TECHNICAL REPORT

On the

Big Mack Property
Kenora Mining District
Northwestern Ontario, Canada
(Latitude: 16' 20" N; Longitude: 35' 33'' W)
(UTM NAD83 Zone 15N : 386525mE, 5570100mN)

Prepared for:

Pan American Energy Corp.
Suite 100 521 3rd Ave SW
Kenora, Alberta T2P 3T3

Prepared by:

Craig Ravnaas, P.Geo.
Consulting Geologist
324 Seventh Ave South,
Kenora, Ontario P9N 2E8

December 12, 2022
(Effective Date: December 12, 2022)

TABLE OF CONTENTS

1.0 SUMMARY 6
2.0 INTRODUCTION 9
2.1 Purpose of Report 9
2.2 Sources of Information 9
3.0 RELIANCE ON OTHER EXPERTS 9
4.0 PROPERTY DESCRIPTION AND LOCATION 10
5.0 ACCESS, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES, AND INFRASTRUCTURE 17
5.1 Access 17
5.2 Climate 17
5.3 Physiography 17
5.4 Local Resources and Infrastructure 17
6.0 HISTORY 18
6.1 Ownership History 18
6.2 Exploration Work History 18
6.3 Ontario Geological Survey (OGS) Activity 29
6.4 University of Manitoba Academic Studies 29
6.4.1 Study A: Strain Relationship in Separation Rapids Pegmatite Field 29
6.4.2 Study B: Age date relationship in Separation Rapids Pegmatite Field 31
7.0 GEOLOGICAL SETTING AND MINERALIZATION 33
7.1 Regional Geology 33
7.2 Property Geology 35
7.3 Mineralization 36
7.3.1 Big Mack Pegmatites 36
7.3.2 Eleven Zone Pegmatite 37
7.3.3 Sprinkler Zone and 6059 Pegmatites 38
7.4 Minerals found in the Big Mack and other Rare-Metal-Bearing Pegmatites 38
7.4.1 Petalite 38
7.4.3 Tantalum 42
8.0 DEPOSIT TYPES 43
9.0 EXPLORATION 45
10.0 DRILLING 45
11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY 45
12.0 DATA VERIFICATION 45
13.0 MINERAL PROCESSING AND METALLURGICAL TESTING 47
14.0 MINERAL RESOURCE ESTIMATES 47
23.0 ADJACENT PROPERTIES 47
23.1 Avalon Rare Metals Inc. 47
23.1.1 Big Whopper Pegmatite 47

23.1.2 Glitter Pegmatite....49
23.1.3 Rattler Pegmatite....50
23.1.4 Wolf Pegmatite....50
23.1.5 Area Northwest of the Property....51
24.0 OTHER RELEVANT DATA AND INFORMATION 53
24.1 Environmental Concerns.... 53
25.0 INTERPRETATION AND CONCLUSIONS 53
26.0 RECOMMENDATIONS 54
26.1 Budget.... 56
27.0 REFERENCES.... 58
28.0 SIGNATURE PAGE.... 61
29.0 CERTIFICATE OF AUTHOR.... 62

LIST OF FIGURES

Figure 1: Property Location Map 14
Figure 2: Mining Lease map with physiography 15
Figure 3: Infrastructure and Access Map 16
Figure 4: Historical drill holes location map 22
Figure 5: Image the central portion of the Big Mack pegmatite 23
Figure 6: Bedrock geology map showing location of pegmatites on the property 26
Figure 7: 2012 grab samples collected from the Big Mack Pegmatite exposure. 28
Figure 8: Pegmatite contact with the mafic volcanic county rock which had been interpreted as folding structural events (from Ching et al 2020). 30
Figure 9: Location of Chronology Samples Sites (see Table 8) 32
Figure 10: Regional Geology 34
Figure 11: Adjacent Properties Map 52

LIST OF TABLES

Table 1: Property details (Source: MLAS Ontario) 13
Table 2: Exploration History 19
Table 3: Avalon Venture Limited Diamond Drill Holes near the Property 20
Table 4: 1998 and 1999 Diamond Drilling on the Property 21
Table 5: Significant Lithium and Tantalum Assays Results of 2001 Diamond Drilling Program on the Property 25
Table 6: Results of Diamond Drilling on Property in 2011 27
Table 7: OGS publications with references that summarize the rare-metal potential of the Separation Lake Pegmatite Field and\ some pegmatites location on the Property. ... 29
Table 8: Uranium-PB age determination of pegmatites and country rock in the Separation Rapids Pegmatite Field (after Ching et al 2020). 31
Table 9: Rare-Metal Lithogeochemical Threshold Values for Rock Types 36
Table 10: Minerals associated with rare-metal bearing pegmatites on the Property and in the Separation Rapids Pegmatite Field (Winter 2012). 39
Table 11: Mineral Resource Estimate for the Big Whopper Rare-Metal Deposit 49
Table 12: Phase 1 budget 56
Table 13: Phase 2 Budget 57

LIST OF PHOTOS

Photo 1: White petalite with web-texture 40
Photo 2: White petalite 40
Photo 3: Pink petalite 41
Photo 4: Lepidolite – pink micas 41

1.0 SUMMARY

This report on the Big Mack Property (the "Property") was commissioned by Pan American Energy Corp. ("Pan American" or the "Company"). The report is intended to provide a summary of material scientific and technical information concerning the Property and, in so doing, fulfill the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101 ("NI 43-101").

The Property is in Paterson Lake Area (G-2634), approximately 80 kilometres north of Kenora, Ontario (Figure 1). It is centred at latitude 50°16'20" N, longitude 94° 35'33" W - UTM Zone 15, 386525 mE, 5570100 mN. The Property is comprised of one mining lease LEA-110010 (195.76 hectares), formerly known as CLM 428, is recorded in good standing within the Kenora Mining Division of Ontario (Figure 2). The Property is collectively known as the Big Mack Property. Magabra Resources Corporation is the recorded owner of the Property. The Property was acquired by Magabra Resources Corporation from Pacific Iron Corporation in 2001. Pan American Energy Corp. optioned to acquire up to 90% interest in the Property from Magabra on August 22, 2022. Legal rights on the Property include mining and surface rights.

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. Previous holders of the Property Emerald Fields Resources Corporation and Pacific Iron Corporation have had discussions with Wabaseemoong Independent Nations regarding their exploration activities on the Property.

The Property is situated approximately 80 kilometres by road north of Kenora, Ontario and is directly accessible via a series of forestry roads. The main line of the Canadian National Railway passes through the village of Redditt, 50 km by road south of the Property.

The area has had a history of base and precious metals exploration with some work focusing on the uranium and iron potential. The Separation Lake Greenstone Belt (SLGB) has been the focus of extensive study by the Ontario Geological Survey since the area was examined as part of Operation Kenora-Sydney Lake (Breaks et al. 1975). The Property occurs within the SLGB of the contact zone of the English River sub province and Winnipeg River sub province of the Archean Superior Province. Extensive research and mapping by the Ontario government from 1993 increased interest in the rare-metal pegmatite potential of the area.

Geologically, the SLGB could be an easterly extension of the Bird River belt of Manitoba (Cerny et. al. 1996). The Bird River – SLGB system is noteworthy in being the locus for one of the highest concentrations of rare-metal pegmatite mineralization in the Superior Province coupled with probably the greatest number of complex-type, petalite-subtype pegmatite occurrences in Canada (Cerny et. al. 1996).

Zoned pegmatites are host to many rare elements and metals such as tantalum, niobium, tin, lithium, rubidium, and cesium. Tanco's Bernic Lake pegmatite in Manitoba, Bikita in Zimbabwe and the Greenbushes in Australia are some of the better-known rare-metal deposits currently

being mined for their lithium and/or tantalum content. Pan American's Big Mack and Avalon Rare Metals Inc.'s Big Whopper petalite pegmatites are examples of potentially economic deposits within the SLGB.

Structural features either as shearing and folding could be important factors related to the pathway for felsic magma which formed the rare-metal pegmatites. This strain and deformational events occurred in the country rocks before the formation of the pegmatites. The pegmatites have not been deformed during injection of magma and after formation. Recent age dating of the pegmatite has proposed there is about 40 Ma span for emplacement.

Historical exploration work to date has identified a series of petalite and rare earth pegmatites on the Property. The most significant of these are the Big Mack, Eleven Zone, and 6059-Sprinkler Zone pegmatites.

EFR completed a 15-hole diamond drilling program on the Big Mack pegmatite between 1998 and 2001. Based on the petalite mineralization intersected in these drill-holes Chastko and Pryslak (MNDM assessment file 2.22913) proposed a volume of petalite at 325,000 tonnes. *(Note: A Qualified Person has not done sufficient work to classify the volume estimate as current mineral resources. The Company is not treating the historical estimate as a current mineral resource or reserve. The Company believes that the historic volume estimate is relevant to an appraisal of the merits of the Property and forms a reliable basis upon which to develop future exploration programs. The Company will need to conduct further exploration which will include drill testing the project, and there is no guarantee that the results obtained will reflect the historical estimate. The historical estimates should not be relied on.)*

Pan American has not carried any exploration work on the Property. The Author visited the Property on August 06 and October 23, 2022, to verify historical exploration work, to examine mineralized outcrops, to collect necessary geological, and to collect other relevant data related to infrastructure, access and logistic support for future work.

The data presented in this report is based on published reports and data available from Pan American, Ontario ENDM (Ministry of Energy, Northern Development and Mines), the Geological Survey of Canada, and the Ontario Geological Survey. All consulted data sources are deemed reliable. The data collected during present study is considered sufficient to provide an opinion about the merit of the Property as a viable exploration target.

Based on its favourable geological setting indicating pegmatite hosted lithium and rare metals mineralization in surface grab samples, channel sampling, trenching, and drill holes; results of historical exploration work; and findings of present study, it is concluded that the Property is a property of merit, with good potential for discovery of economic concentration of lithium and rare metals through further exploration. Good infrastructure, availability of exploration and mining services in the vicinity makes it a worthy mineral exploration target. The historical exploration data collected on the Property provides the basis for a follow-up work program.

Recommendations

In the Author's opinion, the character of the Property is enough to merit the following two-phase work program, where the second phase is contingent upon the results of the first phase.

Phase 1 – Prospecting, and Sampling

Phase 1 Exploration work on the Property should comprise prospecting, mapping, sampling stripping, and channel-cut sampling to further define the potential of the lithium, tantalum, and rare-metal minerals. Geochemistry of all the pegmatites should be reviewed to help determine genesis and relationships of the pegmatites across the Property. The estimated budget for Phase 1 work is $688,218 and it will take about four months to complete this work.

Phase 2 – Diamond Core Drilling

Phase 2 work should include diamond drilling of the Big Mack pegmatite to depth and along strike to prove continuity and the potential associations to the other pegmatites in the immediate area. The estimated budget for Phase 2 work is 1,754,325 and it will take about six months' time to complete this work.

2.0 INTRODUCTION

2.1 Purpose of Report

This report was commissioned by Pan American Energy Corporation ("Pan American" or the "Company") with Craig Ravnaas, P.Geo. (the "Author") retained to prepare an independent Technical Report on the Big Mack Lake Property (the "Property"). The report is intended to provide a summary of material scientific and technical information concerning the Property and, in so doing, fulfill the Standards of Disclosure for Mineral Projects according to Canadian National Instrument 43-101 ("NI 43-101").

2.2 Sources of Information

The present report is based on published work reports and data available from the Ministry of Energy, Northern Development, Mines and Forestry (ENDM) Ontario, and published reports by the Ontario Geological Survey (OGS), the Geological Survey of Canada ("GSC"), various researchers, websites, and personal observations. All consulted sources are listed in the References section. The sources of the maps are noted on the figures.

In accordance with the requirements of National Instrument 43-101, the Author conducted a recent one day duration visits to the Big Mack Property on August 06 and October 23, 2022. The purpose of the visit was to ascertain the geology of the project area examine several pegmatite outcrop exposures and discussing the geology with site-based personnel. During the visit, the Author also assisted in collecting drone aerial images of the Big Mack, Eleven Zone and Sprinkler Zone exposures.

The Author has also reviewed the land tenure on the ENDM Database. The Author reserves the right but will not be obliged to revise the report and conclusions if additional information becomes known after the date of this report.

The information, opinions and conclusions contained herein are based on:

- Information available to the Author at the time of preparation of this report.
- Assumptions, conditions, and qualifications as set forth in this report; and,
- Data, reports, and other information supplied by the Company and other third-party sources.

3.0 RELIANCE ON OTHER EXPERTS

In respect of ownership information relating to the Property, the Author has reviewed and relied on the Property option agreement dated August 22, 2022 between Magabra Resources Corporation ("Magabra") and Pan American (the "Option Agreement") and the mining lease information provided by the Company, which to the Author's knowledge is correct.

A limited search of tenure data on the MLAS Ontario website on October 25, 2022, confirms the data supplied by Pan American. However, the limited research by the Author does not

express a legal opinion as to the ownership status of the Property. This disclaimer applies to ownership information relating to the Property in this report.

As of the date of this report, the Author is not aware of any material fact or material change with respect to the subject matter of this technical report that is not presented herein, or which the omission to disclose could make this report misleading.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Property is located in Paterson Lake Area (G-2634), approximately 80 kilometres north of Kenora, Ontario (Figure 1). The Property is centered at UTM NAD83 Zone 15, 386525 mE, 5570100 mN.

The Property is comprised of one mining lease LEA-110010 (195.76 hectares), former known as CLM 428 (Former Lease Number LEA-107283), is recorded in good standing with expiry date of 2042-02-28, within the Kenora Mining Division of Ontario (Table 1 and Figure 2). The Property is collectively known as the Big Mack Property. Magabra is the recorded owner with 100% interest in the Property. The Property was acquired by Magabra from Pacific Iron Corporation in 2001. Legal rights on the Property include both mining and surface rights. Annual lease payment is $408 which has been dully paid for the year 2022.

The Property was optioned by Pan American pursuant to the Option Agreement, pursuant to which Pan American has an option to acquire up to 90% interest in and to the Property from under the following terms and conditions:

1. Magabra has granted to Pan American the option (the "**First Option**") to acquire a 51% interest in the Property, which First Option shall be deemed to be exercised upon the satisfaction of each of the following conditions:

   (a) paying, on or before the date that is thirty (30) days following the date of the Option Agreement, $80,000 in cash to Magabra;

   (b) issuing, on or before the date that is sixty (60) days following the date of the Option Agreement, such number of common shares of the Company (the shares) to Magabra as is equal to $200,000 converted on the date of issuance at the market price of the shares trading on the Canadian Securities Exchange ("the Exchange"), such shares being subject to voluntary resale restrictions whereby, subject to applicable securities laws and stock exchange rules, 50% of the shares shall be released immediately upon the date of issuance and the remaining 50% shall be released four (4) months after the date of issuance; and

   (c) incurring, within twelve (12) months following the date of this Option Agreement, $1,000,000 worth of exploration expenditures on the Property.

   (the "First Option Conditions").

2. In the event that the First Option is exercised, then Pan American shall have the option (the "Second Option") to acquire an additional 24% Interest in the Property (for an aggregate 75% interest), which Second Option shall be deemed to be exercised upon the satisfaction of each of the following conditions:

   (a) paying, on or before the date that is twelve (12) months following the date of this Agreement, an additional $90,000 in cash to Magabra;

   (b) issuing, on or before the date that is twenty-four (24) months following the date of the Option Agreement, such number of additional shares to Magabra as is equal to $400,000 converted on the date of issuance at the market price of the shares trading on the Exchange, such shares being subject to voluntary resale restrictions whereby, subject to applicable securities laws and stock exchange rules, 50% of the Shares shall be released immediately upon the date of issuance and the remaining 50% shall be released four (4) months after the date of issuance; and

   (c) incurring, within twenty-four (24) months following the date of the Option Agreement, an additional $1,000,000 worth of exploration expenditures on the Property

   (the "Second Option Conditions").

3. If the Second Option is exercised, then Pan American shall have the option (the "Third Option") to acquire an additional 15% Interest in the Property (for an aggregate 90% interest), which Third Option shall be deemed to be exercised upon the satisfaction of each of the following conditions:

   (a) paying, on or before the date that is thirty-six (36) months following the date of the Option Agreement, an additional $30,000 in cash to Magabra;

   (b) issuing, on or before the date that is thirty-six (36) months following the date of the Option Agreement, such number of additional Shares to Magabra as is equal to $100,000 converted on the date of issuance at the market price of the shares trading on the Exchange, such shares being subject to voluntary resale restrictions whereby, subject to applicable securities laws and stock exchange rules, 50% of the shares shall be released immediately upon the date of issuance and the remaining 50% shall be released four (4) months after the date of issuance; and

   (c) incurring, within thirty-six (36) months following the date of the Option Agreement, an additional $1,000,000 worth of exploration expenditures on the Property

   (the "Third Option Conditions").

Upon Pan American exercising the Third Option, Pan American will grant a 2% net smelter returns royalty on the Property to Magabra which can be purchased by Pan American for $2 million.

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 3). Pacific Iron Ore Corporation and Emerald Fields Resources had discussions with Wabaseemoong Independent Nations regarding previous exploration work on the Property. It would be courteous to contact the First Nation community about any future exploration work on the Property.

There are no known environmental liabilities associated with the Property. For exploration activity consisting of prospecting, mapping, geochemical sampling exploration permits are not required. Exploration permits must be issued by MNDM before commencing mechanical exploration activity. The Author was informed by the Company that all the permits are in place for recommended Phase 1 and 2 work programs on the Property.

There is no past producing mine on the Property and there are no known environmental liabilities.

Table 1: Property details (Source: MLAS Ontario)

Tenure Disposition Information

Mining Rights Number : LEA-110010

Mining Rights Number:	LEA-110010	**Township Area:**	PATERSON LAKE AREA
Tenure Type:	Lease	**Status:**	Active
Lease Term:	21 Years	**Location:**	
Recorded Owners:	MAGABRA RESOURCES CORP. (506246) - 100%	**Island:**	
Mailing Address:		**Parcel Number:**	3146DKL
Other Interest:		**Mining Division:**	Kenora
Land Area In Hectares	195.76	**Lease Expiry Date:**	2042-02-28
Rent/Tax Effective Date:	2021-03-01	**Long Legal Description:**	CLM 428, Mining Claims K1178427, K1149785, land and land under water, Parts 1-5 on Plan 23R-10223, except SRO on Parts 2-5
Former Lease Number:	LEA-107283	**Short Legal Description:**	CLM428
Location Number:		**Land Registry Office :**	KENORA
Claim Number:		**Claim Numbers:**	
Island:		**Lot:**	
Registered Plan:	23R-10223	**Concession:**	
Part of Plan:	1-5	**Basis Land MR ID:**	
Legal Rights:	Mining and Surface Rights	**SRO Lease ID:**	
Assessment Roll:			
Mining Land File Number:			
Consultation Work Reserve:			
Exploration Work Reserve:			

Figure 1: Property Location Map

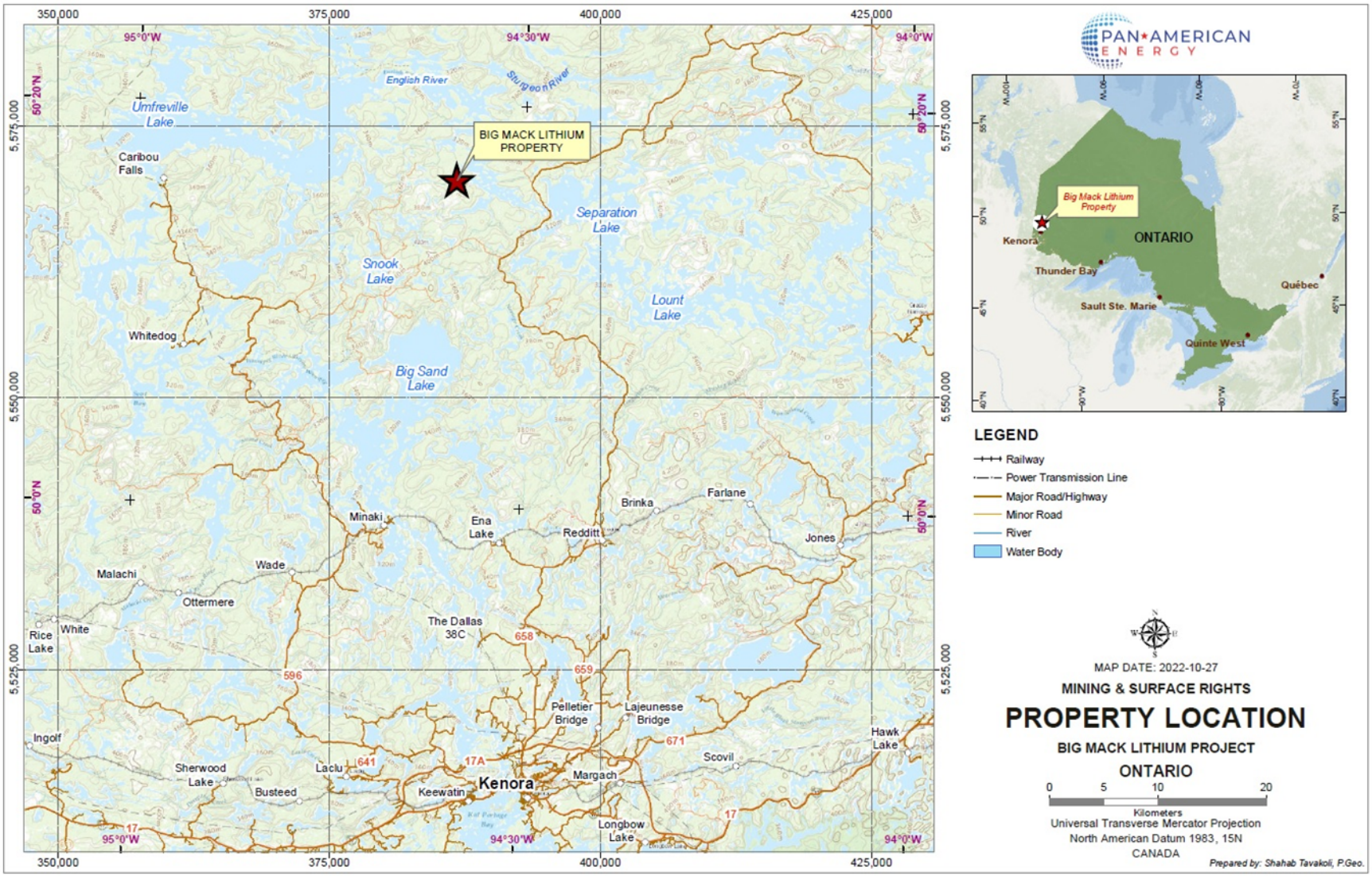


Figure 2: Mining Lease map with physiography

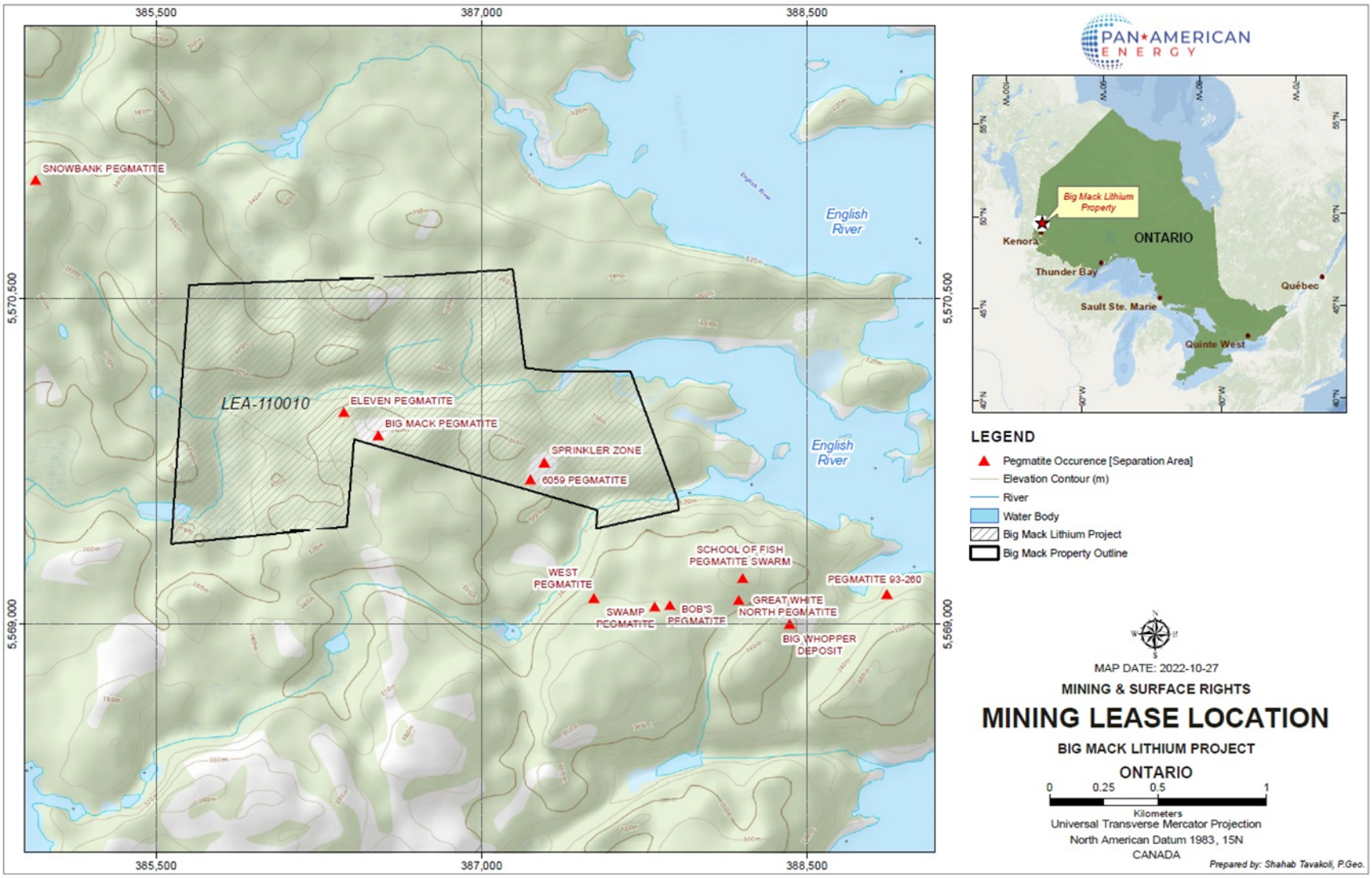
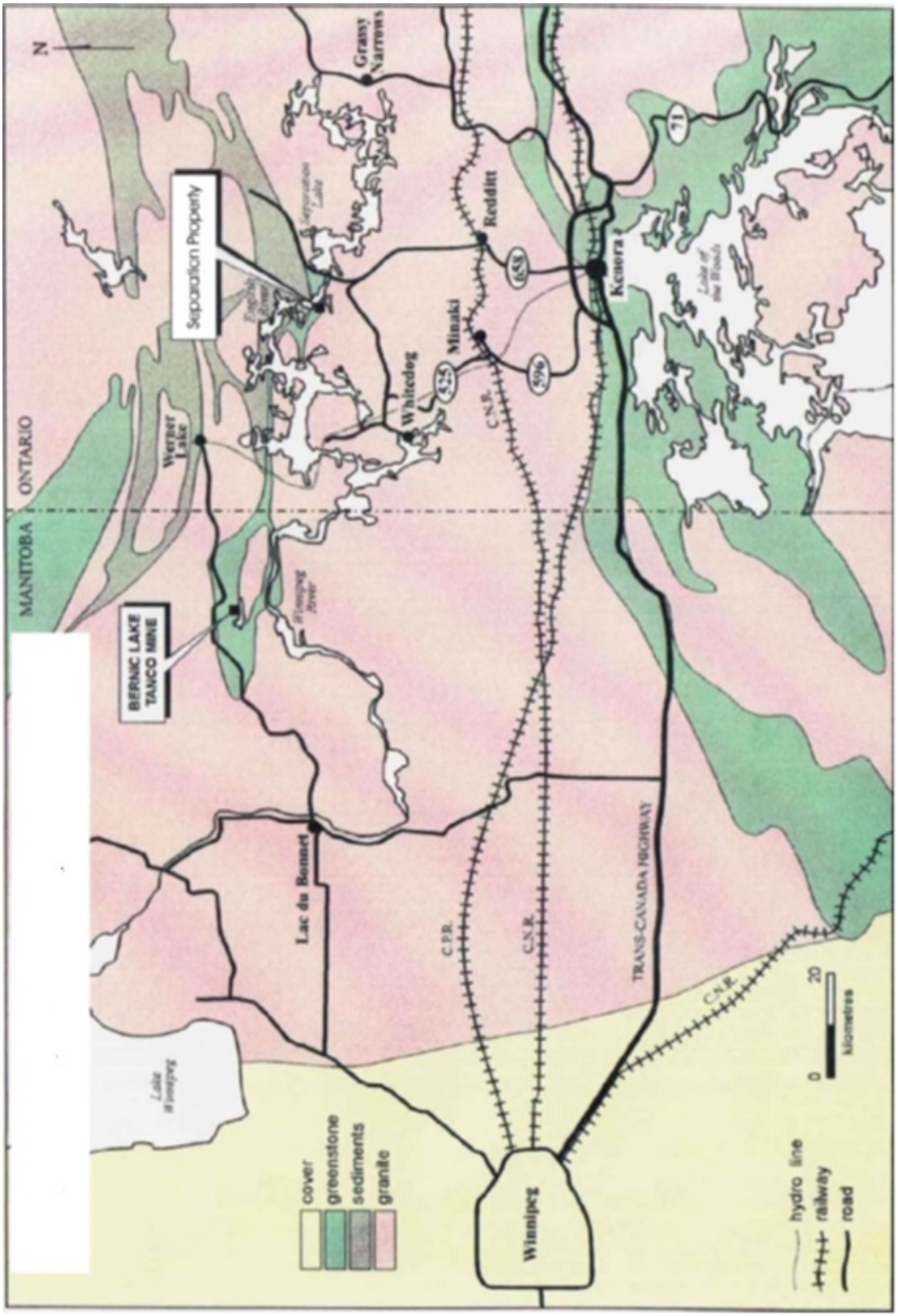


Figure 3: Infrastructure and Access Map



5.0 ACCESS, CLIMATE, PHYSIOGRAPHY, LOCAL RESOURCES, AND INFRASTRUCTURE

5.1 Access

The Property is situated approximately 80 kilometres by road north of Kenora, Ontario in the Separation Rapids area. Access to the Property is by Highway 658 from Kenora to Reddit, then continuing north to kilometre 65 on the English River logging road; west on the Sand Lake Road to kilometre 5.5 and then north for 8 kilometres on a forestry road (Figure 3).

5.2 Climate

The climate of the area is typical of northwestern Ontario and described as continental. The mean daily average temperature is 2.7 degrees Celsius, ranging from a high of 19.5 degrees °C in July, to a low of -17.3 degrees °C in January. Average annual precipitation in the area is 661.8 mm, with approximately 500 mm of rain and 158 cm of snow per year. Winter conditions typically extend from early to mid-November through late March, with freeze-up in mid-November and break-up in early April. Ground sampling trenching and mapping work can be carried out during the summer months from May to early November, whereas geophysical surveys and diamond drilling can be carried out throughout the year except for the freeze up and break up period which can last for 2-3 months.

5.3 Physiography

The Property area is typical of much of northwestern Ontario and the Canadian Shield. The Property is relatively flat with an average elevation of approximately 350 m above sea level. Local topographic relief is limited to about 50 m. Outcrop exposure is in general less than 40% on the Property.

Mature coniferous forests cover most of the Property, with sporadic young regeneration of deciduous trees due to past logging operations. The Property area is covered by boreal forest with the dominant species being Jack pine and Black Spruce. Willow shrubs and grasses dominate the low marshy areas. The land surface within the area varies from the region in that there is considerable relief between the lakes in most areas and the ground surface.

5.4 Local Resources and Infrastructure

The area has well developed services, with the City of Kenora (population 16,000) located 90 kilometres to the south. Almost all supplies are readily available in Kenora, or the major Canadian city of Winnipeg, another 200 kilometres west (Figure 3). Kenora has a helicopter base, as well as several fixed wing bases with both float and ski equipped aircraft. The town of Thunder Bay, located about 400 kilometres to the east of the Property, is the largest city in Northwestern Ontario, serving as a regional commercial centre. The town is a major source of workforce, contracting services, and transportation for the forestry, pulp and paper and mining industry. The city of Thunder Bay has most of the required supplies for exploration work including grocery

stores, hardware stores, exploration equipment supply stores, restaurants, hotels, and a hospital. Many junior exploration and mining companies are based in Thunder Bay, and thus the city is a source of skilled mining labour.

The Property area is sufficient for future mine development operations.

6.0 HISTORY

The Separation Rapids area has a history of base and precious metals exploration with some work focusing on the uranium and iron potential. Extensive research and mapping initiated in 1992 by the Ontario government had increased interest in the rare-metal pegmatite potential of the area. In the mid 1930's, mineral exploration in the Separation Lake Greenstone Belt ("SLGB") focused around Minaki, where work was conducted on the Minaki Pyrite Prospect on Vermillion Lake. Sporadic work for base metals was conducted near Redditt in 1956, by Stratmatt Limited. Both these areas are south of the Property.

The Ontario Geological Survey completed mapping of the SLGB in 1992 and 1993 (Blackburn and Young 2000). Breaks and Tindle (1996b) conducted field examinations, while employed the Ontario Geological Survey, which was designed to evaluation of the rare-metals mineral potential of the Separation Rapids area. Based on this examination several rare metals bearing pegmatite were identified.

6.1 Ownership History

Prospectors A. Mowat and P. Thorgrimson staked the Property's unpatented mining claims in 1996. A Mowat and P. Thorgrimson optioned their land holdings to privately held company Emerald Fields Resource Corporation ("EFR") in 1997. Pacific Iron Corporation ("PIO") held the Property after an amalgamation of Klondike Capital Corporation ("KCC") and ("EFR") (April 2008). Mega Graphite Inc. started negotiations to option the Property from PIO on June 10, 2010. PIO re-acquired the Property in April 2013 from Mega Graphite Inc.

On December 03, 2019, PIO sold their Ontario land holdings to A. Mowatt who transferred his land holdings including the Property to a private company called Magabra Resources Corporation. MNDM transferred mining lease LEA-107283 (current lease number: 110010) into Magabra on July 10, 2020. There are no royalties, back-in-rights, payments or other agreement and encumbrances on the Property.

Pan American optioned the Property from Magabra on August 22, 2022.

6.2 Exploration Work History

A. Mowat and P. Thorgrimson prospected their land holdings in the spring and summer 1997 by collecting 62 samples from pegmatite outcrops. The samples returned lithium values ranged from 7 to 380 ppm lithium (59 samples) with 3 samples additional samples assayed 800, 4400 and 5000 ppm Li (MNDM assessment file 52L07SE00001 and 52L07SE00002). These high lithium values

were identified to be from a petalite-bearing pegmatite which was named Big Mack (Figure 6). A. Mowat and P. Thorgrimson optioned their land holdings to EFR in 1997.

Table 2: Exploration History

Company/Individual	Year	Exploration Activity	Part of Property
Stratmatt Limited	1930's	GL, Samp	South of Property
Ontario Geological Survey	1992 -1993	GL, Samp	SLGB and Property
Ontario Geological Survey	1996 - 2005	GL, Samp	SLGB and Property
Mowat and Thorgrimson	1996	Staking	Property
Avalon Ventures Inc.	1998	DDH 2-325m, Samp	South of Property near 6059-Sprinkler Zone
Mowat and Thorgrimson	1997	GC, Samp, Option to Emerald Fields Resource Ltd.	Property – Big Mack
Emerald Fields Resource Ltd.	1998	Lc, Pr, Str, CC, DDH 2-103.8m, Samp	Property and Big Mack
Emerald Fields Resource Ltd.	1999	DDH 11-1156.7m, Samp, BULK 5000 tonnes, MET, MK	Big Mack, Eleven Zone
Emerald Fields Resource Ltd.	1999	Issued Mining Lease on Property	Property
Emerald Fields Resource Ltd.	2001	GL DDH 17-2100m, Samp, Str, COMP	Property Ta-Series pegmatite
Pacific Iron Corporation	2009	RPT	Property
Mega Graphite Inc.	2011	DDH 2-65m, COMP, Samp	Property and Big Mack

Abbreviations for Table 2:

BULK ..... Bulk sampling permitted
COMP ..... Compilation of historical work
DDH ..... Diamond drill hole(s)
GC ..... Geochemical survey
MET-MK..... Metallurgical Marketing studies
Pr ..... Prospecting
RPT ..... Report technical NI43-101
Samp ..... Sampling (other than bulk)

In 1998, Avalon Ventures Limited had staked a series of claims immediately east and southeast of A. Mowat and P. Thorgrimson claim holdings. Avalon Ventures had completed two diamond drilling holes, on unpatented mining claims which were part of Avalon's land holding in 1996 but were collar near EFR southern boundary of the Property. These drill-holes intersected pegmatites which returned anomalous Li_2O values (MNDM Assessment file 52L07SE2012 and see Table 3).

Table 3: Avalon Venture Limited Diamond Drill Holes near the Property

Hole #	Azimuth	Dip	Depth (Metres)	Year	Li ppm - metre
SR98-49	360	-45	110.00	1998	46.5 ppm - 2.00 m and 1347 ppm - 0.35 m
SR98-48	360	-45	215.00	1998	93 ppm - 0.46 m and 4785 ppm - 1.40 m

When the four unpatented mining claims held by EFR was surveyed in 1999, the southern boundary of the Property (Lease CLM428 - LEA-110010) was further south than EFR originally staked unpatented mining claims lines. Once the lease boundary was surveyed it was realized that two of Avalon's diamond drilling holes extended beneath EFR Property.

EFR continued to explore the Property in 1998. The primary focus became the area that is covered by the mining lease which hosts the Big Mack pegmatite.

1998: Line-cutting (40 km), soil and rock sampling, prospecting, and stripping. Soil sampling indicated an anomalous tantalum-lithium trend associated with the general strike of the Big Mack pegmatite. The prospecting located numerous additional dikes including the Sprinkler-6059 Zone and Eleven Zone pegmatites (see Figure 6).

1998: A program of mechanical removal of overburden and power washing was initiated to expose several pegmatites. These efforts focused on the Big Mack, Sprinkler-6059 Zone, and Eleven Zone pegmatite (MNDM assessment file 52L07SE2007).

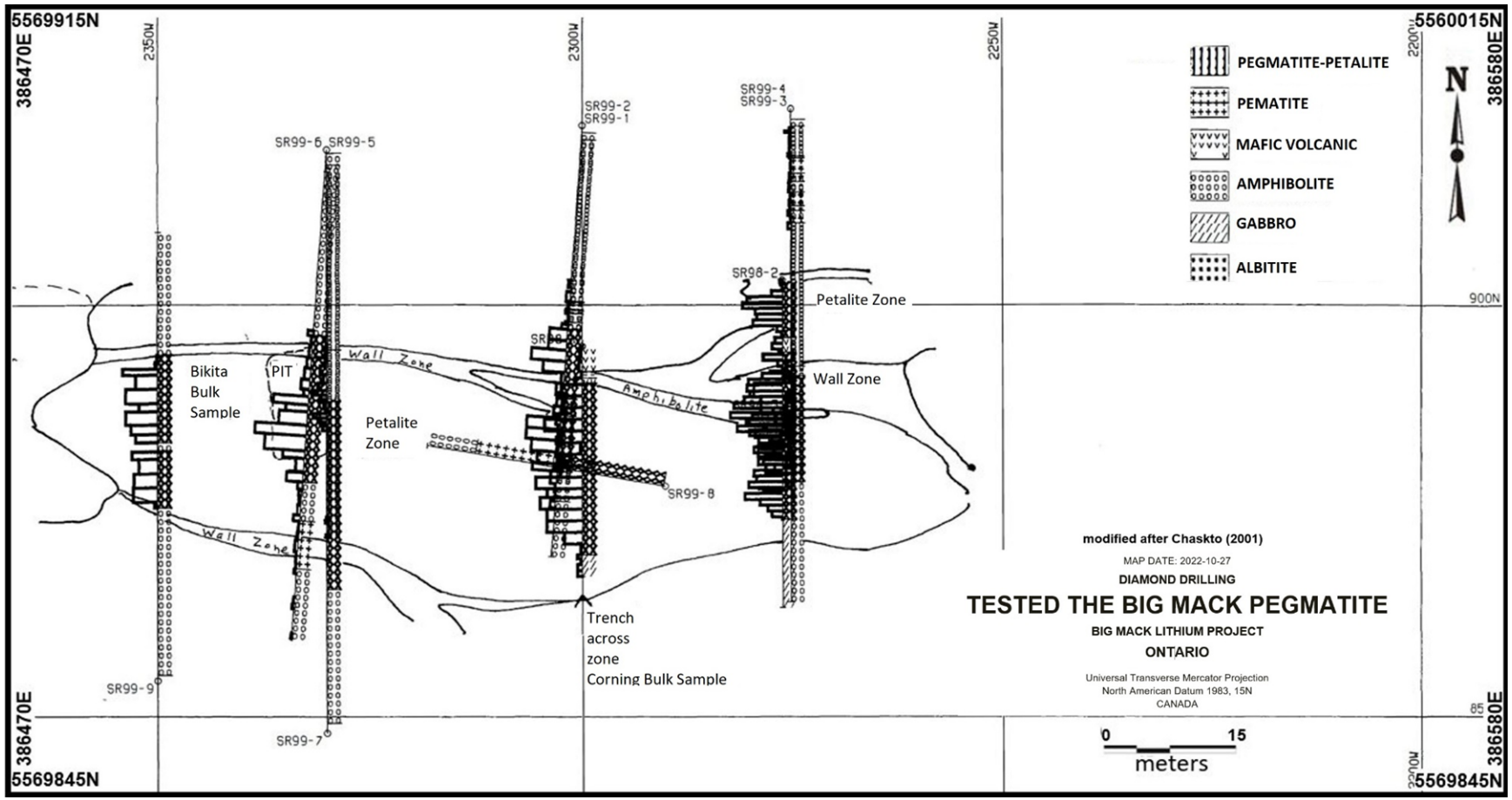
1998: 3 diamond drill holes totaling 103.8 metres (AW core) tested the eastern and central part of the Big Mack pegmatite (MNDM assessment file 52L07SE2007 and Chastko 2001 and see Table 4). These drill-holes intersected petalite-bearing pegmatite which returned values up to 10 900 ppm Li over 1.90 meters (see Table 4).

1999: An additional 11 diamond drill holes total 1156.7 metres (BQ-core) targeted the Big Mack pegmatite and tested the possible western extension of the Big Mack pegmatite. (MNDM assessment file 52L07SE2007 and Chastko 2001 and see Table 4). The drill-holes at the Big Mack intersected up to 48 meters core-length of petalite-bearing pegmatite and the drill-hole assay results are summarized in Table 4. Drill-holes SR-99-10 and 99-11 tested the Eleven Zone pegmatite which is situated 100m northwest of the Big Mack exposure. Figure 4 illustrates the locations of diamond drilling holes SR-99-1 to SR-99-9 which intersected the pegmatite underlying the Big Mack exposure to the vertical depth of 50 metres vertical (MNDM assessment file 52L07SE2007 and Chastko 2001).

Table 4: 1998 and 1999 Diamond Drilling on the Property

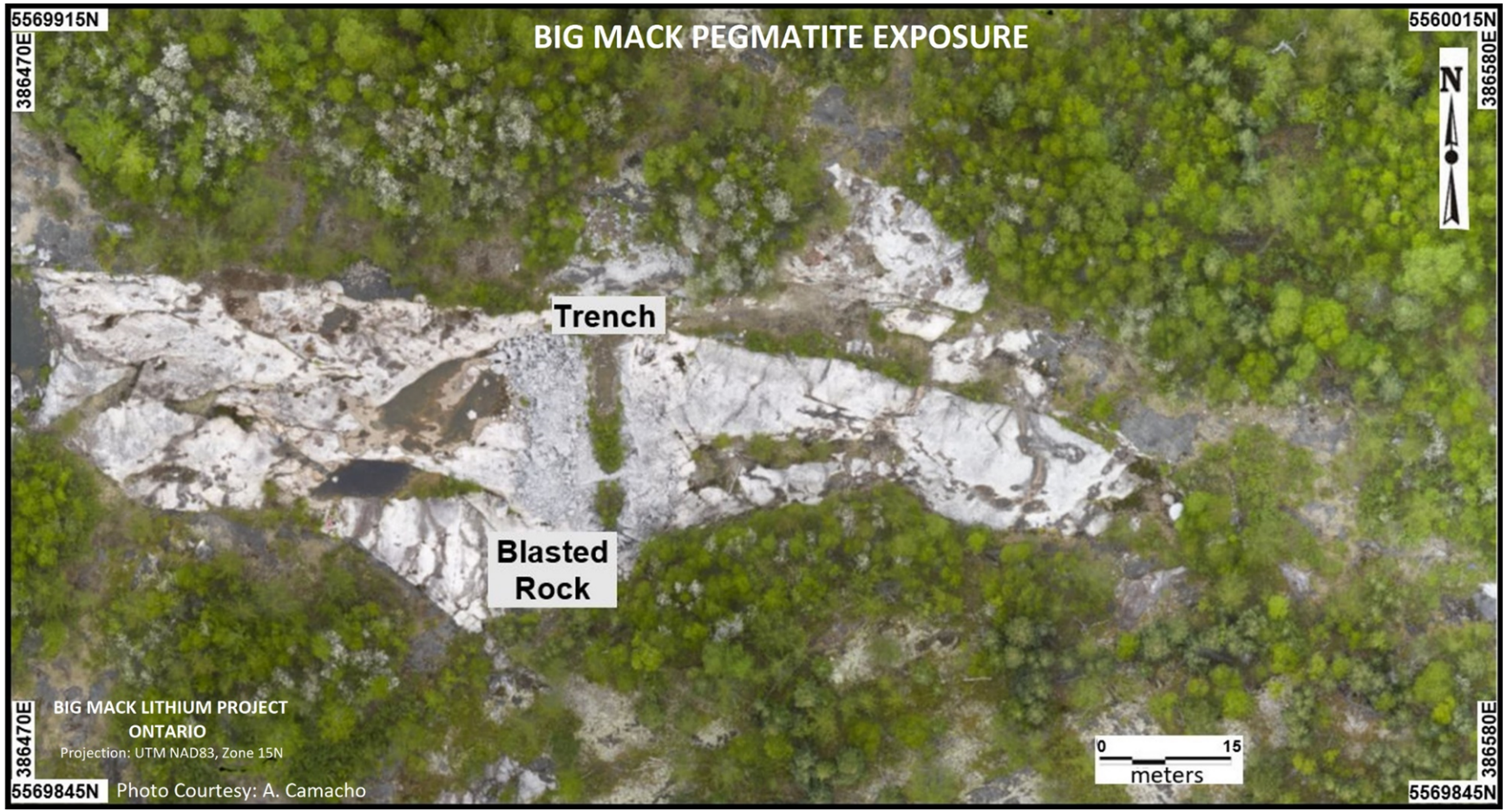
Hole #	Azimuth	Dip	Depth Metres	Year	Target	Significant Lithium Values Li ppm - metre
SR-98-1	180	-45	39.56	1998	Big Mack	10900 - 1.93 9900 - 2.00
SR-98-2	180	-45	30.64	1998	Big Mack	11800 - 1.00 9700 - 1.00
SR-98-3	180	-45	33.64	1998	Big Mack	11260 - 1.00 9100 - 1.00
SR-99-1	184	-50	75.30	1999	Big Mack	8100 - 1.99 8000 - 1.96
SR-99-2	184	-70	119.00	1999	Big Mack	1200 - 1.51 1100 - 1.83
SR-99-3	180	-50	87.50	1999	Big Mack	8900 - 2.44 7900 - 1.12
SR-99-4	180	-70	121.00	1999	Big Mack	1400 - 3.70 1400 - 1.09
SR-99-5	184	-50	90.52	1999	Big Mack	12100 - 2.01 9600 - 2.81
SR-99-6	180	-72	142.30	1999	Big Mack	3300 - 1.69 3100 - 1.64
SR-99-7	360	-60	124.10	1999	Big Mack	10641 - 1.41 8803 - 1.40
SR-99-8	280	-80	153.30	1999	Big Mack	not sampled
SR-99-9	360	-58	96.70	1999	Big Mack	8170 - 1.30 7470 - 3.10
SR-99-10	360	-70	55.10	1999	Eleven	not sampled
SR-99-11	360	-45	91.90	1999	Eleven	7761 - 1.67 5463 - 1.53

Figure 4: Historical drill holes location map



Notes: Map projection NAD83 Zone 15, December 15, 2021 (modified after Chaskto 2001)

Figure 5: Image the central portion of the Big Mack pegmatite



1999: An advanced exploration permit was issued by MNDM to EFR under Part VII of the Ontario Mining Act to remove up to a 5000-tonne bulk sample from the Property on August 10, 1999. A portion of the Big Mack exposure, which is underlain by the petalite-pegmatite zone identified from the 1998-1999 diamond drilling program, was excavated. The trenched area is approximately 2-3 metres wide and 1.0 metres deep and is in the central part of the Big Mack exposure (see Figure 5). An effort was made to collected random pieces of the blasted rock to create a five-tonne sample representative of the petalite-bearing pegmatite. This sample was shipped to International Metallurgical and Environmental Inc. of Kelowna, British Columbia (MNDM assessment file 52L07SE2007). The sample was processed by International Metallurgical and Environmental Inc. to create a petalite concentrate.

The petalite concentrate was then sent to Corning Laboratory Services of Corning, New York for Petalite Analysis and Trial Glass Metals (MNDM assessment file 52L07SE2007). The results are summarized below:

> "Three glass melts were made using the customer supplied petalite. One melt was batched to yield a Corning Ware base pyroceram glass, another to yield a clear cooktop type glass and a third to yield a common soda lime glass (such as that used in container glass) with 0.3 Wt.% Li2O. The petalite proportions used in each batch were as follows:
> Corning Ware Batch -741.9 grams Petalite per total batch of 1018 grams
>
> Clear Cooktop Batch -763.4 grams Petalite per total batch of 1018 grams
>
> Soda Lime with 0.3% Li2O Batch -54.7 grams Petalite per total batch of 1000 grams
>
> These melts were poured into patties and annealed. A portion of each patty was cut off to yield glass for testing. The remaining patty portions have been shipped to you under separate cover. Your petalite yielded glass of acceptable visual quality.

1999: Unpatented mining claims K1149784, K1149785, K1149786 and K1178427 were perimeter surveyed by W.J., Bowman Ltd. and this land became surface and mining rights lease CLM 428 (LEA-107283/LEA110010).

1999: A conceptional design of a pilot plant by-product storage facility was commission by EFR. A portion of the petalite concentrate which had been created by International Metallurgical and Environmental Inc. from the 5000-tonne bulk sample of the Big Mack pegmatite was used to design the pilot plant. Knight Piesold Consulting reported "the plant was designed to process 50,000 tonnes of petalite from the Big Mack pegmatite" (1999). Knight Piesold (1999) mentioned: "10,000 tonnes of petalite is expected to be produced". The report also discussed the processing of the 40,000-tonne fine and coarse fractions By-Products.

1999: EFR applied for an amended closure plan related to part VII of the Ontario Mining Act on December 10, 1999 to the existing 5,000 advanced exploration permit, to remove a larger bulk sample of 50,000 tonnes and the construction of a pilot plant by-product storage facility on Property. A financial assurance $38,800 related to rehabilitation outlined in the closure plan of had been issued in the form of a letter of credit to MNDM.

2001: Geological mapping and sampling was conducted to cover the Property (MNDM assessment files 52L07SE2008, 52L07SE2011 and Chastko 2001). Several pegmatite exposures were identified on the Property (see Figure 6). The focus of the pegmatite examination and sampling was the tin and tantalum potential. Chastko (2001) mention: "a total of 13 targets have been identified on the Property as having potential for hosting economic tantalum {and tin} mineralization. These targets are identified by at least one grab sample assaying at least 100 ppm Ta" (*see* Figure 6 for location of Ta pegmatites). At least 3 of the exposures were also identified as been petalite – lithium bearing pegmatite.

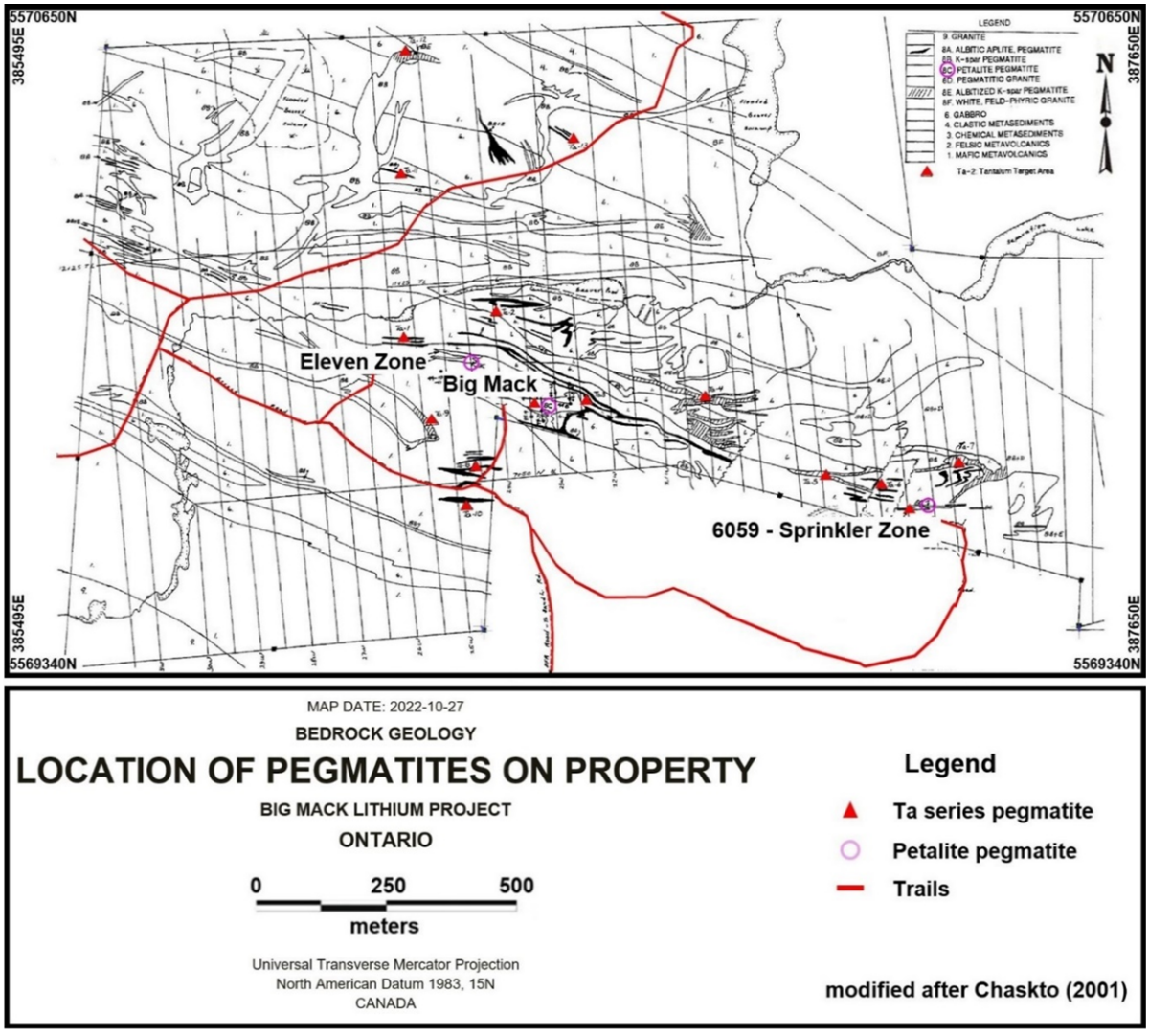
2001: In total 17 diamond drilling holes, total 2100 metres (NQ core) tested the mineral potential of pegmatite located on the Property which had been identified from bedrock mapping and sampling programs (MNDM assessment files 52L07SE2008, 52L07SE2011 and Chastko 2001 and see Table 5). Fifteen of these drill-holes tested the potential of the tantalum (Ta-series) exposures and 2 holes, SR-20 and SR-27, mainly targeted lithium potential of the Eleven Zone and Big Mack pegmatites respectively (Table 5 and see Figure 4 and 6 for location of drill-hole targets).

Table 5: Significant Lithium and Tantalum Assays Results of 2001 Diamond Drilling Program on the Property

Hole #	Azimuth	Dip	Length metres	Year	Target	Results ppm /meter	No. of Assays
SR-01-12	360	-45	102.72	2001	TA-1a	1247 / 0.29 Li 514 / 0.17 Ta	19
SR-01-13	360	-60	127.10	2001	TA-1a	1698 / 0.50 Li 306 / 0.55 Ta	18
SR-01-14	360	-45	99.67	2001	TA-1a	1682 / 0.44 Li 116 / 0.51 Ta	21
SR-01-15	360	-60	160.63	2001	TA-1a	1819 / 1.38 Li 166 / 0.54 Ta	36
SR-01-16	205	-45	99.67	2001	TA-1a	3494 / 0.90 Li 402 / 0.31 Ta	21
SR-01-17	205	-60	124.05	2001	TA-1a	8676 / 1.00 Li 495 / 0.59 Ta	28
SR-01-18	360	-45	151.49	2001	TA-2	372 / 0.28 Li 412 / 0.30 Ta	18
SR-01-19	360	-45	203.31	2001	TA-2	572 / 0.29 Li 221 / 0.2 Ta	36
SR-01-20	360	-45	172.21	2001	Eleven Zone	12747 / 1.35 Li 143 / 0.42 Ta	34
SR-01-21	165	-45	84.43	2001	TA-3	430 / 0.19 Li 234 / 0.82 Ta	20

SR-01-22	165	-60	96.67	2001	TA-3	456 / 0.42 Li 1104 / 0.42 Ta	20
SR-01-23	195	-45	75.29	2001	TA-3	898 / 0.19 Li 585 / 0.20 Ta	20
SR-01-24	195	-60	99.67	2001	TA-3	349 / 1.40 Li 69 / 1.03 Ta	19
SR-01-25	360	-45	157.58	2001	TA-2	319 / 0.70 Li 597 / 1.35 Ta	33
SR-01-26	245	-45	124.05	2001	South of Big Mack	716 / 1.00 Li 52 / 1.20 Ta	18
SR-01-27	10	-45	96.62	2001	Big Mack	6955 / 1.46 Li 447 / 0.28 Ta	14
SR-01-28	190	-45	124.05	2001	Tent Zone TA-10	859 / 0.83 Li 363 / 0.25 Ta	25

Figure 6: Bedrock geology map showing location of pegmatites on the property



2001: Chastko (2001) completed a compilation of exploration activity on EFR Separation Rapids area mineral properties including the activity conducted on the Property. The focus of discussion on the Property was related to the tantalum potential. Chastko (2001) also discussed the results of exploration activity targeting the lithium potential of the Big Mack pegmatite. Surface stripping, channel sampling and trenching shows the surface dimensions of the Big Mack pegmatite to be 180 meters long and a maximum width between 31 to 36 meters (see Figure 4).

A 12-hole diamond drilling program totaling 1261 metres completed in 1998 and 1999 (see Table 4) tested a 75-metre strike-length portion of the Big Mack pegmatite to a vertical depth of 50 metres (see Figure 4 and Table 5).

2001: EFR completed a 15-hole diamond drilling program on the Big Mack pegmatite between 1998 and 2001. Based on the petalite mineralization intersected in these drill-holes Chastko and Pryslak (MNDM assessment file 2.22913, 2001) proposed a volume of petalite at 325,000 tonnes. *(Note: A Qualified Person has not done sufficient work to classify the volume estimate as current mineral resources. The Company is not treating the historical estimate as a current mineral resource or reserve. The Company believes that the historic volume estimate is relevant to an appraisal of the merits of the Property and forms a reliable basis upon which to develop future exploration programs. The Company will need to conduct further exploration which will include drill testing the project, and there is no guarantee that the results obtained will reflect the historical estimate. The historical estimates should not be relied on.)*

2009: PIO commissioned Clark Exploration Consulting Inc. to complete a National Instrument 43-101, and Form 43-101F1 Technical Report on the Separation Property which includes the Property (Clark and Cullen 2009).

2011: Mega Graphite Inc. started negotiations to option the Property from PIO June 10, 2010. Mega Graphite Inc. completed 2 diamond drilling holes, total 65 metres (AQ core) on the Property in 2011 (MNDM assessment file 20000007610 and see Table 6). These drill-holes were collared north of the Big Mack exposure.

Table 6: Results of Diamond Drilling completed on the Property in 2011.

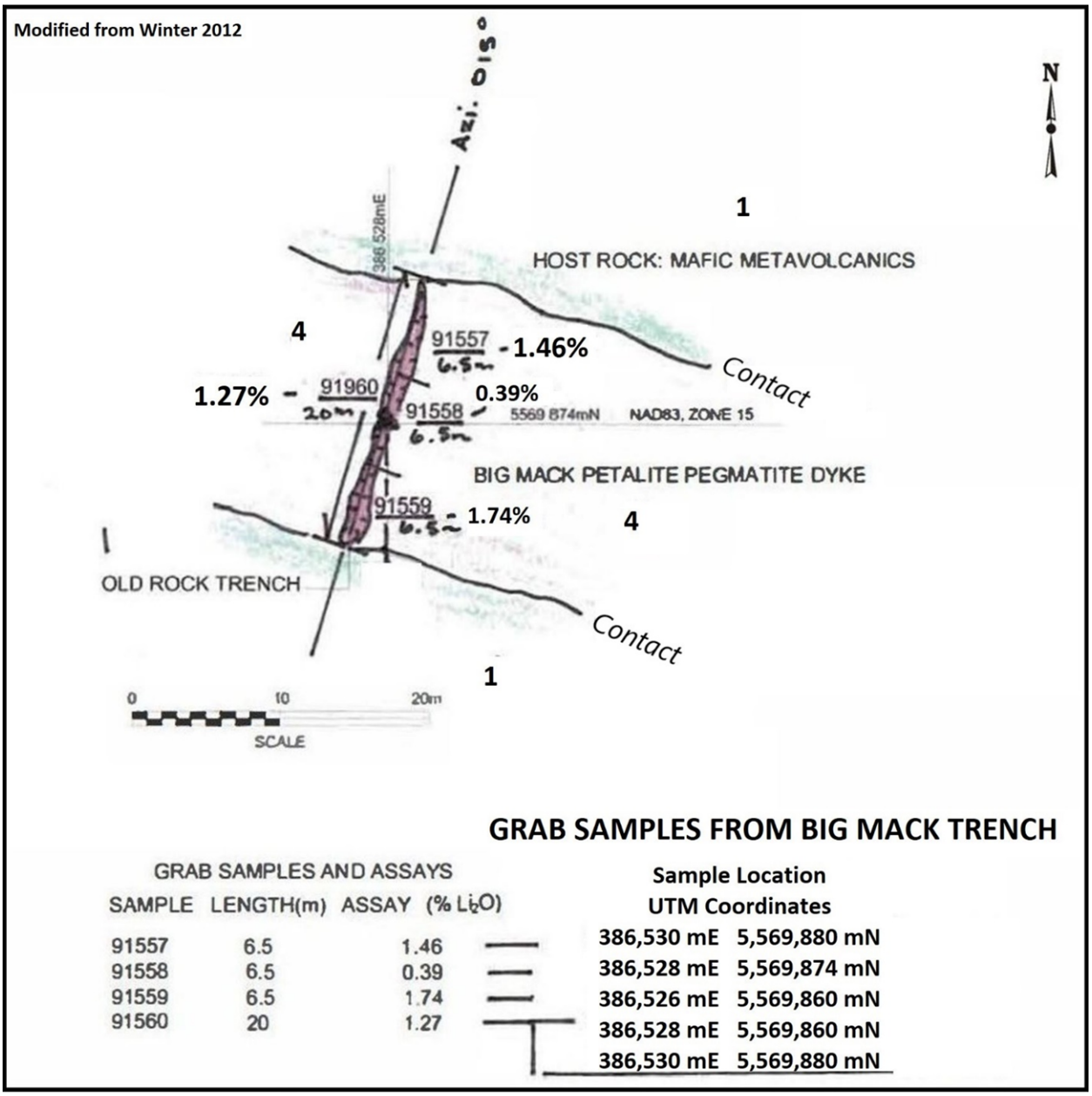
Hole #	Azimuth	Dip	Length meters	Year	Target	Results Li ppm / metres	No. of Assays
PL-01	180	-45	30.64	2011	Pegmatite	12,700 Li /1.00 m	34
PL-02	180	-45	35.10	2011	pegmatite	9,500 Li / 1.00 /m	18

2012: A compilation report was completed for Mega Graphite Inc. on their mining claims including the Property (Winter 2012). Grab samples of petalite-bearing pegmatite were collected from the trench excavated across the central portion of the Big Mack exposure (see Figure 7).

PIO re-acquired the Property in April 2013 from Mega Graphite Inc. No additional exploration work had been conducted on the Property by PIO.

The Property was acquired by Magabra from PIO on December 3, 2019. No additional exploration work has been conducted on the Property by Magabra.

Figure 7: 2012 grab samples collected from the Big Mack Pegmatite exposure.



6.3 Ontario Geological Survey (OGS) Activity

1992 – 2005: the most recent OGS geological map covering the Property is Open File Report 6001 accompanied with Open File Maps 241 and 242 (Blackburn, et al 2000). These Open File Maps were released as colored Preliminary geology maps 2673 and 2674 in 2008 (Blackburn Young and Breaks 2008). These publications are based on geological mapping conducted in 1992 and 1993 on the Separation Lake Greenstone Belt**.**

1996 – 2006: The OGS had conducted numerous detailed sampling and field examination programs on the Separation Rapids Pegmatite Field (Table 7). Most of the work has been conducted by Dr. F. Breaks, Dr. J. Selway, and Dr. A. Tindle of the Ontario Geological Survey. The results from these publications have resulted in interest in the rare-metal potential of the Separation Lake Greenstone belt pegmatite field.

Table 7: OGS publications with references that summarize the rare-metal potential of the Separation Lake Pegmatite Field and\ some pegmatites location on the Property.

Pegmatite Area	Reference
Separation Rapids Pegmatite Group	Breaks and Tindle (1996, 1997, 2001)
	Breaks, Selway and Tindle (2005)
	Breaks, Tindle and Smith (1999)
	Selway, Breaks and Tindle (2001, 2003, 2005)
	Tindle, Breaks and Webb (1998)
	Tindle and Breaks (1998, 2000)

6.4 University of Manitoba Academic Studies

6.4.1 Study A: Strain Relationship in Separation Rapids Pegmatite Field

G. Ching and A. Camacho initiated a study on the relationship of strain within the Lithium-Cesium-Tantalum (LCT) subtype rare-metal pegmatites compared to the adjacent mafic volcanic rocks in the Separation Rapids Pegmatite Field. Ching et al. (2020) mentioned this academic study was selected based on "the presence of ptygmatic folds, mullions and boudins were used as evidence of solid-state deformation by previous workers during regional post- emplacement deformation … In this study, we reassess the importance of regional-scale deformation in the distribution and modification of these pegmatites by using field and thin section observations". G. Ching and A. Camacho are proposing the strain in the mafic volcanic rock occurred before the formation of the pegmatite.

Figure 8: Pegmatite contact with the mafic volcanic county rock which had been interpreted as folding structural events (from Ching et al 2020).

Pederson (1998) discuss the strain displayed in the exposures near the Big Whopper Deposit: "the Separation Rapids area displays strong tectonic fabrics and structures that are reflected to varying degrees in all lithologies. Local folding reflects larger scale closed to isoclinal folding, with local low-amplitude open folds in amphibolite and internally in the pegmatite."

Pryslak (2001) also mentions at the Big Mack exposure "the dike has been complexly folded by a series of isoclinal folds with an S-symmetry."

Clark and Cullen (2009) also discuss the strain displayed in exposures: "Isoclinal to tight open folds is abundant in amphibolite on a pervasive, small, centimetre to several metres scale. This folding is also imposed on pegmatites, which exhibit compressional high-strain features in the form of boudinage and small-scale ptygmatic folds".

Ching et al. (2020) concluded based on this study "the complex morphologies of pegmatites (see Figure 8) are induced locally by intruding mechanisms and not by regional deformation."

The strain which existed in the county rock is probably an importation feature related to the pathway of felsic magma fluid which formed the pegmatite. This strain and deformational events occurred in the country rocks before the formation of the pegmatites. The pegmatites have not been deformed during injection of magma and also after formation of these intrusive rocks.

6.4.2 Study B: Age date relationship in Separation Rapids Pegmatite Field

G. Ching and A. Camacho also initiated a program of in-situ U-PB geochronology age dating of pegmatite and surrounding county rocks from selected sites in the Separation Rapids Pegmatite Field (Ching et al. 2020). Seven samples from rare-metal bearing pegmatites, one sample from the Separation Rapid Pluton and four additional samples representative of the country rock were used in this geochronology evaluation (see Table 8 and Figure 9 for location of sample sites). Geochronology samples have not been collected from any intrusive phases of the Winnipeg River subprovince exposures.

Table 8: Uranium-PB age determination of pegmatites and country rock in the Separation Rapids Pegmatite Field (after Ching et al 2020).

Event	Map No	Lithology – pegmatite unless mentioned	Age ± (Ma)
Crystallization	10	Marko's	2601 ± 6
	9	Marko's	2602 ± 7
	8	Glitter	2617 ± 4
	7	Big Whopper	2617 ± 4
	6	Snowbank	2623 ± 10
	5	Big Mack	2637 ± 3
	4	Separation Rapid Pluton (1)	2646
	3	Great White North – aplite near pegmatite	2649 ± 4
Metamorphism	2	Amphibolite near Big Mack pegmatite	2644 ± 25
Metamorphism		Clastic metasediments	2647 ± 5
	1	Amphibolite xenolith in Big Whopper pegmatite	2665 ± 40
		Separation Lake Greenstone Belt Amphibole (2)	2691

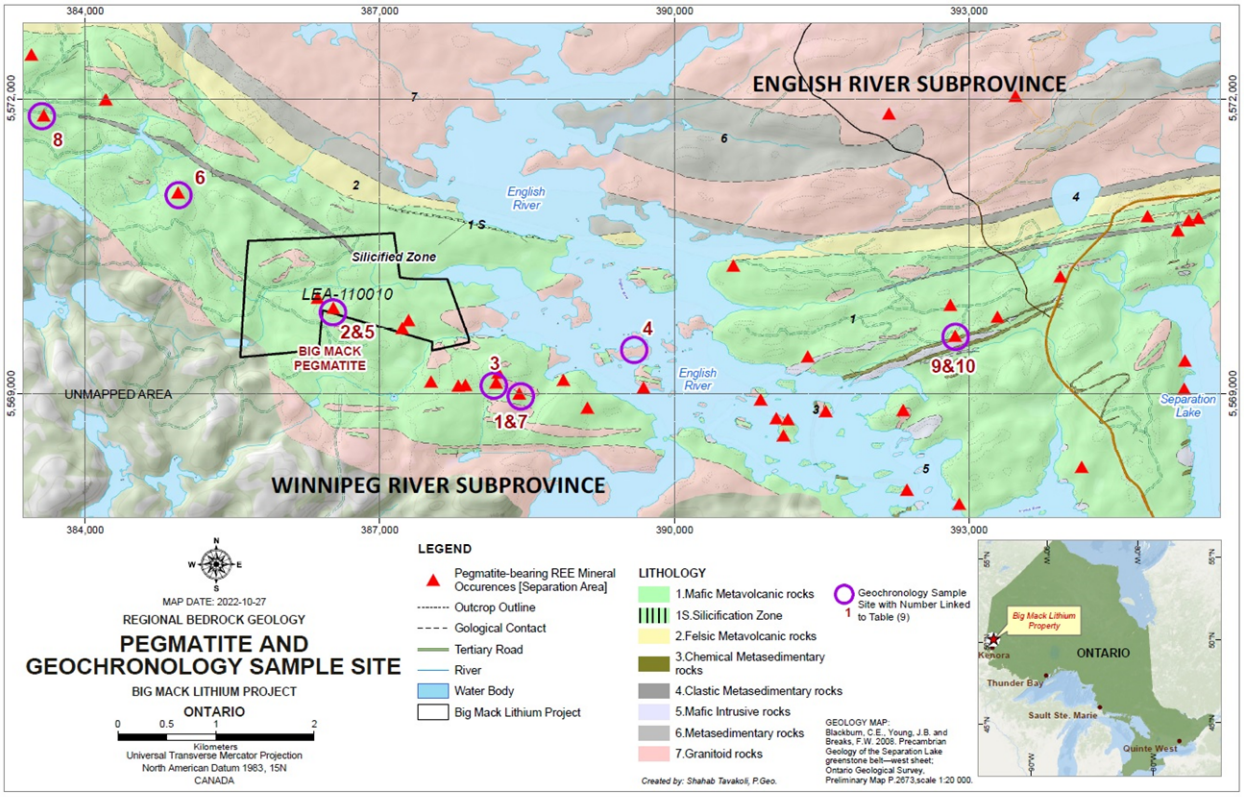
All age dates from Ching and Camacho study except 1 Larbi et al (1999) and 2 Corfu et al. (1995).

Ching et. al. (2020) has proposed based on the U-Pb geochronology "pegmatite intrusion occurred over an unexpected long ~40 Ma period {pegmatite ages see Table 8 under Crystallization Event}. Breaks (1996) has proposed "the Separation Rapids pluton is likely the parent granite to the Separation Rapids pegmatite field". Based on the age dates (Table 8 and

Figure 9) the Separation Rapids Pluton is considerable older than most of the rare-metal pegmatite examined by this geochronology study.

Ching et al. (2020) also proposed based on the age dates “undiscovered LCT pegmatites may lie within other segments of metavolcanic rocks along the English River - Winnipeg River subprovince boundary, as similar emplacement ages across the Separation Rapids Greenstone Belt and Bird River belt of eastern Manitoba (ex. Big Mack pegmatite at ca. 2637 Ma and TANCO at ca. 2640 Ma may infer continuous mineralization along the boundary”.

Figure 9: Location of Chronology Samples Sites (see Table 8)



7.0 GEOLOGICAL SETTING AND MINERALIZATION

The Property is in the Separation Lake Greenstone Belt (SLGB). The area was first examined as part of Operation Kenora- Sydney Lake mapping project (Breaks et al. 1976). The geology and mineral potential of the SLGB has been the focus of extensive study initiated by the Ontario Geological Survey in 1992. The Property occurs within the SLGB of the contact zone of the English River sub province and Winnipeg River sub province of the Archean Superior Province (Figure 10).

7.1 Regional Geology

Metavolcanic, subordinate metasedimentary, mafic, and felsic intrusive rocks occur discontinuously along the English River- Winnipeg River sub provincial boundary from the Ontario-Manitoba border easterly to Property area. It has been suggested that the SLGB is a western extension of the Bird River (Timmins et al. 1985).

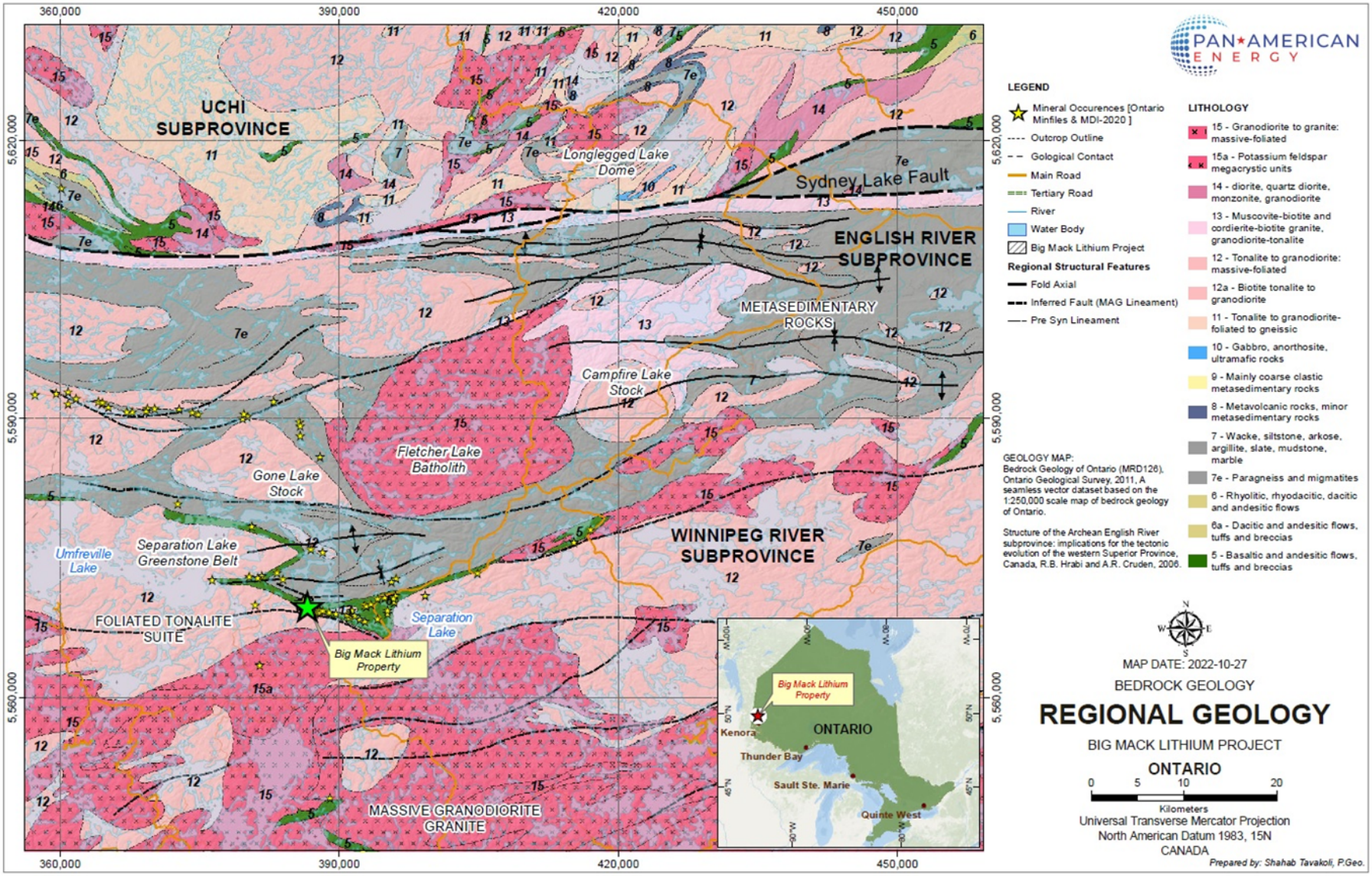
The English River Subprovince, located north from the SLGB is comprised of metasedimentary migmatites (50%), and felsic to intermediate plutonic rocks comprised of a tonalitic and a granodiorite to granite suite of rocks (Breaks 1991). The Winnipeg River Subprovince, south of the SLGB, is comprised of felsic to intermediate plutonic rocks with a tonalitic suite near Property (Beakhouse 1991).

The Separation Lake metavolcanic belt consists predominantly of a lower sequence of mafic metavolcanic rocks, with intercalated magnetite-bearing iron formations, a single discontinuous clastic metasedimentary unit, and overlying subordinate felsic metavolcanic rocks. Gabbro sills intrude the mafic metavolcanic sequence. A thin unit of polymictic conglomerate and sandstone lies along the northern margin of the belt. Metamorphic grade is amphibolite throughout the belt. In the south part of the SLGB where the Property is located supracrustal sequences are interpreted to face homoclinal northward (Blackburn and Young 2000) (see Figure 10).

A north- south oriented compressional tectonic event imparted a strong foliation to both the supracrustal and intrusive rocks and produced high strain features such as folding, boudinage and ductile shear zones.

A pronounced 4-kilometre, east--trending linear feature occurs at the northern part of SLGB and is defined a steep scarp and stream occupied valley. Referred to as the Selwyn Lake Fault, the fault juxtaposes mafic amphibolites and metasedimentary migmatites to the north against amphibolitic and felsic metavolcanic rocks to the south (Blackburn, 2000). Sense of movement related to this fault is not well established.

Figure 10: Regional Geology



7.2 Property Geology

The Property is in the south and western part of the SLGB (Figures 9 and 10) and is predominantly underlain by mafic volcanic rocks. These mafic volcanic units have been intruded by mafic intrusive rocks. All these rocks have been cut by granite, pegmatitic granite and pegmatite dikes. Some of these felsic intrusions are Lithium-Cesium-Tantalum (LCT) subtype rare-metal pegmatites derived from peraluminous magma.

The surface expression of pegmatites found on the Property are generally westerly trending and dip vertically and appears as irregular dikes and elliptical intrusions. The pegmatite are varying sizes with the largest been the Big Mack (Figures 6 and 10).

The rare-metal bearing pegmatite on the Property are comprised mainly of white potassic-feldspar, albite, green muscovite, quartz, with accessory spessartine garnet, cassiterite, apatite, tantalum-oxides, and gahnite.

Some of these pegmatites belong to the complex-type, petalite (LiAlSi4O) LCT sub-type, class of rare metal pegmatites, and are divided into two coeval types (Pedersen 1998):

a. Albitites with accessory K-feldspar, green muscovite, quartz, cassiterite, spessartine garnet, Ta-oxides, and gahnite.

b. Petalite-bearing pegmatite with subordinate rubidian K-feldspar and albite, and accessory quartz, green muscovite, lepidolite, spessartine, apatite, cassiterite, Ta-oxides, spodumene, and topaz.

7.3 Mineralization

The exploration work to date has identified a series of LCT-sub-type petalite and rare earth pegmatites on the Property (Figures 6). Bedrock mapping on the Property has identified albite aplite, potassic feldspar, albitized potassic feldspar, white-feldspar-phyric, petalite and granite pegmatite (Chastko 2001).

TANCO had examined the rare-metal potential of pegmatites in the northeastern part of the SLGB before exploration activity started on the Property. TANCO conducted an extensive lithogeochemical sampling program while searching for pegmatites. Based on the assay results from this program Table 9 presents threshold values for rare-metal mineralization. These rare-metal threshold values could be applied to determine anomalous ranking for results from samples collected during examinations on the Property.

Table 9: Rare-Metal Lithogeochemical Threshold Values for Rock Types (Galeschuk, 1999)

Rock	Background			Possible Anomalous			Anomalous			Highly Anomalous		
Type	Li	Cs	Rb	Li	Cs	Rb	Li	Cs	Rb	Li	Cs	Rb
Mafic Volcanic	<35.5	<1.7	<72.2	35.5-55.9	1.7-5.6	72.2-100.9	55.9-227.7	5.6-39.6	100.9-484.6	>227.7	>39.6	>484.6
Felsic Volcanic	<16.6	<3.0	<75.8	16.6-38.9	3.0-5.5	75.8-159.7	38.9-109.8	5.5-21.9	159.7-406.5	>109.8	>21.9	>406.5
Mafic Intrusive	<46.0	<4.2	<29.6	46.0-54.0	4.2-6.4	29.6-38.4	54.0-334.6	6.4-15.1	38.4-134.3	>334.6	>15.1	>134.3
Felsic Intrusive	<27.2	<6.6	<302.4	27.2-42.3	6.6-15.2	302.4-485.1	42.3-86.1	15.2-29.4	485.1-1769.4	>86.1	>29.4	>1769.4
Peg. Granite	<49.6	<12.4	<230.4	49.6-116.4	12.4-16.2	230.4-321.3	116.4-380.6	16.2-125.7	321.3-2292.7	>380.6	>125.7	>2292.7

7.3.1 Big Mack Pegmatites

The Big Mack represents the largest petalite-bearing pegmatite on the Property and is exposed for 180 meters along a 280º trend with a maximum width between 31 to 36 meters (see Figures 5 and 6).

The following description of the Big Mack pegmatite is modified from Breaks et al. (1999):

The Big Mack Pegmatite exhibits an internal zonation expressed by a continuous wall zone, 0.5 to 3 m thick that grades into a main core mass of petalite-rich pegmatite. The wall zone is composed mainly of cordierite, quartz, and plagioclase and generally lacks petalite. This strongly peraluminous unit is characterized by abundant cordierite, up to 2 by 3 cm, variably altered to garnet + mica-rich zones enveloped by deep blue, fine-grained holmquistite.

Petalite-rich pegmatite comprises most of the body and contains areas up to 56 to 60% light brown-weathering petalite, 30 to 33% blocky potassium feldspar, 5 to 11% quartz, and 2 to 4% muscovite based upon two modal analyses each conducted over a 1 square metre area. The petalite is white, grey or faint blue, translucent to locally transparent with individual well-preserved crystals up to 10 by 15cm.

Cordierite and mica-rich aggregates that replace this mineral are also noted locally in petalite-rich zones as at the northern end of the blasted trench. Deep-blue holmquistite is apparent along the fringes of these mica- rich aggregates and also extends into adjacent petalite.

Chrysoberyl-bearing petalite pegmatite is confined to a 2 to 6 by 25 m unit that is exposed within the southern end of the trench. This unit comprises the assemblage chrysoberyl + garnet + muscovite + petalite + potassium feldspar-plagioclase and is generally finer grained than the main petalite-bearing unit. The petalite content is noticeably lower than the adjacent quartz-potassium feldspar-petalite unit with milky to clear white petalite (10 to 20%) limited to sporadic megacrysts up to 10 cm diameter and narrow, irregular segregations composed of polycrystalline petalite, lesser white feldspar and sporadic, lime-green chrysoberyl.

Quartz-rich patches up to 0.3 by 1 m occur sporadically in the quartz-potassium feldspar-petalite pegmatite unit and may contain 5 to 10% petalite megacrysts and rare platy black oxide grains."

Petalite that was assayed contained 4.63 wt.% Li_2O, 60% of the main Big Mack body consists of petalite. Eucryptite contained up to 11.45 wt.% Li_2O. Bulk analysis of K-feldspar contained an average of 1101 ppm Cs, 8768 ppm Rb and 12.1 K/Rb ratio for 5 samples (Breaks and Tindle 2001).

Pryslak (2001) mention "overall the Big Mack pegmatite contains an estimated 30% petalite. Quartz, blocky K-spars, albite and a variety of micas form the other major constituents. Minor constituents include beryl, eucryptite, bikitaite chrysoberyl, garnet and tin-tantalum oxide minerals".

Diamond drilling holes SR-99-1 to SR-99-9 which intersected the pegmatite underlying the Big Mack exposures (see Table 4 and Figure 4).

7.3.2 Eleven Zone Pegmatite

This is the second largest petalite dike on the Property. It is located about 100 metres to the northwest of the Big Mack pegmatite and may represent a synformal folded section of the Big Mack pegmatite (Chastko, 2001).

The Eleven Zone petalite occurrence consists of two sub-parallel dikes that are centimetres to approximately 15 metres apart and have an aggregate thickness of 15 metres. The dikes have been tested by a single drill hole, SR-99-11 which intersected 7 metres on pegmatite. Eleven

Zone is interpreted as having a high potential for hosting economic reserves of petalite-tantalum mineralization (Chastko, 2011).

7.3.3 Sprinkler Zone and 6059 Pegmatites

The These two rare-metal zones lie 600 metres to the east-southeast of the Big Mack pegmatite (Figure 6). The Sprinkler zone is located 40 metres to the east of 6059, is exposed over a length of 17 metres and the pegmatite has a surface-width of 2.0 metres. Grab samples returned tantalum values vary from 10 to 159 ppm Ta, with the higher values generally associated with albitic phases of the pegmatites (Chastko, 2001).

The 6059 pegmatite has a maximum width of 5 metres and has been exposed over a strike length of 30 metres. Diamond drill hole SR98-49, completed by Avalon Ventures Ltd. in 1998 intersected an albitic aplite dike, associated with the 6059 zone, that assayed 4785 ppm Li over a core length of 1.40 metres (see Table 3).

7.4 Minerals found in the Big Mack and other Rare-Metal-Bearing Pegmatites

The following is examples of lithium-bearing mineral which are commonly found in the rare-metal bearing pegmatite in the Separation Rapids Pegmatite filed including those found on the Property. The mineral photos and mineral descriptions are from Pederson (1998):

7.4.1 Petalite

At least five varieties of petalite have been observed in the Big Whopper Pegmatite in outcrop and drill core:

1. White with characteristic web-texture (Photo 1), occurring as coarse crystals and highly deformed ribbony aggregates (Photo 2). Mechanical and deuteric alteration occurs along cleavage planes.
2. Pink, coarse grained crystals, often lenticular depending on degree of deformation (Photo 3).
3. Blue-grey to blue-pink petalite, generally lenticular due to ductile deformation, with characteristic propane-like odour due lo fluid inclusions, associated with lepidolite and lithium muscovite.
4. Green to blue-green petalite, commonly associated with orange-pink K-feldspar and Lepidolite (Photo 4 of lepidolite).
5. White-clear to faint glassy green petalite, rare, associated with lepidolite and coarse segregations of white petalite.

Table 10: Minerals associated with rare-metal bearing pegmatites on the Property and in the Separation Rapids Pegmatite Field (Winter 2012).

SEPARATION RARE METAL PROPERTY MINERALS IN COMPLEX PEGMATITES		
MINERAL	**CHEMICAL FORMULA**	**COMMENTS**
Lithium-bearing Minerals		
amblygonite-montebrasite	$LiAl(PO_4)(FOH)$	Lithium-aluminum-phosphate.
lepidolite	$K_2Li_3Al_4Si_7O_{21}(OH,F)_3$	
petalite	$LiAlSi_4O_{10}$	
spodumene	$LiAlSi_2O_6$	
Tantalite-Columbite (Niobium) Minerals		
tantalite	$(FeMn)Ta_2O_6$	
columbite	$(FeMn)Nb_2O_6$	
Tin-bearing Minerals		
cassiterite	SnO_2	
wodginite	$Mn(Sn,Ta)Ta_2O_8$	
Cesium-bearing Mineral		
pollucite	$(Ca,Na)_2Al_2Si_4O_{12}2H_2O$	Cesium (Cs) may occur in both lepidolite and pollucite.
Rubidium-bearing Mineral		
lepidolite	$K_2Li_3Al_4Si_7O_{21}(OH,F)_3$	Rubidium (Rb) may occur in lepidolite or feldspar.
Other Minerals of Potential Use/Interest		
albite	$NaAlSi_3O_8$	
potassium feldspar	$KAlSi_3O_8$	
quartz	SiO_2	
muscovite	$KAl_2(AlSi_3O_{10})(F,OH)_2$	
beryl	$Be_3Al_2(SiO_3)_6$	Source of beryllium.
chrysoberyl	$BeAl_2O_4$	Source of beryllium.
Other Minerals and Terms		
cordierite	$Mg_2Al_4Si_5O_{18}$	Occurs in metamorphic rocks.
holmquistite		A member of the amphibole family.
smectite		One of the clay mineral groups.
tourmaline		A complex borosilicate of aluminum, iron, magnesium and alkalies. May contain lithium.
aplite		Fine grained dyke rock with the composition of granite.

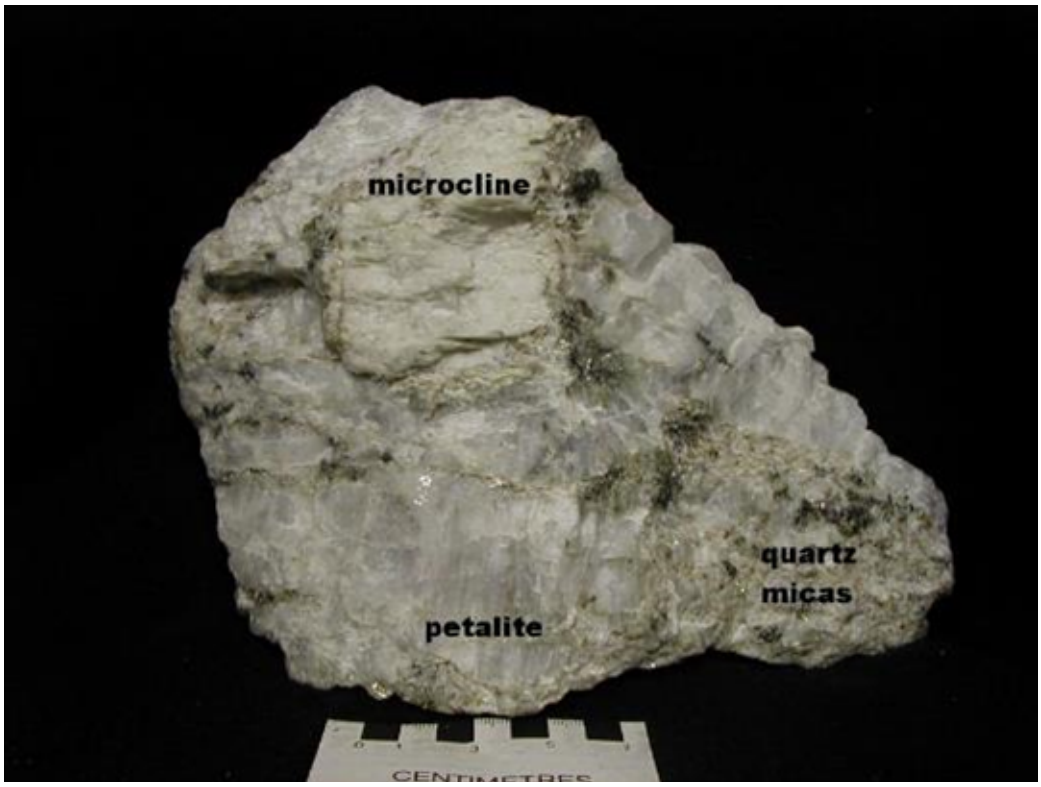


Photo 1: White petalite with web-texture

Photo 2: White petalite

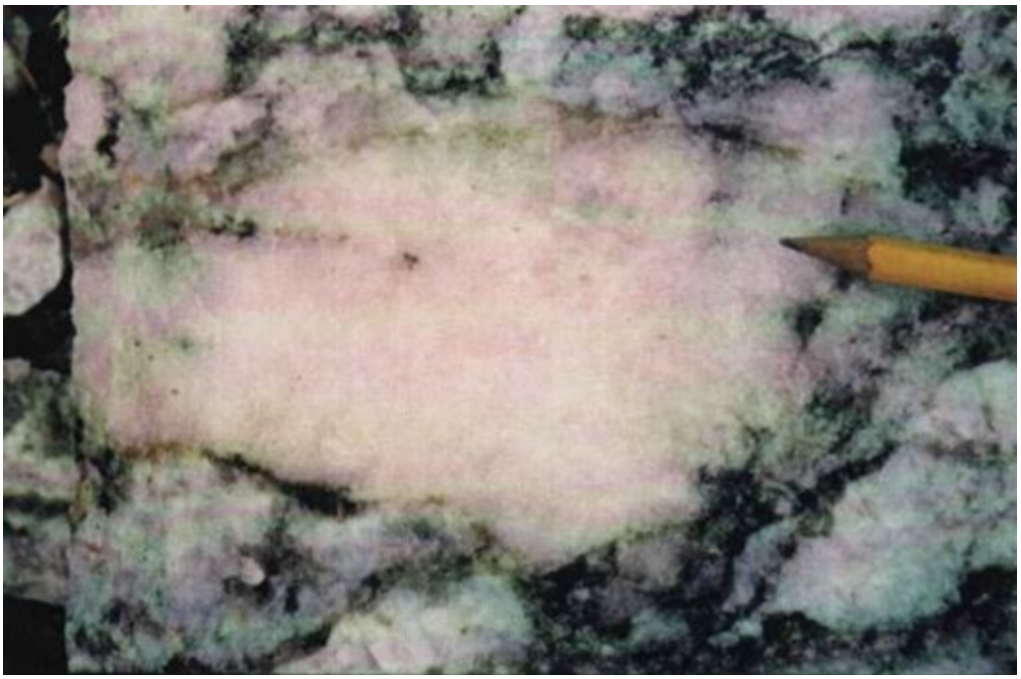


Photo 3: Pink petalite

Photo 4: Lepidolite – pink micas

7.4.3 Tantalum

A wide variety of tantalum (Ta) minerals have been identified by Breaks and Tindle (1996a, b) in the Separation Rapids pegmatites, including mangano-tantalite, wodginite, microlite and lepidolite. Trace to minor tantalum enrichment occurs in albite-rich rocks, interstitial to micas, and in lepidolite zones within the pegmatites. A mapping and grab sampling program conducted in 2001 have identified tantalum mineralization in 13 pegmatites on Property (see Figure 6).

Chastko (2001) mention: "the tantalum content of the Big Mack pegmatite has not been firmly established as the duplication of assays has been a problem. The weighted average T_2O_5 content from assayed drill core of the Big Mack is 43 ppm. However, because of problems in assay duplication, this number is not considered reliable. Current metallurgical work and standard based assay procedures should establish what the recoverable levels of Ta_2O_5 are from the Big Mack pegmatite".

8.0 DEPOSIT TYPES

The SLGB could be an easterly extension of the Bird River Greenstone Belt ("BRGB") of Manitoba (Cerny et. al. 1996). The BRGB – SLGB are noteworthy as being the locus for one of the highest concentrations of rare-metal bearing pegmatite mineralization in the Superior Province coupled with probably the greatest number of complex-type, petalite-LCT subtype pegmatite occurrences in Canada (Cerny et. al. 1996).

The BRGB is host to the Winnipeg River-Cat Lake pegmatite fields that includes TANCO's tantalum and cesium producing mine at Bernic Lake, Manitoba. The Bernic Lake pegmatite, host rock of the TANCO deposit is a zoned petalite-subtype pegmatite. Selway et al. (2000) mentions: "the sub-horizontal Tanco pegmatite (1990 X 1060 X 100 m) consists of nine pegmatite zones: border zone, wall zone, aplitic albite zone, lower intermediate zone, upper intermediate zone, central intermediate zone, quartz zone, pollucite zone and lepidolite zone. The border zone is dominantly an assemblage of saccharoidal albite and quartz along the pegmatite–wallrock contact and is <30 cm thick. The wall zone consists dominantly of giant columnar microcline perthite (≤ 3 m) in a matrix of quartz, medium-grained albite and tabular greenish muscovite (≤ 10 cm). The aplitic albite zone consists mainly of fine-grained undulating layers of saccharoidal albite and quartz with significant Ta–Nb mineralization. The lower intermediate zone consists of two main assemblages: (1) large crystals of microcline perthite and spodumene + quartz pseudomorphs after petalite (≤ 2 m) embedded in medium-grained quartz, albite and micas; (2) quartz pods (0.5–2.0 m) with amblygonite– montebrasite and aggregates of spodumene + quartz. The lower intermediate zone grades gradually into the upper intermediate zone, characterized by gigantic crystals (e.g., amblygonite to 2 m, microcline perthite to 10 m, and petalite to 13 m long). The central intermediate zone consists mainly of microcline perthite, quartz (5– 40 cm) and fine-grained greenish muscovite with significant amounts of Ta–Nb oxide minerals, beryl and zircon. The quartz, pollucite and lepidolite zones are monomineralic. The Tanco pegmatite is mined for Ta (wodginite and tantalite), Cs (pollucite), Rb (lepidolite) and ceramic-grade spodumene".

The rare-metal mineralization of Property pegmatites can also be compared to the Bikita pegmatites of Zimbabwe. The pegmatites of the SLGB and Property also have similarities to Bikita (Breaks and Tindle 1997):

- the dominance of petalite as the principal lithium mineral with spodumene being rare;
- presence of cassiterite, topaz, lepidolite and pollucite and lack of tourmaline

The Bird River Greenstone Belt (BRGB) and SLGB system is noteworthy in being the locus for one of the highest concentrations of rare-metal pegmatite in the Superior Province coupled with probably the greatest number of LCT subtype rare-metal pegmatites occurrences in Canada (Cerny et al. 1996).

The fertile, peraluminous Greer Lake pegmatitic granite pluton is located near TANCO's Bernic Lake deposit in the Winnipeg River-Cat Lake pegmatite field. The Separation Rapids pluton, a highly- evolved, fertile peraluminous granite is located in the Separation Rapids Pegmatite Field (Breaks, 1993).

The Separation Rapids pluton, likely the parent fertile, peraluminous granite to the Separation Rapids pegmatite field, is comparable in size and composition to the fertile, peraluminous Greer Lake pluton of the Winnipeg River-Cat Lake pegmatite field (Breaks, 1993).

This deposit-type is one of the most difficult to explore for in the Archean. Since these is no magnetic or conductive minerals in rare-metal pegmatite the response to geophysics both airborne and ground surveys prevent the detection of these types of felsic intrusive rocks.

9.0 EXPLORATION

Pan American has not conducted any exploration work on the Property.

10.0 DRILLING

No drilling has been done on the Property by the Company.

11.0 SAMPLE PREPARATION, ANALYSES AND SECURITY

Since acquiring the Property on August 22 2022, Pan American has not conducted any drilling or sampling of the Property. No samples were collected by the Author during the August 06 and October 23, 2022, site visits. The historical work performed by previous operators used ALS Chemex for sample preparation and analysis with some duplicate analysis at other laboratories Chastko (2001). ALS Chemex Labs are commercial, independent group of laboratories accredited under both ISO 17025 with CAN-P-1579 for specific registered tests. The laboratories have their own quality assurance (QA) and quality control (QC) procedures for sample preparation, analysis and security. A review of the previous work was completed with paper and digital files and the assay results presented in the Report were reviewed by the Author and were found satisfactory.

In conclusion, the Author considers that the sample preparation, security, and analytical procedures of historical sampling are adequate to ensure credibility of the assays. The QA/QC procedures and protocols employed during historical work are sufficiently rigorous to ensure that the data are reliable.

12.0 DATA VERIFICATION

The Author visited the Property on August 06 and October 23, 2022, to verify historical work, to examine mineralized outcrops and to collect necessary geological data. During the visit of the Property, GPS coordinates using NAD 83 datum were recorded for samples and other exploration work locations.

Review of the previous work was completed with paper and digital files and the assay results presented in the report were reviewed. It is noted that analysis by EFR and PIO was dominantly completed by ALS Chemex with some duplicate analysis at other laboratories (Chastko 2001). The only noted discrepancy was the variable tantalum contents of samples from the Big Mack pegmatite from different laboratories. Chastko (2001) suggested “the variable values of tantalum to a potential nugget effect similar to gold mineralization”.

The Author is of the opinion that the previous sampling meets the standards set out in NI 43-101 and that no additional data verification was required for this report.

Overall, the Author is of the opinion that the data verification process demonstrated the validity of the data and considers the Property database to be valid and of sufficient quality.

The Author was able to verify location of historical sampling areas on the Big Mack Lake pegmatite during his property visits. However, it was observed that there is a discrepancy between historical locations of pegmatites and actual locations. The Author was able to correct these locations by taking fresh GPS points to locate pegmatite outcrops using NAD 1983 (UTM Zone 15N) datum. A limited search of tenure data on the ENDM Ontario website on October 25, 2022, conforms to the data supplied by the Company. However, the limited research by the Author does not express a legal opinion as to the ownership status of the Property.

Historical grades and assay data are taken from ENDMF assessment reports and OGS geological reports which are deemed reliable. Historical geological descriptions taken from various sources were prepared and approved by the professional geologists or engineers and are deemed reliable. The data collected during the present study is considered reliable because the Author collected it. The data quoted from other sources is also deemed dependable because it was conducted under the supervision of professional geoscientist and geophysical contractors and taken from ENDM Ontario, published reports by the Ontario Geological Survey (OGS), the Geological Survey of Canada (“GSC”), various researchers. The historical information was reviewed and verified by the Author during the preparation of this technical report.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

No mineral processing and metallurgical testing were done on the Property by Pan American.

14.0 MINERAL RESOURCE ESTIMATES

No mineral resource estimates were done on the Property by Pan American.

Items 15 to 22 are not applicable at this time.

23.0 ADJACENT PROPERTIES

Big Mack Lake Property is in the heart of the mineral rich Canadian Shield of Northwestern Ontario. There are several mines and exploration projects that are near the Property. Particularly, the Property is part of an active and historical mining and mineral exploration region where many operators conducted exploration and development work. The following information is taken from the publicly available sources which are identified in the text and in Section 27. The Author has not been able to independently verify the information contained. The information is not necessarily indicative of the mineralization on the Property, which is the subject of this technical report.

23.1 Avalon Rare Metals Inc.

The Avalon Rare Metals Inc. is the land holder of the land adjacent to the Property. Avalon's land holdings include the Big Whopper deposit, Glitter, Wolf and Rattler occurrences (see Figure 11).

23.1.1 Big Whopper Pegmatite

A summary of the description of the Big Whopper Pegmatite (BWP) (Clark and Cullen 2009) is presented below:

"The Separation Rapids property is host to one of the largest, rare metal pegmatite deposits in the world. Known as the "Big Whopper" Project ("BWP"), it is only the fourth example in the world of a rare metal pegmatite with the size required to be of major economic importance and only the second to be enriched in the rare lithium mineral called petalite. The deposit is a potential source of lithium minerals for use in the glass and ceramics industry and specialty composite materials and is also a potential source of lithium chemicals for the growing rechargeable battery market. There is also potential for production of tantalum and rubidium minerals and a pure form of sodium feldspar.

Since acquiring the property in October 1996, Avalon has invested approximately $3.7 million on exploration and development work primarily focused on the lithium minerals

potential. This involved geological mapping, trenching, ground magnetic surveys, mineralogical studies and diamond drilling totaling 10,152 m in 69 holes. This work culminated in 1999 with the completion of a comprehensive pre-feasibility study on the viability of producing petalite with by-product feldspars, by independent consultant Micon International Inc. The business model involved production of high purity concentrates of petalite for sale to glass-ceramics manufacturers such as Corning for use in its famous Corningware® cookware. Avalon was unsuccessful in advancing the project on this basis following the shutdown of the Corningware manufacturing facility in the U.S. in 2001.

In 2002-2003, Avalon completed a Scoping Study to evaluate an alternative development concept for the project which involved producing a diluted petalite product called "high-lithium feldspar". The concept was based on application of a simple dry processing technique to remove the iron and tantalum-bearing minerals by magnetic separation and aggregating the feldspar and quartz with the petalite into a material to be marketed as a low-cost, lithium-enriched glass sand. Subsequent process testwork on a six-tonne bulk sample and crucible melt studies demonstrated that an acceptable quality product could be produced which would have the advantage of lowering the melting temperature of the glass batch, thereby reducing the manufacturers' energy costs and emissions of greenhouse gases. However, development was frustrated by the requirement for large volume test samples and the lack of suitably equipped custom milling facilities available to produce such a sample.

In 2005, a potential new market for the petalite ore was identified as an ingredient in a new non-combustible composite material with various potential construction applications. The untreated crushed petalite ore could be used directly in the manufacturing process for this material, creating an interesting development opportunity for Avalon. In 2006, a 300-tonne bulk sample of the ore was extracted and crushed for delivery to the customer for its own product development purposes. Deliveries of this material began in early 2007 but have since been discontinued, while the customer, a development stage company, attempted to raise additional capital. There has been no word as to when shipments might resume to this customer.

With increasing energy prices and concerns about climate change related to greenhouse gas emissions, interest in lithium additions to glass formulations is increasing, creating new opportunities for lithium minerals producers. Avalon is continuing to investigate these opportunities through an on-going marketing campaign and periodically produces small test samples for laboratory evaluation by potential customers.

Complex-type pegmatites are found in many areas of the world and are economically important as resources for the rare metals, including lithium, tantalum, cesium and rubidium. Except for the producing Tanco (Manitoba), Bikita (Zimbabwe) and Greenbushes (Western Australia) mines, most complex-type pegmatites are too small to be profitably mined. While comparable in size, the BWP exhibits some significant differences from the norm in its structural setting, preservation of magmatic zonation and

overall crystal size. Unlike Tanco and Bikita, which are shallowly dipping, undeformed zoned intrusions, and Greenbushes, which is an approximately 45°-dipping, zoned pegmatite, the BWP is subvertically-dipping, complexly folded, and strongly foliated, with a smaller average grain size.

Table 11: Mineral Resource Estimate for the Big Whopper Rare-Metal Deposit

Commodity	Tonnage–Grade Estimates and/or Dimensions (*NI-43-101 Compliant)	Reserve References
Lithium (Li)	Lithium Resource Estimate* (cut-off 0.6% Li_2O): t-tonnes Measured: 3,364,000 t @ 1.431% Li_2O Indicated: 5,041,000 t @ 1.393% Li_2O Total (M+I): 8,405,000 t @ 1.408% Li_2O Inferred: 1,791,000 t @ 1.349% Li_2O	Avalon Advanced Materials Inc., news release, May 23, 2018.

These mineral resources are delineated over a strike length of 600 m, to a maximum vertical depth of 250 m and remain open for expansion both to depth and along strike. The lithium and rubidium grades are consistent with a petalite content averaging 25±5% and an Rb-K-feldspar content averaging 10 to 15%, with the rest of the rock consisting mainly of albite, muscovite, lepidolite, and quartz. Important accessory minerals include spodumene, spessartine, cassiterite, and columbite-tantalite, the principal ore mineral for tantalum.

23.1.2 Glitter Pegmatite

The description of the Glitter Pegmatite is from Winter (2012) and Clark and Cullen (2009). “The Glitter Pegmatite is a highly deformed, petalite-bearing pegmatite exposed along its southeastern strike-length for 75 m and achieves a maximum width of 25 m. It exhibits internal zonation as four distinct units:

- discontinuous wall zone of garnet + muscovite + quartz + plagioclase aplite
- main mass of muscovite + quartz + potassium feldspar + petalite pegmatite
- holmquistite + cordierite + muscovite + biotite granitic pegmatite
- replacement stage garnet + muscovite aplite as irregular patches and anastomosing vein network

Considerable deformation is obvious in the form of ubiquitous tectonic flames of biotite-rich, metasomatized mafic metavolcanic rock along the contact which locally are traceable into tight folds contained within the petalite-rich pegmatite zone. A similar structural history to the Big Mack pegmatite was observed. Notable thickening of petalite-bearing pegmatite within an adjacent apophysis was developed during the isoclinal folding stage.

Channel samples were selected at 1 m intervals by Champion Bear Resources across part of the main petalite-bearing unit. The results revealed Li_2O contents between 1.03 and 1.64% accompanied by anomalous trace levels of other rare metals.

Petalite in the main unit is light brown on the weathered surface and intensely recrystallized, such that original crystal shapes could not be discerned. Locally up to 80% petalite was noted. Oxide minerals occur sparsely disseminated and were identified by electron microprobe analysis as cassiterite, ferrowodginite, ferrotantalite, ferrocolumbite and ferrotapiolite."

23.1.3 Rattler Pegmatite

Considerable deformation is obvious in the form of ubiquitous tectonic flames of biotite-rich, metasomatized mafic metavolcanic rock along the contact which locally are traceable into tight folds contained within the petalite-rich pegmatite zone. A similar structural history to the Big Mack pegmatite was observed. Notable thickening of petalite-bearing pegmatite within an adjacent apophysis was developed during the isoclinal folding stage.

Description of the Glitter Pegmatite is from Winter (2012) and Clark and Cullen (2009): "This zone consists of pink weathering, pegmatite segregations, up to 7 by 12 m, hosted in the most westward striking apophysis of the Skidder pluton (Figure 3). The segregations, which grade imperceptibly into its medium- to coarse-grained, garnet-biotite granite host, are composed of tourmaline-muscovite potassic pegmatite. The pegmatite contains 5 to 10% coarse books of silver to light brown muscovite up to 10 cm thick. Local patches and layers of sodic aplite, up to 0.25 by 1 m, and composed of white cleavelandite, green muscovite, quartz, blocky potassium feldspar, sporadic dark brown and black oxide specks, and faint green apatite. Milky and lime-green euhedral beryl, up to 6 by 10 cm, is the most striking rare-metal mineral present and is most conspicuous in muscovite-quartz- rich pods. Oxide minerals are quite sparse and identified to date only in the aplite and muscovite-quartz pods, respectively as fine-grained black grains and a single, 1 cm diameter dark brown crystal. Champion Bear Resources registered maximum bulk values of 831 ppm Cs, 0.021% Ta_2O_5, 0.015% Nb_2O_5, 124 ppm Sn, 0.41% Rb_2O, and 0.20% Li_2O in the zone."

23.1.4 Wolf Pegmatite

Description of the Wolf Pegmatite is from Winter (2012) and Clark and Cullen (2009). "This mass of pink-weathering pegmatite occupies a 40 by 100 m area within a west-striking apophysis from the Skidder pluton. The zone consists mostly of tourmaline-garnet-biotite-muscovite potassic pegmatitic leucogranite characterized by graphic intergrowths of quartz-potassium feldspar up to 0.7 by 1 m and abundant coarse books of silver-

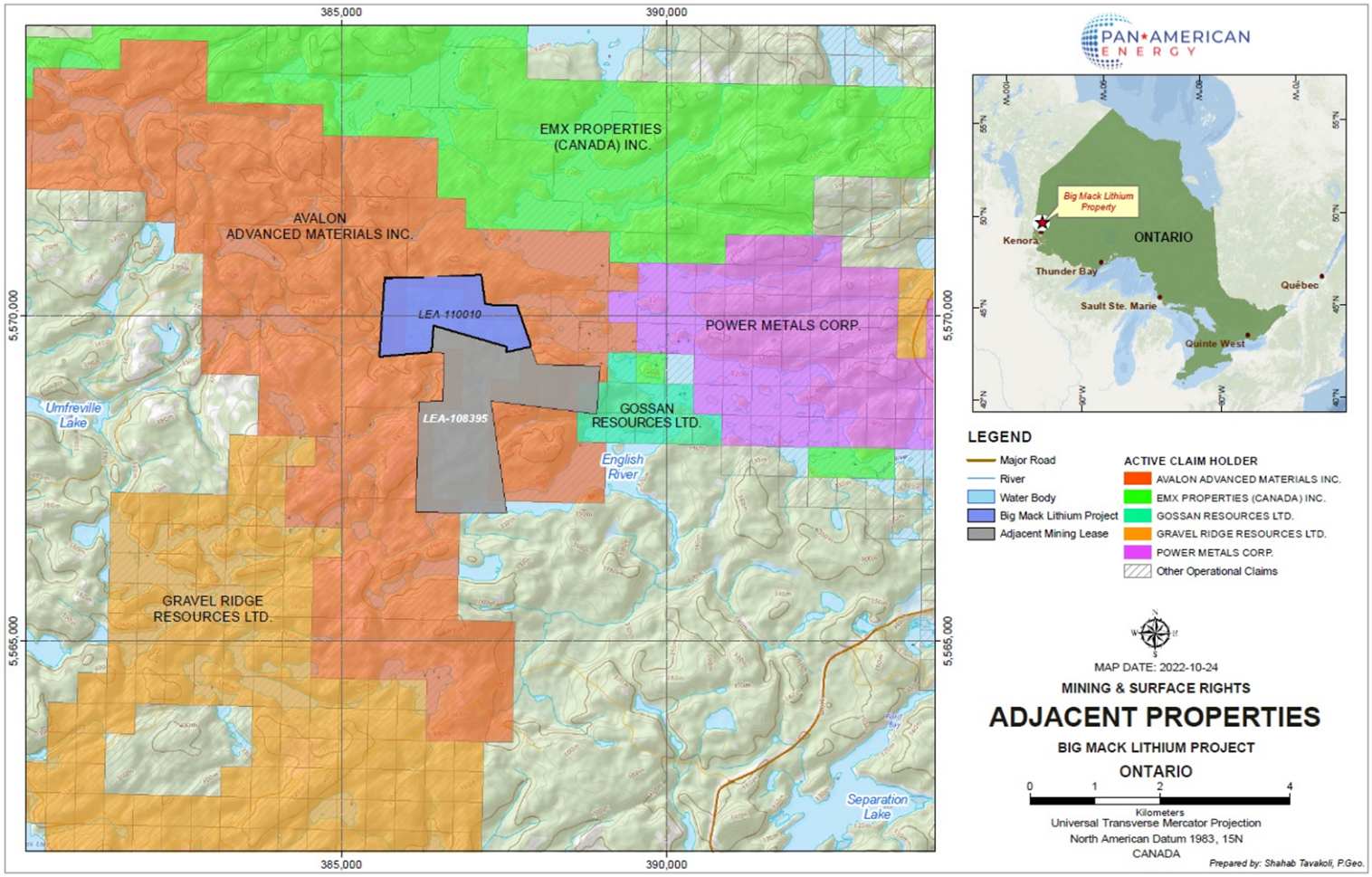
coloured muscovite up to 5 cm thick. A gradational contact between medium-grained, garnet-biotite-muscovite granite was noted on the north side of the pegmatite mass.

Oxide minerals up to 5 mm diameter, identified by electron microprobe analysis as dark brown cassiterite, manganocolumbite and microlite, are mainly confined to small pods and layers of sodic aplite up to 0.8 by 1 m in size. Green beryl is rare. Maximum bulk values of 1000 ppm Cs, 0.016% Ta_2O_5, 0.024% Nb_2O_5, 859 ppm Sn, 0.17 % Rb_2O and 0.39% Li_20, were obtained in the sampling of Champion Bear Resources."

23.1.5 Area Northwest of the Property

Avalon Rare-Metals Inc. conducted a geobotanic sampling project (MNDM assessment file 2.5849) on their ground adjacent to the Property. This program successfully identified lithium and cesium anomalous areas-based biogeochemistry results from sampling twigs of same age growth from black spruce and alders. Grid line spaced at 100m and samples collected at 50 m intervals along line was used in program. The analytical technique used by Avalon (MNDM File 2.5849) was "vegetation samples were collected, packaged and shipped to ALS in Thunder Bay, where they were dried and prepared by maceration of the dry plant tissue to produce a homogeneous and representative pulp. A 100g sub-sample was milled to 100% passing 1mm (prep code VEG-MILL01). This un-ashed sample was analysed using HNO_3/HCl Digestion and ICP-MS finish (65 elements ME-VEG41)".

Figure 11: Adjacent Properties Map



24.0 OTHER RELEVANT DATA AND INFORMATION

24.1 Environmental Concerns

There is no other data relevant to the Property.

25.0 INTERPRETATION AND CONCLUSIONS

The Property hosts several petalite (Lithium) and rare-metal bearing pegmatites that are part of the SLGB. These include the Big Mack, Eleven Zone and 6059-Sprinkler Zone bodies. These pegmatites have potential to contain economic concentrations of lithium and possible other rare-metal minerals such as tantalum.

The Big Mack pegmatite has been tested with diamond drilling to a vertical depth of 50 meters and has intersected a lithium-petalite bearing zone. The remaining pegmatites on the Property have had limited or have not been tested by diamond drilling.

Further exploration of the Property should comprise prospecting, additional sampling and diamond drilling to further define the potential of the lithium and rare-metal pegmatites.

Specifically, the work should include diamond drilling of the Big Mack pegmatite to depth and along strike to prove continuity and the potential associations to the other pegmatites in the immediate area.

Geochemistry of all the pegmatites should be reviewed to help determine genesis and relationships of the pegmatites across the Property.

There are some risks associated with the historical exploration data on the Property. The tantalum content of the Big Mack pegmatite has not been firmly established as the duplication of assays has been a problem. The weighted average Ta_2O_5 content from assayed drill core of the Big Mack is 43 ppm. However, because of problems in assay duplication, this number is not considered reliable. Current metallurgical work and standard based assay procedures should establish what the recoverable levels of Ta_2O_5 are from the Big Mack pegmatite. The early indications from International Metallurgical is that this number maybe considerably higher.

Based on its favourable geological setting indicating petalite pegmatite hosted lithium and rare metals mineralization in surface grab samples, trenches, and drilling; historical and current exploration work; and findings of present study, it is concluded that the Property is a property of merit, with good potential for discovery of economic concentration of lithium and rare metals mineralization through further exploration. Good infrastructure, availability of exploration and mining services in the vicinity makes it a worthy mineral exploration target. The historical exploration data collected on the Property provides the basis for a follow-up work program. The Author believes the present study has met its original objectives.

26.0 RECOMMENDATIONS

In the Author's opinion, the character of the Property is enough to merit the following two-phase work program, where the second phase is contingent upon the results of the first phase.

Phase 1 – Prospecting, and Sampling

Phase 1 exploration work on the Property should comprise prospecting, mapping, sampling stripping, and channel-cut sampling to further define the potential of the lithium, tantalum and rare-metal minerals. Geochemistry of all the pegmatites should be reviewed to help determine genesis and relationships of the pegmatites across the Property.

A forest fire which occurred in 2021 had burnt the western two-thirds of the Property. As a result of the fire the bedrock is considerably more visible due to the reduced amount of vegetation. Aerial images, either as recent high-resolution Landsat or orthorectified drone imagery would assist in prospecting efforts and could also identified the white pegmatite compared to the darker-colored country rocks.

The geological mapping and sampling conducted 1998 and 2001 located numerous pegmatites on the Property. These pegmatites should be examined and sampled to evaluate the lithium and other rare-metal mineralization as the 1998-2001 program mainly focused on the tantalum potential. The areas near these pegmatite exposures should also be prospected. If new pegmatites are found these exposures should have overburden removed and pressure-washed. Geological mapping, channel-cutting and sampling should test mineral potential of pegmatites.

A biogeochemistry sampling program collecting twigs of same age growth from black spruce or alders should be conducted on the parts of Property not affected by the 2021 forest fire. Grid line spaced at 50m and samples collected at 25 m intervals.

The past exploration efforts have established there is potential for tantalum on the Property. Corrective measures be implemented in order to obtain reliable and repeatable analysis for tantalum. Sample collection methods and a flowsheet outlining analytical procedures and techniques should be drafted and tested with assay laboratories to establish duplication of assay results

Detailed structural examination of all rock types, especially those adjacent to the pegmatite, could determine the strain and folding which existed in the country rock before the injection of rare-metal-bearing felsic intrusive magma.

The estimated budget for Phase 1 work is $688,218 and it will take about four months to complete this work.

Phase 2 – Diamond Core Drilling

Phase 2 work should include diamond drilling of the Big Mack pegmatite to depth and along strike to prove continuity and the potential associations to the other pegmatites in the immediate area. Additional diamond drilling will enable the further expansion of the Big Mack pegmatite along strike and to depth. The diamond drilling will also assess the structural complexity and potential zonation of the Big Mack pegmatite. The diamond drilling and associated sampling will help understand the relationships of the identified pegmatites within the immediate area and to those adjacent to Property such as the Big Whopper pegmatite.

The estimated budget for Phase 2 work is $1,754,325 and it will take about six months' to complete this work.

26.1 Budget

Table 12: Phase 1 budget

Program	Units	Rate ($)	Unit	Total Costs
Phase 1				
Prospecting		**50m line-spacing**	**40 line kms**	
Staff	2 Staff	$600/day 1 km/day	40 days	$24,000
Assaying		$110/sample 15/day	600	$66,000
Supplies				$1,000
Travel	$0.95/km	$150/day	40 days	$6,000
Report	1 Staff	$600/day	5 days	$3,000
Stripping			**15 new sites**	
Upgrade access trail	contractor			$400,000
Equipment includes mod/demob	Operator	$2200/day	15 days	$33,000
Washing	2 Staff	$600/day	20 days	$12,000
Channel-Cutting	2 Staff	$600/day 20m/day	15 days	$9,000
Assaying		$110/sample	300	$33,000
Supplies	Blades, bags			$2,000
Travel	$0.95/km	$150/day	35 days	$5,250
Report	1 Staff	$600/day	7 days	$4,200
Sub Total				**$598,450**
Contingency			**15%**	**$89,768**
Total Phase 1 Budget				**$688,218**

Table 13: Phase 2 Budget

Program	Units	Rate ($)	Unit	Total Costs
Phase 2				
Drilling			**5,000 m**	
Metreage	All costs	$160 / meter	5,000 m	$800,000
Mob/Demob	80km from Ken			$50,000
Geologist	1 Staff	$600/day 50m/day	100 days	$60,000
Core cutting machine				$10,000
Core Cutting Assistant	3 Staff	$300/day 15% core	100 days	$90,000
Supplies	Blades, bags			$2,000
Assays	15% of 5000m	$110/sample	750	$75,000
Travel	$0.95/km	$150/day	100 days	$15,000
Report	1 Staff	$600/day	10 days	$6,000
Project Manager	1 staff	$600/day	120	$72,000
Room and Board	14 staff	$200/person	120	$336,000
Final Report	1 Staff	$600/day	7 days	$4,200
Ta Assay Method Study	Geologist	$600/day	4 day	$2,400
Assay		$110/sample	10 sample	$1,100
Travel	$0.95/km	$150/day	4 day	$600
Report		$600/day	2 Days	$1,200
Subtotal				**$1,525,500.00**
Contingency			15%	$228,825.00
Total Budget				**$1,754,325.00**

27.0 REFERENCES

1. Blackburn, C.E., and Young, J.B., 2000. Geology of the Separation Lake Area, Northwestern Ontario; Ontario Geological Survey, Open File Report 6001.
2. Blackburn, C.E., Young, J.B., Breaks, F.W., 2008. Precambrian Geology of the Separation Lake Area West-Half, Ontario geological Survey, Preliminary Map 2673, scale 1:20,000.
3. Breaks, F.W., Bond, W.D., Harris, N. and Desnoyers, D.W. 1976. Operation Kenora–Ear Falls, Lac Seul sheet, District of Kenora; Ontario Division of Mines, Preliminary Map P.1202, scale 1:63 360.
4. Breaks, F.W. 1991. English River Subprovince, In: Geology of Ontario, Ontario Geological Survey, Special Volume 4, Part 1, p. 279-301.
5. Breaks, F.W. 1993. Granite-related mineralization in northwestern Ontario: I. Raleigh Lake and Separation Rapids (English River) rare-metal pegmatite fields; in Summary of Field Work and Other Activities 1993, Ontario Geological Survey, Miscellaneous Paper 161, p. 104-110.
6. Breaks, F.W. and Tindle, A.G. 1996. New discovery of rare-element pegmatite mineralization, Separation Lake area, northwestern Ontario; Ontario Geological Survey, Open File Report 5946, 9p.
7. Breaks, F.W. and Tindle, A.G. 1996a. Geology and geochemistry of the Separation Rapids pegmatite group: eastern terminus of the Cat Lake-Winnipeg River pegmatite field; in Geological Association of Canada-Mineralogical Association of Canada, 1996 Joint Annual Meeting, Program with Abstracts, vol. 21, p. A-21.
8. Breaks, F.W. and Tindle, A.G. 1996b. New discovery of rare-metal pegmatite mineralization, Separation Lake area, northwestern Ontario; Ontario Geological Survey Open File Report 5946, 8 p.
9. Breaks, F.W. and Tindle, A.G. 1997. Rare-metal exploration potential of the Separation Lake area; an emerging target for Bikita-type mineralization in the Superior Province of Ontario; Ontario Geological Survey, Open File Report 5966, 27p.
10. Breaks, F.W. and Tindle, A.G. 2001. Rare-element mineralization of the Separation Lake area, northwest Ontario: characteristics of a new discovery of complex-type, petalite-subtype, Li-Rb-Cs-Ta pegmatite; in Industrial minerals in Canada, Canadian Institute of Mining and Metallurgy, Special Volume 53, p.159-178.
11. Breaks, F.W., Selway, J.B. and Tindle, A.G. 2001. Fertile peraluminous granites and related rare-element pegmatite mineralization, Superior Province, Northwest, and Northeast Ontario; in Summary of Field Work and Other Activities 2001, Ontario Geological Survey, Open File Report 6070, p.39-1 to 39-39.
12. Breaks, F.W., Selway, J.B. and Tindle, A.G. 2003. Fertile peraluminous granites and related rare-element pegmatite mineralization, Superior Province, northwest and northeast Ontario: Operation Treasure Hunt; Ontario Geological Survey, Open File Report 6099, 179p.

13. Breaks, F.W., Selway, J.B. and Tindle, A.G. 2005. Fertile peraluminous granites and related rare-element pegmatites, Superior Province of Ontario, in Linnen, R.L., and Samson, I.M., eds., Rare-Element Geochemistry and Mineral Deposits, Geological Association of Canada, GAC Short Course Notes 17, p. 87-125.
14. Breaks, F.W., Tindle, A.G. and Smith, S.R 1999. Geology, Mineralogy and Exploration Potential of the Big Mack Pegmatite System: A newly discovered western extension of the Separation Rapids Pegmatite Group, N.W. Ontario, Summary of Field Work and Other Activities 1999, Ontario Geological Survey, Open File Report 6000 p 245- 257.
15. Breaks, F.W., Tindle, A.G. and Smith, S.R. 1999. Geology, mineralogy and exploration potential of the Big Mack Pegmatite system: a newly discovered western extension of the Separation Rapids Pegmatite Group; in Summary of Field Work and Other Activities 1999, Ontario Geological Survey, Open File Report 6000, p.25-1 to 25-22.
16. Černý, P. 1989. Exploration strategy and methods for pegmatite deposits of tantalum; in Lanthanides, tantalum and niobium, Springer-Verlag, Berlin, p.274-302.
17. Černý, P., Ercit, T., and Vanstone, P. 1996. Petrology and mineralization of the Tanco rare-element pegmatite, southeastern Manitoba; in Geological Association of Canada–Mineralogical Association of Canada, Joint Annual Meeting, Winnipeg Manitoba, Field Trip A3 guidebook, 105p.
18. Chastko, L.C., 2001. Independent report on rare element pegmatite properties in the Separation, Huston and Linklater lakes area; internal unpublished report, Emerald Fields Resource Corporation 120p.
19. Ching, J.G., Camacho, A., Piette-Lauziere, N. and Pederson, J.C. (2020) Textural and geochronological investigations into the Separation Rapids rare-metal pegmatite; poster display at PDAC Toronto 2020: Department of Geological services, University of Manitoba.
20. Clark, G and Cullen, D 2009. Independent technical report exploration summary on the Separation Property unpublished report, Pacific Iron Ore Corporation., 44p.
21. Corfu, F., Stott, G.M. and Breaks, F.W. (1995): U-Pb geochronology and evolution of Province, an Archean low P-high T metasedimentary belt Superior Province; Tectonics, 14, Pages 1220-1233.
22. Galeschuk, C. 1999. Report on the 1996 and 1997 lithogeochemistry and geological mapping activity Separation Lake, Ontario (52L/08SW) summers 1996 and 1997; Kenora Assessment Files L07SE Q-3, Tantalum Mining Corporation of Canada Ltd.
23. Knight Piesold Consulting (743963 Ontario Ltd) 1999. Report of Conceptual Design of Pilot Plant By-Products Storage Facility, for Emerald Fields Resource Corporation - Separation Rapids (Big Mack) Project; internal report Emerald fields Resource Corporation, 100p.

24. Larbi, Y., Stevenson, R., Breaks, F., Machado, N. and Gariépy, C. (1999): Age and isotopic composition of late Archean leucogranites: implications for continental collision in the western Superior Province; Canadian Journal of Earth Sciences, 36, pages 495-510.
25. Pederson, J.C. 1998. Geological report 1997-1998 exploration program on the Big Whopper Rare Metal Pegmatite Separation Rapids Property; Paterson Lake Area; Avalon Ventures Ltd., MNDM assessment file 52L07SE2003.
26. Pryslak, A.P. (2001) Report on Diamond Drilling on the Big Mack Rare Metal Pegmatite Separation Property; Paterson Lake Area; Emerald Fields Resource Corporation., MNDM assessment file 52L07SE2007.
27. Selway, J.B. and Breaks, F.W. and Tindle A. G., 2005. A review of Rare-metal (Li-Cs-Ta) pegmatite exploration techniques from the Superior Province, Canada and large worldwide tantalum deposits: Canadian Institute Mining, Metallurgy and Petroleum, Exploration and Mining Geology, Volume 14, Nos. 1-4, pp. 1-30.
28. Selway, J.B., Cerny, P.C. and Hawthorne, F.C. 2000. The Tanco Pegmatite at Bernic Lake, Manitoba. XIV. Internal Tourmaline; Canadian Mineralogist, vol. 38, p.877-891.
29. Timmins, E.A., Turek, A., and Symons, D.T.A. 1985. U-Pb zircon geochronology and paleomagnetism of the Bird River greenstone belt, Manitoba; Geological Association of Canada-Mineralogical Association of Canada, 1985 Annual Meeting, Program with Abstracts, vol. 10, p. A-62.
30. Tindle, A.G. and Breaks, F.W. 1998. Oxide minerals of the Separation Rapids rare-element granitic pegmatite group, northwestern Ontario; The Canadian Mineralogist, v.36, p.609-635.
31. Tindle, A.G. and Breaks, F.W. 2000. Tantalum mineralogy of rare-element granitic pegmatites from the Separation Lake area, northwestern Ontario; Ontario Geological Survey, Open File Report 6022, 378p.
32. Tindle, A.G., Breaks, F.W. and Webb, P.C. 1998. Wodginite-group minerals from the Separation Rapids rare element granitic pegmatite group, northwestern Ontario; The Canadian Mineralogist, v.36, p.637-658.
33. Winter, S. 2012. Property Visit and Sampling Report on the Separation Rare Metal Property, Paterson Lake Area, for Mega Graphite Inc., MNDM assessment file 20000007813, 47p.

28.0 SIGNATURE PAGE

The effective date of this Technical Report titled, “Technical Report on the Big Mack Property, Kenora Mining District, Northwestern Ontario, Canada”, is dated: December 12, 2022.

Signed "Craig Ravnaas"

Craig Ravnaas, P.Geo.

Dated this 12st day of December, 2022

29.0 CERTIFICATE OF AUTHOR

I, Craig Ravnaas, P.Geo., as the Author of this report entitled, "Technical Report on the Big Mack Property, Kenora Mining District, Northwestern Ontario, Canada", dated December 12, 2022, do hereby certify that:

I. I am a Geological Consultant with a business address at 324 Seventh Ave South, Kenora, Ontario P9N 2E8.

II. This certificate applies to the technical report entitled "Technical report on the Big Mack Property, Kenora Mining District, Northwestern Ontario, Canada", with an effective date of December 12, 2022 (the "Technical Report").

III. I am a graduate of the Lake Superior University of Sault Ste Marie Michigan USA, with a Bachelor of Science in Geology in 1984. I am a member of the Association of Professional Geoscientists of Ontario and License 0747. My relevant experience includes 30 years of experience in mineral exploration and mining operation with 25 years in Northwestern Ontario Archean mineral deposits while working as District Geologist with Ontario Geological Survey, including rare-metal deposits.

IV. I have read the definition of "qualified person" as set out in National Instrument 43-101 *Standards of Disclosure for Mineral Properties* (the Instrument) and certify that by reason of my education, affiliation with a professional association (as defined in the Instrument), and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of the Instrument.

V. My most recent personal inspections of the Big Mack Property was on August 06 and than on October 23, 2022.

VI. I am responsible all items of the Technical Report.

VII. I am independent of Pan American Resources Corporation and Magabra Resources Corporation as defined by Section 1.5 of the Instrument.

VIII. I have had no prior involvement with the Big Mack Property that is the subject of the Technical Report, other than previous visits since 1996 while employed with the Ontario Geological Survey.

IX. I have read the Instrument and confirm that the Technical Report has been prepared in compliance with the Instrument and Form 43-101F1.

X. As of the effective date of the Technical Report, 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 the Technical Report not misleading.

Signed this 12th day of December 2022 at Kenora, Ontario.

Signed "Craig Ravnaas"

Craig, Ravnaas, P.Geo.
Dated: December 12, 2022