Appia Confirms High-Grade Gallium Mineralization in All Zones on Alces Lake Property

written by Raj Shah | March 25, 2021

March 25, 2021 (Source) – **Appia Energy Corp.** (**CSE: API**) (**OTCQB: APAAF**) (**FSE: A0I.F**) (**FSE: A0I.MU**) (**FSE: A0I.BE**) (**the "Company" or "Appia"**) is pleased to announce that high-grade gallium has been consistently reported from lithogeochemical assay results from all of the high-grade rare earth element ("**REE**") zones on the Company's Alces Lake property (the "**Property**"), northern Saskatchewan.

Following up on the results from an electron microprobe study that successfully showed monazite was the mineral host for gallium as well as REEs (see News Release dated February 17, 2021), the Company re-analyzed select samples with high-grade rare earth oxide ("**REO**") results from each zone to determine the extent of gallium mineralization over the Property (Table 1). The results from the recent study shows gallium concentrations ranging from 0.01 to 0.104 wt% Ga_2O_3, and a positive linear correlation between gallium and REO suggests that all monazite on the Property contains gallium: more monazite means more REO and gallium. High-grade gallium is considered anything greater than 0.010 wt% Ga_2O_3.

Frederick Kozak, Appia's President, comments: "The gallium concentrations on the Property are remarkable. Gallium was found in naturally occurring high-concentrations on the Property that far-exceed current concentrations required for global production of gallium. The presence of gallium in the high-grade REO system on the Alces Lake property helps distinguish the Property as a

potential world-class asset for high-valued critical elements required for sustainable production of advanced technological applications".

The current price of high-grade gallium metal (99.99%) is US$376.71/kg. On January 31st, 2021, the price of high-grade gallium metal (99.99%) was US$306.72/kg, and on October 31st, 2020, the price of high-grade gallium metal (99.99%) was US$189.43/kg (all prices were derived from Shanghai Metals Market). These represent a 23% price increase over 2 months and 99% price increase over 5 months. In 2011, the price for low-grade gallium oxide (99%) peaked at US$1,150/kg.

Up to 90% of primary global gallium supply is a by-product of processing of bauxite (alumina ore) with lesser amounts derived from sphalerite (ZnS) production. Production of gallium is therefore limited by global economic and social factors that influence the production of the principal mineral commodities (i.e., aluminum or zinc). It takes multiple cycles of bauxite processing before the gallium content reaches its production starting concentration point of approximately 100 – 125 ppm Ga_2O_3, whereas Ga_2O_3 from Alces Lake monazite would have approximately 10x to 20x higher starting concentrations.

Gallium is one of several elements deemed "critical" by the United States Government (i.e., restricted supply by China, Kazakhstan and Ukraine, and in high-demand) that is used in numerous modern technological applications, in wireless communications such as 5G, cell phones, laser diodes, semiconductors, solar energy magnetic materials, and military defense. A significant potential exists for bottlenecks in the gallium supply chain because of rapid growth in areas of green/clean energy technologies.

Much like rare earth elements, gallium is widely dispersed in

nature but rarely found in economically extractable quantities. For example, the Apex mine, southwestern Utah, USA, was the only primary mined source of gallium (and germanium) until its closure in 2011 by Teck Resources Limited. The mine operated intermittently over 100 years since 1884. A historic estimate for the average concentration of gallium was 0.032 wt%, with locally occurring grades up to 0.148 wt% gallium (USGS – Gallium Statistics and Information).

All lithogeochemical assay results were provided by Saskatchewan Research Council's Geoanalytical Laboratory, an ISO/IEC 17025:2005 (CAN-P-4E) certified laboratory in Saskatoon, SK, for lead isotope, uranium and gallium analysis by lithium metaborate fusion.

All analytical results reported herein have passed internal QA/QC review and compilation. The technical content in this news release was reviewed and approved by Dr. Irvine R. Annesley, P.Geo, Advisor to Appia's Board of Directors, and a Qualified Person as defined by National Instrument 43-101.

ALCES LAKE SUMMARY

Since detailed exploration began at Alces Lake in 2017, a total of seventy-four (74) REE, gallium and uranium bearing surface zones and occurrences over 45 km of the System have been discovered on the Property. To date, less than 1% of the Property has been explored with diamond drilling. The Property is in Saskatchewan, the provincial jurisdiction that is developing a "first-of-its-kind" rare earth processing facility in Canada, scheduled to become operational by 2022.

The Property encompasses some of the highest-grade total and critical rare earth elements ("**CREE**") and gallium mineralization in the world. CREE is defined here as those rare earth elements that are in short-supply and high-demand for use in permanent

magnets and modern electronic applications such as electric vehicles and wind turbines, (i.e: neodymium (Nd), praseodymium (Pr) dysprosium (Dy), and terbium (Tb)). The Alces Lake project area is 17,577 hectares (43,434 acres) in size and is 100% owned by Appia. The project is located close to an old mining camp with existing support services, such as transportation (i.e., 15 km from the nearest trail), energy infrastructure (hydroelectric power), a 1,200 m airstrip that receives daily scheduled services, and access to heavy equipment.

Appia is planning to aggressively explore the Property during the summer months of 2021. The Company is fully-funded and committed to complete the largest exploration and diamond drilling program on the Property to date.

About Appia

Appia is a Canadian publicly-listed company in the uranium and rare earth element sectors. The Company is currently focusing on delineating high-grade critical rare earth elements and uranium on the Alces Lake property, as well as prospecting for high-grade uranium in the prolific Athabasca Basin on its Loranger, North Wollaston, and Eastside properties. The Company holds the surface rights to exploration for 65,601 hectares (162,104 acres) in Saskatchewan.

The Company also has a 100% interest (subject to a 1% Uranium Production Payment Royalty and a 1% Net Smelter Return Royalty on any precious or base metals payable, provided that the price of uranium is greater than US$130 per pound) in 12,545 hectares (31,000 acres), with rare earth element and uranium deposits over five mineralized zones in the Elliot Lake Camp, Ontario. The Camp historically produced over 300 million pounds of U_3O_8 and is the only Canadian camp that has had significant rare earth element (yttrium) production. The deposits are largely

unconstrained along strike and down dip.

Appia has 94.4 million common shares outstanding, 110.4 million shares fully diluted.

For more information, visit Appia's website at www.appiaenergy.ca.

Cautionary Note Regarding Forward-Looking Statements: This News Release contains forward-looking statements which are typically preceded by, followed by or including the words "believes", "expects", "anticipates", "estimates", "intends", "plans" or similar expressions. Forward-looking statements are not guarantees of future performance as they involve risks, uncertainties and assumptions. We do not intend and do not assume any obligation to update these forward- looking statements and shareholders are cautioned not to put undue reliance on such statements.

Neither the Canadian Securities Exchange nor its Market Regulator (as that term is defined in the policies of the CSE) accepts responsibility for the adequacy or accuracy of this release.

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Table 1 – Lithogeochemical results for Gallium (Ga_2O_3), Thorium (ThO_2), Uranium (U_3O_8) and Individual, Total and Critical REOs

Zone	Boulder/ Channel Line/ DDH	From (m)	To (m)	Interval (m)	La_2O_3 >95%	CeO_2 >95%	Pr_6O_{11} >95%	Nd_2O_3 >95%	Sm_2O_3 >95%	Eu_2O_3 >95%	Gd_2O_3 >95%	Tb_4O_7 >95%	Dy_2O_3 >95%	Ho_2O_3 >95%	Er_2O_3 >95%	Yb_2O_3 >95%	Lu_2O_3 >95%	Y_2O_3 >95%	Ga_2O_3 >95%	ThO_2 >95%	U_3O_8 >95%	TREO >95%	CREO >95%
Ivan	IV-19-012	9.70	17.60	7.90	7.130	15.219	1.735	5.748	0.805	0.010	0.400	0.027	0.071	0.007	0.012	0.002	0.000	0.173	0.067	4.058	0.105	31.339	7.591
	includes	9.70	13.40	3.70	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	0.104	6.365	0.164	49.165	11.918
Dylan	Line 10	0.48	1.50	1.02	9.657	20.789	2.250	7.042	0.907	0.012	0.521	0.026	0.086	0.009	0.028	0.001	0.001	0.205	0.078	4.926	0.133	41.534	9.417
Dylan	Line 11	0.48	1.19	0.71	9.403	19.227	2.114	6.754	0.883	0.012	0.521	0.025	0.081	0.009	0.027	0.001	0.001	0.213	0.077	4.835	0.131	39.273	8.987
Dante	Line 3	1.66	2.45	0.79	2.838	6.187	0.605	1.919	0.272	0.004	0.154	0.008	0.025	0.003	0.008	0.000	0.000	0.064	0.030	1.623	0.046	12.087	2.561
Dante	DT-19-004B	16.30	17.50	1.20	5.313	11.715	1.239	4.470	0.626	0.007	0.304	0.022	0.051	0.006	0.006	0.001	0.000	0.132	0.051	3.141	0.078	23.891	5.789
WRCB	CH-18-008	0.00	1.55	1.55	1.096	2.371	0.248	0.814	0.122	0.002	0.075	0.005	0.020	0.003	0.006	0.001	0.000	0.077	0.013	0.568	0.017	4.841	1.090
WRCB	CH-18-008	9.00	12.55	3.55	2.400	4.886	0.545	1.685	0.240	0.003	0.137	0.007	0.025	0.003	0.008	0.001	0.000	0.076	0.023	1.274	0.038	10.017	2.265
WRCB	RI-20-004	8.60	9.10	0.50	2.533	5.479	0.570	1.936	0.270	0.003	0.113	0.009	0.025	0.003	0.003	0.001	0.000	0.067	0.028	1.377	0.039	11.011	2.543
WRCB	RI-20-004	10.60	13.40	2.80	2.566	5.468	0.599	1.909	0.270	0.003	0.111	0.009	0.025	0.003	0.003	0.001	0.000	0.069	0.025	1.437	0.037	11.035	2.546
WRCB	RI-20-005	10.15	10.90	0.75	1.728	3.659	0.404	1.389	0.190	0.003	0.098	0.007	0.022	0.002	0.004	0.001	0.000	0.066	0.019	0.908	0.024	7.573	1.825
WRCB	WI-18-004	16.80	17.85	1.05	3.613	7.620	0.831	2.687	0.363	0.005	0.198	0.010	0.033	0.004	0.010	0.000	0.000	0.091	0.033	1.904	0.051	15.465	3.566
Danny	Boulder				1.935	4.471	0.476	1.842	0.275	0.002	0.145	0.015	0.049	0.001	0.026	0.005	nr	0.156	0.022	1.096	0.029	9.400	2.385
Danny	Boulder				2.639	6.007	0.672	2.437	0.348	0.003	0.176	0.018	0.048	0.001	0.030	0.003	nr	0.150	0.031	1.113	0.040	12.532	3.178
Danny	Boulder				2.850	6.511	0.761	2.635	0.385	0.003	0.196	0.020	0.054	0.001	0.034	0.003	nr	0.171	0.029	0.462	0.057	13.626	3.474
Danny	Boulder				0.482	1.137	0.124	0.494	0.072	0.001	0.042	0.005	0.015	0.001	0.008	0.001	nr	0.047	0.008	0.092	0.006	2.430	0.640
Danny	Boulder				2.111	4.778	0.509	1.901	0.266	0.001	0.125	0.012	0.026	0.001	0.019	0.001	nr	0.065	0.025	0.996	0.027	9.815	2.449
Danny	Boulder				2.533	5.823	0.674	2.297	0.327	0.002	0.150	0.013	0.032	0.002	0.023	0.001	nr	0.074	0.028	1.377	0.033	11.951	3.019
Biotite Lk.	Boulder				0.562	1.241	0.137	0.462	0.074	0.002	0.042	0.003	0.011	0.001	0.002	0.001	0.000	0.032	0.010	0.403	0.019	2.568	0.614
Biotite Lk.	Boulder				0.538	1.107	0.128	0.441	0.068	0.001	0.039	0.003	0.010	0.001	0.002	0.001	0.000	0.028	0.010	0.382	0.016	2.367	0.583
Ermacre	Boulder				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	0.012	0.506	0.012	4.209	1.084
Hinge	Line 1	0.97	1.38	0.41	0.577	1.314	0.149	0.536	0.074	0.001	0.036	0.004	0.008	0.001	0.006	0.001	nr	0.019	0.011	0.264	0.011	2.726	0.698
Oldman	Line 2	0.69	1.48	0.79	0.814	1.609	0.181	0.634	0.087	0.002	0.035	0.002	0.004	0.000	0.001	0.000	0.000	0.007	0.013	0.387	0.014	3.377	0.823

The REEs Thulium (Tm) and Promethium (Pm) are not reported because they are both extremely scarce in nature, and Pm forms as a product of spontaneous fission of U-238

TREO = Total Rare Earth Oxide = sum of La_2O_3+CeO_2+Pr_6O_{11}+Nd_2O_3+Sm_2O_3+Eu_2O_3+Gd_2O_3+Tb_4O_7+Dy_2O_3+Ho_2O_3+Er_2O_3+Yb_2O_3+Lu_2O_3+Y_2O_3

CREO = Critical Rare Earth Oxide = sum of Pr_6O_{11}+Nd_2O_3+Eu_2O_3+Tb_4O_7+Dy_2O_3

Indicates light rare earth elements
Indicates heavy rare earth elements
Indicates radioactive elements

nr = not reported

Conditions Used for Reporting Composite Results

- cutoff grade = 0.010 wt% Ga_2O_3
- maximum internal dilution along drill hole intervals; 2.00 m
- true thickness has not been determined for any intervals

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