



- Exploring for high-grade rare earth elements (“REEs”), gallium and uranium in the prolific Athabasca Basin area
- Ownership of historic uranium and rare earth mines at Elliot Lake

### Alces Lake High-Grade, Critical REE Property

- Some of the highest REE grades reported in the world and exposed at surface; **average zone high-grades range from 4.209 to 31.827 wt% total rare earth oxide (“TREO”)**
- Diamond drilling has discovered numerous surface and shallow REE zones, less than 15 m from surface; i.e., **IV-19-012 returned 15.55 m @ 16.06 wt% TREO including 3.7 m @ 49.17 wt% TREO**
- In 2020, Appia completed 2,506.8 metres of diamond drilling in 18 drill holes with 15 of the 18 holes **intersecting the REE minerals system over 875 m strike length, as deep as 340 m from surface**, still open in all directions (3D space), and in two sub-parallel trends
- Appia has amalgamated the **Wilson, Richard, Charles and Bell high-grade zones, now referred to as the WRCB zone which extends over 145 m along strike**
- The zones have **uniformly high concentrations of critical REEs** (neodymium (Nd), praseodymium (Pr), dysprosium (Dy) and terbium (Tb)) for use in high-strength permanent magnets, which account for between 20% and 25% of the total REEs
- Bench-scale **monazite processing and metallurgical testing has started** at the Saskatchewan Research Council with the goal of processing monazite-bearing rocks from the Property to produce a mixed REE carbonate
- Saskatchewan: consistently **“Most Attractive Jurisdiction in Canada” for mining investment** (Fraser Institute)



**Table 1 – Alces Lake Average High-Grade REO Summary Chart by Zone**

Zone	DDH	La <sub>2</sub> O <sub>3</sub> (wt%)	CeO <sub>2</sub> (wt%)	Pr <sub>6</sub> O <sub>11</sub> (wt%)	Nd <sub>2</sub> O <sub>3</sub> (wt%)	Sm <sub>2</sub> O <sub>3</sub> (wt%)	Eu <sub>2</sub> O <sub>3</sub> (wt%)	Gd <sub>2</sub> O <sub>3</sub> (wt%)	Tb <sub>4</sub> O <sub>7</sub> (wt%)	Dy <sub>2</sub> O <sub>3</sub> (wt%)	Ho <sub>2</sub> O <sub>3</sub> (wt%)	Er <sub>2</sub> O <sub>3</sub> (wt%)	Yb <sub>2</sub> O <sub>3</sub> (wt%)	Lu <sub>2</sub> O <sub>3</sub> (wt%)	Y <sub>2</sub> O <sub>3</sub> (wt%)	ThO <sub>2</sub> (wt%)	U <sub>3</sub> O <sub>8</sub> (wt%)	TREO (wt%)	CREO (wt%)
Bell		2.394	5.156	0.538	1.647	0.232	0.003	0.137	0.008	0.027	0.003	0.009	0.001	0.000	0.083	1.309	0.038	10.239	2.223
Charles		2.289	4.716	0.527	1.631	0.220	0.003	0.128	0.007	0.022	0.003	0.007	0.001	0.000	0.067	1.182	0.036	9.621	2.190
Richard		1.894	4.070	0.449	1.511	0.212	0.003	0.095	0.008	0.022	0.002	0.004	0.001	0.000	0.065	1.094	0.030	8.335	1.992
Wilson		2.267	4.668	0.497	1.535	0.210	0.003	0.121	0.006	0.021	0.002	0.007	0.001	0.000	0.060	1.162	0.034	9.398	2.062
Dylan		7.407	15.841	1.719	5.444	0.708	0.010	0.407	0.020	0.066	0.008	0.021	0.001	0.000	0.174	3.842	0.100	31.827	7.259
Dante		3.794	8.310	0.868	2.999	0.414	0.005	0.215	0.014	0.036	0.004	0.008	0.001	0.000	0.096	2.209	0.056	16.763	3.922
Ivan		5.085	10.961	1.211	4.058	0.546	0.007	0.287	0.018	0.050	0.005	0.011	0.001	0.000	0.128	2.804	0.073	22.369	5.344
Ivan	IV-19-012	3.653	7.798	0.889	2.946	0.413	0.005	0.205	0.014	0.036	0.004	0.006	0.001	0.000	0.089	2.081	0.054	16.059	3.890
	including	11.233	23.833	2.753	8.996	1.258	0.016	0.626	0.042	0.110	0.011	0.019	0.002	0.001	0.266	6.365	0.164	49.165	11.918
Ermacre		0.908	1.965	0.239	0.821	0.128	0.001	0.059	0.005	0.017	0.002	0.004	0.002	0.000	0.057	0.506	0.012	4.209	1.084

- Highlighting Nd grades associated with high-grade Total REOs
- Highlighting Pr grades associated with high-grade Total REOs
- Highlighting “High-Grade” Total and Critical REOs (i.e. >1.897 wt% TREO)
- Indicates light rare earth elements
- Indicates heavy rare earth elements

TREO = Total Rare Earth Oxide = sum of La<sub>2</sub>O<sub>3</sub>+CeO<sub>2</sub>+Pr<sub>6</sub>O<sub>11</sub>+Nd<sub>2</sub>O<sub>3</sub>+Sm<sub>2</sub>O<sub>3</sub>+Eu<sub>2</sub>O<sub>3</sub>+Gd<sub>2</sub>O<sub>3</sub>+Tb<sub>4</sub>O<sub>7</sub>+Dy<sub>2</sub>O<sub>3</sub>+Ho<sub>2</sub>O<sub>3</sub>+Er<sub>2</sub>O<sub>3</sub>+Yb<sub>2</sub>O<sub>3</sub>+Lu<sub>2</sub>O<sub>3</sub>+Y<sub>2</sub>O<sub>3</sub>  
 CREO = Critical Rare Earth Oxide = sum of Pr<sub>6</sub>O<sub>11</sub>+Nd<sub>2</sub>O<sub>3</sub>+Eu<sub>2</sub>O<sub>3</sub>+Tb<sub>4</sub>O<sub>7</sub>+Dy<sub>2</sub>O<sub>3</sub>  
 Conditions used for reporting Composite Summary Grades:  
 - individual sample cutoff grade = 4.0 wt% TREO, max. internal dilution less than 2.0 m.  
 Ermacre results based on 1 grab sample

### Saskatchewan Uranium Properties

- Appia holds 3 projects totaling approximately 48,024 hectares (118,669 acres) in the Athabasca Basin area
- Loranger property: 6 out of 7 drill holes intersected uranium mineralization in Appia’s first drill campaign. Uranium mineralization is currently open along strike and at depth. A second drill season was completed in 2019 which resulted in the discovery of a new near-surface uranium zone that extends over 900 m along strike.

## Elliot Lake Uranium and REE Property

- 100% interest in the Elliot Lake property totaling approximately 13,008 hectares (32,143 acres)
- Elliot Lake Property is adjacent to Denison Mines Corp. and Rio Algom Limited past-producing uranium and REE mines
- Elliot Lake camp produced over 300 M lbs. U<sub>3</sub>O<sub>8</sub> and is the only mining camp in Canada with significant historical commercial rare earth element production (yttrium) which was recovered through bioleaching and conventional milling
- Significant potential to increase the size of the current resources as they are largely unconstrained along strike and at depth
- Metallurgical testing, using different process methods, indicates a recovery rate of approximately 90% for uranium and most REEs in the 80% to 90% range

### Table 2 – Elliot Lake Uranium and REE Resources

NI 43-101 Mineral Resource Estimates*								
Indicated Resources					Inferred Resources			
Teasdale Lake Zone								
	Tonnage (M tons)	Average Grade (lbs./ton)	Contained Metal U <sub>3</sub> O <sub>8</sub> (M lbs.)	Contained Metal TREE (M lbs.)	Tonnage (M tons)	Average Grade (lbs./ton)	Contained Metal U <sub>3</sub> O <sub>8</sub> (M lbs.)	Contained Metal TREE (M lbs.)
U <sub>3</sub> O <sub>8</sub>	14.4	0.554	8.0		42.4	0.474	20.1	
REE	14.4	3.30		47.7	42.4	3.14		133.2
Banana Lake Zone								
U <sub>3</sub> O <sub>8</sub>					30.3	0.912	27.6	
<b>TOTAL</b>	<b>14.4</b>		<b>8.0</b>	<b>47.7</b>	<b>72.8</b>		<b>47.7</b>	<b>133.2</b>

\* "A Technical Report on the Appia Energy Corp. Elliot Lake Uranium-Rare Earth Property", by Watts, Griffis and McQuat Limited (July 30, 2013). Mineral resources are not mineral reserves and do not have demonstrated economic viability.

### Table 3 – Elliot Lake's Teasdale Lake Zone REE Resource Summary Chart

Zone	Category	La (ppm)	Ce (ppm)	Pr (ppm)	Nd (ppm)	Sm (ppm)	Eu (ppm)	Gd (ppm)	Tb (ppm)	Dy (ppm)	Ho (ppm)	Er (ppm)	Tm (ppm)	Yb (ppm)	Lu (ppm)	Y (ppm)	TREE (ppm)	CREE (ppm)
Teasdale Lake	Indicated	422.0	745.0	73.8	247.0	41.1	1.7	26.2	3.2	14.3	2.3	5.8	0.8	4.6	0.7	59.4	1647.9	344.1
Teasdale Lake	Inferred	401.0	709.0	69.9	232.0	39.0	1.6	24.6	3.0	13.5	2.1	5.5	0.7	4.4	0.6	56.5	1563.4	323.9

TREE = Total Rare Earth Elements = sum of La+Ce+Pr+Nd+Sm+Eu+Gd+Tb+Dy+Ho+Er+Tm+Yb+Lu+Y

CREE = Critical Rare Earth Elements = sum of Pr+Nd+Eu+Tb+Dy

The Teasdale Lake zone Uranium and Rare Earth Element Mineral Resource Estimate is effective as of July 30, 2013

The Banana Lake zone Uranium Mineral Resource Estimate is effective as of April 01, 2011



Mineral Resources were prepared from a polygonal model estimated at a cut-off value of \$100/tonne, using a uranium price of US \$70/lb. U<sub>3</sub>O<sub>8</sub>, a combined TREE price of \$78/kg, and a C\$:US\$ exchange rate of 1:0.9

A specific gravity (S.G.) of 2.85 tonnes/m<sup>3</sup> (or 3.14 tons/m<sup>3</sup>) was used

Indicated amounts may not precisely sum due to rounding

The quantity and grade of reported Inferred Resources are uncertain in nature and there has been insufficient exploration to define these as Indicated or Measured Mineral Resources

The Mineral Resources were estimated using the CIM Mineral Resources and Reserves Guidelines (December 11, 2015)

 Indicates light rare earth elements  
 Indicates heavy rare earth elements

## Officers and Directors

Anastasios (Tom) Drivas – CEO & Director

Frederick Kozak, P.Eng, MBA, President

Frank van de Water, B.Com, CPA, CA – CFO & Director

Thomas Skimming, B.Sc., P.Geo., P.Eng. – Director

Brian E. Robertson, B.Sc., P.Eng., Grad. Dipl. Bus. Admin. – Director

Nick Bontis, B.A., Ph.D. – Director

William R. Johnstone, L.L.B. – Legal Counsel & Director

## Capital Structure (as of Oct. 14, 2021)

Issued: (Insiders – approx. 32.1 %) 108.2 million shares

Fully Diluted: 128.4 million shares

52 Week Range: \$0.365 - \$0.76 CAD

Share Price: \$0.76 CAD

Market Capitalization: \$82.2 million CAD

Cash on Hand: approx. \$7.3 million CAD

Cash Fully Diluted: \$19.2 million CAD

The information contained herein is provided solely for the reader's general knowledge and is not intended to be a comprehensive review of all matters and developments concerning Appia Energy Corp. The technical information in this Presentation has been prepared in accordance with the Canadian regulatory requirements set out in National Instrument 43-101 Standards of Disclosure for Mineral Projects ("NI 43-101"). The information was reviewed and approved by Mr. Thomas Skimming, P.Geo, P.Eng, a Director of Appia Energy Corp. and a Qualified Person as defined by NI 43-101 Standards.