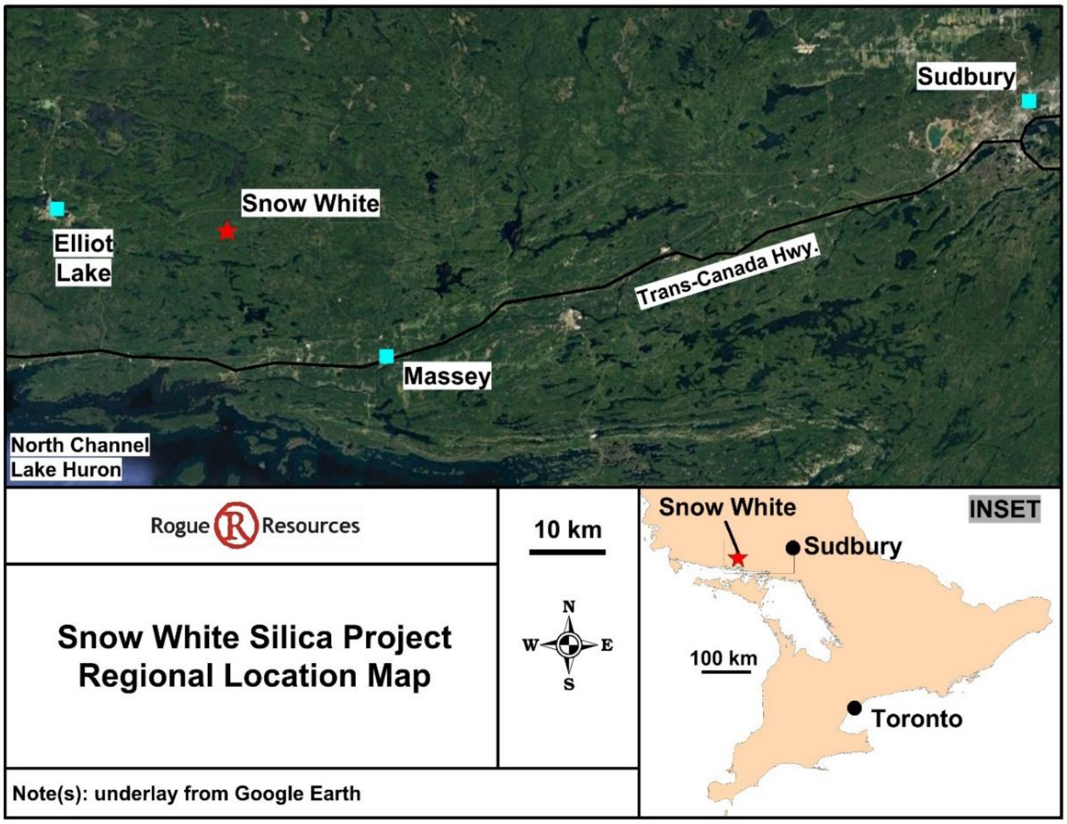


Figure extracted from the January, 2018, Technical Report.

On December 14, 2017, Rogue announced that it had closed the acquisition of the Snow White Project.

The Project comprises title to three Legacy mining claims (SSM 1229647, SSM 1231116, and SSM 4280824, and the Pit-Quarry Licence 71715) which have since been converted to eight mining claims (SSM 101210, SSM 205670, SSM 206327, SSM 291130, SSM 272909, SSM 196885, SSM 335359 and SSM 219782) with the Mining Lands Administration System (MLAS) implementation that occurred on April 10, 2018. Details on the status of each of the mining claims is summarized in Table 4.1. See Figure 4.2 for the current claims location in relationship to the Legacy Claims and the Quarry Permit Boundary.

On June 18, 2018, Rogue announced an agreement to amend the payment terms for the Snow White Project. As of that date, the Company had made cash payments totalling CAD50,000. Under the terms of the Agreement, the Company has agreed to deliver additional cash payments of up to an aggregate of CAD470,000 upon the earlier of achievement of certain production milestones and the end of 2023. The Company also agreed to make payments equal to a maximum of CAD355,000 in the aggregate on the basis of CAD1.00/t of silica removed from the Project. The common shares to be issued over the payment period and the 2% net return royalty remain unchanged from the original acquisition agreement.

This information was derived from the MLAS website, the Ontario government system for management of claims, available on the website of the Ontario Ministry of Northern Development and Mines (MNDM). On April 10, 2018, the Province of Ontario converted the ground staked mining claims (Legacy claims) and transformed them into one or more cell or boundary claims on the provincial grid. The provincial grid is latitude and longitude based and is made up of more than 5.2 million cells ranging in size from 17.7 ha in the north to 24 ha in the south. Each cell will have a unique identifier based on the cell's position in the grid. Legacy Claims SSM 1231116 and SSM 1229647 were originally staked in 1998 and 1999, respectively, and claim SSM 4280824 was staked in November, 2017, with details of the Legacy Claims being summarized in Table 4.2. The claims have work requirement due dates in August and November, 2019. As per MNDM (2018), the current owner of the Property is Rogue.

Table 4.1
New Mineral Claims Converted from the Legacy Claims as of April 10, 2018

LEGACY CLAIM	CLAIMHOLDER	%	TOWNSHIP_NAME	CELL CLAIM	CELL_KEY_ID	CELL_TYPE	CENTRAL CELL	Area (ha)	Lapse Date
1229647	ROGUE RESOURCES INC.	100	DEAGLE	101210	41J08F263	Boundary	Yes	17.4	18-11-2019
1229647	ROGUE RESOURCES INC.	100	DEAGLE	205670	41J08F264	Standard		2.9	18-11-2019
1229647	ROGUE RESOURCES INC.	100	DEAGLE	206327	41J08F283	Boundary		1.1	18-11-2019
1231116	ROGUE RESOURCES INC.	100	DEAGLE	101210	41J08F263	Boundary		0.1	18-11-2019
1231116	ROGUE RESOURCES INC.	100	DEAGLE	205670	41J08F264	Standard		19.7	18-11-2019
1231116	ROGUE RESOURCES INC.	100	DEAGLE	206327	41J08F283	Boundary	Yes	19.8	18-11-2019
1231116	ROGUE RESOURCES INC.	100	DEAGLE	291130	41J08F284	Standard		22.3	24-08-2019
1231116	ROGUE RESOURCES INC.	100	DEAGLE	272909	41J08F303	Boundary		19.4	24-08-2019
1231116	ROGUE RESOURCES INC.	100	DEAGLE	196885	41J08F304	Standard		22.3	24-08-2019
4280824	ROGUE RESOURCES INC.	100	GAIASHK	335359	41J08F243	Boundary	Yes	8.8	06-11-2019
4280824	ROGUE RESOURCES INC.	100	GAIASHK	219782	41J08F244	Boundary		9.9	06-11-2019
4280824	ROGUE RESOURCES INC.	100	GAIASHK	101210	41J08F263	Boundary		2.9	18-11-2019
4280824	ROGUE RESOURCES INC.	100	GAIASHK	205670	41J08F264	Standard		2.7	18-11-2019

Table supplied by Rogue.

Figure 4.2
Location of the Current Claims in Relationship to the Legacy Claims and the Quarry Permit Boundary

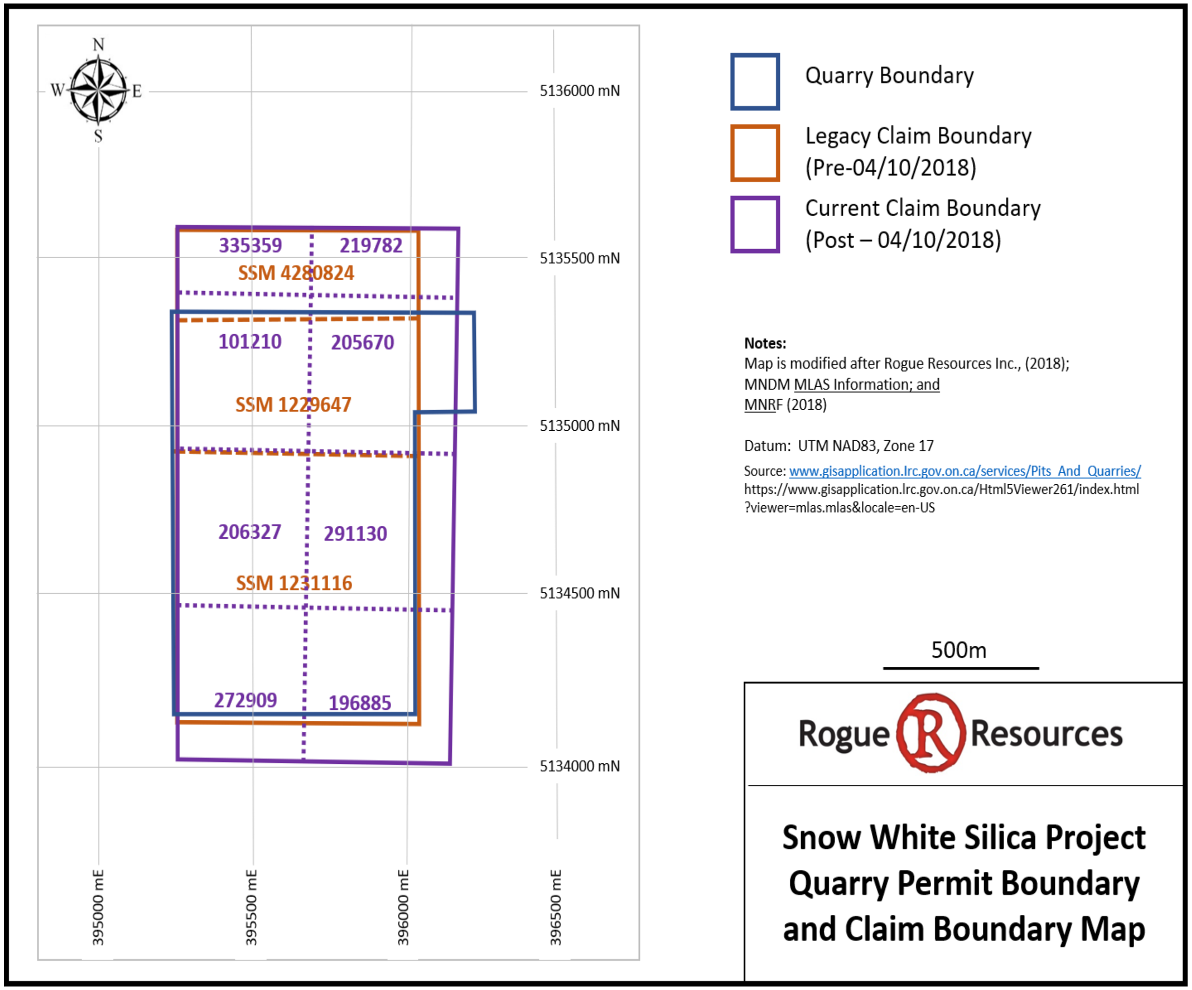


Figure supplied by Rogue dated August, 2018.

Table 4.2
Summary of the Legacy Mineral Claims, Status, Work and Reservations

Claim Number	No. Units within Claim	Claim Area (ha)	Annual Work Required[1] (CAD/year)	Total Work Applied to Claims (CAD)	Work Amount in Banked in Reserve[2] (CAD)	Date Due	Claim Reservations (see notes)	Unresolved Issues
SSM-1231116	4	64	1,600	28,800		July 24, 2019	1, 2, 3, 4, 5	Improper location registered for the claim. Rogue in consultation with the MNDM for clarity. Impact of imminent MAM uncertain.
SSM-1229647	2	32	800	14,400	144,953	November 18, 2019	1, 2, 3, 4, 5	Improper location registered for the claim. Rogue in consultation with the MNDM for clarity. Impact of imminent MAM uncertain.
SSM-4280824	4	64	1,600	0		November 6, 2019	1, 2, 3, 4, 5, 6	Recently staked status pending
Total	**10**	**160**	**4,000**	**43,200**	**144,953**			

Notes: Information from MNDM (2017a), Claim Abstracts from MNDM CLAIMaps website.

Claim Reservations:

1) 400 feet Surface rights reservation around all lakes and rivers.
2) Sand and gravel reserved.
3) Peat reserved.
4) Other reservations under the mining act may apply.
5) Including land underwater.
6) Excluding road.

[1]Annual Work requirement is equivalent to CDN $400 per claim unit per year and must be performed by the anniversary date each year.
[2] Banked credits are not automatically applied to mining claims. The claim holder is responsible for maintaining mining claims by filing an Application to Distribute Banked Assessment Work Credits form before any due date.
Table extracted from the January, 2018, Technical Report and updated.

The status of the claims was identified on December 7, 2017, and December 13, 2017 (for the newly recorded SSM 4280824) using the CLAIMaps link to the Mining Claim Abstracts. It was rechecked on January 8, 2018 and the updated Abstracts (MNDM, 2018) indicate that the ownership has been transferred from Steven Gossling to Rogue. It was identified during the validation of the property position that the CLAIMaps location for the claims does not reconcile with the location of the claims identified in the quarry permit, and Rogue consulted with the MNDM and completed a field survey to identify the mining claim locations in the field to resolve the property boundary. Based upon the field investigation and historic survey data with claim post locations, it was determined by the MNDM that the mining claims were located incorrectly on the official claim maps and the mining claims were properly located in the position as defined by the known claim post locations.

4.2.1 Displacement of the Claim Location

The property position as originally registered with the MNDM had been located in the wrong location and was offset approximately 300 m to the southeast. Figure 4.3 details the property position as registered with the MNDM as of January 8th, 2018, and where Rogue indicated the property position is located by reference to the # 1 Post of Claim 1229647. This had been identified both in the field in 2017 by Steven Gossling, the Vendor and original staker of Claim 4280824 that adjoins the property to the north and by Rogue during a verification review in the field. The location was also noted in the Site Survey submitted with the original Quarry Permit application.

As noted in Figure 4.3, there was an apparent displacement of approximately 300 m to the southeast on the registered locations of Claims SSM-1229647 and SSM-1231116 relative to where Rogue contends these claims are spatially located.

Figure 4.3
Claim Location Displacement

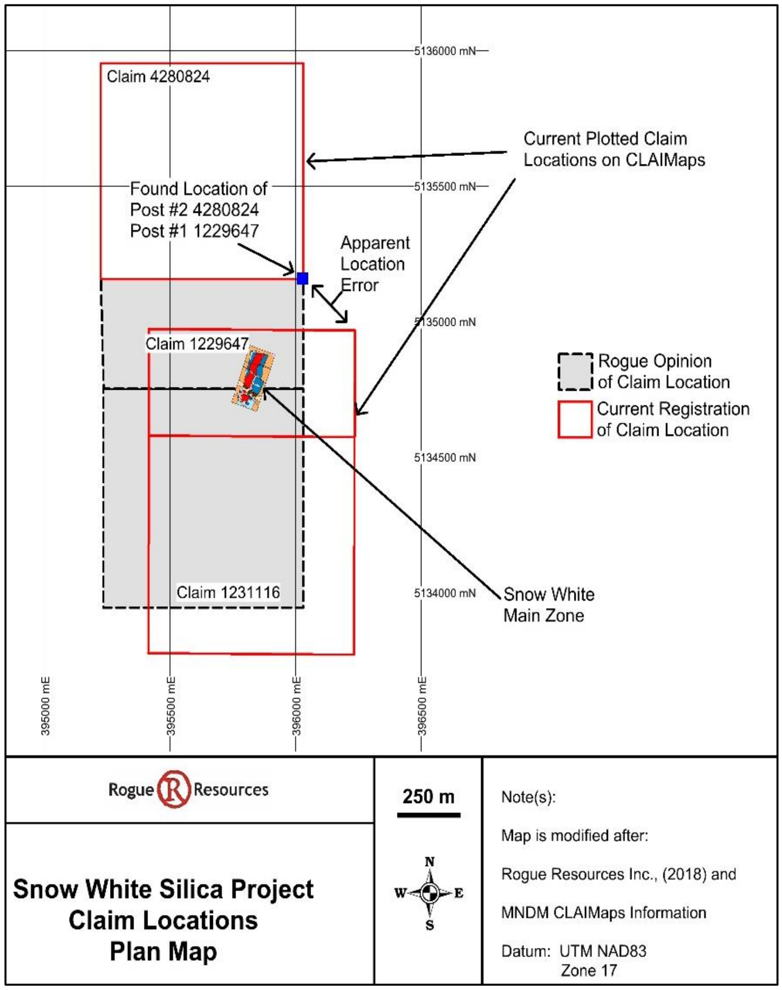


Figure extracted from the January, 2018, Technical Report.

Previous workers apparently did not identify this error, as Winter et al. (2010) ascribed all of its Main Zone drilling to lie within Claim SSM-1229647. MNDM has accepted Rogue's assertion regarding the correct location of the claims and adopted the southern boundary using 400 m increments for claim units due south of the identified #1 Post of Claim SSM-1229647 in Figure 4.2. The Main Zone crosses the border between Rogue's Claim SSM-1229647 and SSM-1231116.

At the time that the previous Technical Report was filed, on January 8th, 2018, the definitive boundary of the claim position was unresolved. It was determined that in either of the scenarios for claim locations (i.e., the Legacy CLAIMaps version or the Rogue opinion supported by the Site Plan version and field visit), the Main Zone massive quartz exposure lies within the Rogue claim block.

MNDM accepted Rogue's evidence regarding the displacement of the mining claims and corrected the locations of the claims on the CLAIMaps website on January 26, 2018. The displacement was corrected, and the claims were correctly located as indicated on Figure 4.2. No further action was required by Rogue or MNDM regarding the mining claims locations.

4.3 Obligations, Encumbrances, Environmental Liabilities and Permitting

Rogue has noted that the property is subject to a 2% net return on silica/quartz production that can be repurchased for CAD2 million. There is also an underlying royalty to a previous owner consisting of a 3% net smelter return (NSR) to all non-silica production from the property. The right to harvest timber is not included as part of the property.

Additional Reservations listed in the mining claim abstracts include for each claim: a 400 ft surface rights reservation around all lakes and rivers; sand and gravel reserved; peat reserved; other reservations under the Mining Act may apply; including land under water". An additional reservation on Claim SSM-4180824 is listed as "excluding road".

A Natural Environment Level 1 Technical Study was conducted by DST Consulting Engineers Inc. (DST Consulting) in July, 2001, for Rapier Resources Inc. (Rapier) in conjunction with its application for the quarry licence. The Level 1 study was required for the permitting of a Category 9 (pit above the established groundwater table) and Category 11 (quarry above the established groundwater table). A Level 1 study entails determining whether any of the following features exist on and within 120 m of the site:

- Significant wetland.
- Significant portions of habitat of endangered or threatened species.
- Fish habitat.

- Significant woodland.
- Significant wildlife habitat.
- Significant areas of natural and scientific interest.

In general, while three wetlands were identified within 120 m of the site, and the potential suitable habitat for the peregrine falcon (none observed) neither these nor any other significant issues (endangered or threatened animal or plant species) were found to impede the issuance of the licence to Rapier.

Also, there are no provincially registered archeological sites within the area and the area is considered to have a low potential for the identification of archeological remains given its remoteness.

However, the July, 2001, DST Consulting report recommended that a Level II Technical Report be undertaken to further mitigate fisheries issues associated with the watercourse and an ecological features identified as significant habitat (moose aquatic feeding habitat and heronry feeding habitat) located within the 120 m area of influence.

An Environmental Conditions Site Visit was conducted by DST Consulting on May 9, 2018, to perform a preliminary level environmental conditions site visit related to the on-going development of the quarry site. This visit included the completion of the following:

- Complete a desktop review of the various information bodies to gather information on the occurrence or potential occurrence of species at risk (SAR) or significant wildlife habitat at the Site;
- Complete a site visit to confirm the potential absence or presence of species at risk (SAR) habitat identified;

DST Consulting concluded that the desktop review indicated that there is little information pertaining to the Project area in the databases consulted, suggesting the surrounding terrestrial environment has been largely unstudied. According to the National Heritage Information Centre, available on the Ontario Ministry of Natural Resources and Forestry (MNRF) online database, the Project site is not considered an Area of Natural Heritage and Scientific Interest and there are no significant Wetlands, Woodlands, Conservation Reserves, Provincial Parks or Natural Heritage Sites within the area of the Project. Similarly, there are no known occurrences of SAR on or adjacent to the property. In addition, no SAR or significant wildlife habitat were observed during the field survey.

M.Plan is unable to comment on any remediation which may have been undertaken by previous owners as related to the historic drill sites or the current infrastructure. M.Plan does note that for all of the historical drilling the casing appears to have been pulled and that Rogue also pulled any drill casing as it completed the holes.

4.3.1 Active Quarry Permit

The Property includes active Quarry Licence 71715, covering 102 ha overlying claims SSM 101210, SSM 205670, SSM 291130, SSM 196885, SSM 272909 and SSM 206327 which are part of the Snow White property, and part of the access road that overlies claim SSM 511997 belonging to a third party. The quarry permit is represented on the Ontario Government website, via https://www.ontario.ca/environment-and-energy/find-pits-and-quarries), and the location is shown in Figure 4.4 as derived from the site survey submitted with the original permit application by Rapier. The site survey plan was submitted and approved by the MNDM in the NAD 27 datum. Figure 4.4 details the aggregate permit boundaries in the NAD 83 datum consistent with other data acquired for the project including Google Earth satellite imagery and the MNDM claim information. A simple translation of adding 7.4 m in easting, and 220.7 m in northing was utilized to convert the coordinate systems as per the translation guide provided by the West Virginia Department of Environmental Protection GIS server.

Of note, when comparing the location of the active quarry permit as derived from the site survey that was filed with the Quarry Application by Rapier, the permit boundary matches very closely to the location that Rogue (2018) interpreted for the claim boundaries. The Main Zone mapping of Winter et al. (2010) is located in Figure 4.4 for spatial context relative to the property position and the permit boundary.

Figure 4.4
Quarry Permit Location Map

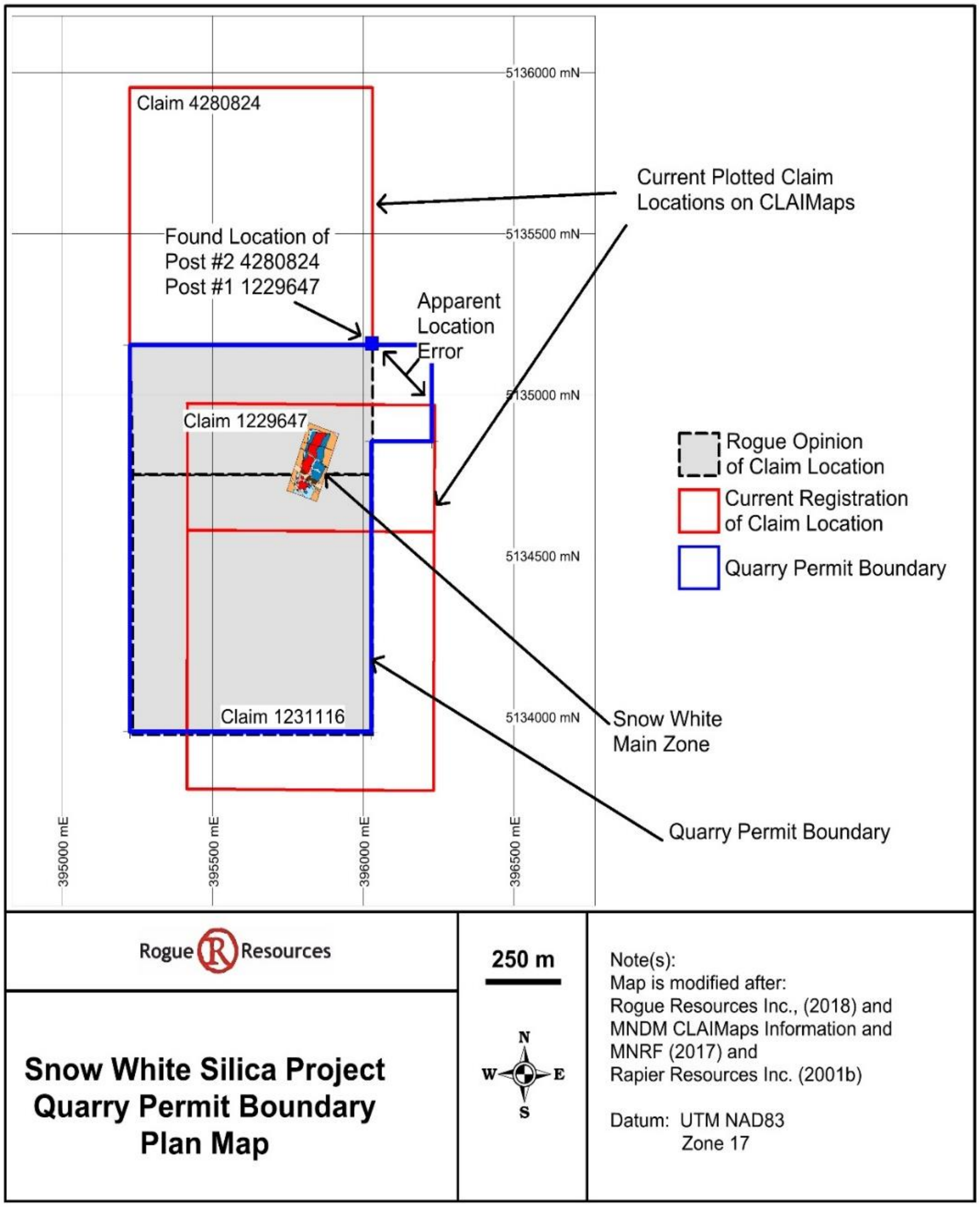


Figure extracted from the January, 2018, Technical Report.

Part of the quarry permit underlies an active mining claim belonging to a third party. Rogue has indicated to M.Plan that there are no implications to this overlap as the all of the identified quartz zones are contained within the Rogue claims and there is no access restrictions associated with staked claims.

Figure 4.5 is a view of the quarry face as seen during the May, 2018, M.Plan site visit.

Figure 4.5
Existing Quarry Face as of May, 2018

4.4 OTHER SIGNIFICANT FACTORS OR RISKS

M.Plan and the QPs are not aware of any other risks or encumbrances, environmental liabilities or other significant factors and risks that may affect access, title or the right or ability to perform work on the property other than those already stated.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 ACCESSIBILITY

The Snow White property is directly accessible by driving; located approximately 27 km northwest of the town of Massey, 105 km west of the city of Sudbury and 500 km north-northwest of Toronto. It is accessible by travelling north on Highway 533 from Massey, Ontario, for 25.7 km to the intersection of a westerly running logging road located 0.7 km north of a power transmission line that crosses Highway 533. Travel is westward on the logging road for 4.7 km to the junction with the powerline access road, then travel west a further 4.2 km to a logging road trending southwest and travel along this road for an additional 6.4 km to the site. Total distance from Massey is 41 km, including 25.7 km along Highway 533 and 15.3 km along logging roads.

5.2 CLIMATE

The climate in the Massey, Ontario region is generally suitable for exploration, development and operation of a quarry throughout the year. The average winter temperature (December to February) is -9.1°C and the average summer temperature (June to August) is +17.5°C. The cumulative average annual snowfall is 200.9 cm and the average cumulative annual rainfall is 689.2 mm. Table 5.1 summarizes the temperature and precipitation data as recorded for Massey, Ontario.

Table 5.1
Massey, Ontario Temperature and Precipitation Data (1981-2010)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average and Extreme Minimum and Maximum Temperatures													
Daily Average (°C)	-11.1	-9.6	-4.5	4.4	10.9	15.9	18.7	17.8	13.4	6.9	0.3	-6.7	**4.7**
Standard Deviation	3.6	3.1	2.0	1.8	1.8	1.4	1.3	1.4	1.6	1.2	2.0	3.9	**1.5**
Daily Max. (°C)	-5.8	-3.8	1.6	10.4	17.6	22.7	25.4	24.3	19.4	11.8	4.2	-2.3	**10.5**
Daily Min. (°C)	-16.4	-15.5	-10.5	-1.5	4.1	9.0	12.0	11.1	7.3	2.0	-3.6	-11.1	**-1.1**
Extreme Max. (°C)	8.0	10.0	19.0	27.0	30.0	33.5	37.0	36.0	32.5	27.5	18.5	14.5	**-**
Extreme Min. (°C)	-41.0	-41.0	-36.0	-24.5	-5.0	-1.5	2.0	0.0	-7.5	-8.5	-29.0	-38.5	**-**

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Average and Extreme Precipitation													
Rainfall (mm)	8.1	8.7	32.2	52.8	76.1	74.7	75.1	85.0	91.2	96.7	65.8	23.0	**689.2**
Snowfall (cm)	50.7	36.3	28.7	7.7	0.5	0.0	0.0	0.0	0.0	2.3	22.2	25.6	**200.9**
Extreme Daily Rainfall (mm)	18.8	16.6	40.2	49.4	52.6	44.2	68.4	85.0	50.0	45.6	54.2	37.2	-
Extreme Daily Snowfall (cm)	20.0	24.0	23.0	18.6	9.0	0.0	0.0	0.0	0.0	14.0	34.0	22.0	-
Extreme Snow Depth (cm)	67.0	74.0	90.0	58.0	9.0	0.0	0.0	0.0	0.0	4.0	27.0	49.0	-

Source: www.climate.weather.gc.ca/climate_normals/results_1981_2010
Table extracted from the January, 2018, Technical Report.

During spring breakup, the access roads to the project are subject to reduced load restrictions during the months of March, April, and May. The logging roads to reach the property would be expected to require snow maintenance during the winter months to maintain property access.

5.3 Local Resources and Infrastructure

The nearest town is Massey, located on the Trans-Canada Highway and along the Sudbury-Sault Ste. Marie short line freight railroad which is operated by the Huron Central Railway and interchanges with the Canadian National and Canadian Pacific Railways. Massey is part of the Sables-Spanish Rivers Township with a population of 3,214 (2016 census) and is about an hour's drive west of Sudbury, a major mining hub with a population of 161,531. The Project is proximal to the deep-water ports of Lake Huron, including Spragge Harbor situated approximately 50 km west of Massey.

The property has an active Quarry Permit (No. 71715) to conduct quarry operations for unlimited silica production. No permanent infrastructure is currently envisioned for the Project at this time other than the already emplaced portable steel bridge near the quarry site.

Manpower to run the quarrying can be located either locally or within the region. Active logging on the property and in the area began in the spring of 2018 which further assists Rogue in clearing the property prior to any planned active quarrying.

5.4 PHYSIOGRAPHY

The Snow White Project area is dominated by relatively gradual and minor relief with mixed boreal forest consisting of conifers such as red and white pines, and balsam firs, with deciduous white birch, trembling aspen, poplar, and yellow birch. The region is well-drained, with an unnamed north to south flowing creek traverses the property proximal (within 40 to 50 m) to the northern exposure of the Snow White quarry. A portable steel bridge, originally constructed in 2000 by Rapier to facilitate access to the Snow White quartz outcrop for bulk sample metallurgical testwork, remains situated over the creek for access and egress to and from the property, subject to maintenance requirements as stipulated in government regulations. This bridge was repaired and upgraded by Rogue in the spring of 2018 prior the site visit by M.Plan.

The water table elevation was identified in the site survey plan by Tulloch Engineering Inc. (Tulloch) from Sudbury, Ontario at the 303 m elevation above mean sea level (masl). The existing permit allows for material 2 m above the water table to be quarried. The maximum elevation of the Snow White quartz vein exposure in the Main Zone has been identified at approximately 334 masl.

Previous bulk sampling activities modified the natural topography at both the quarry, to the south of the creek, and the residual crushed material at the stockpile to the northeast of the creek at the property entrance.

6.0 HISTORY

6.1 GENERAL OWNERSHIP AND WORK HISTORY

In 1965, government geological mapping identified two trends of quartz-rich exposures in northern Deagle Township. These exposures were acquired jointly by Mrs. Mai Ward and Mr. Jim Vance by staking of claims 1231116 and 1229647 in 1998 and 1999, respectively. In 1999, they subsequently optioned the claims to Rapier.

In 2000, Rapier completed a site survey plan and built access roads to the property from the power line logging road, including a bridge over the small creek at the site. Rapier conducted drilling, sampling, and blasting culminating in the delivery of an 846.394 t bulk sample to Globe Metallurgical Inc. (Globe) in Niagara Falls, New York, for metallurgical testing in 2000. Globe reported no problems with its decrepitation test, and their furnace test of the bulk sample indicated that the Snow White material yielded good quality silicon metal and met Globe's stringent purity criteria. In 2001, as a result of the previous work Rapier acquired the quarry-aggregate permit.

In 2006, the property ownership reverted to Ward and Vance and, in 2008, they optioned the property to Verbina Resources Inc. (Verbina).

In 2008, Verbina completed work over 200 m of strike length on the main exposure area of the Snow White quartz vein, which they termed the Vanward Main Zone, including diamond drilling and detailed mapping of the Main Zone outcrop. Between October 1, 2008 and mid-November 2008, Verbina mined and processed approximately 2,900 t of high purity quartz that were then trucked by Sitec s.e.c. (Sitec) to Bécancour, Quebec for metallurgical testing. Sitec subsequently advised Verbina that the bulk sample had met its required specifications, although the details of the testing were not publicly disclosed.

In its June, 2009, Management Discussion and Analysis (MDA) for the period ending March 31, 2009, Verbina noted that *"Sitec originally indicated to the Company that the Bulk Sample had met its required specifications, however,* *subsequently Sitec advised Verbina that acceptable purity levels for some elements were being reduced. Verbina is planning additional sampling to determine if the Vanward quartz will continue to meet the new specifications."*

In its January, 2010, MDA for the period ending September 30, 2009, Verbina noted that: *"In the summer of 2009, following further testing of silica samples from the Vanward property, and along with changes made to the acceptable levels of impurities for certain elements by Sitec, the Company agreed to sell a second bulk sample of approximately 2,100 metric tonnes. As of the end of the year, the production of the silica sample was largely complete and was being prepared for shipment to Becancour. Ultimately a total of 2,300 metric tonnes was shipped and the results of the second bulk sample were positive with regard to the levels of impurity for certain elements."*

The detailed results of these tests by Sitec were once again not publicly disclosed.

On April 19, 2011 Verbina announced that its shareholders had approved its name change to Buccaneer Gold Corp. at its annual shareholders meeting.

In 2012, the property ownership reverted to Ward and Vance and, in 2016, the title to the property was transferred to Steven Gossling who added an additional claim to the north of the original property package in the fall of 2017 (SSM-4280824).

Rogue acquired the property package including claims SSM-1231116, SSM-1229647, and SSM-4280824, and the aggregate permit No. 71715 in December, 2017.

6.2 Historical Exploration and Drilling Programs

6.2.1 Government

Government geological mapping in 1965 identified two trends of quartz-rich exposures in northern Deagle Township.

6.2.2 Rapier

In 2000, Rapier conducted drilling, sampling, and blasting, culminating in the delivery of an 846.394 t bulk sample to Globe for metallurgical testing which was completed in 2000. No mapping or exploration drilling is contained in the assessment files for this period. However, Rapier did present the geochemical results of the impurity analyses from 30 holes which were some of the ones presumably drilled for blasting the bulk sample. These data include 168 analytical results for iron, titanium, phosphorus, aluminum and calcium. A detailed report on this analytical work and methodology has not been identified and, therefore, the data are not of sufficient quality to be able to be verified and used as part of any further studies.

The site was surveyed in 2000 by Tulloch on behalf of Rapier for the application of the quarry permit. The type of survey instrument used to tie the project area in to the UTM coordinate system is unknown.

Given the current lack of verifiable information from the exploration conducted by Rapier on the Snow White Project, any data from this program should be classified as historical work only.

6.2.3 Verbina

6.2.3.1 Drilling Program

In 2008, Verbina explored a 200 m strike length of the main exposure area of the Snow White quartz vein, termed the Vanward Main Zone. The exploration program included 24 diamond drill holes totalling 1,229.3 m from which 22 composite assays for silica were extracted, as well as detailed mapping of the Main Zone outcrop. Figure 6.1 shows the collar of a Verbina drill hole located during the M.Plan site visit. Details of the 2008 historical drilling program are derived from the 2010 assessment report with the hole locations are shown in Figure 6.2 and the details for the drill holes are summarized in Table 6.1.

The 2010 assessment report noted the drill program was conducted by Discovery Drilling & Exploration Ltd. (Discovery Drilling) during a five-week period from May to June, 2008. A Discovery Drilling representative monitored the day-to-day activities, and the project QP for Verbina intermittently visited the site. Drill holes were collared on grid lines, and locations were measured with a handheld GPS with a stadia rod to approximate relative elevation.

The report notes that that the core was placed in core trays at the drill and transported by truck to the core shed and storage facility located at 190 Hwy 17 West, Walford, Ontario. The boxes were then re-labelled with hole identification and box number with metal tags, stapled to each box. Core logging was completed in Microsoft Excel. All work was completed on Claim 1229647.

The Verbina drilling in 2008 was located with handheld global positioning survey (GPS) instrument, and elevations were measured with a stadia rod. The drill casings of all holes appear to have been pulled, but while the collar locations of numerous holes are easily located there are no existing markers to positively identify the individual holes.

While it may be possible to locate the drill core, given the number of years that have passed since it was drilled, logged and sampled it is doubtful that it will be in a sufficiently intact and identifiable condition to be used to augment any new data collected at the Project. Therefore, given the current state of the drill collars and the lack of the drill core, the Verbina exploration data should be classified as unverifiable historical information of work conducted at the Snow White Project.

No significant prospecting and no diamond drilling have been reported on the north and south trends of the Snow White Quartz vein outside of the Main Zone.

Figure 6.1
Verbina Drill Collar Viewed During M.Plan Site Visit

Figure 6.2
2008 Verbina Drill Hole Locations

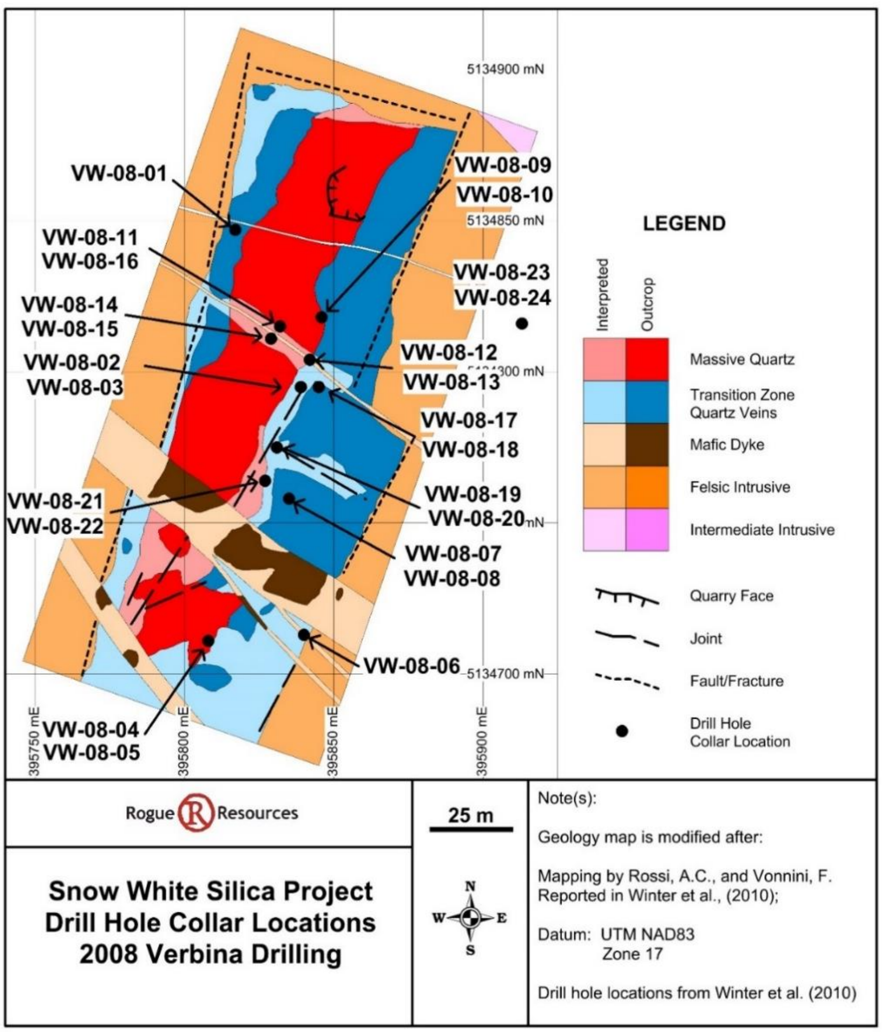


Figure extracted from the January, 2018, Technical Report.

Table 6.1
Summary of the Verbina Drill Hole Information

Drill Hole	Claim	Easting (m)	Northing (m)	Elevation (masl)	Dip (degrees)	Azimuth (degrees)	Length (degrees)	Bottom Elevation of Drill Hole (masl)
VW-08-01	1229647	395817	5134847	320	-70	110	115.0	211.9
VW-08-02	1229647	395839	5134795	329	-50	290	52.5	288.8
VW-08-03	1229647	395839	5134795	329	-90	-	100.5	228.5
VW-08-04	1229647	395808	5134711	330	-50	290	32.5	305.1
VW-08-05	1229647	395808	5134711	330	-90	-	60.0	270.0
VW-08-06	1229647	395840	5134713	326	-75	290	101.0	228.4
VW-08-07	1229647	395835	5134758	329	-50	290	42.0	296.8
VW-08-08	1229647	395835	5134758	329	-90	-	100.0	229.0
VW-08-09	1229647	395846	5134818	326	-90	-	40.0	286.0
VW-08-10	1229647	395846	5134818	326	-60	290	25.0	304.3
VW-08-11	1229647	395832	5134815	325	-45	20	25.0	307.3
VW-08-12	1229647	395842	5134804	327	-90	-	40.0	287.0
VW-08-13	1229647	395842	5134804	327	-60	290	25.0	305.3
VW-08-14	1229647	395829	5134811	325	-90	-	17.1	307.9
VW-08-15	1229647	395829	5134811	325	-45	200	27.0	305.9
VW-08-16	1229647	395832	5134815	325	-90	-	15.0	310.0
VW-08-17	1229647	395845	5134795	328	-90	-	40.0	288.0
VW-08-18	1229647	395845	5134795	328	-50	290	29.0	305.8
VW-08-19	1229647	395831	5134775	329	-90	-	40.0	289.0
VW-08-20	1229647	395831	5134775	329	-45	290	36.7	303.0
VW-08-21	1229647	395827	5134764	329	-90	-	27.0	302.0
VW-08-22	1229647	395827	5134764	329	-45	290	29.5	308.1
VW-08-23	1229647	395913	5134816	324	-60	290	94.5	242.2
VW-08-24	1229647	395913	5134816	324	-80	290	115.0	210.7
Total Holes = 24						**Total**	**1,229.3**	
Datum for Hole Locations = UTM NAD 83, Zone 17						**Average**	**51.2**	**280.1**
						Minimum	**15.0**	**210.7**
Modified from Winter et al. (2010) Table 3, pg. 12						**Maximum**	**115.0**	**310.0**

Table extracted from the January, 2018, Technical Report.

6.2.3.2 Drill Sampling

The sampling methodology from the 2008 Verbina drilling was not identified in the 2010 drilling assessment report and the sampling description is derived from the Verbina press releases of October 2, and November 20, 2008:

> *"Zones of high purity quartz are visually identifiable with a composite sample being taken from the zone within each drill hole. Commencing at the start of the high purity quartz zone and continuing to the end of the zone, at each one metre interval a 10 cm piece of BQ size drill core is removed and cut in half longitudinally. One half of the core is placed*

in the core box and the other half becomes part of the composite sample which represents the total zone and is analyzed."

"The drill core composite samples are transported in sealed, plastic sample bags to the ALS Chemex Prep Lab located in Sudbury, Ontario where the pulps are shipped to the ALS Chemex Assay Laboratory in North Vancouver, B.C. ALS Chemex is an ISO 9001-2000 registered laboratory."

"The company's Qualified Person (QP) for the Vanward Project is L.D.S. Winter, P.Geo., CEO and a Director of Verbina. The sampling was carried out by Mr. Winter and he has assembled the assembled the technical information contained in this news release."

The sampling results reported in the Verbina press releases of October 2, and November 20, 2008 have been combined and summarized in Table 6.2.

Table 6.2
Summary of the Assay Results of the 2008 Drill Composite Sampling by Verbina

Drill Hole Number	Composite Assay Intersection					Comments
	From (m)	To (m)	Length (m)	True Width	SiO_2 (%)	
VW-08-01	-	-	-	-	-	No Significant intersection. Hole in footwall and did not intersect the zone.
VW-08-02	6.0	19.0	13.0	13.0	98.34	
VW-08-03	13.5	32.9	19.4	11.5	99.21	
VW-08-04	5.0	21.0	16.0	16.0	97.85	
VW-08-05	5.0	24.4	19.4	19.0	98.28	
VW-08-06	50.4	68.2	17.8	12.0	99.01	
VW-08-07	22.8	30.1	7.3	7.0	97.93	
VW-08-08	22.3	40.4	18.1	16.0	97.80	
VW-08-09	19.2	40.0	20.8	-	99.0	East contact of zone.
VW-08-10	0.2	25.0	24.8	-	98.85	East contact of zone.
VW-08-11	3.5	25.0	21.5	-	98.89	Drilled along strike in Centre of zone.
VW-08-12	15.9	40.0	24.1	-	97.21	East contact of zone.
VW-08-13	14.8	25.0	10.2	-	98.98	Diabase dyke intersected from 0 to 14.8 m.
VW-08-14	2.5	17.1	14.6	-	98.70	Vertical hole in the centre of the zone, ended in zone.
VW-08-15	2.0	8.3	6.3	-	98.81	Drilled to establish contact at 8.3 m depth.
VW-08-16	3.0	4.5	6.5	-	98.83	Diabase dyke intersected from 4.5 to 10.0 m.
	10.0	15.0	5.0	-	98.83	
VW-08-17	0.4	33.6	33.2	-	96.21	East contact of zone.

Drill Hole Number	Composite Assay Intersection					Comments
	From (m)	To (m)	Length (m)	True Width	SiO_2 (%)	
VW-08-18	2.0	24.7	22.7	-	98.19	East contact of zone.
VW-08-19	2.5	27.0	24.5	-	96.92	Vertical hole to lower contact.
VW-08-20	2.4	26.0	23.6	-	98.48	On east contact of zone.
VW-08-21	10.5	24.4	13.9	-	98.65	Vertical hole to lower contact.
VW-08-22	7.0	25.8	18.8	-	98.25	On east contact of zone.

According to Verbina:

> *"All holes were drilled within the high purity quartz zone. The core lengths noted and sampled are representative of the zone but are not and should not be considered to be true widths. Based on the drilling to date, the quartz body strikes N20°E, dips east and has a true width in the order of 20 metres in its upper part which then narrows to about 10 metres at a depth of 100 metres."*

Given that the samples were composited samples and the there is a lack of detail provided regarding the nature of the compositing process it is not known if the inclusion bearing material on each side of the quartz vein was included in these composite samples.

The 2010 assessment report noted that Verbina conducted specific gravity (SG) tests on some samples randomly collected from silica-rich portions of this area. However, from subsequent discussions in the January, 2018, Technical Report it appears that these samples may have been from another Verbina property in the area and not specific to the Snow White property. M.Plan recommends that Rogue undertakes specific gravity testing on samples from the Snow White Project.

6.2.3.3 Core Handing, Logging, Sampling and Quality Assurance/Quality Control (QA/QC) Information

The 2010 assessment report notes that the core was placed in core trays at the drill and transported by truck to the core shed and storage facility at 190 Hwy 17 West, Walford, Ontario. The boxes were re-labelled with hole identification and box number with metal tags, stapled to each box. Core logging was completed in Microsoft Excel at the core shed and storage facility.

As noted previously the sampling methodology is derived from the Verbina press releases and not contained in any report.

There is no information reported in the 2010 drilling assessment report on QA/QC methodology. An indication that there may have been QA/QC on the drilling project is from the October and November, 2008, press releases which state: *"the Company has a quality control program to ensure best practices in the sampling and analysis of drill core"*. Details of control samples or other QA/QC methods are not presented. These press releases indicated the samples in the high purity quartz were composites and composes of 10 cm pieces cut in half longitudinally with one half of the sample being returned to the box. It appears that this may have been the extent of the QA/QC program.

There is an inherent lack of information in the assessment files or any other reports on the data necessary to judge whether or not industry best practices were followed regarding the drilling program. Therefore, M.Plan concludes that the previous work by Verbina is not sufficiently documented to be used in support of a mineral resource estimate on the Snow White Project.

6.3 Historical Resource and Reserve Estimates

There are no historical mineral resource or reserve estimates for the Snow White Project. Although, the Snow White property has an active quarry permit (No. 71715), the modicum of historical production has been bulk samples for the purposes of metallurgical testing as opposed to true silica production.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 GENERAL INFORMATION

The property and the host granite to granodiorite complex has been only cursorily explored since the discovery of massive quartz at the Snow White Project in the mid-1960's by Ontario government geologists. The geological terrains to the north, west and northwest have been extensively explored, including the Whiskey Lake Greenstone Belt for its nickel, copper, gold, platinum, palladium, zinc, silver and uranium potential, among other commodities, and the Paleoproterozoic supracrustal rocks of the Huronian Supergroup present within the Quirke Lake syncline which are host to the Elliot Lake region uranium deposits.

7.2 REGIONAL GEOLOGY

The property area is regionally situated within a broad suite of intermediate intrusive granodioritic to tonalitic rocks attributed to the late Archean-aged Ramsey-Algoma Granitoid Suite (2,690 to 2,670 Ma). These rocks are cross-cut by Proterozoic diabase dyke swarms, typically trending northwest-southeast, and one of the numerous mafic dykes cross-cutting the Snow White property has been identified as part of the Matachewan swarm. Matachewan dykes are regionally dated at 2,473-2,446 Ma. The recently staked northern portion of the property position is interpreted to be underlain by the southern margin of the Archean-aged Whiskey Lake Greenstone Belt, a 40 km long by 10 km wide, metamorphosed Archean greenstone belt that has seen significant exploration for various commodities including uranium, copper, zinc, nickel, platinum, palladium and gold. Regional geology as recently compiled in Easton (2013) is shown in Figure 7.1.

Figure 7.1
Regional Geological Map

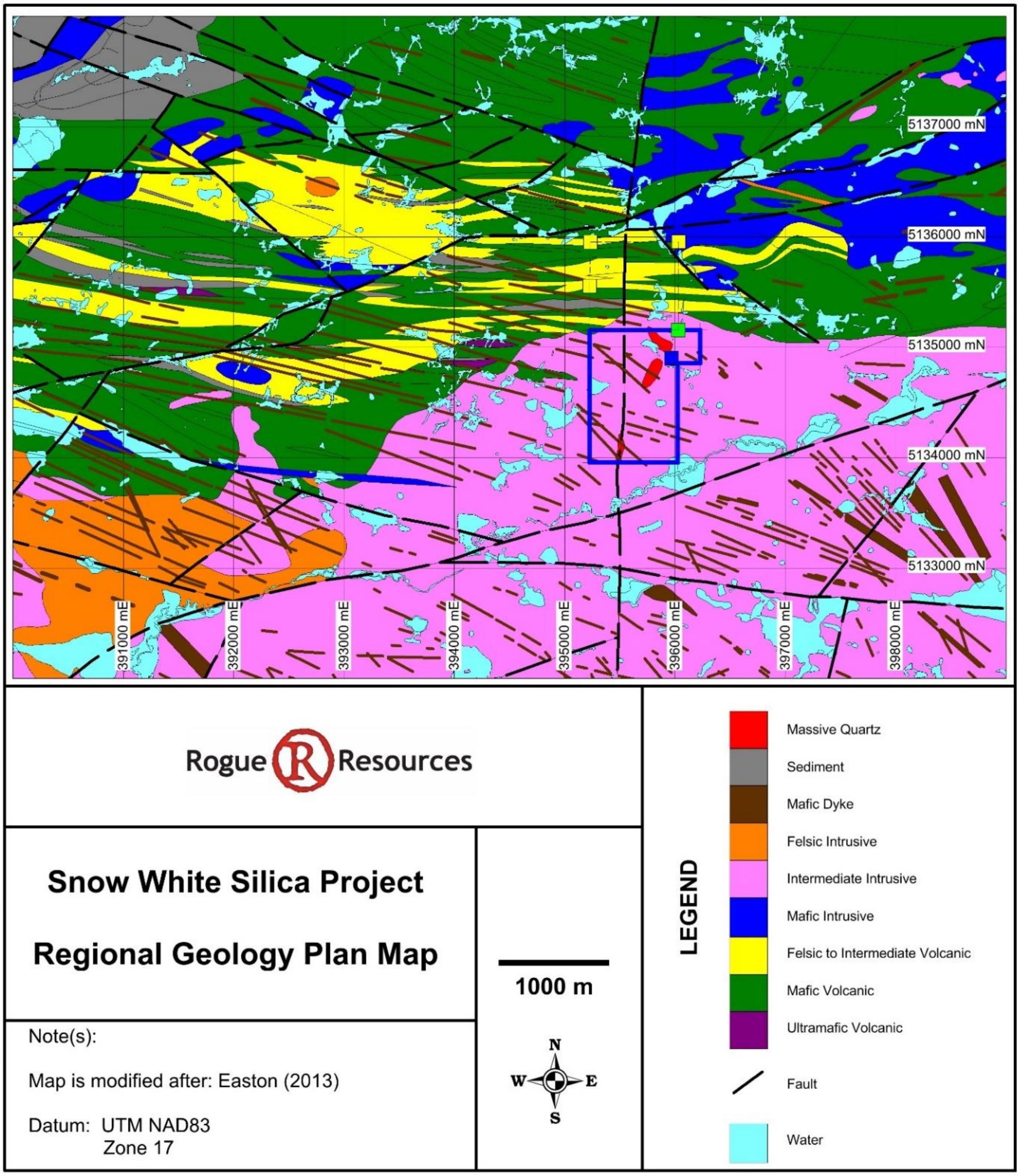


Figure extracted from the January, 2018, Technical Report.

7.3 Property or Local Geology

The quartz veining on the Snow White property was discovered during regional reconnaissance mapping by government geologists. The mineralization is interpreted to be an Archean-aged composite quartz vein precipitated along a north-south trending structure within the host granitoids, both of which are cross-cut by northwest trending early Proterozoic-aged mafic dykes. The quartz mineralization has been identified intermittently over at least a 1,000 m strike length.

Diamond drilling along 200 m of the Main Zone portion of the quartz mineralization at the Snow White property indicates that the deposit strikes 020°, dipping 55° to 75° to the east. The Main Zone been interpreted to be a composite zone of quartz veins intruding the host granitoid with a massive quartz vein at the core of the structure. The massive quartz vein was interpreted from drilling results to vary in true thickness from 10 m to 28 m in the core area, crosscut by several near-vertical diabase dikes. The Main Zone is comprised of a massive high silica core (QTZ) which is flanked by a transitional zone (TRN) on both its eastern and western margins. The TRN which is comprised of multiple phases of quartz veining with granitoid restite or raft inclusions has been identified as varying in thickness from a few metres to tens of metres, locally.

Detailed mapping of the Main Zone conducted in 2010 is presented in Figure 7.2, and cross sections from the Verbina drilling in 2008 are shown in Figure 7.3.

Figure 7.2
Main Zone Geological Map

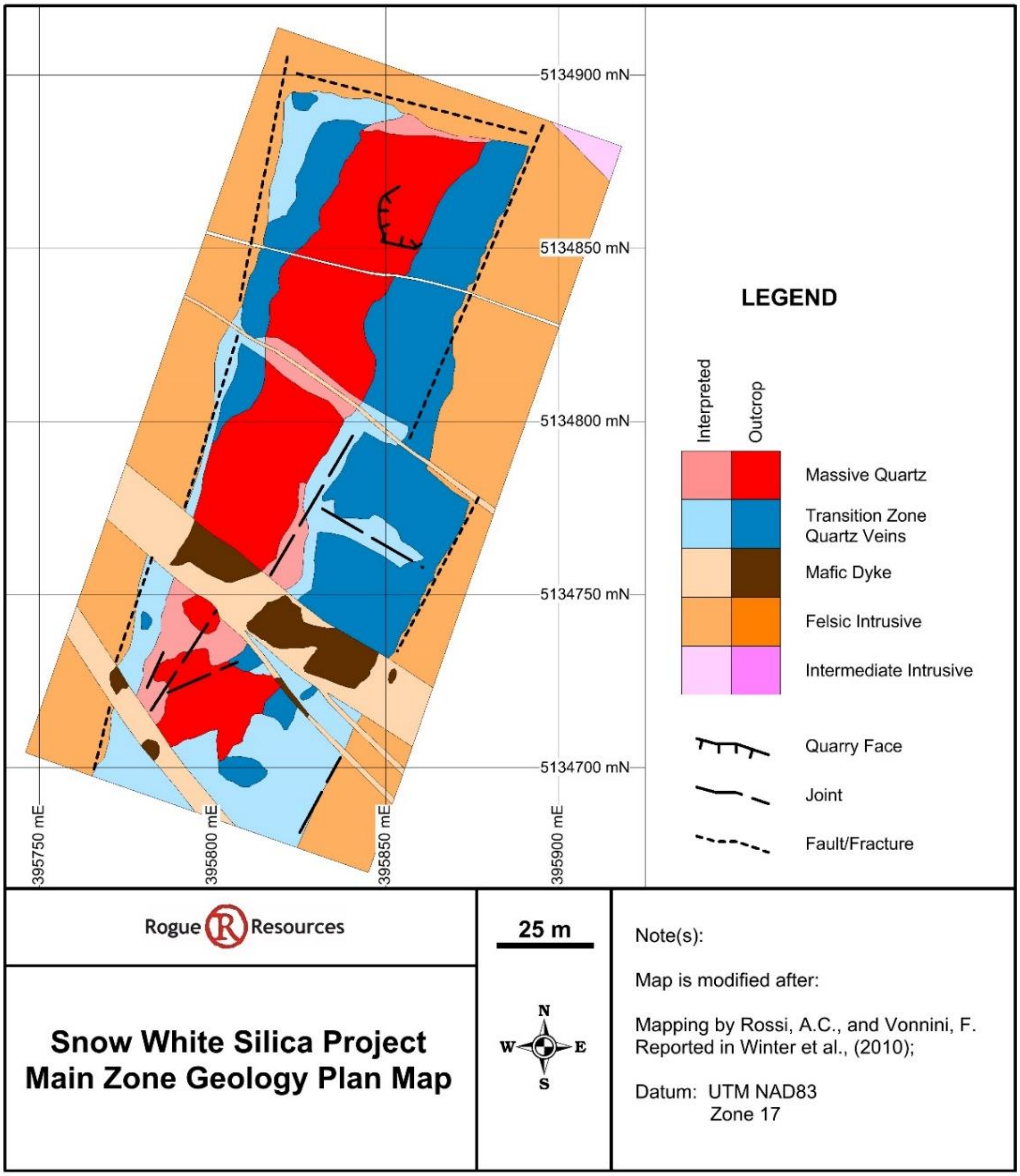


Figure extracted from the January, 2018, Technical Report.

Figure 7.3
Main Zone Cross-Sections

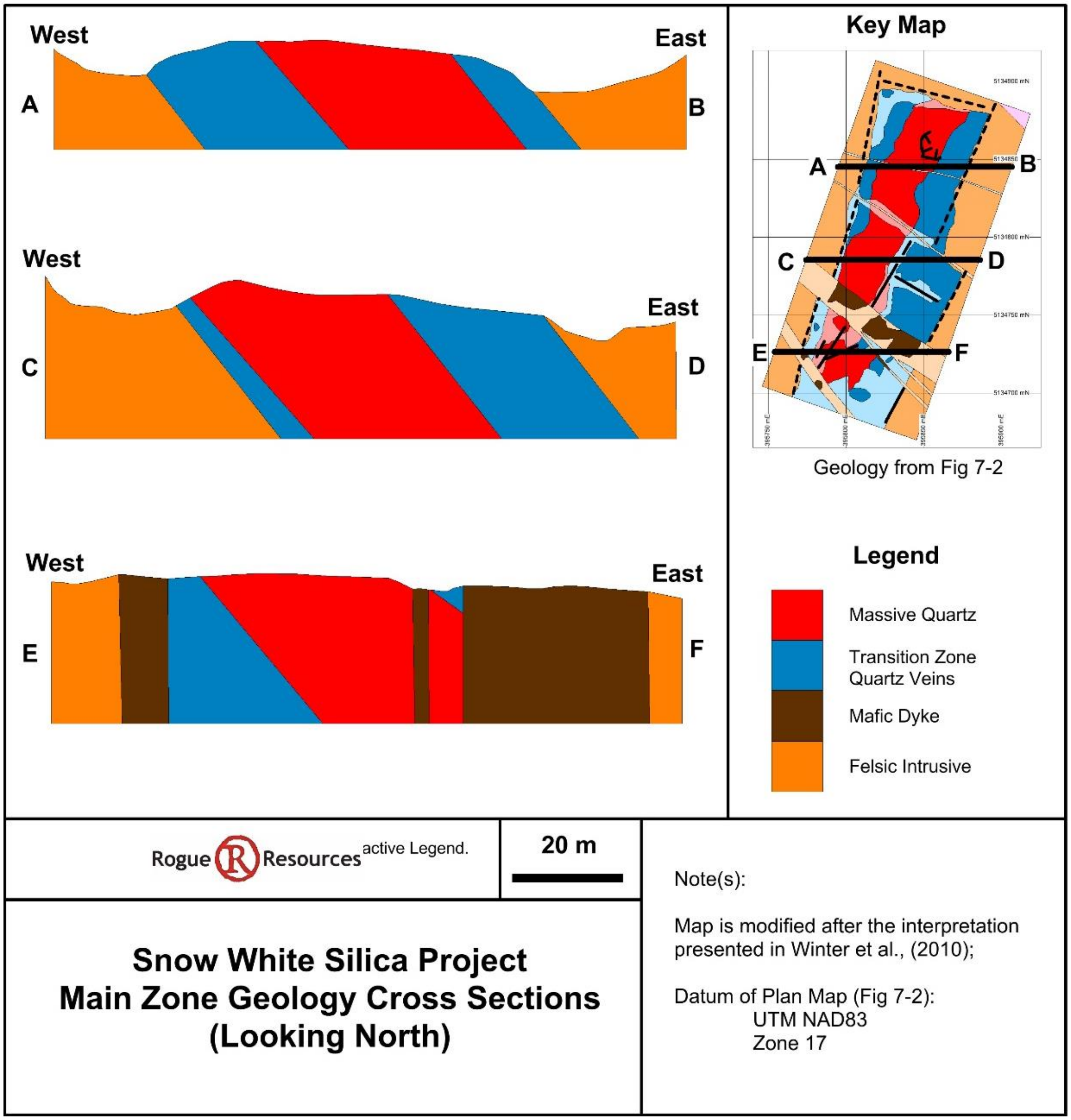


Figure extracted from the January, 2018, Technical Report.

7.4 MINERALIZATION

The quartz mineralization is interpreted to be an Archean-aged composite vein precipitated along a north-south trending structure within the host granitoids, both of which are cross-cut by northwest trending early Proterozoic-aged mafic dykes. The quartz mineralization is identified intermittently over at least a

1,000 m strike length. The Main Zone is separated from the Mirror Zone by approximately 300 m of vegetated lowlands and forest with the Pure White Zone located near the southern boundary of the quarry permit.

The structure along which the Snow White quartz vein appears to be emplaced is a regionally prominent north-trending structure, probably a fault, that extends as far north as Whiskey Lake, and which offsets magnetic trends in the Whiskey Lake greenstone belt.

The massive quartz core of the Main Zone has been identified in assays and in initial metallurgical work as well as in later verification work to be nearly pure silica, with very low impurity elements such as aluminum, iron, titanium, phosphorous and calcium.

The quartz is fine-grained to aphanitic and marble-like in texture and appearance. A general indication of the quality of the quartz vein on the property is provided by visual inspection in hand specimens of the colour imparted by the presence of granitoid inclusion or fracture coating material.

8.0 DEPOSIT TYPES

The classification of silica deposits includes the following types:

1. Unconsolidated silica sands.
2. Orthoquartzite (quartzitic sandstone).
3. Quartzite (metamorphic, recrystallized).
4. Massive quartz (hydrothermal-lode; segregations within intrusive bodies or pegmatite).

Silica deposits are widespread throughout the world with most of the production derived from silica sands.

The silica-rich and low impurity Snow White deposit was interpreted in 2010 to be a composite zone of quartz veining, shearing and silica flooding. Easton (2009) indicates that these quartz vein deposits are regionally associated with north-south trending structures cross-cutting Archean granitoids. Additional silica-rich quartz veins have been identified elsewhere in a similar geological setting including north of Espanola, and north of Massey.

9.0 EXPLORATION

9.1 GENERAL INFORMATION

The initial verification exploration work conducted by Rogue on the Project began in October, 2017, as part of its due diligence process to determine if the Snow White quartz zone was suitable for use in silicon production. The exploration work included verification of historic mapping, a drone photo survey, sampling of the quartz unit, and included sampling for thermal stability tests by ANZAPLAN in Germany.

This verification exploration work was discussed in the data verification and metallurgical sections in Rogue's January, 2018, NI 43-101 Technical Report on the Snow White Property by Philip Vicker. This information is summarized and included in Sections 12.0 and 13.0 of this Technical Report.

In 2018, after Rogue acquired the Snow White Project further exploration work included:

1. A 2018 three-dimensional (3D) orthomosaic drone survey to provide detailed topographic data for the quartz mineralization at the Main Zone.
2. A 2018 drilling program to gather sufficient data to assist in the preparation of a mineral resource estimate compliant with the CIM Definition Standards.

The exploration work conducted by Rogue is summarized in Table 9.1.

Table 9.1
Summary of Exploration Work on the Snow White Property

Year	Exploration Work
2017	Selected grab samples for induced coupled plasma and mass spectrometry (13 samples)
	Collection of two samples (45 kg) shipped to ANZAPLAN for thermal stability testwork
	Drone video survey to identify quartz zones and any environmental liabilities
	Verification of historic mapping and past exploration work
2018	NI 43-101 Technical Report by Philip Vicker, M.Sc., P. Geo. January 8, 2018.
	Drill Program (Main Zone), started in May
	3D orthomosaic drone survey for topographic measurements (Main Zone)
	Half drill core from three NQ holes sent to ANZAPLAN for sensor-based sorting test program

9.2 Future Exploration Work on the Snow White Project

Future exploration work will focus on the extension of the near surface quartz zones identified on the Snow White Property. To date, three zones have been identified on the property including the Main Zone, the Mirror Zone and the recently discovered Pure White Zone (Figure 9.1). Future exploration work will include property scale prospecting and mapping as well as more detailed mapping of areas with known quartz mineralization, mechanical stripping, channel sampling, analysis and diamond drilling.

The Mirror Zone, located approximately 300 m southwest of the Main Zone, was stripped of overburden in the past to expose the quartz mineralization (Figure 9.2). The quartz mineralization is similar in appearance to the Main Zone, separated by northwest trending diabase dykes of varying width. No recent analytical samples have been taken from the Mirror Zone and future exploration will include mapping the area in detail and completing systematic channel sampling of the quartz zones for analysis. Contingent on results, follow up diamond drilling may be completed on the Mirror Zone to confirm the extent of the quartz mineralization at depth.

Work completed by Rogue in 2018 identified high purity quartz on the southern edge of the aggregate permit approximately 1,000 m south of the Main Zone, (Figure 9.1 and Figure 9.3). Analysis by ALS Global (ALS) of a selected grab sample taken from the Pure White Zone reported 99.59% SiO_2, 0.08% Al, 0.037% Fe, 0.005% Ti, 0.01% Ca and 0.001% P, meeting the specifications required for the production of metallurgical grade silicon (Rogue Press Release, July 30, 2018). Follow up exploration will include mapping and sampling of the quartz exposures, mechanical stripping of the quartz zones, channel sampling and analysis of the quartz zones and potential follow up diamond drilling.

Figure 9.1
Rogue Plan Map with Property Boundaries and the Identified Quartz Zones

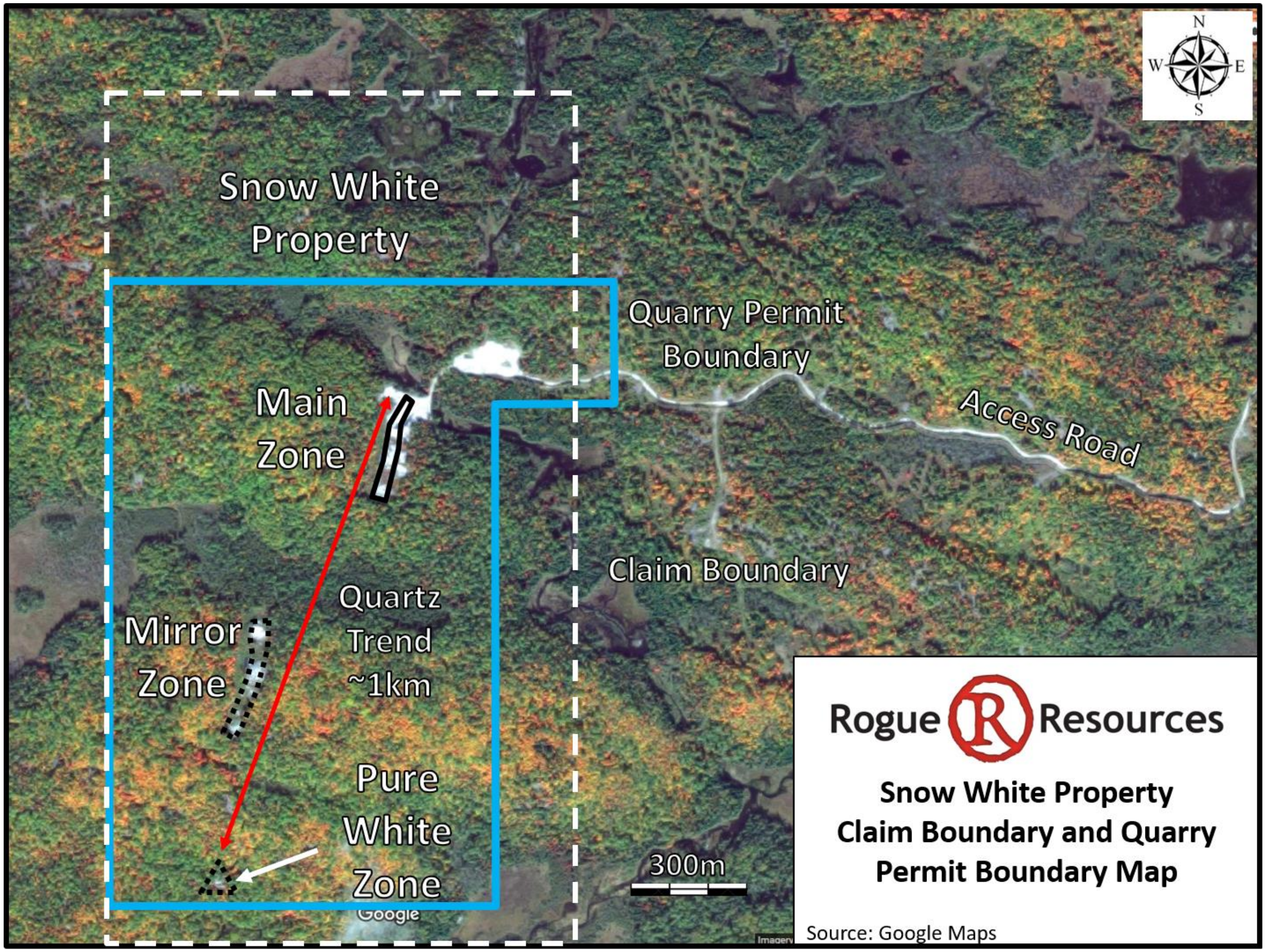


Figure supplied by Rogue in August, 2018.

Figure 9.2
Photo of Mirror Zone Looking North Along Trend

Photograph supplied by Rogue. August, 2018.

Figure 9.3
Photo of Pure White Zone Looking North
(UTM Zone 17, 395492 mE, 5133989 mN)

Photograph supplied by Rogue. August, 2018.

Recent prospecting by Rogue has identified the continuation of the quartz mineralization to the south of the Main Zone (Figure 9.4) and connecting the trend between the Pure White Zone and the Mirror Zone (Figure 9.5). Exploration work in these areas will include mapping and sampling, mechanical stripping, channel sampling and analysis and diamond drilling.

Figure 9.4
Photo of Main Zone South Extension Looking North
(UTM Zone 17, 395783mE, 5134670mN)

Photograph supplied by Rogue. August, 2018.

Figure 9.5
Quartz Mineralization along trend between Mirror Zone and Pure White Zones
(UTM Zone 17, 395505mE, 5134176mN)

Photograph supplied by Rogue. August, 2018.

10.0 DRILLING

10.1 General Information

Rogue completed the diamond drill program on the Snow White Project as part of its 2018 exploration program. This was designed to provide the necessary drill density to complete an initial mineral resource estimate on the quartz mineralization associated with the Main Zone on the Snow White property.

10.2 2018 Drilling Program

Rogue undertook its initial drill program between May 1, 2018 and June 3, 2018 on the Main Zone quartz unit. The diamond drill program consisted of 36 holes for a total of 1,910 m. The holes were drilled by Orbit Garant Drilling Inc. (Orbit), located out of Val-d'Or, Quebec. The work was completed with one rig equipped to retrieve NQ (47.6 mm) diameter core. Prior to May, 2018, Rogue had not completed any drilling on any other areas either within the Snow White property boundaries or regionally in the area surrounding the property.

The drill program was designed to define the geometry, width, depth extension and quality of that portion of the quartz unit located primarily above the water table at 303 masl. Drilling has identified that the Main Zone quartz mineralization extends along a strike length of 225 m and remains open both along strike and at depth.

Table 10.1 summarizes the 2018 drilling program by Rogue.

Table 10.1
Summary of 2018 Collar Information for Each Drill Hole on the Snow White Project

Drill Hole	Easting	Northing	Elevation (m)	Azimuth (°)	Dip (°)	Start Date	Finish Date	Depth (m)
RR-18-01	395822	5134820	323.6	255	-55	2018-05-04	2018-05-04	25.00
RR-18-02	395832	5134822	324.5	255	-55	2018-05-04	2018-05-04	36.00
RR-18-03	395840	5134824	324.2	255	-55	2018-05-04	2018-05-05	48.00
RR-18-04	395850	5134826	324.9	255	-55	2018-05-05	2018-05-06	63.00
RR-18-05	395849	5134806	326.1	255	-55	2018-05-06	2018-05-07	78.00
RR-18-06	395840	5134803	324.8	255	-55	2018-05-07	2018-05-08	63.00
RR-18-07	395831	5134801	327.1	255	-55	2018-05-08	2018-05-08	48.00
RR-18-08	395821	5134798	327.0	255	-55	2018-05-08	2018-05-09	36.00
RR-18-09	395811	5134796	327.7	255	-55	2018-05-09	2018-05-09	21.00
RR-18-10	395819	5134778	328.7	255	-55	2018-05-10	2018-05-10	36.00

Drill Hole	Easting	Northing	Elevation (m)	Azimuth (°)	Dip (°)	Start Date	Finish Date	Depth (m)
RR-18-11	395829	5134780	327.8	255	-55	2018-05-10	2018-05-10	48.00
RR-18-12	395839	5134783	328.4	255	-55	2018-05-11	2018-05-11	63.00
RR-18-13	395837	5134719	326.7	255	-55	2018-05-11	2018-05-12	75.00
RR-18-14	395827	5134717	327.7	255	-55	2018-05-12	2018-05-13	63.00
RR-18-15	395817	5134715	329.7	255	-55	2018-05-13	2018-05-13	48.00
RR-18-16	395806	5134712	328.5	255	-55	2018-05-13	2018-05-14	36.00
RR-18-17	395796	5134713	327.7	255	-55	2018-05-14	2018-05-14	20.30
RR-18-18	395857	5134790	324.3	255	-55	2018-05-15	2018-05-15	90.00
RR-18-19	395855	5134764	326.7	255	-55	2018-05-16	2018-05-16	90.00
RR-18-20	395843	5134762	328.1	255	-55	2018-05-16	2018-05-17	75.00
RR-18-21	395834	5134761	328.6	255	-55	2018-05-17	2018-05-17	63.00
RR-18-22	395823	5134758	327.4	255	-55	2018-05-17	2018-05-18	48.00
RR-18-23	395813	5134756	327.9	255	-55	2018-05-18	2018-05-18	36.00
RR-18-24	395806	5134754	328.2	255	-55	2018-05-18	2018-05-18	21.00
RR-18-25	395842	5134745	328.9	255	-55	2018-05-19	2018-05-19	90.00
RR-18-26	395834	5134741	328.5	255	-55	2018-05-20	2018-05-20	75.00
RR-18-27	395825	5134739	329.0	255	-55	2018-05-20	2018-05-20	54.00
RR-18-28	395816	5134739	328.7	255	-55	2018-05-21	2018-05-21	48.00
RR-18-29	395805	5134734	326.7	255	-55	2018-05-22	2018-05-22	36.00
RR-18-30	395828	5134697	325.8	255	-55	2018-05-23	2018-05-23	48.00
RR-18-31	395809	5134694	327.5	255	-55	2018-05-23	2018-05-24	36.00
RR-18-32	395852	5134865	309.1	255	-55	2018-05-24	2018-05-24	36.00
RR-18-33	395861	5134867	308.4	255	-55	2018-05-26	2018-05-27	48.00
RR-18-34	395861	5134867	308.4	255	-70	2018-05-24	2018-05-24	63.00
RR-18-35	395891	5134872	306.0	255	-55	2018-05-25	2018-05-26	75.00
RR-18-36	395896	5134873	305.6	255	-55	2018-05-27	2018-05-31	70.50

Table supplied by Rogue.

Figure 10.1 is a plan view of the 2018 Rogue drill holes and for presentation purposes the Hole IDs have been shortened, for example, From RR-18-01 to 01.Figure dated August, 2018.

Figure 10.2 is a cross-section through drill holes RR-18-19 to RR-18-24.

Figure 10.1
Plan View of the 2018 Rogue Drill Holes

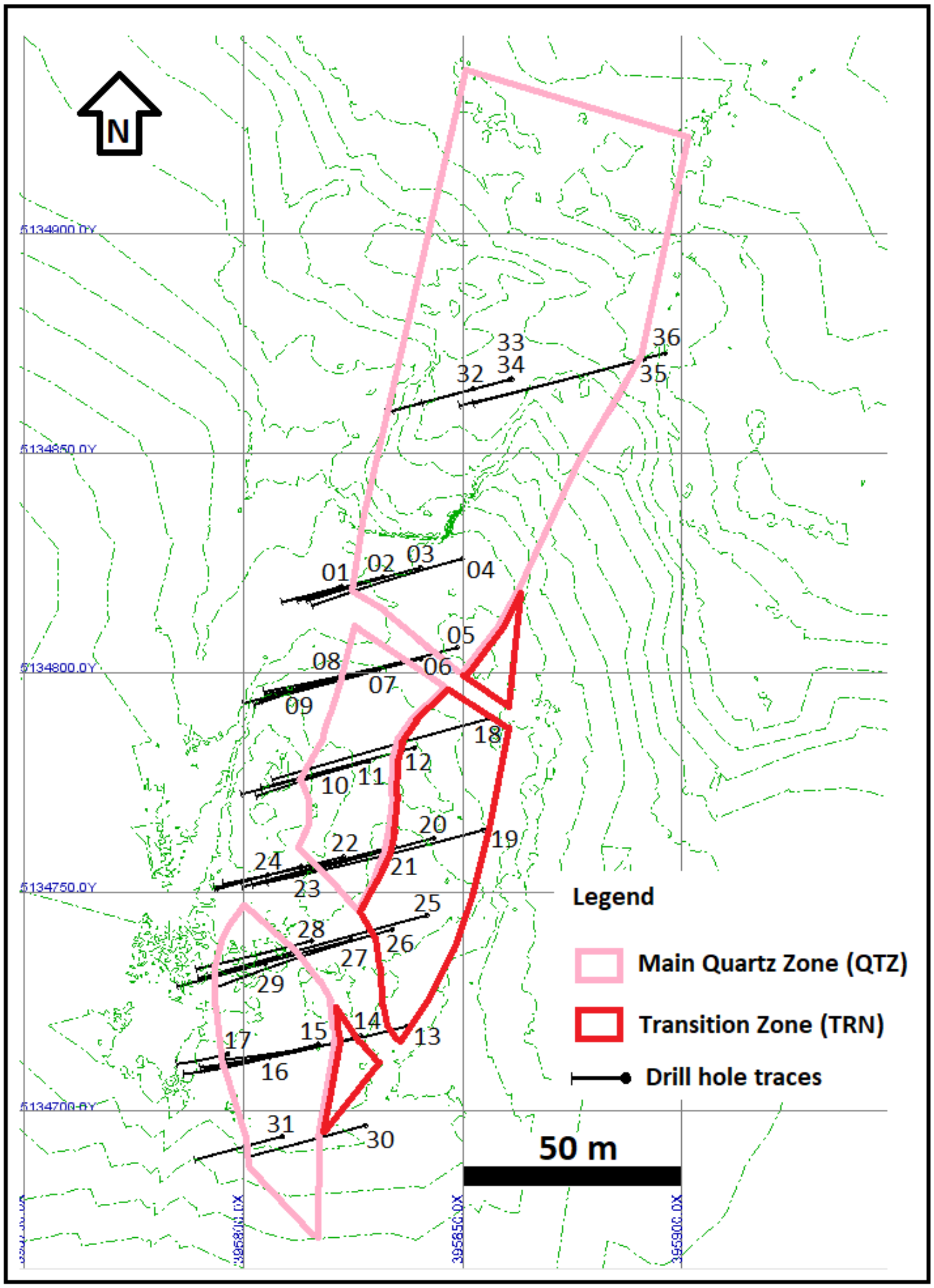


Figure dated August, 2018.

Figure 10.2
Cross-section through Drill Holes RR-18-24 to RR-18-19

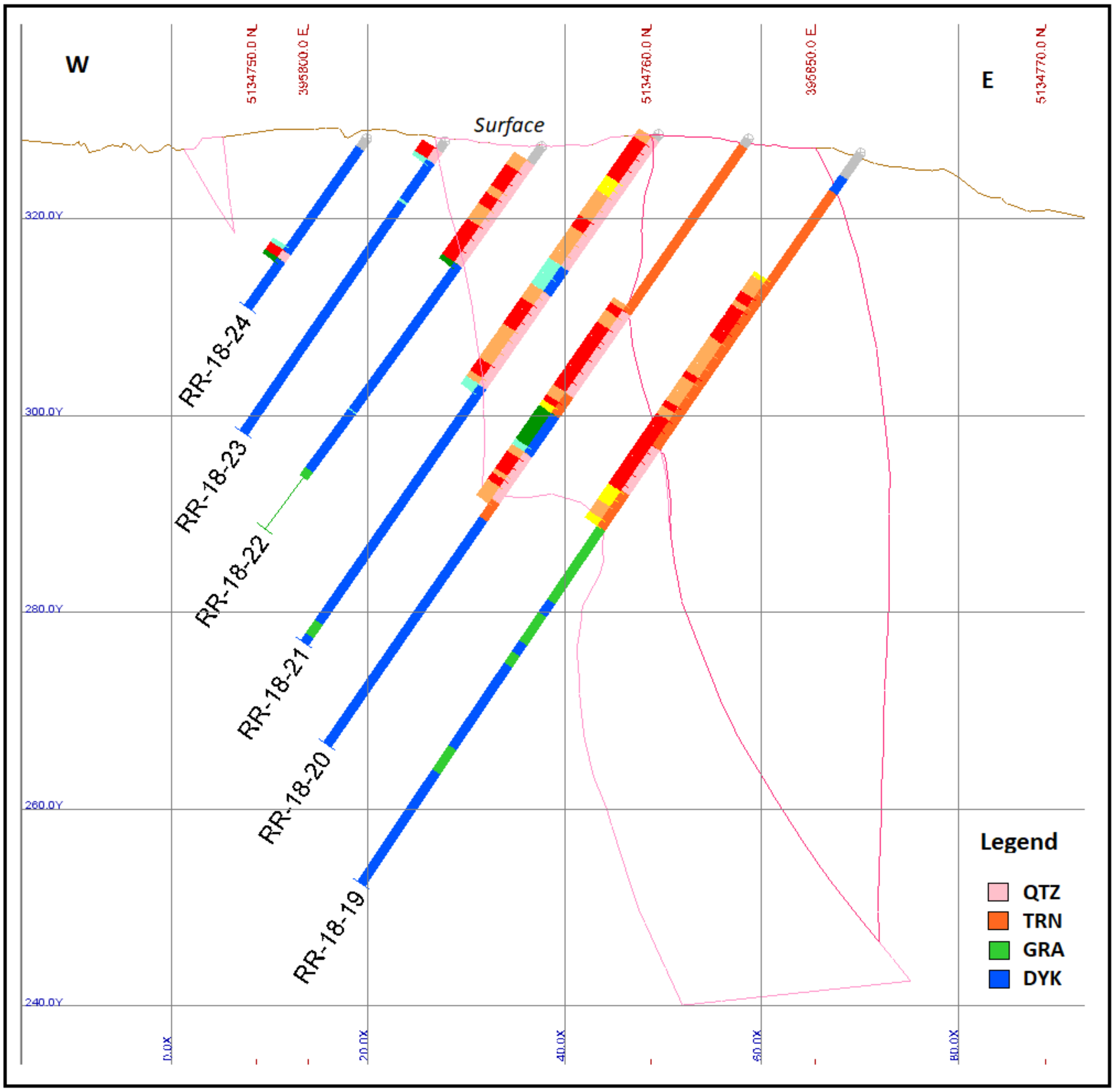


Figure dated August, 2018.

10.2.1 Drilling Procedures

The proposed collar locations were staked in the field using a handheld GPS, compass and measuring tape, and the drill pads were constructed by the drill contractor. Given the uneven terrain related to outcrop exposure, the drill holes were located as close as possible to their ideal location. A magnetic compass was used to align the drilling rig along the intended azimuth. Figure 10.3 shows the drill set-up on one of the holes during the M.Plan site visit.

Figure 10.3
Drill Set-up During the M.Plan May, 2018 Site Visit

All but one of the holes were drilled at an angle of -55°, with one drilled at a steeper angle of -70°, toward the west-southwest (azimuth 255°). The depth of the holes ranged from 20 m to 90 m. The Main Zone was drilled on sections 20 m apart, although the most northerly section was separated from the previous section by 40 m due to the location of the quarry pit face. Where the topography allowed, drill holes were separated from each other by approximately 10 m along the section line. Sections consisted of between two and six holes with most sections contain five holes.

Down hole surveys were completed concurrent to drilling, using a single shot Reflex instrument with a measurement taken at the bottom of the hole.

At the end of the drilling campaign, all the collars were surveyed by an independent contractor, Bull Surveying Corp. (Bull Surveying) of Sudbury, Ontario, with a Differential Global Positioning System (DGPS). The downhole deviation was measured using a Reflex instrument.

Core was placed in wooden core trays at the drill site, labelled with the hole and box number, sealed with a lid and strapped with wire or fibre tape. Twice per day the core was transported from the drill site to the core storage and logging facility in Massey, Ontario.

At the core logging facility, drill core was first geotechnically logged and then geologically logged, photographed and sampled. Geotechnical logging involved measurements of recovery and rock quality designation (RQD). Core recovery was generally very high with approximately 88% of the core intervals at over 95%. Geological logging included descriptions of lithology, physical qualities, quartz content, alteration and structure. Core samples were laid out by the geologist and marked in the box with markers and tags, after which the core was photographed.

Where sampled, the core was sawn in half with a diamond-bladed core saw with one half submitted for analysis and the other half retained for reference. Three of the holes (NQ core diameters) RR-18-14, RR-18-23 and RR-18-24, were first sawn in half with a diamond blade with one half shipped to ANZAPLAN for sensor-based sorting analysis and the other half sawn into quarter-core with one quarter being submitted for analysis and the other quarter retained for reference. Once sampling was completed, all drill core was cross stacked and wrapped in protective wrap at the logging facility in Massey, Ontario.

A total of 872 samples were taken, which represented a total core length of 890.10 m. In addition, duplicate, standard and blank materials were inserted as QA/QC samples to monitor the laboratory performance. The nominal sample length was 1.5 m but, ranged from 2.0 m to 0.25 m to honour both the lithological contacts and the changes in the quality of the quartz. Only in certain cases, was samples length over 1.5 m and usually only when the core recovery was poor between the drill depth markings.

10.3 2018 Drill Program Results

The results of the 2018 drill program demonstrated the continuity of the quartz mineralization and assisted in identifying the distribution of the impurities within the unit (Al, Fe, Ti, Ca, and P). Drilling confirmed the association of higher impurity content with increased content of granitic inclusions and alteration associated with contacts with the mafic intrusions.

Table 10.2 summarizes the significant 2018 drilling results from the Main Zone on the Snow White Property.

Table 10.2
Summary of Significant 2018 Drill Results

Hole ID	From (m)	To (m)	Width (m)	True Thickness[1] (m)	SiO_2 (%)[2]	Al (%)[3]	Ca (%)[3]	Fe (%)[3]	P (%)[3]	Ti (%)[3]
RR-18-01	0.80	5.15	4.35	3.13	98.76	0.26	0.01	0.092	0.002	0.010
incl.	0.80	4.00	3.20	NA	99.23	0.15	0.01	0.059	0.001	0.007
RR-18-02	0.60	15.00	14.40	10.33	98.88	0.14	0.01	0.081	0.001	0.007
incl.	2.00	11.80	9.80	NA	99.24	0.06	0.01	0.034	0.001	0.004
RR-18-03	1.20	26.10	24.90	17.79	99.09	0.10	0.04	0.045	0.001	0.004
RR-18-04	1.25	31.50	30.25	21.59	98.60	0.23	0.02	0.107	0.006	0.013
incl.	1.25	9.00	7.75	NA	99.09	0.13	0.01	0.056	0.001	0.006
incl.	9.50	12.25	2.75	NA	99.03	0.13	0.01	0.046	0.001	0.006
incl.	13.50	31.50	18.00	NA	99.03	0.11	0.01	0.049	0.001	0.007
RR-18-05	1.40	6.90	5.50	3.98	96.93	0.73	0.06	0.288	0.007	0.026
	8.30	17.60	9.30	NA	95.47	0.84	0.22	0.477	0.017	0.038
	22.40	38.15	15.75	11.53	98.77	0.23	0.01	0.094	0.002	0.007
incl.	26.50	36.00	9.50	NA	99.02	0.17	0.01	0.047	0.001	0.004
RR-18-06	1.15	15.70	14.55	10.55	96.01	0.89	0.10	0.444	0.013	0.032
incl.	12.15	15.70	3.55	NA	99.71	0.06	0.01	0.031	0.001	0.004
lost core	15.70	17.70	2.00	2.0						
	17.70	18.90	1.20	1.2	99.27	0.04	0.01	0.015	0.001	0.004
lost core	18.90	20.50	1.60	1.6						
	20.50	21.40	0.90	0.9	99.14	0.04	0.01	0.030	0.001	0.004
lost core	21.40	22.20	0.80	0.8						
	22.20	26.45	4.25	4.25	99.05	0.18	0.02	0.066	0.002	0.008
RR-18-07	0.65	10.00	9.35	9.35	99.22	0.15	0.01	0.054	0.002	0.007
RR-18-07		Lost Core								
RR-18-07	12.00	13.40	1.40	1.4	98.98	0.07	0.01	0.039	0.001	0.004
RR-18-07		Lost Core								
RR-18-07	15.00	17.10	2.10	1.52	98.85	0.18	0.01	0.058	0.002	0.005
RR-18-08	1.15	7.15	6.00	4.30	99.33	0.09	0.01	0.021	0.001	0.005
RR-18-09	1.10	12.00	10.90	7.81	98.96	0.20	0.01	0.066	0.002	0.008
RR-18-10	1.20	21.20	20.00	14.41	99.25	0.09	0.01	0.044	0.001	0.004
RR-18-11	1.10	17.00	15.90	11.36	98.51	0.32	0.02	0.097	0.005	0.010
	20.00	27.85	7.85	5.51	99.30	0.07	0.01	0.054	0.001	0.008
RR-18-12	0.50	30.00	29.50	21.31	97.27	0.61	0.06	0.253	0.012	0.020
incl.	17.30	28.50	11.20	NA	99.07	0.19	0.01	0.078	0.002	0.007
RR-18-13	28.00	46.50	18.50	13.65	98.69	0.20	0.02	0.072	0.002	0.005
incl.	33.00	46.50	13.50	NA	99.03	0.09	0.02	0.056	0.001	0.003
RR-18-14	17.70	33.20	15.50	11.42	99.04	0.13	0.01	0.044	0.002	0.003
RR-18-15	4.50	26.00	21.50	15.76	98.65	0.21	0.01	0.071	0.003	0.006

Hole ID	From (m)	To (m)	Width (m)	True Thickness[1] (m)	SiO_2 (%)[2]	Al (%)[3]	Ca (%)[3]	Fe (%)[3]	P (%)[3]	Ti (%)[3]
incl.	12.00	26.00	14.00	NA	99.32	0.06	0.01	0.035	0.001	0.003
	29.00	34.25	5.25	NA	99.09	0.12	0.01	0.029	0.001	0.003
RR-18-16	3.20	23.90	20.70	15.11	98.34	0.27	0.02	0.102	0.003	0.009
incl.	4.40	14.30	9.90	NA	99.08	0.05	0.01	0.024	0.001	0.003
incl.	17.30	23.90	6.60	NA	99.12	0.12	0.01	0.030	0.001	0.003
RR-18-17	1.80	4.75	2.95	2.14	99.22	0.11	0.01	0.045	0.001	0.004
	6.90	14.30	7.40	NA	99.11	0.14	0.01	0.026	0.001	0.003
RR-18-18	16.75	24.60	7.85	5.66	96.03	0.95	0.06	0.247	0.006	0.020
	31.00	47.50	16.50	11.88	97.80	0.41	0.06	0.159	0.005	0.014
incl.	34.70	46.00	11.30	NA	99.12	0.11	0.02	0.045	0.001	0.005
RR-18-19	16.50	42.20	25.70	18.58	96.73	0.74	0.04	0.241	0.008	0.023
RR-18-20	21.00	33.65	12.65	9.13	97.67	0.36	0.09	0.308	0.003	0.013
	39.15	45.50	6.35	4.58	96.67	0.56	0.11	0.389	0.008	0.023
RR-18-21	1.60	6.40	4.80	3.46	99.05	0.27	0.02	0.073	0.002	0.008
	8.20	16.65	8.45	6.09	95.88	0.78	0.08	0.453	0.007	0.025
	19.80	30.60	10.80	7.78	96.78	0.74	0.06	0.218	0.010	0.017
RR-18-22	2.00	14.75	12.75	9.28	97.36	0.49	0.06	0.259	0.006	0.019
RR-18-23	1.10	2.50	1.40	1.01	97.96	0.38	0.13	0.300	0.005	0.013
RR-18-24	14.15	15.10	0.95	0.68	97.20	0.35	0.48	0.430	0.002	0.016
RR-18-25	57.60	63.80	6.20	4.46	97.52	0.41	0.06	0.349	0.005	0.013
RR-18-26	39.50	54.00	14.50	10.12	98.42	0.30	0.03	0.084	0.002	0.008
RR-18-27	28.00	42.00	14.00	10.16	94.76	1.31	0.07	0.331	0.013	0.036
RR-18-28	16.10	35.30	19.20	13.90	97.19	0.69	0.04	0.199	0.007	0.015
incl.	19.70	24.00	4.30	NA	99.36	0.15	0.01	0.049	0.002	0.005
incl.	25.40	28.15	2.75	NA	99.10	0.22	0.01	0.059	0.001	0.004
RR-18-29	2.50	18.30	15.80	11.43	97.50	0.45	0.05	0.201	0.012	0.017
incl.	2.50	9.50	7.00	NA	99.06	0.15	0.01	0.034	0.001	0.003
and	18.85	23.40	4.55	NA	96.53	0.79	0.05	0.333	0.018	0.029
RR-18-30	21.00	42.60	21.60	15.59	97.43	0.32	0.41	0.109	0.002	0.008
incl.	26.30	35.85	9.55	NA	99.25	0.08	0.02	0.039	0.001	0.004
RR-18-31	1.20	17.55	16.35	11.80	98.84	0.18	0.01	0.062	0.002	0.007
RR-18-32	1.80	16.50	14.70	10.61	98.04	0.37	0.01	0.093	0.002	0.010
RR-18-33	1.00	20.50	19.50	14.07	99.38	0.09	0.01	0.038	0.001	0.004
RR-18-34	1.20	37.50	36.30	21.15	97.77	0.40	0.04	0.165	0.005	0.016
incl.	1.20	21.00	19.80	NA	98.93	0.09	0.01	0.040	0.001	0.005
RR-18-35	3.00	56.00	53.00	38.58	98.43	0.24	0.04	0.073	0.002	0.008
incl.	16.50	46.50	30.00	NA	98.99	0.10	0.02	0.041	0.001	0.006
RR-18-36	5.85	62.00	56.15	40.77	98.58	0.24	0.04	0.103	0.003	0.009
incl.	24.00	58.50	34.50	NA	99.24	0.11	0.02	0.053	0.001	0.005

[1]NA = Not Applicable because hole collared in quartz and does not cross-cut the entire quartz zone
[2] - ALS Whole Rock by Fusion/XRF
[3] - ALS Super Trace Lowest DL 4A by ICP-MS

Diamond drilling along 225 m of the Main Zone's strike direction confirmed that the deposit strikes 020°, dips from 60° to 70° to the east and has undulating eastern and western contacts. The Main Zone is a composite zone of quartz veins intruding the host granites with a massive quartz vein at the core of the structure. The massive quartz vein was interpreted from drilling results to vary in true thickness from a few metres to upwards of 40 m in the central area, crosscut by several near-vertical diabase dikes. The high silica massive core is flanked by transitional zones on both the eastern and western margins, which are comprised of multiple phases of quartz veining with granitoid restite or raft inclusions. The volume percentage of granitoid restite and raft inclusion increases as the contacts with the granitoid host are approached. The transition zone as identified varies from a few metres to tens of metres thick with the majority of the transition zone being found on the eastern contact of the massive quartz vein.

10.4 Qualified Person Comments

The QP for this section has reviewed and discussed the Rogue drilling program with Rogue personnel and believes that the Snow White program has followed the best practices guidelines as outlined by the CIM for exploration.

The QP for this section believes that the quality of the data acquired by the drilling program is suitable to be used as the basis of a mineral resource estimate. There is sufficient data in order to determine both the extent and continuity of the quartz mineralization and the impurities.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

11.1 General Information

The 2018 drilling program is the first time Rogue has conducted an extensive work program on the Snow White Project. As part of the drilling program, Rouge has introduced QA/QC protocols to be followed as part of the sample preparation, analyses and security measures to be followed.

11.2 Core Sample Preparation

The following QA/QC protocols are used for logging and sampling the core:

- The geologist to determine the sample locations based on the nature of the quartz mineralization.
- Maximum sample length of 1.5 m.
- Isolate inclusions of granite and diabase that are greater than 25 cm.
- Include sample breaks related to alteration (colour) and veining (chlorite, potassium feldspar):
  - Quartz ranges in colour from white to pink (K?) to red (Fe) in relation to its proximity to the diabase dykes and granite inclusions.
- Do not use a grease pencil on the core to mark the sample breaks. Instead flagging tape is to be inserted at the beginning and end of the samples.
- Identify any sections with metal contamination from the drill program. In order to remove any contamination these sections of the core may need to be subjected to grinding or sanding.
- Tungsten carbide-based diamond blades are to be used for sawing. Other blades will potentially result in contamination with Fe and Ti.
- Ensure the saw is set up with the proper ventilation, water supply and that personal protective equipment is worn including dust masks given high level of silica in the samples.
- Wash samples to remove fines before placing in sample bags.

- Standards and blanks to be inserted into the sample stream.
- Standards, blanks and duplicates to be inserted at a rate of 3 per every 25 samples which is in line with the general QA/QC industry standards

11.3 Sample Analytical Procedures

Rogue has set-up the following steps in its analytical procedures for the Snow White property:

- Limiting contamination is the key objective of the sampling and analytical program.
- Deliver the samples to the laboratory as drilling sections are completed.
- Samples to be delivered to ALS in Sudbury for preparation.
- Detailed instructions on sample preparation will be provided with each session:
    - CRU-31 Fine Crushing.
    - LOG-22 Sample Login.
    - LOG-24 Pulp Login – tungsten carbide.
    - SPL-21 Split Sample.
    - WEL-21 Received Sample Weight.
- Ensure that the sample is pulverized with tungsten carbide bowls (Code PUL-33).
- Samples to be run using inductively coupled plasma mass spectrometry (ICP-MS Code supertrace MS61L) and XRF (Code XRF26).

As its sample standards Rogue is using three samples produced from quartzite from its Silica Ridge Project. These standards are as follows:

- Rogue Ultra Fine Quartz Powder (UFQP).
- Rogue Fine Quartz Powder (FQP).
- Rogue Quartz Powder (QP).

Table 11.1 summarizes the chemical and physical properties of each of the standards.

Table 11.1
Rogue Standards Chemical and Physical Properties

Property Type	**Description**	**Standards**			**Units**
		UFQP	**FQP**	**QP**	
Chemical Analysis	SiO_2	98.4	98.6	99.4	wt%
	Al_2O_3	0.86	0.76	0.17	wt%
	Fe_2O_3	0.015	0.011	< 0.005	wt%
	Ti_2O	0.017	0.018	0.019	wt%
	K_2O	0.04	0.03	0.02	wt%
	Na_2O	0.01	< 0.01	< 0.01	wt%
	CaO	0.01	0.02	< 0.01	wt%
	MgO	< 0.01	0.01	< 0.01	wt%
Physical Properties	Density	2.65	2.65	2.65	t/m^3
	Bulk Density	0.8	0.9	1.2	t/m^3
	Tapped Density	1.1	1.3	1.6	t/m^3
	ISO Brightness	83.6	84.0	80.8	%
	d50	4.4	10.4	30.6	mm
	Moisture	<1	<1	<1	wt.-%
	Surface area	1.7	1.6	0.4	m^2/g
	pH	6.5	6.4	6.3	-
	Oil adsorption	20	16	15	g/100 g
	Fraction (µ)				**wt%**
Particle size distribution	< 100	-	100	100	
	< 90	-	100	100	
	< 71	-	99.7	98.2	
	< 63	-	99.1	95.2	
	< 40	100	91.6	69.6	
	< 20	99.5	72.8	24.8	
	< 10	77.7	51.6	9.6	
	< 6	59.3	41.4	8.3	
	< 2	23.0	18.9	4.7	
	< 1	8.3	7.5	2.1	

Note: Data taken from the Rogue Draft Technical Data Sheets.

The three Rogue standards are natural products processed from a bulk sample at pilot scale by ANZAPLAN. The grinding process for the UFQP, FQP and QP material ensured that each contained minimal contamination. All three samples can be used in a wide range of applications such as filtration media, ceramics and glazes.

As its sample blanks Rogue uses samples of sodium bicarbonate ($NaHCO_3$), purchased from local suppliers.

Duplicate analysis of pulp samples was routinely performed as part of the analytical process.

11.4 Security Measures at Drill, Core Logging Facility and Core Sample Shipment

As previously noted in Section 10.2, for all drill holes completed on the Snow White Project, core was placed in wooden core trays at the drill site, covered with a lid and then transported by pickup truck to a secured core logging facility located in Massey, Ontario. The logging facility in Massey has a gate access and is a locked secure building.

The core was logged by Rogue geotechnicians and geologists, after which the sampling intervals were marked by the geologists and the geotechnicians and the core photographed. Core marked for sampling was then split with a diamond saw, with one half submitted for geochemical analysis and the other retained in the core box for reference.

Samples taken for geochemical analysis were placed into a clear polyethylene bag together with a waterproof identification tag, which is then sealed and placed together with other samples into a rice bag. Once full the rice bag was sealed with a non-reusable plastic tag. A sample shipment comprised a group of rice bags containing all of the samples from a single hole, or group of holes, which were shipped together by pickup truck. The assays were delivered to the ALS sample processing laboratory in Sudbury, Ontario by Rogue personnel. Both Rogue personnel and ALS representatives would inspect the shipment to ensure there were no broken security tags prior to completing delivery at the ALS facility in Sudbury.

ALS is an independent assay laboratory with all ALS geochemical hub laboratories accredited to ISO/IEC 17025:2017 for specific analytical procedures. ALS's quality program includes quality control steps through sample preparation and analysis, inter-laboratory test programs, and regular internal audits.

11.5 Qualified Person Comments

In general, the QP for this section considers that the QA/QC program in place as part of Rogue's procedures is of sufficient quality and quantity to be considered as following the best practices guidelines as published by the CIM. Therefore, the sample results are suitable to be used as the basis of a mineral resource estimate.

As with any QA/QC program a review should be conducted, and improvements made over time.

12.0 DATA VERIFICATION

12.1 GENERAL

M.Plan's data verification and site visit was conducted to independently verify the geology and data provided by Rogue for this Technical Report. Independent check sampling was conducted to verify the nature of the mineralization at the Snow White Project

12.2 M.PLAN MAY, 2018, SITE VISIT AND INDEPENDENT SAMPLING

The site visit to the Snow White Project was conducted on May 17, 2018, as part of activities related to the publication of this report. The main quartz vein on the property was visited along with the historical drill sites. Drill sites from the current drilling program reviewed as well. Rogue's facilities in Massey, where the core is logged and prepared for testing, were also visited.

Mr. Lewis conducted the M.Plan site visit with the assistance of Mr. Paul Davis of Rogue.

During the site visit, Mr. Lewis took five random grab samples covering the Main Zone and the stockpile at the site entrance. The samples were placed in a plastic bag and sealed, on site, and then carried back to Toronto by Mr. Lewis in his carry-on luggage. From the M.Plan office the samples were shipped to SGS Canada Inc. (SGS Minerals Services, Lakefield) in Lakefield Ontario where testwork on the samples was conducted for M.Plan. SGS Minerals Services (Lakefield) is an independent laboratory which is accredited by the Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at http://www.scc.ca/en/programs/lab/mineral.shtml.

Table 12.1 summarizes the grab samples and descriptions taken during the site visit.

Table 12.1
May, 2018, M.Plan Snow White Project Site Visit Independent Sample Description

Sample Number	Sample Type	Sample Description
75022	Grab	Sample taken close to granite inclusion near the western transition zone.
75023	Grab	Sample take in the main body of the quartz vein.
75024	Grab	Sample taken in the eastern transition zone.
75025	Grab	Sample taken in the western transition zone.
75026	Sample Tag Not Used	-
75027	Grab	Sample taken from the western stockpile at the quarry.

Table 12.2 summarizes the weight, XRF results and specific gravity testwork conducted by SGS Minerals Services on the Snow White Project samples. Table 12.3 through Table 12.6 summarize the ICPMS results after multi-acid digestion testwork conducted by SGS Minerals Services on the Snow White Project.

The SGS Certificate of Analysis is included as Appendix 1.

As a reference, the threshold values for impurity elements for metallurgical grade silicon metal production are summarized in Table 12.7.

12.3 Rogue Database Verification

M.Plan received the geological database for the Snow White deposit on July 18, 2018. Validation of the 36 drill holes and all dependent tables, comprised of the down the hole surveys, lithology logs, assays and density were performed to ensure integrity of the data, a few minor errors were found and corrected.

12.4 Qualified Person Comments

The QPs responsible for reviewing the work conducted by Rogue and conducting the mineral resource estimate have reviewed the material provided by Rogue and found that the data were adequate for the purposes of the mineral resource estimate on the Snow White Project and for inclusion in this Technical Report.

Table 12.2
May, 2018, Summary of the Sample Weight, XRF Results and Specific Gravity Testwork Conducted on the Snow White Project

Weight/Element/ Bulk Density	Weight	LOI	SiO_2	Al_2O_3	Fe_2O_3	MgO	CaO	K_2O	Na_2O	TiO_2	MnO	P_2O_5	Cr_2O_3	V_2O_5	Sum	Bulk Density
Analytical Method	G_WGH79	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	G_PHY03V
Detection Limit	0	-10	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0	0.01
Units	g	%	%	%	%	%	%	%	%	%	%	%	%	%	%	sg
75022	859	0.148	**98.7**	**0.22**	**0.05**	0.02	0.03	0.06	0.02	**<0.01**	<0.01	**<0.01**	<0.01	<0.01	99.2	2.68
75023	904	0.293	**98.2**	**0.51**	**0.05**	0.04	<0.01	0.17	<0.01	**<0.01**	<0.01	**<0.01**	<0.01	<0.01	99.3	2.68
75024	1,500	0.952	**90.4**	**5.15**	**0.97**	0.44	0.26	1.74	0.03	**0.14**	<0.01	**0.04**	<0.01	0.01	100.2	2.71
75025	699	0.331	**98.3**	**0.46**	**0.17**	0.05	0.01	0.15	<0.01	**<0.01**	<0.01	**<0.01**	<0.01	<0.01	99.5	2.69
75027	1,420	0.0696	**99**	**0.13**	**0.01**	0.01	0.01	0.02	<0.01	**<0.01**	<0.01	**<0.01**	<0.01	<0.01	99.2	2.69

Table 12.3
May, 2018, Summary of the ICPMS Results after Multi-Acid Digestion (Ag to Ni) Testwork Conducted on the Snow White Project

Element	Ag	Al	Ba	Ca	Cr	Cu	Fe	K	Li	Mg	Mn	Na	Ni
Analytical Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Detection Limit	0.02	0.01	1	0.01	1	0.5	0.01	0.01	1	0.01	2	0.01	0.5
Units	ppm	%	ppm	%	ppm	ppm	%	%	ppm	%	ppm	%	ppm
75022	0.03	0.1	23	0.02	6	<0.5	0.03	0.05	<1	<0.01	8	0.02	1.5
75023	<0.02	0.26	33	<0.01	6	<0.5	0.04	0.15	1	0.02	6	<0.01	0.8
75024	0.02	2.58	348	0.18	9	4.2	0.65	1.42	16	0.25	59	0.03	3
75025	<0.02	0.23	21	<0.01	7	1	0.12	0.12	1	0.03	8	<0.01	0.8
75027	<0.02	0.05	4	<0.01	6	0.8	<0.01	0.02	<1	<0.01	3	<0.01	0.6

Table 12.4
May, 2018, Summary of the ICPMS Results after Multi-Acid Digestion (P to Co) Testwork Conducted on the Snow White Project

Element	P	S	Sr	Ti	V	Zn	Zr	As	Be	Bi	Cd	Ce	Co
Analytical Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Detection Limit	100	0.01	0.5	0.01	2	1	0.5	1	0.1	0.04	0.02	0.05	0.1
Units	ppm	%	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
75022	<100	<0.01	5.6	<0.01	<2	2	<0.5	<1	<0.1	<0.04	<0.02	0.19	1142
75023	<100	<0.01	1.2	<0.01	5	2	<0.5	<1	0.1	<0.04	<0.02	0.09	1170
75024	177	<0.01	29.8	0.06	41	10	18.9	<1	0.7	0.25	<0.02	5.55	660
75025	<100	<0.01	1.4	<0.01	4	2	0.5	<1	0.1	<0.04	<0.02	0.36	1375
75027	<100	<0.01	0.7	<0.01	<2	<1	<0.5	<1	<0.1	<0.04	<0.02	0.09	1281

Table 12.5
May, 2018, Summary of the ICPMS Results after Multi-Acid Digestion (Cs to Se) Testwork Conducted on the Snow White Project

Element	Cs	Ga	Hf	In	La	Lu	Mo	Nb	Pb	Rb	Sb	Sc	Se
Analytical Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Detection Limit	1	0.1	0.02	0.02	0.1	0.01	0.05	0.1	0.5	0.2	0.05	0.5	2
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
75022	<1	0.5	0.02	<0.02	<0.1	0.03	0.21	<0.1	1.1	1.3	0.06	<0.5	<2
75023	<1	1	<0.02	<0.02	<0.1	<0.01	0.08	<0.1	0.7	7.2	0.05	<0.5	<2
75024	1	9.4	0.53	<0.02	2.2	0.02	3.2	0.1	2.5	104	0.07	1.8	<2
75025	<1	1	0.02	<0.02	0.2	<0.01	8.12	<0.1	1.5	7.3	<0.05	<0.5	<2
75027	<1	0.1	<0.02	0.08	<0.1	<0.01	0.11	<0.1	<0.5	0.7	<0.05	<0.5	<2

Table 12.6
May, 2018, Summary of the ICPMS Results after Multi-Acid Digestion (Sn to Yb) Testwork Conducted on the Snow White Project

Element	Sn	Ta	Tb	Te	Th	Tl	U	W	Y	Yb
Analytical Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Detection Limit	0.3	0.05	0.05	0.05	0.2	0.02	0.05	0.1	0.1	0.1
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
75022	<0.3	<0.05	<0.05	<0.05	<0.2	0.09	<0.05	662	0.2	<0.1
75023	<0.3	<0.05	<0.05	<0.05	<0.2	0.08	<0.05	699	<0.1	<0.1
75024	0.3	<0.05	<0.05	<0.05	1.4	0.51	0.36	593	1.6	0.1
75025	<0.3	<0.05	<0.05	<0.05	<0.2	0.04	<0.05	750	0.1	<0.1
75027	<0.3	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05	661	<0.1	<0.1

Table 12.7
Summary of Reference Impurity Values for Metallurgical Grade Silicon

Reference	Al (ppm)	Ca (ppm)	Fe (ppm)	Mg (ppm)	P (ppm)
ANZAPLAN (2017)	800-2,000	50-200	150-1,000	60-150	20-70
Globe Metallurgy Inc. (2001)	1000.00	200.00	350-500	n/a	40.00

Table extracted from the January, 2018, Technical Report.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

13.1 General Information

There have been a number of metallurgical test studies completed using samples of the massive quartz from the Snow White Project to support the conclusion that it is very high in silica and low in impurities such as aluminum, calcium, iron, phosphorous, and titanium. The low levels of impurities identified from each of the tests are reported to be within the thresholds permissive to the production of metallurgical grade silicon (MG-Si).

The tests conducted on the quartz from the Snow White property include the following:

- In 2000, testwork on a bulk sample testwork was completed by Globe in Niagara Falls, New York, USA for Rapier.
- In 2008 and 2009, bulk samples sent by Verbina to Sitec at Bécancour, Quebec, Canada for testing.
- In 2017, as part of its property acquisition due diligence, Rogue Resources sent two bucket-sized samples for testing to ANZAPLAN in Hirschau, Germany.
- In 2018, eight core samples (three quartz vein samples, three footwall samples and two hanging wall samples) from three drill holes RR-18-14, RR-18-23 and RR-18-24 were sent to ANZAPLAN for testwork to determine the impact of sensor-based sorting and to define a set of recommended cut-off grades for the key elements to assist in the resource estimation process. The testwork was completed in Hirschau, Germany and Tomra in Hamburg, Germany.

13.2 Metallurgical Testing

13.2.1 Globe (2000 and 2001)

In 2000, Rapier delivered an 846 t bulk sample to Globe in Niagara Falls, New York, for metallurgical testing. There was also 43 t of fines delivered to another destination in order to assess its marketability for landscaping or decorative applications. No results from the fines assessment were reported in the 2001 Globe report.

Globe reported no problems with its decrepitation test, and their furnace test of the bulk sample, which comprised feeding a furnace with Snow White material for about 20 days at a rate of around 31 t/d. This yielded good quality silicon metal that met Globe's purity criteria.

Globe assessed the impurities of the shipments of Snow White quartz through both truck and bin sampling. Both sets of data indicated impurity levels typically lower than those required for MG silicon production. The bin data reported in the 2001 Globe report, along with its threshold values for impurity levels of select elements, are presented in Table 13.1. Globe did not provide specifications of the analytical methodology, nor the specifics of how the bin sampling was undertaken, but the fact that it ran the Snow White quartz in isolation in their furnace for a month and yielded "good quality silicon metal" indicates a positive result.

Additional chemical analyses conducted by Globe is found in Rapier's assessment files, but the details on the sampling and analytical methodology were not discussed. In the January, 2018, Technical Report it was "*speculated that these data are from samples derived from the blast holes drilled to extract the bulk sample, but no corroborating information has been ascertained, and the data is being shelved for future reference should more information comes to light.*"

Table 13.1
2001 Globe Bin Sample Results

		Ca (ppm)	Al (ppm)	Ti (ppm)	Fe (ppm)	P (ppm)
Impurity Thresholds						
	Spec 1	200	1,000	100	500	40
	Spec 2	200	1,000	100	350	40
Snow White Quartz (Samples from Bin 12)						
12/01/00		100	800	40	340	10
12/06/00		150	510	20	360	<10
12/08/00		90	600	20	140	10
12/11/00		110	550	20	180	10
12/13/00		100	810	40	240	10
12/18/00		90	430	20	50	<10

Table extracted from the January, 2018, Technical Report.

13.2.2 Sitec Bulk Sampling Testing (2008 and 2009))

In the fourth quarter of 2008, Verbina quarried and processed a 2,900-t bulk sample that was trucked to Bécancour, Quebec for metallurgical testing by Sitec. A follow-up 2,300 t bulk sample was tested in Bécancour in 2009. The detailed results of these tests were not publicly disclosed. However, Verbina reported that Sitec found the material had met its required specifications but required an additional sample to assess the material for updated purity requirements. Verbina reported that Sitec indicated the results of the second bulk sample were positive with regard to the new required levels of impurity for certain elements, and again, no details of the bulk sampling work were identified, such as analytical results, impurity levels, sampling methodology and the nature of bulk sample testing.

13.2.3 ANZAPLAN Bucket Samples (2017)

In 2017, two 25 kg buckets of quartz samples were collected from the blasted rock stockpiles at the property by Mr. Paul Davis for Rogue as part of its property acquisition due diligence procedures. Laboratory-scale thermal stability tests were conducted on the samples at the ANZAPLAN laboratory in Hirschau, Germany, to provide an indication of the suitability of the quartz samples for MG silicon production. Chemical analyses were conducted to indicate the levels of impurities in the quartz samples, which are required to be within certain specified threshold values for MG-Si production.

ANZAPLAN (2017) reported that the ICP analysis was conducted using a standard methodology for trace level element analysis and the results are summarized in Table 13.2. The ICP analysis indicated that both samples show a chemical purity well within, or superior to, the range of typical quartz compositions for MG-Si production.

Table 13.2
Summary of the ICP Analysis for Silica Impurities in 2017 by ANZAPLAN

	Al (ppm)	Fe (ppm)	Ti (ppm)	Ca (ppm)	Mg (ppm)	P (ppm)
Snow White Bucket Samples						
BRS 1	440	41	1.5	21	26	0.4
BRS 2	420	190	1.5	17	21	0.4
Reference Material						
Quartz Feed for MG Silicon	800-2,000	150-1,000	20-70	50-200	60-150	20-70

Table extracted from the January, 2018, Technical Report.

13.3 Chemical Composition for Metallurgical Grade Silicon, to Calculate Cut-off Grades for the Mineral Resources

To assist with the assessment of the cut-off grade to be used in the estimation of mineral resources, Rogue provided ANZAPLAN with the intended chemical composition of the final quartz product for lump material for the silicon metal business (MG-Si), with the specifications as noted in Table 13.3.

Table 13.3
Intended Chemical Composition of Final Quartz Product for Lump Material

Description	Al_2O_3 (%)	Fe_2O_3 (%)	P_2O_5 (%)	TiO_2 (%)
Cut-off Grade	<0.18	<0.045	<0.009	<0.009
On Average Expectation	<0.15	-	-	-

Rogue based this expectation on:

- Extensive market analysis and discussions conducted over the past three years.
- Knowledge of the high-quality quartz currently available on the market.
- An understanding of the Snow White characteristics through past analysis (the 2002 Globe Furnace Test Truck averages were: Al_2O_3=0.17%, Fe_2O_3=0.038%, P_2O_5=0.003% and TiO_2=0.005%).
- Rogue sampling of the outcrop and blasted rock stockpiles from the site.

Given the distribution of granitic xenoliths, diabase and veining within the quartz body and the ability to optically sort this material, it is anticipated that the cut-off grade for the Snow White resource will include higher impurity concentrations than the MG-Si specifications provided in Table 13.3.

13.3.1 ANZAPLAN 2018, Drill Core Sample Testwork

As part of M.Plan's work to prepare a mineral resource estimate on the Snow White Project, ANZAPLAN conducted automated sensor-based sorting tests using three drill core samples from holes RR-18-14, RR-18-23 and RR-18-24. The testwork program included crushing, classification and analytical testing.

Based on Rogue's geological definition each drill core sample was divided into several samples, which were merged into sub-samples noted as hanging wall (HW), quartz vein sample (ORE) and footwall (FW). This resulted in eight samples comprising three ORE, three FW and two HW samples. The goal of this test program was to define a set of cut-off grades for the key elements that can be applied to the resource estimation process. The target application is metallurgical grade silicon.

The eight samples were crushed, classified and underwent sensor-based sorting. The final products were compared to specifications of quartz for MG-Si applications. Finally, the feed composition was matched with the recovery into silicon specifications in order to define the set of cut-off grades.

Reasonable mass recovery was achieved for the ORE samples after crushing, classification and sensor-based sorting, with feed grades of ≤2.4% Al_2O_3, ≤0.53% Fe_2O_3 and ≤0.054% TiO_2. In contrast, only negligible mass recovery was achieved for the FW and HW samples with feed grades of ≥5.1% Al_2O_3; ≥1.8% Fe_2O_3 and ≥0.142% TiO_2. ANZAPLAN recommended therefore to use the specific cut-off grades listed in Table 13.4.

Table 13.4
Proposed Cut-off Grades

Oxide	Cut-off Grade (wt%)
Al_2O_3	2.4
Fe_2O_3	0.53
TiO_2	0.054

Considering that only eight samples were used, the basis for the determination of the cut-off grade is considered to be limited. In addition, using halved NQ drill core led to an increased number of fines during crushing and classification (resulting in a reduced recovery). However, at the same time, a finer product fraction resulted in an increased degree of liberation and thus recovery in sorting. This may lead to a minor deviation between the current testwork and the results obtained during actual operation using lumps.

The results from optical sorting of the ORE samples (within the suggested cut-off grades) were promising. A portion of between 32.9% and 86.0% of the fraction greater than 20 mm was shown to be chemically suitable for MG-Si. In addition, by including dense media separation (DMS) the total recovery increased to 65.5% to 86.0% of fraction greater than 20 mm.

M.Plan notes that for all samples with aluminum, iron and titanium within specification, the phosphate P_2O_5 grades also met the specifications (<0.009% P_2O_5).

ANZAPLAN's 2018 testwork on Rouge's drill core is discussed in detail in the M.Plan report dated August 6, 2018 contained as Appendix 2.

14.0 MINERAL RESOURCE ESTIMATE

14.1 General Description

The Snow White Project mineral resources are estimated based on two adjacent mineralization zones, the Main Quartz Zone (QTZ) of high quality and the Transition Zone (TRN) of medium quality. The two zones are vein type structures disposed contiguously, exposed at surface and approximately bearing 020° and dip to the east. Figure 14.1 shows the location of the two mineralized zones. The Snow White quartz deposit has been estimated assuming an aggregate surface mining scenario, more commonly known as a quarry when industrial minerals are involved.

Figure 14.1
Location of the Snow White Mineralized Zones

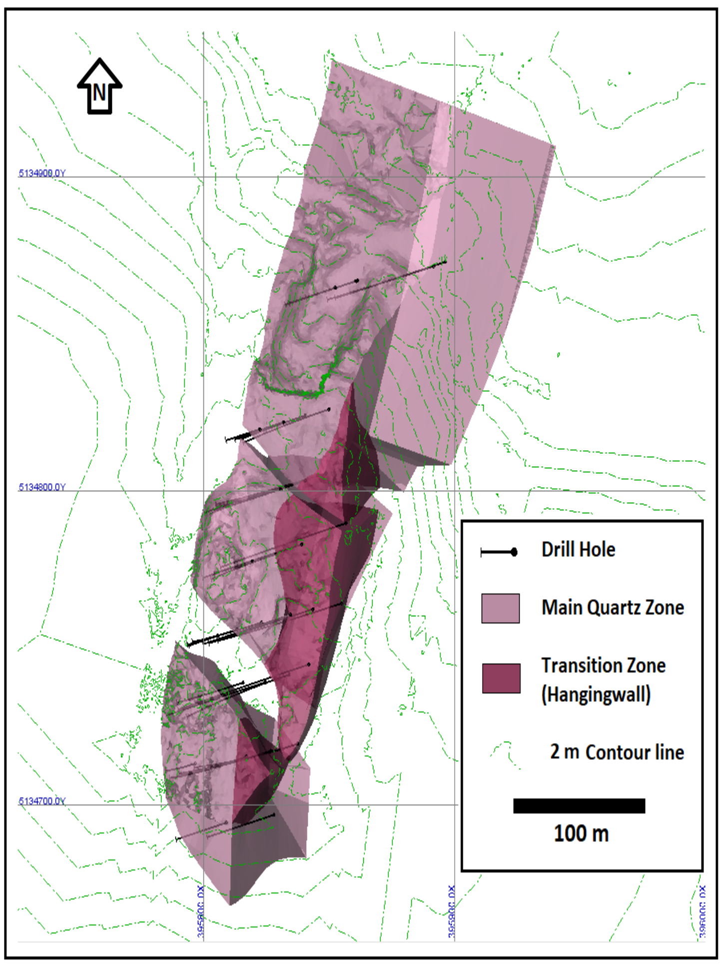


Figure dated August, 2018.

14.2 Mineral Resource Estimate Definition and Procedures

The current mineral resource estimate for the Snow White Project deposits has been conducted following the May, 2014, CIM Definition Standards as required under NI 43-101 regulations. The 2014 CIM Definition Standards are as follows:

> *"Mineral Resources are sub-divided, in order of increasing geological confidence, into Inferred, Indicated and Measured categories. An Inferred Mineral Resource has a lower level of confidence than that applied to an Indicated Mineral Resource. An Indicated Mineral Resource has a higher level of confidence than an Inferred Mineral Resource but has a lower level of confidence than a Measured Mineral Resource."*
>
> *"A Mineral Resource is a concentration or occurrence of solid material of economic interest in or on the Earth's crust in such form, grade or quality and quantity that there are reasonable prospects for eventual economic extraction."*
>
> *"The location, quantity, grade or quality, continuity and other geological characteristics of a Mineral Resource are known, estimated or interpreted from specific geological evidence and knowledge, including sampling."*
>
> *"Material of economic interest refers to diamonds, natural solid inorganic material, or natural solid fossilized organic material including base and precious metals, coal, and industrial minerals."*
>
> *"The term Mineral Resource covers mineralization and natural material of intrinsic economic interest which has been identified and estimated through exploration and sampling and within which Mineral Reserves may subsequently be defined by the consideration and application of Modifying Factors. The phrase 'reasonable prospects for eventual economic extraction' implies a judgment by the Qualified Person in respect of the technical and economic factors likely to influence the prospect of economic extraction. The Qualified Person should consider and clearly state the basis for determining that the material has*

reasonable prospects for eventual economic extraction. Assumptions should include estimates of cut-off grade and geological continuity at the selected cut-off, metallurgical recovery, smelter payments, commodity price or product value, mining and processing method and mining, processing and general and administrative costs. The Qualified Person should state if the assessment is based on any direct evidence and testing."

"Interpretation of the word 'eventual' in this context may vary depending on the commodity or mineral involved. For example, for some coal, iron, potash deposits and other bulk minerals or commodities, it may be reasonable to envisage 'eventual economic extraction' as covering time periods in excess of 50 years. However, for many gold deposits, application of the concept would normally be restricted to perhaps 10 to 15 years, and frequently to much shorter periods of time."

14.2.1 Inferred Mineral Resource

"An Inferred Mineral Resource is that part of a Mineral Resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. Geological evidence is sufficient to imply but not verify geological and grade or quality continuity."

"An Inferred Mineral Resource has a lower level of confidence than that applying to an Indicated Mineral Resource and must not be converted to a Mineral Reserve. It is reasonably expected that the majority of Inferred Mineral Resources could be upgraded to Indicated Mineral Resources with continued exploration."

"An Inferred Mineral Resource is based on limited information and sampling gathered through appropriate sampling techniques from locations such as outcrops, trenches, pits, workings and drill holes. Inferred Mineral Resources must not be included in the economic analysis, production schedules, or estimated mine life in publicly disclosed Pre-Feasibility or Feasibility Studies, or in the Life of Mine

plans and cash flow models of developed mines. Inferred Mineral Resources can only be used in economic studies as provided under NI 43-101."

"There may be circumstances, where appropriate sampling, testing, and other measurements are sufficient to demonstrate data integrity, geological and grade/quality continuity of a Measured or Indicated Mineral Resource, however, quality assurance and quality control, or other information may not meet all industry norms for the disclosure of an Indicated or Measured Mineral Resource. Under these circumstances, it may be reasonable for the Qualified Person to report an Inferred Mineral Resource if the Qualified Person has taken steps to verify the information meets the requirements of an Inferred Mineral Resource."

14.2.2 Indicated Mineral Resource

"An Indicated Mineral Resource is that part of a Mineral Resource for which quantity, grade or quality, densities, shape and physical characteristics are estimated with sufficient confidence to allow the application of Modifying Factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit."

"Geological evidence is derived from adequately detailed and reliable exploration, sampling and testing and is sufficient to assume geological and grade or quality continuity between points of observation."

"An Indicated Mineral Resource has a lower level of confidence than that applying to a Measured Mineral Resource and may only be converted to a Probable Mineral Reserve."

"Mineralization may be classified as an Indicated Mineral Resource by the Qualified Person when the nature, quality, quantity and distribution of data are such as to allow confident interpretation of the geological framework and to reasonably assume the continuity of mineralization. The Qualified Person must recognize the importance of the Indicated

> *Mineral Resource category to the advancement of the feasibility of the project. An Indicated Mineral Resource estimate is of sufficient quality to support a Pre-Feasibility Study which can serve as the basis for major development decisions."*

There are no Measured Mineral Resources estimated for the Snow White Project. Therefore, the CIM definition for Measured Resources has been omitted from this report.

14.2.3 Supporting Data

The Snow White Project database provided to M.Plan comprises 36 drill holes, with a total of 1,910 m of drill core and containing 830 samples. This database was the starting point from which the two mineralized envelopes, QTZ and TRN, were modelled.

For the mineral resource estimation, M.Plan used only the data contained within the wireframes, so that the effective number of drill holes and samples used were 35 drill holes and 831 m of core.

No trench samples or any other source of analytical data were used in the resource estimate.

14.2.4 Topography

The Project topography comes from a digital terrain model (DTM) based on Drone survey data captured by Drew Sommerville of WB Creative, a company hired by Rogue. The survey created a high resolution DTM, however, there were a few issues, such as not enough coverage area and the incorrect global terrain elevation. These issues were solved by M.Plan by merging the new high-resolution topography with an old 10 m contour line survey to cover the missing areas required to do a pit optimization and by adjusting the topographic elevation to the average collar elevation. The resulting final DTM was of sufficient quality to be used in an industrial mineral resource estimate.

14.2.5 Geological and Mineralogical Data

The geological and mineralogical data for the Snow White Project has been gathered during mapping, drilling and metallurgical testwork programs conducted by both government and private industry as noted previously in this report. These data have been reviewed by the QPs for this report and found to be of sufficient quality to be used as the basis for a mineral resource estimate.

14.2.6 Bulk Density or Specific Gravity

Density measurements were taken by local technicians and geologists employed by Rogue. Density measurements were conducted on drill core samples, using the water displacement or buoyancy method. The drill core density measurements were grouped by lithology to calculate an average value for each rock type.

A total of 17 density measurements were delivered to M.Plan, from which average densities were calculated for the major lithologies identified at the Snow White deposit, including waste rock. The overall average density value for the mineralized zone is 2.644 g/cm^2. Table 14.1 summarizes the density measurements.

Table 14.1
Snow White Project Average Density within Each Rock Type

Lithology	Hole-ID	Sample-ID	From (m)	To (m)	Length (m)	Density Value
Diabase Dyke (Intrusive)	RR-18-16	X004305	26.8	26.93	0.13	2.82
	RR-18-16	X004306	30.1	30.15	0.05	2.94
	RR-18-01	X004301	21.1	21.33	0.25	3.00
	Dyke Total Length and Average				**0.43**	**2.939**
Quartz	RR-18-02	X005655	7.2	7.5	0.3	2.64
	RR-18-03	X005681	22.5	24	1.5	2.64
	RR-18-19	X004201	38.5	40.1	1.6	2.64
	RR-18-27	X003445	38.65	40	1.35	2.65
	RR-18-30	X004218	30.1	31.2	1.1	2.65
	RR-18-36	X003521	57	58.5	1.5	2.65
	RR-18-36	X003510	42	43.5	1.5	2.64
	Quartz Total Length and Average				**8.85**	**2.644**
Granite (Waste)	R-18-05	X004302	68.9	69	0.1	2.85
	R-18-05	X004303	41.3	41.55	0.25	2.68
	RR-18-30	X004304	18	18.2	0.2	2.78
	RR-18-03	X005689	28.5	29.6	1.1	2.68
	RR-18-19	X004205	42.2	43.2	1	2.71

Lithology	Hole-ID	Sample-ID	From (m)	To (m)	Length (m)	Density Value
	RR-18-27	X003438	32.3	33.65	1.35	2.79
	RR-18-31	X004247	17.55	18.1	0.55	2.68
	Granite Total Length and Average				**4.55**	**2.727**

14.2.7 General Statistics

Snow White is a deposit consisting largely of quartz (SiO_2) which is different from a typical resource estimation case where the aim is to identify the amount of contained metal within the rock. The Snow White deposit targets the high purity quartz and as a result the maximum allowed cut-off for contaminants such as Al_2O_3, Fe_2O_3, P_2O_5 and TiO_2 are the important economic factor within the deposit. The lower the contaminants the better the quality of the quartz and the higher potential economic value of the quartz.

Basic statistics were performed for the entire database and for selected intervals of the mineralized envelopes. The results are summarized in Table 14.2 and Table 14.3.

Table 14.2
Snow White Global Basic Statistics of Silica and Contaminants

Description	SiO_2 (%)	Al_2O_3 (%)	P_2O_5 (%)	TiO_2 (%)	Fe_2O_3 (%)
Number of samples	830	830	830	830	830
Minimum value	38.06	0.003	0.001	0.001	0.001
Maximum value	99.980	4.663	0.113	0.821	9.932
Mean	88.257	0.517	0.005	0.033	0.464
Median	98.135	0.127	0.001	0.004	0.057
Variance	639.918	0.788	0.000	0.009	1.815
Standard Deviation	25.297	0.888	0.011	0.096	1.347
Coefficient of variation	0.287	1.717	2.037	2.910	2.906
	Correlation Coefficients				
SiO_2	1.00	-0.23	-0.21	-0.28	-0.28
Al_2O_3	-0.23	1.00	0.84	0.84	0.84
P_2O_5	-0.21	0.84	1.00	0.76	0.75
TiO_2	-0.28	0.84	0.76	1.00	0.98
Fe_2O_3	-0.28	0.84	0.75	0.98	1.00

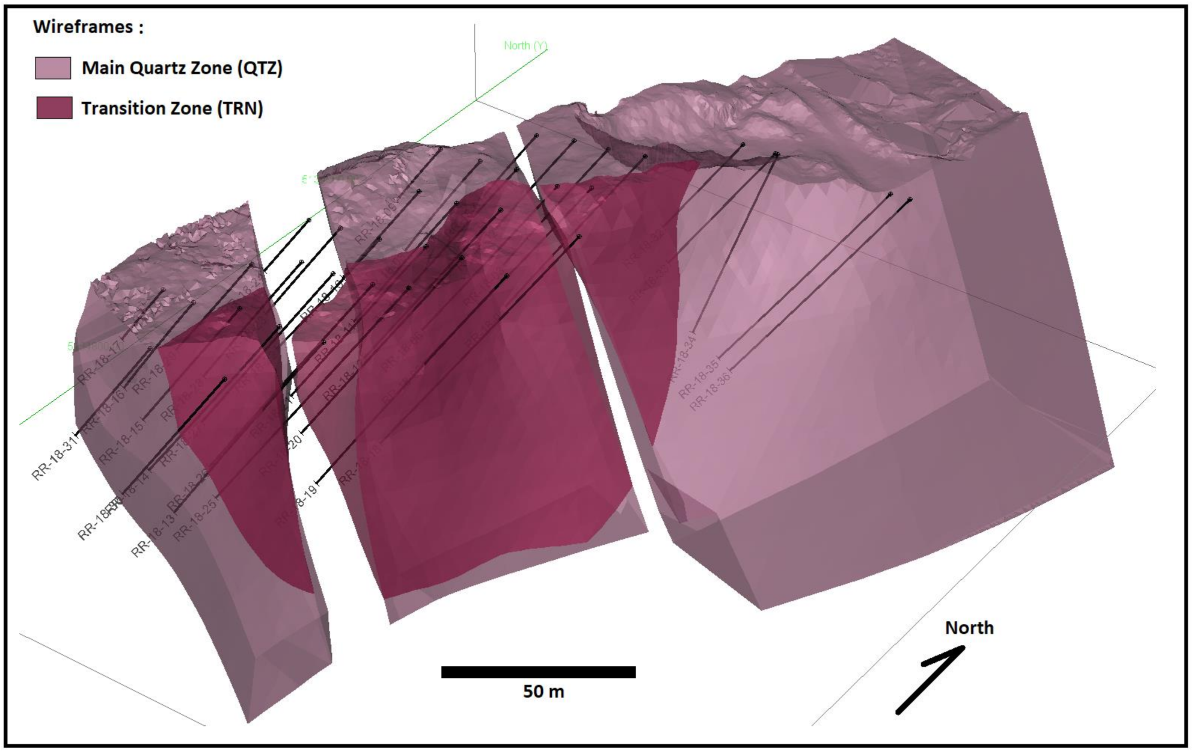
Table 14.3
Snow White Basic Statistics within the Quartz Envelopes

Description	Snow White Mineralized Zones									
Mineralized Zone	QTZ					TRN				
Variable	SiO_2 (%)	Al_2O_3 (%)	P_2O_5 (%)	TiO_2 (%)	Fe_2O_3 (%)	SiO_2 (%)	Al_2O_3 (%)	P_2O_5 (%)	TiO_2 (%)	Fe_2O_3 (%)
Number of samples	615	615	615	615	615	93	93	93	93	93
Minimum value	38.06	0.003	0.001	0.001	0.001	43.140	0.048	0.001	0.002	0.018
Maximum value	99.980	3.948	0.113	0.767	9.687	99.810	4.663	0.062	0.821	9.932
Mean	96.793	0.273	0.003	0.015	0.218	89.137	1.161	0.013	0.078	1.023
Median	98.730	0.095	0.000	0.004	0.045	94.700	0.709	0.006	0.021	0.315
Variance	65.735	0.243	0.000	0.003	0.666	170.933	1.304	0.000	0.024	3.721
Standard deviation	8.108	0.493	0.008	0.059	0.816	13.074	1.142	0.015	0.153	1.929
Coefficient of variation	0.084	1.807	2.624	3.871	3.740	0.147	0.983	1.181	1.968	1.886

14.2.8 Three-Dimensional (3D) Modelling

Rogue provided M.Plan with the lithology logs and surface mapping to use as the basis for interpreting and constructing the mineralized envelopes for the Snow White QTZ and TRN zones. M.Plan and Rogue conducted various review sessions and discussions regarding the envelopes to achieve the final 3D wireframes. M.Plan modelled the two mineralized zones as vein type structures, as well as, the intrusive dacite dykes using Leapfrog Geo®. The wireframes are based on logged and mapped geology and not the grade of the mineralization. Figure 14.2 illustrates the final wireframes for the QTZ and TRN zones.

Figure 14.2
Finalized Wireframes for the Two Snow White Mineral Zones



14.2.9 Data Processing

14.2.9.1 Element to Oxide Conversion

The original ICP assay results provided by Rogue were single element assays i.e., Al%, Fe%, P% and Ti%. M.Plan used conversion factors to calculate the oxide values as follows:

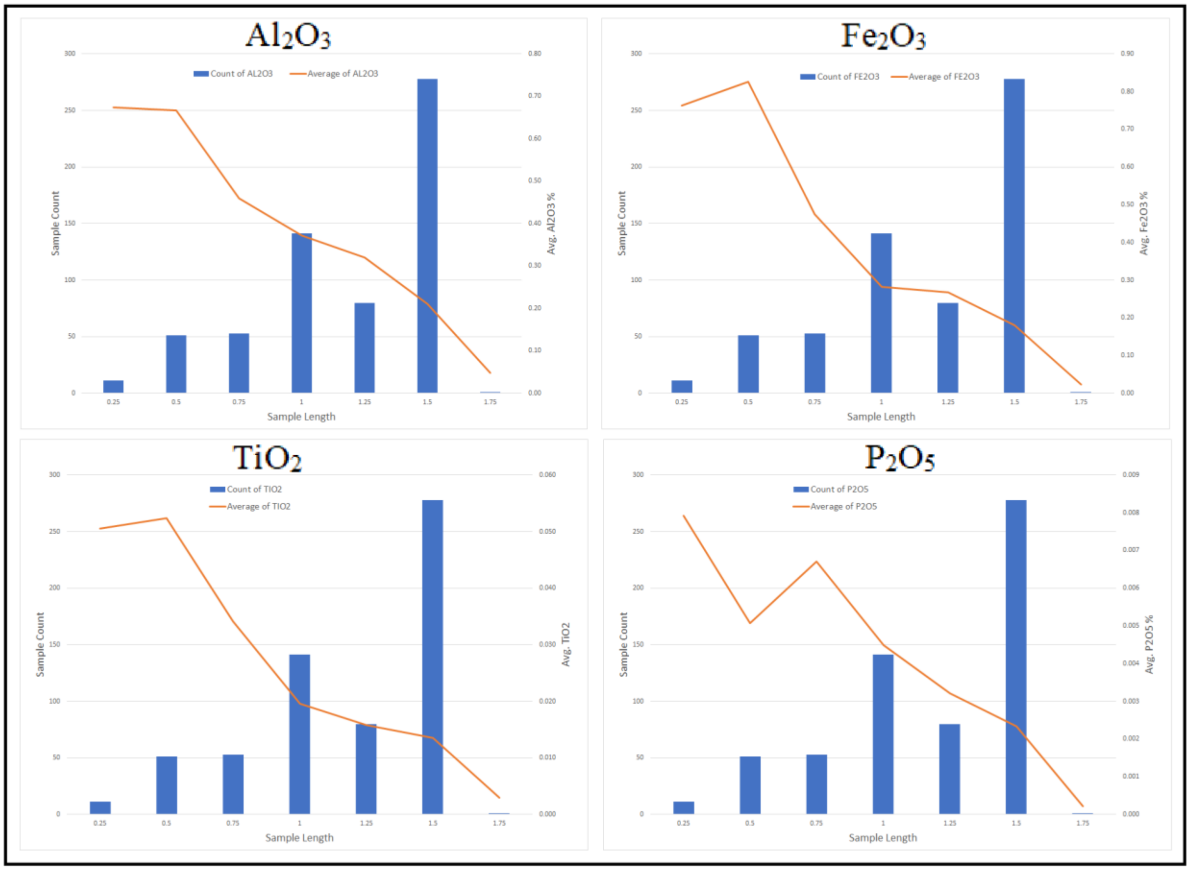
- Al%/1.8895 Al_2O_3%
- Fe%/1.4297 Fe_2O_3%
- P%/2.2916 P_2O_5%
- Ti%/1.6681 TiO_2%

14.2.9.2 High Grade Restriction

All outlier values were carefully scrutinized by M.Plan. However, since the nature of this resource estimate focused on the high purity quartz with low contaminant grades, M.Plan decided that no capping was necessary for the estimate. In addition, it was noted that the carrier of most of the contaminants are the cross-cutting intrusive dacite dykes. This lead M.Plan to undertake other measures of restricting the grade of the contaminants which were related to the search strategy rather than reducing the grade outliers directly.

Furthermore, looking at the ICP raw assays of Al_2O_3, Fe_2O_3, P_2O_5 and TiO_2 versus sample length a strong correlation of short samples to high grade was noted, suggesting that true outliers should be assessed after compositing to constant intervals (Figure 14.3).

Figure 14.3
Contaminants Grade vs Sample Length Charts



14.2.9.3 Compositing

The selected intercepts for the Snow White Project were composited to 1.5-m equal length intervals, with the composite length selected based on the most common original sample length. Table 14.4 summarizes the basic statistics of the composited data.

Table 14.4
Summary of Basic Statistics for 1.5 m Composites

Description	Snow White Mineralized Zones									
Mineralized Zone	QTZ					TRN				
Variable	SiO_2 (%)	Al_2O_3 (%)	P_2O_5 (%)	TiO_2 (%)	Fe_2O_3 (%)	SiO_2 (%)	Al_2O_3 (%)	P_2O_5 (%)	TiO_2 (%)	Fe_2O_3 (%)
Number of samples	472	472	472	472	472	59	59	59	59	59
Minimum value	47.012	0.011	0.001	0.001	0.006	43.140	0.129	0.001	0.004	0.062
Maximum value	99.920	3.699	0.054	0.673	8.358	99.044	4.012	0.062	0.821	9.932
Mean	96.896	0.257	0.003	0.016	0.222	89.795	1.112	0.012	0.073	0.940
Median	98.747	0.097	0.000	0.004	0.046	93.691	0.795	0.007	0.024	0.332
Variance	49.715	0.183	0.000	0.003	0.558	112.356	0.850	0.000	0.019	2.817
Standard deviation	7.051	0.428	0.006	0.055	0.747	10.600	0.922	0.012	0.137	1.678
Coefficient of variation	0.073	1.664	2.181	3.505	3.366	0.118	0.829	1.069	1.880	1.785

14.2.10 Mineral Deposit Variography

Variography is the analysis of spatial continuity of the grade for the commodity of interest. However, in the case of the Snow White deposit there are no grades to chase but rather areas of high contaminates to eliminate. Despite this, M.Plan decided to perform various iterations using Down the Hole variograms and 3D variograms, in order to identify the most appropriate parameters to interpolate the contaminant grades within the Snow White deposit.

Variograms must be performed on regular coherent shapes with geological continuity support. First, down-the-hole variograms were constructed for each contaminant, to establish the nugget effect to be used in the modelling of the 3D variograms. Figure 14.4 to Figure 14.7 show the resulting major variograms of the contaminants within the Main Zone (QTZ).

Figure 14.4
Snow White Main Zone (QTZ) Al_2O_3% – Major Variogram

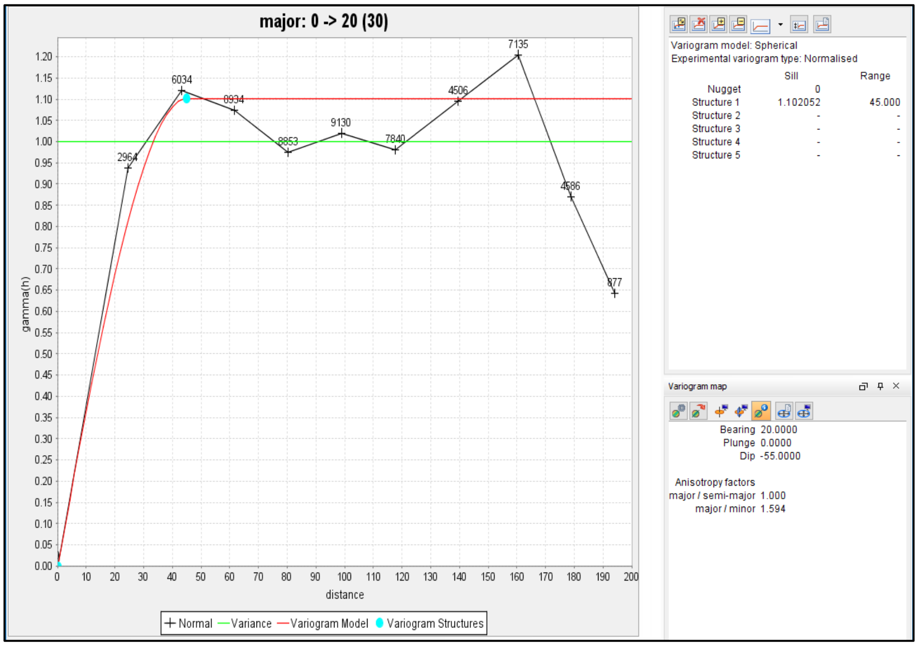


Figure 14.5
Snow White Main Zone (QTZ) Fe_2O_3% – Major Variogram

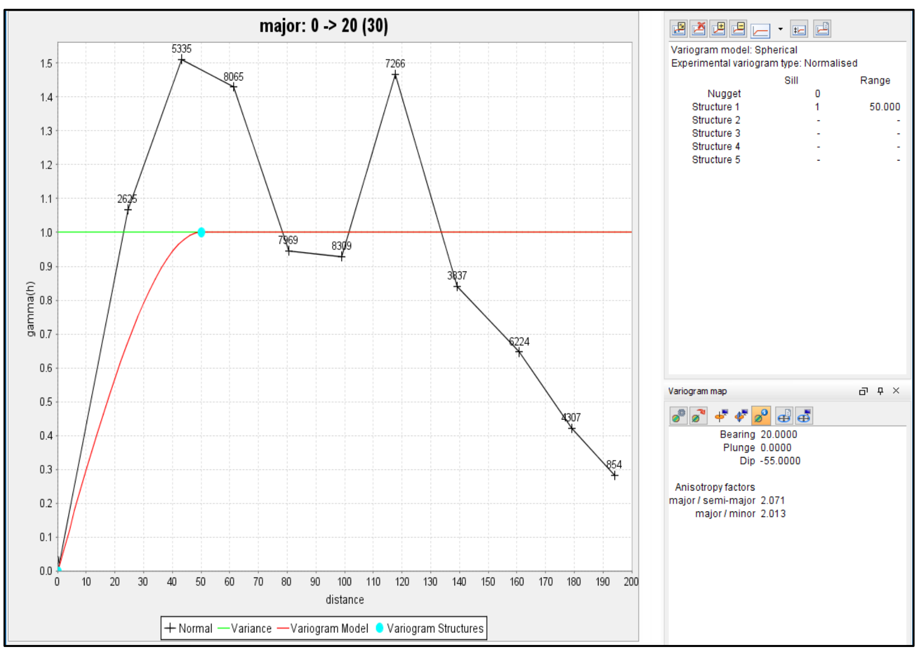


Figure 14.6
Snow White Main Zone (QTZ) P_2O_5% – Major Variogram

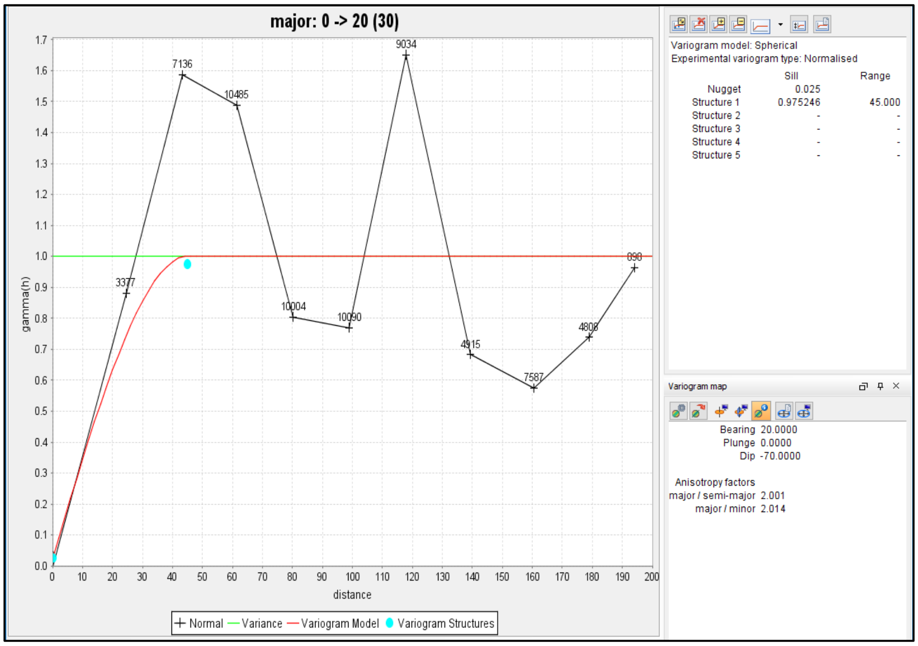
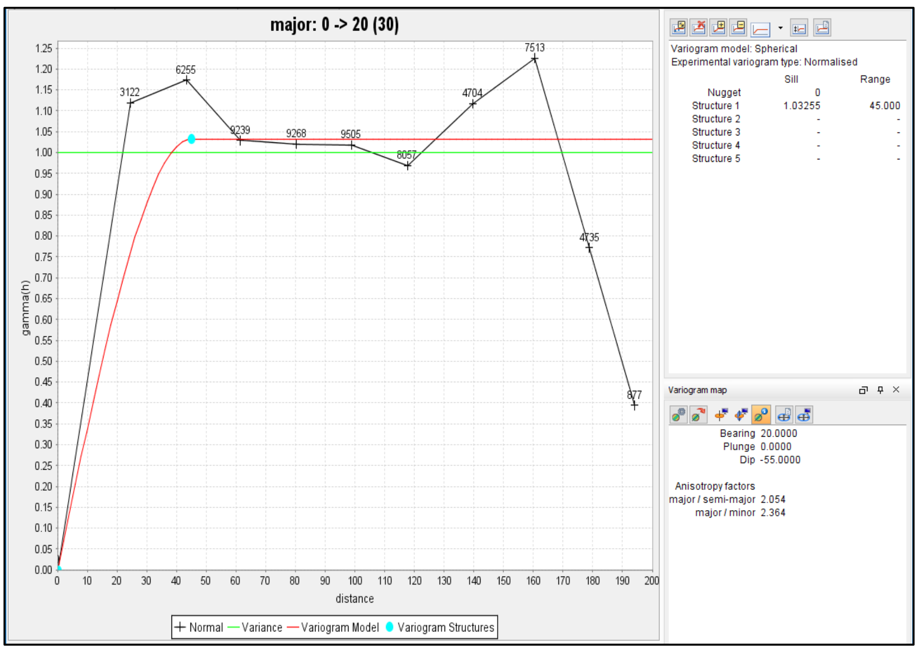


Figure 14.7
Snow White Main Zone (QTZ) TiO_2% – Major Variogram



No meaningful variogram models were achieved to support any Kriging interpolation methods, hence, the Snow White deposit silica and contaminant grades were interpolated using the inverse distance squared (ID^2) method. However, the results of the variography were used to gain a better understanding of the search ranges and anisotropy. More details related to this discussion can be found in Section 14.3.2 Search Strategy and Interpolation.

14.2.11 Continuity and Trends

The geometry of the Snow White QTZ and TRN zones are well defined by the exposed geology in the outcrops and drill hole intercepts which allow for confidence when interpreting the continuity of the quartz along strike and down dip. Both the QTZ and TRN zone have a bearing of 020° and an average dip of -68° to the east.

The drilling is closely spaced with most holes within a 20 m centre spacing. Despite the intrusive dacitic dyke structures that cross-cut and split the QTZ and TRN zones the trend of the quartz is clear and the continuity of the quartz is well demonstrated.

14.3 Mineral Resource Estimate

The economic interest of the Snow White Project relies on the value of the high purity quartz and the low level of contaminants. The maximum cut-off grades for the various contaminants as identified by the testwork are <2.4% Al_2O_3, <0.53% Fe_2O_3 and <0.054% TiO_2. Although testwork was conducted for phosphorous, the testwork indicated the values were so low that a cut-off grade was not identified in the current testwork and therefore it is not noted in the resource estimate. . Finally, the grade of the silica (SiO_2) was estimated to report the overall silica grade of the saleable quartz.

14.3.1 Block Model

A block model was constructed to constrain the rock types, contaminant grades and density. The data for the block model is summarized in Table 14.5.

Table 14.5
Information Summary of the Snow White Project Block Model

Description	Resource Block Model (QTZ and TRN)
Model Dimension X (m)	280
Model Dimension Y (m)	325
Model Dimension Z (m)	120
Origin X (Easting)	395,720
Origin Y (Northing)	5,134,650
Origin Z (Upper Elevation)	340
Rotation (º)	0
Block Size X (m) – Across Strike	2
Block Size Y (m) – Along Strike	5
Block Size Z (m) – Down Dip	5

14.3.2 Search Strategy and Interpolation

A set of parameters were derived primarily from the geology and variography in order to interpolate the grades of the contaminants within the blocks. A summary of the Snow White Project ID^2 interpolation parameters is contained in Table 14.6.

Table 14.6
Snow White Project, ID^2 Interpolation Parameters

Rock[1] Code(s)	Oxide	Pass	Orientation			Search Parameters					
			Az (°)	Plunge (°)	Dip (°)	Range Major Axis (m)	Range Semi-Major Axis (m)	Range Minor Axis (m)	Minimum Samples	Maximum Samples	Maximum Samples per Hole
10 / 30	Al_2O_3	1	320	0	-70	45	30	10	6	8	2
10 / 30	Al_2O_3	2	320	0	-70	90	60	20	4	8	2
10 / 30	Fe_2O_3	1	320	0	-70	45	30	10	6	8	2
10 / 30	Fe_2O_3	2	320	0	-70	90	60	20	4	8	2
10 / 30	TiO_2	1	320	0	-70	45	30	10	6	8	2
10 / 30	TiO_2	2	320	0	-70	90	60	20	4	8	2
10 / 30	SiO_2	1	55	0	-50	45	45	10	6	8	2
10 / 30	SiO_2	2	55	0	-50	90	90	20	4	8	2

[1]Note: Rock codes Snow White Main Quartz – QTZ (10), Transition Zone – TRN (30).

14.3.3 Prospects for Economic Extraction

This mineral resource has been constrained by a pits hell using economic assumptions based on an open pit mining scenario. The pit shell is conceptual in nature and based on the Lerchs-Grossman algorithm using Geovia Whittle™ software.

The mineral resource estimate and open pit optimization have been prepared with some reference to surface constraints such as public infrastructure, a 30 m buffer from lakes and streams and the water table as specified in the quarry licence.

The Snow White Quartz body (QTZ and TRN) has been evaluated using only quartz material that meets the specified contaminant cut-off grades as described previously.

Operating costs were supplied by Rogue. It is M.Plan's opinion that the costs are reasonable, but they were not developed from first principles and are considered conceptual in nature.

For the open pit scenario, the maximum pit slope angle was set at 55°.

Table 14.7 summarizes the open pit economic assumptions upon which the resource estimate for the Snow White Project is based.

Table 14.7
Summary of the Snow White Project Economic Assumptions for the Conceptual Open Pit Scenario

Description	Units	Value
Quartz Product Price	CAD/t	85.00
Mining Cost (Quartz and Waste)	CAD/t	5.50
Processing Cost (Crushing)	CAD/t	7.85
Processing Cost (Optical Sorting)	CAD/t	12.35
General & Administration	CAD/t	2.00
Quartz Recovery (Sorter)	%	90.00
Overall Pit Slope Angle	o	55.00

The open pit parameters noted above were input into the pit optimization software and a series of nested pit shells representing varying revenue factors (quartz prices) were generated.

The pit optimization was conducted in two stages, first above the water table (aggregate licence already permitted) and second, below the water table. The water table was set by Tulloch in 2000, at an elevation of 303 masl. The current aggregate permit allows for mining material down to within 2 m above water table level, that reference elevation is 305 masl.

The stripping ratios for the optimized pit shell, at a quartz price of CAD85.00/t, is 0.4 for the pit above the water table and 1.34 for a combined pit which considers all material both above and below the water table.

14.3.4 Pit Optimization Results – Nested Pit Shells

The preliminary economic constraints applied to the block model for the Snow White deposit present a robust performance in the pit-by-pit graphs when changing the revenue factor. Figure 14.8 shows the Snow White pit-by-pit graph using only the material above the water table as defined by a pit shell. Figure 14.9 shows the Snow White pit by pit graph showing all of the material above and below the water table as defined by a pit shell.

Figure 14.8
Snow White Pit by Pit Graph of the Material Above the Water Table in a Pit

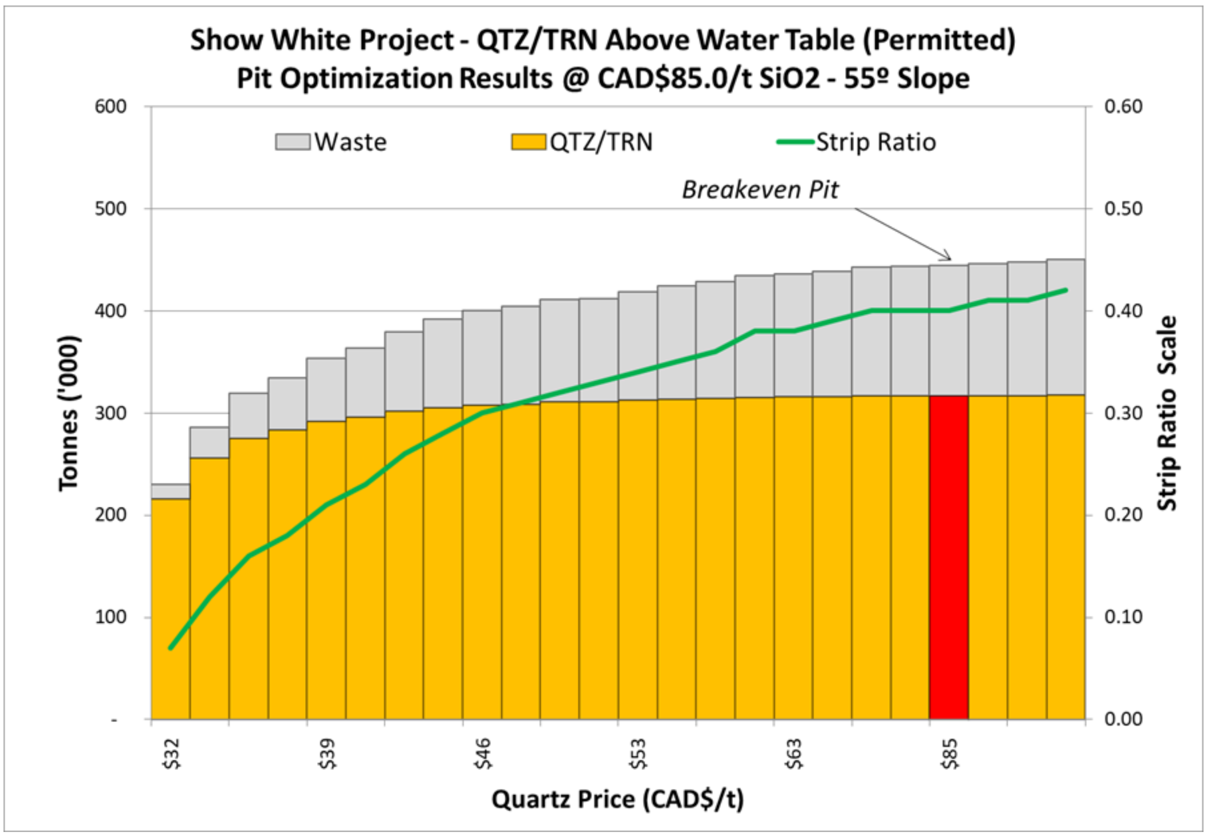
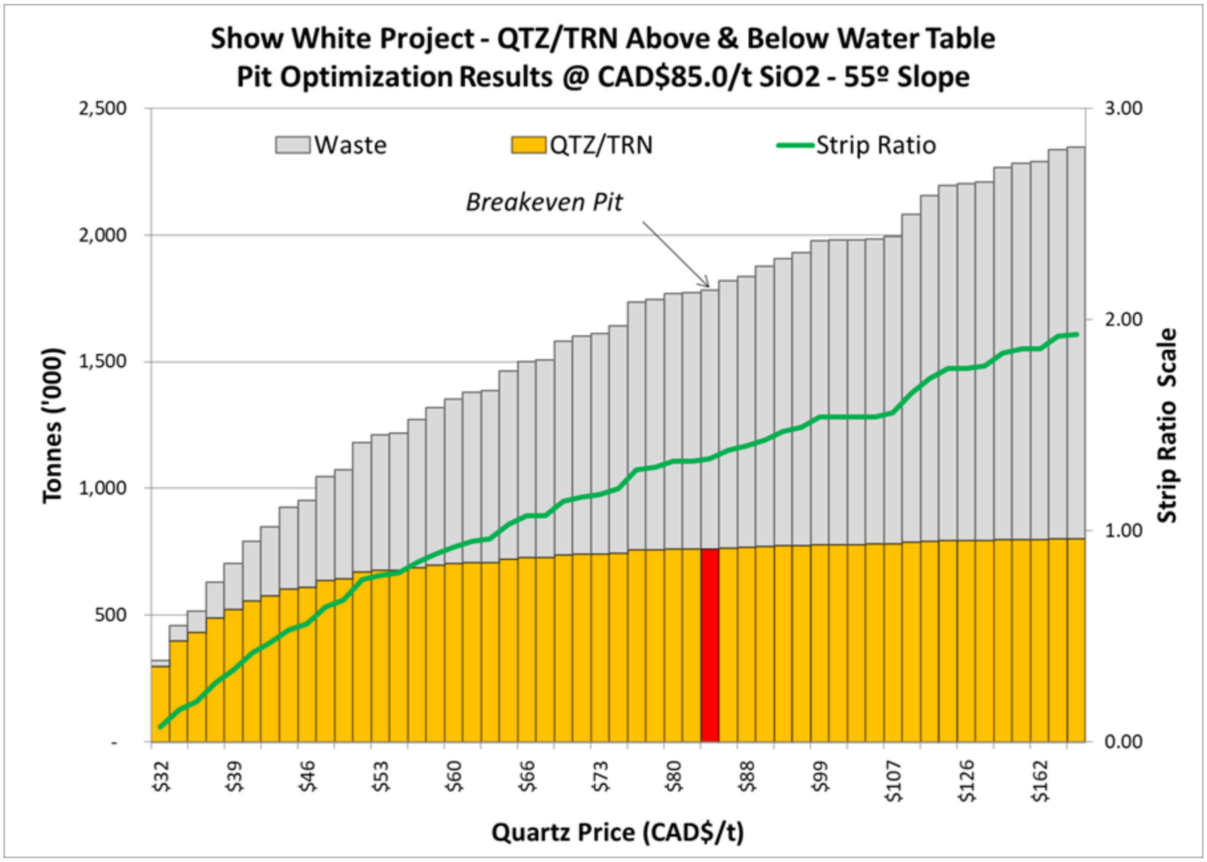


Figure 14.9
Snow White Pit by Pit Graph of all Material Above and Below the Water Table in a Pit



14.3.5 Classification of the Mineral Resource Estimate

M.Plan has classified the mineral resource estimate for the Snow White Project into the Indicated and Inferred categories. No Measured resources have been identified, at this time. The material in the Transition Zone (TRN) is entirely classified as Inferred due to sampling gaps for the contaminants.

The approach to classification of the indicated resources was to select blocks within 20 m from the closest drill hole and then to conduct a visual review of the data to obtain a coherent shape based on the well identified continuity of the southern portion of the QTZ zone. Where the continuity of the zone was not well demonstrated the material remained in the inferred category.

14.4 MINERAL RESOURCE STATEMENT FOR THE SNOW WHITE PROJECT

The mineral resource statement for the Snow White Project is summarized in Table 14.8.

Table 14.8
In-pit Mineral Resources for the Snow White Project as of August 4, 2018

Entire Deposit (QTZ and TRN Zones)						
Source/Phase	**Category**	**Metric Tonnes**	**SiO_2 (%)**	**TiO_2 (%)**	**Al_2O_3 (%)**	**Fe_2O_3 (%)**
Permitted (Above Water Table, 305 masl)	Indicated	236,000	96.89	0.008	0.195	0.113
	Inferred	75,000	92.91	0.010	0.384	0.177
Unpermitted (Below Water Table, 305 masl)	Indicated	251,000	97.21	0.010	0.254	0.149
	Inferred	196,000	94.89	0.009	0.361	0.195
Total	**Indicated**	**486,000**	**97.05**	**0.009**	**0.225**	**0.131**
Total	**Inferred**	**271,000**	**94.34**	**0.009**	**0.368**	**0.190**

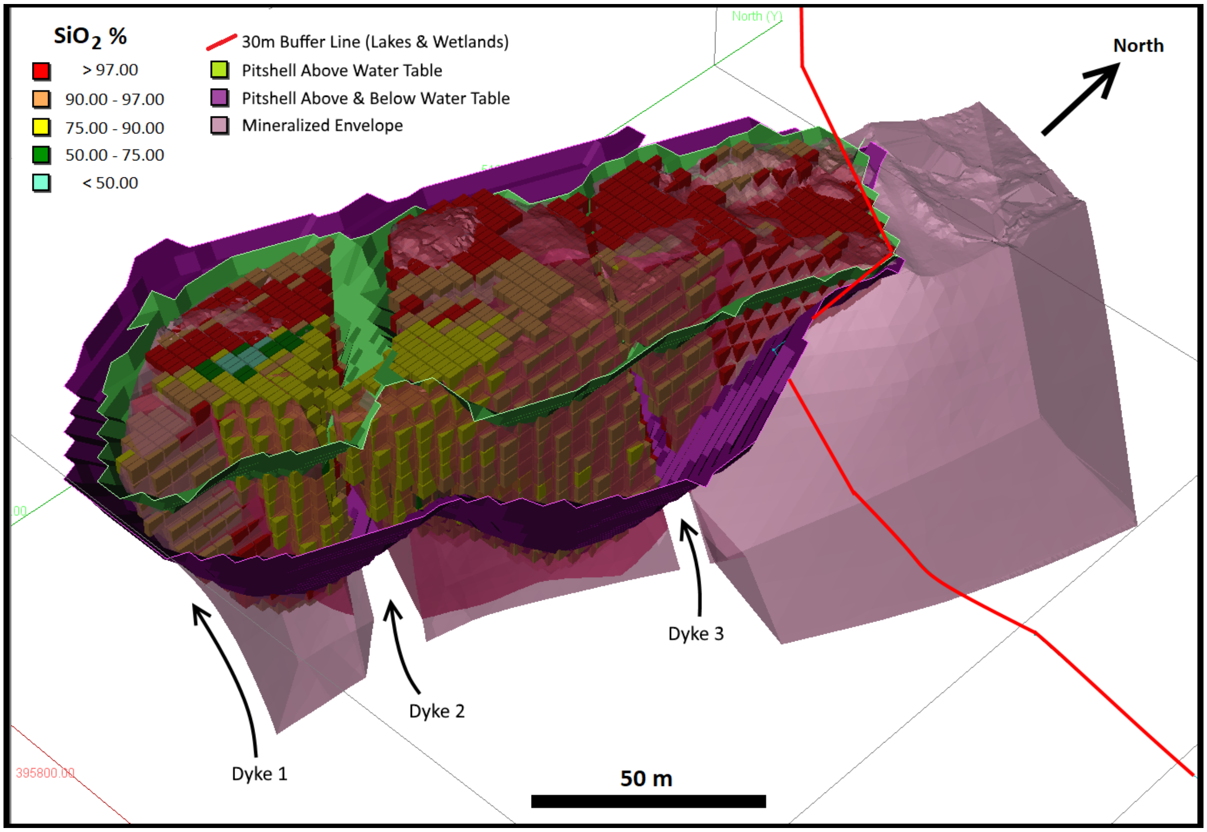
Mineral resources which are not mineral reserves do not have demonstrated economic viability. At the present time, M.Plan does not believe that the mineral resource estimate is materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

M.Plan considers that the resource estimate for the Snow White Project has been reasonably prepared and conforms to the current CIM standards and definitions for estimating mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, M.Plan does not consider them to be material.

The mineral resources summarized in Table 14.8 above are shown graphically in Figure 14.10.

Figure 14.10
Snow White Resource Blocks Isometric View



14.5 MINERAL RESOURCE VALIDATION

M.Plan has validated the block model using statistical comparison and visual inspection.

14.5.1 Statistical Comparison

The average grade of the composites within the mineralized envelope were compared to the average grade of all of the blocks. Table 14.9 summarizes the results of the comparison.

The average composite grades and the block grades compare well providing confidence in the overall estimate.

Table 14.9
Snow White 1.5 m Composites versus Blocks

Attribute	Main Quartz Zone (QTZ)		Transition Zone (TRN)	
Source	1.5-m Comps	Block Model	1.5-m Comps	Block Model
SiO_2	96.896	97.47	89.795	91.21
Al_2O_3	0.257	0.209	1.112	0.802
Fe_2O_3	0.222	0.139	0.94	0.717
TiO_2	0.003	0.007	0.073	0.029

14.5.2 Visual Inspection

The model blocks and the drill hole intercepts were reviewed section by section to ensure the blocks were honouring the drill hole data. Figure 14.11 and Figure 14.12 are typical vertical sections for the Snow White deposit. The degree of agreement between the block grades and the drill intercepts is satisfactory.

Figure 14.11
Snow White Vertical Section 20NW – Looking Northwest

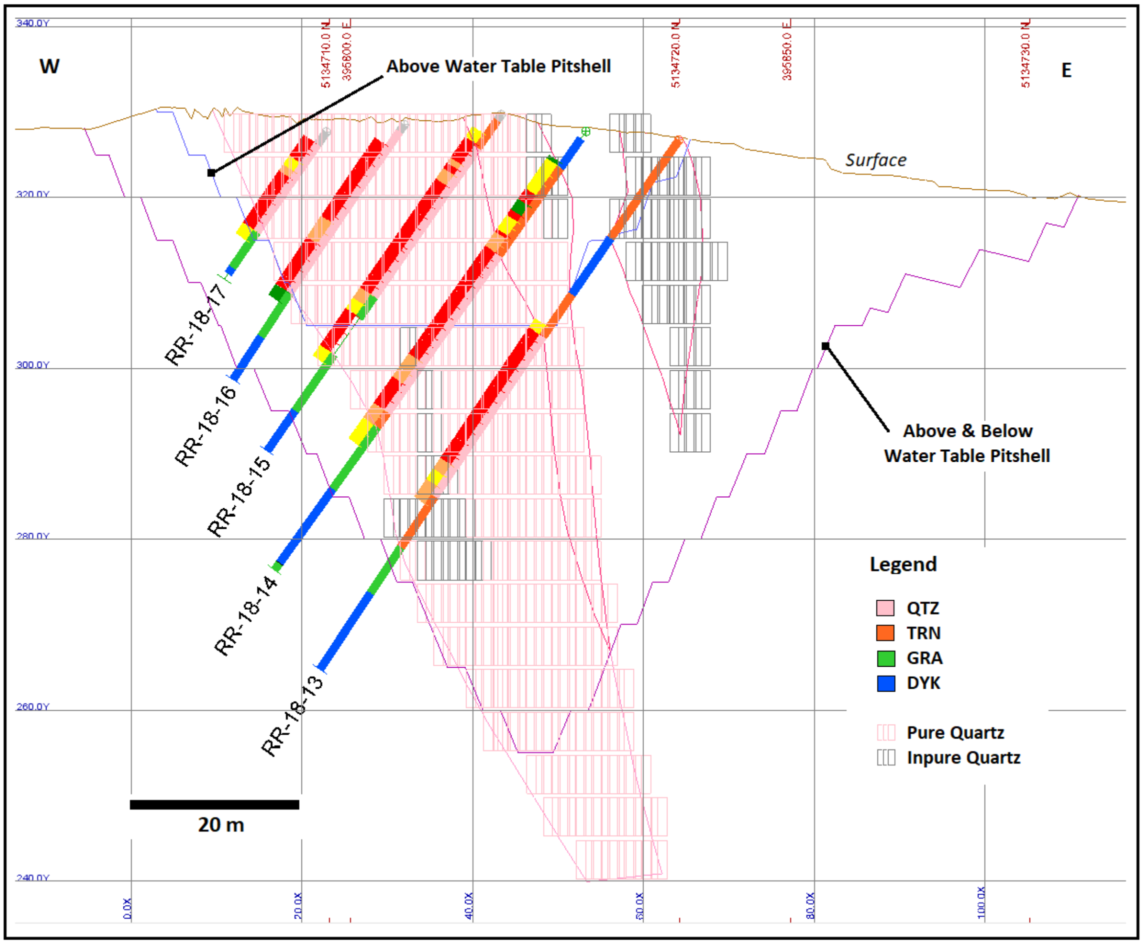
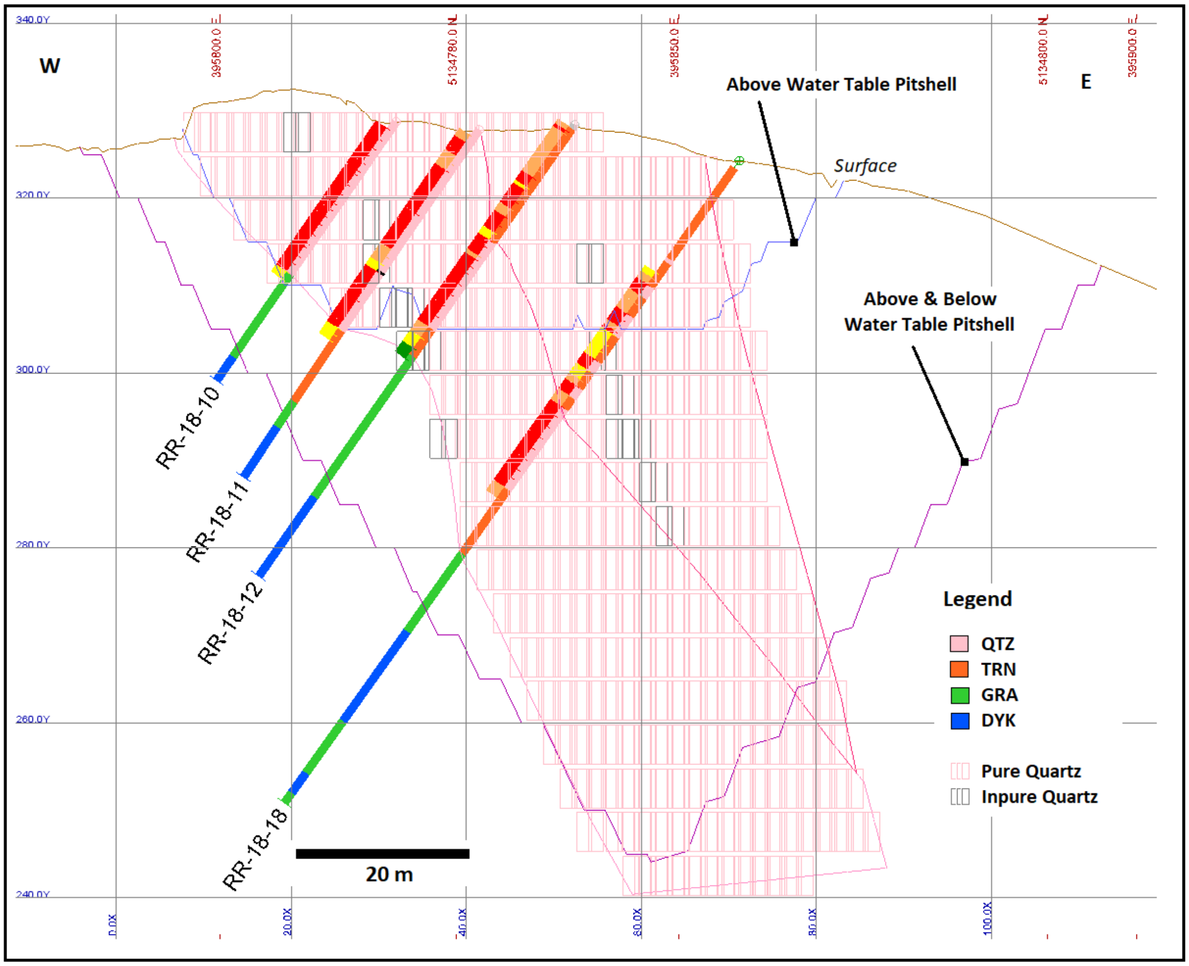


Figure 14.12
Snow White Vertical Section 50NW – Looking Northwest



TECHNICAL REPORT SECTIONS NOT REQUIRED

The following sections which form part of the NI 43-101 reporting requirements for advanced projects or properties are not relevant to the current Technical Report for the Snow White Silica Project.

15.0 MINERAL RESERVE ESTIMATES

16.0 MINING METHODS

17.0 RECOVERY METHODS

18.0 PROJECT INFRASTRUCTURE

19.0 MARKET STUDIES AND CONTRACTS

20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

21.0 CAPITAL AND OPERATING COSTS

22.0 ECONOMIC ANAYSIS

23.0 ADJACENT PROPERTIES

The quartz (silica) deposit discovered to date is contained entirely within the boundaries of the Snow White property and there are no directly adjacent properties which affect the either the deposit itself or the quarrying of the deposit controlled by Rogue.

24.0 OTHER RELEVANT DATA AND INFORMATION

All relevant data and information regarding Rogue's Snow White Project are included in other sections of this Technical Report.

M.Plan is not aware of any other data that would make a material difference to the quality of this Technical Report or make it more understandable, or without which the report would be incomplete or misleading.

25.0 INTERPRETATION AND CONCLUSIONS

25.1 Property

Rogue's Snow White Project is located approximately 27 km northwest of the town of Massey, 105 km west of the city of Sudbury and 500 km north-northwest of Toronto.

On October 20, 2017, Rogue agreed to purchase the Snow White Project in exchange for: a cash payment and issuance of Rogue common shares at closing, plus additional post-closing cash payments. Rogue's October 20, 2017, press release stated that the property was comprised of two staked mining claims representing 96 ha, but Rogue and the vendor subsequently agreed to add an additional staked mining claim to the north, adding an additional 64 ha to the property for a total of 160 ha. However, none of the remaining terms of the acquisition agreement were altered by the addition of the additional mining claim.

On April 10, 2018, the Province of Ontario converted the ground staked mining claims (legacy claims) and transformed them into one or more cell or boundary claims on the provincial grid. Therefore, the current Snow White property now is comprised of 10 claim units within eight mining claims totaling approximately 149 ha and an overlying quarry licence.

On June 18, 2018, Rogue announced an agreement to amend the payment terms for the Snow White quartz project. The common shares to be issued over the Payment Period and the 2% net return royalty remain unchanged from the original acquisition agreement.

25.2 Exploration

Rogue undertook its initial drill program between May 1, 2018 and June 3, 2018 on the Main Zone quartz unit. The diamond drill program consisted of 36 holes for a total of 1,910 m.

The drill program was designed to define the geometry, width, depth extension and quality of that portion of the quartz unit located primarily above the water table at 303 masl. Drilling has identified that the Main Zone quartz mineralization extends along a strike length of 225 m and remains open both along strike and at depth.

The results of the 2018 drill program demonstrated the continuity of the quartz mineralization and assisted in identifying the distribution of the impurities within the unit (Al, Fe, Ti, Ca, and P). Drilling confirmed the association of higher impurity content with increased content of granitic inclusions and alteration associated with contacts with the mafic intrusions.

In 2018, eight core samples (three mineralized samples, three footwall samples and two hanging wall samples) from three drill holes RR-18-14, RR-18-23 and RR-18-24 were sent to ANZAPLAN for testwork to determine the impact of sensor-based sorting and to define a set of recommended cut-off grades for the key elements to assist the resource estimation process.

The data obtained from the 2018 drilling campaign along with further metallurgical work conducted by ANZAPLAN has allowed M.Plan to undertake an initial mineral resource estimate for the Main Zone at the Snow White Project.

25.3 MINERAL RESOURCE ESTIMATE

25.3.1 Discussion and Parameters

The Snow White Project mineral resources in the Main Zone are estimated based on two mineralization zones, the Main Quartz Zone (QTZ) of high quality and the Transition Zone (TRN) of medium quality. The two zones are vein type structures disposed contiguously, exposed at surface and approximately bearing 020° and dipping to the east. The Snow White quartz deposit has been estimated assuming an aggregate surface mining scenario, more commonly known as a quarry mine.

The Snow White Project database provided to M.Plan comprises 36 drill holes, with a total of 1,910 m of drill core and containing 830 samples. This database was the starting point from which the two mineralized envelopes, QTZ and TRN, were modelled.

For the purpose of mineral resource estimation, M.Plan only used the data contained within the wireframes, so that the effective number of drill holes and samples used were 35 drill holes and 831 m of core.

No trench samples or any other samples were used in the resource estimate.

A total of 17 density measurements were delivered to M.Plan, from which average densities were calculated for major lithologies at the Snow White deposit, including waste rock. The overall average density value for the mineralized zone is 2.644 g/cm^2.

Snow White is a deposit consisting largely of quartz (SiO_2) which is different from a typical resource estimation case where the aim is to identify the amount of contained metal within the rock. The Snow White deposit targets the high purity quartz and as a result the maximum allowed cut-off for contaminants such as Al_2O_3, Fe_2O_3, P_2O_5 and TiO_2 are the important economic factor within the deposit. The lower the contaminants the better the quality of the quartz and the higher potential economic value of the quartz. Basic statistics were performed for the entire database and for selected intervals of the mineralized envelopes.

Rogue provided M.Plan with the lithology logs and surface mapping to use as the basis for interpreting and constructing the mineralized envelopes for the Snow White QTZ and TRN zones. M.Plan and Rogue conducted various review sessions and discussions regarding the envelopes to achieve the final 3D wireframes. M.Plan modelled the two mineralized zones as vein type structures, as well as, the intrusive dacite dykes using Leapfrog Geo®. The wireframes are based on logged and mapped geology and not the grade of the mineralization.

The selected intercepts for the Snow White Project were composited to 1.5-m equal length intervals, with the composite length selected based on the most common original samples length.

No meaningful variogram models were achieved to support any Kriging interpolation methods, hence, the Snow White deposit silica and contaminants were interpolated by ID^2 method.

The geometry of the QTZ and TRN zones are well defined by geology in outcrops and drill holes intercepts giving enough support to be confident on its continuity along strike and down dip, both QTZ and TRN have a 020° bearing and dipping approximately -68° to the east.

The drilling is primarily spaced within 20 m centres and the quartz mineralization trends are clear in the Snow White deposit, despite the intrusive dacitic dyke structures that cross-cut and split the QTZ and TRN, the continuity of the quartz body is well demonstrated.

25.3.2 Mineral Resource Estimation

The economic interest of the Snow White Project relies on the high purity quartz that is within the maximum cut-off grade for the contaminants as specified by metallurgical work conducted by ANZAPLAN. Those limits are <2.4% Al_2O_3, <0.53% Fe_2O_3 and <0.054% TiO_2. Although P_2O_5 was present, it was not used in the selection of the cut-off criteria due to its very low presence which was well below the cut-off grade. Finally, the grade of the silica (SiO_2) was estimated to report the overall silica grade of the saleable quartz.

25.3.2.1 Block Model

A block model was constructed to contain the rock types, contaminant grades and density. A summary of the definition data of the block model is shown in Table 25.1.

Table 25.1
Summary of the Snow White Project Block Model

Description	Resource Block Model (QTZ & TRN)
Model Dimension X (m)	280
Model Dimension Y (m)	325
Model Dimension Z (m)	120
Origin X (Easting)	395,720
Origin Y (Northing)	5,134,650
Origin Z (Upper Elevation)	340
Rotation (º)	0
Block Size X (m) – Across Strike	2
Block Size Y (m) – Along Strike	5
Block Size Z (m) – Down Dip	5

25.3.2.2 Prospects for Economic Extraction

This mineral resource has been constrained by a pit shell using economic assumptions of an open pit mining scenario. The pit shell is conceptual in nature and are based on the Lerchs-Grossman algorithm using Geovia Whittle™ software.

The mineral resource estimate and open pit optimization have been prepared with some reference to surface constraints like public infrastructure as there is a 30 m buffer from lakes and streams as designated by the quarry permit and the water table is noted as there are different permitting requirements based on whether it is below or above the water table.

The Snow White Quartz body (QTZ and TRN) has been evaluated using only quartz material that meet the contaminants selection criteria described in Section 14.3.

Operating costs were supplied by Rogue. It is the QP's opinion that the costs for the purposes of the mineral resources are considered to be reasonable.

For the open pit scenario, the maximum pit slope angle was set at 55°.

Table 25.2 summarizes the open pit economic assumptions upon which the resource estimate for the Snow White Project is based.

Table 25.2
Summary of the Snow White Project Economic Assumptions for the Conceptual Open Pit Scenario

Description	Units	Value
Quartz Product Price	CAD/t	85.00
Mining Cost (Quartz and Waste)	CAD/t	5.50
Processing Cost (Crushing)	CAD/t	7.85
Processing Cost (Optical Sorting)	CAD/t	12.35
General & Administration	CAD/t	2.00
Quartz Recovery (Sorter)	%	90.00
Overall Pit Slope Angle	°	55.00

The open pit parameters noted in Table 25.2 were input into the pit optimization software and a series of nested pit shells representing varying revenue factors (quartz prices) were generated.

The pit optimization was done in two stages, first above water table (aggregate already permitted) and second, below water table. The water table was set by

Tulloch in 2000, at an elevation of 303 masl and current aggregate permit allows to mine material 2 m above water table. The water table reference elevation is 305 masl.

M.Plan has classified the mineral resource estimate of the Snow White Project in the Indicated and Inferred category, no Measured resource are declared at this time, the Transition Zone (TRN) is entirely Inferred due to sampling gaps of the contaminants.

The mineral resource statement for the Snow White Project is summarized in Table 25.3.

Table 25.3
In-pit Mineral Resources for the Snow White Project as of August 4, 2018

Entire Deposit (QTZ and TRN Zones)						
Source/Phase	**Category**	**Metric Tonnes**	**SiO_2 (%)**	**TiO_2 (%)**	**Al_2O_3 (%)**	**Fe_2O_3 (%)**
Permitted (Above Water Table, 305 masl)	Indicated	236,000	96.89	0.008	0.195	0.113
	Inferred	75,000	92.91	0.010	0.384	0.177
Unpermitted (Below Water Table, 305 masl)	Indicated	251,000	97.21	0.010	0.254	0.149
	Inferred	196,000	94.89	0.009	0.361	0.195
Total	**Indicated**	**486,000**	**97.05**	**0.009**	**0.225**	**0.131**
Total	**Inferred**	**271,000**	**94.34**	**0.009**	**0.368**	**0.190**

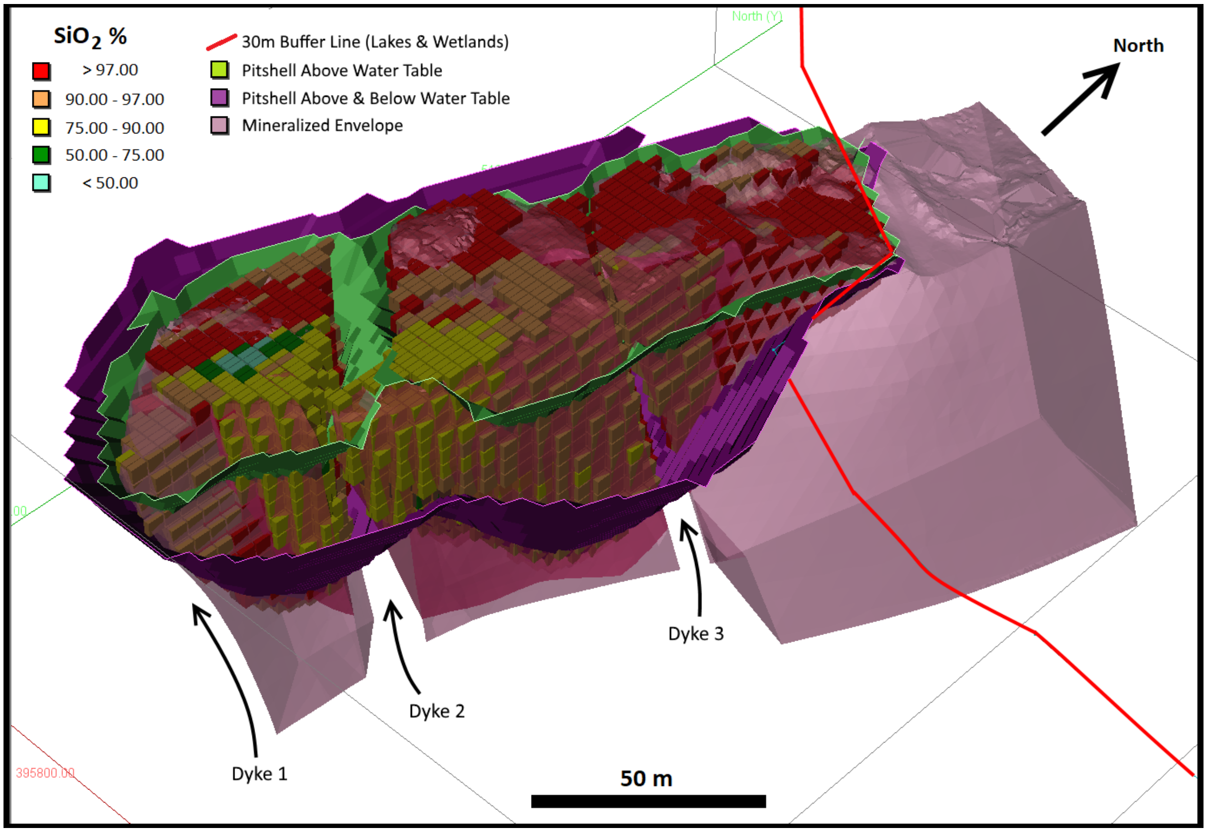
Mineral resources which are not mineral reserves do not have demonstrated economic viability. At the present time, M.Plan does not believe that the mineral resource estimate is materially affected by environmental, permitting, legal, title, taxation, socio-political, marketing, or other relevant issues.

M.Plan considers that the resource estimate for the Snow White Project has been reasonably prepared and conforms to the current 2014 CIM Definition Standards for estimating mineral resources.

The process of mineral resource estimation includes technical information which requires subsequent calculations or estimates to derive sub-totals, totals and weighted averages. Such calculations or estimations inherently involve a degree of rounding and consequently introduce a margin of error. Where these occur, M.Plan does not consider them to be material.

The mineral resources summarized in Table 25.3 above are shown graphically in Figure 25.1.

Figure 25.1
Snow White Resource Blocks Isometric View



26.0 RECOMMENDATIONS

26.1 EXPLORATION BUDGET AND OTHER EXPENDITURES

Since acquiring the Snow White Project, Rogue has completed its first exploration drilling program on the property. This program has assisted in identifying the extent and quality of the quartz mineralization on the Main Zone at the Snow White Project.

The quartz mineralization remains open in both north and south strike directions as well as at depth and further drilling will be needed to define the true extent of the quartz mineralization.

The mineral resources also remain open in all directions, providing Rogue with the opportunity to further expand upon the current mineral resource estimate with further exploration.

For the remainder of 2018 and in 2019, Rogue is planning to conduct further exploration on the Snow White Project broken into two phases.

26.1.1 Rogue Snow White Project Phase 1 and 2 Exploration Budget

Table 26.1 summarizes the conceptual Phase I and Phase II exploration programs for the Snow White Project. Phase I includes channel sampling of the Main and Mirror zones, stripping of overlying material and vegetation on the zones, sample analysis and geological mapping. Phase II includes a resource expansion component with diamond drilling. The budget as proposed for the Phase II work is not necessarily dependent on the results of the Phase I work.

Table 26.1
Summary of Phase I and II Exploration Budget for the Snow White Project

	Item	Units	No. of Units	Unit Cost	Sub-Total Cost	Total Cost/Item	Total Cost/Phase
Phase I							
	Channel Sample Main Zone					**$36,800**	
	Geologist	per/day	14	$800	$11,200		
	Geotech	per/day	14	$400	$5,600		
	Analysis	per/sample	200	$100	$20,000		
	Channel Sample Mirror Zone					**$26,800**	
	Geologist	per/day	14	$800	$11,200		
	Geotech	per/day	14	$400	$5,600		
	Analysis	per/sample	100	$100	$10,000		

	Item	Units	No. of Units	Unit Cost	Sub-Total Cost	Total Cost/Item	Total Cost/Phase
	South Zone Extension Stripping					**$16,600**	
	Excavator	per/day	4	$1,650	$6,600		
	Washing	per/day	10	$250	$2,500		
	Labour	per/day	10	$750	$7,500		
	Mirror Zone Stripping					**$16,600**	
	Excavator	per/day	4	$1,650	$6,600		
	Washing	per/day	10	$250	$2,500		
	Labour	per/day	10	$750	$7,500		
	Detailed Mapping					**$12,000**	
	Geologist	per/day	10	$800	$8,000		
	Geotech	per/day	10	$400	$4,000		
	Property Scale Mapping					**$23,000**	
	Geologist	per/day	15	$800	$12,000		
	Geotech	per/day	15	$400	$6,000		
	Analysis	per/sample	50	$100	$5,000		
	Total Phase I						**$131,800**
Phase II							
	Resource Expansion					**$1,000,000**	
	Diamond Drilling	metres	5,000	$120	$600,000		
	Analysis	per/sample	2,500	$85	$212,500		
	Geologist	per/day	90	$800	$72,000		
	Geotech	per/day	90	$400	$36,000		
	Incidentals				$79,500		
	Total Phase II						**$1,000,000**

The QP responsible for this section agrees with the direction of Rogue's exploration Phase I and II programs and regard the expenditures and studies as appropriate. M.Plan realizes that the nature of the programs and expenditures may change as the program advances due to various causes and that the final expenditures and results may not be the same as originally proposed.

26.2 Further Recommendations

M.Plan understands that Rogue will conduct further exploration programs in order to gain knowledge regarding the true extent of the quartz mineralization on the property and expand on the current resource estimate. In that context, M.Plan makes the following additional recommendations:

1. Continue to identify other quartz outcrops on the property and conduct geological mapping to see how they relate to each other and if they are potentially part of the same quartz mineralizing event.

2. Surface trenching should be conducted not only to gain a better understanding of the extent and grade of the quartz mineralization but also to generate a larger sample for further metallurgical testwork. The lump size should be suitable to confirm the recent sorting testwork and offer the opportunity to improve yields by testing larger samples used to optimize the recent sorting parameters within the strike direction.
3. Infill drilling should be conducted for the sole purpose of acquiring whole core upon which to conduct further metallurgical testwork with a lump size adequately suited to confirm current sorting testwork and offer the opportunity to improve yields by testing larger samples used to optimize the recent sorting parameters with depth.

27.0 DATE AND SIGNATURE PAGE

M.PLAN INTERNATIONAL LIMITED

"William J. Lewis" {signed and sealed as of the report date}

William J. Lewis, B.Sc., P.Geo. Report Date: August 31, 2018

Senior Geologist Effective Date: August 4, 2018

"Richard M. Gowans" {signed and sealed as of the report date}

Richard M. Gowans, B.Sc., P.Eng. Report Date: August 31, 2018

President Effective Date: August 4, 2018

"Alan J. San Martin" {signed and sealed as of the report date}

Ing. Alan J. San Martin, MAusIMM (CP) Report Date: August 31, 2018

Mineral Resource and Mine Planning Specialist Effective Date: August 4, 2018

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29.0 CERTIFICATES

CERTIFICATE OF AUTHOR

William J. Lewis

As the co-author of this report for Rogue Resources Inc. entitled "NI 43-101 Technical Report on the Snow White Silica Project, Deagle Township, Massey, Ontario, Canada" dated August 31, 2018 with an Effective date of August 4, 2018, I, William J. Lewis do hereby certify that:

1. I am employed by Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. 416 362 5135, fax 416 362 5763, e-mail wlewis@micon-international.com; I carried out this assignment for M.Plan International Limited, a company that has a joint venture with Micon International Limited.
2. This certificate applies to the Technical Report titled "NI 43-101 Technical Report on the Snow White Silica Project, Deagle Township, Massey, Ontario, Canada" dated August 31, 2018 with an Effective date of August 4, 2018.
3. I hold the following academic qualifications:

   B.Sc. (Geology) University of British Columbia 1985.
4. I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of Manitoba (membership # 20480); as well, I am a member in good standing of several other technical associations and societies, including:
   - Association of Professional Engineers and Geoscientists of British Columbia (Membership # 20333).
   - Association of Professional Engineers, Geologists and Geophysicists of the Northwest Territories (Membership # 1450).
   - Professional Association of Geoscientists of Ontario (Membership # 1522).
   - The Canadian Institute of Mining, Metallurgy and Petroleum (Member # 94758).
5. I have worked as a geologist in the minerals industry for 33 years.
6. I am familiar with NI 43-101 and, by reason of education, experience and professional registration, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 4 years as an exploration geologist looking for gold and base metal deposits, more than 11 years as a mine geologist in underground mines and more than 15 years as a surficial geologist and consulting geologist on precious and base metals and industrial minerals.
7. I have read NI 43-101 and this Technical Report has been prepared in compliance with the instrument.
8. I visited the Snow White Silica Project on May 17, 2018.
9. I am independent Rogue Resources Inc. and related entities according to the definition described in NI 43-101 and the Companion Policy 43-101 CP.
10. I am responsible for Sections 1 to 12 (except 12.4), and 23 to 26 of this Technical Report. Sections 15 through 22 do not apply to this Technical Report. I supervised Mr. Alan J. San Martin's work regarding the mineral resource estimate for this Technical Report.
11. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this Technical Report not misleading.

Report Dated this 31 day of August, 2018 with an effective date of August 4, 2018.

"William J. Lewis" {signed and sealed as of the report date}

William J. Lewis, B.Sc., P.Geo.
Senior Geologist and Director

CERTIFICATE OF AUTHOR

Richard M. Gowans

As the co-author of this report for Rogue Resources Inc. entitled "NI 43-101 Technical Report on the Snow White Silica Project, Deagle Township, Massey, Ontario, Canada" dated August 31, 2018 with an Effective date of August 4, 2018 I, Richard Gowans do hereby certify that:

1. I am employed by Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. 416 362 5135, fax 416 362 5763, e-mail rgowans@micon-international.com. I carried out this assignment for M.Plan International Limited, a company that has a joint venture with Micon International Limited.
2. I hold the following academic qualifications:
    - B.Sc. (Hons) Minerals Engineering, The University of Birmingham, U.K. 1980.
3. I am a registered Professional Engineer of Ontario (membership number 90529389); as well, I am a member in good standing of the Canadian Institute of Mining, Metallurgy and Petroleum.
4. I am familiar with NI 43-101 and by reason of education, experience and professional registration, fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes over 30 years of the management of technical studies and design of numerous metallurgical testwork programs and metallurgical processing plants.
5. I have read NI 43-101 and this Technical Report has been prepared in compliance with the instrument.
6. I have not visited the property.
7. I am independent Rogue Resources Inc. and related entities according to the definition described in NI 43-101 and the Companion Policy 43-101 CP.
8. I am responsible for Section 13 of this Technical Report.
9. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this technical report not misleading.

Report Dated this 31 day of August, 2018 with an effective date of August 4, 2018.

"Richard M. Gowans" {signed and sealed as of the report date}

Richard M. Gowans P.Eng.
President and Principal Metallurgist

CERTIFICATE OF AUTHOR

Alan J. San Martin

As the co-author of this report for Rogue Resources Inc. entitled "NI 43-101 Technical Report on the Snow White Silica Project, Deagle Township, Massey, Ontario, Canada" dated August 31, 2018 with an Effective date of August 4, 2018, I, Alan J. San Martin, do hereby certify that:

1. I am employed as a Mineral Resource Specialist by Micon International Limited, Suite 900, 390 Bay Street, Toronto, Ontario M5H 2Y2, tel. 416 362 5135, fax 416 362 5763, e-mail asanmartin@micon-international.com. I carried out this assignment for M.Plan International Limited, a company that has a joint venture with Micon International Limited.
2. I hold a Bachelor's Degree in Mining Engineering (equivalent to B.Sc.) from the National University of Piura, Peru, 1999.
3. I am a member in good standing of the following professional entities:
   - The Australasian Institute of Mining and Metallurgy, Membership #301778.
   - Canadian Institute of Mining, Metallurgy and Petroleum, Member ID 151724.
   - Colegio de Ingenieros del Perú (CIP), Membership #79184.
4. I have been working as a mining engineer and geoscientist in the mineral industry for 14 years.
5. I am familiar with NI 43-101 and, by reason of education, experience and professional registration in the MAusIMM, I fulfill the requirements of a Qualified Person as defined in NI 43-101. My work experience includes 5 years as mining engineer in exploration, 4 years as Resource Modeller in exploration and 5 years as Mineral Resource Specialist in mining consultancy. For the purposes of this report, my work on the resource estimate was reviewed by William Lewis, P.Geo.
6. I have read NI-43-101 and this Technical Report has been prepared in compliance with that instrument.
7. I have not visited the property.
8. As of the date of this certificate, to the best of my knowledge, information and belief, the Technical Report contains all scientific and technical information that is required to be disclosed to make this report not misleading. I have read the NI 43-101 Instrument and this Technical Report has been prepared in compliance with this Instrument.
9. I am independent Rogue Resources Inc. and related entities according to the definition described in NI 43-101 and the Companion Policy 43-101 CP.

I am responsible for Sections 12.4 and 14 of this Technical Report dated August 31, 2018 and entitled "NI 43-101 Technical Report on the Snow White Silica Project, Deagle Township, Massey, Ontario, Canada" with an Effective date of August 4, 2018.

Report Dated this 31 day of August, 2018 with an effective date of August 4, 2018.

"Alan J. San Martin" {signed and sealed as of the report date}

Ing. Alan J. San Martin, MAusIMM (CP)
Mineral Resource Specialist

APPENDIX 1

MICON SITE VISIT SAMPLES

SGS CERTIFICATE OF ANALYSIS

SGS

Certificate of Analysis

Work Order : LK1801349

[Report File No.: 0000015999]

Date: July 24, 2018

To: **William J. Lewis**
MICON INTERNATIONAL LTD
SUITE 900
390 BAY ST
TORONTO ON M5H 2Y2

P.O. No.: Micon International
Project No.: -
Samples: 5
Received: Jun 15, 2018
Pages: Page 1 to 10
(Inclusive of Cover Sheet)

Methods Summary

No. Of Samples	Method Code	Description
5	G_WGH79	Weighing of samples and reporting of weights
5	G_MSC80	Miscellaneous preparation charge, per hr
5	G_PUL56	Pulverize, Tungsten Carbide Bowl, <100g
5	GO_XRF76V	@Ore grade Borate fusion, XRF (0.5g plus 1g LOI)
5	G_PHY03V	SG by pycnometer
5	ZMS_ICM40B	Package Price - GE_ICM40B (GE_IC40A+GE_IC40M)
5	GE_IC40A	@Package, ICPAES after Multi-Acid Digest
5	GE_IC40M	@Package, ICPMS after Multi-Acid Digest

Storage: Pulp & Reject

PULP STORAGE : DISCARD
REJECT STORAGE : DISCARD

Comments:

Assays not suitable for commercial exchange.

Certified By : *Debbie Waldon*
Debbie Waldon
Project Coordinator

SGS Minerals Services (Lakefield) is accredited by Standards Council of Canada (SCC) and conforms to the requirements of ISO/IEC 17025 for specific tests as indicated on the scope of accreditation to be found at http://www.scc.ca/en/programs/lab/mineral.shtml

Report Footer:

L.N.R.	= Listed not received	I.S.	= Insufficient Sample
n.a.	= Not applicable	–	= No result

*INF = Composition of this sample makes detection impossible by this method

M after a result denotes ppb to ppm conversion, % denotes ppm to % conversion

Methods marked with an asterisk (e.g. *NAA08V) were subcontracted
Elements marked with the @ symbol (e.g. @Cu) denote assays performed using accredited test methods

SGS Canada Inc. | Minerals 185 Concession Street Lakefield ON K0L 2H0 t+1(705) 652-2000 f+1(705) 652-6365 www.ca.sgs.com

Final : LK1801349 Order: Micon International

Report File No : 0000015999

Element Method Det.Lim. Units	WtG G_WGH79 0 g	@LOI GO_XRF76V -10.000 %	@SiO2 GO_XRF76V 0.01 %	@Al2O3 GO_XRF76V 0.01 %	@Fe2O3 GO_XRF76V 0.01 %	@MgO GO_XRF76V 0.01 %	@CaO GO_XRF76V 0.01 %	@K2O GO_XRF76V 0.01 %
75022	859	0.148	98.7	0.22	0.05	0.02	0.03	0.06
75023	904	0.293	98.2	0.51	0.05	0.04	<0.01	0.17
75024	1500	0.952	90.4	5.15	0.97	0.44	0.26	1.74
75025	699	0.331	98.3	0.46	0.17	0.05	0.01	0.15
75027	1420	0.0696	99.0	0.13	0.01	0.01	0.01	0.02
*Blk BLANK		100.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
*Std SY-4		4.30	50.3	20.9	6.23	0.55	8.08	1.66
*Rep 75025		0.237	98.5	0.47	0.17	0.05	<0.01	0.15
*Blk BLANK		100.0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
*Std OREAS-160		0.920	88.7	5.11	1.60	0.63	0.13	2.11

Element	@Na2O	@TiO2	@MnO	@P2O5	@Cr2O3	@V2O5	Sum	Sg
Method	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	GO_XRF76V	G_PHY03V
Det.Lim.	0.01	0.01	0.01	0.01	0.01	0.01	0	0.01
Units	%	%	%	%	%	%	%	sg
75022	0.02	<0.01	<0.01	<0.01	<0.01	<0.01	99.2	2.68
75023	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	99.3	2.68
75024	0.03	0.14	<0.01	0.04	<0.01	0.01	100.2	2.71
75025	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	99.5	2.69
75027	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	99.2	2.69
*Rep 75025								2.68
*Std OREAS-523								3.47
*Blk BLANK	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	100.0	
*Std SY-4	7.10	0.29	0.11	0.12	<0.01	<0.01	99.6	
*Rep 75025	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	99.6	
*Blk BLANK	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	100.0	
*Std OREAS-160	0.55	0.15	<0.01	0.04	0.01	<0.01	100.0	

SGS

Final : LK1801349 Order: Micon International

Report File No.: 0000015999

Element	@Ag	@Al	@Ba	@Ca	@Cr	@Cu	@Fe	@K
Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Det.Lim.	0.02	0.01	1	0.01	1	0.5	0.01	0.01
Units	ppm	%	ppm	%	ppm	ppm	%	%
75022	0.03	0.10	23	0.02	6	<0.5	0.03	0.05
75023	<0.02	0.26	33	<0.01	6	<0.5	0.04	0.15
75024	0.02	2.58	348	0.18	9	4.2	0.65	1.42
75025	<0.02	0.23	21	<0.01	7	1.0	0.12	0.12
75027	<0.02	0.05	4	<0.01	6	0.8	<0.01	0.02
*Rep 75027	<0.02	0.05	4	<0.01	5	2.2	<0.01	0.02
*Std OREAS-903	0.35	5.63	185	0.57	74	6563	3.94	3.34
*Blk BLANK	0.03	<0.01	<1	<0.01	<1	<0.5	<0.01	<0.01
*Blk BLANK	0.02	<0.01	<1	<0.01	1	<0.5	<0.01	<0.01

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Report File No.: 0000016999

Element Method Det.Lim. Units	@Li GE_ICM40B 1 ppm	@Mg GE_ICM40B 0.01 %	@Mn GE_ICM40B 2 ppm	@Na GE_ICM40B 0.01 %	@Ni GE_ICM40B 0.5 ppm	@P GE_ICM40B 100 ppm	@S GE_ICM40B 0.01 %	@Sr GE_ICM40B 0.5 ppm
75022	<1	<0.01	8	0.02	1.5	<100	<0.01	5.6
75023	1	0.02	6	<0.01	0.8	<100	<0.01	1.2
75024	16	0.25	59	0.03	3.0	177	<0.01	29.8
75025	1	0.03	8	<0.01	0.8	<100	<0.01	1.4
75027	<1	<0.01	3	<0.01	0.6	<100	<0.01	0.7
*Rep 75027	<1	<0.01	3	<0.01	0.6	<100	<0.01	0.7
*Std OREAS-903	18	0.69	651	0.03	50.9	1038	0.50	71.9
*Blk BLANK	<1	<0.01	<2	<0.01	<0.5	<100	<0.01	<0.5
*Blk BLANK	<1	<0.01	<2	<0.01	<0.5	<100	<0.01	<0.5

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Report File No.: 0000015999

Element	@Ti	@V	@Zn	@Zr	@As	@Be	@Bi	@Cd
Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Det.Lim.	0.01	2	1	0.5	1	0.1	0.04	0.02
Units	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
75022	<0.01	<2	2	<0.5	<1	<0.1	<0.04	<0.02
75023	<0.01	5	2	<0.5	<1	0.1	<0.04	<0.02
75024	0.06	41	10	18.9	<1	0.7	0.25	<0.02
75025	<0.01	4	2	0.5	<1	0.1	<0.04	<0.02
75027	<0.01	<2	<1	<0.5	<1	<0.1	<0.04	<0.02
*Rep 75027	<0.01	<2	<1	<0.5	<1	<0.1	<0.04	<0.02
*Std OREAS-903	0.17	73	23	143	N.A.	N.A.	N.A.	N.A.
*Blk BLANK	<0.01	<2	<1	<0.5	<1	<0.1	<0.04	<0.02
*Blk BLANK	<0.01	<2	<1	<0.5	<1	<0.1	<0.04	<0.02
*Std OREAS-523					641	0.3	13.9	<0.02

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Report File No.: 0000015999

Element	@Ce	@Co	@Cs	@Ga	@Hf	@In	@La	@Lu
Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Det.Lim.	0.05	0.1	1	0.1	0.02	0.02	0.1	0.01
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
75022	0.19	1142	<1	0.5	0.02	<0.02	<0.1	0.03
75023	0.09	1170	<1	1.0	<0.02	<0.02	<0.1	<0.01
75024	5.55	660	1	9.4	0.53	<0.02	2.2	0.02
75025	0.36	1375	<1	1.0	0.02	<0.02	0.2	<0.01
75027	0.09	1281	<1	0.1	<0.02	0.08	<0.1	<0.01
*Rep 75027	0.11	1292	<1	0.1	<0.02	<0.02	<0.1	<0.01
*Std OREAS-903	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
*Blk BLANK	<0.05	0.2	<1	<0.1	<0.02	<0.02	<0.1	<0.01
*Blk BLANK	<0.05	<0.1	<1	<0.1	<0.02	<0.02	<0.1	<0.01
*Std OREAS-523	160	670	<1	13.4	2.68	0.36	115	0.31

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Report File No.: 0000015999

Element	@Mo	@Nb	@Pb	@Rb	@Sb	@Sc	@Se	@Sn
Method	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B	GE_ICM40B
Det.Lim.	0.05	0.1	0.5	0.2	0.05	0.5	2	0.3
Units	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
75022	0.21	<0.1	1.1	1.3	0.06	<0.5	<2	<0.3
75023	0.08	<0.1	0.7	7.2	0.05	<0.5	<2	<0.3
75024	3.20	0.1	2.5	104	0.07	1.8	<2	0.3
75025	8.12	<0.1	1.5	7.3	<0.05	<0.5	<2	<0.3
75027	0.11	<0.1	<0.5	0.7	<0.05	<0.5	<2	<0.3
*Rep 75027	0.10	<0.1	<0.5	0.7	<0.05	<0.5	<2	<0.3
*Std OREAS-903	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
*Blk BLANK	<0.05	<0.1	0.6	<0.2	0.06	<0.5	<2	<0.3
*Blk BLANK	<0.05	<0.1	0.6	<0.2	<0.05	<0.5	<2	<0.3
*Std OREAS-523	304	5.1	24.8	64.8	11.4	6.2	3	11.8

Element Method Det.Lim. Units	@Ta GE_ICM40B 0.05 ppm	@Tb GE_ICM40B 0.05 ppm	@Te GE_ICM40B 0.05 ppm	@Th GE_ICM40B 0.2 ppm	@Tl GE_ICM40B 0.02 ppm	@U GE_ICM40B 0.05 ppm	@W GE_ICM40B 0.1 ppm	@Y GE_ICM40B 0.1 ppm
75022	<0.05	<0.05	<0.05	<0.2	0.09	<0.05	662	0.2
75023	<0.05	<0.05	<0.05	<0.2	0.08	<0.05	699	<0.1
75024	<0.05	<0.05	<0.05	1.4	0.51	0.36	593	1.6
75025	<0.05	<0.05	<0.05	<0.2	0.04	<0.05	750	0.1
75027	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05	661	<0.1
*Rep 75027	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05	694	<0.1
*Std OREAS-903	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
*Blk BLANK	<0.05	<0.05	<0.05	<0.2	0.03	<0.05	<0.1	<0.1
*Blk BLANK	<0.05	<0.05	<0.05	<0.2	<0.02	<0.05	0.1	<0.1
*Std OREAS-523	0.42	0.57	1.60	6.0	0.33	58.6	178	16.4

Final : LK1801349 Order: Micon International

Report File No.: 0000015999

Element	@Yb
Method	GE_ICM40B
Det.Lim.	0.1
Units	ppm
75022	<0.1
75023	<0.1
75024	0.1
75025	<0.1
75027	<0.1
*Rep 75027	<0.1
*Std OREAS-903	N.A.
*Blk BLANK	<0.1
*Blk BLANK	<0.1
*Std OREAS-523	2.0

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APPENDIX 2

2018 ANZAPLAN TESTWORK

Rogue Resources Inc.

Optical Sorting Test Work to Prepare a Mineral Resource Estimate for the Main Zone at the Snow White Silica Project in Ontario

Short Report

P 1825

August 06, 2018

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Table of Contents

List of Tables

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List of Figures

1.0 SUMMARY

M.Plan International is conducting a NI 43-101 resource estimate for Rogue Resources' Snow White deposit. ANZAPLAN has carried out an automated sensor based sorting of 3 drill core samples from drillholes RR-18-14, RR-18-23 and RR-18-24 including crushing, classification and analytics. Based on geological definition by Rogue each drill core was subdivided into several samples, which were merged to sub samples hanging wall (HW), quartz ore sample (ORE) and footwall (FW), resulting in 8 samples (three ore samples, three footwall samples and two hanging wall samples). Target of this test program was to define a set of cut-off grades for key elements to assist the resource estimation. Target application is MG-Silicon.

In order to define the set of cut-off grades, the eight samples were crushed, classified and underwent sensor based sorting. The final products were compared to specifications of quartz for MG-Silicon applications. Finally, the feed composition was matched with the recovery into silicon specifications in order to define the set of cut-off grades.

Reasonable mass recovery was achieved for the "ORE" samples after crushing, classification and sensor based sorting with feed grades of ≤2.4 wt.-% Al_2O_3, ≤0.53 wt.-% Fe_2O_3 and ≤0.054 wt.-% TiO_2. In contrast, only negligible mass recovery was achieved for the "FW" and "HW" samples with feed grades of ≥5.1 wt.-% Al_2O_3; ≥1.8 wt.-% Fe_2O_3 and ≥0.142 wt.-% TiO_2. ANZAPLAN proposes therefore using the element-specific cut-off grades listed in Table 1.

Table 1: Proposed cut-off grades

Oxide	**Cut-off grade** [wt.-%]
Al_2O_3	2.4
Fe_2O_3	0.53
TiO_2	0.054

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Considering the total of 8 samples, the basis for the determination of the cut-off grade is limited. Additionally, the usage of halved NQ drill cores led to an increased amount of fines during crushing and classification (resulting in a reduced recovery) but at the same time a finer product fraction results in an increased degree of liberation and thus recovery in sorting. This may lead to minor deviation from current test work results in actual operation using lumps.

The results from optical sorting of the "ORE" samples (within the suggested cut-off set) are promising. A portion of 32.9 wt.-% to 86.0 wt.-% of the fraction >20 mm is chemically suitable for MG-Silicon. By including ferrosilicon application in addition, total recovery increases to 65.5 wt.-% to 86.0 wt.-% of fraction >20 mm.

2.0 INTRODUCTION

M.Plan International is conducting a NI 43-101 resource estimate for Rogue's Snow White deposit. ANZAPLAN has carried out an automated sensor based sorting of 3 drill core samples from drillholes RR-18-14, RR-18-23 and RR-18-24 including crushing, classification and analytics. Based on geological definition by Rogue each drill core was subdivided into several samples, which were merged to sub samples hanging wall (HW), quartz ore sample (ORE) and footwall (FW). Target of this test program was to define a set of cut-off grades for key elements to assist the resource estimation.

The drill core samples arrived on June 11 on ANZAPLAN's premises in the total amount of approx. 310 kg.

The present short report summarizes the test work results.

3.0 APPLIED TECHNIQUES AND PROCEDURES

3.1 CHEMICAL ANALYSES

The chemical composition was analyzed by X-ray fluorescence spectroscopy (XRF, Bruker AXS Sequential X-Ray Spectrometer Type S4 Pioneer) according to DIN EN ISO 12677.

3.2 MINERAL PROCESSING

3.2.1 Crushing and Classification

Halves of NQ drill core samples were initially crushed by using a jaw crusher. For silicon production generally quartz in particle size 20 - 120 mm is used. Therefore, dry screening was applied to separate fraction > 20 mm from undersized fraction < 20 mm.

3.2.2 Optical sorting

Fully automated optical sorting devices employ CCD cameras for particle detection, exploiting characteristics such as color, contrast or shape differences of particles as a sorting criterion. Non specified particles are separated from the bulk flow by high pressure air jets. For the test work, an industrial sized optical sorting device was used. Figure 1 shows the principle of the optical sorting device and Figure 2 depicts details of the optical detection and separation system.

From the feed hopper the raw material is discharged to a vibration feeder which allows a constant feeding speed and adjusts a homogenous distribution of the feed material (mono layer) to the scanning line. There the feed material is scanned by two CCD cameras. The signal is then processed by a computer.

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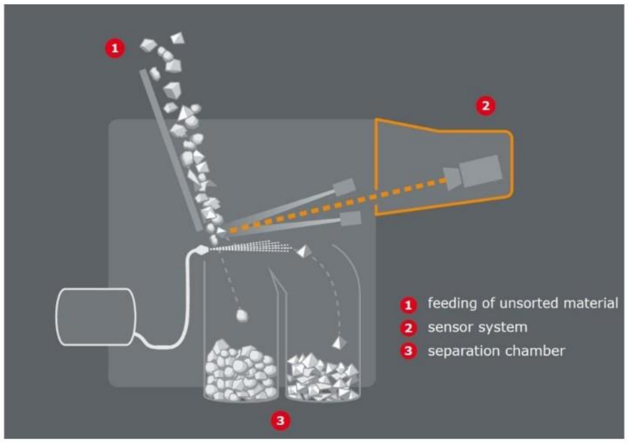

Figure 1: Operating principle of optical sorting system

For detection, the raw material is lighted by specific LED lamps to ensure a defined white light that prevents detection problems on the camera image. The sample material is scanned in a free fall sequence, so the raw material can be accessed from both sides. The computer aided information controls the pressurized air ejection system and the individual blowing valves. The ejected material is deflected from the flight path by the air blow and collected in the reject material box.

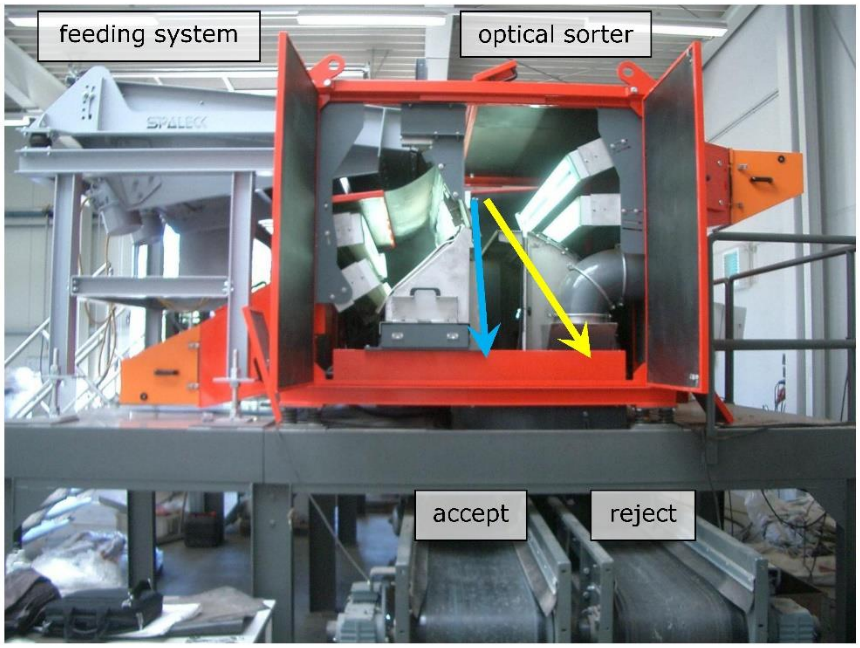

Figure 2: Details optical sorting system

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4.0 PROCESSING TESTS

Based on Rogue's classification into ore zone (ORE), hanging wall (HW) and footwall (FW), eight samples were defined (cf. Table 2). These samples were crushed in a jaw crusher and classified into fractions <20 mm and >20 mm, since fraction < 20 mm is not suitable for silicon production. Mass balance after crushing is presented in Table 2. Since NQ drill core halves were used for test work, the amount of undersized fraction <20 mm was higher than expected for lump samples.

Table 2: Mass balance after crushing and classification

Drill core	Sample	Fraction > 20 mm [wt.-%]	Fraction < 20 mm [wt.-%]
RR-18-14	ORE	56.9	43.1
RR-18-14	FW	58.9	41.1
RR-18-23	HW	68.3	31.8
RR-18-23	ORE	61.3	38.7
RR-18-23	FW	66.9	33.1
RR-18-28	HW	63.7	36.3
RR-18-28	ORE	57.8	42.2
RR-18-28	FW	69.0	31.0

After crushing and screening, product fraction >20 mm was treated by optical sorting. Automated optical sorting exploits differences in color to sort the quartzite into different qualities. Two sorting steps were carried out for improving quality and define optimum settings in order to maximize the mass portion suitable for MG-Silicon feedstock material. After each sorting step one accept (product fraction) and a reject (waste fraction) were generated with the target to improve the quality of the accept fraction from step 1 to step 2. The accept fraction (product) from the first step served as feed material for the second sorting step, corresponding to the flow sheet presented in Figure 3. Two reject fractions as well as one accept fraction were obtained after the complete optical sorting procedure. Images from sorted fractions are presented in Figure 8 to Figure 15 in the appendix.

The mass balance after optical sorting is presented in Table 3.

Since NQ drill core halves (NQ core diameter is 47.6 mm) were used for test work, fraction > 20 mm consisted mainly of fraction 20 – 50 mm, instead of fraction 20 - 120 mm normally used in silicon production. Thus a slightly higher degree of liberation was achieved than would be expected for the actual process.

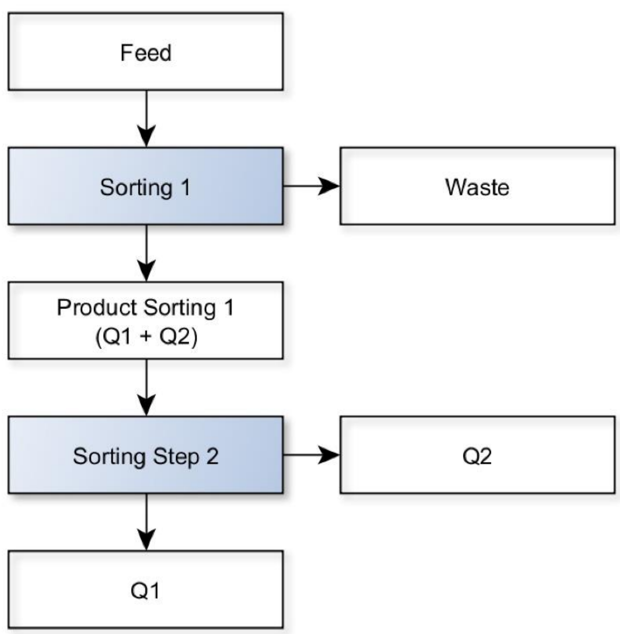

Figure 3: Flow sheet from optical sorting after crushing and classification

Table 3: Mass balance of optical sorting tests

Drill core	**Sample**	**Q1** [wt.-%]	**Q2** [wt.-%]	**Waste** [wt.-%]
RR-18-14	ORE	29.7	56.3	14.0
RR-18-14	FW	0.3	6.4	93.2
RR-18-23	HW	1.8	8.1	90.1
RR-18-23	ORE	32.9	43.1	24.0
RR-18-23	FW	0.5	8.6	90.9
RR-18-28	HW	2.2	9.6	88.1
RR-18-28	ORE	41.3	24.2	34.6
RR-18-28	FW	0.3	3.5	96.2

5.0 RESULTS

Results of chemical analyses from optical sorting are presented in Table 9 to Table 12 in the appendix.

Chemical composition of the feed fraction, the fraction > 20 mm and the fraction after first sorting step was calculated based on mass balance and chemical analyses of samples "waste", "Q1" and "Q2". Final results are listed in Table 4 to Table 7 together with suitable MG-Si key oxide levels, provided by the Memo "Chemical Composition for MG-Si, to calculate Ore Cutoff grades in the Resource", dated June 20, 2018, received from Rogue.

Table 4: Chemical composition of feed samples (calculated)

Drill core	Sample	SiO_2 [wt.-%]	Al_2O_3 [wt.-%]	Fe_2O_3 [wt.-%]	TiO_2 [wt.-%]
RR-18-14	ORE	99.0	0.42	0.08	0.014
RR-18-14	FW	79.6	8.2	3.6	0.34
RR-18-23	HW	78.9	8.8	3.7	0.38
RR-18-23	ORE	98.1	0.74	0.28	0.02
RR-18-23	FW	88.5	5.1	1.8	0.14
RR-18-28	HW	81.9	8.2	2.6	0.29
RR-18-28	ORE	95.1	2.4	0.53	0.054
RR-18-28	FW	81.0	8.9	2.4	0.26
Spec MG-Si			0.18	0.045	0.009

Table 5: Chemical composition of fractions > 20 mm (calculated)

Drill core	Sample	SiO_2 [wt.-%]	Al_2O_3 [wt.-%]	Fe_2O_3 [wt.-%]	TiO_2 [wt.-%]	mass [wt.-%]
RR-18-14	ORE	99.0	0.44	0.12	0.015	56.9
RR-18-14	FW	78.8	8.5	3.9	0.36	58.9
RR-18-23	HW	77.6	9.3	3.9	0.41	68.3
RR-18-23	ORE	97.8	0.86	0.32	0.026	61.3
RR-18-23	FW	88.1	5.3	1.9	0.15	66.9
RR-18-28	HW	80.9	8.6	2.8	0.31	63.7
RR-18-28	ORE	94.5	2.7	0.59	0.062	57.8
RR-18-28	FW	80.2	9.2	2.5	0.27	69.0
Spec MG-Si			0.18	0.045	0.009	

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Table 6: Chemical composition of samples after first sorting (calculated)

Drill core	Sample	6.0 SiO_2 [wt.-%]	7.0 Al_2O_3 [wt.-%]	8.0 Fe_2O_3 [wt.-%]	9.0 TiO_2 [wt.-%]	10.0 mass [wt.-%]
RR-18-14	ORE	99.6	0.12	0.03	<0.005	48.9
RR-18-14	FW	97.5	1.1	0.27	0.019	4.0
RR-18-23	HW	96.4	1.4	0.51	0.049	6.8
RR-18-23	ORE	99.3	0.23	0.08	<0.005	46.5
RR-18-23	FW	95.9	1.8	0.46	0.028	6.1
RR-18-28	HW	96.0	1.6	0.51	0.052	7.6
RR-18-28	ORE	99.1	0.39	0.06	0.005	37.8
RR-18-28	FW	93.9	2.7	0.75	0.077	2.6
Spec MG-Si			0.18	0.045	0.009	

Table 7: Chemical composition of samples after second sorting (Q1)

Drill core	Sample	11.0 SiO_2 [wt.-%]	12.0 Al_2O_3 [wt.-%]	13.0 Fe_2O_3 [wt.-%]	14.0 TiO_2 [wt.-%]	15.0 mass [wt.-%]
RR-18-14	ORE	99.7	0.06	0.009	<0.005	16.9
RR-18-14	FW	98.5	0.52	0.058	<0.005	0.2
RR-18-23	HW	99.3	0.20	0.030	<0.005	1.3
RR-18-23	ORE	99.7	0.08	0.017	<0.005	20.1
RR-18-23	FW	99.1	0.21	0.049	<0.005	0.3
RR-18-28	HW	99.6	0.13	0.022	<0.005	1.4
RR-18-28	ORE	99.6	0.11	0.018	<0.005	23.9
RR-18-28	FW	99.5	0.07	0.014	<0.005	0.2
Spec MG-Si			0.18	0.045	0.009	

Portions suitable for MG-Silicon were obtained:

- after the first sorting step for "ORE" sample from drill core RR-18-14 with a total mass yield (including mass yield of classification) of 48.9 wt.-%
- after the second sorting step for "ORE" sample from drill core RR-18-23 with a total mass yield of 20.1 wt.-%
- after the second sorting step and for "ORE" sample from drill core RR-18-28 with a total mass yield of 23.9 wt.-%

In all FW and HW samples no or virtually no quartz was separated in suitable quality.

The mass yield for each element can be read from graphs exhibiting recovery as a function of feed grade (cf. Figure 4 for Al_2O_3, Figure 5 for Fe_2O_3 and Figure 6 for TiO_2) not accounting for overall suitability of the sample (not considered remaining specified elements).

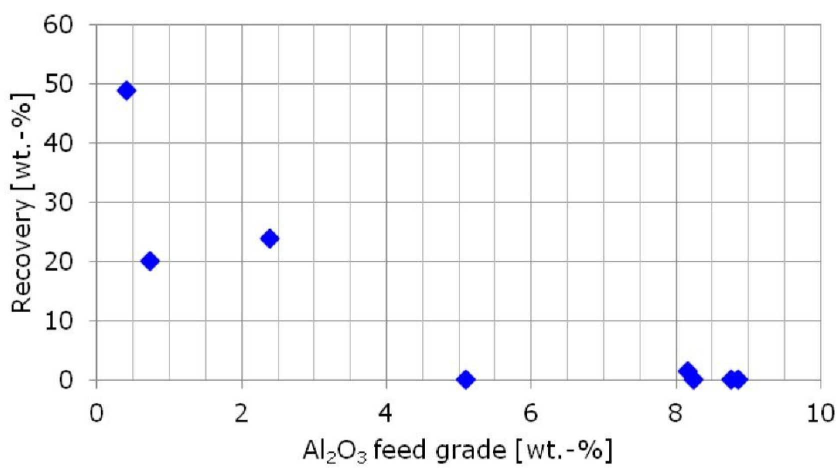

Figure 4: Recovery over Al_2O_3 feed grade

13

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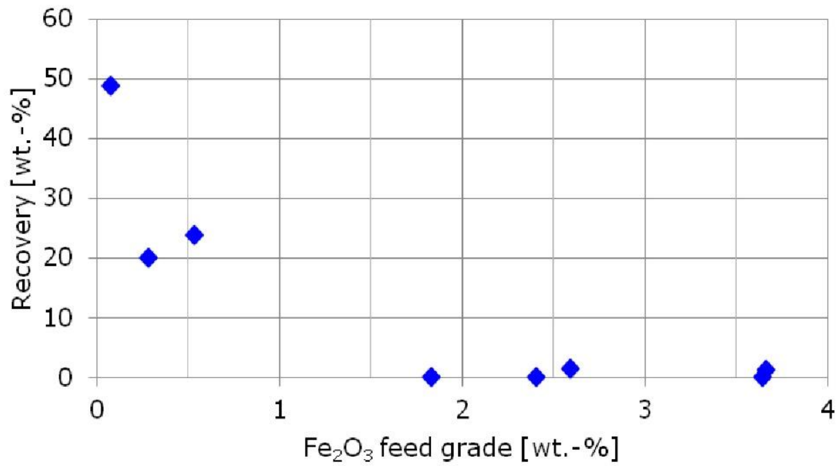

Figure 5: Recovery over Fe_2O_3 feed grade

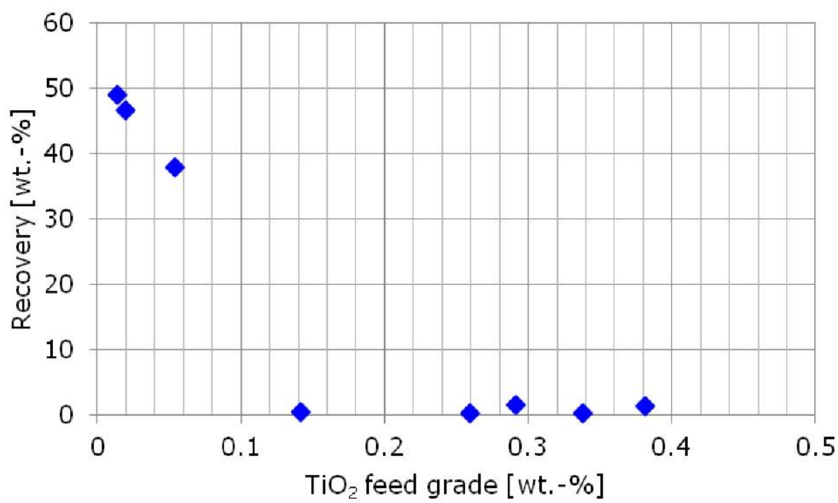

Figure 6: Recovery over TiO_2 feed grade

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Reasonable mass recovery was achieved for the "ORE" samples after crushing, classification and sensor based sorting with feed grades of ≤2.4 wt.-% Al_2O_3, ≤0.53 wt.-% Fe_2O_3 and ≤0.054 wt.-% TiO_2. In contrast, only negligible mass recovery was achieved for the "FW" and "HW" samples with feed grades of ≥5.1 wt.-% Al_2O_3; ≥1.8 wt.-% Fe_2O_3 and ≥0.142 wt.-% TiO_2. For all samples with aluminum, iron and titanium in spec P_2O_5 grades also meet the specifications (< 0.009 wt.-% P_2O_5).

ANZAPLAN proposes therefore using the element-specific cut-off grades listed in Table 8.

Table 8: Suggested cut-off grades

Oxide	**Cut-off grade** [wt.-%]
Al_2O_3	2.4
Fe_2O_3	0.53
TiO_2	0.054

Considering the total of 8 samples, the basis for the determination of the cut-off grade is limited. Additionally, the usage of halved NQ drill cores led to an increased amount of fines during crushing and classification (resulting in a reduced recovery) but at the same time a finer product fraction results in an increased degree of liberation and thus recovery in sorting. This may lead to minor deviation from current test work results in actual operation using lumps.

The results from optical sorting of the "ORE" samples (within the suggested cut-off set) are promising. A portion of 32.9 wt.-% to 86.0 wt.-% of the fraction >20 mm is chemically suitable for MG-Silicon. By including ferrosilicon application in addition, total recovery increases to 65.5 wt.-% to 86.0 wt.-% of fraction >20 mm (cf. Figure 7).

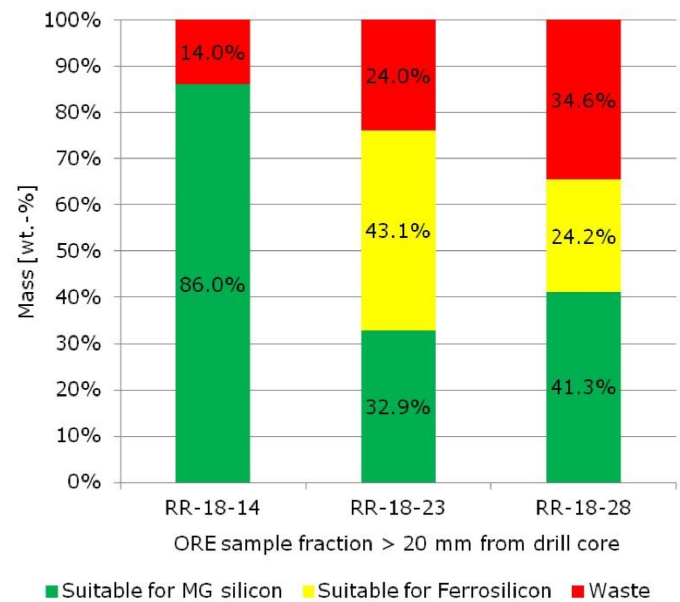

Figure 7: Mass distribution from optical sorting of "ORE" samples > 20 mm

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16.0 APPENDIX

Table 9: Results from chemical analysis of fractions "Q1" after sorting

			SiO_2 [wt.-%]	Al_2O_3 [wt.-%]	Fe_2O_3 [wt.-%]	TiO_2 [wt.-%]	K_2O [wt.-%]	Na_2O [wt.-%]	CaO [wt.-%]	MgO [wt.-%]	BaO [wt.-%]	LOI [wt.-%]
RR-18-14	ORE	Q1	99.7	0.06	0.01	<0.005	0.02	<0.02	<0.01	<0.01	<0.01	0.09
RR-18-14	FW	Q1	98.5	0.52	0.06	<0.005	0.38	0.06	0.09	0.02	<0.01	0.24
RR-18-23	HW	Q1	99.3	0.20	0.03	<0.005	0.06	0.05	0.05	0.01	<0.01	0.16
RR-18-23	ORE	Q1	99.7	0.08	0.02	<0.005	0.04	<0.02	<0.01	<0.01	<0.01	0.10
RR-18-23	FW	Q1	99.1	0.21	0.05	<0.005	0.09	<0.02	0.16	0.03	<0.01	0.26
RR-18-28	HW	Q1	99.6	0.13	0.02	<0.005	0.05	<0.02	0.02	<0.01	<0.01	0.10
RR-18-28	ORE	Q1	99.6	0.11	0.02	<0.005	0.05	<0.02	0.01	<0.01	<0.01	0.11
RR-18-28	FW	Q1	99.5	0.07	0.01	<0.005	0.02	<0.02	0.10	<0.01	<0.01	0.18

Table 10: Results from chemical analysis of fractions "Q2" after sorting

			SiO_2 [wt.-%]	Al_2O_3 [wt.-%]	Fe_2O_3 [wt.-%]	TiO_2 [wt.-%]	K_2O [wt.-%]	Na_2O [wt.-%]	CaO [wt.-%]	MgO [wt.-%]	BaO [wt.-%]	LOI [wt.-%]
RR-18-14	ORE	Q2	99.5	0.15	0.04	<0.005	0.06	<0.02	<0.01	0.01	<0.01	0.14
RR-18-14	FW	Q2	97.4	1.1	0.28	0.020	0.28	0.14	0.16	0.10	<0.01	0.33
RR-18-23	HW	Q2	95.8	1.7	0.62	0.060	0.41	0.31	0.30	0.30	0.01	0.39
RR-18-23	ORE	Q2	99.0	0.34	0.12	<0.005	0.13	0.04	0.08	0.02	<0.01	0.16
RR-18-23	FW	Q2	95.7	1.9	0.48	0.029	0.38	0.24	0.45	0.22	<0.01	0.52
RR-18-28	HW	Q2	95.2	2.0	0.62	0.063	0.46	0.13	0.47	0.31	0.01	0.6
RR-18-28	ORE	Q2	98.2	0.88	0.14	0.010	0.24	0.02	0.06	0.07	<0.01	0.27
RR-18-28	FW	Q2	93.5	2.9	0.80	0.083	0.66	0.37	0.61	0.38	0.02	0.59

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Table 11: Results from chemical analysis of fractions "waste" after sorting

			SiO_2 [wt.-%]	Al_2O_3 [wt.-%]	Fe_2O_3 [wt.-%]	TiO_2 [wt.-%]	K_2O [wt.-%]	Na_2O [wt.-%]	CaO [wt.-%]	MgO [wt.-%]	BaO [wt.-%]	LOI [wt.-%]
RR-18-14	ORE	waste	95.3	2.4	0.71	0.095	0.63	<0.02	0.11	0.23	<0.01	0.42
RR-18-14	FW	waste	77.5	9.0	4.2	0.39	1.9	2.1	1.8	1.6	0.06	1.3
RR-18-23	HW	waste	75.5	10.2	4.3	0.45	2.9	1.6	1.6	2.1	0.09	1.3
RR-18-23	ORE	waste	93.2	2.8	1.1	0.10	0.73	0.14	1.2	0.2	0.02	0.46
RR-18-23	FW	waste	87.3	5.7	2.0	0.16	1.4	0.51	0.72	1.1	0.03	1.0
RR-18-28	HW	waste	78.9	9.5	3.1	0.35	2.2	1.4	1.5	1.4	0.06	1.4
RR-18-28	ORE	waste	85.9	7.0	1.6	0.17	2.3	0.46	0.64	0.82	0.05	0.95
RR-18-28	FW	waste	79.7	9.5	2.6	0.28	2.1	2.1	1.3	1.3	0.07	1.0

Table 12: Results from chemical analysis of fractions < 20 mm after classification

			SiO_2 [wt.-%]	Al_2O_3 [wt.-%]	Fe_2O_3 [wt.-%]	TiO_2 [wt.-%]	K_2O [wt.-%]	Na_2O [wt.-%]	CaO [wt.-%]	MgO [wt.-%]	BaO [wt.-%]	LOI [wt.-%]
RR-18-14	ORE	< 20	99.1	0.38	0.01	0.013	0.15	<0.02	<0.02	0.05	<0.01	0.22
RR-18-14	FW	< 20	80.6	7.9	3.3	0.30	1.8	1.9	1.7	1.3	0.05	1.14
RR-18-23	HW	< 20	81.9	7.6	3.1	0.32	2.0	1.2	1.2	1.5	0.06	1.18
RR-18-23	ORE	< 20	98.4	0.55	0.21	0.011	0.2	0.04	0.22	0.04	<0.01	0.18
RR-18-23	FW	< 20	89.2	4.8	1.8	0.13	1.1	0.49	0.71	0.9	0.03	0.83
RR-18-28	HW	< 20	83.6	7.4	2.2	0.25	1.7	1.3	1.2	1.0	0.05	1.12
RR-18-28	ORE	< 20	96.0	2.0	0.44	0.043	0.61	0.07	0.19	0.17	0.01	0.37
RR-18-28	FW	< 20	82.6	8.0	2.2	0.23	1.9	1.8	1.2	1.1	0.06	0.93

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Figure 8: Fractions Q1, Q2 and waste after two step optical sorting of sample ORE from drill core RR-18-14

Figure 9: Fractions Q1, Q2 and waste after two step optical sorting of sample FW from drill core RR-18-14

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Figure 10: Fractions Q1, Q2 and waste after two step optical sorting of sample HW from drill core RR-18-23

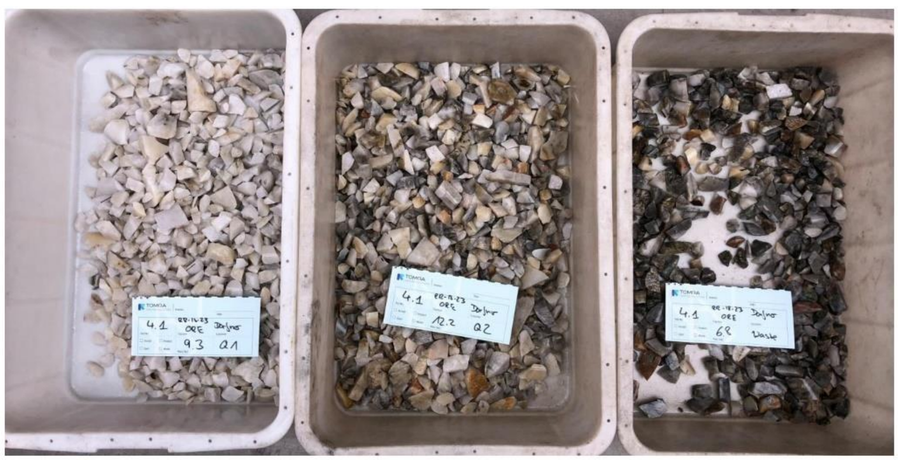

Figure 11: Fractions Q1, Q2 and waste after two step optical sorting of sample ORE from drill core RR-18-23

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Figure 12: Fractions Q1, Q2 and waste after two step optical sorting of sample FW from drill core RR-18-23

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Figure 13: Fractions Q1, Q2 and waste after two step optical sorting of sample HW from drill core RR-18-28

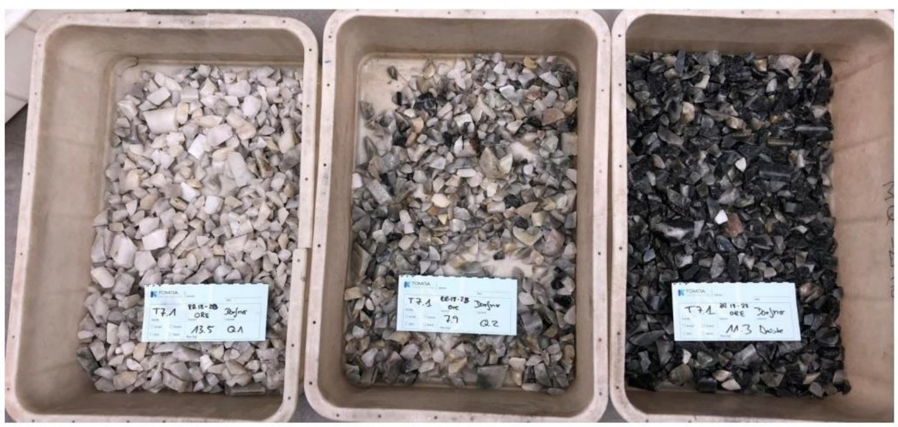

Figure 14: Fractions Q1, Q2 and waste after two step optical sorting of sample ORE from drill core RR-18-28

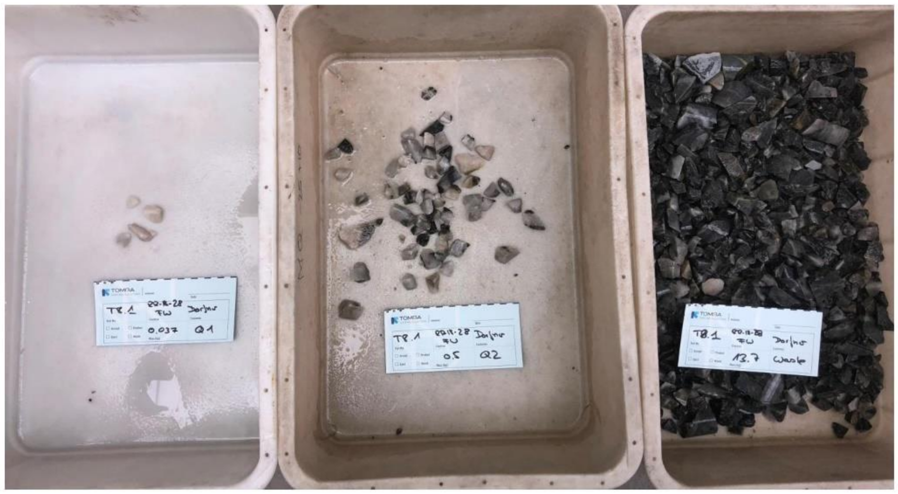

Figure 15: Fractions Q1, Q2 and waste after two step optical sorting of sample FW from drill core RR-18-28