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Assessment Report on Mineralogical and Petrographic Studies on the Big Whopper Pegmatite, Separation Rapids ON for Avalon Advanced Materials Inc. January 2017 JC Pedersen

SUMMARY

Core and trench samples were collected from drill holes and trenches on mining lease CLM 469 for the purposes of mineralogical, optical, analytical and petrograhpic studies. The goals of these studies include verification of historic analyses, verifying mineralmodal abundances, particularly Li-minerals and feldspars, and quantifying the modal abundance of secondary spodumene and its distribution in the pegmatite.

INTRODUCTION

The "Big Whopper Pegmatite" or BWP (as the Separation Rapids deposit is known) lithium-feldspar deposit is located approximately 70 km north of Kenora, Ontario on Avalon's 100% owned Separation Rapids rare metals property (Figure 1).

The property is readily accessible out of Kenora from a main all-weather road into a network of secondary logging roads. The main line of the Canadian National Railway passes through the village of Redditt, 40 km south of the property. Redditt is accessible by paved highway from Kenora and secondary roads link Redditt to the project site. Redditt is linked to the Ontario Hydro-power grid. The property lies within the traditional land use area of the Wabaseemoong Independent Nations of Whitedog, Ontario, an aboriginal community located approximately 35 km southwest of the property.

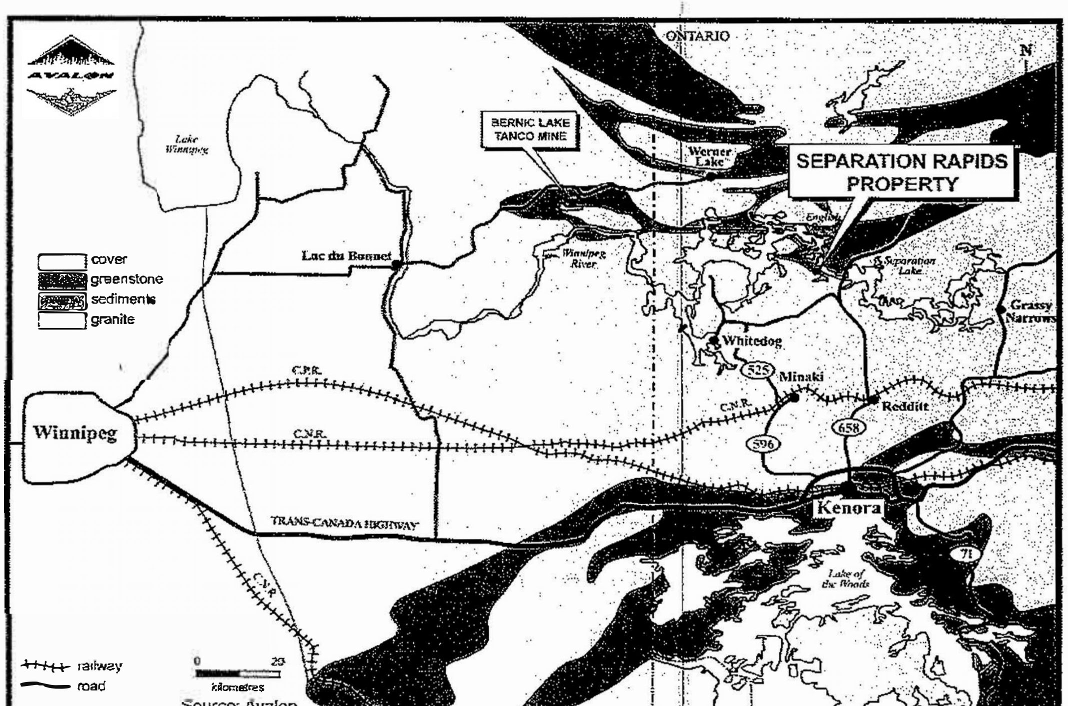

Figure 1 Property Location

PROPERTY DESCRIPTION

The Separation Rapids property (Figure 2) consists of 5 un-patented mineral claims totaling 62 claim units, covering approximately 2,480 acres (1000 hectares) and one Mining and Surface Rights Lease CLM 469 covering 441.44 hectares in the Paterson Lake Area, Kenora Mining Division, Ontario (Table 1). The lease and un-patented claims form one contiguous land package owned 100% by Avalon.

Township/Area	Claim Number	Recording Date	Status	Percent Owned
PATERSON LAKE AREA	1178857	1997-Feb-13	A	100 %
PATERSON LAKE AREA	1178858	1997-Feb-13	A	100 %
PATERSON LAKE AREA	1178859	1997-Feb-13	A	100 %
PATERSON LAKE AREA	1247024	2001-Feb-01	A	100 %
PATERSON LAKE AREA	4218361	2010-Jan-19	A	100 %
PATERSON LAKE AREA	CLM 469 (Min.Lease)	Start 2009-Oct-01 Expiry 2030-Sep-30	A	100 %

Table 1 Avalon Advanced Materials Separation Rapids Unpatented mining claims and mining lease

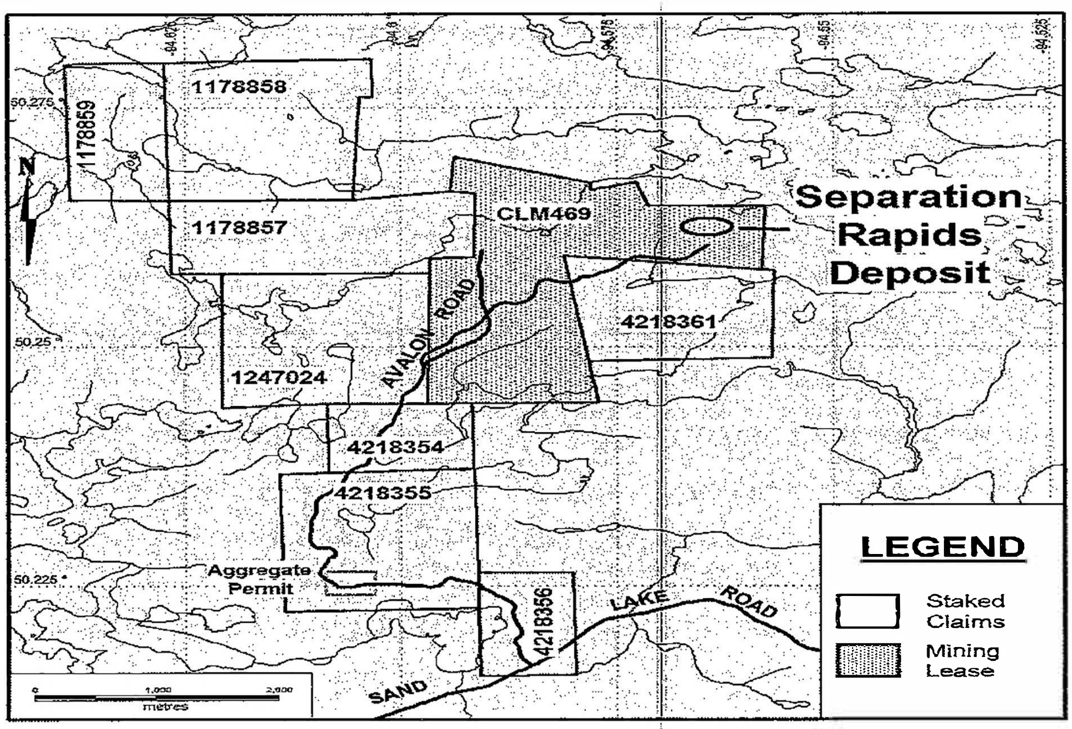

Figure 2. Claim location

PROPERTY GEOLOGY

The Separation Rapids property (Figure 7.2) is underlain predominantly by a mafic metavolcanic sequence (amphibolite) consisting of flows, tuffs and rare iron formation horizons. In the northern part of the property the mafic metavolcanic sequence is intruded by granite, pegmatitic granite and pegmatite dykes associated with the Separation Rapids pluton, and in the southern part of the property by pegmatitic granite and related dykes of the Winnipeg River batholith. The amphibolite of the mafic metavolcanic sequence and the Winnipeg River granite (unit 2) is the host lithologies to the BWP.

The BWP forms a large lens-shaped body approximately 400 m long and approximately 70 m at its widest part. The BWP narrows to less than 20 m at both its eastern and western ends, and extends along strike in both directions for at least 300 m in the form of relatively narrow tails up to 10 to 15 m wide. Smaller, subparallel, one to 10 m wide, petalite-bearing pegmatite bodies predominantly occur to the northeast, north and northwest of the main BWP body, with minor occurrences on the southern flank of the BWP. The narrower west-southwest-striking zone of petalite pegmatites extends from the main BWP for a distance of approximately 750 m to the west.

Based on lithological, mineralogical and textural variations, the BWP itself has been subdivided into five distinct units (3a, 3b, 4, 5 and 6 that outcrop as irregular dykes and larger irregular to elliptical bodies intruding the amphibolite and granites. Within the BWP, amphibolite occurs as narrow, discontinuous screens with strike lengths ranging from tens of metres up to greater than 100 m and widths of predominantly less than 1 m. These screens are preferentially, but not exclusively, concentrated near the north and south margins of the main pegmatite body. Diamond drilling has confirmed their down-dip continuity and surface mapping shows that they are also locally isoclinally folded with the pegmatite. Outside of the BWP, recessively-weathering amphibolite forms depressions and valleys adjacent to resistant ridges of granite and pegmatite.

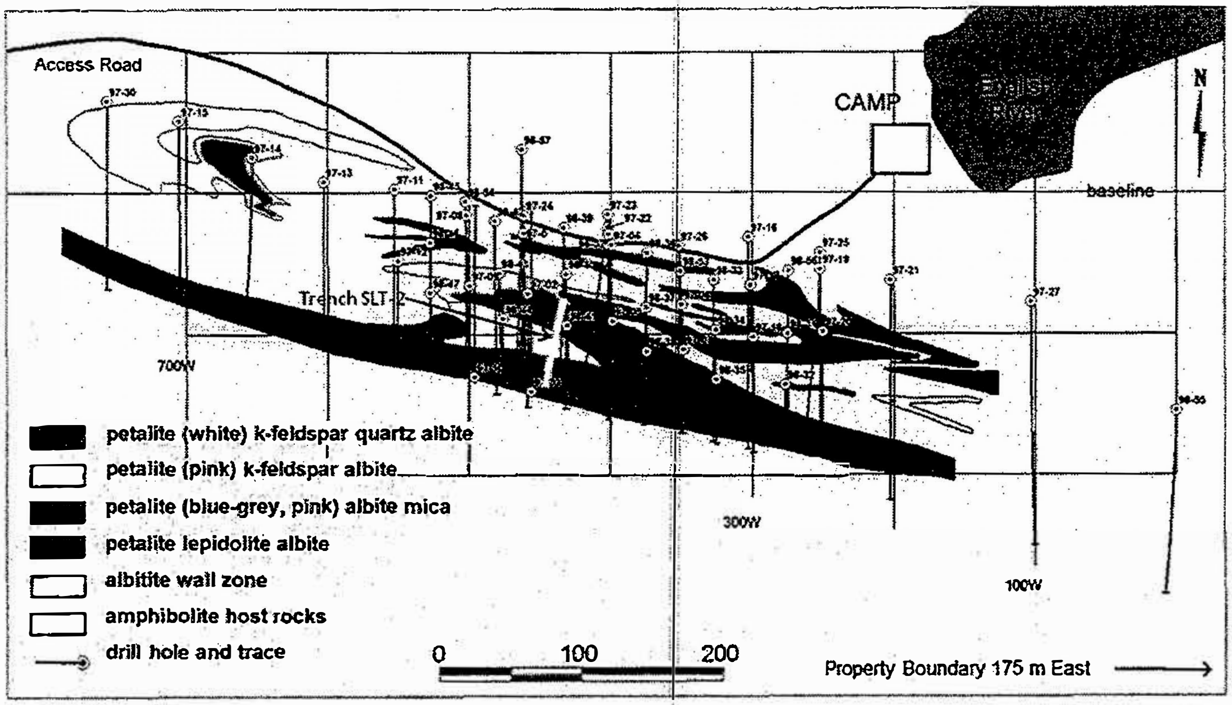

Figure 3 Property Geology with drill holes and Trench SLT-2

PETROGRAPHIC STUDY

Twenty eight thin sections obtained from samples collected from Trench SLT-2 (Figure 3) on the main mass of the Big Whopper were examined under a petrographic microscope with the primary purposes of identifying spodumene mineralization associated with petalite alteration, and the distribution and modal abundance of spodumene in the three principal petalite sub-types of Unit 6 (Pedersen, 2016). Early investigation by Taylor (1998 op.cit.) suggested classic pressure-temperature related alteration of petalite to "squi" (an acronym for spodumene-quartz intergrowth). Spodumene constitutes a third Li-bearing mineral in the deposit, and knowledge of its distribution and relative abundance is important to metallurgical test work.

The current study indicates that spodumene occurs as very fine symplectite intergrowths of pseudo-acicular spodumene and quartz along petalite cleavage planes in sub-unit 6a (Fig 4), and as fine symplectitic stringers across and through other mineral groups (Fig. 5), indicating a late, secondary hydrothermal origin to the spodumene, rather than co-eval P-T related reversion to squi. It was also found that these spodumene symplectites only occur in subunit 6a, and not 6b or 6c. More work, including point counts, is required to quantify spodumene content in 6a, but the current study is a significant step forward in optimizing mineralogical understanding to assist metallurgical optimization and mine planning.

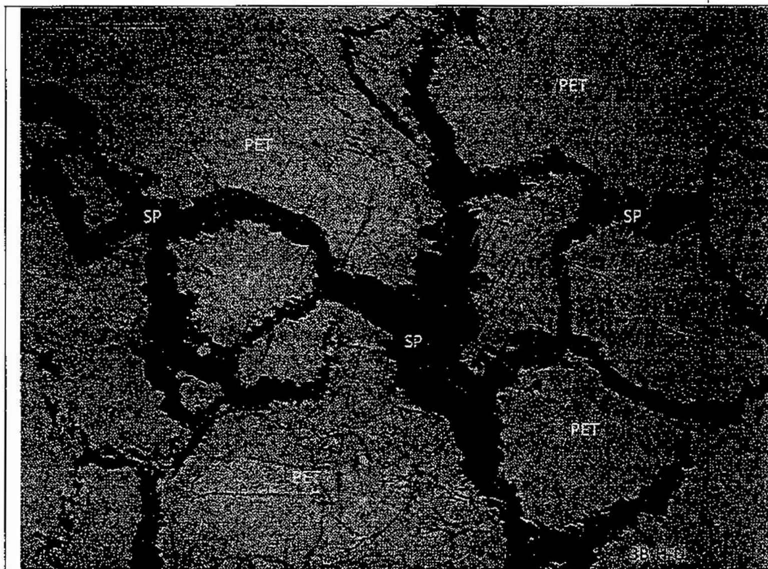

Figure 4 Sympletite spodumene along cleave planes in petalite. Plane polarized light.
PET Petalite
SP Spodumene

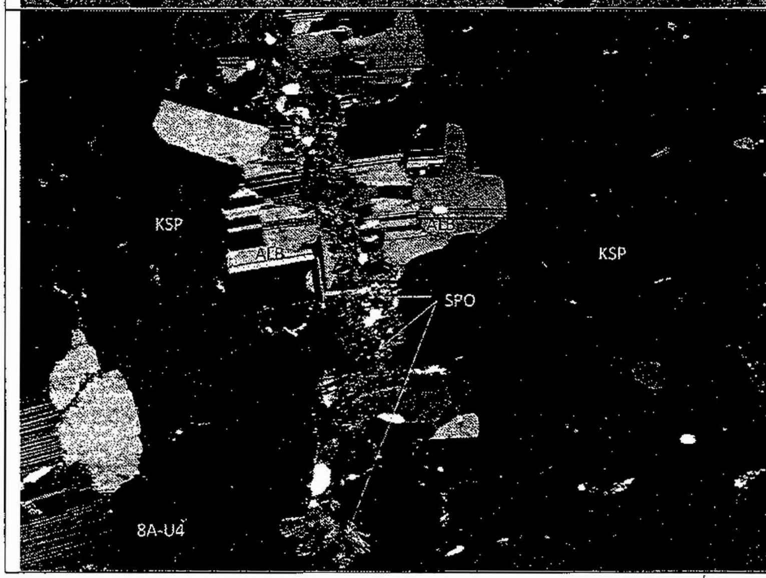

Figure 5 Symplectite spodumene stringer cross-cutting albite-K-feldspar assemblages. Plane polarized light.
SPO Spodumene
KSP K-feldspar
ALB albite

MINERALOGICAL STUDIES

A QEMSCAN study of crushed drill core and an X-ray Diffraction (XRD) study on a single sample of crushed drill core were completed by ALS Environmental (ALS) to determine and verify historic petalite and feldspar content, and overall mineralogy of the BWP, as reported below.

QEMSCAN and XRD Investigations

In 2016, Avalon submitted eight samples of crushed drill core to the ALS Environmental (ALS) laboratory in Kamloops, British Columbia, for Qemscan analysis of mineralogy (ALS, 2016). ALS completed Qemscan analysis of the eight samples and submitted the data to Avalon as an Excel spreadsheet. In addition, one XRD analysis was completed of an individual sample for comparison purposes. The XRD analysis was completed at Department of Earth, Ocean and Atmospheric Sciences at University of British

Columbia. The XRD results are presented below (**Error! Reference source not found.**). The XRD diffraction data is useful because the method can identify petalite whereas Qemscan cannot definitively identify petalite due to its inability to analyse light elements like lithium.

	SAMPLE_ID	Petalite	Plagioclase	K-Feldspar	Total Feldspar	Illite-Muscovite	Quartz
XRD	862938	33.00	31.00	8.40	39.40	6.20	18.30
	SAMPLE_ID	Pargasite	Dolomite/ Ankerite	Calcite	Schorl	Sillimanite	
XRD	862938	1.20	0.60	0.50	0.40	0.40	

Table 2 X-Ray Diffraction Analysis of Sample 862938 from Separation Rapids (Percent mineral content) Note: Sample from drill hole SR98-52 at 163.78-166 m.

The analyses for XRD account for 100% of the mineral content, a satisfactory total considering that some minerals such as tantalite, topaz and others are not measured by this method.

Table 3 below gives the results of the Qemscan analysis for the eight samples, with the lithological subunit specified.

ole No.	From (m)	To (m)	Interval (m)	Lithological Subunit	Sample Number (2016)	Sample Number (1997-8)	Quartz	Muscovite	Albite	Potassium Feldspar	Alumin Silicate (Petali
R98-52	157.10	158.65	1.55	6a	862932	51800	32.5	10.0	30.1	8.8	17.
R97-2	5.00	8.00	3.00	6a	862944	236555	31.3	8.5	24.0	12.4	21.
R97-2	32.00	35.00	3.00	6b	862947	236566	24.1	12.1	26.5	11.4	24.
R97-2	35.00	37.90	2.90	6b	862948	236567	23.1	13.2	25.1	9.3	28.
R97-2	47.40	48.30	0.90	6c	862953	236574	22.2	9.7	33.2	10.1	23.
R97-2	80.70	81.90	1.20	6c	862964	236591	25.5	14.1	28.9	8.1	22.
R98-52	84.05	86.05	2.00	6d	862922	51762	24.0	14.5	30.5	8.9	21.
R98-52	163.78	166.00	2.22	6d	862938	51807	18.9	7.9	27.6	10.0	31.

ole No.	From (m)	To (m)	Interval (m)	Lithological Subunit	Sample Number (2016)	Topaz	Apatite	Others	Total	Elemental Iron (Tramp Iron)
R98-52	157.10	158.65	1.55	6a	862932	-	0.1	0.6	99.9	0.5
R97-2	5.00	8.00	3.00	6a	862944	<0.1	0.1	1.0	99.9	0.3
R97-2	32.00	35.00	3.00	6b	862947	<0.1	0.1	0.4	99.9	0.4
R97-2	35.00	37.90	2.90	6b	862948	-	0.2	0.3	100.0	0.4
R97-2	47.40	48.30	0.90	6c	862953	-	0.1	0.3	100.0	0.3

R97-2	80.70	81.90	1.20	6c	862964	-	0.1	0.3	99.9	0.3
98-52	84.05	86.05	2.00	6d	862922	0.1	0.2	0.4	99.9	0.2
98-52	163.78	166.00	2.22	6d	862938	1.3	0.2	0.4	99.9	0.3

Table 3 . Qemscan Mineralogical Analysis by ALS (Percent mineral content)

Visual estimates of major mineral modal abundances from outcrop and drill core were made by JC Pedersen (2016, internal company document) as a base for comparison with optical and analytical methods (Table 4).

Subunit		Pedersen Estimates						ALS Qemscan			
	Lithology	Petalite (Pet) (%)	K-feldspar (Ksp) (%)	Albite (Alb) (%)	Total Feldspar	Quartz (Qtz) (%)	Spodumene (%)	K-feldspar (Ksp)	Albite (Alb)	Total Feldspar	Quattz (Qtz)
6a	Pet-Ksp-Alb-Qtz	30	20	20	40	15	10	10.68	26.55	37.23	32.95
6b	Pet-Alb-Ksp-Mica	35	25	20	45	15		11.75	28.36	40.11	22.48
6c	Pet-Alb-Mica-Ksp	30	20	20	40	15	10	10.62	35.14	45.76	20.20
6d	Pet-Lep-Alb-Ksp	30	25	15	40	15		7.97	30.32	38.29	21.33

Table 4 Mineral Modal Abundance: Comparison of ALS Qemscan with Pedersen (2016) Visual Core Estimates Pedersen, 2016a; ALS, 2016.

Comparison of the averages for Pedersen, Taylor, Lakefield and ALS are given in the table below (**Error! Reference source not found.**) averaged for Subunits 6a, 6b and 6c. Subunit 6d is excluded because of its enhanced lepidolite content. In viewing this data, it must be noted that the number of samples in each study is relatively small and the range of results may simply be due to the inherent variability in the material and the small sample number.

Mineral	Pedersen Average 2016a (%)	Taylor Modal Range 1999a (%)	Mean Taylor (+5)	Lakefield 1999 (%)	ALS Qemscan 2016 (%)
Number of samples	NAP[1]	11	11	4	16
Petalite	31.3	19 - 36	25.0	21.8	24.2
Potassium feldspar	22.5	7 - 17	10.0	9.0	10.3

Mineral	Pedersen Average 2016a (%)	Taylor Modal Range 1999a (%)	Mean Taylor (+5)	Lakefield 1999 (%)	ALS Qemscan 2016 (%)
Albite	18.8	22 - 30	27.0	30.7	30.1
Total feldspar	43.3	29 - 47	37.0	39.7	40.4
Mica (lepidolite and Li-micas)	15.0	8 - 16	11.0	11.1	9.4
Spodumene	5.0	0 - 13	1.0	3.9	NA[2]
Quartz	15.0	18 - 33	25.0	23.5	24.2

[1] Not applicable. Table 5 Average Mineral Contents Estimated by Pedersen, Taylor, Lakefield and ALS
[2] Not available.

In conclusion, the various mineralogical investigations show similar estimates of mineral content for a range of samples. In particular, the mean estimates of Taylor and ALS of the total feldspar content average 39% for the two means, and representing a total of 28 samples examined of four different lithologies of Subunits 6a, 6b, 6c and 6d. This average of 39% for individual samples can be compared to two metallurgical bulk samples of Unit 6 that averaged 40.7% total feldspar when analysed by Qemscan.

Pedersen's average of 43.3% total feldspar is higher, but illustrates the difficulty of accurately estimating mineral percentages during visual examination of drill core using a hand lens where some minerals in some cases have been subjected to shearing and mylonite textures. In particular, when albite and potassium feldspar are fine-grained distinguishing the two is challenging.

The representativity of the feldspar content measurements given in this report can be considered by reference to Figure 6. Eleven drill holes have had quantitative mineralogy of which Taylor (1999a) examined SR97-02, -07, -09, -18 and SR98-32, 35, 37, 40, 41, 43 whilst ALS analysed SR97-02 and SR98-52. Lithologies were covered to the extent of seven samples of Subunit 6a, five samples of Subunit 6b, five samples of Subunit 6c and three samples of Subunit 6d. As a result, it can be considered that the drill holes studied cover most of the strike length of the deposit and all subunits of Unit 6 were studied. Thus the conclusions are considered to be representative of the deposit.

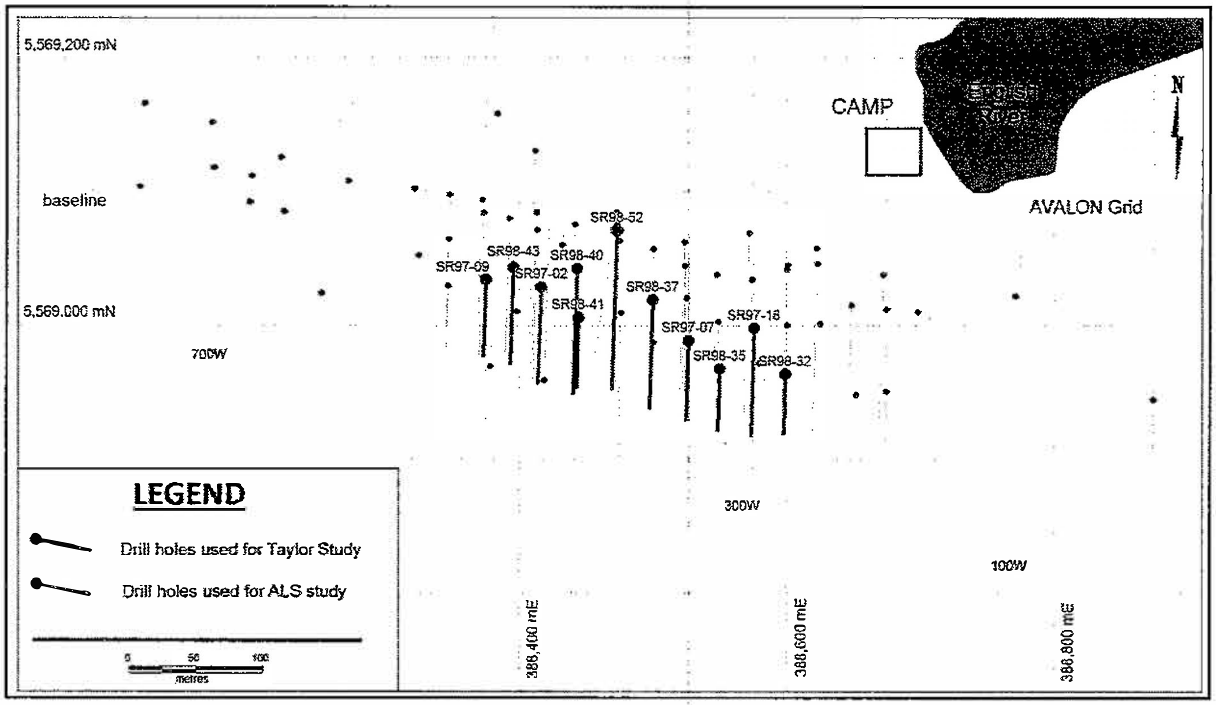

Figure 6 Drill Holes with Samples with Quantitive Mineralogy Measured

COMMUNITY ENGAGEMENT

Avalon conducted on-going community engagement through 2016. Meetings included both aboriginal and non-aboriginal stakeholders and groups. Meetings were held with local regulators to introduce the project, to better understand the environmental conditions at the proposed mine site, and assess environmental options for the proposed hydrometallurgical plant site in Kenora. Discussions and engagement activities were also carried out with the two identified aboriginal right-bearing communites of Wabaseemoong Independent Nation and the Metis Nation of Ontario (MNO) and MNO Kenora Council.

REFERENCES

Pedersen, JC 1998; Geological Report 1997-98 Exploration Program, The Big Whopper Rare Metals Pegmatite, Separation Rapids Property, Kenora Mining Division, Ontario. Internal company report

Pedersen, JC 2016 Petrographic Study of Petalite Sub-Zones in the Separation Rapids Pegmatite, Separation Rapids, ON. Internal company report for Avalon Advanced Materials

Taylor RP, 1998 Mineralogical studies on the Big Whopper Pegmatite. Internal reports for Avalon Ventures, in Pedersen 1998, op. cit.

QUANTITATIVE PHASE ANALYSIS OF ONE POWDER SAMPLE USING THE RIETVELD METHOD AND X-RAY POWDER DIFFRACTION DATA.

Project: KM 5110

PO# M1795

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August 24, 2016

EXPERIMENTAL METHOD

The sample of Project ***KM 5110*** was reduced to the optimum grain-size range for quantitative X-ray analysis (<10 μm) by grinding under ethanol in a vibratory McCrone Micronizing Mill for 10 minutes. Step-scan X-ray powder-diffraction data were collected over a range 3-80°2θ with CoKa radiation on a Bruker D8 Advance Bragg-Brentano diffractometer equipped with an Fe monochromator foil, 0.6 mm (0.3°) divergence slit, incident- and diffracted-beam Soller slits and a LynxEye-XE detector. The long fine-focus Co X-ray tube was operated at 35 kV and 40 mA, using a take-off angle of 6°.

RESULTS

The X-ray diffractogram was analyzed using the International Centre for Diffraction Database PDF-4 and Search-Match software by Bruker. X-ray powder-diffraction data of the sample were refined with Rietveld program Topas 4.2 (Bruker AXS). The results of quantitative phase analysis by Rietveld refinements are given in Table 1. These amounts represent the relative amounts of crystalline phases normalized to 100%. The Rietveld refinement plot is shown in Figure 1.

Note that schorl and beryl cannot be distinguished at this low concentration level as only one free-standing peak which is common for both minerals, is available. In addition, the X-ray pattern shows the presence of some amorphous or nanoscale material that was accounted for by fitting the pattern with a broad calculated peak at about 30°2θ.

Table 1. Results of quantitative phase analysis (wt.%)

Mineral	**Ideal Formula**	**862938**
Petalite	$LiAlSi_4O_{10}$	33.0
Plagioclase	$NaAlSi_3O_8 - CaAl_2Si_2O_8$	31.0
Quartz	SiO_2	18.3
K-feldspar	$KAlSi_3O_8$	8.4
Illite-Muscovite	$K_{0.65}Al_{2.0}(Al_{0.65}Si_{3.35}O_{10})(OH)_2$- $KAl_2AlSi_3O_{10}(OH)_2$	6.2
Pargasite	$NaCa_2(Mg_4Al)Si_6Al_2O_{22}(OH)_2$	1.2
Dolomite/ Ankerite ?	$CaMg(CO_3)_2$ / $Ca(Fe^{2+},Mg,Mn)(CO_3)_2$	0.6
Calcite	$CaCO_3$	0.5
Schorl	$NaFe_3^{2+}Al_6(BO_3)_3Si_6O_{18}(OH)_4$	0.4
Sillimanite	Al_2SiO_5	0.4
Total		100.0

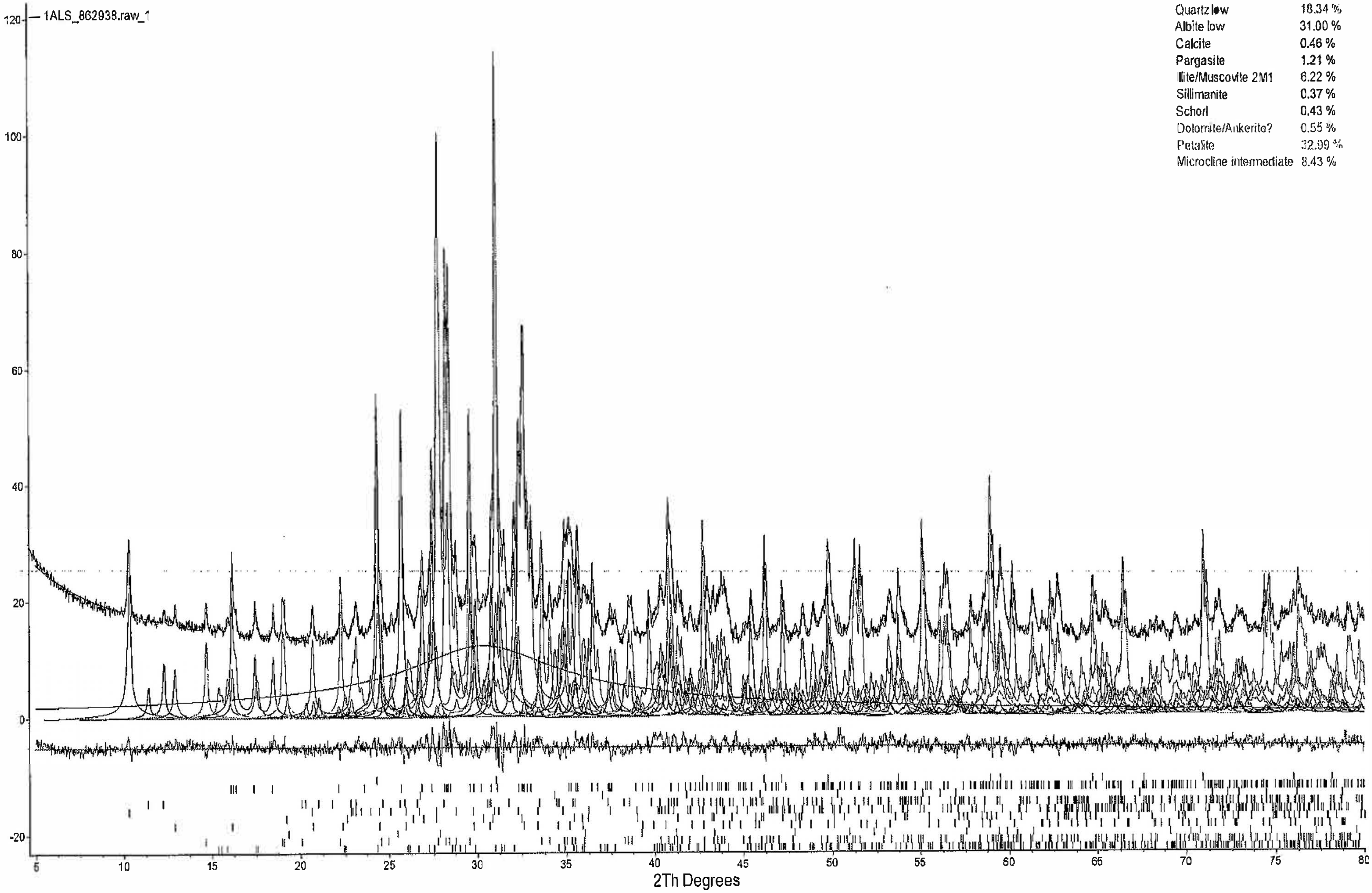


Figure 1. Rietveld refinement plot of sample **ALS Metallurgy Kamloops: 862938** (blue line - observed intensity at each step; red line - calculated pattern; solid grey line below - difference between observed and calculated intensities; vertical bars - positions of all Bragg reflections). Coloured lines are individual diffraction patterns of all phases.

TABLE 1A
MINERAL COMPOSITION OF SEPARATION RAPIDS SAMPLES
KM5110

Minerals	862922	862932	862938	862944
Sulphide Minerals	<0.1	<0.1	<0.1	0.0
Elemental Iron (Trap Iron)	0.2	0.5	0.3	0.3
Quartz	24.0	32.5	18.9	31.3
Muscovite	14.5	10.0	7.9	8.5
Biotite/Phlogopite	<0.1	0.1	1.1	0.1
Feldspar Albite	30.5	30.1	27.6	24.0
K Feldspar	8.9	8.8	10.0	12.4
Aluminum Silicate	21.0	17.0	31.7	21.9
Kaolinite (clay)	0.2	0.2	0.2	0.3
Topaz	0.1	0.0	1.3	<0.1
Apatite	0.2	0.1	0.2	0.1
Amphibole	<0.1	<0.1	0.4	<0.1
Carbonates	<0.1	<0.1	<0.1	<0.1
Others	0.4	0.6	0.4	1.0
Total	100	100	100	100

Notes 1) Sulphide Minerals includes Chalcopyrite, Bornite, Chalcocite/Covellite and Pyrite.
2) Elemental Iron (Tramp Iron) includes trace amounts of Limonite/Goethite.
3) Feldspar Albite includes trace amounts of Plagioclase Fledspar.
4) Alumininum Silicrate includes Petalite based on the XRD data.
5) Carbonates includes Calcite and trace amounts of Ankerite/Dolomite.
6) Others includes trace amounts of Garnet, Zircon, Cassiterite, Sphene and unresolved mineral species.

TABLE 1A CONTINUED
MINERAL COMPOSITION OF SEPARATION RAPIDS SAMPLES
KM5110

Minerals	862947	862948	862953	862964
Sulphide Minerals	<0.1	0.1	<0.1	<0.1
Elemental Iron (Trap Iron)	0.4	0.4	0.3	0.3
Quartz	24.1	23.1	22.2	25.5
Muscovite	12.1	13.2	9.7	14.1
Biotite/Phlogopite	0.2	0.1	0.2	<0.1
Feldspar Albite	26.5	25.1	33.2	28.9
K Feldspar	11.4	9.3	10.1	8.1
Aluminum Silicate	24.6	28.0	23.8	22.6
Kaolinite (clay)	0.2	0.1	0.1	0.2
Topaz	<0.1	0.0	0.0	0.0
Apatite	0.1	0.2	0.1	0.1
Amphibole	<0.1	<0.1	<0.1	<0.1
Carbonates	<0.1	<0.1	<0.1	<0.1
Others	0.4	0.3	0.3	0.3
Total	100	100	100	100

Notes 1) Sulphide Minerals includes Chalcopyrite, Bornite, Chalcocite/Covellite and Pyrite.
2) Elemental Iron (Tramp Iron) includes trace amounts of Limonite/Goethite.
3) Feldspar Albite includes trace amounts of Plagioclase Fledspar.
4) Alumininum Silicrate includes Petalite based on the XRD data.
5) Carbonates includes Calcite and trace amounts of Ankerite/Dolomite.
6) Others includes trace amounts of Garnet, Zircon, Cassiterite, Sphene and unresolved mineral species.

TABLE 1B
% ALUMINUM BEARING MINERAL OF TOTAL ALUMINUM
KM5110

Minerals	862922	862932	862938	862944
Micas	27.0	20.5	15.0	17.3
Feldspar Albite	35.5	39.4	31.5	30.6
K Feldspar	11.5	12.6	12.3	17.9
Aluminum Silicate	25.2	26.7	36.3	32.4
Other Aluminum Minerals	0.8	0.7	4.8	1.8
Total	100	100	100	100

Minerals	862947	862948	862953	862964
Micas	23.0	24.5	18.3	26.8
Feldspar Albite	31.3	29.3	39.5	34.4
K Feldspar	15.1	12.1	13.3	10.7
Aluminum Silicate	30.0	33.6	28.5	27.7
Other Aluminum Minerals	0.5	0.6	0.4	0.4
Total	100	100	100	100

Notes 1) Micas includes Muscovite and trace amounts of Biotite/Phlogopite.

2) Feldspar Albite includes trace amounts of Plagioclase Fledspar.

3) Alumininum Silicate includes Petalite according to XRD data.

4) Other Aluminum Minerals includes Garnet, Sphene, Amphibole, Kaolinite and Topaz.

TABLE 1B CONTINUED

% SILICON BEARING MINERAL OF TOTAL SILICON

KM5110

Minerals	862922	862932	862938	862944
Quartz	33.8	44.1	26.9	42.5
Micas	9.1	6.1	5.6	5.2
Feldspar Albite	28.6	27.1	25.9	21.8
K Feldspar	7.1	6.8	7.9	9.3
Aluminum Silicate	21.2	15.6	32.6	20.5
Other Silicon Minerals	0.2	0.2	1.1	0.6
Total	100	100	100	100

Minerals	862947	862948	862953	862964
Quartz	33.7	32.5	31.1	35.4
Micas	7.7	8.3	6.1	8.7
Feldspar Albite	24.8	23.5	30.9	26.8
K Feldspar	8.9	7.3	7.8	6.2
Aluminum Silicate	24.8	28.3	23.9	22.6
Other Silicon Minerals	0.2	0.2	0.1	0.1
Total	100	100	100	100

Notes 1) Micas includes Muscovite and trace amounts of Biotite/Phlogopite.

2) Feldspar Albite includes trace amounts of Plagioclase Fledspar.

3) Aluminum Silicate includes Petalite according to XRD data.

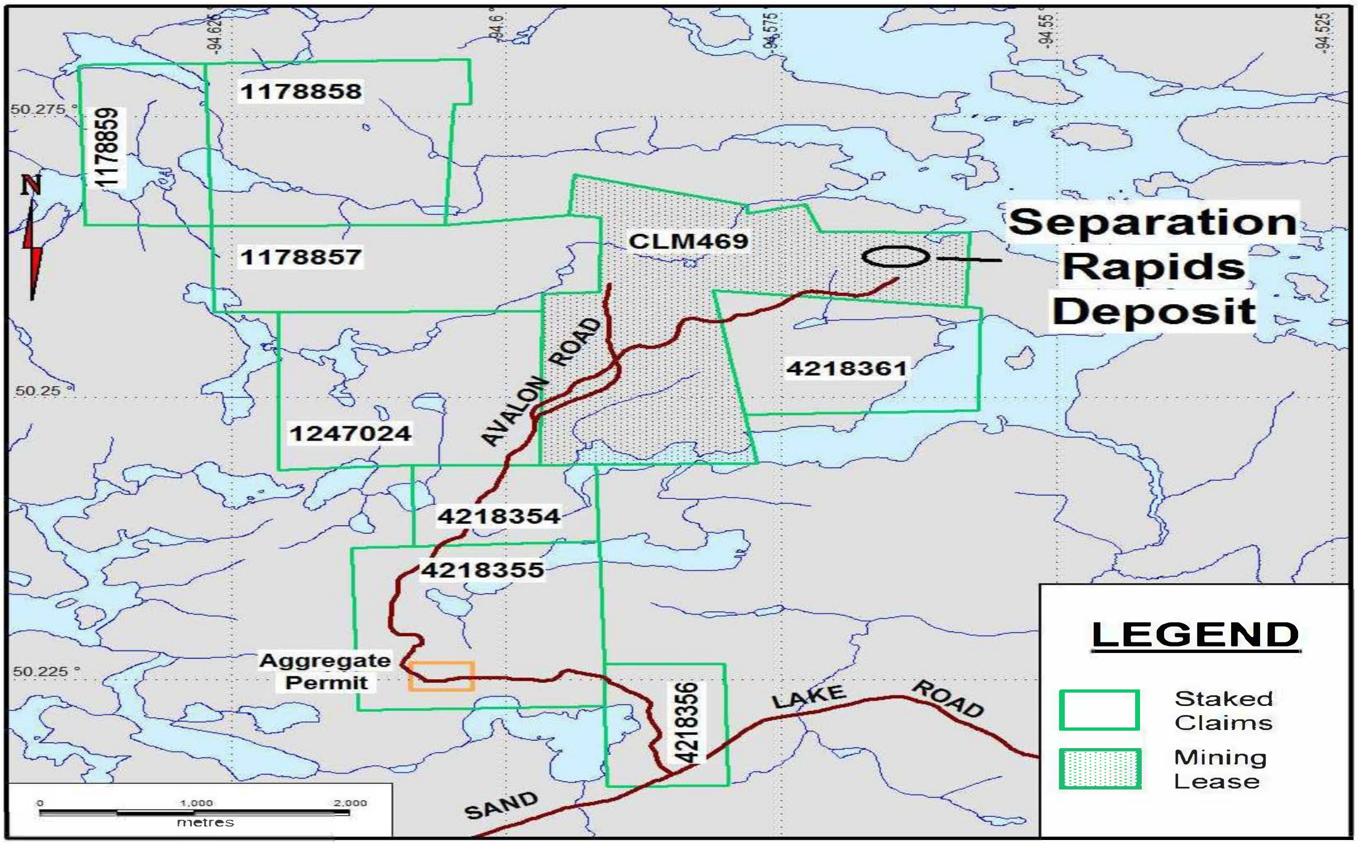
4) Other Silicon Minerals includes Garnet, Sphene, Amphibole, Kaolinite and Topaz.

TABLE 1C
CHEMICAL COMPOSITION OF SEPARATION RAPIDS SAMPLES
KM5110

Element	Assay Methods	862922	862932	862938	862944
Al	QEMSCAN	9.22	8.33	9.66	8.45
	Chemical	8.52	8.34	8.60	8.13
Ca	QEMSCAN	0.10	0.12	0.31	0.04
	Chemical	0.14	0.16	0.31	0.11
Fe	QEMSCAN	0.20	0.45	0.50	0.34
	Chemical	0.16	0.56	0.43	0.52
K	QEMSCAN	2.60	2.13	2.14	2.43
	Chemical	2.17	1.87	1.74	2.25
Na	QEMSCAN	2.50	2.44	2.19	1.99
	Chemical	2.86	2.75	2.54	2.29
S	QEMSCAN	<0.01	0.01	0.01	0.00
	Chemical	0.01	0.01	0.02	0.01
Si	QEMSCAN	33.2	34.4	32.7	34.4
	Chemical	35.3	35.1	34.2	35.0

TABLE 1C CONTINUED
CHEMICAL COMPOSITION OF SEPARATION RAPIDS SAMPLES
KM5110

Element	Assay Methods	862947	862948	862953	862964
Al	QEMSCAN	9.09	9.23	9.17	9.03
	Chemical	8.15	8.21	8.42	8.07
Ca	QEMSCAN	0.05	0.11	0.12	0.06
	Chemical	0.14	0.12	0.16	0.14
Fe	QEMSCAN	0.38	0.35	0.31	0.31
	Chemical	0.45	0.42	0.36	0.38
K	QEMSCAN	2.67	2.50	2.27	2.44
	Chemical	2.16	2.00	1.94	1.92
Na	QEMSCAN	2.19	2.06	2.70	2.37
	Chemical	2.63	2.38	3.21	2.90
S	QEMSCAN	0.01	0.02	<0.01	<0.01
	Chemical	0.01	0.01	0.01	<0.01
Si	QEMSCAN	33.4	33.3	33.4	33.6
	Chemical	35.6	35.4	35.9	35.3



-94.625
-94.6
-94.575
-94.55
-94.525
50.275
50.25
50.225
N
1178858
1178859
1178857
CLM469
Separation Rapids Deposit
AVALON ROAD
4218361
1247024
4218354
4218355
Aggregate Permit
4218356
SAND LAKE ROAD
0
1,000
2,000
metres
LEGEND
Staked Claims
Mining Lease