Spark Energy Minerals Reports New Lithium and Gallium-REE Assay Results from Flagship Brazil Project

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New assays define three >1,000 ppm lithium anomalies at Cruzeta and expand the gallium-REE footprint at Caladão.

Vancouver, October 17, 2025 - Spark Energy Minerals Inc. (CSE: SPRK) (OTCID: SPARF) (FSE: 8PC) ("Spark" or the "Company") reports new assay results from 103 surface samples collected at its flagship Arapaima Project in Brazil's Lithium Valley. The new results expand known lithium anomalies and support ongoing drill planning at the Cruzeta, Água Branca, Grota do Maquém, and Caladão targets. These results, together with the ongoing exploration work - including mapping, geochemical analysis, and sampling - further support the definition of high-priority critical-mineral drill targets.

Batch Highlights:

- Three lithium anomalies exceeding 1,000 ppm Li defined from surface rock samples at Cruzeta.
- Stream-sediment sample at the Caladão Target returned total rare earth oxide (TREO) values above 10,000 ppm (1%), extending the anomalous footprint southward.

Samples were analyzed by SGS Geosol (Vespasiano, MG, Brazil), an internationally certified laboratory suitable for resource and reserve reporting. Preparation and analytical methods were selected by sample type; stream-sediment and rock/core samples were prepared and analyzed under SGS's standard protocols, and Spark's QA/QC program included routine blanks, duplicates, and certified reference standards.

The Company is finalizing logistics and permitting for its initial diamond drill program at the Cruzeta, Água Branca, and Grota do Maquém lithium targets, and for air-core or reverse-circulation drilling at the gallium-REE Caladão Target, located adjacent to recent publicly reported ionic-clay gallium and REE discoveries developed over the Caladão Granite. Drill targeting will be guided by ongoing geochemical interpretation and field mapping. Initial drilling will test the subsurface continuity of lithium-bearing pegmatites and gallium-REE mineralization zones identified through surface sampling and mapping. With multiple anomalies now defined and drill planning underway, Spark's exploration team is preparing to advance its first subsurface testing program within the district.

"Our ongoing exploration work has clearly delineated key lithium and gallium-rare-earth targets," said Eugene Hodgson, CEO. "The correlations we're observing between lithium and key pathfinder elements, particularly at Cruzeta and Grota do Maquém, provide a strong technical foundation for our first-phase drilling. We're now advancing permitting and logistics to begin as soon as practicable."

Figure 1. Location of Spark Energy Minerals' Arapaima Project in Brazil's Lithium Valley, highlighting the priority lithium and gallium-REE targets (right), relative to competitor areas (left).

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Figure 2. Geochemical vectoring map of the Cruzeta Target, highlighting the recent lithium assay results from surface samples.

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Figure 3. Geological map of the Caladão Target, highlighting the recent REE assay results from surface samples.

To view an enhanced version of this graphic, please visit:
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Figure 4. Geological map of the Caladão Target, highlighting the recent gallium assay results from surface samples.

To view an enhanced version of this graphic, please visit:
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Table 01: SGS Results for the Li_2O in the stream sediment samples.

Sample ID	Cs_2O (ppm)	Ga_2O_3 (ppm)	Ga_2O_3 (gpt)	Li_2O (ppm)	Nb_2O_5 (ppm)	Rb_2O (ppm)	Sc_2O_3 (ppm)	Tl_2O (ppm)
ARA-SS-253	41.98	52.38	52.38	307.81	91.55	475.71	12.27	3.43
ARA-SS-256	19.08	63.12	63.12	191.57	42.92	241.68	9.20	1.77
ARA-SS-275	16.11	73.87	73.87	133.46	64.37	194.66	N/A	1.66
ARA-SS-257	14.84	52.38	52.38	120.54	37.19	150.92	N/A	1.35
ARA-SS-255	13.57	41.63	41.63	111.93	28.61	196.85	N/A	1.35
ARA-SS-281	10.71	53.72	53.72	109.78	75.82	205.60	N/A	1.77
ARA-SS-254	7.85	29.55	29.55	83.95	32.90	94.05	N/A	0.62
ARA-SS-279	9.97	57.75	57.75	83.95	58.65	147.64	N/A	1.35
ARA-SS-283	11.45	63.12	63.12	83.95	61.51	146.54	N/A	1.35
ARA-SS-274	10.39	49.69	49.69	81.80	52.93	203.41	N/A	1.35
ARA-SS-273	9.12	51.03	51.03	77.49	51.50	166.23	N/A	1.14
ARA-SS-282	7.21	37.60	37.60	77.49	114.44	166.23	N/A	1.14
ARA-SS-272	1.17	64.46	64.46	73.19	134.47	50.31	13.80	N/A
ARA-SS-277	7.10	38.95	38.95	73.19	47.21	168.41	N/A	1.14
ARA-SS-280	5.83	36.26	36.26	71.03	41.48	124.67	N/A	0.94
ARA-SS-278	5.09	32.23	32.23	64.58	62.94	131.23	N/A	0.94
ARA-SS-270	0.85	38.95	38.95	60.27	203.13	80.93	15.34	0.73
ARA-SS-271	0.64	42.98	42.98	60.27	978.47	48.12	23.01	0.52
ARA-SS-267	0.95	67.15	67.15	58.12	296.12	75.46	19.94	0.62
ARA-SS-262	0.64	64.46	64.46	51.66	532.15	63.43	16.87	N/A
ARA-SS-266	0.74	68.49	68.49	47.36	238.90	48.12	26.07	N/A
ARA-SS-269	0.64	60.44	60.44	45.20	135.90	56.87	12.27	0.62
ARA-SS-259	0.64	67.15	67.15	38.75	233.17	28.43	19.94	N/A
ARA-SS-265	0.53	51.03	51.03	38.75	308.99	40.46	21.47	N/A
ARA-SS-263	0.32	64.46	64.46	36.59	267.51	7.66	13.80	N/A
ARA-SS-264	0.32	65.81	65.81	36.59	748.16	14.22	16.87	N/A
ARA-SS-268	0.42	65.81	65.81	36.59	216.01	5.47	15.34	N/A
ARA-SS-258	0.42	65.81	65.81	34.44	462.06	10.94	21.47	N/A
ARA-SS-260	0.11	81.92	81.92	32.29	240.33	N/A	23.01	N/A
ARA-SS-261	0.21	83.27	83.27	32.29	546.46	3.28	24.54	N/A

Table 02: SGS results for Li_2O in the chip rock.

Sample ID	Cs_2O (ppm)	Ga_2O_3 (ppm)	Ga_2O_3 (gpt)	Li_2O (ppm)	Nb_2O_5 (ppm)	Rb_2O (ppm)	Sc_2O_3 (ppm)	Tl_2O (ppm)
ARA-CR-116C	172.39	212.38	212.38	7990.08	799.66	5728.26	127.31	22.45
ARA-CR-215	141.64	206.82	206.82	4150.02	1369.00	3825.40	141.11	19.95
ARA-CR-122	283.71	151.89	151.89	3721.67	841.14	3221.74	16.87	15.59
ARA-CR-114B	113.23	161.30	161.30	3007.04	590.80	3251.26	16.87	18.60
ARA-CR-112	24.60	135.76	135.76	2619.59	391.96	1815.37	26.07	11.12
ARA-CR-212	49.09	126.24	126.24	2567.93	871.18	2012.22	75.16	12.99

ARA-CR-131	94.57	155.79	155.79	2202.01	713.83	3290.63	9.20	18.70
ARA-CR-136	162.85	126.24	126.24	1956.62	437.74	2545.89	13.80	13.40
ARA-CR-205	762.59	141.02	141.02	1319.48	205.99	1786.94	N/A	6.96
ARA-CR-203	46.97	115.50	115.50	992.30	331.88	1154.84	23.01	5.61
ARA-CR-132	88.31	84.61	84.61	908.36	268.94	1641.49	7.67	10.39
ARA-CR-147	57.46	162.50	162.50	858.85	347.61	1931.29	N/A	7.38
ARA-CR-135	73.68	150.42	150.42	727.55	263.21	1849.27	15.34	7.59
ARA-CR-134	29.05	150.42	150.42	628.53	300.41	1521.19	15.34	6.86
ARA-CR-112B	11.56	81.92	81.92	589.79	135.90	571.95	N/A	3.22
ARA-CR-133	13.99	123.56	123.56	477.86	160.22	1386.68	7.67	7.17
ARA-CR-207	125.95	51.03	51.03	462.79	67.23	383.85	N/A	1.97
ARA-CR-208	42.83	68.49	68.49	460.64	120.16	484.46	52.15	1.97
ARA-CR-237	36.89	76.55	76.55	443.42	128.75	597.10	26.07	2.60
ARA-CR-231	28.20	52.38	52.38	413.28	90.12	448.37	10.74	2.18
ARA-CR-210	79.30	47.01	47.01	385.30	50.07	554.45	N/A	3.01
ARA-CR-201	62.23	83.27	83.27	380.99	90.12	833.32	12.27	5.61
ARA-CR-238	30.85	68.49	68.49	376.69	91.55	539.14	15.34	2.49
ARA-CR-137	40.92	61.78	61.78	325.03	144.48	1175.62	N/A	6.44
ARA-CR-112A	7.53	76.55	76.55	301.35	44.35	562.11	N/A	4.05
ARA-CR-034A	4.13	32.23	32.23	266.91	68.66	400.26	9.20	2.39
ARA-CR-204	38.70	37.60	37.60	223.86	57.22	406.82	N/A	2.49
ARA-CR-216	6.26	38.95	38.95	219.56	70.10	171.69	9.20	1.45
ARA-CR-219	1.38	28.20	28.20	206.64	38.62	285.43	N/A	2.18
ARA-CR-227	15.48	32.23	32.23	202.34	28.61	333.55	N/A	1.87
ARA-CR-220	5.19	41.63	41.63	195.88	226.02	382.76	24.54	2.91
ARA-CR-247	14.21	60.44	60.44	193.73	90.12	367.45	N/A	1.45
ARA-CR-235	14.21	36.26	36.26	187.27	24.32	523.83	N/A	2.81
ARA-CR-149	10.18	41.63	41.63	178.66	77.25	531.49	N/A	5.20

Table 03: REE (TREO/MREO) assay results from stream sediment samples on Caladão Target.

Sample ID	CeO_2 (ppm)	Dy_2O_3 (ppm)	Er_2O_3 (ppm)	Eu_2O_3 (ppm)	Ga_2O_3 (ppm)	Ga_2O_3 (gpt)	Gd_2O_3 (ppm)	Ho_2O_3 (ppm)	L
ARA-SS-271	4,708.18	54.63	19.55	2.44	42.98	42.98	116.09	8.48	2
ARA-SS-270	966.30	17.49	7.34	3.17	38.95	38.95	28.33	3.00	5
ARA-SS-266	1,010.23	14.22	7.35	2.81	68.49	68.49	19.46	2.74	2
ARA-SS-269	815.44	16.79	7.47	2.69	60.44	60.44	24.18	2.94	3
ARA-SS-272	857.14	9.67	4.55	0.96	64.46	64.46	17.08	1.73	3
ARA-SS-265	726.07	12.23	6.61	2.58	51.03	51.03	16.16	2.33	2
ARA-SS-253	546.17	13.07	6.25	1.71	52.38	52.38	19.95	2.33	2
ARA-SS-267	868.85	7.14	4.11	2.07	67.15	67.15	8.73	1.40	9
ARA-SS-262	712.49	4.40	3.88	1.17	64.46	64.46	3.43	1.09	3
ARA-SS-259	402.33	7.00	4.19	1.63	67.15	67.15	7.77	1.45	1
ARA-SS-268	310.74	6.20	4.31	0.38	65.81	65.81	5.18	1.39	5
ARA-SS-260	382.54	3.98	3.12	0.49	81.92	81.92	2.81	0.96	2
ARA-SS-264	245.38	7.45	6.17	1.08	65.81	65.81	6.45	1.75	5
ARA-SS-263	225.35	4.80	3.10	1.08	64.46	64.46	5.28	1.03	7
ARA-SS-261	291.30	4.53	4.06	0.49	83.27	83.27	2.73	1.18	2
ARA-SS-255	146.88	3.33	1.46	0.85	41.63	41.63	5.33	0.60	8
ARA-SS-254	123.69	3.18	1.57	0.53	29.55	29.55	4.51	0.58	6
ARA-SS-274	114.20	4.71	2.10	0.64	49.69	49.69	6.09	0.79	5
ARA-SS-256	113.26	3.14	1.42	1.20	63.12	63.12	4.32	0.57	5
ARA-SS-258	125.44	4.89	4.13	0.59	65.81	65.81	3.50	1.20	3
ARA-SS-257	107.52	2.39	1.15	0.76	52.38	52.38	3.52	0.44	4
ARA-SS-277	62.19	5.58	2.77	0.41	38.95	38.95	4.70	1.01	4
ARA-SS-282	54.58	5.70	3.19	0.37	37.60	37.60	4.38	1.09	3
ARA-SS-281	65.83	2.73	1.36	0.52	53.72	53.72	3.58	0.53	3
ARA-SS-280	48.61	3.44	1.83	0.32	36.26	36.26	3.11	0.66	2
ARA-SS-275	54.82	2.70	1.15	0.63	73.87	73.87	3.09	0.44	2
ARA-SS-283	51.54	2.20	1.19	0.37	63.12	63.12	2.54	0.41	2

ARA-SS-278	28.58	5.03	3.24	0.23	32.23	32.23	2.84	1.10	1
ARA-SS-273	37.48	3.83	1.99	0.37	51.03	51.03	2.64	0.71	2
ARA-SS-279	27.76	2.02	1.06	0.29	57.75	57.75	1.64	0.37	1

Table 04: REE (TREO/MREO) assay results from chip rock samples on Caladão Target.

Sample ID	CeO_2 (ppm)	Dy_2O_3 (ppm)	Er_2O_3 (ppm)	Eu_2O_3 (ppm)	Ga_2O_3 (ppm)	Ga_2O_3 (gpt)	Gd_2O_3 (ppm)	Ho_2O_3 (ppm
ARA-CR-220	N/A	35.46	13.53	8.77	41.63	41.63	65.17	5.83
ARA-CR-217	2,543.66	4.98	2.66	1.73	83.27	83.27	7.66	0.94
ARA-CR-132	1,102.99	29.39	8.79	1.76	84.61	84.61	49.94	4.06
ARA-CR-216	N/A	24.43	9.88	10.12	38.95	38.95	43.47	4.18
ARA-CR-219	N/A	23.16	8.74	8.05	28.20	28.20	41.06	3.88
ARA-CR-212	481.63	21.70	10.70	2.93	126.24	126.24	27.04	3.93
ARA-CR-215	87.96	10.09	4.36	6.44	206.82	206.82	20.09	1.74
ARA-CR-211	592.08	3.98	1.60	2.19	71.18	71.18	7.48	0.68
ARA-CR-218	N/A	9.61	4.06	5.59	41.63	41.63	16.19	1.63
ARA-CR-222	721.27	2.13	1.40	0.41	87.30	87.30	2.22	0.46
ARA-CR-135	353.02	11.97	3.22	0.87	150.42	150.42	20.18	1.62
ARA-CR-221	N/A	11.03	5.07	3.75	38.95	38.95	14.00	2.03
ARA-CR-202	N/A	5.61	2.16	0.53	26.86	26.86	8.79	0.92
ARA-CR-213	115.02	5.41	2.07	3.05	69.84	69.84	10.17	0.90
ARA-CR-034A	N/A	6.19	3.03	3.43	32.23	32.23	8.56	1.15
ARA-CR-214	107.64	3.70	1.42	2.48	67.15	67.15	7.00	0.62
ARA-CR-133	59.38	7.86	4.37	1.88	123.56	123.56	7.63	1.56
ARA-CR-203	77.66	7.38	3.91	1.02	115.50	115.50	6.20	1.40
ARA-CR-149	N/A	7.44	3.95	1.83	41.63	41.63	8.77	1.43
ARA-CR-112A	82.46	4.09	0.87	1.11	76.55	76.55	6.33	0.50
ARA-CR-112B	65.01	3.73	1.35	1.02	81.92	81.92	4.84	0.61
ARA-CR-150	N/A	5.10	2.30	0.66	30.89	30.89	4.65	1.02
ARA-CR-201	73.56	3.05	1.91	0.42	83.27	83.27	3.11	0.68
ARA-CR-148	74.96	0.67	0.14	0.27	51.03	51.03	1.28	0.09
ARA-CR-112C	39.12	3.93	1.80	1.22	64.46	64.46	4.53	0.73
ARA-CR-239	N/A	0.93	0.38	0.60	34.92	34.92	1.58	0.15
ARA-CR-134	14.17	3.05	1.81	0.73	150.42	150.42	2.59	0.62
ARA-CR-209	N/A	1.47	0.64	0.81	25.52	25.52	1.86	0.26

Table 05: Ga_2O_3 assay results from chip rock samples on Caladão Target.

Sample ID	CeO_2 (ppm)	Dy_2O_3 (ppm)	Er_2O_3 (ppm)	Eu_2O_3 (ppm)	Ga_2O_3 (ppm)	Ga_2O_3 (gpt)	Gd_2O_3 (ppm)	Ho_2O_3 (ppm
ARA-CR-114C	5.86	1.02	0.44	0.30	221.79	221.79	0.85	0.14
ARA-CR-116C	19.44	0.99	0.50	0.40	212.38	212.38	1.34	0.15
ARA-CR-215	87.96	10.09	4.36	6.44	206.82	206.82	20.09	1.74
ARA-CR-147	4.92	0.11	N/A	N/A	162.50	162.50	0.14	N/A
ARA-CR-131	12.77	1.33	0.83	0.25	155.79	155.79	1.03	0.26
ARA-CR-122	27.52	2.12	0.98	0.48	151.89	151.89	2.14	0.32
ARA-CR-135	353.02	11.97	3.22	0.87	150.42	150.42	20.18	1.62
ARA-CR-134	14.17	3.05	1.81	0.73	150.42	150.42	2.59	0.62
ARA-CR-205	16.40	0.40	0.18	0.14	141.02	141.02	0.55	0.06
ARA-CR-212	481.63	21.70	10.70	2.93	126.24	126.24	27.04	3.93
ARA-CR-136	8.08	0.68	0.32	0.15	126.24	126.24	0.51	0.10
ARA-CR-133	59.38	7.86	4.37	1.88	123.56	123.56	7.63	1.56
ARA-CR-203	77.66	7.38	3.91	1.02	115.50	115.50	6.20	1.40
ARA-CR-222	721.27	2.13	1.40	0.41	87.30	87.30	2.22	0.46

Samples were analyzed by SGS Geosol (Vespasiano, metropolitan Belo Horizonte), an internationally certified laboratory for resource and reserve reporting. Methods were selected according to sample type and expected element/oxide ranges. Stream-sediment samples were prepared using PRS80J-PA (Soil & Sediment; 80# sieving). Rock and core samples (fresh or weathered) were prepared using PRP70J_A2-PA (crush 75% <3 mm; pulverize 250 g to 95% <150#; Jones split). Chemical analyses employed ICM90A (sodium-peroxide fusion with ICP-OES/ICP-MS finish). QA/QC measures included a blank at the start of

preparation, duplicates every 15 samples, and one certified reference standard per analytical batch.

Qualified Person:

The scientific and technical information disclosed in this document has been approved by Jonathan Victor Hill, BSc Hons, FAusIMM, the Company's Qualified Person as defined by National Instrument 43-101.

About Spark Energy Minerals Inc.

Spark Energy Minerals Inc. is a Canadian company advancing the exploration and development of critical minerals essential to the clean-energy transition. The Company's primary focus is Brazil, where it controls a significant land position within the country's emerging Lithium Valley - a region recognized for its lithium, gallium, and rare-earth potential. Spark's flagship Arapaima Project spans approximately 91,900 hectares and hosts multiple targets for lithium and gallium-REE mineralization. Through systematic exploration, Spark aims to help strengthen the secure and sustainable supply of minerals that power electrification, renewable energy, and modern technologies. The Company is committed to responsible exploration practices and supporting Brazil's development of a transparent, sustainable critical-minerals supply chain.

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

FOR ADDITIONAL INFORMATION, SEE THE COMPANY'S WEBSITE AT

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