Technical Report on the Eco Ridge Project, Elliot Lake Area, Ontario, Canada Report for NI 43-101

Radio Fuels Resources Corp.

SLR Project No: 233.03446.R0000

September 14, 2021

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1.0 SUMMARY

1.1 Executive Summary

SLR Consulting Ltd (SLR) was retained by Radio Fuels Resources Corp. (Radio Fuels) to prepare an independent Technical Report on the Eco Ridge Project (Eco Ridge or the Project), located in Ontario, Canada. The purpose of this Technical Report is to support the disclosure of an updated Mineral Resource estimate with an effective date of August 19, 2021. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101). SLR visited the property on July 18, 2021.

The Project is located approximately 11 km east of the City of Elliot Lake, Ontario, and is 100% owned by Radio Fuels, a private Canadian mining company involved in the acquisition, exploration, and development of uranium deposits. Claims and mining leases were transferred from Eco Ridge Development Corporation to 2579113 Ontario Limited on June 1, 2017. The name of 2579113 Ontario Limited was officially changed to Radio Fuels Resources Corp. on May 12, 2020.

Currently, the major asset associated with the Project is a stratabound zone of rare earth oxide (REO) and uranium oxide (U_3O_8) mineralization.

Rare earth elements (REE) are divided into two groups:

- The Light Rare Earth Elements (LREE) or cerics, comprising La, Ce, Pr, and Nd.
- The Heavy Rare Earth Elements (HREE) or yttrics, comprising Y, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, and Sm. Scandium, while not a rare earth, has been included with the HREE for the purposes of this Technical Report.

Light rare earth oxides (LREO) and heavy rare earth oxides (HREO) refer to oxides of light and heavy rare earth elements, respectively. In this document, Total Rare Earth Oxides (TREO) refers to LREO and HREO collectively.

The previous Mineral Resource estimate was prepared by Roscoe Postle Associates Inc. (RPA), now part of SLR, in 2013. SLR, as RPA, has been involved with the Project since 2007.

1.1.1 Conclusions

The Eco Ridge Mineral Resource estimate with an effective date of August 19, 2021, is summarized in Table 1-1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were used for Mineral Resource classification.

Table 1-1: Mineral Resource Estimate – August 19, 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Classification	Tonnes (000 t)	U_3O_8		Total REO		U_3O_8 Equivalent	
		(%)	(000 lbs)	(ppm)	(000 lbs)	(%)	(000 lbs)
Indicated	22,306	0.045	22,290	1,613	79,314	0.081	39,920
Inferred	36,955	0.046	37,728	1,560	127,101	0.082	67,208

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated within the Main Conglomerate Bed (MCB) at a cut-off value of C$72/t. Values were calculated based on prices and recoveries of uranium and rare earths, net of off-site rare earth separation costs.
3. Mineral Resources are estimated using an average long-term uranium price of US$55/lb U_3O_8, a rare earth "basket price" of US$35/kg (net of separation charges), and a C$:US$ exchange rate of 1.25:1.00.
4. U_3O_8 Equivalents are calculated by converting rare earths values (net of prices, recoveries, and separation charges) to uranium values.
5. A minimum mining thickness of 1.8 m was used.
6. TREO include light oxides La_2O_3, CeO_2, Pr_6O_{11}, and Nd_2O_3, and heavy oxides Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Y_2O_3, and Lu_2O_3. Sc_2O_3 is also included, as it occurs in low concentrations and carries high unit values like a HREO.

No additional drilling has been conducted at Eco Ridge since the previous NI 43-101 resource estimate.

The Mineral Resources at Eco Ridge have excellent potential for expansion, with low exploration risk. The mineralized reefs of the Elliot Lake mining camp are well known for their consistency and size. The deposit remains open down-dip.

The Qualified Person (QP) is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

1.1.2 Recommendations

SLR recommends that Radio Fuels proceed with additional exploration programs and search of historical information from other uranium and REE operations in the area. These programs would have the following objectives:

- Search for the dip continuation of the existing mineralization
- Infill drilling to increase confidence of the Mineral Resource estimate
- Additional metallurgical test work
- Engineering studies
- Mineral Resource estimate update

SLR has reviewed, and concurs with, the budget proposed by Radio Fuels for the exploration programs on the Eco Ridge property. These activities, consisting of core drilling, geophysical and geochemical surveys, and an updated Mineral Resource estimate, are detailed in Table 1-2.

Table 1-2: Recommended Program and Budget
Radio Fuels Resources Corp. – Eco Ridge Project

Item	Total (US$)
Exploration Core Drilling (3,000 m at $350/m)	1,050,000
Geochemical Surveys	100,000
Geophysical Surveys	400,000
Resource Estimate Update	100,000
Metallurgical Test Work	150,000
Engineering Studies	250,000
Subtotal	2,050,000
Contingency	250,000
Total	**2,300,000**

1.2 Technical Summary

1.2.1 Property Location and Accessibility

The Eco Ridge property is located in northern Ontario, approximately 11 km east of the City of Elliot Lake and 400 km northwest of Toronto. The Project is located in Gunterman, Deagle, Gaiashk, Joubin, and Proctor townships, District of Algoma. It is centred at approximately Universal Transverse Mercator (UTM) coordinates 384000E and 5138000N (NAD 83, Zone 17).

Highway 108 crosses the western portion of the Eco Ridge property. The turn-off for the access road to the Eco Ridge property from Highway 108 is located three kilometres south of Elliot Lake. The access road is a public road. The western boundary of the Eco Ridge property is located four kilometres from the turn-off. The access road extends across the Eco Ridge property and in this area is suitable for access by all-wheel drive vehicles only, during some of the year.

1.2.2 Land Tenure

In June 2017, project claims and mining leases were transferred to 2579113 Ontario Limited from Subco, a wholly owned subsidiary of Pele Mountain Resources Inc (Pele Mountain). Subco has agreed to sell, transfer, assign and convey all its interest in the Project to the purchaser for a consideration of $380,000. The name of 2579113 Ontario Limited was officially changed to Radio Fuels Resources Corp. on May 12, 2020.

The Eco Ridge property consists of 17 boundary-cell mining claims with a surface of 131.21 ha and 297 single cell mining claims with a surface of 6,612.99 ha, for a total of 6,744.20 ha. Ten boundary cell mining claims and 100 single cell mining claims are subject to three net smelter return (NSR) agreements. There are three mining leases covering 1,621.21 ha of the Project area in the Sault Ste. Marie Mining Division.

1.2.3 History

Uranium was discovered in the Elliot Lake District in 1948 and the subsequent prospecting resulted in the discovery of several zones of radioactive conglomerate. Production in the Elliott Lake District commenced in 1958 and by the end of 1996, when the last mine in the district was shut down due to the low demand and oversupply of uranium, a total of 138,500 tonnes of uranium metal had been produced at an average grade of approximately 0.09% U_3O_8 from the 12 mines at Elliot Lake.

Historically, mining and processing operations were carried out in the Elliot Lake area, however, there has been no past production from the Eco Ridge property. The mining in the area was all by underground methods, primarily room and pillar, with shaft access. The major portion of the ore mined was processed through conventional uranium processing plants, with some production from underground leaching. The Elliot Lake mineralization also contains REO. Yttrium oxide and heavy REO were recovered at the Denison mine in the past, as by-products of the uranium production.

Several companies have conducted exploration on the Eco Ridge property, with the majority of exploration conducted in the period from 1953 to 1955 immediately following the discovery of uranium in the Elliot Lake District. The Eco Ridge uranium mineralization was discovered by surface prospecting and mapping, followed by diamond drilling. This exploration outlined the Pardee Channel, which hosts the deposit, and the subsequent drilling traced the mineralization down dip to a depth of approximately 500 m over a strike length of approximately 5,000 m. Further exploration during the 1960s and early 1970s consisted of deeper drilling and demonstrated that the mineralization continued down dip and extended to a depth of approximately 1,200 m.

With the closure of the mines at Elliot Lake in the 1990s, the Eco Ridge claims, then held by Rio Algom Limited, were allowed to lapse. The near surface portion of the Eco Ridge deposit was staked by CanAlaska in October 2004 and January 2005. CanAlaska carried out a compilation of historic data on the Eco Ridge property but did not conduct any exploration surveys or drilling.

In 2005 and 2006, Pele Mountain acquired Eco Ridge by way of claim staking and acquisitions. In 2006 and 2007, the Pele Mountain carried out drilling to confirm historical data, followed by infill drill programs in 2007, 2008, 2009, and 2011. In 2007, Scott Wilson RPA, a predecessor company to RPA, was retained to prepare a Mineral Resource estimate and a Preliminary Assessment report based on panel drifting and longhole mining with underground bioleaching. In 2011, RPA updated the Mineral Resource estimate and completed a Preliminary Economic Assessment (PEA) based on processing by in-situ and surface heap leaching.

In June 2012, RPA prepared an updated Mineral Resource estimate based on drilling in 2011 and completed a PEA which contemplated the development of an underground mining operation and the recovery of REO and U_3O_8 by conventional milling and acid baking. In 2013, RPA carried out an internal update of the Project's Mineral Resources, which included further drilling by Pele Mountain in late 2012.

No additional work has been carried out on the Project since 2013.

1.2.4 Geology and Mineralization

The Elliot Lake area lies within the Precambrian Canadian Shield of Northern Ontario, Canada, at the boundary between the Southern and Superior Geological Provinces. Three major regional lithological components and two regional structural components locally influenced the initial deposition and subsequent deformation of the Elliot Lake mineral deposits:

- The Archean-age basement made up of metavolcanic and metasedimentary rocks, granite, and minor mafic intrusive rocks of the Superior province.
- Proterozoic-age Huronian metasedimentary rocks containing minor intercalated mafic volcanic rocks.
- Post-Huronian intrusive rocks including Nipissing diabase sills and post Nipissing diabase dykes and sills, small felsic intrusive bodies, and lamprophyre dykes.
- Regional folding and thrust faulting during the Penokean Orogeny.
- Faulting during the late Proterozoic.

The Elliot Lake uranium deposits are located within the Huronian sediments, in the thicker sections of the Matinenda Formation that are located over depressions in the underlying Archean basement. These thicker sections are termed channels and generally strike west-northwest. The Matinenda Formation consists of well-sorted arkosic quartzite with coarse-grained beds containing scattered quartz pebbles. The uraniferous quartz-pebble conglomerates are enclosed within the quartzite beds. The quartz-pebble conglomerate beds (historically called reefs) containing the uranium mineralization are located within the lower Matinenda Formation approximately 40 m to 50 m above the basement. The lower Matinenda, designated as the Ryan Member, is characterized by the presence of pebbles, an increase in the amount of pyrite, and a distinctive green colour as a result of sericite alteration. The higher grade rare earths and uranium mineralization is contained within three conglomerate beds in the Ryan Member: the Basal Conglomerate Bed (BCB), the MCB, which is equivalent to the Pardee Reef, and the Floater Reefs. Although little uranium is found outside of the conglomerate beds, rare earths mineralization has been found throughout the Ryan Member, including within the Hanging Wall Zone (HWZ).

The Elliot Lake deposits are interpreted to be modified paleoplacer (detrital) deposits and the source rocks are believed to be pegmatitic granite located to the north.

The primary uranium-bearing minerals are uraninite and brannerite. Other uranium minerals that have been reported are pitchblende, coffinite, and thucolite. All minerals deposited with the uranium have a specific gravity of 5.0 or greater and they are also resistant to weathering (hardness of 5.0 or greater), which results in their deposition as heavy minerals within the matrix of the quartz pebble conglomerate beds.

The major carrier of the REE is monazite, which contains over 90% of the REE in the MCB. The remainder of the REE (approximately 10%) is contained within the uranium minerals uraninite, pitchblende, coffinite, and brannerite.

1.2.5 Exploration Status

Radio Fuels has not conducted any exploration activity since the acquisition of the Project in June 2017.

The previous owner, Pele Mountain, conducted exploration using several different investigative techniques between 2007 and 2012.

Most recent exploration was carried out by Pele Mountain from 2006 to 2012, including exploration programs in 2007, 2008, 2009, 2011, and 2012 oriented mostly towards infill drilling. Some of the programs also included step-out drilling. Pele Mountain's exploration programs consisted primarily of diamond drilling, mineralogical analysis, and metallurgical testing. In 2010, Pele Mountain re-assayed pulps from the 2007-2009 drilling programs to obtain REE, yttrium and scandium data. In 2011 Pele Mountain conducted a sampling and assaying program on core from previous drill programs, aimed at intercepts above the MCB, to help delineate the HWZ.

1.2.6 Mineral Resources

The current Mineral Resource estimate listed in Table 1-1, includes Indicated Mineral Resources of 22.3 million tonnes (Mt) at 0.045% U_3O_8 and 1,613 ppm TREO and Inferred Mineral Resources of 36.9 Mt at 0.046% U_3O_8 and 1,560 ppm TREO.

An NSR cut-off value of $72/t for the MCB was applied. A minimum mining thickness of 1.8 m was used.

2.0 INTRODUCTION

SLR Consulting Ltd (SLR) was retained by Radio Fuels Resources Corp. (Radio Fuels) to prepare an independent Technical Report on the Eco Ridge Project (Eco Ridge or the Project), located in Ontario, Canada. The purpose of this Technical Report is to support the disclosure of an updated Mineral Resource estimate with an effective date of August 19, 2021. This Technical Report conforms to National Instrument 43-101 Standards of Disclosure for Mineral Projects (NI 43-101).

The Project is located approximately 11 km east of the City of Elliot Lake, Ontario, and is 100% owned by Radio Fuels, a private Canadian mining company involved in the acquisition, exploration, and development of uranium deposits. Claims and mining leases were transferred from Eco Ridge Development Corporation to 2579113 Ontario Limited on June 1, 2017. The name of 2579113 Ontario Limited was officially changed to Radio Fuels Resources Corp. on May 12, 2020.

Currently, the major asset associated with the Project is a stratabound zone of rare earth oxide (REO) and uranium oxide (U_3O_8) mineralization.

Rare earth elements (REE) are divided into two groups:

- The Light Rare Earth Elements (LREE) or cerics, comprising La, Ce, Pr, and Nd.
- The Heavy Rare Earth Elements (HREE) or yttrics, comprising Y, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, Lu, and Sm. Scandium, while not a rare earth, has been included with the HREE for the purposes of this Technical Report.

Light rare earth oxides (LREO) and heavy rare earth oxides (HREO) refer to oxides of light and heavy rare earth elements, respectively. In this document, Total Rare Earth Oxides (TREO) refers to LREO and HREO collectively.

The previous Mineral Resource estimate was prepared by Roscoe Postle Associates Inc. (RPA), now part of SLR, in 2013. SLR, as RPA, has been involved with the Project since 2007.

2.1 Sources of Information

A site visit was carried out on July 18, 2021, by Tudorel Ciuculescu, M.Sc., P.Geo., SLR Consultant Geologist. Mr. Ciuculescu visited the Eco Ridge property on a previous occasion, on November 22, 2010, while activity on the Project was conducted by the previous owner.

Mr. Ciuculescu is an independent Qualified Person (QP) as defined under NI 43-101 responsible for overall preparation of this Technical Report.

The documentation reviewed, and other sources of information, are listed at the end of this Technical Report in Section 27, References.

2.2 List of Abbreviations

Units of measurement used in this Technical Report conform to the metric system. All currency in this Technical Report is US dollars (US$) unless otherwise noted.

μ	micron	kVA	kilovolt-amperes
μg	microgram	kW	kilowatt
a	annum	kWh	kilowatt-hour
A	ampere	L	litre
bbl	barrels	lb	pound
Btu	British thermal units	L/s	litres per second
°C	degree Celsius	m	metre
C$	Canadian dollars	M	mega (million); molar
cal	calorie	m^2	square metre
cfm	cubic feet per minute	m^3	cubic metre
cm	centimetre	MASL	metres above sea level
cm^2	square centimetre	m^3/h	cubic metres per hour
d	day	mi	mile
dia	diameter	min	minute
dmt	dry metric tonne	μm	micrometre
dwt	dead-weight ton	mm	millimetre
°F	degree Fahrenheit	mph	miles per hour
ft	foot	MVA	megavolt-amperes
ft^2	square foot	MW	megawatt
ft^3	cubic foot	MWh	megawatt-hour
ft/s	foot per second	oz	Troy ounce (31.1035g)
g	gram	oz/st, opt	ounce per short ton
G	giga (billion)	ppb	part per billion
Gal	Imperial gallon	ppm	part per million
g/L	gram per litre	psia	pound per square inch absolute
Gpm	Imperial gallons per minute	psig	pound per square inch gauge
g/t	gram per tonne	RL	relative elevation
gr/ft^3	grain per cubic foot	s	second
gr/m^3	grain per cubic metre	st	short ton
ha	hectare	stpa	short ton per year
hp	horsepower	stpd	short ton per day
hr	hour	t	metric tonne
Hz	hertz	tpa	metric tonne per year
in.	inch	tpd	metric tonne per day
in^2	square inch	US$	United States dollar
J	joule	Usg	United States gallon
k	kilo (thousand)	Usgpm	US gallon per minute
kcal	kilocalorie	V	volt
kg	kilogram	W	watt
km	kilometre	wmt	wet metric tonne
km^2	square kilometre	wt%	weight percent
km/h	kilometre per hour	yd^3	cubic yard
kPa	kilopascal	yr	year

3.0 RELIANCE ON OTHER EXPERTS

This Technical Report has been prepared by SLR for Radio Fuels. The information, conclusions, opinions, and estimates contained herein are based on:

- Information available to SLR at the time of preparation of this Technical Report.
- Assumptions, conditions, and qualifications as set forth in this Technical Report.

For the purpose of this Technical Report, SLR has relied on ownership information provided by Radio Fuels. The client has relied on an opinion by Irwin Lowy LLP dated August 26, 2021, entitled "Pele Mountain Project Report – Operational Tenures and Claims with Corresponding NSR Information", and this opinion is relied on in Section 4 and the Summary of this Technical Report. SLR has not researched property title or mineral rights for the Project and expresses no opinion as to the ownership status of the property.

SLR has relied on Radio Fuels for guidance on applicable taxes, royalties, and other government levies or interests, applicable to revenue or income from Eco Ridge.

Except for the purposes legislated under provincial securities laws, any use of this Technical Report by any third party is at that party's sole risk.

4.0 PROPERTY DESCRIPTION AND LOCATION

The Eco Ridge property is located in northern Ontario, approximately 11 km east of the City of Elliot Lake and 400 km northwest of Toronto (Figure 4-1). The Project is located in Gunterman, Deagle, Gaiashk, Joubin, and Proctor townships, District of Algoma, within 1:50,000 scale NTS map sheet 41J07 (Elliot Lake) and map sheet 41J/08 (Whiskey Lake). The Project consists of one irregularly shaped block located within a rectangular area extending for 13 km in an east-west direction and 6.5 km in a north-south direction. It is centred at approximately Universal Transverse Mercator (UTM) coordinates 384000E and 5138000N (NAD 83, Zone 17).

4.1 Land Tenure

As of the effective date of this Technical Report, all the subject lands were in good standing and were currently 100% held under the name of Radio Fuels Resources Corp. The Eco Ridge property consists of 17 boundary cell mining claims with a surface of 131.21 ha and 297 single cell mining claims with a surface of 6,612.99 ha, for a total of 6,744.20 ha (Figure 4-2). Ten boundary cell mining claims and 100 single cell mining claims are subject to three net smelter return (NSR) agreements. There are three mining leases covering 1,621.21 ha of the Project area in the Sault Ste. Marie Mining Division, as described in Table 4-1. Lease LEA-109585 covers the LEA-108596 and includes additional small areas.

Table 4-1: Mining Leases
Radio Fuels Resources Corp. – Eco Ridge Project

Item	Tenure		
Tenure Number	LEA-108596	LEA-108589	LEA-109585
Registered Plan	1R-11977	1R-11978	N/A
Mining Land File Number	N/A	N/A	151294 et al
Former Lease Number	N/A	N/A	106875
Claim Type	Lease	Lease	Lease
Legal Rights	Mining and Surface Rights	Mining and Surface Rights	Mining Rights only
Term of Lease	21 Years	21 Years	21 Years
Anniversary Date	4/30/2032	4/30/2032	9/30/2035
Holder Name	2579113 Ontario Limited – 100%	2579113 Ontario Limited – 100%	2579113 Ontario Limited – 100%
Area (Hectares)	1,365.44	185.10	1,436.11
Area of Precambrian Ventures NSR 1.75% (ha)	214.56	-	214.56
Area of CanAlaska Ventures NSR 1.75% (ha)	643.51	185.10	643.51
Area of Ternowesky, Halverson, Kakeeway, Cox NSR 3% (ha)	510.28	-	510.28

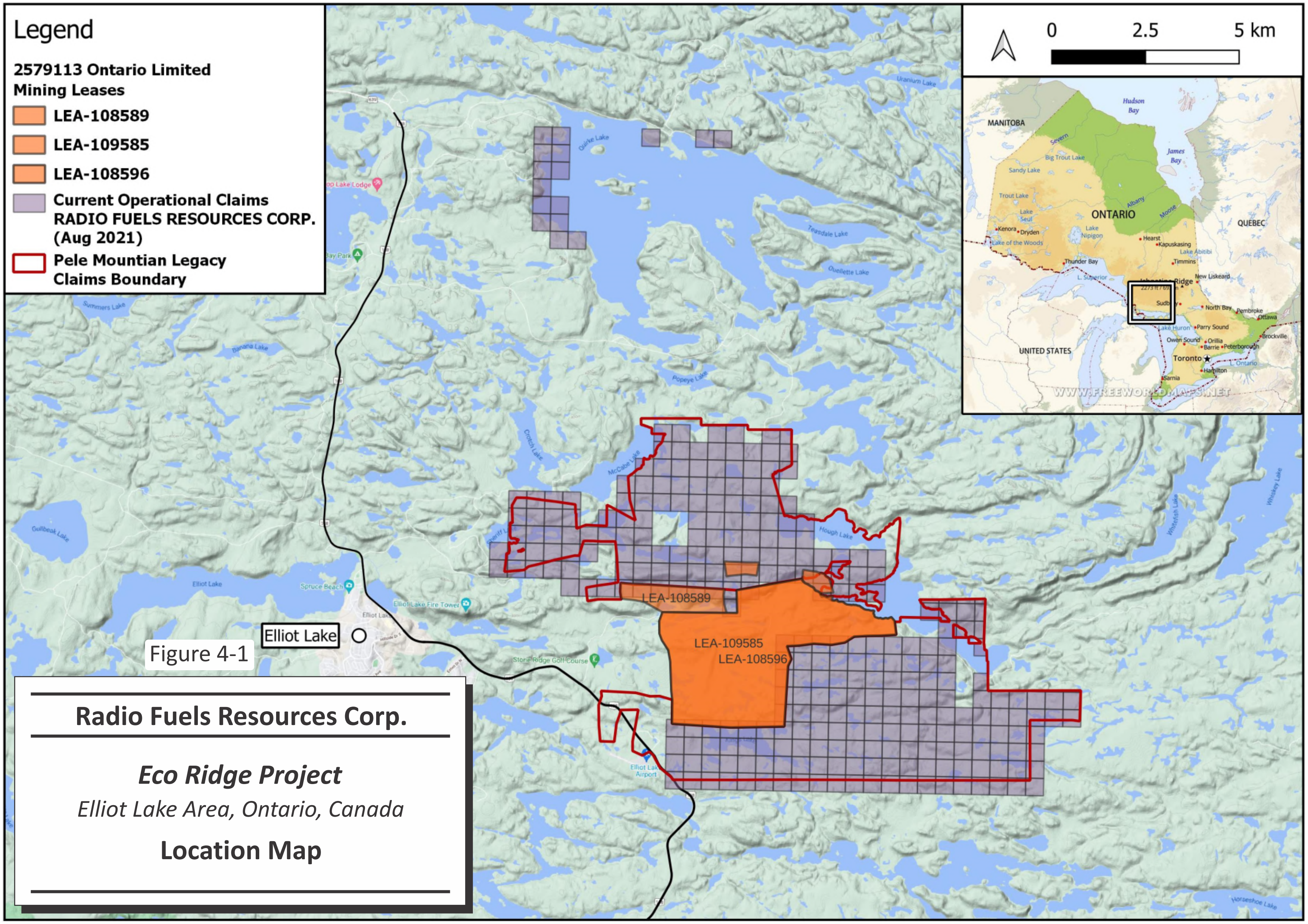


Figure 4-1

Radio Fuels Resources Corp.

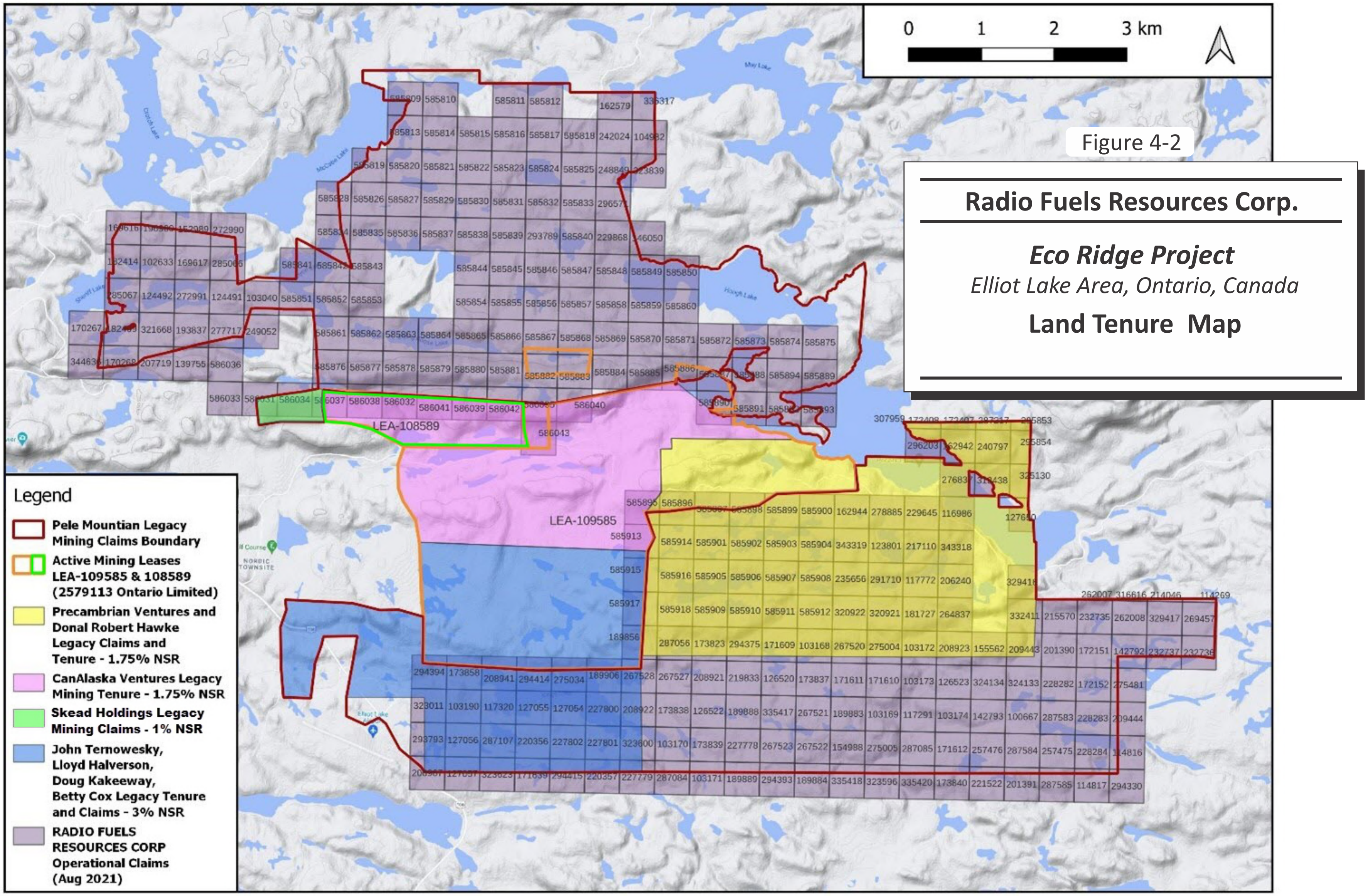
Eco Ridge Project

Elliot Lake Area, Ontario, Canada

Location Map

September 2021

***Source:** MNDM, 2011.*



September 2021

Source: *MNDM, 2011.*

In June 2017, Project claims and mining leases were transferred to 2579113 Ontario Limited from Subco, a wholly owned subsidiary of Pele Mountain Resources Inc. (Pele Mountain). Subco agreed to sell, transfer, assign, and convey all its interest in the Project to the purchaser for a consideration of $380,000. The name of 2579113 Ontario Limited was officially changed to Radio Fuels Resources Corp. on May 12, 2020.

In February 2005, Pele Mountain staked two non-contiguous claim blocks in Joubin and Gunterman Townships, Elliot Lake District. Subsequently, the Project area was expanded by claim acquisitions. On October 16, 2006, Pele Mountain entered into an agreement with CanAlaska Uranium Ltd. (CanAlaska) to purchase five unpatented claims (1192671, 3009465, 3009474, 3009475, and 3009485) totalling 60 claim units in Joubin Township. Claim 3009475 was re-staked as claim 4218565. CanAlaska retained a 1.75% NSR royalty, with the right to buy-back up to 1% of the royalty for $1 million. On December 18, 2006, Pele Mountain entered into an agreement with Precambrian Ventures Ltd. (Precambrian) to acquire a 100% interest in eight claims (1211241, 1249895, 1249896, 1249897, 1249898, 1249899, 3009471, and 3009472). Precambrian retained a 1.75% NSR royalty, with a right to buy-back 1% for $1 million. Claim 3009471 was re-staked as 4218566.

In January and February 2007, Pele Mountain staked another six claims (4214876, 4214877, 4214880, 4214882, 4214883, and 4214884). Five of these six claims were subsequently re-staked as claims 4220225, 4220224, 4220222, 4220226, and 4220221; claim 4214880 was not re-staked. On May 2, 2007, Pele Mountain entered into an agreement to acquire five additional claims (4215304, 4215305, 4215306, 4215307, and 4215007) in Joubin and Proctor townships. These claims were subject to a 3% NSR royalty with provision to buy-back 1.5% for $1.5 million. Claim 4215007 was re-staked as claim 4205078.

Additional staking was carried out in May 2007 and June 2010. Three claim units that tie on to the western boundary of the Eco Ridge property were purchased in May 2011, with the vendor retaining a 1% NSR royalty.

In 2009, Pele Mountain signed a 21 year lease agreement (the Lease) with the City of Elliot Lake (the City) in respect of surface rights to key mining claims. The Lease includes the City's surface rights to a total of 48 surface patents, comprising approximately 796 ha, and includes an option for Pele Mountain to purchase the surface rights under certain circumstances. The annual lease payment was $2,388.

In 2011, two mining leases (the Mining Leases) were granted to Pele Mountain from the Province of Ontario for the Project. The Mining Leases provide Pele Mountain with the exclusive right to mine the Eco Ridge deposit and include surface rights that allow for siting of Project infrastructure and processing facilities. The Mining Leases are valid for a period of 21 years (commencing March 1, 2011) and are renewable. The Mining Leases cover an area of 1,550 ha, and the annual lease payments total $4,652.

4.2 Licences of Occupation

There are Licences of Occupation within the claim block, which are held by Rio Algom Limited (Rio Algom). The locations of these Licences of Occupation are shown in Figure 4-2. These Licences of Occupation comprise less than 2% of the overall area of the claim block and are not considered necessary to conduct future mining and processing operations on the Eco Ridge property.

4.3 Royalties and Other Encumbrances

Apart from the royalties related to the agreements documented above, the QP is not aware of any other royalties, back-in rights, or other obligations related to the agreements or underlying agreements.

4.4 Permits

The Project is currently at the resource definition and Preliminary Economic Assessment stage and, based on discussions with the Canadian Nuclear Safety Commission (CNSC) and the Ontario Ministry of Northern Development and Mines (MNDM), no permits are required from either the provincial or federal governments to conduct preliminary exploration and evaluation on a mineral project. There is a requirement to notify the Ontario Ministry of Labour that exploration drilling or surveys are being conducted on the Eco Ridge property. Preliminary exploration may include geological mapping, ground geophysical and geochemical surveys, airborne geophysical or geochemical surveys, limited stripping and trenching, limited bulk sampling, and various forms of drilling from surface.

Permits will be required when the Project proceeds to the advanced exploration stage. Advanced exploration means the excavation of an exploratory shaft, adit or decline, the extraction of material in excess of the prescribed quantity (1,000 t) where the extraction involves the disturbance or movement of prescribed material located above or below the surface of the ground, the installation of a mill for test purposes or any other prescribed work (includes the excavation of backfilled raises, shafts, or adits).

4.5 Environmental Liabilities

There are no known environmental liabilities associated with the Eco Ridge property.

There has been no previous production at the Eco Ridge property. Exploration was conducted on the Eco Ridge property from 1953 through to 1974, with the majority of the holes drilled in 1953 and 1954. During this period, 109 diamond drill holes were drilled on the Eco Ridge property. None of these holes were grouted and the casings for some of the holes are still in place. Many of the casings have been destroyed as a result of logging operations conducted in the area. An exploration adit was excavated in 1954 to recover samples for metallurgical investigations. The adit was backfilled in 1994 by Rio Algom as part of the decommissioning programs carried out when the mines were closed in the Elliot Lake area.

5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

5.1 Accessibility

The Eco Ridge property is located 11 km east of the City of Elliot Lake, Ontario, which is situated 26 km north of Highway 17 (TransCanada Highway) on Highway 108. Highway 108 crosses the western portion of the Eco Ridge property. The turn-off for the access road to the Eco Ridge property from Highway 108 is located three kilometres south of Elliot Lake. The access road is a public road. The western boundary of the Eco Ridge property is located four kilometres from the turn-off. The access road extends across the Eco Ridge property and during some of the year this area accessible by all-wheel drive vehicles only. The access road to the Eco Ridge property is shown in Figure 4-2. The major assets and facilities located on the Eco Ridge property are the rare earths and uranium oxides Mineral Resources, and a 236 kV power line extending across the Eco Ridge property. The location of the exploration adit is also shown in Figure 4-2. The adit has been backfilled.

Elliot Lake is located 160 km west of Sudbury and 180 km east of Sault Ste. Marie and these communities are connected by highway. The Sault Ste. Marie, Ontario – Sault Ste Marie, Michigan border crossing is located 200 miles west of Elliot Lake. There is a railway line 26 km south at the intersection of Highways 108 and 17 (TransCanada Highway). There are two deep water ports near the same highway intersection on the North Channel of Lake Huron. One port is currently used by Lafarge at the town of Blind River and the other, located at Sprague, is now used by a yacht club. Elliot Lake airport has a runway 30 m wide and 1,372 m long. The airport is maintained year round and is certified by Transport Canada for airline service. Air Bravo Corporation operates an air ambulance service and provides charter service.

5.2 Climate

The climate in the Elliot Lake region is suitable for conducting exploration, development, and operation of a mine throughout the year. The average winter temperature (December to February) is -9ºC and the average summer temperature (June to August) is +16ºC. The minimum and maximum temperatures for each month are shown in Table 5-1. The average annual winter snowfall is 236 mm and the average annual rainfall is 636 mm for a total annual precipitation of 872 mm (a factor of 0.1 is used to convert snowfall to precipitation). Historically, the maximum rainfall for Elliot Lake has been estimated to be 420 mm of rain within 12 hours.

Table 5-1: Average Minimum and Maximum Temperatures in the Elliot Lake District
Radio Fuels Resources Corp. – Eco Ridge Project

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Min (°C)	-17.7	-17.6	-11.1	-2.6	4.0	9.5	12.2	11.4	7.7	2.9	-3.9	-12.3	-0.8
Max (°C)	-6.4	-5.2	0.8	8.2	15.9	21.5	23.6	22.3	17.7	11.9	3.0	-3.7	9.8

The wind direction is predominantly from the north from December through to April and from the southwest and south the remainder of the year.

5.3 Local Resources

Based on the 2016 census, the City of Elliot Lake has a population of 10,741 people. The median age of the population is 58.8 years, with approximately 89% of the population over 15 years of age. Based on October to December 2005 statistics, the labour force is 3,495, or approximately 33%, of the total population over 15 years of age. This low participation rate reflects the large number of retirees in the city. The unemployment rate at the same period was 11.3%.

There are two fully serviced industrial park areas within the community and existing buildings are available for lease or purchase.

Elliot Lake has a full complement of educational, professional, medical, and social services. A new multidisciplinary community medical centre in downtown Elliot Lake opened in 2007. Tenants of the state-of-the-art facility include 12 family doctors, other health care professionals such as nurse practitioners and dieticians, and a drug store.

5.4 Infrastructure

Natural gas has been available in Elliot Lake since the mid-1980s and is provided by Union Gas Limited, a major natural gas company in Canada. Natural gas was used at the Rio Algom and Denison mines for facility and mine air heating and for product drying. Natural gas was provided to the Stanleigh Mine, which is located directly northwest of the Project, and to the adjacent Nordic Mine property for the operation of the yellow cake drying and packing plant.

The main east to west high voltage three-phase transmission lines between Ontario Power Generation's station in Mississagi and Sudbury cross the eastern edge of the Eco Ridge property. These lines are rated at 230 kV. There is a load centre at Elliot Lake with a generation capacity of 23 MW. The capacity can be increased. The Elliot Lake hydro system has the capacity to supply electricity to 25,000 people plus six operating mines. The entire hydro infrastructure is still in place, although it is not all in current use.

Sulphuric acid is available from Sudbury where it is manufactured as a by-product from the nickel mining operations sulphur dioxide emission reduction program. The acid is produced by Vale and Xstrata but marketed through chemical supply companies. Lime is available from the Lafarge Cement Plant in Sprague.

Cameco Corporation operates a uranium conversion facility at Blind River, located 50 km from the Eco Ridge property on Highway 17.

5.5 Physiography

The Eco Ridge property is underlain by moderately rugged topography, with elevations ranging from 320 m to 430 m. Steep cliffs form the south slopes, while the north slopes are gentler and tend to follow the dip of the stratigraphy. The ridges trend east-northeast along the strike of the rocks. The contact between the Huronian sediments and the underlying Archean rocks forms a south-facing hill. To the south of this hill, where any future infrastructure would be sited, the topography is relatively flat. Lakes and streams tend to develop along the strike of the strata and along the north-northwest trending faults that crosscut the strata.

5.5.1 Drainage Basins

The Eco Ridge property is located within the Serpent River drainage basin. The Serpent River Watershed is comprised of more than 70 lakes and nine sub-watersheds, which cover an area of 1,376 km^2, and drain into Lake Huron. The Eco Ridge property is located within two of the major sub-basins: the Elliot Lake sub-basin on the western portion of the Eco Ridge property and the Pecors Lake sub-basin on the eastern portion of the Eco Ridge property. Drainage on the western part of the Project claims is west into Pardee and Stinson Lakes and south into Kings Lake, while the eastern portion of the claims drains into Pecors Lake.

5.5.2 Flora and Fauna

The valleys are covered with hemlock and cedar trees and the ridges are wooded with maple, oak, birch, and poplar trees. Many different species of birds and mammals can be seen in the forests and surrounding areas of the Project claims. These include finches to bald eagles and beaver to moose. At this time no rare, threatened, or endangered species or habitat are known to be present in the project area. A 1993 survey found 22 different species of fish in the lakes of the Serpent River Watershed. Benthic invertebrates include snails, insect larvae, and clams.

Site characterization and environmental baseline surveys on the Eco Ridge property were conducted in 2007 and 2008.

6.0 HISTORY

Uranium was discovered in the Elliot Lake District in 1948 and the subsequent prospecting resulted in the discovery of several zones of radioactive conglomerate. Production in the Elliott Lake District commenced in 1958 and by the end of 1996, when the last mine in the district was shut down due to the low demand and oversupply of uranium, a total of 138,500 tonnes of uranium metal had been produced at an average grade of approximately 0.09% U_3O_8 from the 12 mines at Elliot Lake.

6.1 Exploration

Several companies have conducted exploration on the Eco Ridge property, with the majority of exploration conducted in the period from 1953 to 1955 immediately following the discovery of uranium in the Elliot Lake District. The Eco Ridge uranium mineralization was discovered by surface prospecting and mapping, followed by diamond drilling. This exploration outlined the Pardee Channel, which hosts the deposit, and the subsequent drilling traced the mineralization down dip to a depth of approximately 500 m over a strike length of approximately 5,000 m. Further exploration during the 1960s and early 1970s consisted of deeper drilling and demonstrated that the mineralization continued down dip and extended to a depth of approximately 1,200 m. The previous exploration on the Eco Ridge property is summarized below.

Aquarius Porcupine Gold Mines Limited (Aquarius) staked the Pardee property in 1953. The Pardee property forms the central portion of the claim blocks of the current Eco Ridge property. McIntyre Porcupine Gold Mines Limited (McIntyre) optioned the claims from Aquarius later in 1953 and carried out line cutting and geological mapping. In 1954, McIntyre drilled 28 AQ diamond drill holes totalling 2,498 m (S-1 to S-28). The drill holes were drilled over a strike length of approximately 3,000 m.

Pardee Amalgamated Mines Limited (Pardee) was formed in 1954 to consolidate the Aquarius property with other properties in the area. Pardee carried out extensive mapping, trenching, diamond drilling, and drove an inclined adit along the conglomerate bed for a distance of approximately 31 m to obtain a bulk sample for metallurgical tests. Pardee drilled an additional 30 AXT diamond drill holes totalling 6,567 m (Series PA-1 to PA-29) and CPA-24 was a joint hole with New Jersey Zinc Exploration Company Canada Ltd. (New Jersey Zinc) on the boundary with the Calder-Bousquet property, located immediately to the west of the Pardee claims. The drilling results from the S-series and PA-series holes outlined a large zone of uranium mineralization within the MCB. The drill hole logs and the analytical results from the core samples for the S-series and PA-series holes are on file at the MNDM offices in Sault Ste. Marie.

The eastern portion of the Eco Ridge property was staked in 1953 by Preston East Dome Mines, a company controlled by the Algom group of companies. Prospecting and geological mapping were conducted on these claims in 1953 by Algom. Algom drilled a total of 1,486 m in 15 holes (PW-101 to PW-115) in the eastern portion of the Eco Ridge property immediately to the west of Pecors Lake in 1953 and 1954. The drilling intersected the MCB and mineralization was reported. Although some cross sections showing the plots of the drill holes were found in the MNDM office, the drill hole logs with the sample intervals and analytical results are not available.

New Jersey Zinc conducted exploration drilling on the Calder-Bousquet property located directly west of the Pardee claim block. In 1954 and 1955, New Jersey Zinc conducted 7,201 m of AXT diamond drilling in 23 holes (CB-1 to CB-23). The holes were tested with a scintillometer and samples taken. The historic analytical results for these holes and many of the drill logs were located at the MNDMF offices. The CB-series drill holes also intersected the MCB.

The northwest portion of the Radio Fuels property was originally staked by St. Mary's Uranium Mines Limited (St. Mary's). Two diamond drill holes were drilled, one a joint hole with New Jersey Zinc on the boundary with the adjoining Calder-Bousquet property. The St. Mary's claims came open for staking and were re-staked by Rio Algom in 1964. Rio Algom staked the claims in 1965 covering the original Calder-Bousquet claim block. Rio Algom also acquired the Pardee property. Rio Algom drilled two assessment holes, CB-30 and CB-31, on the former Calder-Bousquet claim block. The holes were wedged to provide a second intersection through the MCB.

Sprague (1965) conducted a resource estimate for Rio Algom based on the surface diamond drilling. The "ore reserve estimate" was based on surface diamond drilling programs [undertaken] in 1954 and 1955 by McIntyre, Pardee, St. Mary's, and New Jersey Zinc on the Calder-Bousquet Property, and two assessment holes drilled by Rio Algom in late 1965 and early 1966. Sprague's "ore reserve estimate" was based on a total of 99 holes using a minimum thickness of 1.5 m (5.0 ft.). This estimate is a historic estimate and does not conform to the current Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) required under NI 43-101.

Rio Algom drilled three additional holes, CB 32, 33, and 34, on the former St. Mary's property in 1967. Rio Algom drilled another two holes on the Eco Ridge property (CB-35 and CB-36) in 1969 and 1974, respectively. In 1977, Rio Algom re-estimated the "ore reserves" initially compiled and estimated by Sprague and reported these estimates as "ore estimates". The revised estimates included Calder-Bousquet Block, the Pardee Block and the additional drilling conducted by Rio Algom from 1967 to 1974. The estimates also include the Pecors Block and the estimate for this block is based on the drilling conducted by Rio Algom in 1954 (PW-1 to PW-116).

The northern part of the Project was formerly held by Stancan Uranium Corporation (Stancan), Consolidated Callinan Flin-Flon Mines Ltd. (Consolidated Callinan), and Magoma Mines Ltd. (Magoma). Stancan drilled two deep holes (Z-5-1 and Z-5-2) which intersected a uranium-bearing conglomerate bed. Based on the descriptions in the drill hole logs and the position of the conglomerate bed in the stratigraphic sequence, the bed is correlated with the MCB intersected in the up-dip drilling. However, no assays are available in the public files for the intersections.

Consolidated Callinan and Magoma reportedly drilled one deep hole each, but no data for these holes are available. The claims were allowed to lapse and were re-staked by Kerr-McGee Corporation (Kerr-McGee) in the late 1960s. Kerr-McGee drilled three deep drill holes in 1967, with one hole drilled on the Eco Ridge property. The drill hole logs are available for these holes.

With the closure of the mines at Elliot Lake in the 1990s, the claims held by Rio Algom were allowed to lapse. The near-surface portion of the Eco Ridge deposit was staked by CanAlaska in October 2004 and January 2005. CanAlaska carried out a compilation of historic data on the Eco Ridge property but did not conduct any exploration surveys or drilling.

In 2005 and 2006, Pele Mountain acquired the Project by way of claim staking and acquisitions. In 2006 and 2007, the Pele Mountain carried out drilling to confirm historical data, followed by infill drill programs in 2007, 2008, 2009, and 2011. In 2007, Scott Wilson RPA, a predecessor company to RPA, was retained to prepare a Mineral Resource estimate and a Preliminary Assessment report based on panel drifting and longhole mining with underground bioleaching. In 2011, RPA updated the Mineral Resource estimate and completed a Preliminary Economic Assessment (PEA) based on processing by in-situ and surface heap leaching.

In June 2012, RPA prepared an updated Mineral Resource estimate based on drilling in 2011 and completed a PEA which contemplated the development of an underground mining operation and the recovery of REO and U_3O_8 by conventional milling and acid baking. In 2013, RPA carried out an internal update of the Project's Mineral Resources, which included further drilling by Pele Mountain in late 2012.

No additional work has been carried out on the Project since 2013.

6.2 Historical Mineral Resource Estimates

A resource estimate for two zones in the area of the current Project was prepared by McIntyre in 1955, followed by an estimate by Spraque in 1965 and Rio Algom in 1977 (Scott Wilson RPA, 2007a). The 1977 Rio Algom estimate indicated 30.5 million tonnes (Mt) of mineralization averaging 0.047% U_3O_8 in the MCB. The above estimates are historical in nature and should not be relied upon, however, they do give an indication of mineralization on the Eco Ridge property. The key assumptions and categories of mineral resources are unknown. The QP has not done sufficient work to classify these historical estimates as current mineral resources or mineral reserves and Radio Fuels is not treating the historical estimates as current mineral resources or mineral reserves

Mineral Resources estimates prepared by RPA for Pele Mountain are summarized in Table 6-1. These historic estimates are relevant and reliable. CIM Definition Standards (2000) were used to estimate mineral resources. Radio Fuels is not treating these historical estimates as current mineral resources and mineral reserves. These historical estimates have been superseded by the current Mineral Resource estimate discussed in Section 14 of this Technical Report.

Table 6-1: Historical Mineral Resource Estimates
Radio Fuels Resources Corp. - Eco Ridge Project

Reference	Category	Tonnage (Mt)	Grade		Contained Metal	
			% U_3O_8	%TREO	(Mlb U_3O_8)	(Mlb TREO)
Scott Wilson RPA, 2007a[1]	Inferred	30	0.50	-	33	-
Scott Wilson RPA, 2007b	Indicated	5.7	0.051	-	6.4	-
	Inferred	37.3	0.044	-	36.1	-
RPA, 2011b	Indicated	14.3	0.048	0.164	15.2	51.9
	Inferred	33.1	0.043	0.132	31.4	6.4
RPA, 2012	Indicated	48.8	0.026	0.116	27.7	124.3
	Inferred	37.99	0.026	0.110	21.8	91.8
RPA, 2013[2]	Indicated	22.7	0.045	0.160	22.6	80.5
	Inferred	36.6	0.047	0.155	37.6	125.2

Notes:

1. Based on historical drilling.
2. Internal estimate

6.3 Past Production

Historically, mining and processing operations were carried out in the Elliot Lake area, however, there has been no past production from the Eco Ridge property. The mining in the area was all by underground methods, primarily room and pillar, with shaft access. The major portion of the ore mined was processed through conventional uranium processing plants, with some production from underground leaching. The Elliot Lake mineralization also contains REO. Yttrium oxide and heavy REO were recovered at the Denison mine in the past, as by-products of the uranium production.

7.0 GEOLOGICAL SETTING AND MINERALIZATION

7.1 Regional Geology

The Elliot Lake area lies within the Precambrian Canadian Shield of Northern Ontario, Canada, at the boundary between the Southern and Superior Geological Provinces.

Three major regional lithological components and two regional structural components locally influence the initial deposition and subsequent deformation of the Elliot Lake mineral deposits:

- The Archean-age basement made up of metavolcanic and metasedimentary rocks, granite, and minor mafic intrusive rocks of the Superior province.
- Proterozoic-age Huronian metasedimentary rocks containing minor intercalated mafic volcanic rocks.
- Post-Huronian intrusive rocks including Nipissing diabase sills and post Nipissing diabase dykes and sills, small felsic intrusive bodies, and lamprophyre dykes.
- Regional folding and thrust faulting during the Penokean Orogeny.
- Faulting during the late Proterozoic.

The major geological provinces and the crosscutting structures within the region are shown in Figure 7-1 and a table listing the formations is shown in Table 7-1.

Table 7-1: Table of Formations in the Region
Radio Fuels Resources Corp. - Eco Ridge Project

Period	Province or Complex	Dominant Lithology	Age – Ma
Paleozoic	Ordovician	Limestone	448 - 443
Mid-Proterozoic	Grenville	Variable, highly metamorphosed	1,200 - 1,000
Mid- Proterozoic	Keweenawan	Mafic Volcanics	1,225
Early Proterozoic	Nipissing Diabase	Gabbro and Diabase Intrusions	2,115
Early Proterozoic	Huronian Supergroup	Clastic Sediments	2,450 - 2,115
Archean	Superior	Granite and Metavolcanics	>2,500

The Huronian metasedimentary and basal volcanic rocks lie unconformably above the Archean basement. They are part of the Huronian Supergroup, portions of which extend across the region from Sault Ste. Marie in the west to the Cobalt Area near the Quebec border in the east. The Huronian sedimentary rocks are interpreted to have been deposited during a period of marine transgression from south to north, commencing with quartzite, conglomerates, and argillite with local intercalated mafic volcanics followed by more mature clastic sediments and marine evaporates. The source of the sediments is the Archean rocks of the Superior province to the north. The unconformity with the basement rocks is sharp in some places and at others is represented by several metres of regolith.

The Huronian Supergroup has been divided into four groups, each containing several formations (Table 7-2).

Table 7-2: Stratigraphy of the Huronian Supergroup (Sault Ste Marie – Sudbury – Cobalt Region)
Radio Fuels Resources Corp. - Eco Ridge Project

Formation	Description
COBALT GROUP	
Bar River Formation	Orthoquartzite, siltstone
Gordon River Formation	Siltstone
Lorrain Formation	Arkose, orthoquartzite
Gowganda Formation	Polymictic conglomerate, quartzite, siltstone, argillite
QUIRKE LAKE GROUP	
Serpent Formation	Orthoquartzite
Espanola Formation	Greywacke, limestone
Bruce Formation	Limestone, siltstone
HOUGH LAKE GROUP	
Mississagi Formation	Orthoquartzite
Pecors Formation	Greywacke, argillite, quartzite
Ramsay Lake Formation	Polymictic conglomerate
ELLIOT LAKE GROUP	
McKim Formation	Greywacke, argillite, quartzite Stinson Member: Polymictic conglomerate
Matinenda Formation	Ryan Member, Manfred Members: Arkosic quartzite
Livingstone Creek Formation	Mafic Volcanics with intercalated feldspathic quartzite and conglomerates

7.1.1 Post Huronian Igneous Intrusions

The primary intrusive event affecting the region and the Elliot Lake District was the intrusion of the Nipissing diabase sills and dykes. These intrusions are dated at 2,120 Ma (Van Schums, 1976). The sills and dykes have been folded during the Penokean Orogeny and have been metamorphosed to greenschist facies. The Nipissing diabase is primarily found as intrusions in the Huronian sediments, but the intrusions are also found in the underlying Archean rocks.

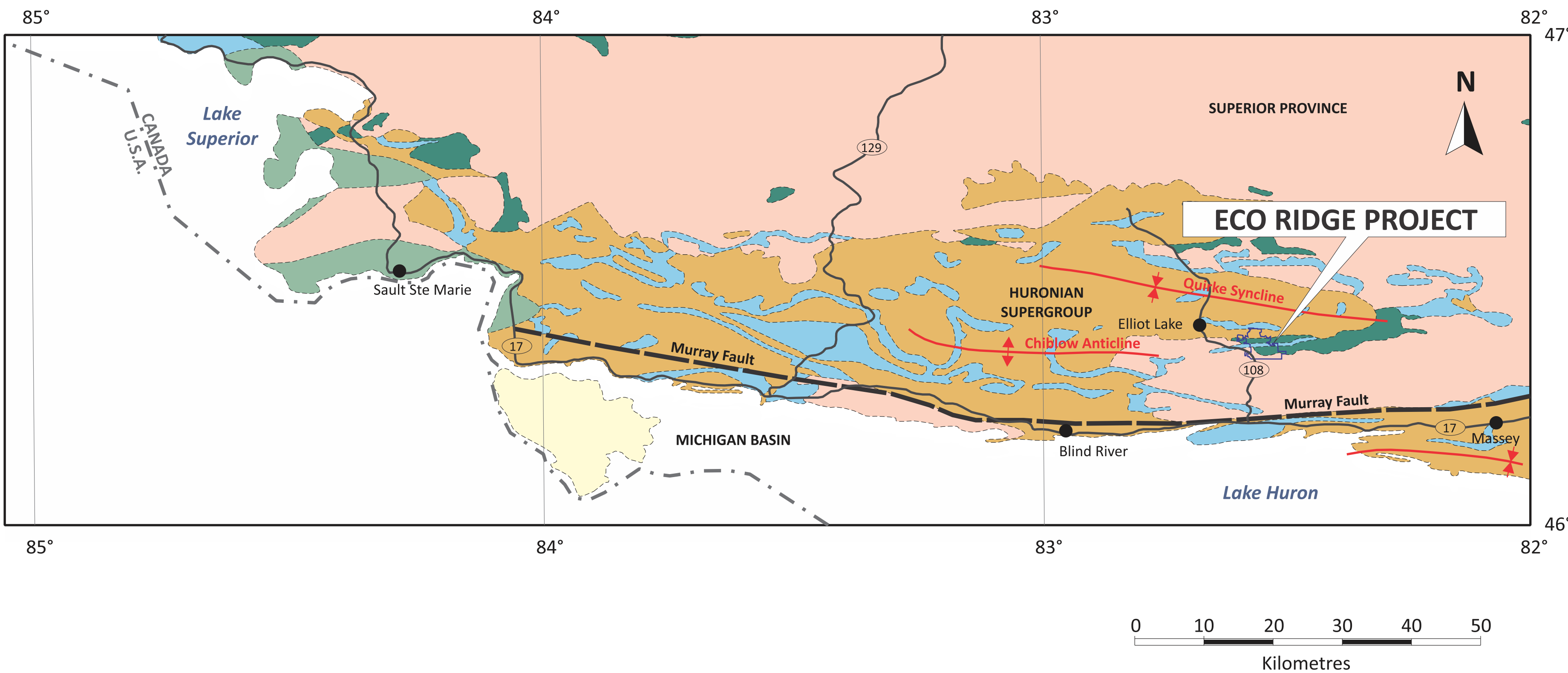
7.1.2 Structural Geology

The major structural event that has deformed the Huronian sedimentary rocks is the Penokean orogeny which affected the region between approximately 1,850 Ma and 1,750 Ma (Van Schmus, 1976). The deformation caused by the Penokean Orogeny resulted in folding and thrust faulting of the Huronian sedimentary rocks. The Murray and Onaping fault systems are composed predominantly of strike-slip faults that were formed some time after the Grenville orogeny (post 1,000 Ma). These faults generally strike north-northeast and east.

7.1.3 Regional Uranium Occurrences

Uranium and thorium occur within the Huronian Supergroup at several localities in the region. Most of the occurrences are in conglomerates, but some are in coarse-grained quartzite referred to locally as “grit”, and in quartzite and argillite. The only uranium deposits known to contain sufficient grade and tonnage to be economically viable occur in the lower part of the Matinenda Formation within approximately 40 m of the basement. Most of the exploitable uranium deposits are found in the Elliot Lake area. The Pronto Mine is located in the Blind River area and the Agnew Lake Mine is located approximately 60 km west of Sudbury.

The Huronian sedimentary basin is one of several early to mid-Proterozoic basins in Canada that host, or has the potential to host, uranium deposits. Others include the Athabasca Basin in Saskatchewan, the Thelon Basin in Nunavut, the Otish Region in Quebec, and the Sibley Basin in Ontario (Jefferson et al, 2005).



Legend:

	Paleozoic Sedimentary Rocks		Fold Axes
	Paleozoic Sedimentary Rocks		Fault
	Proterozoic Metasedimentary Rocks		Town
	Proterozoic Plutonic and Volcanic Rocks		Road
	Archean Granitoid Rocks		
	Archean Greenstone Terranes		

Figure 7-1

Radio Fuels Resources Corp.

Eco Ridge Project

Elliot Lake Area, Ontario, Canada

Regional Geology

September 2021

***Source:** Johns et al., 2003.*

7.2 Local Geology

7.2.1 General Geology

In the Elliot Lake area, the Huronian sedimentary rocks are folded and form shallow westward plunging, gently folded syncline and anticline structures, referred to as the Quirke syncline and the Chiblow anticline (Figure 7-2). The Elliot Lake uranium deposits are located within the sediments that form the Quirke syncline. The Quirke syncline is flanked on the north and east by Archean granites and on the south by Archean mafic metavolcanic and metasedimentary rocks. On the north, the limbs of the Quirke syncline generally dip from 20° to 40° south and, on the south, the limbs dip from 15° to 30° north. The depth to the centre of the syncline from the present surface is estimated to be approximately 1,500 m. The axis of the syncline plunges gently west at approximately 15°. The Huronian sedimentary rocks are intruded by Nipissing diabase dykes and sills and by younger lamprophyre dykes.

The stratigraphy of the Elliot Lake Group, which contains the Matinenda Formation and hosts the uranium deposits, is shown in Table 7-3.

Table 7-3: Elliot Lake Group, Elliot Lake Area
Radio Fuels Resources Corp. - Eco Ridge Project

Formation	Member	Description
		Elliot Lake Group
McKim Formation		Banded greywacke and argillite, locally termed "Nordic Formation". Cross bedding indicates beds were deposited from the NW.
Matinenda Formation	Stinson	Massive grey quartzite with minor pebble beds and coarse-grained grit.
	Ryan	Coarse-grained quartzite or arkose, pebble bands, and quartz-pebble conglomerates bands, sericitic alteration with distinctive green colour. Contains the conglomerate beds hosting the rare earths and uranium mineralization.
	Basal Conglomerate or Breccia	Quartz pebbles and fragments of basement rocks, pyrite and pyrrhotite in matrix, contains rare earths and uranium mineralization.
Livingston Creek Formation		Amygdaloidal basalt, metamorphosed to greenschist facies, intercalated sediments.
		Archean Basement Rocks
		Metavolcanics, Metasediments, Iron Formation and Granite

7.2.1.1 Post Huronian Intrusions

The Nipissing diabase intrusions occur as sill-like bodies paralleling the strike of the sedimentary formations, but with steeper dips and as crosscutting dykes. The sills vary in thickness from approximately 10 m to over 100 m and displace the conglomerate beds hosting the uranium mineralization. The dykes are generally 10 m to 20 m thick and strike predominantly east-west, parallel to the sills, and northwest.

These dykes can be mapped and delineated, and are included as a distinct unit in the geological and block model of the mineralization.

In a report by Sprague (1965), significant chlorite alteration of the conglomerate bed is described in the zones adjacent to the Nipissing diabase intrusions. In some instances, the mineralization could not be mined because the chlorite alteration resulted in the processing problems in the filters caused by the presence of chlorite. These altered zones were generally left in place despite having above average uranium grades, however, they are amenable to underground leaching based on metallurgical testing (CANMET, 1988).

The Huronian sedimentary rocks and the uranium deposits are also intruded by narrow lamprophyre dykes. The lamprophyre dykes generally vary in width from less than a metre up to approximately four metres. The lamprophyre dykes have chilled margins, but there is no evidence of contact metamorphism in the adjacent rocks. Two major trends are exhibited in the strike of the lamprophyre dykes: east-west and north-northwest. Occasionally, these dykes are calcite-rich and they deteriorate rapidly when exposed during underground mining.

7.2.1.2 Faulting

The major fault mapped within the immediate Elliot Lake District is the Flack Lake fault which is located immediately north of the Quirke syncline. The Canyon Lake fault, which was mapped by Robertson (1961), crosses the Eco Ridge property. The Canyon Lake fault is shown displacing both the Huronian sediments and a diabase dyke to the north in Gunterman Township between McCabe Lake and Canyon Lake and recent drilling demonstrates that it extends across the Eco Ridge property. The general geology of the Elliot Lake District is shown in Figure 7-2.

7.2.2 Geological Setting of the Uranium and REE Mineralization

The uranium-bearing conglomerate beds are found within thicker sections of the Matinenda Formation that are located over depressions in the underlying basement. These thicker sections are termed channels and generally strike west-northwest. The Matinenda Formation consists of well-sorted arkosic quartzite with coarse-grained beds containing scattered quartz pebbles. The quartz-pebble conglomerates are enclosed within the quartzite beds. The quartz-pebble conglomerate beds (historically called reefs) containing the uranium and REE mineralization are located within the lower Matinenda Formation approximately 40 m to 50 m above the basement. The lower Matinenda, designated as the Ryan Member, is characterized by the presence of pebbles, an increase in the amount of pyrite, and a distinctive green colour as a result of sericite alteration.

Although the coarser grained quartzite beds commonly contain low-grade mineralization, the higher grade mineralization is hosted within the beds of quartz-pebble conglomerate with disseminated pyrite in the matrix. The number and thickness of the conglomerate beds are not uniform between the channels. In general, the thickest sections and the greatest number of conglomerate beds occur within the channels which host the higher grade deposits. The channels are separated by topographic highs in the underlying basement, where the sediments of the Elliot Lake Group are thinner or, in some cases, absent. The reefs are located within the channels. The number and thickness of the conglomerate reefs are not uniform between the channels. In general, the greatest numbers of reefs and the highest grade deposits occur in the thickest sections of the Ryan Member.

The sedimentary rocks are interpreted to have been formed by the erosion of Archean granite to the north and deposited as sands and conglomerates. The uranium was transported as heavy mineral grains along with quartz pebbles, pyrite, and other heavy minerals such as zircon, rutile, leucoxene, and monazite in fast-flowing streams within topographic lows in the Archean bedrock. The quartz pebbles and the heavy minerals were deposited locally where the velocity of the streams decreased. The sediments may also have been re-worked, upgrading the mineralization locally.

The two major channels in the Elliot Lake District are the Nordic Channel and the Quirke Channel. Within each of these channels, the conglomerate beds or reefs occur at different stratigraphic intervals. Three other channels have been identified in the syncline, the Pardee, Pecors and Whisky Lake channels (Robertson, 1986). No mining has taken place within these last three channels to date. The locations of the channels based on historic data and interpretations are shown in Figure 7-3.

7.2.3 Stratigraphy of the Mineralized Conglomerate Beds

The stratigraphy of the Lower Matinenda Formation varies between the channels. The stratigraphy of the mineralized reefs within the Pardee Channel on the Eco Ridge property can be correlated with the stratigraphy of the reefs in the Nordic Channel.

The Nordic Channel is located on the south limb of the Quirke syncline. The Nordic Channel has an average strike length of approximately 2,130 m (7,000 ft.) and extends approximately 6,100 m (20,000 ft.) down dip along the limb of the anticline. The channel plunges northwest at an average angle of 17°. The Nordic Channel hosts the former Nordic, Lacnor, Milliken, and Stanleigh mines. Hart and Sprague (1968) describe three conglomerate beds within the Nordic Channel that host the higher grade uranium mineralization: the lower, the middle, and the upper conglomerate reefs. These reefs are located in the bottom 46 m (150 ft.) of the Ryan Member. The stratigraphy of the Ryan Member of the Lower Matinenda at the Stanleigh Mine is shown in Table 7-4 (Golder Associates, 1983).

The lower reef or Lacnor Reef is located directly above the basement. The lower reef is generally thin and discontinuous, however, some mining was carried out on this reef in the Stanleigh Mine. At the Lacnor and Milliken mines, the lower conglomerate was mined at an average height of 2.44 m (8 ft.). The parting quartzite divides the lower reef from the middle reef. The parting quartzite contains intercalated quartzite with weak pebble conglomerate bands.

The Middle Conglomerate Bed, or Nordic Reef, was the primary unit mined at all the four of the mines located in the Nordic Channel. The cobble size was generally smaller than the cobbles in the lower reef. The average height was 3.0 m (10 ft.).

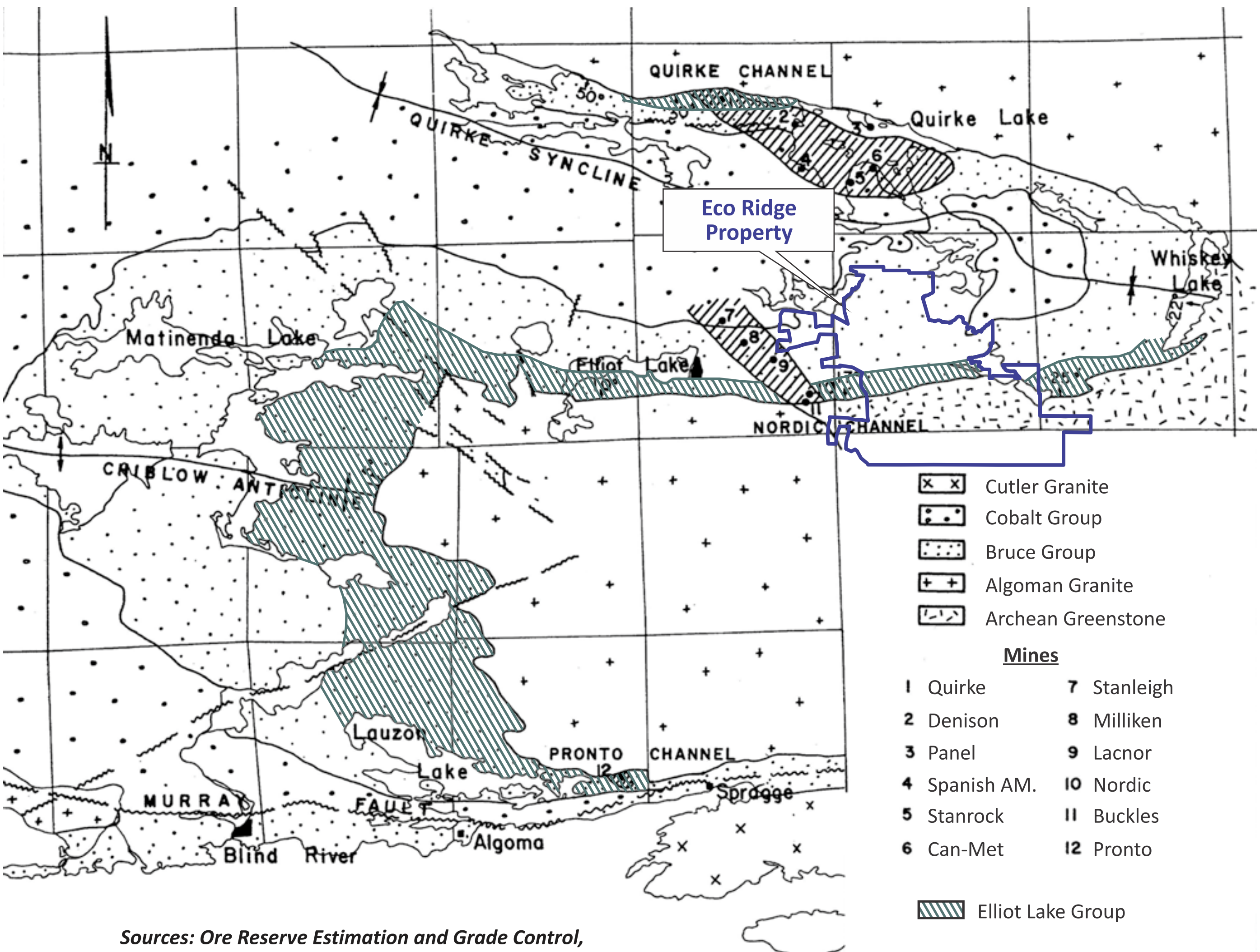
A limited amount of mining took place in the Upper Conglomerate Bed, or the Pardee Reef, and the average mining height was 1.5 m (5 ft.) at the Nordic Mine, but it reached thicknesses of 3.0 m (10 ft.) at the Stanleigh Mine.

The Floater Reef occurs above the Upper Reef. The Floater Reef is thin and very discontinuous. No mining was carried out on the Floater Reef. Golder Associates (1983) indicated that the surface of the original basement is irregular and the presence of “basement highs” can result in the Lower or Main Reef being absent because they were not deposited.

Table 7-4: Stratigraphy of Lower Matinenda (Stanleigh Mine)
Radio Fuels Resources Corp. - Eco Ridge Project

Zone	Thickness (ft)	Relative Content of U_3O_8 (lb/st)	Comments
Quartzite	-	-	
Floater Reef	7	-	Discontinuous
Quartzite	0 – 20	-	
Upper Reef	7	1.4	Correlated with the MCB
Quartzite	20	0.2	Divider Quartzite
Main Reef	10	1.6	
Parting Quartzite	8	0.5	Parting Quartzite
Lower Reef	8	1.4	
Quartzite	Variable	-	Generally thin
Basement	-	-	Metavolcanics

The Upper Reef in the Nordic Channel is correlated with the MCB in the Pardee Channel on the Eco Ridge property. Figure 7-3 shows a plan of the mineralized reefs and a longitudinal section along the south limb of the Quirke syncline looking north. The section illustrates the correlation of the mineralized conglomerate beds through the Nordic, Pardee, Pecors, and Whisky channels.



Sources: Ore Reserve Estimation and Grade Control, CIM Special Volume 9, 1968, and Robertson , 1986.

0 2 4 6 8
Miles

0 2 4 6 8 10
Kilometres

Figure 7-2

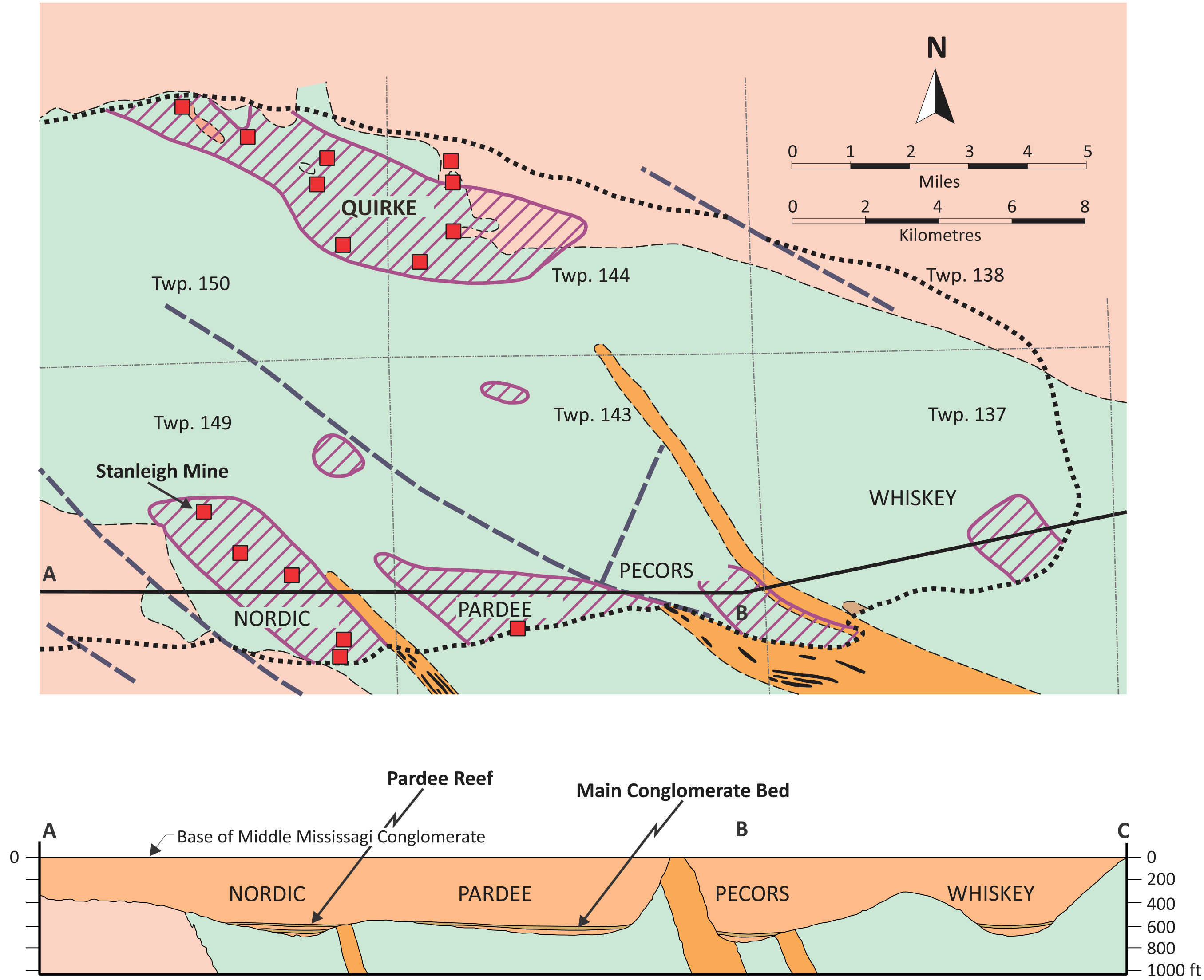
Radio Fuels Resources Corp.

Eco Ridge Project

Elliot Lake Area, Ontario, Canada

District Geology

September 2021



Schematic Cross Section A - B - C

Legend:

- Lower Mississagi Formation
- Conglomerate
- Huronian-Archean Contact at surface
- Granite
- Greenstone
- Iron Formation, Outcrop; Magnetic Anomaly
- Fault
- Deposit
- Mineralized Channel

Figure 7-3

Radio Fuels Resources Corp.

Eco Ridge Project

Elliot Lake Area, Ontario, Canada

Location of the Mineralized Channels

September 2021 ***Source: J. Robertson, 1986.***

7.3 Property Geology

The Eco Ridge property is situated to the east of the Nordic Channel on the south limb of the Quirke syncline (Figure 7-2). All the formations within the Quirke Lake Group, the Hough Lake Group, and the Elliot Lake Group are present within the Eco Ridge property boundaries, including the Livingston Creek Volcanic Formation.

7.3.1 General Geology

The Archean basement rocks underlying the syncline are primarily metasedimentary, and chloritized metavolcanic. Robertson (1961) mapped the pre-Huronian basement as igneous gabbroic and diabasic rocks, as well as metamorphosed sediments consisting of quartzites, greywackes tuffs and agglomerates, and minor basic lavas. These sediments strike northwest and dip steeply to the northeast.

The Archean basement is overlain by east-west trending, north dipping Elliot Lake Group sediments and volcanics with the Livingston Creek Formation forming the basal unit. The Livingston Creek Volcanics are intercalated with minor beds of conglomerate. The Huronian volcanics are directly overlain by a thin 'green grit' (possible regolith) from 10 cm to 20 cm thick, which commonly is logged as a fault zone or gouge in the drill core.

The mineralization on the Eco Ridge property is hosted by conglomerate beds that occur within the Ryan Member. The Ryan Member unit has been designated "Green Quartzite" in the descriptions in the historic drill hole logs and the unit overlying the green quartzite has been logged a "Grey and/or Pink Quartzite" which correlates with the Stinson Member. The Ryan Member is approximately 100 m thick, well sorted quartzite and quartzarenite with intercalated quartz-pebble conglomerates with a matrix of quartz grains. The quartzite has been altered to sericite which imparts the light green colour. Pyrite in the matrix occurs as small grains and can be 3% to 4% and up to 15% in the coarser quartz-pebble conglomerate units.

7.3.1.1 Intrusions

The Huronian sediments on the Eco Ridge property have been intruded by dykes and sills of Nipissing diabase. A prominent Nipissing diabase dyke, averaging 30 m in thickness and striking east-west extends across the entire property, crosscutting the mineralization.

Narrow dykes of lamprophyre are logged throughout the drilling. These dykes are generally less than a metre in thickness, but they can reach thicknesses of approximately six metres. These dykes are the youngest geological units on the Eco Ridge property.

7.3.1.2 Structure

Based on structural contours of the unconformity, Sprague (1965) interpreted the pre-Huronian topography as being relatively flat except for two local highs. He suggested that the first high, outlined by drill hole S-10 immediately east of the adit, is probably the extension of a zone of basic rocks in the Archean footwall mapped by Robertson (1961) as gabbros, amphibolites and diabase. Sprague suggested that these massive intrusions would be more resistant to erosion than the enclosing softer rocks and thus would tend to form areas of positive relief. The second area of positive relief was interpreted from holes PW-113, PW-112 and PW-106 on the east end of the Eco Ridge property near Pecors Lake.

A major structural feature on the Eco Ridge property is the Pecors Lake structure. This fault is shown on Ontario Geological Survey Map 2419 (Robertson, 1961). It is located along the west shore of Pecors Lake and strikes north 60° west across the Eco Ridge property (refer to Figure 7-3). Sprague indicated that the direction of movement is observed by the offset on the diabase and suggested a vertical displacement of approximately 150 m, north side up as indicated in the deep drill holes drilled by Stancan. Based on structural analyses carried out by Scott Wilson RPA and using information from drill holes located north of the Pecors Lake structure, the conglomerate bed containing the uranium mineralization continues to the north of the fault and appears to have been uplifted relative to the location of the conglomerate bed on the south side of the structure.

The apparent extension of the Canyon Lake fault to the south is marked by a prominent depression that strikes south 40 degrees east through the Eco Ridge property to the west end of Stinson Lake. This topographic depression continues to the south across the Huronian-basement contact into the Archean basement rocks.

A plan showing the general geology of the Eco Ridge property is shown in Figure 7-4.

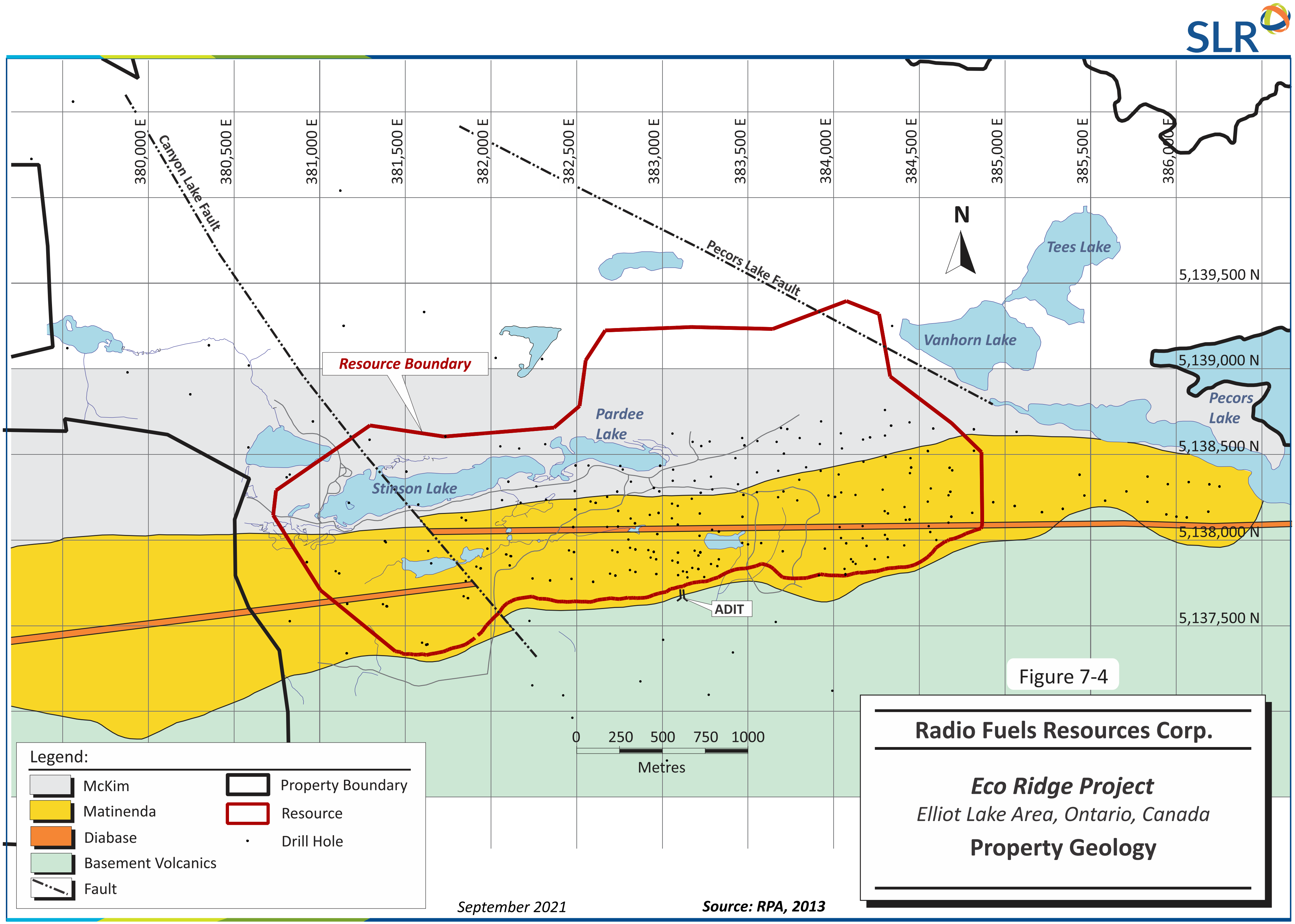


Figure 7-4

Radio Fuels Resources Corp.

Eco Ridge Project

Elliot Lake Area, Ontario, Canada

Property Geology

7.4 Mineralization

7.4.1 General Description

The quartzite beds in the Ryan Member in the Pardee Channel have a background grade of approximately 0.01% U_3O_8, rising to 0.02% within coarser grained "gritty" beds. The higher grade uranium mineralization is contained within three conglomerate beds, the Basal Conglomerate Bed (BCB), the Main Conglomerate Bed (MCB), which is equivalent to the Pardee Reef, and the Floater Reefs.

Limited rare earth assay data are available outside of the MCB intercepts drilled and assayed by Pele Mountain from 2006 to 2012. The available data show that rare earths mineralization continues above and below the MCB. The Pele Mountain sampling protocol targeted the conglomerate and pebble beds occurrences, as well as concentrations of heavy mineral bands within the Ryan Member to determine the extent of the mineralization

The BCB is located directly above the Archean basement rocks. This unit consists of poorly sorted, angular, and rounded pebbles that are granitic, volcanic and quartzitic and are commonly 2 in. (5 cm) in diameter. It may contain up to 5% pyrite in the matrix. This bed is discontinuous and, in drill holes where it is intersected, is generally thin, averaging approximately 0.5 m in thickness. However, historically, the sampling of the BCB has not been consistent and thicker sections have been intersected at Eco Ridge. The matrix is a grey or grey-green quartzite with up to 10% medium to coarse grained pyrite, and locally some pyrrhotite. The BCB is discontinuous, but, where intersected in the historic drilling, the average thickness is approximately 0.5 m, although widths up to four metres have been intersected in recent drilling and an intersection of 11 m was returned in drill hole CB-1, approximately 20 m below the MCB.

Sprague (1965) indicated that the basal reef was interpreted as being too narrow and too local to be of primary interest in Rio Algom's program, however, he did note that two holes, PA-26 and S-18, cut basal reef averaging 0.07% U_3O_8 / 1.7 m and 0.126% U_3O_8 / 1.4 m, respectively. Sprague suggested that detailed drilling of this reef may prove up small tonnages of interest.

The MCB is located approximately 10 m to 15 m above the BCB. It is intercalated within the quartzite beds. The MCB and the first few metres immediately above it host the Mineral Resource on the Eco Ridge property. The conglomerate contains quartz, quartzite, and dark cherty pebbles in a fine grained, pyrite-rich matrix. The pebbles make up to 60% of the rock and are most abundant in the lower metre. The pebbles are well rounded and 0.64 cm to 3.8 cm thick. This bed fines upwards with narrow intercalated beds of quartzite. Pyrite occurs in the matrix generally as small grains comprising 4% to 15% of the rock. Sprague reported that the bed varies from 1.3 m to 4.4 m in thickness. The highest grade uranium mineralization within the bed is located in the conglomerate band on the footwall contact with the underlying quartzite. The footwall contact is well-defined and provides a marker for geological assessment. The hanging wall contact is not as distinct due to the increased occurrences of intercalated bands of quartzite within the conglomerate.

The MCB contains the higher grade rare earths and uranium mineralization and outcrops on the Eco Ridge property and extends over a strike length of 6,000 m. The uranium and REE mineralization has been intersected in holes at a depth of 1,000 m and over a dip length of approximately 3,800 m.

A series of thin conglomerate beds are present within the quartzite overlying the hanging wall contact of the MCB. These thin conglomerate beds represent the Floater Reefs. The Floater Reefs generally extend from 6 m to 15 m above the MCB. The Floater Reefs average from 0.1 m to 2.0 m in thickness and the uranium content is generally less than 0.04%. These beds are not well developed on the Eco Ridge property and it is not possible to correlate individual beds between the drill holes. In many cases, quartzite beds logged as "grit" or "pebble conglomerate" contain low-grade mineralization and these pebble conglomerates are probably equivalent to the Floater Reefs. The quartzite with Floater Reefs above the MCB is referred to in this Technical Report as the Hanging Wall Zone (HWZ).

The stratigraphic units in the Matinenda Formation on the Eco Ridge property are summarized in Table 7-5.

Table 7-5: Stratigraphy of Lower Matinenda (Ryan Member)
Radio Fuels Resources Corp. – Eco Ridge Project

Unit	Thickness (m)	Relative Content of $\%U_3O_8$	Comments
Quartzite	30 – 40		
Floater Reef	0.2 – 0.4	0.02-0.04	Discontinuous
Quartzite	Variable (2 to 10)	0.01	
Main Conglomerate Bed	2-3	0.02-0.1	Very Continuous
Divider Quartzite	10-15	0.01	Variable in thickness
Basal Conglomerate Bed	Variable (0 to 11)	0.02 – 0.5	Not Continuous
Livingston Creek Formation (volcanic) – Archean (Greenstone)			

7.5 Historical Mineralogical Studies

The primary uranium-bearing minerals reported in the Elliot Lake Camp are uraninite and brannerite. Other uranium minerals that have been reported are pitchblende, coffinite and thucolite. Uranium-bearing, REE-bearing, and associated heavy minerals that have been identified previously at the Elliot Lake Camp are listed in Table 7-6. All minerals deposited with the uranium have a specific gravity of 5.0 or greater and they are also resistant to weathering (hardness of 5.0 or greater), which results in their deposition as heavy minerals within the matrix of the quartz pebble conglomerate beds.

Table 7-6: Uranium-Bearing and Associated Heavy Minerals
Radio Fuels Resources Corp. – Eco Ridge Project

Uranium Minerals	Formula	Specific Gravity	Hardness	Substitution and Trace Elements
Uraninite	UO_2	7.5 – 9.7	5.5	Th, Pb, Ra, Ce, Y, other REE
Brannerite	$(U,Ca,Ce)(Ti,Fe)_2O_6$	5.4	4 – 5	Forms series with Thorutite, (33% U)
Pitchblende	UO_2	7.5 – 10	5-6	Variety of uraninite, Rare, no substitution
Coffinite	$U(SiO_4)_{1-x}(OH)_{4x}$	5.1	5-6	Rare, Secondary
Thucolite	Carbonaceous	3.9 – 4.2	2.5	Also known as "gummite", rare

Uranium Minerals	Formula	Specific Gravity	Hardness	Substitution and Trace Elements
		Heavy Minerals		
Monazite	$(Ce,La,Nd,Y,Th)PO_4$	4.6 – 5.4	5.0 – 5.5	Minor U
Pyrite	FeS_2	5.0	6.0 – 6.5	Ni, Co
Rutile	TiO_2	4.2	6.0 – 6.5	Fe, Ta
Zircon	$ZrSiO_4$	4.65	7.5	

Note:

1. Reported from the Elliot Lake Camp

7.5.1 Uranium Minerals

7.5.1.1 Uraninite

The uranium mineralization in the Elliot Lake deposits is reported to occur as detrital microscopic uraninite grains within the matrix of the quartz-pebble conglomerates (Theis, 1979). In the main reef at the Denison Mine, Theis reported that the grains commonly show increased concentration near the base of the beds. He also reported that the uraninite grains are more commonly found in samples that contained medium to large quartz pebbles. Theis also reported that the texture of the grains varies from smooth to highly pitted and ragged, suggesting secondary leaching of some grains. Theis reported the following analyses for uraninite: 65% UO_2; 6.5% ThO_2; 18% PbO and 2.5% Y_2O_3, with less than 1% Ce_2O_3. Uraninite also represents a source of rare earths, particularly of heavy rare earths.

7.5.1.2 Brannerite

Composite grains which contain mixtures of uranium and titanium-bearing phases are referred to as brannerite. The brannerite occurs as skeletal-like grains within rutile and as microscopic blebs in bands and veinlets. Saager and Stupp (1983) determined that U-Ti phases are second only to uraninite as the most important uranium minerals in the Elliot Lake mineralization. Microprobe work confirmed the existence of a continuous mineral series recognized optically, which ranges from uranium-free leucoxene/rutile to uranium enriched brannerite. They suggested that redistribution and subsequent adsorption of uranium on Ti phases during diagenesis and/or metamorphism of the conglomerates resulted in microcrystalline leucoxene/rutile admixtures containing uranium in varying amounts.

Theis (1979) found that brannerite was associated with other titaniferous phases throughout the matrix of the conglomerate, which were associated with beds that had medium to smaller size pebbles. Based on 23 microprobe analyses, Theis reported that the brannerite averaged from 31% UO_2 to 37% UO_2.

7.5.1.3 Accessory Uranium Minerals

Secondary uranium minerals, coffinite, thucolite and pitchblende, have been reported historically. These are thought to be the result of “diagenetic modification” of the original uraninite.

7.5.2 Associated Minerals

7.5.2.1 Monazite

Monazite, a phosphate mineral, is the main mineral containing the REE and the more common form of monazite is enriched in cerium relative to the other REE. The monazite content generally decreases with increasing pebble size and is associated with zircon. This relationship is the opposite of the uraninite which is concentrated in the conglomerate beds with the largest pebble size. The monazite present on the Eco Ridge property is particularly enriched in light rare earth elements.

7.5.2.2 Pyrite

In general, the higher uranium grades reported from the mines that previously produced in the Elliot Lake area were hosted by the thickest quartz-pebble conglomerate lenses with high pyrite contents. The pyrite occurs ubiquitously with uranium. The pyrite content was used as a visual ore estimate during mining as the uranium content generally increased proportionally with pyrite. The pyrite is also considered to be detrital, having been deposited in a reducing environment in the early Proterozoic.

7.5.2.3 Accessory Heavy Minerals

Other accessory minerals are hematite, magnetite, monazite, zircon, uranothorite, coffinite, sphene, anatase, rutile, chromite, spinel, epidote, sericite, chlorite, amphibole, apatite, cassiterite, fluorite, barite, pyrrhotite, chalcopyrite, galena, sphalerite, molybdenite, marcasite, and gold (Roscoe and Steacy (1958)).

7.5.2.4 Geochemistry

General geochemical relationships that have been observed at Elliot Lake are:

- Uranium and thorium have no significant correlation, suggesting that they are concentrated in separate minerals.
- The lead content closely parallels the uranium content.
- There is a general correlation between the pyrite content and uranium.
- REE mineralization appears to continue beyond the limits of uranium mineralization.

7.6 Mineralogical Studies on the Eco Ridge Property

In 2007, Scott Wilson RPA selected a total of 10 samples from the drill core and sample rejects. One sample was taken from the Floater Reef, six samples from the MCB, and three samples from the BCB. The samples are considered to be representative of the deposit. The samples were sent to the Inco Innovation Centre (IIC) at Memorial University in Newfoundland (MUN) for mineralogical examination using a mineral liberation analyzer (MLA), which is an automated mineralogy system that utilizes a scanning electron microscope (SEM). The results were provided to Pele Mountain in a detailed report (Sylvester, 2007) and are briefly summarized here.

Overall, the mineralogy of conglomerate in the three beds is dominated by detrital quartz (60% to 70%), orthoclase (10% to 20%) and pyrite (5% to 15%). Secondary muscovite is present in amounts ranging from 3% to 9%. The uranium-bearing minerals and the heavy minerals make up less than 1% of the rock.

In 2011 Pele Mountain selected 15 additional samples for mineralogical analysis. The selection included ten samples from MCB, three from BCB and two from pyrite enriched bands. Polished thin sections and polished slabs were prepared from each sample, and the study included examination in normal plain and polarized light, cathodoluminescence, scanning electron microscopy with utilization of energy dispersive x-ray detection, backscattered electron imaging, and x-ray element mapping. This study identified the main uranium minerals to be uranothorite, thorite, brannerite, coffinite, as well as an unidentified uranium silicate containing Ti, REE, Y, S, and Bi. The coffinite, thorite, and the unidentified uranium silicate carry Y and heavy rare earth elements, while the monazite is the most common light rare earth elements-bearing mineral at Eco Ridge (Mariano, 2011).

7.6.1 Uranium Minerals

7.6.1.1 Main Conglomerate Bed

The uranium mineralization in the deposit is contained within a much greater number of mineral phases than previously reported at Elliot Lake. The mineral phases are similar in all the conglomerate beds, however, the relative amount of each mineral phase varies between the beds. The uranium minerals, their modal abundance and uranium content, and the relative contribution of the mineral to the overall uranium content of the six samples from the MCB are summarized in Table 7-7.

The only detrital uranium mineral identified is Th-uraninite. All other uranium minerals and mineral phases (pitchblende, brannerite, uranium in rutile, a complex aluminum-silicate-uranium-pyrite mix and uranium pyrite mix) are minerals that have been formed by secondary processes subsequent to the primary deposition of the uranium as uraninite.

The main uranium-bearing minerals in the MCB are pitchblende (Th-poor uraninite) and brannerite. The pitchblende has been deposited from the aqueous alteration of uraninite by oxidizing fluids and has been precipitated by reduction of the fluid upon encountering pyrite. This process has increased the uranium content. The brannerite was formed by the reaction of the uranium in fluids with rutile. The brannerite is associated with muscovite, biotite, and rutile. Th-uraninite, the only detrital mineral present, forms 10% of the contained uranium mineralization. Silica-rich minerals and mineral phases (coffinite and a complex aluminum-silica-pyrite-uranium phase) contain approximately 25% of the uranium.

Table 7-7: Uranium Mineralogy of the Main Conglomerate Bed
Radio Fuels Resources Corp. – Eco Ridge Project

Mineral Phase	Modal Mineralogy Weight % of Sample	Relative %	% Contribution to Total Uranium
Th-uraninite	0.057	9	10
Brannerite	0.177	27	24
Pitchblende	0.079	12	32
UO_2 Rutile	0.074	11	4
UO_2-Py-AlSi mix	0.166	26	13
UO_2-Py	0.032	5	3
Coffinite	0.067	10	14

7.6.1.2 Basal Conglomerate Bed

The samples selected from the BCB contain higher grade uranium than the samples in the MCB, and the mineralization occurs in altered zones with extensive pyrite and solution cavities, suggesting that these zones represent permeable bands where extensive fluid flow has taken place. The mineralization within the BCB contains the same minerals and mineral phases as the MCB; however, there are a larger proportion of secondary minerals. The modal analyses, the relative abundances of the uranium minerals and mineral phases and the per cent of the total uranium contained within the mineral or the mineral phase is shown in Table 7-8.

Based on the three samples examined, coffinite ($U(SiO_4)_{1-x}(OH)_{4x}$), a uranium silicate, comprises approximately 40% to 45% of the uranium, followed by pitchblende with 19% and composite grains of aluminum-silicate-pyrite-uranium with 15%. Detrital Th-uraninite comprises only approximately 4% of the mineralization. The presence of coffinite and the aluminum-silicate-pyrite-uranium phase suggests that the fluids depositing the secondary uranium mineralization contained more silica than the fluids forming the secondary uranium mineralization in the MCB.

Table 7-8: Uranium Mineralogy of the Basal Conglomerate Bed
Radio Fuels Resources Corp. – Eco Ridge Project

Mineral Phase	Modal Mineralogy Weight % of Sample	Relative %	% Contribution to Total Uranium
Th-uraninite	0.019	9	4
Brannerite	0.028	5	11
Pitchblende	0.026	5	19
UO_2 Rutile	0.039	7	3
UO_2-Py-AlSi mix	0.166	39	15
UO_2-Py	0.031	6	5
Coffinite	0.189	35	43

7.6.1.3 Gold

Gold is present in the MCB in amounts ranging from 10 ppb to 40 ppb (0.01 g/t to 0.04 g/t Au). The gold content of the BCB is higher, ranging from 100 ppb up to 900 ppb (0.1 g/t to 0.9 g/t Au). No discrete grains of gold or gold alloy were identified by the MLA. The gold is therefore likely to be dissolved in one or more of the detrital or alteration minerals. The higher content of gold in the BCB suggests that the gold may be associated with the secondary mineralization process and may be contained within the pyrite. In situ analyses of the minerals would be required to determine the host mineral for the gold and assess its potential for recovery.

7.6.1.4 Rare Earths

The major carrier of the REE is monazite, which contains over 90% of the REE in the MCB. The remainder of the REE (approximately 10%) is contained within the uranium minerals uraninite, pitchblende, coffinite and brannerite.

7.7 Detailed Description of Mineralized Zones

Figure 7-5 shows a typical cross section through the deposit. The section illustrates the relative positions of the Floater Reef, the HWZ, the MCB, the BCB and the Nipissing diabase dyke that crosscuts the deposit from east to west. The MCB is a consistent marker and has been intersected in almost all holes drilled on the Eco Ridge property. The MCB has an average dip of -21° N and the thickness averages 2.7 m with little variation. The HWZ is the lower grade mineralization continuing above the MCB. The BCB generally parallels the strike and dip of the MCB and is located from 10 m to 15 m below the MCB at the contact with the underlying Livingston Creek Volcanic Formation. The BCB is variable in thickness and is discontinuous in the Adit Block as shown in Figure 7-5. It is thicker and more continuous in the Canyon Lake Block. The Adit block refers to the area of detailed drilling in 2007, in the central part of the deposit. The Canyon Lake block is located on the western side of the Adit block.

7.7.1 Mineralization in the MCB

- The thickness of the MCB, the U_3O_8, and REE grades and their distribution consistent throughout the MCB.
- The uranium analytical results from the twin holes indicate that the historic analyses may be low compared to the current analyses (CB-series holes).
- The uranium is concentrated primarily within pitchblende and brannerite.
- The REE mineralization is contained primarily in monazite and the uranium bearing minerals.
- The gold content of the MCB varies between 10 ppb and 60 ppb.

The uranium mineralization is consistently concentrated at the base of the MCB and the uranium content decreases toward the top of the bed. A vertical profile in the grade is shown in Figure 7-6. The data are based on the analyses for drill holes PM-04 to PM-19 drilled in the Adit Block.

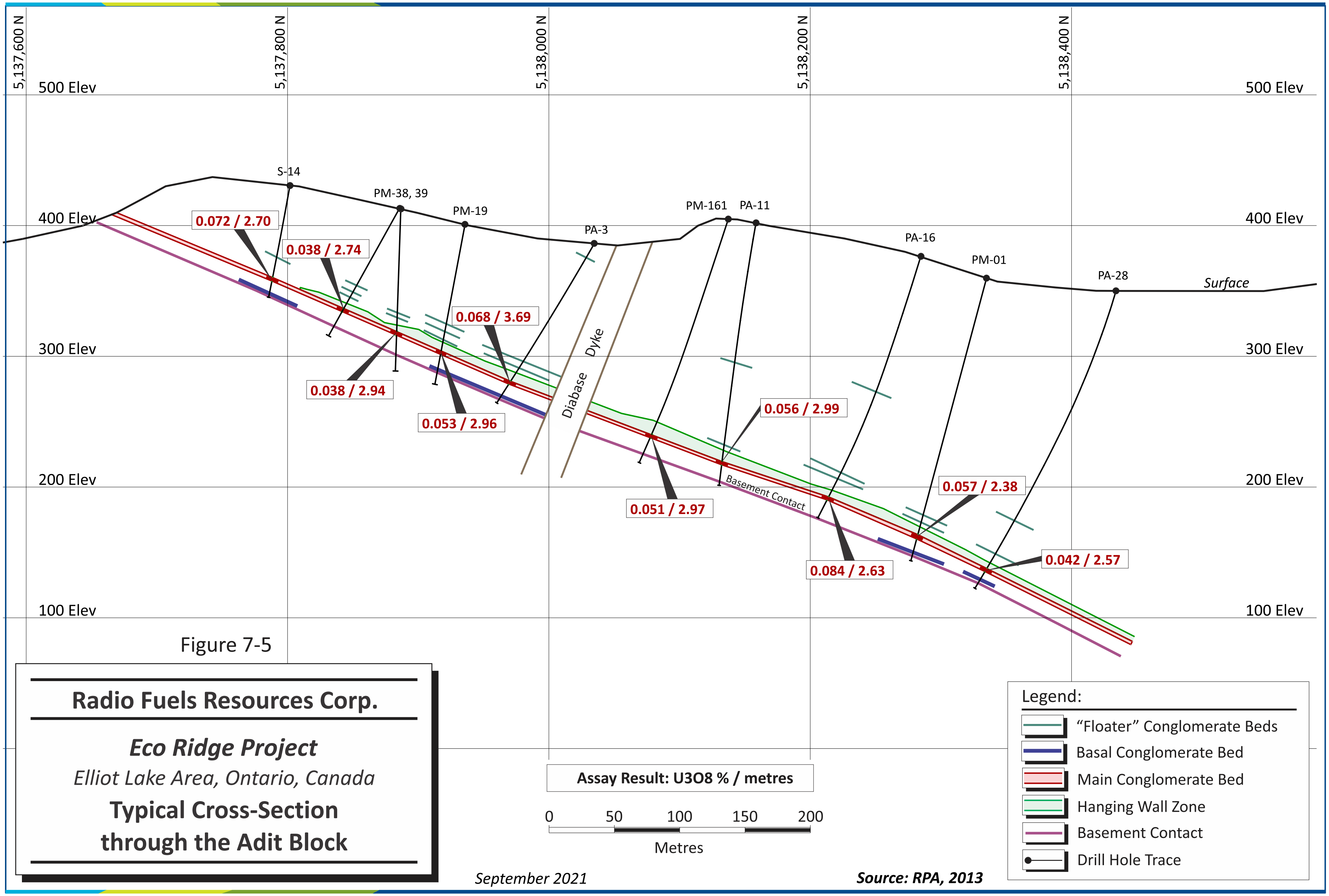

5,137,600 N
5,137,800 N
5,138,000 N
5,138,200 N
5,138,400 N
500 Elev
400 Elev
300 Elev
200 Elev
100 Elev
S-14
PM-38, 39
PM-19
PA-3
PM-161
PA-11
PA-16
PM-01
PA-28
Surface
Diabase Dyke
Basement Contact
0.072 / 2.70
0.038 / 2.74
0.068 / 3.69
0.038 / 2.94
0.053 / 2.96
0.056 / 2.99
0.051 / 2.97
0.057 / 2.38
0.084 / 2.63
0.042 / 2.57
Assay Result: U3O8 % / metres
0 50 100 150 200
Metres
Legend:
"Floater" Conglomerate Beds
Basal Conglomerate Bed
Main Conglomerate Bed
Hanging Wall Zone
Basement Contact
Drill Hole Trace
Radio Fuels Resources Corp.
Eco Ridge Project
Elliot Lake Area, Ontario, Canada
Typical Cross-Section
through the Adit Block
September 2021
Source: RPA, 2013

Figure 7-5

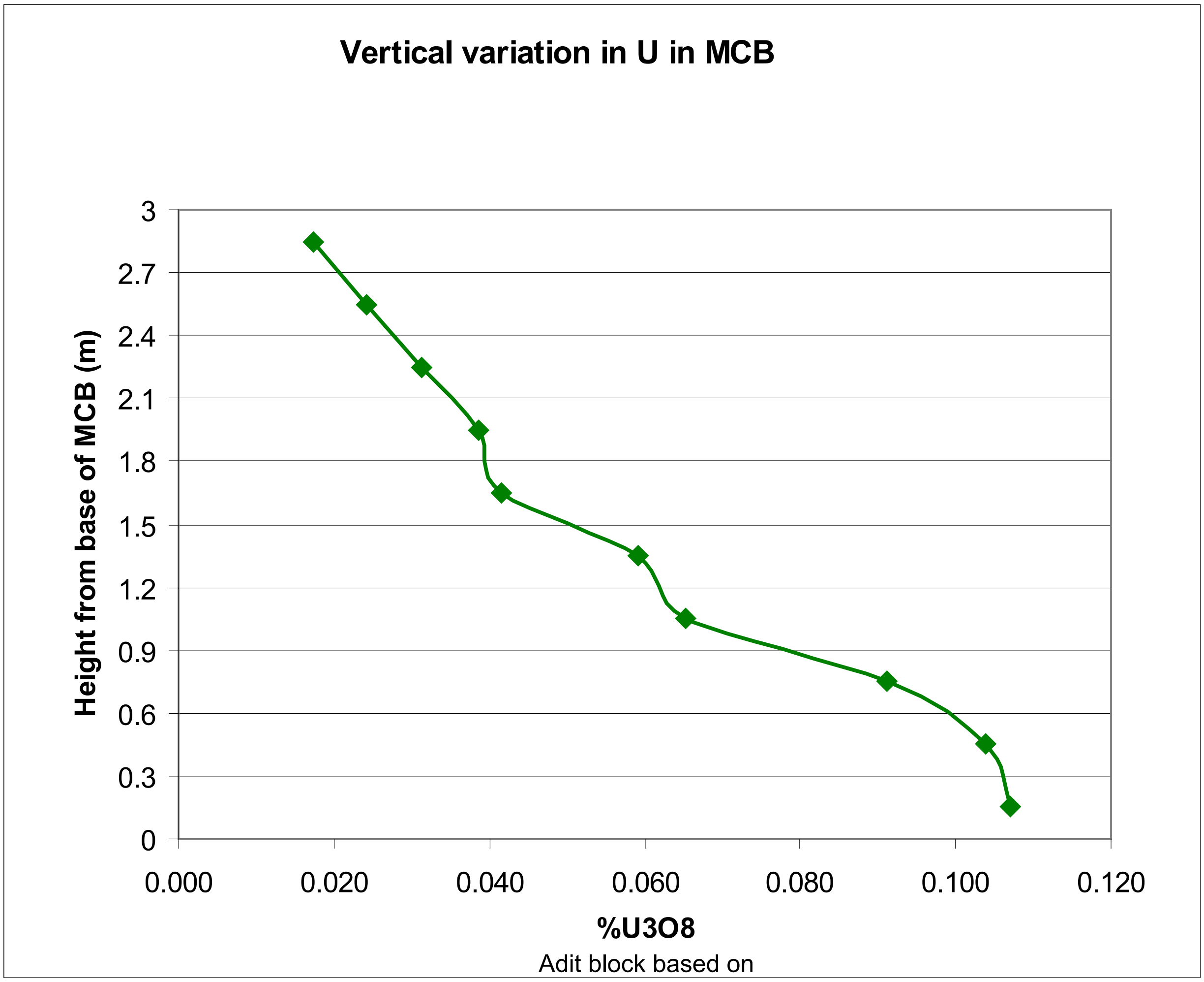


Figure 7-6: Variation in Uranium Concentration in the Main Conglomerate Bed

7.7.2 Mineralization in the HWZ

- The thickness of the HWZ is variable, while the U_3O_8 and REE grades are less variable. The HWZ represents the lower grade mineralization in the Floater Reefs and quartz grit immediately above the MCB conglomerate.
- The uranium is concentrated primarily within pitchblende and brannerite.
- The REE mineralization is contained primarily in monazite.

7.7.3 Mineralization in the BCB

- The BCB is located at, or close to, the unconformity between the Huronian sediments and the underlying volcanic rocks.
- The BCB is narrow and discontinuous within the Adit Block, but thicker and more continuous in the Canyon Lake Fault block.
- The variation in the grade of the mineralization in the BCB does not exhibit a consistent pattern across the BCB.

- The uranium mineralization is higher grade relative to the mineralization in the MCB.
- The secondary mineralization in the BCB, when present, is associated with porous alteration zones containing massive pyrite, extensive solution cavities, and chlorite and carbonate alteration within coarse conglomerate.
- Mineralogical studies indicate that the U_3O_8 in the BCB is contained in secondary minerals: coffinite, uraninite-pyrite-alumosilicate composite grains, and pitchblende. Detrital uranium minerals compose less than 5% of the uranium minerals.
- The mineralogy of the uranium minerals and the concentration of the mineralization within permeable alteration zones suggest the uranium has been deposited by secondary concentration from silica-rich fluids.
- The gold content of the zones containing the secondary mineralization is enriched compared to the MCB.

7.8 Discussion of Mineralized Zones

The MCB is a continuous unit, except in areas of the greatest topographic highs, where the basement depth is higher than the position of the MCB. In these areas, the MCB pinches out against the basement volcanic formation. This appears to occur only in one location. Otherwise, the variations in the depth to the basement do not appear to affect either the grade or the thickness of the MCB.

The HWZ is a continuous unit, trailing the MCB and including the Floater Reefs immediately above the MCB. The thickness and frequency of the Floater Reefs influence the thickness and continuity of the HWZ.

The relationship between the depth of basement and the presence of the sections of conglomerate is more pronounced within the BCB. The BCB is the thickest and most continuous in the deepest portions of the basin.

The BCB represents a distinct style of mineralization compared to the MCB. The BCB appears to have been deposited initially as a sedimentary deposit of coarse-grained quartzite or conglomerate at or immediately above the contact with the underlying volcanics. Although the intersections in the BCB are generally narrow, the uranium grade is typically higher than the grades in the MCB and higher grade mineralization has been intersected over thicker sections. The higher grade mineralization is associated with permeable zones within the BCB where fluid flow has reacted with pyrite to deposit secondary uranium minerals and mineral phases high in SiO_2, such as coffinite. The presence of pyrite or other sulphide minerals appears to be a very important factor in the deposition and concentration of the secondary uranium.

Although secondary enrichment has occurred in the MCB, the process appears to be more efficient in the BCB and may have resulted in the formation of thicker lenses of higher grade uranium. The secondary enrichment in the MCB has upgraded the uranium only locally and the secondary mineralization within the MCB is concentrated at the base of the bed where the highest grades occur. In general, the base of the MCB is in sharp contact with very low grade quartzite.

7.8.1 Geochemical Relationships and Metallurgical Implications

7.8.1.1 Rare Earth Oxides

Drilling by Pele Mountain confirmed that REE mineralization is widespread outside of the MCB. The relative percentages of the individual REE within the MCB and the BCB are shown in Table 7-9. The distribution of the REE within each of the beds is different. The REE content of the BCB is significantly less than the REE content of the MCB and the relative distributions of the REE are also different, as shown in Table 7-10. The REE content of the MCB is dominated by the light REE (La, Ce, Pr, Nd, and Sm) which constitute 88% of the REE content. The remainder of the REE is the heavy REE which make up 12% of the REE content in the MCB. The relative distribution of the REE in the MCB is consistent with the distribution of the REE within the mineral monazite ($(Ce,La,Nd,Y,Th)PO_4$). Although monazite is the major carrier of LREE in the BCB, a greater percentage of HREE are also contained within the uranium minerals, in particular, coffinite. The relative amount of monazite in the BCB is less than the amount in the MCB, which accounts for the lower REE content in the BCB relative to the MCB.

Table 7-9: Relative Percentage of Individual Rare Earth Elements
Radio Fuels Resources Corp. - Eco Ridge Project

REE	MCB	BCB
Yttrium (Y)	4.5	16.5
Cerium (Ce)	45.2	31.8
Dysprosium (Dy)	1.2	3.9
Erbium (Er)	0.5	1.9
Europium (Eu)	0.1	0.6
Gadolinium (Gd)	2	4.2
Holmium (Ho)	0.2	0.7
Lanthanum (La)	24.1	16
Lutetium (Lu)	0	0.2
Neodymium (Nd)	14.4	14
Praseodymium (Pr)	4.6	3.9
Samarium (Sm)	2.5	4
Terbium (Tb)	0.3	0.7
Thulium (Tm)	0	0.2
Ytterbium (Yb)	0.4	1.4

The recovery of REE contained within the monazite increases greatly by acid baking. Over 90% of the REE in the MCB are contained within monazite and the remainder is contained within uranium minerals. The recovery of the REE to leaching is discussed in Section 13.

The correlation coefficient between uranium and rare earth and other elements (ppm) for the resource assays ranges from 0.03 to 0.72 (Table 7-10). The LREE have generally a lower correlation coefficient with uranium than HREE.

Table 7-10: Correlation Between Uranium and Rare Earths
Radio Fuels Resources Corp. - Eco Ridge Project

Element	Correlation Factor
La	0.28
Ce	0.31
Pr	0.32
Nd	0.34
Sm	0.45
Eu	0.52
Gd	0.54
Tb	0.64
Dy	0.70
Ho	0.70
Er	0.72
Tm	0.72
Yb	0.72
Lu	0.66
Y	0.63
Sc	0.02
Th	0.46

The correlation factors between the HREE ranges from 0.71 to 0.99, and between LREE from 0.93 to 0.99.

The relatively poor correlation coefficients between uranium and REE assay results concur with the mineralogical observations made by Sylvester, 2007. Much of the HREE come from same minerals as uranium, while for the LREE only a small fraction comes from uranium bearing minerals. The low correlation coefficient suggests that the distribution of the REE should be investigated separately from uranium.

8.0 DEPOSIT TYPES

Uranium occurs in several different igneous, metamorphic, and sedimentary environments. The primary deposit types that are currently being exploited for uranium are sandstone-hosted deposits, unconformity-related deposits, and metamorphic vein deposits. Uranium is also produced as a by-product from hematite breccia deposits at Olympic Dam in Australia and from quartz-pebble gold deposits in the Witwatersrand Basin in South Africa.

Geological studies on the uranium-gold deposits in the Witwatersrand Basin in South Africa and the uranium deposits in the Blind River-Elliot Lake region of Canada have resulted in the definition of the uranium-gold bearing quartz-pebble conglomerate class of mineral deposit (Robertson 1986). Uranium is produced from the Witwatersrand deposits as a by-product and the conglomerate bands are commonly referred to as "reefs". This terminology was used at Elliot Lake to designate the uranium-bearing conglomerate beds. The Quartz-Pebble Conglomerate Deposit types also occur at other localities, such as the Jacobina District in Brazil, and at certain locations in Australia, however, most of these deposits have not yet been exploited.

The Elliot Lake deposits are interpreted to be modified paleoplacer (detrital) deposits and the source rocks are believed to be pegmatitic granite (Robertson, 1986) located to the north. The uranium and rare earth-bearing heavy minerals were released from the granites as a result of weathering and transported to the site of deposition in channel systems in Early Proterozoic sedimentary basins. Heavy mineral grains along with quartz pebbles and pyrite were deposited from fast-flowing streams in topographic lows in the Archean bedrock. With the current oxygen content of the atmosphere, the uranium minerals would oxidize and dissolve in the ground water and be transported in solution. It is suggested that the erosion and sedimentation took place in the early Proterozoic in a reducing environment as a result of the low oxygen content of the atmosphere prior to 2,200 Ma.

The quartz pebbles and the uranium and associated heavy minerals were deposited in areas where the velocity of the streams was reduced, forming conglomerate beds in deltaic piles. Peripheral to the conglomerate beds, poorly sorted feldspathic sand and silt were deposited. Subsequent diagenesis resulted in the formation of the conglomerate beds intercalated within coarse sandstone with scattered pebbles and siltstone. At the Denison Mine, the highest grade uranium mineralization occurred to the lee of basement highs where the flow was more abruptly reduced (A. MacEachern, personal communication, in RPA, 2007b).

There has been post-depositional alteration of the uranium as evidenced by the formation of brannerite, secondary pyrite and the formation of secondary quartz and sericite (Robinson and Spooner, 1984). Robinson and Spooner suggest that this post-depositional modification was caused by low Eh near-neutral ground water.

The mineralogical examination of the Pardee deposit supports this suggestion and demonstrates that the uranium is now primarily contained within secondary uranium minerals as a result of the interaction of the detrital uraninite with groundwater. Within the MCB, the deposition of the secondary minerals appears to have been limited causing local upgrading of the uranium content in some areas and leaching in others. For the heavy REE there is a predominant contribution from secondary mineral phases, while the light REE are predominantly found in detrital minerals.

8.1 Exploration Model

In the MCB, it appears that the formation of the secondary uranium mineralization has not transported the uranium any significant distance from the initial point of deposition during sedimentation. Therefore, a detrital depositional model is still considered to be applicable to exploration for the uranium mineralization contained in the MCB.

The exploration model at Elliot Lake consists of drilling the lower Matinenda Formation to test and outline the MCB and the HWZ. The quartz-pebble conglomerate beds have formed within the thicker sections of the Lower Matinenda Formation in topographic lows in the underlying basement rocks, forming the uranium-bearing channels. The channels are identified and outlined based on general isopach maps of the host sedimentary formation. The initial exploration is focused on identifying these channels.

Within the channels, the highest grade sections within the quartz-pebble conglomerate are concentrated locally where the physical conditions such as topographic highs in the basement rocks may have reduced the velocity of the streams. The uranium minerals, the quartz pebbles and other heavy minerals are generally concentrated along the flanks of the topographic highs. Although secondary enrichment has occurred in the MCB, the uranium has not been transported any distance and secondary enrichment does not appear to be the primary process controlling the uranium grade.

8.2 Secondary Enrichment Model

Although the secondary enrichment of the uranium appears to be local within the MCB, there is also evidence that the uranium has been leached and transported greater distances in the BCB at the base of the sediments. Therefore, any exploration program at Elliot Lake should also consider the potential for secondary enrichment deposits resulting from the interaction of ground water with either deep hydrothermal fluids that may have mobilized along faults or the presence of iron-rich rocks. Along with uranium, heavy rare earth elements are likely to have been subjected to secondary enrichment.

Jefferson et al. (2005) have indicated that several Paleoproterozoic and Mesoproterozoic basins in Canada, including the Huronian Basin which hosts the Elliot Lake deposits, are considered to have potential for unconformity-related uranium deposits. Unconformity deposits are extremely high grade and result from the deposition of uranium from secondary fluids that encounter a reducing environment. In unconformity deposits, the uranium is deposited primarily as pitchblende in faults or fractures at the unconformity between the sediments and the underlying basement, or within faults or fractures in the overlying sediments or the underlying basement rocks.

9.0 EXPLORATION

Radio Fuels has not conducted any exploration activity since the acquisition of the Project in June 2017.

The previous owner, Pele Mountain, conducted exploration using several different investigative techniques between 2007 and 2012.

Most recent exploration was carried out by Pele Mountain from 2006 to 2012, including exploration programs in 2007, 2008, 2009, 2011, and 2012 oriented mostly towards infill drilling. Some of the programs also included step-out drilling. Pele Mountain's exploration programs consisted primarily of diamond drilling, mineralogical analysis, and metallurgical testing. The results from the drill programs are described in Section 10 of this Technical Report. In 2010, Pele Mountain re-assayed pulps from the 2007-2009 drilling programs to obtain REE, yttrium and scandium data. In 2011 Pele Mountain conducted a sampling and assaying program on core from previous drill programs, aimed at intercepts above the MCB, to help delineate the HWZ.

9.1 Topographic Survey

Dudley Thompson Mapping Corporation Inc. (Dudley) of Surrey, British Columbia, was contracted to carry out an aerial survey over the Eco Ridge property. The survey was completed in April 2007 over an area of approximately 4,955 ha. Ten surveyed control points were established on the ground. Black and white aerial photographs at a scale of 1:20,000 were provided. The aerial film was scanned at a resolution of 12 µm using a Wehrli RM-6 scanner and the scanned images were aerotriangulated and adjusted to the control data. Dudley compiled a digital elevation model suitable for the support of five metre contours.

9.2 Geological Mapping

The geology of the deposit was compiled using government township maps (Robertson, 1961, 1962) and the interpretation of the information provided by the historical and current drilling. In 2007, RPA conducted reconnaissance mapping to determine the surface location of a Nipissing diabase dyke that crosscuts the mineralization.

9.3 Radiometric Logging

To validate the analyses from the historic drilling, several of the historic holes were logged using a spectral gamma-ray probe. The spectral gamma-ray probe measures the natural gamma ray emitted by potassium-40, uranium, and thorium series isotopes from the rocks in counts per second (cps).

DGI Geoscience Inc. (DGI) was contracted to carry out the radiometric logging. DGI provides several well logging services including radiometric logging. Their head office is in Toronto and their operations centre is located in Sudbury.

A Mount Sopris temperature-compensated, digital spectral gamma probe sampling 1,024 channels in the energy range of 100 keV to 3 MeV was used to obtain gamma emission spectra in time based mode over 15 minute intervals. The probe was calibrated at the United States Department of Energy's calibration facility in Grand Junction, Colorado, to determine the constant of proportionality (K factor) that relates the instrument's response in cps to the grade of the material being measured. The K factor must be determined empirically from measurements made in a controlled situation. The facility contains test pits with material of known grade and thickness. The uranium grade determined from the radiometric logging is reported as an equivalent assay (eU_3O_8) to distinguish it from the determination by chemical analysis.

9.4 Summary of Results of Radiometric Surveys

Although the results from the radiometric surveys match the core analyses for many of the new drill holes, the results do not match the core analyses for several historic drill holes. In the later cases, the eU_3O_8 is higher and the results are attributed to secondary leaching of the uranium from the MCB causing disequilibrium. The magnitude of the disequilibrium (and the leaching) varies throughout the deposit. As a result, the radiometric surveys are not recommended as an alternative to determine the uranium content of any of the new drill holes that are drilled.

The $\%eU_3O_8$ determined in the historic holes from the radiometric surveys do not match the historic core analyses. In all cases, the eU_3O_8 is much higher. The difference may be attributed to disequilibrium, however, it may also be due to the presence of secondary uranium deposited on the drill hole wall. In either case, the radiometric probe cannot currently be used to validate the analyses in the historic holes.

9.5 Exploration Potential

Historic drilling (described below) has intersected the MCB down-dip from the current Mineral Resource and to the east in the resource wireframes.

A target for further exploration was estimated for the areas where the historical drilling has demonstrated the presence of mineralized MCB outside of Mineral Resources. A polygonal method was used based on the thickness of the intersections of the MCB, uranium grades, typical TREO grades, and a specific gravity of 2.7. It was estimated that these areas could contain a further 40 Mt to 60 Mt in an exploration target grading from 0.030% to 0.050% U_3O_8, accompanied by 0.12% to 0.18% TREO for the MCB.

The potential quantities and grades of the exploration targets are conceptual in nature and there has been insufficient drilling to define a Mineral Resource. It is uncertain if further exploration will result in the definition of a mineral resource in these areas.

More detail on the data supporting the exploration targets is available at the end of Section 14, below.

10.0 DRILLING

Radio Fuels has not conducted any drilling on the Eco Ridge property since the acquisition of the Project in June 2017.

10.1 Summary

Drilling completed to date on the Project is listed in Table 10-1. Figure 10-1 shows the location of the drill holes on the Eco Ridge property. All the historical drilling was core drilling using AXT rods with a core diameter of 32.5 mm (1.28 in.).

Table 10-1: Drill Hole Summary
Radio Fuels Resources Corp. – Eco Ridge Project

Year	Operator	No. of Holes	Metreage (m)	Hole Numbers
1954	McIntyre Porcupine Mines	28	2,498	S-1 to S-28
1955	Pardee Amalgamated	30	6,567	PA-1 to PA-29CPA -24
1953-54	Algom Uranium Mines Ltd.	15	1,486	PW-101 to PW-115
1954-55	New Jersey Zinc	23	7,201	CB-1 to CB-23
1955	St. Mary's	1	642	E-2
1955	Stancan Uranium Corp	2	1,744	Z-5-1 to Z-5-2
1967	Kerr-McGee Corporation	2	3,058	143-2 to 143-3
1965-69	Riocanex and Rio Algom Mines	5	5,269	CB-30 to CB-35 (all wedged)
1974	Rio Algom	1	489	CB-36
2006-12	Pele Mountain	246	43,932	PM, GS, and HL series

Note:

1. CB-30 to CB-35 were wedged from the parent holes to provide duplicate intersections

There has been no additional drilling since 2012.

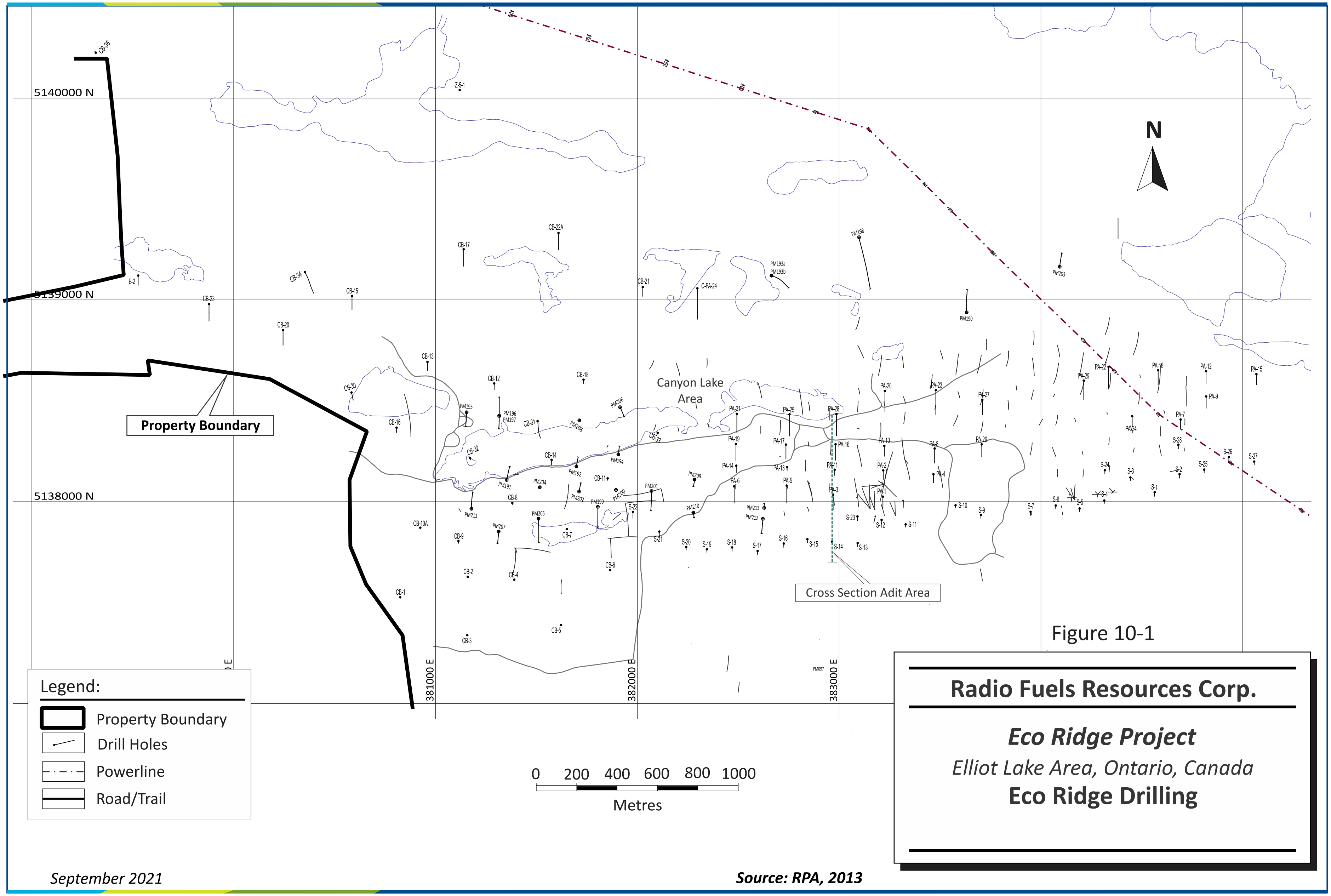


Figure 10-1

Radio Fuels Resources Corp.

Eco Ridge Project

Elliot Lake Area, Ontario, Canada

Eco Ridge Drilling

10.2 Historical Drill Programs

There is no detailed documentation describing the drilling procedures used for any of the historic drilling campaigns. In 2007, RPA reviewed the summary reports of the drilling programs and the drill logs and was of the opinion that the procedures appeared to be similar to the procedures currently used by industry (Scott Wilson RPA, 2007a).

10.3 Pele Mountain Drill Programs

Pele Mountain carried out diamond drill programs in 2006, 2007, 2008, 2009, 2011, and 2012. A total of 232 holes were drilled on the Eco Ridge property, of which 214 investigated the MCB or other targets and 18 were geotechnical holes.

The early Pele Mountain drilling was aimed at confirming the historical data, and then it focused on delineating the mineralized conglomerate. One drill hole was drilled in 2006 to confirm the historic drilling. Two drilling programs, from January to March 2007 and from April to August 2007, were executed to provide data for the 2007 PA (RPA, 2007b). Exploration and infill drill programs were carried out from October 2007 to June 2008, from June 2008 to February 2009, and from June 2009 to August 2009, directed towards obtaining a tighter drill spacing for better grade delineation and upgrading of Inferred Resources into the Indicated category, as well as to provide mineralized core material for metallurgical tests. MCB intercepts from 22 drill holes have been used for metallurgical tests (RPA, 2011b). In 2011, Pele Mountain conducted an infill and step-out drill program aimed at upgrading Inferred Resources into Indicated category and to explore the down-dip continuation of the MCB to the north. In October 2012, the company drilled a further 13 surface holes for a total of 6,574 m targeting the down-dip extension of the MCB.

10.3.1 Drilling Procedures

The drilling was conducted by independent drill contractors, using a diesel-powered core drill. The drill rods were thin-wall BQ (36.5 mm), NQ (47.6 mm), and HQ (63.5 mm). The drill used initially was capable of drilling up to 350 m. Drills used in later drill programs were capable of drilling past 700 m.

Each run consisted of three metres. It took two rods to complete one run. Typically, it took an hour for four runs.

The drill crew marked any lost core or faulted area on metreage marker as indicated by loss of water or water pressure in the hole.

Core recovery was excellent, with less than 1% of the core lost.

Upon completion of drilling, all material and waste were removed from the site. The sludge was removed and buried, and the hole was capped with a removable metal cap.

10.3.2 Drill Hole Deviation Survey

Pele Mountain drill holes were surveyed by two different instruments. Holes PM-001 to PM-022 were surveyed with an Icefield MI-03 instrument, with stations at every five metres. Holes PM-023 to PM-213 were surveyed with a Ranger Multifunctional Tool. This tool measures inclination, azimuth, gravity roll, magnetic dip, magnetic interference, and temperature. Communication with the tool is with infrared link with RSC (ranger survey controller). The tool employs a Triaxial Accelerometer (accuracy ±0.2°), a Triaxial

Fluxgate Magnetometer (accuracy ±0.5°) and a temperature sensor packaged in a solid state brass alloy tube. The tool is employed in open hole environments with stations taken at 10 m intervals.

10.3.3 Core Handling Procedures

Pele Mountain used the following core logging procedures:

- Core was placed by the driller in well identified, one metre and a half long, labelled wooden core boxes, from left to right, with the start and finish of each drill run labelled with a metreage marker.
- Core boxes were closed by the driller at the drill site and regularly transported to the core logging facility and laid out in order of increasing hole depth.

The core logging facility is a secure warehouse in an industrial area in the City of Elliot Lake. Signage is posted restricting no unauthorized personnel. Employees working in the building are informed of this restriction. The building is locked and always bolted when not occupied.

Core box labels and metreage were checked for accuracy, and aluminum labels recording hole number and box number were affixed to the boxes.

The core was stored at the core storage facility in Elliot Lake. Split core and samples collected were stored inside the locked core storage facility. All other core was stored outside.

10.3.4 Core Logging Procedures

Specially designed forms including general data such as location, date drilled, diameter, azimuth, dip, etc., were used for logging.

Geological data were manually recorded on the drill logs. The drill log includes lithology, alteration, mineralization, and structure. The handwritten log when completed was transferred to electronic format for analysis.

The sample numbers were recorded on the drill logs.

10.3.5 Sampling Procedures

At the Pele Mountain core facility, sampling intervals have been set according to geological and/or mineralogical constraints. From 2006 to 2009 sampling was continuous from the at least one metre above the hanging wall of the MCB to its base. At least one barren sample has been taken from the quartzite underlying the base of the MCB. If there were significant floater reefs above the MCB, sampling was extended into the hanging wall to include these reefs. In 2010, core from holes drilled previously was sampled to approximately 20 m above the base of the MCB. For the 2011 drill program, 20 m or more of core was sampled above the base of the MCB to allow the definition of the HWZ.

The sampling interval was variable and dependent upon lithological or mineralogical parameters. From 2006 to 2009, in the floater reefs, sample intervals varied from 0.5 m to 1.5 m. In the MCB, sample intervals varied between 0.1 m and 0.5 m. From 2010 on, inside the MCB the samples were less than 0.5 m long, and above the MCB, into the HWZ and above it, sample length was typically 1.0 m.

The sampling of the BCB was continuous from at least one sample above the contact to at least one sample below the contact.

Sample intervals were marked on the core and core boxes with a red lumber crayon, and sample tickets prepared in triplicate. One tag was stapled to the interior of the core tray at the beginning of the sample interval, one tag accompanied the sample, and the remaining tag was used for drill log entry.

The core was sampled by halving with a diamond saw. Once sawn, both halves of the core were returned to the core tray. After each sample, the saw blade was cleaned with water.

Some of the sampling in the MCB required that one of the sawn halves be halved again to create quarters. Quarter core was submitted for analysis while the remaining quarter core was retained for the geological record and the half core was put aside for future metallurgical testing.

Before removing the sample from the core tray and placing it in a plastic sample bag, each sample interval was checked to confirm the sample tag matched the interval being sampled.

11.0 SAMPLE PREPARATION, ANALYSES, AND SECURITY

Radio Fuels has not conducted any sampling on the Eco Ridge property since the acquisition of the Project in June 2017.

11.1 Sample Shipment and Security

11.1.1 October 2006 to August 2007

Bagged and securely closed samples were placed in larger, triple bagged "rice bags", approximately 15 samples per bag.

The name of the client (Pele Mountain) and the sample numbers of the samples contained within the "rice bags" were recorded on the exterior of the second bag. The third bag had the name and address of the recipient recorded on it.

Analytical request forms were submitted with each bag and placed in the first bag. Each bag was securely fastened with a numbered security tag and then the bag was photographed so that both the security number and bag number were recorded.

The bags were strapped and placed on wooden pallets and transported by a commercial carrier to the laboratories for sample preparation.

When the samples were received, the laboratory recorded the sample numbers and assigned a group number. Sample receipt verification was then e-mailed for confirmation.

11.1.2 October 2007 to August 2009

Broken sample pieces were placed in properly tagged heavy duty plastic bags. Samples were packed into five litre heavy plastic pails with locking lids. Description of the content, analysis packages, and addresses were also placed in the pail, then the lids were sealed with security tags. The numbered seals were recorded, and the information relayed to the laboratory.

The name of the client (Pele Mountain), drill hole name, and the sample numbers were recorded on the exterior of the pail, as well as the address of the laboratory.

The pails were transported by a commercial carrier to the laboratories for sample preparation.

When the samples were received by the laboratory, a work order number was assigned, and sample receipt verification was transmitted to Pele Mountain.

11.1.3 May 2011 to November 2012

Bagged and securely closed samples were placed in larger "rice bags".

The name of the client (Pele Mountain) and the sample numbers of the samples contained within the "rice bags" were recorded on the bag.

Analytical request forms were submitted with each bag. Each bag was securely fastened with a numbered security tag, and security number and bag number were recorded.

The bags were strapped and placed on wooden pallets and transported by a commercial carrier to the laboratories for sample preparation.

When the samples were received, the laboratory recorded the sample numbers and assigned a group number. Sample receipt verification was then e-mailed to Pele Mountain for confirmation.

11.2 Sample Preparation and Analysis

11.2.1 Historic Holes

No information is available concerning the sampling and assaying methods used in the historic drilling for the CB-series and PA-series drill holes. The samples have been analyzed at several different laboratories, which most likely include mine site laboratories. The laboratories are generally not identified and there is no comprehensive description available on the assay procedures used.

Robinson (1954) provided a list of check assay results for samples taken from the S-series holes drilled by McIntyre in the 1954 exploration program. The primary laboratory used was identified as Bell-White, check assays were carried out at the Ontario Department of Mines Laboratory, and some samples were sent to a laboratory identified as "Technical Services Laboratory".

11.2.2 Pele Mountain Drilling Programs

Pele Mountain drilling at Eco Ridge property spanned several programs. Samples were sent to several laboratories and up to six different assay methods were used, tailored to accommodate the exploration and mineralization delineating drilling programs. The samples have been sent mainly to SGS and Activation Laboratories.

11.2.2.1 Specific Gravity Measurements

The specific gravity measurements implemented for the 2007 RPA Preliminary Assessment (Scott Wilson RPA, 2007b) were applied to the following drill programs (October 2007, 2008, and 2009) for continual assessment of the deposit for estimation purposes. The average specific gravity is 2.71 g/c^3, confirming the value determined for the 2006-early 2007 drill program (Scott Wilson RPA, 2007b). Thirty-six samples were submitted to Activation Laboratories Ltd. (Actlabs), Ancaster, Ontario, for specific gravity measurements. The average specific gravity for the quartz pebble conglomerate is 2.76 g/c^3, while the quartzite has a specific gravity of 2.65 g/c^3.

The specific gravity value of 2.71 g/c^3 determined in this study concurs with the 2.70 g/c^3 used by Rio Algom for its "ore estimates". In this resource estimate, a specific gravity of 2.70 g/c^3 is used for tonnage determination.

11.2.2.2 January to March 2007 Drill Program

For the January to March 2007 drilling program, the samples were sent to SGS Toronto, an accredited laboratory with the Standards Council of Canada, for sample preparation and analyses. The samples were crushed, split, and pulverized and were analyzed using two methods: IMS95R (metaborate fusion with ICP-MS finish) for U, Th, and RRE and ICM40B (multi-acid digestion with ICP-ES and ICP-MS finish) for a suite of 50 elements, including U and S. Some samples were also analyzed for gold with FAI313 method (lead collection fire assay with ICP-OES finish).

11.2.2.3 April to August 2007 Drill Program

For the April to August 2007 program, core samples were sent to Saskatchewan Research Centre (SRC) in Saskatoon for sample preparation and analyses. SRC analyzed the samples for uranium with a multi-element ICP package using an aqua regia digest, with a second analysis using a digestion in a mixture of $HF/HNO_3/HClO_4$. Because of variations in the analyses from SRC compared to the historic analyses and the analyses from SGS Toronto, all the pulps for drill holes were re-analyzed at SGS Toronto using the IMS95R method to ensure consistency in the data used for Mineral Resource estimation. Core samples from the remaining holes in the program were sent to SGS Toronto for sample preparation and analyses.

The 2007 PA (RPA, 2007b) contains a detailed discussion of the analytical methods employed for samples collected from January to August 2007.

11.2.2.4 October 2007 to August 2009 Drilling Programs

The samples collected by Pele Mountain from October 2007 to August 2009 were sent to Actlabs for sample preparation and analyses. Actlabs is an independent accredited laboratory with the Standards Council of Canada and is also accredited to ISO/IEC 17025. This accreditation is the standard for analytical testing laboratories.

The entire rock or core sample was crushed to a nominal minus 10 mesh (1.7 mm), mechanically split (riffle) to obtain a representative sample and then pulverized to at least 85% minus 200 mesh (75 µm). All the steel mills at Actlabs had mild steel and did not induce Cr or Ni contamination. As a routine practice, sand was used as a cleaner between each sample. Quality of crushing and pulverization was routinely checked as part of the quality assurance program. Randomization of samples in larger orders (>100) provided an excellent means to monitor data for systematic errors. The data was restored after analysis according to sample number. For soil samples, a 100 g to 150 g aliquot was pulverized in a mild steel ring mill to normally finer than 95% minus 150 mesh. As a routine practice, sand was used as a cleaner between each sample.

Uranium was analyzed using three different methods. Package 4B2-standard was used for uranium, thorium, and the rare earth elements. Package U-DNC provides delayed neutron counting for uranium and was assayed if high. Package 1D was used for the soil samples for uranium and rare earth elements.

The Actlabs Code 4B and trace element ICP/MS package Code 4B2 was a whole rock package fusion technique that employs lithium metaborate/tetraborate fusion. The resulting molten bead was rapidly digested in a weak nitric acid solution. The fusion ensured that the entire sample was dissolved. This procedure allowed for the major oxides including SiO_2, REE and other high field strength elements to be put into solution.

The Actlabs U – DNC package was a Delayed Neutron Count for uranium. The Actlabs Code 1D technique employed an irradiation with flux wires. An approximately 30 g aliquot was encapsulated and weighed in a polyethylene vial and then irradiated with flux wires at a thermal neutron flux of 7 x 1011 n.cm-2s-1. After a seven day decay to allow Na-24 to decay the samples were counted on a high purity Ge detector with a resolution of better than 1.7 KeV for the 1332 KeV C0-60. Using the flux wires the decay corrected activities were compared to a calibration developed from multiple certified international reference materials.

Actlabs routinely monitored and documented the reliability of submitted samples to ensure that any sub-samples taken (e.g., from a crushed rock split) were reliable and representative of the original sample submitted.

Actlabs maintained a schedule for the maintenance and calibration of equipment used in the laboratory. Records of calibration and performance parameters were maintained for both testing and measuring equipment.

SGS Laboratories in Toronto was used for sample check analyses. SGS is an independent accredited laboratory with the Standards Council of Canada. SGS Minerals Services is also accredited to ISO/IEC 17025. Pele Mountain consulting geologists used the SGS analysis package IMS95R recommended in the PA of October 2007 (RPA, 2007b).

11.2.2.5 Pulp Re-assay Program November 2010

In November 2010, Pele Mountain submitted 1,283 pulps from MCB intercepts collected in the 2008 and 2009 drill programs for re-analysis. The pulps were sent to SGS Toronto to be assayed for REE, yttrium and scandium. The analytical methods chosen were IMS95A (trace elements by lithium metaborate fusion with ICP-MS finish) for REE and Yttrium. The digestion with lithium metaborate is not suitable for producing accurate results for Scandium, hence the ICP40B analysis package was used (four acid digestion with ICP-AES finish) for reporting the latter.

11.2.2.6 May 2011 to November 2012

The samples collected by Pele Mountain from the 2011 drill program and samples collected from core obtained in previous drill programs were sent to Actlabs for sample preparation and analyses.

Uranium and REE were analyzed using the analysis package 4B/4B2, involving metaborate/tetraborate fusion and ICP/MS. Samples with uranium results above detection limit were analyzed via DNC or XRF.

In QP's opinion, the sample preparation, analysis, and security procedures at the Project meet industry standards and are acceptable for Mineral Resource estimation.

11.3 QA/QC Procedures

For control purposes, one blank sample of barren material was included with each batch of 15 to 20 samples, approximately one blank sample per hole. From 2007 to early 2011, the blank samples are diabase dyke intercepts from a gold project at Manitouwadge, Ontario, located several kilometres from the Project. In late 2011, the blank material was changed to syenite grab samples, collected at a Pele Mountain gold property in Wawa area.

Certified reference material (CRM) samples DL-1a, UTS-4, UTS-3, SY-3, and SY-4 from CANMET, and OREAS102A from Ore Research & Exploration Pty. Ltd. were inserted every 15 to 20 samples for independent assessment of the laboratory performance.

Duplicate samples were submitted at a rate of one in 15 to 20 samples to assess the reliability of the grade determination at various grades.

Pulp replicates were sent to a different laboratory for check analyses. Blanks, as well as duplicate pulp replicates were submitted at a rate of one in 20.

11.3.1 Pele Mountain QA/QC Monitoring

Under direct supervision from RPA, Pele Mountain implemented a QA/QC protocol in 2007 that has been continued throughout the Pele Mountain drilling. The QA/QC protocol consisted of regular submission of blanks, CRMs (standards), and core duplicates at a rate of one in 15 to 20 samples, as well as pulp replicates to alternate lab.

The QA/QC procedures, results, interpretation, and conclusions for the 2006-2009 drill programs and the 2010 pulp re-assay program are presented in the 2007 Preliminary Assessment Report (Scott Wilson RPA, 2007b) and in the 2011 Preliminary Assessment Report (RPA, 2011). Excellent correlation coefficients were found for sample duplicates and interlaboratory checks, demonstrating that samples are representative of the mineralization. No evidence of contamination was revealed by the blanks. The certified reference materials indicated that there was no bias and the level of contamination was not considered significant. Pulp replicates sent to SRC and Actlabs returned assay values with correlation coefficients of 0.99, indicating excellent interlaboratory agreement, as well as good reproducibility with different analytical methods.

11.3.2 Pele Mountain QA/QC Program 2011 to 2012

The rock samples from the drill core were analyzed by Actlabs. Actlabs is accredited by the Standards Council of Canada. The samples were analyzed for U, REE, Y Sc, and Th by the 4B2 lithium metaborate/tetraborate fusion - ICP/MS analysis package.

Pele Mountain geologists regularly submitted blanks, CRM samples, and sample duplicates to monitor the assay results. The control samples were submitted one in every 15 to 20 samples.

11.3.2.1 2011

Pele Mountain personnel inserted 136 samples of blank material in the sample stream. Out of these, 91 samples were diabase dyke core taken from a gold project at Manitouwadge, Ontario, while 45 were syenite grab samples from a Pele Mountain gold project in Wawa, Ontario. The diabase material assayed consistently at the Earth uranium background level, as well as consistent REE values. The syenite returned roughly twice the uranium level of the diabase, while the REE values were less homogenous (Figure 12-1). There was no indication of sample contamination.

The CRM samples inserted by Pele Mountain in the sample stream were DL-1a (waste-rock from the Denison Mine) (112 samples), UTS-4 (from Eldor Mine at Rabbit Lake, Saskatchewan) (15 samples), and UTS-3 (from Eldorado Nuclear Ltd., at Beaverlodge, Saskatchewan) (20 samples), totalling 147 samples (Figure 12-2). These CRMs are certified for uranium and thorium and have been used continuously throughout the Pele Mountain drilling programs. The CRM were obtained from CANMET.

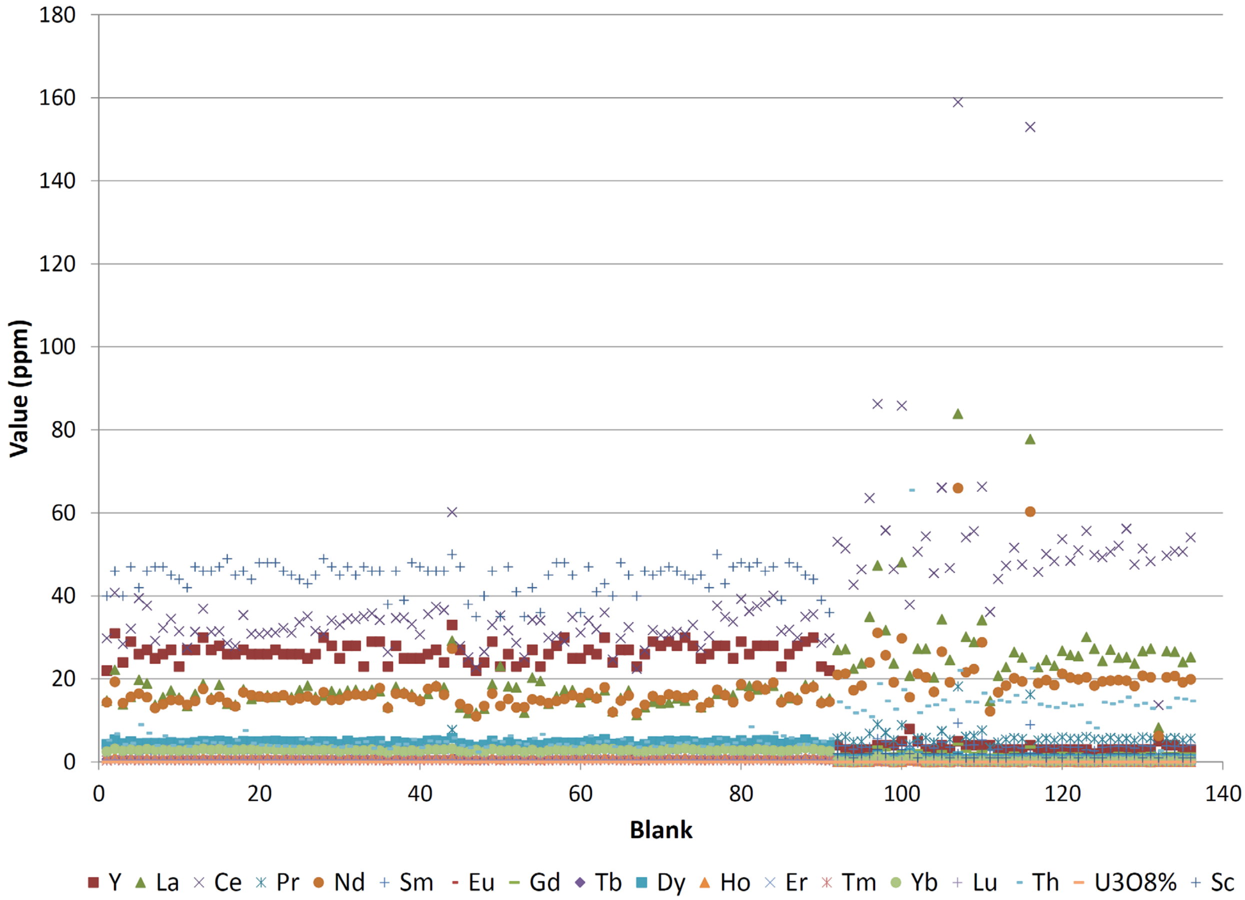
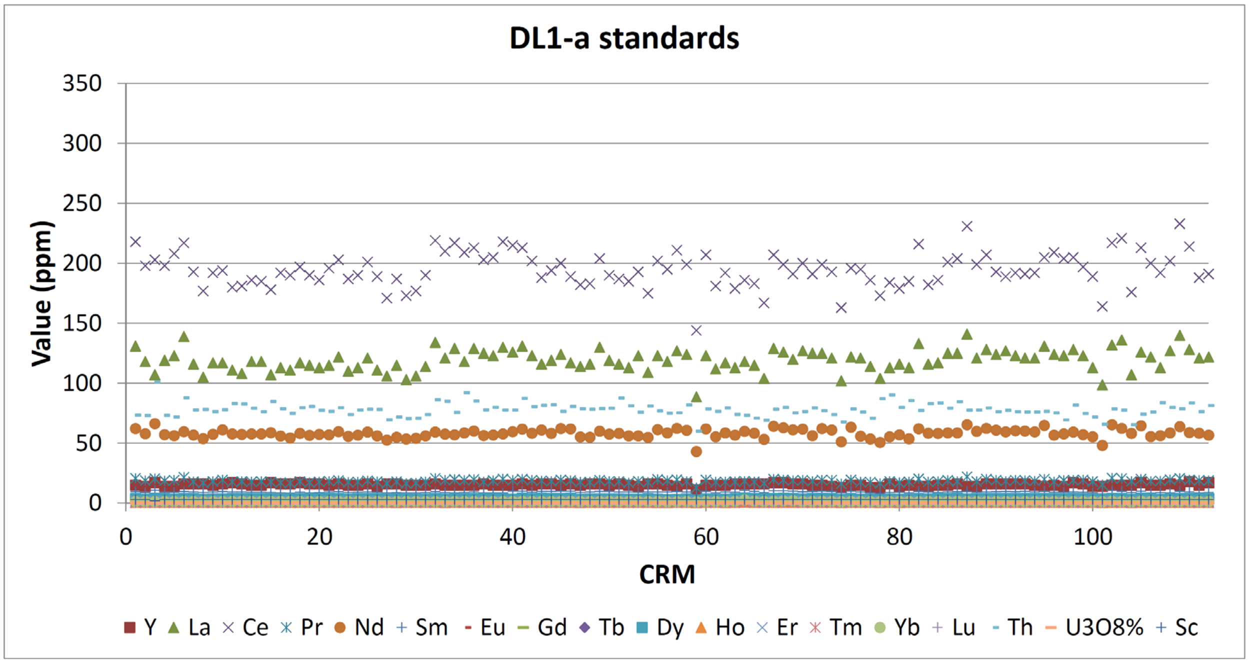


Figure 11-1: Blank Samples



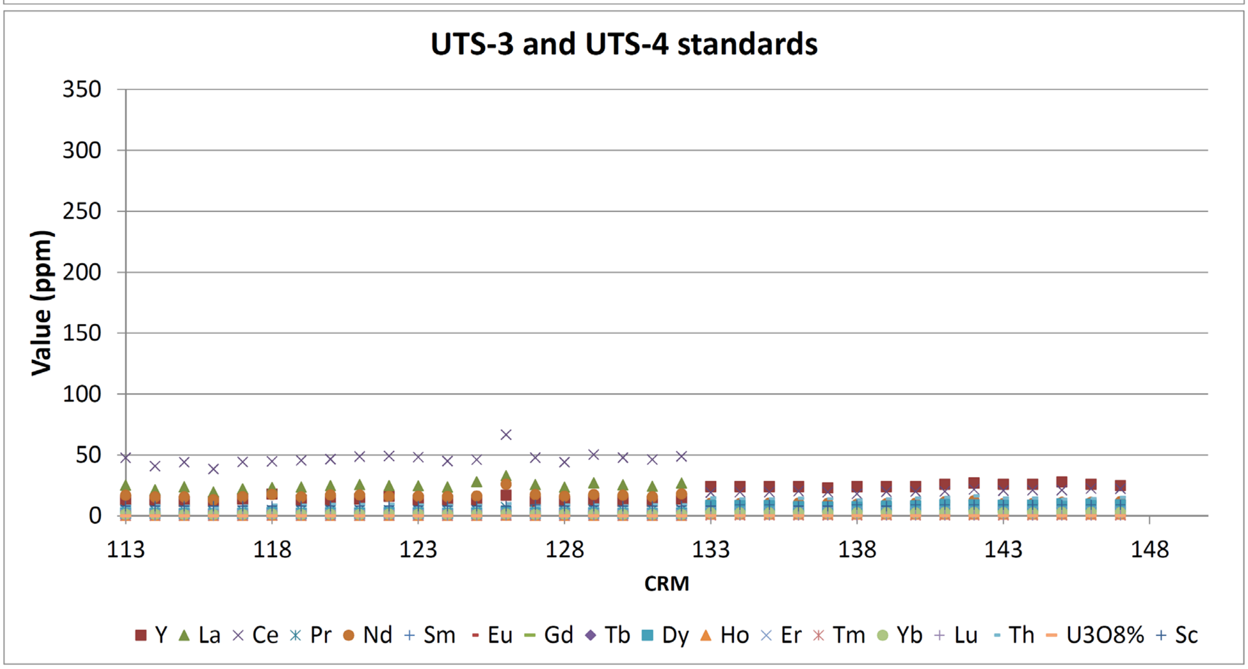


Figure 11-2: Certified Reference Materials Samples

Approximately 175 field sample duplicates were assayed. The correlation coefficient was 0.89 for U_3O_8 after removing one outlier. The correlation coefficient for Nd was 0.84, and for Dy it was 0.83. This represents a good correlation for field sample duplicates. No bias was identified (Figure 12-3).

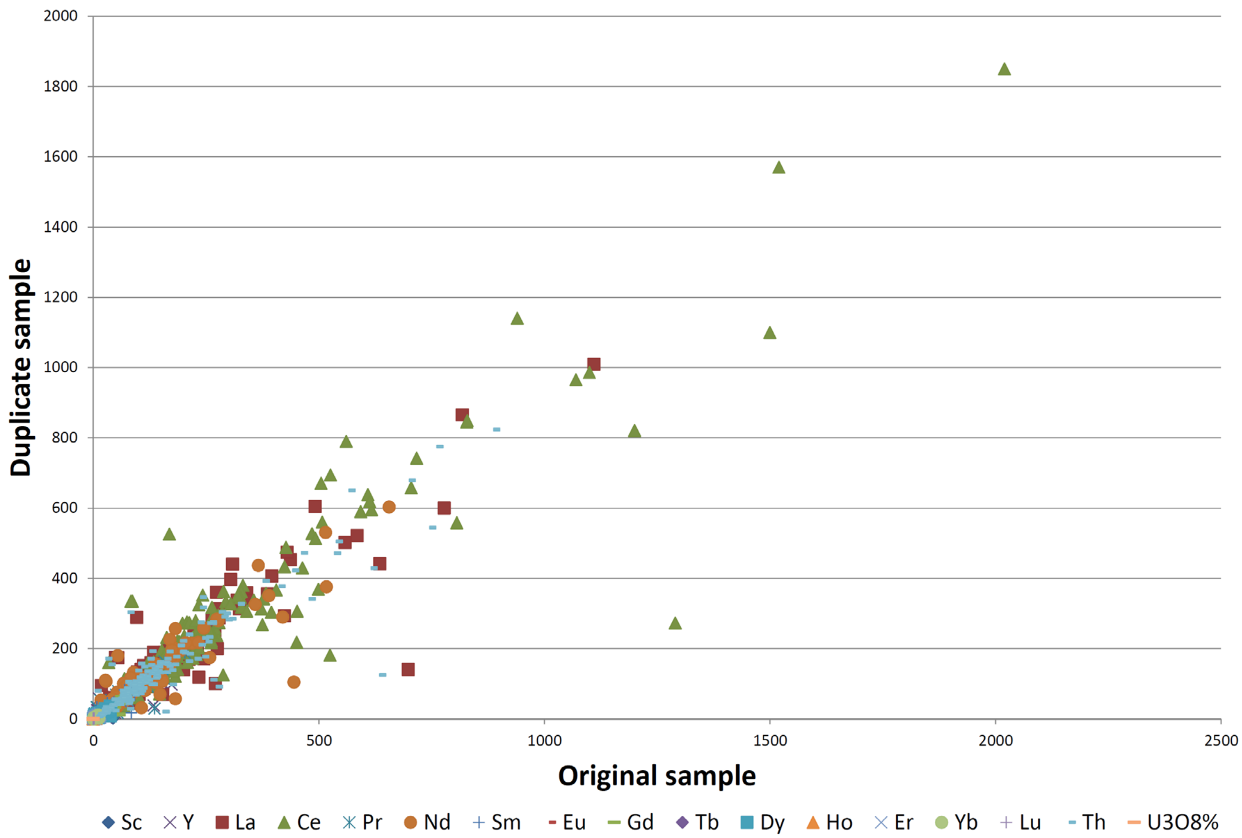


Figure 11-3: Field Sample Duplicates

11.3.2.2 2012

The QP reviewed the blank, CRM, and field sample duplicate data for the 2012 drilling program (Figure 11-4).

The blank material assayed consistently for U at the background level, with one exception. Similarly, Nd and Dy displayed consistent results except for one sample; however, the higher than expected grades came from different samples and there was no indication of contamination or sample switching. There were 18 blank samples, representing 3% of the samples.

A total of 18 CRM samples were inserted in the sample stream, assaying consistently around the nominal values.

There were 22 field sample duplicate pairs assayed in the 2012 drilling program, representing approximately 3.5% of the samples. The correlation coefficients for U, Nd, and Dy were 0.89 or higher, similar to the results obtained for the sample duplicates in the previous drilling campaigns. This represents a good correlation for field sample duplicates. No bias was identified.

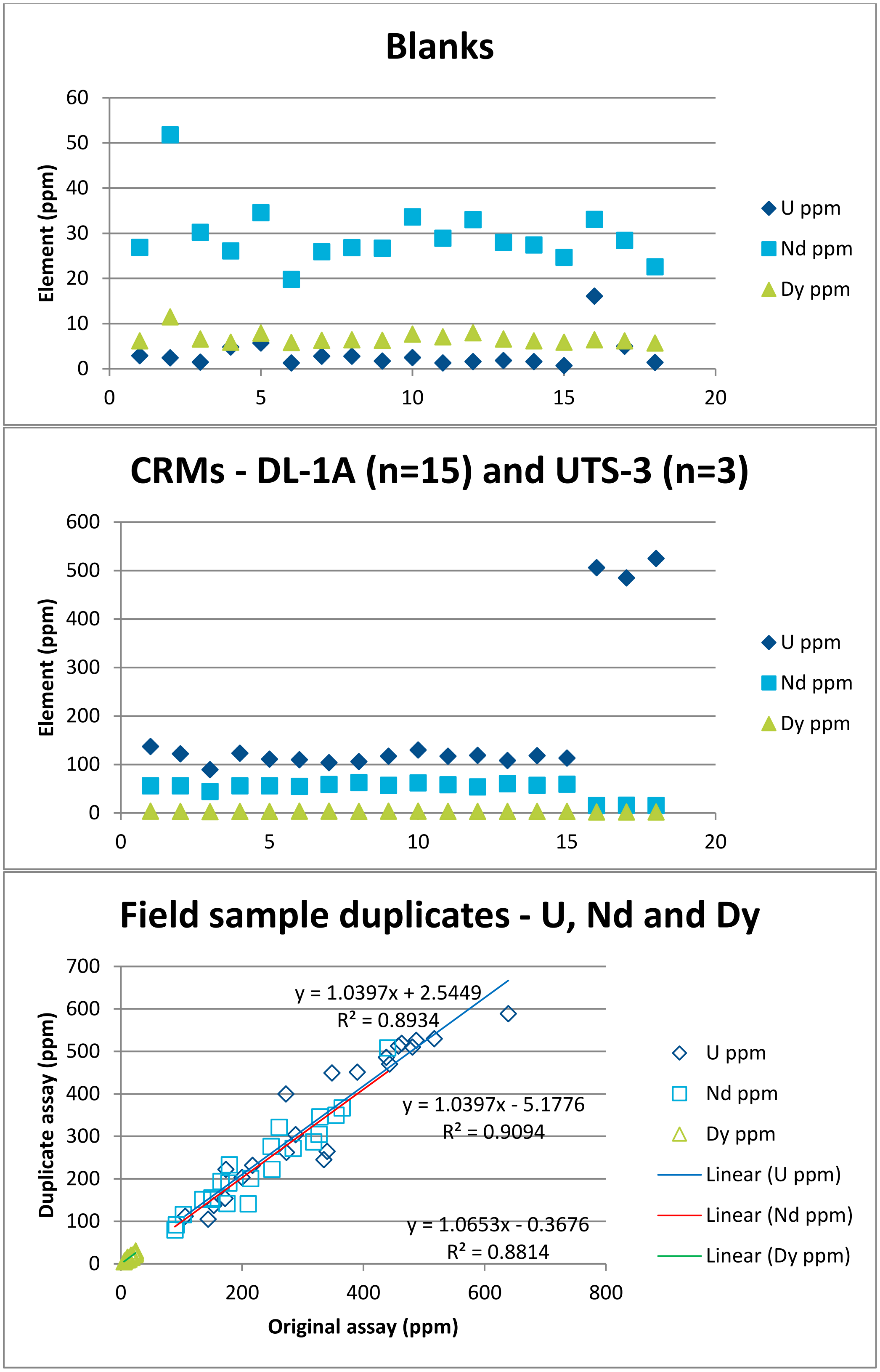


Figure 11-4: QA/QC Samples – Blanks, CRMs, Sample Duplicates

12.0 DATA VERIFICATION

SLR reviewed and used the 2013 drill hole database and Gemcom GEMS project, which is considered current for the purpose of the 2021 estimate.

Mr. Tudorel Ciuculescu, P.Geo., SLR Consultant Geologist, and independent QP carried out a site visit to the Project on July 18, 2021. The sea containers used for storage of processed samples were in good condition, locked, and undisturbed. SLR notes that the core is stored outside, uncovered, or covered with tarps, and should be better protected before the core cases start degrading.

The data verification described below was carried out for the RPA 2013 resource estimate by Mr. Ciuculescu, P. Geo. who is also the current QP.

12.1 Drill Hole Collar Surveys

Drill hole collar locations and elevations were determined by Paul H. Torrance Surveying using precision GPS measurement. The equipment used to survey was a Leica dual frequency GPS RTK (Real Time Kinematic) system, and the surveys were based on static sessions from Ministry of Transportation Ontario control monuments. The coordinate values provided were UTM, NAD83 CSRS (Canadian Spatial Reference System) horizontal datum and CGVD28 vertical datum, rounded to one decimal place.

12.2 Drill Hole Deviation

The historic holes have been tested with acid, providing control points for dip variation along the hole or at the end of the hole. For those with no data regarding the dip, i.e., 18 holes from the CB series, a correction was applied considering variations similar to the neighbouring holes.

Pele Mountain drill holes were surveyed by two different instruments. Deviation survey data was provided in digital files. Prior to transfer to the database, the data was scrutinized for errors. Details about the instruments are provided in Section 10.

12.3 Database

Drill log data were formatted accordingly for import into a Gemcom GEMS project database for geological modelling and resource estimation. The drill log data for the Project contained information acquired from several stages of exploration, during a period of more than 50 years. The database contained drill hole and sample data from several historic drill programs and the latest Pele Mountain drill programs.

The historic drill programs were conducted by Pardee in 1955 (series PA, holes 1-29), New Jersey Zinc in 1954-1955 (series CB, holes 1 to 24), Rio Algom in 1967-1979 (series CB, holes 30 to 35, diameter AX and AXT), and McIntyre (series S). There were in total 325 holes in the Gemcom database, containing 29 holes from CB series, 29 holes from the PA series, 27 holes from the S series, and 214 holes from the recent PM series. There were 143 sample entries for the CB series, 243 samples for the PA series, 58 for the S series, and 7,629 for the PM series.

The database contained drill hole collar location, deviation surveys, lithology, sample numbers, sample intervals, and analytical data. For the historic holes the analyses primarily included %U_3O_8 and there were some samples with ThO_2 analysis. For the PM-series holes, the analyses included %U_3O_8, Th, REE, Y, Sc, S, Au, and P.

12.4 Data Entry

Data were extracted from copies of the original historic drill logs, which contained the core description, sample numbers, sample intervals, and the uranium analyses. The lithology was encoded according to a scheme containing 27 lithological types. Analytical data in the historic drill holes was expressed in mixed units, either as percentage U_3O_8 or pounds/ton U_3O_8. ThO_2 analysis was available for a few samples only. All the pounds/tons values were converted to percentage U_3O_8 by dividing the pounds/tons results by 20 before the data were entered into the database.

For the drill programs and pulp replicate re-assay program conducted by Pele Mountain in 2006-2012 the core description, sample numbers, sample intervals, drill hole coordinates, and survey data were entered into the database from the drill logs. Core samples were analyzed at SGS in Toronto, SRC in Saskatoon, and at Actlabs in Ancaster. The analyses were sent to RPA and Pele Mountain in printed and digital format. Analytical values were provided in ppm for U, Th, and REE, Y, and Sc, while S in percentages and Au in ppb. Uranium was converted to oxide percentage prior to importing in the database, while Th, REE, Y, and Sc results were preserved in element ppm values.

Dhlogger and Microsoft Excel were used for data entry and data were exported as comma separated files and then imported into Gemcom GEMS. Assay data for historic holes were typed by the database operator and imported, while the PM-series assay results were imported from files provided by the laboratory.

The drill hole collar locations in UTM coordinates were entered directly into the Gemcom database.

Drill hole deviation survey data were typed for historic drill holes and imported directly when properly formatted digital data was provided, as was the case for most of the Pele Mountain drilling.

12.5 Database Validation

All data imported into the Gemcom GEMS project database were initially in the form of comma separated values file format.

Checks on the collar location, lithology, and assay data were performed. Sample and lithology location entries were validated by comparison with drill logs. Drill hole deviations were inspected visually. Collar locations were checked against paper maps and digital topographic surface. Assays were compared with drill logs for historic data and with assay certificates files originated from the laboratory. Assays were also compared by plotting the assay value against lithology. Gemcom GEMS database verification routines were used for database validation

The 3D geological model developed in Gemcom shows a good agreement between the historic holes and the Pele Mountain drill programs.

12.6 Independent Sampling by RPA QP

During the November 2010 site visit, the RPA QP collected five samples from four diamond drill holes and sent them to SGS for independent assays using the IMS95A analytical package. The samples consisted of the second half of the sampled core retained. The presence of mineralization was confirmed, and the assay results were similar to the original samples. A comparison of the assays is listed in Table 12-1.

Table 12-1: Independent Sampling by RPA QP
Radio Fuels Resources Corp. - Eco Ridge Project

Hole	From	To	Original Sample		Pulp Replicate	
			Sample ID	U_3O_8 (%)	Pulp ID	U_3O_8 (%)
PM075	239.05	239.50	01208	0.248	70973	above DL[1]
PM078	107.35	107.64	01367	0.023	70972	0.022
PM084	236.29	236.60	01561	0.013	70971	0.016
PM087	199.86	200.02	01646	0.064	70975	0.074
PM087	214.90	215.26	01655	0.056	70974	0.059

Note:

1. The grade of the sample was higher than the upper detection limit imposed by the IMS95A analytical package

It is the opinion of QP that the sample preparation, security, and analytical procedures implemented at the Project meet industry standards. The analysis of CRM, blanks, duplicate pulp samples, and duplicate core samples show acceptable results.

The QP considers that the database is acceptable to use for resource estimation.

13.0 MINERAL PROCESSING AND METALLURGICAL TESTING

Radio Fuels has not performed metallurgical testing on the Project. Results of earlier metallurgical test work are summarized in the 2007, April 2011, and August 2011 NI 43-101 Technical Reports (Scott Wilson RPA 2007, RPA 2011a, RPA 2011b, RPA 2012).

The most recent phase of metallurgical testing was performed by the Saskatchewan Research Council (SRC) in Saskatoon, Saskatchewan. The conceptual process utilizes comminution, magnetic separation, flotation, acid baking, and leaching to extract uranium and REO. The results were reported in a report and via e-mail and personal communication with SRC (SRC, 2012).

13.1 Samples

Four bulk samples, weighing between 12 kg and 32 kg, were sent to SRC by Pele Mountain contractors. The samples were used to perform physical separation tests, including size reduction, high intensity magnetic separation, flotation, acid baking, and leaching.

13.2 Sample Preparation

The samples were prepared using a combination of crushing, screening, and dry milling to reduce the particle sizes to 100% passing 300 µm. Due to the limited sample sizes, the various tests were performed on different samples. It is assumed that the results are comparative and follow up test work is advancing at SRC that will include tracking individual samples throughout the full testing cycle in preparation for pilot plant testing.

For many of the tests, the product was screened at 45 µm. The screen oversize, i.e., minus 300 µm plus 45 µm, was separated by gravity and magnetic separation and the screen undersize, i.e., minus 45 µm, was processed by flotation. Since the preliminary flotation recovery of REEs and uranium on the fine particles achieved significantly lower recovery than achieved by dry magnetic separation, a screen size of 20 µm was used to increase the amount of material reporting to the magnetic separation and reduce the amount reporting to flotation.

A single Frantz barrier magnetic separation was performed on the plus 20 µm minus 45 µm size fraction. During this separation no obvious electrostatic interference was observed which appears to support an assumption that plus 20 µm is a viable particle size fraction for dry magnetic separation. This size distribution formed the basis of the mass balance and economic analysis that was used to complete the 2012 PEA.

Bulk sample #3 was screened at 45 µm. The product weights and size distributions are shown in Table 13-1.

Table 13-1: Preliminary Screening Size Distribution
Radio Fuels Resources Corp. - Eco Ridge Project

Size (µm)	Weight (g)	Weight (%)
minus 300 plus 45	2,422	75.5%
minus 45	787	24.5%

The minus 45 µm material was then wet screened at 20 µm. The product weights and size distributions from the wet screening are shown in Table 13-2.

Table 13-2: Preliminary Screening Size Distribution
Radio Fuels Resources Corp. - Eco Ridge Project

Size (µm)	Weight (g)	Weight (%)
minus 45 plus 20	53.8	39%
minus 20	84.8	61%

From these two size distribution analyses, the overall size distribution was calculated, as shown in Table 13-3.

Table 13-3: Overall Size Distribution
Radio Fuels Resources Corp. - Eco Ridge Project

Size (µm)	Weight (g)
minus 300 plus 45	75.5%
minus 45 plus 20	9.5%
minus 20	15.0%

13.3 Analyses

Although x-ray diffraction (XRD) was used at times to quickly evaluate various parameters, lithium metaborate fusions, and inductively coupled plasma (ICP) analyses were used to determine the metallurgical balances.

13.4 Magnetic Separation

The magnetic separation tests were performed on bulk sample number #3. The coarse fraction, i.e., minus 300 µm plus 45 µm, was separated into four fractions using three different magnetic field intensities, as shown in Table 13-4.

Table 13-4: Magnetic Separation Results
Radio Fuels Resources Corp. - Eco Ridge Project

REO	Assays (ppm)				Recovery (%)				
	Feed	Mag1 6,500 G	Mag 2 10,000 G	Mag 3 18,000 G	Tails	Mag 1 6,500 G	Mag 2 10,000 G	Mag 3 18,000 G	Total
Sc_2O_3	8								
Y_2O_3	79	666.7	292.1	70.4	7.7	78.8%	7.4%	5.8%	92.0%
La_2O_3	424	3670.8	1899.9	362.4	23.5	80.9%	8.9%	5.6%	95.5%
CeO_2	796	7014.0	3439.4	621.6	36.9	82.4%	8.6%	5.1%	96.2%

REO	Assays (ppm)				Recovery (%)				
	Feed	Mag1 6,500 G	Mag 2 10,000 G	Mag 3 18,000 G	Tails	Mag 1 6,500 G	Mag 2 10,000 G	Mag 3 18,000 G	Total
Pr_6O_{11}	80	712.8	348.0	50.9	3.6	83.4%	8.7%	4.2%	96.3%
Nd_2O_3	277	2507.7	1021.8	175.0	12.2	84.8%	7.4%	4.2%	96.4%
Sm_2O_3	39	343.2	161.2	30.3	2.2	82.0%	8.2%	5.1%	95.3%
Eu_2O_3	2	17.7	9.0	2.2	0.2	76.4%	8.3%	6.5%	91.2%
Gd_2O_3	25	207.5	98.8	24.3	2.0	78.8%	8.0%	6.5%	93.3%
Tb_4O_7	3	26.1	12.7	3.3	0.3	77.3%	8.0%	6.8%	92.1%
Dy_2O_3	15	125.1	60.3	16.5	1.6	76.4%	7.9%	7.1%	91.3%
Ho_2O_3	3	24.4	10.9	3.2	0.3	76.3%	7.3%	7.0%	90.6%
Er_2O_3	5	42.2	19.2	6.0	0.7	74.8%	7.3%	7.4%	89.5%
Tm_2O_3	1	7.1	3.2	1.0	0.1	74.9%	7.1%	7.5%	89.5%
Yb_2O_3	5	38.1	16.9	5.8	0.7	73.7%	6.9%	7.8%	88.4%
Lu_2O_3	1	5.3	2.3	0.8	0.1	74.4%	6.8%	7.6%	88.8%
U_3O_8	432	3372.6	2051.9	625.0	42.6	73.0%	9.5%	9.5%	91.9%

A preliminary rougher flotation test was performed using the fine, i.e., minus 45 µm, size fraction. Flotation was performed at 25°C to 30°C using modified hydroximic acid collector at a dosage of 2.5 kg/t. Sodium silicate was used as a depressant at a dosage of 1.5 kg/t. The pH was between eight and nine and the flotation time was six minutes. The results are shown in Table 13-5. The collectors used in this test were not targeting U_3O_8 recovery. Follow up test work is advancing at SRC to optimize flotation recovery results.

Table 13-5: Flotation Results
Radio Fuels Resources Corp. - Eco Ridge Project

REO	Feed (ppm)	Concentrate (ppm)	Tailings (ppm)	Recovery (%)
Sc_2O_3	n/a	n/a	n/a	n/a
Y_2O_3	99	218.4	61.2	52.6%
La_2O_3	519	1747.4	137.2	79.8%
CeO_2	963	3242.9	253.0	80.0%
Pr_6O_{11}	95	320.2	25.3	79.8%
Nd_2O_3	292	940.1	90.7	76.3%
Sm_2O_3	49	147.3	18.4	71.3%
Eu_2O_3	3	8.3	1.5	63.0%
Gd_2O_3	33	84.1	16.9	60.7%
Tb_4O_7	5	10.5	2.7	54.8%

REO	Feed (ppm)	Concentrate (ppm)	Tailings (ppm)	Recovery (%)
Dy_2O_3	22	47.3	14.1	51.0%
Ho_2O_3	4	8.9	2.8	49.7%
Er_2O_3	8	16.2	5.4	48.6%
Tm_2O_3	1	2.6	0.9	46.7%
Yb_2O_3	7	13.3	5.1	45.0%
Lu_2O_3	1	1.9	0.7	46.2%
U_3O_8	640	838.4	577.8	31.1%

13.4.1 Acid Baking and Leaching

Leaching tests were performed using three different batches of samples. First, five samples were used to determine the optimum conditions for acid baking and leaching. The effect of baking temperature, baking time, acid to ore ratio, and leaching time were evaluated using samples that had been pre-concentrated and samples that had not been pre-concentrated. The optimum conditions based on the preliminary tests were determined to be acid baking at 310°C using the sulphuric acid to sample ratio of 0.3 t acid to one tonne of ore, an acid baking time of three hours and a leaching time of three hours. A new sample was used as the feed material to conduct batch leaching tests that were used as the basis for the 2012 PEA. The leaching results for the selected, optimum leaching conditions are shown in Table 13-6.

Table 13-6: Leaching Results
Radio Fuels Resources Corp. - Eco Ridge Project

REO	Feed (ppm)	PLS (ppm)	Residue (ppm)	Recovery (%)
Sc_2O_3	10	0.5	3.1	70.4%
Y_2O_3	298	18.2	24.5	92.5%
La_2O_3	1540	98.9	45.7	97.3%
CeO_2	2952	190.6	71.2	97.8%
Pr_6O_{11}	241	15.4	8.8	96.7%
Nd_2O_3	959	61.8	25.4	97.6%
Sm_2O_3	121	7.7	5.2	96.0%
Eu_2O_3	8	0.5	0.4	94.8%
Gd_2O_3	101	6.4	4.6	95.8%
Tb_4O_7	16	1.0	0.8	95.6%
Dy_2O_3	54	3.3	4.3	92.6%
Ho_2O_3	8	0.5	1.0	89.0%
Er_2O_3	27	1.7	1.9	93.6%
Tm_2O_3	0	0.0	0.3	0.0%

REO	Feed (ppm)	PLS (ppm)	Residue (ppm)	Recovery (%)
Yb_2O_3	20	1.2	2.0	90.8%
Lu_2O_3	0	0.0	0.3	0.0%
U_3O_8	946	61.5	15.2	98.5%

13.4.2 Head Assays

REE assays for the plus 45 µm and minus 45 µm size distributions were conducted for bulk sample #4, as shown in Table 13-7.

Table 13-7: Bulk Sample #4 Analyses
Radio Fuels Resources Corp. - Eco Ridge Project

Size (µm)	Sc	Y	La	Ce	Pr	Nd	Sm	Eu	Gd
+45 -300	3	47.6	319	677	66.8	203	32.3	1.83	22.8
-45	9	90.4	847	1430	147	451	69.8	4.1	49.1
	Tb	Dy	Ho	Er	Tm	Yb	Lu	U	Th
+45-300	2.62	12.7	2.43	4.44	0.76	4.32	0.63	267	281
-45	5.62	26.6	4.87	8.82	1.44	7.79	1.05	777	832

The results show that the finer size fraction has higher concentrations of the REEs, which is common. When the decision was made to change the classification size to 20 µm, assays were also conducted on the plus 20 µm minus 45 µm size fraction and the minus 20 µm size fraction. The finer size fraction was analyzed in duplicate. The results are shown in Table 13-8.

Table 13-8: Fine Size Fraction Analyses
Radio Fuels Resources Corp. - Eco Ridge Project

Size (µm)	Sc	Y	La	Ce	Pr	Nd	Sm	Eu	Gd
-45 +20	6	57.2	337	614	49.7	206	37.2	2.73	28.4
-20	11	42.5	197	341	28.2	115	21.6	2.12	19.7
-20R	12	41.8	191	335	27.5	113	20.8	1.91	17.2
	Tb	Dy	Ho	Er	Tm	Yb	Lu	U	Th
+45 +20	3.37	17.8	3.23	6.47	1.00	5.69	0.76	988	326
-20	2.41	13.6	2.57	4.77	0.81	4.40	0.59	771	221
-20R	2.38	12.5	2.38	4.65	0.74	4.22	0.55	768	213

These results show that the analyses for the coarser and finer size fractions are similar and, in fact, the concentrations of the REEs in the coarser size fraction are oftentimes slightly higher than the concentrations of the REEs in the finer size fraction. Based on this observation, it was assumed that the REEs are evenly distributed in the minus 45 µm plus 20 µm and the minus 20 µm particle size fractions.

13.4.3 Recovery

The analyses of the size fractions showed that the total amount of REEs reporting to the fine size fraction was not proportional to the weights reporting to the coarse and fine sizes alone. It was, however, possible to estimate the relative quantity of each REE reporting to the coarse fraction, i.e., plus 20 µm, and the fine fraction, i.e., minus 20 µm, using the weights reported in Tables 13-1, 13-2, and 13-3 and the analyses of the various size fractions. For the purposes of these estimations, it was assumed that the assays for the minus 20 µm fraction were the same as those for the minus 45 µm fractions.

In some cases, e.g., Sc, Tm, and Lu, complete test data was not available. In these cases, the average recoveries for the other light rare earth and heavy REO were utilized to estimate the overall recovery.

Using these assumptions and the recovery data reported for the various unit operations, the overall recovery for each of the REO was estimated as shown in Table 13-9.

Table 13-9: Estimated REO Recoveries
Radio Fuels Resources Corp. - Eco Ridge Project

REO	REE to Magnetic Separation	Magnetic Separation	Flotation	Leaching	Overall
Sc_2O_3	65.4%	94.7%	71.8%	70.4%	61.1%
Y_2O_3	74.9%	92.0%	52.6%	92.5%	75.9%
La_2O_3	68.1%	95.5%	79.8%	97.3%	88.1%
CeO_2	72.8%	96.2%	80.0%	97.8%	89.8%
Pr_6O_{11}	72.0%	96.3%	79.8%	96.7%	88.7%
Nd_2O_3	71.8%	96.4%	76.3%	97.6%	88.6%
Sm_2O_3	72.4%	95.3%	71.3%	96.0%	85.1%
Eu_2O_3	71.7%	91.2%	63.0%	94.8%	78.9%
Gd_2O_3	72.5%	93.3%	60.7%	95.8%	80.8%
Tb_4O_7	72.5%	92.1%	54.8%	95.6%	78.3%
Dy_2O_3	73.0%	91.3%	51.0%	92.6%	74.5%
Ho_2O_3	73.9%	90.6%	49.7%	89.0%	71.1%
Er_2O_3	74.0%	89.5%	48.6%	93.6%	73.8%
Tm_2O_3	74.9%	89.5%	46.7%	93.7%	73.8%
Yb_2O_3	75.9%	88.4%	45.0%	90.8%	70.8%
Lu_2O_3	77.3%	88.8%	46.2%	93.7%	74.1%
U_3O_8	66.1%	91.9%	31.1%	98.5%	70.2%

13.4.4 Samples

A bulk sample collection program ran from November 2011 to December 2011, consisting of drilling multiple holes on two sites located in the southeast of the resource area. The sites were selected due to the proximity to surface of the MCB, while being of sufficient depth to avoid the usual excessive groundwater leaching of the MCB near surface. M.G. Forage Inc completed drilling of 98 NTW boreholes, for a total of 2139.5 m of drilling, resulting in 2635 kg of MCB material. Approximately 200 kg of this material is currently being used in processing optimization test work at SRC and the balance is being securely stored in Elliot Lake in preparation for commencement of a pilot plant test program.

14.0 MINERAL RESOURCE ESTIMATE

14.1 Summary

SLR has carried out the Mineral Resource estimate for the mineralization within the MCB. The Mineral Resources are reported at a cut-off value of $72/t and a nominal minimum true thickness of 1.8 m. Mineral Resources have not been estimated for any zones outside of the MCB.

The current Mineral Resource estimate prepared by SLR for the Project is summarized in Table 14-1. The effective date of the Mineral Resource estimate is August 19, 2021.

Table 14-1: Mineral Resource Estimate – August 19, 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Classification	Tonnes (000 t)	U_3O_8		Total REO		U_3O_8 Equivalent	
		(%)	(000 lbs)	(ppm)	(000 lbs)	(%)	(000 lbs)
Indicated	22,306	0.045	22,290	1,613	79,314	0.081	39,920
Inferred	36,955	0.046	37,728	1,560	127,101	0.082	67,208

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated within the MCB at a cut-off value of C$72/t. Values were calculated based on prices and recoveries of uranium and rare earths, net of off-site rare earth separation costs.
3. Mineral Resources are estimated using an average long-term uranium price of US$55/lb U_3O_8, a rare earth "basket price" of US$35/kg (net of separation charges), and a C$:US$ exchange rate of 1.25:1.00.
4. U_3O_8 Equivalents are calculated by converting rare earths values (net of prices, recoveries, and separation charges) to uranium values.
5. A minimum mining thickness of 1.8 m was used.
6. TREO include light oxides La_2O_3, CeO_2, Pr_6O_{11}, and Nd_2O_3, and heavy oxides Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Y_2O_3, and Lu_2O_3. Sc_2O_3 is also included, as it occurs in low concentrations and carries high unit values like a HREO.

Since the previous NI 43-101 resource estimate, no additional drilling has been conducted at Eco Ridge.

The Mineral Resources at Eco Ridge have excellent potential for expansion, with low exploration risk. The mineralized reefs of the Elliot Lake mining camp are well known for their consistency and size. The deposit remains open down-dip.

14.2 Mineral Resource Database

The August 2021 Mineral Resource estimate for the Eco Ridge deposit was based on 264 diamond drill holes totalling 55,539 m. The resource drilling consisted of 69 historic holes drilled from 1954 to 1974 totalling 15,820 m, and 185 holes drilled by Pele Mountain from 2006 to 2012 totalling 39,719 m.

Rare earth data has been collected only for the Pele Mountain drill holes. There were 176 mineralized intercepts assayed for REE. Twenty-five of these drill holes were not assayed for Tm and Lu, and five other drill holes were not assayed for Sc.

The resource estimate was based on 2,160 assays for U and 1,937 assays for REE and other elements. The REE assays did not have Tm and Lu reported for 194 samples, and Sc results were not reported for 18 samples.

14.3 Geological Interpretation and 3D Solids

Historic drill logs, cross sections, government geology maps, and sample analyses were used in combination with data collected in the 2006 to 2012 Pele Mountain drill programs. West facing north-south cross sections were drawn which displayed topography and the locations of all available diamond drill holes with the stratigraphic intercepts identified in the holes.

The geological interpretations from the diamond drill holes used the base of the MCB and the top of the underlying volcanic formation as marker beds. These two features were linked between the diamond drill holes for each cross section and longitudinal section. The base of the MCB and the top of the volcanic formation are the most distinct and recognizable features in the stratigraphy.

The base of MCB, marked by distinct conglomerate beds or presence of pebbles accompanied by pyrite and accumulation of heavy minerals, relates directly to the location of the uranium/REE mineralization. The contact between the MCB and the lower grade mineralization HWZ is transitional and is identified by a decrease in grades across the board. The top of the HWZ is also transitional, marked by diminishing grades. The project is currently focused on the higher-grade MCB, so the HWZ was not considered for the current resource estimate. An NSR value of $72/t was used as a guide for defining the top of the MCB.

Based on assay data, the percent of uranium and REE mineralization through the HWZ and MCB typically increases down hole. The mineralization stops abruptly at the contact with the underlying quartzite. The underlying quartzite has grades of 0.01% U_3O_8 or less.

A large 25 m wide Nipissing diabase dyke crosses the Eco Ridge property. The dyke strikes east-west and dips at approximately 65° to 70° S. Several dyke segments have been modelled based on the available drilling information.

Geological interpretations were used to generate 3D wireframe models of the MCB, the unconformity, and the diabase dyke. The cross sections indicated that the MCB has an average dip of 21° towards the north, with values ranging from 17° to 25°. Data from deeper holes suggested a down-dip steepening of the dip angle. The longitudinal sections showed that the MCB has a 2° to 3° plunge towards the west. Both the cross sections and the longitudinal sections reflected a consistent thickness of quartzite between the base of the MCB and the volcanic/sediment contact. The interpretation and extrapolation of the cross section data to the topographic surface on the plan map showed that the MCB has a strike of N80°E.

Table 14-2 shows the descriptive statistics of the MCB intercepts true width, and the intercepts true width histogram is shown in Figure 14-1.

Table 14-2: MCB Intercepts True Thickness – Descriptive Statistics
Radio Fuels Resources Corp. – Eco Ridge Project

Description	MCB True Thickness (m)
Mean	2.86
Median	2.81
Minimum	1.65
Maximum	5.67
Count	256

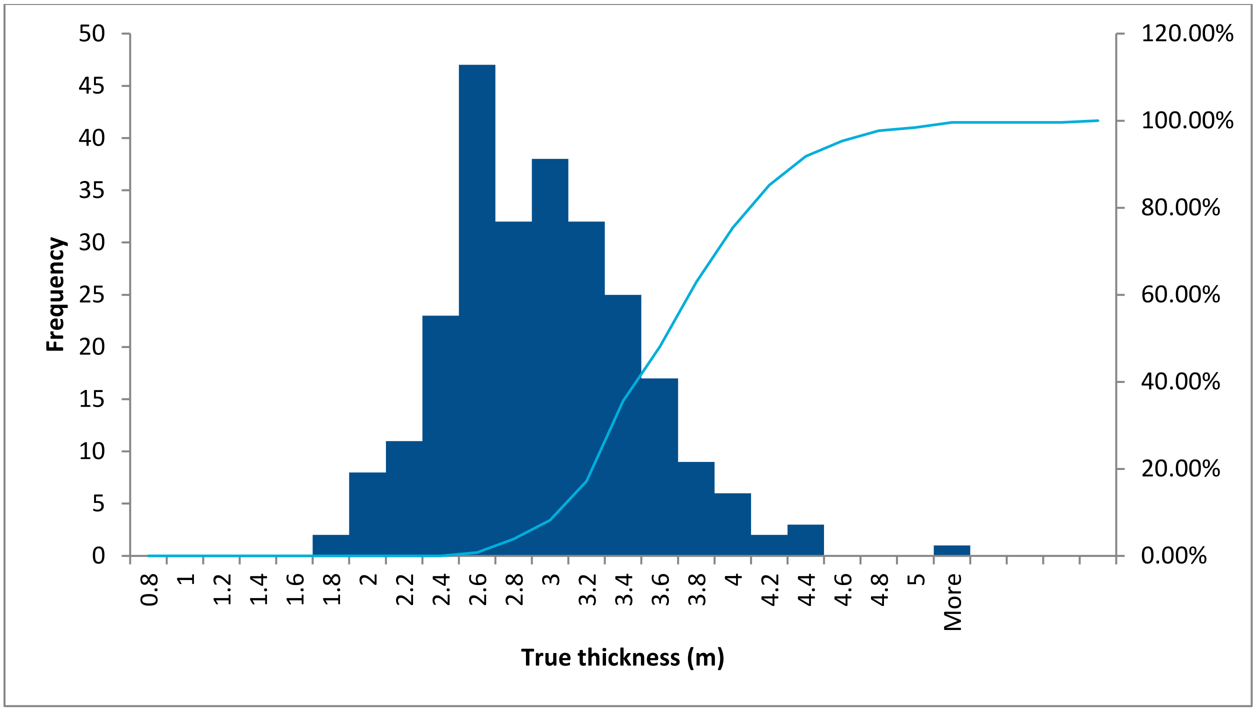


Figure 14-1: MCB Intercepts True Width Histogram (n=256)

The resource wireframe was trimmed at the Eco Ridge property boundary, licence of occupation contours, clipped with the dyke solids, and the resulting solid was then trimmed to vertical 16 m below the topographic surface to account for a crown pillar.

14.4 Basic Statistics and Capping of High Assays

Descriptive statistics of the MCB resource assays are shown in Table 14-3. The QP did not consider it necessary to cap the assays based on relatively low coefficients of variation (C of V) across the board. Uranium has the highest coefficient of variation among all the elements, with a value of less than 1.1. Percentile analysis for U_3O_8, Nd, and Dy, among the three largest contributors to the revenue, indicated that capping of high grades was not required. As more data becomes available, the necessity for high grade capping should be investigated.

Figure 14-2 shows the resource assay histograms for U_3O_8, Dy (from the heavy REE group), and Nd (from the light REE group), respectively.

Table 14-3: Rare Earth and Other Elements - MCB Resource Assays Descriptive Statistics
Radio Fuels Resources Corp. - Eco Ridge Project

Element	U_3O_8 (%)	Th (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)
Mean	0.046	326.34	329.92	599.06	61.15	202.83	34.78	1.93	23.17
Median	0.033	289.00	296.00	533.50	53.85	177.50	30.60	1.70	20.55
Minimum	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	1.021	1,420.00	2,270.00	3,820.00	401.00	1,340.00	261.00	18.70	196.00
St. Dev.	0.05	226.92	222.97	418.34	43.97	145.73	25.03	1.34	16.48
C of V	1.08	0.70	0.68	0.70	0.72	0.72	0.72	0.69	0.71
Count	2,160	1,938	1,938	1,938	1,938	1,938	1,938	1,938	1,938

Element	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)	Y (ppm)	Sc (ppm)
Mean	3.138	14.90	2.53	6.23	0.85	4.85	0.66	61.64	3.70
Median	2.700	12.60	2.19	5.30	0.74	4.20	0.58	53.00	3.10
Minimum	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Maximum	30.900	161.00	28.20	71.80	9.23	52.00	6.22	627.00	43.00
St. Dev.	2.31	11.22	1.88	4.67	0.62	3.54	0.46	44.77	2.53
C of V	0.74	0.75	0.74	0.75	0.74	0.73	0.70	0.73	0.68
Count	1,938	1,938	1,938	1,938	1,759	1,938	1,759	1,938	1,938

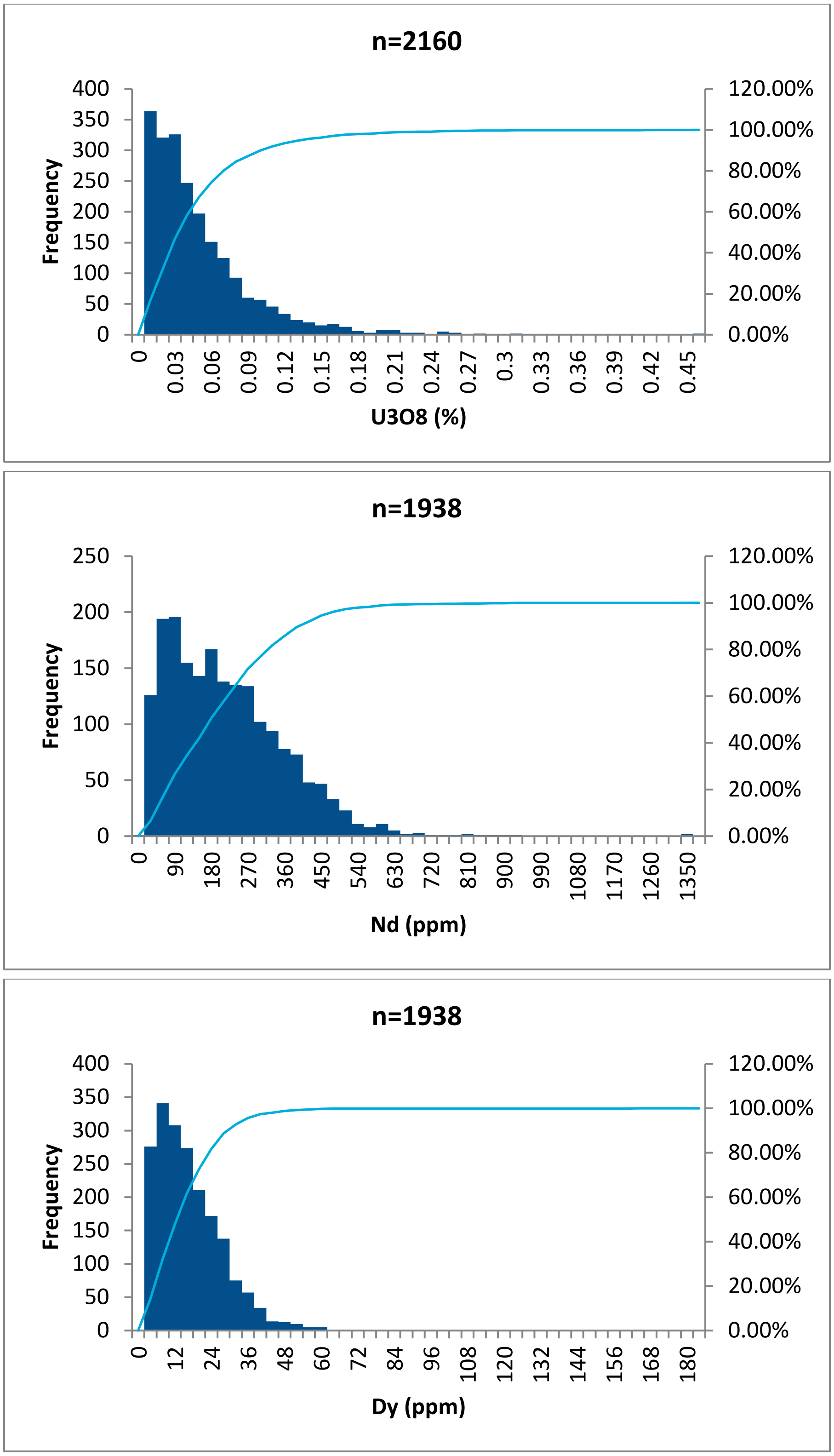


Figure 14-2: U_3O_8, Dy, and Nd Assay Histograms for MCB

14.5 Compositing

Full intercept composites were used by SLR for the MCB. The assays were weighted by sample length. The composites were used for the Mineral Resource estimate.

Descriptive statistics of the composites in the MCB are shown in Table 14-4. Histograms of the U_3O_8, Nd, and Dy composited grades for the MCB are shown in Figure 14-3.

Table 14-4: Rare Earth and Other Elements - MCB Resource Composites Descriptive Statistics
Radio Fuels Resources Corp. - Eco Ridge Project

Element	U_3O_8 (%)	Th (ppm)	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)
Mean	0.05	328.80	332.81	604.29	61.16	202.63	34.81	1.94	23.65
Median	0.04	320.05	335.14	619.77	63.17	207.30	35.54	1.92	23.41
Minimum	0.01	158.21	8.36	22.17	3.68	16.60	6.30	1.05	7.35
Maximum	0.11	685.03	583.37	1,041.90	115.44	350.29	62.44	3.22	49.91
St.Dev.	0.02	83.23	93.09	169.82	17.79	56.21	9.42	0.42	6.63
CofV	0.37	0.25	0.28	0.28	0.29	0.28	0.27	0.22	0.28
Count	256	176	176	176	176	176	176	176	176

Element	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)	Y (ppm)	Sc (ppm)
Mean	3.18	14.96	2.55	6.30	0.84	4.89	0.66	62.02	4.17
Median	3.15	14.74	2.47	6.13	0.82	4.76	0.65	61.58	3.73
Minimum	1.16	6.70	1.28	2.87	0.12	2.08	0.12	26.27	2.07
Maximum	6.63	27.83	4.69	12.25	1.44	8.68	1.11	105.46	28.31
St.Dev.	0.87	3.96	0.63	1.69	0.22	1.27	0.17	16.03	2.82
CofV	0.27	0.26	0.25	0.27	0.27	0.26	0.26	0.26	0.68
Count	176	176	176	176	160	176	160	176	176

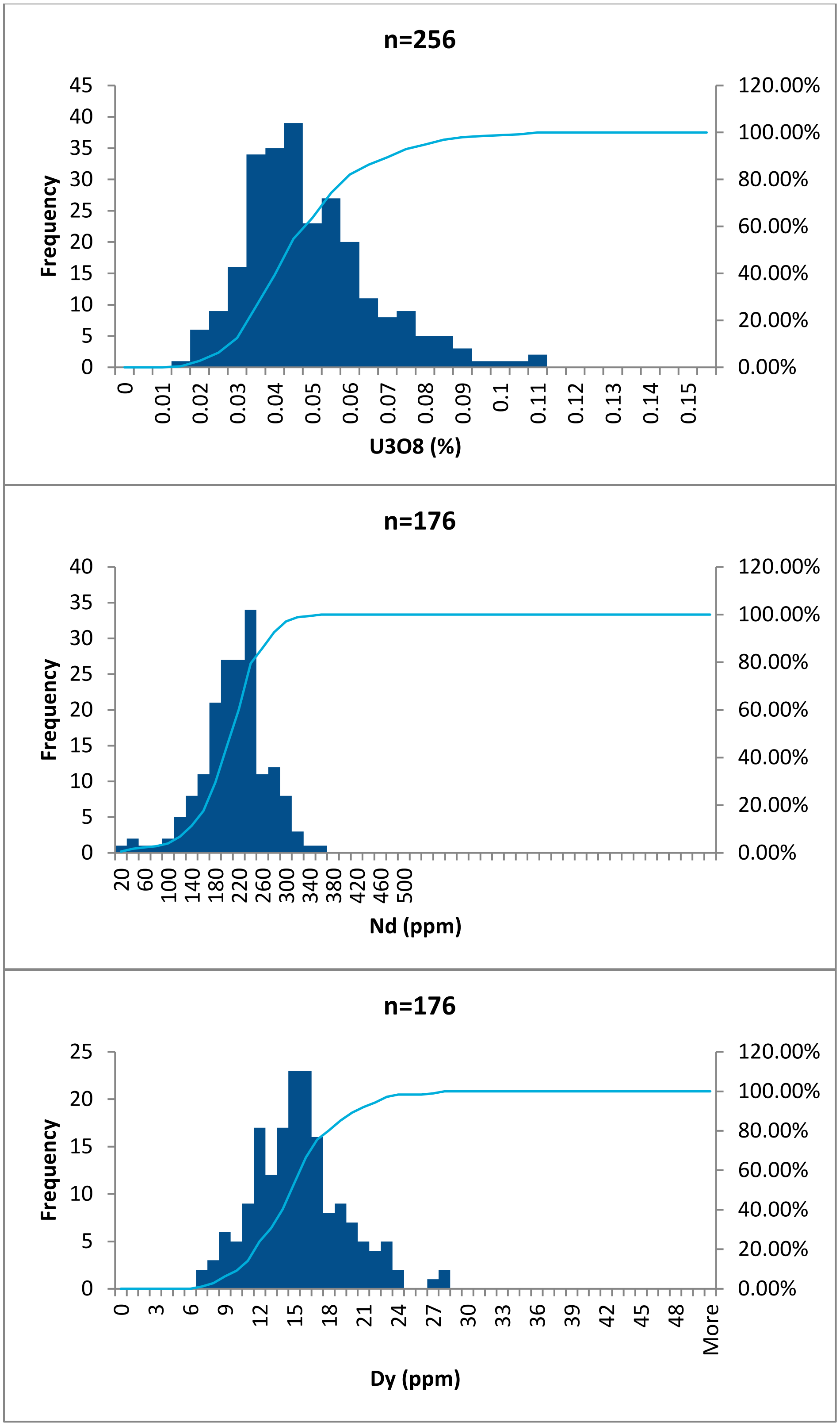


Figure 14-3: U_3O_8, Dy, and Nd Composite Histograms for MCB

14.6 Cut-Off Grade

SLR used an NSR cut-off value for the Mineral Resources. The assumptions used for calculating the NSR value include the following:

- Uranium price of \$55/lb U_3O_8
- Rare earth basket price of \$35/kg REO
- Net of separation costs of \$5/kg for LREO and \$30/kg for HREO
- Exchange rate of C\$1.25 = US\$1.00
- Metallurgical recoveries of 90% for uranium and an average of 88% for rare earths
- NSR royalty of 0.75%

A net value (in \$/t) was calculated for each block in the model, using the grades as inputs and the assumptions above. This value was compared to operating cost assumptions to determine which blocks to include in the Mineral Resource and which blocks to exclude.

An operating cost of \$72/t was assumed for the MCB, for room and pillar mining, and full process and G&A costs. The MCB wireframe was drawn at the nominal limit of \$72/t NSR values.

Table 14-5 presents the REO pricing used for the NSR factor calculation for the August 2021 resource estimate. The factors used for the U_3O_8 equivalent calculation are shown in Table 14-6.

Table 14-5: Rare Earth Oxide Pricing – August 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Oxide	Value per Unit	Price
U_3O_8	US\$/lb	55
CeO_2	US\$/kg	5
La_2O_3	US\$/kg	5
Nd_2O_3	US\$/kg	110
Pr_6O_{11}	US\$/kg	110
Sm_2O_3	US\$/kg	5
Eu_2O_3	US\$/kg	40
Gd_2O_3	US\$/kg	50
Sc_2O_3	US\$/kg	1,230
Y_2O_3	US\$/kg	6
Yb_2O_3	US\$/kg	25
Dy_2O_3	US\$/kg	475
Er_2O_3	US\$/kg	40
Ho_2O_3	US\$/kg	-
Lu_2O_3	US\$/kg	-
Tb_4O_7	US\$/kg	1,370
Tm_2O_3	US\$/kg	-

Table 14-6: Factors for U_3O_8% Equivalent Calculation – August 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Element	Value per Unit	U_3O_8 % Eq
Ce	C$/ppm	0.000001615
La	C$/ppm	0.000001512
Nd	C$/ppm	0.000083203
Pr	C$/ppm	0.000086281
Sm	C$/ppm	0.000001445
Eu	C$/ppm	0.000026748
Gd	C$/ppm	0.000034083
Sc	C$/ppm	0.000873045
Y	C$/ppm	0.000004380
Yb	C$/ppm	0.000015265
Dy	C$/ppm	0.000307606
Er	C$/ppm	0.000025566
Ho	C$/ppm	0.000000000
Lu	C$/ppm	0.000000000
Tb	C$/ppm	0.000955600
Tm	C$/ppm	0.000000000

14.7 Variography And Trend Analysis

Variograms were prepared for the MCB using the U_3O_8, Nd, and Dy full intercepts. The omnidirectional variograms shown in Figure 14-4 are essentially 2D variograms in the plane of the mineralization. The variograms based on the updated dataset are similar to those generated previously, indicating ranges between 375 m and 450 m for the three commodities investigated. The nugget effect values are relatively high, generally above 50% of the sill. Directional variograms are generally sensitive to minor variations of the orientation and lag, which may be indicative of sparse sampling or the need to define smaller domains within the resource wireframe.

Previous trend analysis studies (2012 RPA PEA) indicated that the eastern and central part of the MCB wireframe might represent two separate domains. The area in the central part of the MCB displayed a north-northwest to south-southeast (approximately 155°) oriented trend, while the eastern part displayed a west-northwest to east-southeast (approximately 120°) oriented trend. The two directions of continuity identified in the MCB represent relatively small deviations from the documented regional paleocurrent northwest direction (135°) (Fralick and Miall, 1989). The trend analysis performed in the 2012 RPA PEA report on the two MCB domains with approximate trends of 155° and 120° did not yield good variograms, mainly because of the reduction in available composites. The latest set of drill holes added to the database intended to expand the resource footprint, had large drill hole spacing, and was focused outside of the studied area, hence it was inadequate for helping the trend interpretation. The trend analysis should be revisited when data generated by subsequent infill drilling programs become available. Consequently, the inverse distance squared algorithm was used for interpolation of uranium and REE grades. The search ellipses were oriented towards 135° for grade interpolation in the MCB.

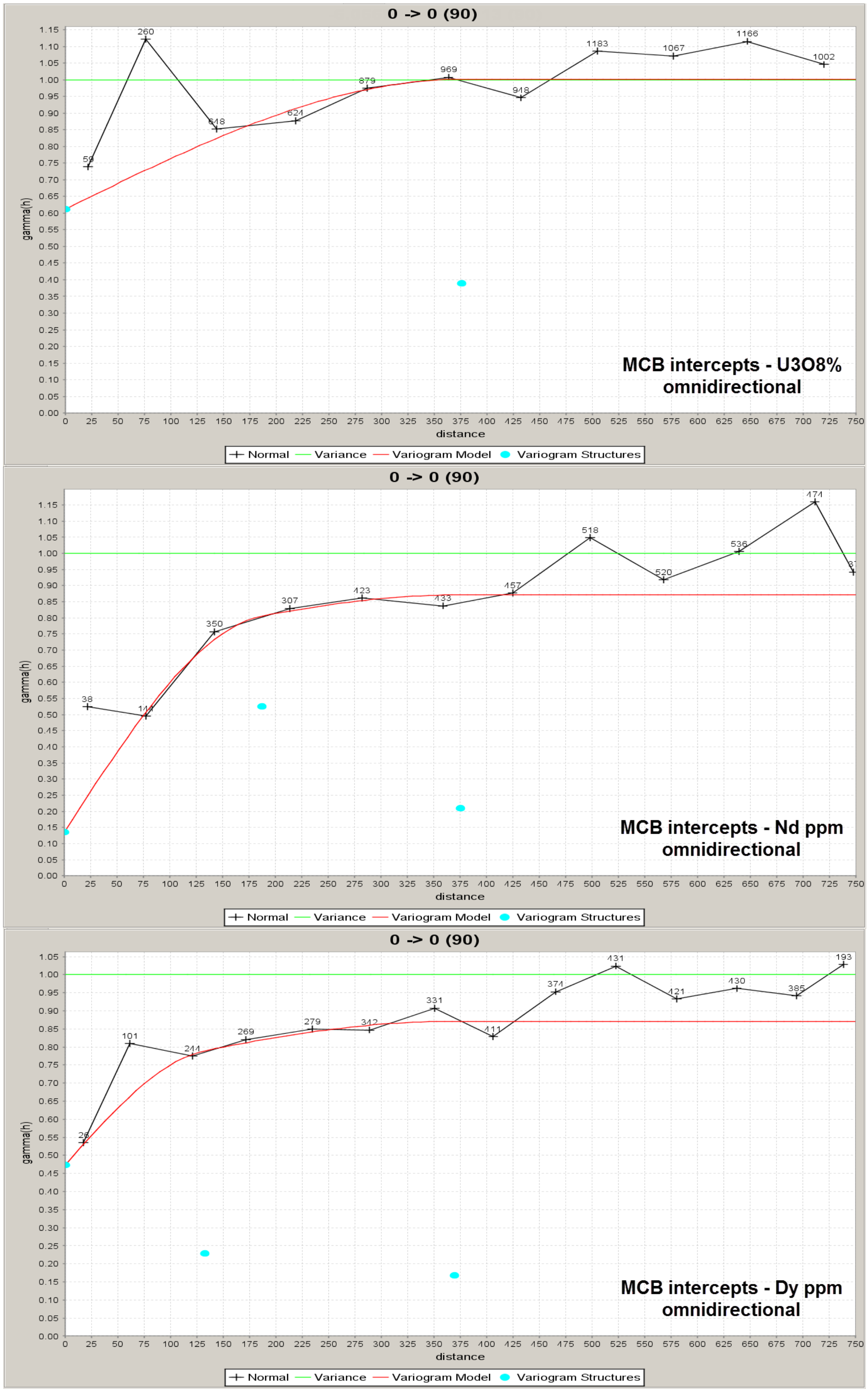


Figure 14-4: MCB Intercepts Variography for U3O8, Nd, and Dy

14.8 Block Model and Grade Estimation

A block model extending beyond the limits of the modelled MCB wireframe was set up in Gemcom GEMS. The block sizes were 25 m east-west by 25 m north-south by 3 m vertical.

The MCB resource wireframes were used to flag the resource blocks and also to establish the percent of each block inside the wireframe. Table 14-7 lists the block model characteristics.

Table 14-7: Block Model Setup
Radio Fuels Resources Corp. - Eco Ridge Project

Element	X (m)	Y (m)	Z (m)
Origin	378412.5	5137012.5	500
Block size	25	25	3
Block count	324	152	300

The interpolation method used for the resource estimate was inverse distance squared, performed in three passes, with an ellipsoidal search having its long axis oriented towards 135°. The search ellipse characteristics and sample selection strategy are presented in Table 14-8.

Table 14-8: Search Strategy Parameters
Radio Fuels Resources Corp. - Eco Ridge Project

Zone	Ellipse	Anisotropy			Rotation			Sample Selection		
		X (m)	Y (m)	Z (m)	Z	X	Z	Min sample	Max sample	Max per drill hole
MCB	Pass 1	150	100	50	5°	-20°	120°	2	12	1
	Pass 2	300	200	100	5°	-20°	120°	2	12	1
	Pass 3	600	400	200	5°	-20°	120°	1	12	1

For each resource block, the interpolated REE values were transformed into their respective oxide grade and summed to suit the need for reporting LREO, HREO including yttrium oxide and scandium oxide, as well as TREO.

The tonnage estimate was based on a density of 2.7 g/cm^3. This is the same factor used by Sprague (1965), by Rio Algom for its “ore estimates”, as outlined in the description of Rio Algom’s estimation methods in Hart and Sprague (1968), and by RPA in previous estimates.

14.9 Block Model Validation

The interpolated block grades were visually compared with the grades of the composites, both in plan and on vertical section.

The U_3O_8 grade was also interpolated using the nearest neighbour method as a check, and similar grades were estimated.

In the QP’s opinion, the block model is a reasonable representation of the tonnage and grade of the MCB uranium and REE mineralization of the Project.

A plan view of the resource block model is shown in Figure 14-5.

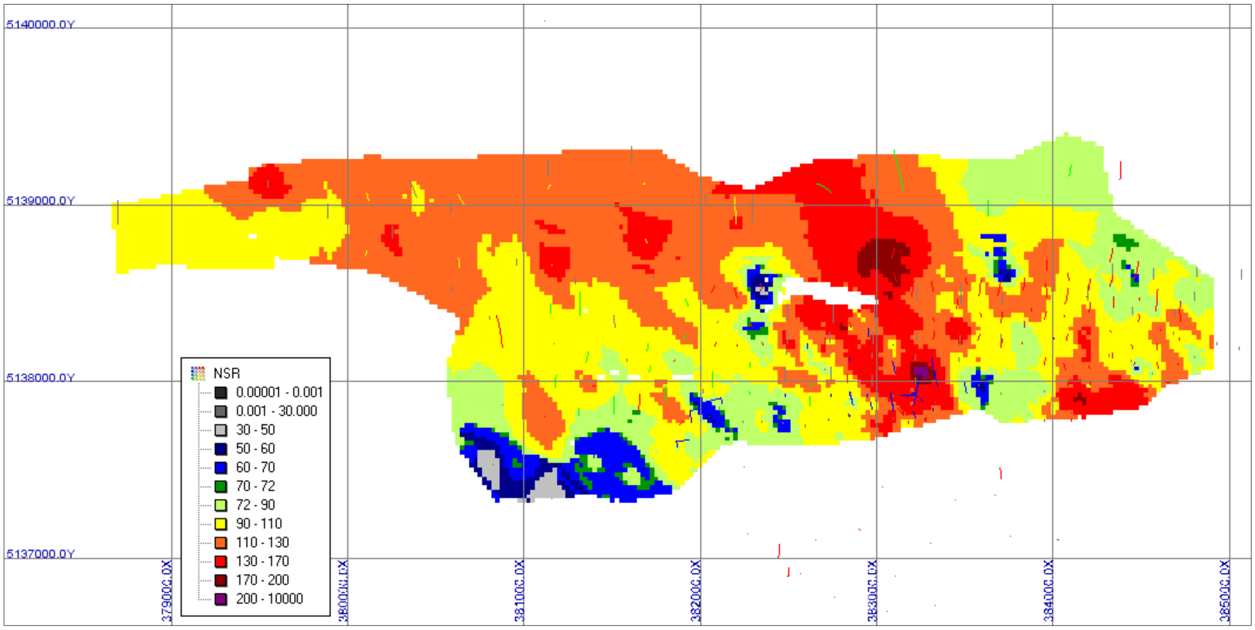


Figure 14-5: Resource Blocks in MCB – NSR Values

14.10 Classification

The uranium and REE mineralization at Eco Ridge is hosted in the MCB, as well as in the lower grade HWZ. For the MCB, the grade and thickness continuity between holes is excellent. The omnidirectional variograms for uranium, neodymium, and dysprosium displayed maximum ranges between 375 m and 450 m. The nugget effect indicated by the variograms was relatively high, generally above 0.5.

The Mineral Resources were classified as Indicated using a maximum drill hole spacing of 200 m, representing approximately half of the average maximum variogram range. For the Indicated Resources, the MCB average drill hole spacing was 130 m.

The remaining Mineral Resources within the resource wireframe were classified as Inferred. For the Inferred Resources, drill hole spacing averages 310 m. This considers the continuous structure of the mineralization and concurs with past practice in the Elliot Lake district.

14.11 Mineral Resource Statement

The current Mineral Resource estimate is listed in Table 14-9. The grade of individual REOs and related oxides, as well as LREO, HREO, and TREO, are presented in Table 14-10.

The Qualified Person (QP) is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

Table 14-9: Mineral Resource Estimate – August 19, 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Classification	Tonnes (000 t)	U_3O_8		Total REO		U_3O_8 Equivalent	
		(%)	(000 lbs)	(ppm)	(000 lbs)	(%)	(000 lbs)
Indicated	22,306	0.045	22,290	1,613	79,314	0.081	39,920
Inferred	36,955	0.046	37,728	1,560	127,101	0.082	67,208

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated within the MCB at a cut-off value of C$72/t. Values were calculated based on prices and recoveries of uranium and rare earths, net of off-site rare earth separation costs.
3. Mineral Resources are estimated using an average long-term uranium price of US$55/lb U_3O_8, a rare earth "basket price" of US$35/kg (net of separation charges), and a C$:US$ exchange rate of 1.25:1.00.
4. U_3O_8 Equivalents are calculated by converting rare earths values (net of prices, recoveries, and separation charges) to uranium values.
5. A minimum mining thickness of 1.8 m was used.
6. TREO include light oxides La_2O_3, CeO_2, Pr_6O_{11}, and Nd_2O_3, and heavy oxides Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Y_2O_3, and Lu_2O_3. Sc_2O_3 is also included, as it occurs in low concentrations and carries high unit values like a HREO.

Table 14-10: Mineral Resource Estimate (Rare Earth Oxides) – August 19, 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Resource	Indicated		Inferred	
Tonnes	22,743,000		36,560,000	
Uranium	0.045%	22,554,000 lbs	0.047%	37,623,000 lbs
Uranium Equivalent	0.099%	49,827,000 lbs	0.102%	81,842,000 lbs
Rare Earth Oxides	**Grade (ppm)**	**Contained Oxides (t)**	**Grade (ppm)**	**Contained Oxides (t)**
La_2O_3 (ppm)	385	8,589	371	13,707
CeO_2 (ppm)	729	16,272	701	25,921
Pr_6O_{11} (ppm)	73	1,625	70	2,602
Nd_2O_3 (ppm)	234	5,224	226	8,353
Sm_2O_3 (ppm)	40	895	40	1,461
Eu_2O_3 (ppm)	2	50	2	79
Gd_2O_3 (ppm)	27	595	26	976
Tb_4O_7 (ppm)	4	82	4	132
Dy_2O_3 (ppm)	17	379	17	621
Ho_2O_3 (ppm)	3	64	3	103

Resource	Indicated		Inferred	
Rare Earth Oxides	Grade (ppm)	Contained Oxides (t)	Grade (ppm)	Contained Oxides (t)
Er_2O_3 (ppm)	7	158	7	261
Tm_2O_3 (ppm)	1	21	1	35
Yb_2O_3 (ppm)	6	123	5	203
Lu_2O_3 (ppm)	1	16	1	28
Y_2O_3 (ppm)	78	1,743	77	2,855
Sc_2O_3 (ppm)	6	140	9	315
LREO (ppm)	1,422	31,711	1,369	50,583
HREO (ppm)	191	4,265	191	7,069
TREO (ppm)	1,613	35,976	1,560	57,652

Notes:

1. CIM definitions were followed for Mineral Resources.
2. Mineral Resources are estimated within the MCB at a cut-off value of C$72/t. Values were calculated based on prices and recoveries of uranium and rare earths, net of off-site rare earth separation costs.
3. Mineral Resources are estimated using an average long-term uranium price of US$55/lb U_3O_8, a rare earth "basket price" of US$35/kg (net of separation charges), and a C$:US$ exchange rate of 1.25:1.00.
4. U_3O_8 Equivalents are calculated by converting rare earths values (net of prices, recoveries, and separation charges) to uranium values.
5. A minimum mining thickness of 1.8 metres was used.
6. LREO include La_2O_3, CeO_2, Pr_6O_{11}, and Nd_2O_3.
7. HREO include Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, and Lu_2O_3. Y_2O_3 and Sc_2O_3.

14.12 Sensitivity Analysis

The Mineral Resources in the MCB were moderately sensitive to the cut-off value in the $70/t to $90/t NSR range, and sensitive to higher cut-off values for both Indicated and Inferred Resources. The tonnage and grades for various NSR cut-off values are presented in Table 14-11 and Figure 14-6 for Indicated Resources, and in Table 14-12 and Figure 14-7 for Inferred Resources.

Table 14-11: Indicated Resources at Various NSR Cut-off Values
Radio Fuels Resources Corp. - Eco Ridge Project

Cut-off NSR Value ($/t)	Tonnage (000 t)	U_3O_8 (%)	TREO (%)	EqU_3O_8 (%)
150	1,226	0.075	0.218	0.123
140	2,145	0.070	0.210	0.116
130	3,614	0.065	0.203	0.109
120	5,870	0.060	0.194	0.103
110	9,467	0.055	0.185	0.096
100	13,969	0.051	0.176	0.090
90	18,794	0.048	0.168	0.085
80	21,453	0.046	0.163	0.082
75	22,160	0.045	0.162	0.081
72	**22,306**	**0.045**	**0.161**	**0.081**
70	22,308	0.045	0.161	0.081
60	22,311	0.045	0.161	0.081
50	22,311	0.045	0.161	0.081
40	22,311	0.045	0.161	0.081
30	22,311	0.045	0.161	0.081
20	22,311	0.045	0.161	0.081
10	22,311	0.045	0.161	0.081
0	22,311	0.045	0.161	0.081

Table 14-12: Inferred Resources at Various NSR Cut-off Values
Radio Fuels Resources Corp. - Eco Ridge Project

Cut-off NSR Value ($/t)	Tonnage (000 t)	U_3O_8 (%)	TREO (%)	EqU_3O_8 (%)
150	488	0.073	0.206	0.119
140	955	0.068	0.199	0.113
130	3,784	0.060	0.184	0.103
120	13,325	0.055	0.175	0.095
110	21,254	0.053	0.171	0.091
100	28,076	0.050	0.166	0.088
90	32,067	0.049	0.162	0.086
80	35,562	0.047	0.157	0.083
75	36,818	0.046	0.156	0.083
72	**36,955**	**0.046**	**0.156**	**0.082**
70	36,960	0.046	0.156	0.082
60	36,960	0.046	0.156	0.082
50	36,960	0.046	0.156	0.082
40	36,960	0.046	0.156	0.082
30	36,960	0.046	0.156	0.082
20	36,960	0.046	0.156	0.082
10	36,960	0.046	0.156	0.082
0	36,960	0.046	0.156	0.082

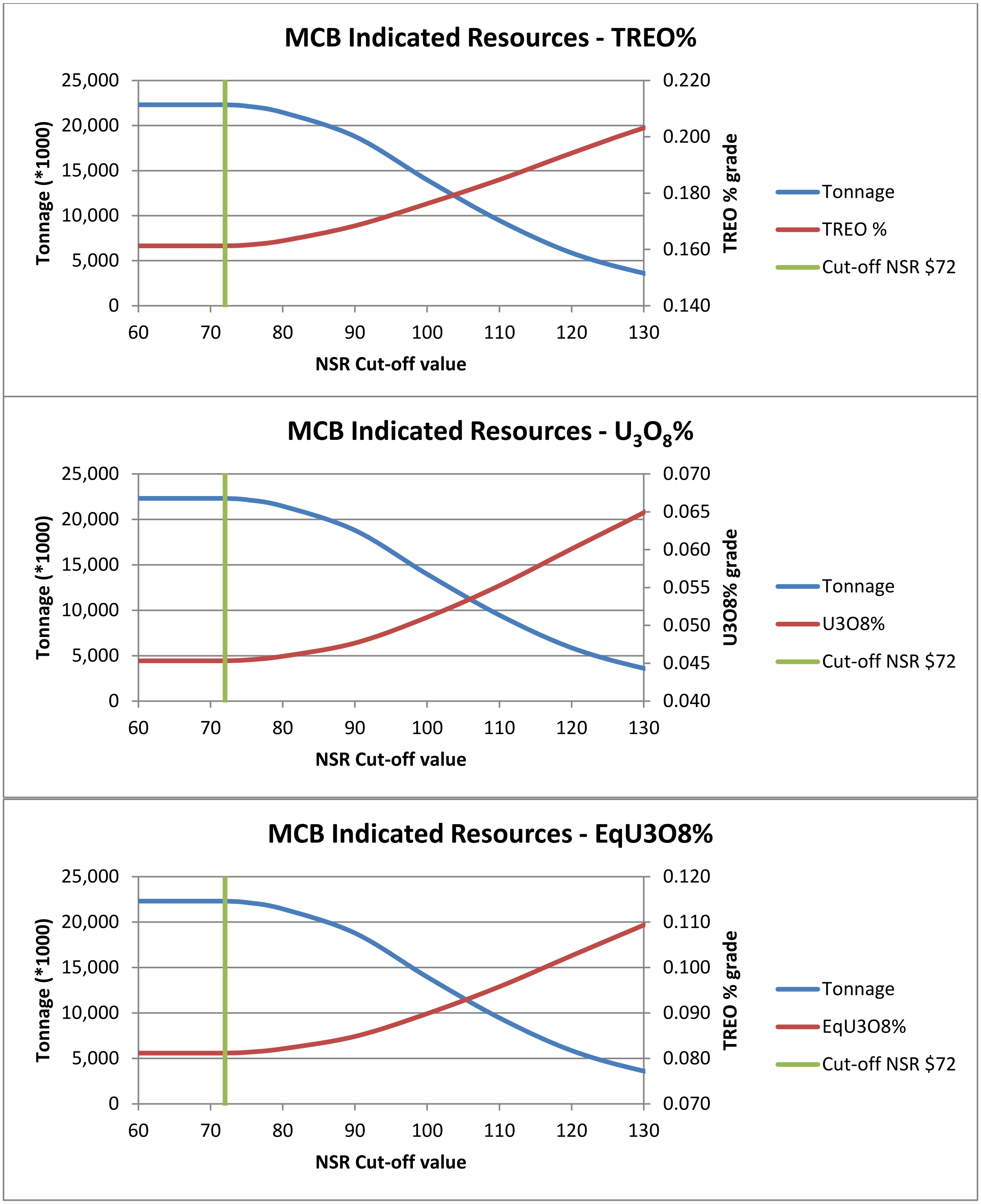
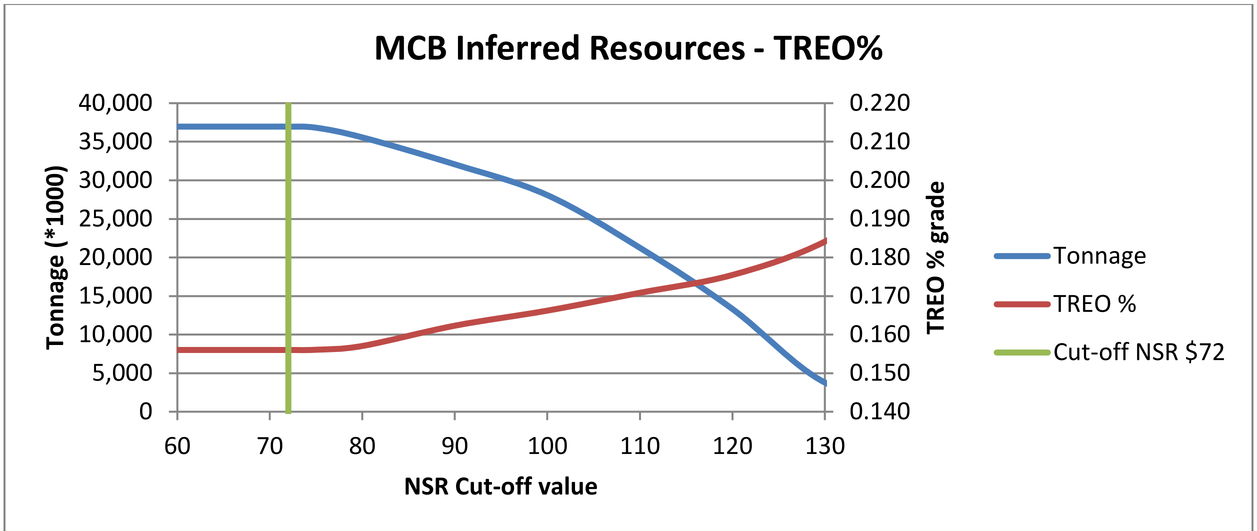
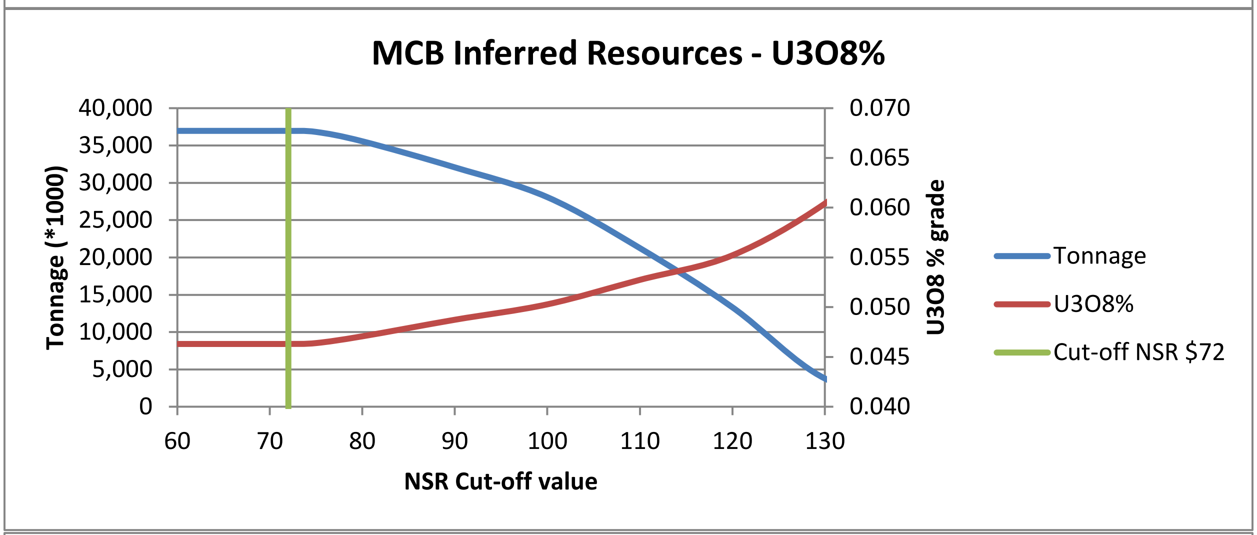


Figure 14-6: Grade –Tonnage Curves of Indicated Resource





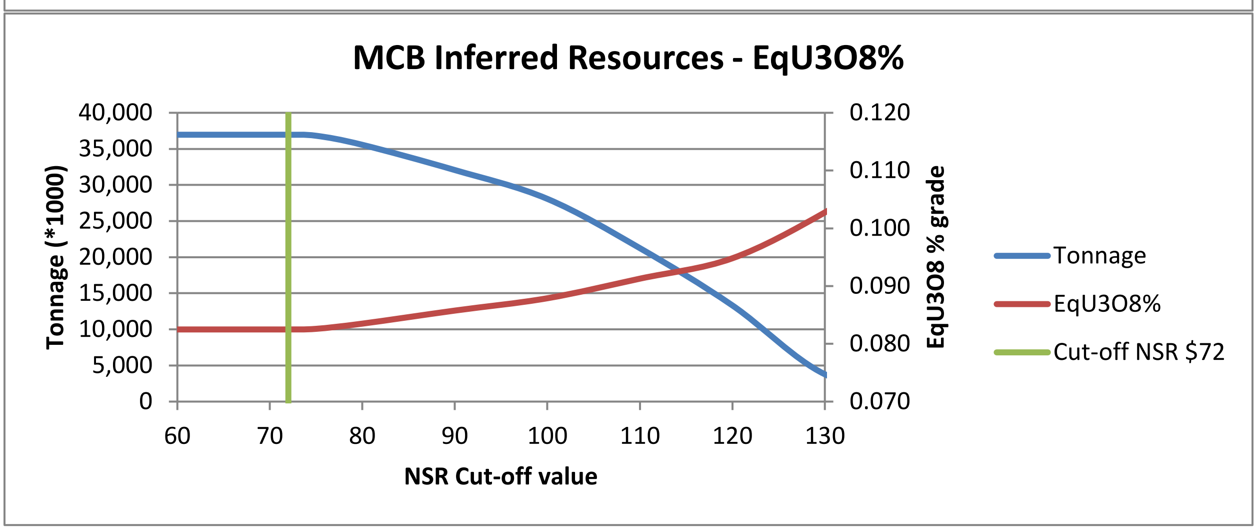


Figure 14-7: Grade –Tonnage Curves of Inferred Resource

14.13 Comparison with Previous Mineral Resource Estimate

The Mineral Resource estimate for the MCB at Eco Ridge reported in the 2013 is compared with the current 2021 estimate in Table 14-1.

Table 14-13: Mineral Resource Comparison for the MCB– 2013 to 2021
Radio Fuels Resources Corp. – Eco Ridge Project

Resource	NSR Cut-Off ($/t)	Tonnage (000 t)	Grade (% U_3O_8)	Grade (% TREO)
2013 Indicated	90	22,743	0.045	0.161
2013 Inferred	90	36,560	0.047	0.155
2021 Indicated	72	22,306	0.045	0.161
2021 Inferred	72	36,955	0.046	0.156

The Mineral Resources were reported in a similar fashion, following the same methodology. The 2021 estimate used updated metal prices, at prices of US$55/lb U_3O_8 (down from US$70/lb U_3O_8) and rare earth "basket price" of US$35/kg (down from US$55/kg). The C$:US$ exchange rate has also changed to 1.25:1.00, resulting in a reduction of the NSR cut-off value to C$72/t. The current resources are similar with those reported for the 2013 estimate.

15.0 MINERAL RESERVE ESTIMATE

There are no Mineral Reserves estimated for the Project.

16.0 MINING METHODS

Not applicable.

17.0 RECOVERY METHODS

Not applicable.

18.0 PROJECT INFRASTRUCTURE

Not applicable.

19.0 MARKET STUDIES AND CONTRACTS

Not applicable.

20.0 ENVIRONMENTAL STUDIES, PERMITTING, AND SOCIAL OR COMMUNITY IMPACT

Not applicable.

21.0 CAPITAL AND OPERATING COSTS

Not applicable.

22.0 ECONOMIC ANALYSIS

Not applicable.

23.0 ADJACENT PROPERTIES

23.1 Exploration Projects

Abeta Mining Corporation Limited (Abeta) held a block of 25 claims (Abeta Block) on the west boundary of the Eco Ridge property. During the period from October 1953 to June 1954, 15 holes were drilled by the Mining Corporation of Canada on the Abeta Block (Robinson, 1954). In 1977, Long Lac Mineral Exploration drilled 14 holes on the Abeta Block and, in 1977, David S. Robertson & Associates Ltd. (Robertson) completed a report on the economic potential of the Eco Ridge property previously owned by Abeta.

Robertson noted that there were several beds of uraniferous conglomerates within the Lower Matinenda Formation. The principal bed was located from 15.2 m (50 ft) to 30.4 m (100 ft) above the basement rocks and Robertson identified this bed as the "Pardee Reef". It also noted that uraniferous conglomerate beds were developed from 3.3 m (10 ft) to 15.2 m (50 ft) above the hanging wall contact of the Pardee Reef and termed these units "Floater Reefs". Robertson also noted the occurrence of a polymictic conglomerate at the contact between the sediments and the underlying basement rocks.

The uranium mineralization on the Abeta Block is interpreted as an extension of the mineralization on the Pele Mountain property to the west (the Pardee deposit). The Pardee Reef described by Robertson is directly correlated with the MCB described on the Pele Mountain property. The Floater Reefs are correlated with the upper reefs and the conglomerate located at the basement contact on the Abeta property is correlated with the BCB described on the Eco Ridge property.

This information was used to extend the Mineral Resource to the western boundary of the Eco Ridge property.

23.2 Mining Operations

Historically, mining and processing operations were carried out in the Elliot Lake area, but not on the Eco Ridge property. The mining at Elliot Lake was all by underground methods, primarily room and pillar, with shaft access. The major portion of the ore mined was processed through a conventional uranium processing plant, with some production from underground leaching. The Elliot Lake mineralization also contains REO. Yttrium oxide and REO were recovered at the Denison mine in the past, as by-products of the uranium production.

Rio Algom operated a total of nine uranium mines between 1955 and 1996 while Denison Mines operated three. The two closest mines to the Project are Nordic (Denison Mines) and Lacnor (Rio Algom) mines, few kilometres west of the property. Nordic Mine started its operations in 1956 and ended in 1970, producing approximately 13 Mt of ore from the Pardee Reef. Lacnor operated from 1956 to 1960 producing approximately 3.4 Mt of ore. Stanleigh Mine (Rio Algom), another major uranium mine further to the west of Nordic and Lacnor mines, operated from 1956 to 1960 and re-opened in 1982 until its final closure in 1996, producing over 14.0 Mt of ore from the Pardee Reef (Rio Algom, 2005).

24.0 OTHER RELEVANT DATA AND INFORMATION

No additional information or explanation is necessary to make this Technical Report understandable and not misleading.

25.0 INTERPRETATION AND CONCLUSIONS

The Eco Ridge Mineral Resource estimate with an effective date of August 19, 2021, is summarized in Table 25-1. Canadian Institute of Mining, Metallurgy and Petroleum (CIM) Definition Standards for Mineral Resources and Mineral Reserves (CIM (2014) definitions) were used for Mineral Resource classification.

Table 25-1: Mineral Resource Estimate – August 19, 2021
Radio Fuels Resources Corp. - Eco Ridge Project

Classification	Tonnes (000 t)	U_3O_8		Total REO		U_3O_8 Equivalent	
		(%)	(000 lbs)	(ppm)	(000 lbs)	(%)	(000 lbs)
Indicated	22,306	0.045	22,290	1,613	79,314	0.081	39,920
Inferred	36,955	0.046	37,728	1,560	127,101	0.082	67,208

Notes:

1. CIM (2014) definitions were followed for Mineral Resources.
2. Mineral Resources are estimated within the Main Conglomerate Bed (MCB) at a cut-off value of C$72/t. Values were calculated based on prices and recoveries of uranium and rare earths, net of off-site rare earth separation costs.
3. Mineral Resources are estimated using an average long-term uranium price of US$55/lb U_3O_8, a rare earth "basket price" of US$35/kg (net of separation charges), and a C$:US$ exchange rate of 1.25:1.00.
4. U_3O_8 Equivalents are calculated by converting rare earths values (net of prices, recoveries, and separation charges) to uranium values.
5. A minimum mining thickness of 1.8 m was used.
6. TREO include light oxides La_2O_3, CeO_2, Pr_6O_{11}, and Nd_2O_3, and heavy oxides Sm_2O_3, Eu_2O_3, Gd_2O_3, Tb_4O_7, Dy_2O_3, Ho_2O_3, Er_2O_3, Tm_2O_3, Yb_2O_3, Y_2O_3, and Lu_2O_3. Sc_2O_3 is also included, as it occurs in low concentrations and carries high unit values like a HREO.

No additional drilling has been conducted at Eco Ridge since the previous NI 43-101 resource estimate.

The Mineral Resources at Eco Ridge have excellent potential for expansion, with low exploration risk. The mineralized reefs of the Elliot Lake mining camp are well known for their consistency and size. The deposit remains open down-dip.

The Qualified Person (QP) is not aware of any environmental, permitting, legal, title, taxation, socio-economic, marketing, political, or other relevant factors that could materially affect the Mineral Resource estimate.

26.0 RECOMMENDATIONS

SLR recommends that Radio Fuels proceed with additional exploration programs and search of historical information from other uranium and REE operations in the area. These programs would have the following objectives:

- Search for the dip continuation of the existing mineralization
- Infill drilling to increase confidence of the Mineral Resource estimate
- Additional metallurgical test work
- Engineering studies
- Mineral Resource estimate update

SLR has reviewed, and concurs with, the budget proposed by Radio Fuels for the exploration programs on the Eco Ridge property. These activities, consisting of core drilling, geophysical and geochemical surveys, and an updated Mineral Resource estimate, are detailed in Table 26-1.

Table 26-1: Recommended Program and Budget
Radio Fuels Resources Corp. – Eco Ridge Project

Item	Total (US$)
Exploration Core Drilling (3,000 m at $350/m)	1,050,000
Geochemical Surveys	100,000
Geophysical Surveys	400,000
Resource Estimate Update	100,000
Metallurgical Test Work	150,000
Engineering Studies	250,000
Subtotal	2,050,000
Contingency	250,000
Total	**2,300,000**

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28.0 DATE AND SIGNATURE PAGE

This report titled "Technical Report on the Eco Ridge Project, Elliot Lake Area, Ontario, Canada" with an effective date of August 19, 2021, was prepared and signed by the following author:

(Signed and Sealed) ***Tudorel Ciuculescu***

Dated at Toronto, ON
September 14, 2021

Tudorel Ciuculescu, M.Sc., P.Geo.
Consultant Geologist

29.0 CERTIFICATE OF QUALIFIED PERSON

29.1 Tudorel Ciuculescu

I, Tudorel Ciuculescu, M.Sc., P.Geo., as an author of this report entitled "Technical Report on the Eco Ridge Project, Elliot Lake Area, Ontario, Canada" with an effective date of August 19, 2021, prepared for Radio Fuels Resources Corp., do hereby certify that:

1. I am Consultant Geologist with SLR Consulting (Canada) Ltd, of Suite 501, 55 University Ave., Toronto, ON M5J 2H7.
2. I am a graduate of University of Bucharest with a B.Sc. degree in Geology in 2000 and University of Toronto with a M.Sc. degree in Geology in 2003.
3. I am registered as a Professional Geologist in the Province of Ontario (Reg. #1882). I have worked as a geologist for a total of 20 years since my graduation. My relevant experience for the purpose of the Technical Report is:
    - Preparation of Mineral Resource estimates.
    - Over five years of exploration experience in Canada and Chile.
4. I have read the definition of "qualified person" set out in National Instrument 43-101 (NI 43-101) and certify that by reason of my education, affiliation with a professional association (as defined in NI 43-101) and past relevant work experience, I fulfill the requirements to be a "qualified person" for the purposes of NI 43-101.
5. I visited the Eco Ridge Project on July 18, 2021.
6. I am responsible for overall preparation of the Technical Report.
7. I am independent of the Issuer applying the test set out in Section 1.5 of NI 43-101.
8. I have prepared a previous Technical Report dated June 20, 2012, on the property that is the subject of the Technical Report.
9. I have read NI 43-101, and the Technical Report has been prepared in compliance with NI 43-101 and Form 43-101F1.
10. At 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.

Dated this 14th day of September, 2021

(Signed and Sealed) ***Tudorel Ciuculescu***

Tudorel Ciuculescu, M.Sc., P.Geo.

www.slrconsulting.com