

Strategic Metals & Rare Earths Letter

INTERNATIONAL

the independent information and advisory publication on investing in Strategic Metals & Rare Earths

May 2021



Marino G. Pieterse,
publisher and editor

Critical Metals and Special Minerals		Heavy Rare Earths Oxides (HREO)		Light Rare Earth Oxides (LREO)
lithium (Li)	yttrium (Y)	europium (Eu)	erbium (Er)	lanthanum (La)
cobalt (Co)	scandium (Sc)	gadolinium (Gd)	thulium (Tm)	cerium (Ce)
graphite (C)	niobium (Nb)	terbium (Tb)	ytterbium (Yb)	praseodymium (Pr)
vanadium (V)	tantalum (Ta)	dysprosium (Dy)	lutetium (Lu)	neodymium (Nd)
magnesium (Mg)	beryllium (Be)	holmium (Ho)		promethium (Pm)
tungsten (W)	gallium (Ga)			samarium (Sm)
titanium (Ti)	indium (In)			
zirconium (Zr)	germanium (Ge)			
hafnium (Hf)				
antimony (Sb)				

► Electric car revolution results in continuation of booming strategic metals equity markets in 2021

Overview of listed LITHIUM focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	US\$ billion	US\$ billion
			US\$	US\$		US\$	US\$	US\$ billion	US\$ billion
Albemarle Corp.	NYSE	ALB	167.15	147.52	13	188.36	56.17	17.7	17.7
FMC	NYSE	FMC	121.83	114.93	6	123.67	85.59	15.0	15.0
SQM	NYSE	SQM	54.57	49.09	11	60.75	20.50	13.8	13.8
			Euro	Euro		Euro	Euro	Euro million	US\$ million
ERAMET	Euronext	ERA:FP	64.80	42.92	51	66.68	20.05	1,749.0	2,099
			CNY	CNY		CNY	CNY	CNY billion	US\$ billion
Tianqi Lithium	Shenzen	002466	48.38	39.27	23	70.13	16.01	74,150.0	11,123
			A\$	A\$		A\$	A\$	A\$ million	US\$ million
Pilbara Minerals	1) ASX	PLS	1.18	0.87	36	1.47	0.19	3,400.0	2,618.0
Orocobre	ASX	ORE	6.99	4.51	55	7.28	1.83	2,400.0	1,848.0
Galaxy Resources	ASX	GXY	4.02	2.31	74	4.17	0.70	2,030.0	1,563.1
Piedmont Lithium	ASX	PLL	0.89	0.37	139	1.14	0.08	1,390.0	1,070.3
Liontown Resources	ASX	LTR	0.41	0.40	3	0.55	0.10	734.8	565.8
IoNeer	ASX	INR	0.35	0.28	27	0.49	0.09	663.7	511.0
AVZ Minerals	ASX	AVZ	0.15	0.17	-15	0.23	0.05	421.4	324.5
Core Lithium	ASX	CXO	0.27	0.15	83	0.42	0.04	311.1	239.5
Neometals	ASX	NMT	0.56	0.28	100	0.57	0.14	305.4	235.2
Sayona Mining	ASX	SYA	0.04	0.01	289	0.05	0.01	156.8	120.7
Argosy Minerals	ASX	AGY	0.09	0.08	10	0.22	0.04	110.0	84.7
Lithium Australia	ASX	LIT	0.12	0.07	82	0.21	0.05	108.2	83.3
Lithium Power International	ASX	LPI	0.29	0.22	32	0.39	0.12	87.3	67.2
Prospect Resources	ASX	PSC	0.15	0.17	-15	0.28	0.06	54.4	41.9
European Lithium	ASX	EUR	0.06	0.05	24	0.13	0.04	51.9	40.0

1) completed acquisition of Altura Lithium on January 20, 2021; in consideration of an upfront cash payment of US\$ 155 million (A\$ 201 million)

Overview of listed LITHIUM focused companies (by market capitalization) - continuation

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	C\$ million	US\$ million
			C\$	C\$		C\$	C\$	C\$ million	US\$ million
Lithium Americas	TSX	LAC	16.49	15.98	3	36.60	4.23	1,784.8	1,445.7
Standard Lithium	TSX.V	SLL	4.23	2.85	48	4.75	0.71	536.7	434.7
Sigma Lithium Resources	TSX.V	SGMA	5.10	2.99	71	5.52	1.30	413.9	335.3
Neo Lithium	TSX	NLC	2.50	1.99	26	3.88	0.43	338.2	273.9
American Lithium	TSX.V	LI	2.21	1.22	81	4.21	0.25	291.0	235.7
Millennial Lithium	TSX	ML	2.93	2.57	14	5.25	0.89	286.6	232.1
Critical Elements Lithium	TSX.V	CRE	1.28	0.69	86	1.63	0.21	215.2	174.3
Frontier Lithium	TSX.V	FL	0.90	0.37	147	1.39	0.17	165.8	134.3
E3 Metals	TSX.V	ETMC	2.15	0.88	144	5.37	0.23	87.9	71.2
Macarthur Minerals	TSX.V	MMS	0.44	0.44	0	0.70	0.08	60.4	48.9
Avalon Advanced Materials	TSX	AVL	0.16	0.11	45	0.36	0.05	56.9	46.1
Wealth Minerals	TSX.V	WML	0.33	0.09	282	0.39	0.07	53.9	43.7
Pure Energy Minerals	TSX	PE	1.37	0.71	93	2.63	0.21	41.7	33.7
Lithium South Development	1) TSX.V	LIS	0.68	0.46	49	1.18	0.21	38.7	31.3
Power Metals	TSX.V	PWM	0.27	0.39	-31	0.54	0.23	28.5	23.1
Ultra Resources	2) TSX.V	ULT	0.25	0.09	178	0.28	0.03	26.8	21.7
Aberdeen International	TSX	AAB	0.17	0.15	14	0.48	0.03	22.6	18.3
Dajin Lithium	3) TSX.V	DJI	0.09	0.06	50	0.20	0.02	14.7	11.9
Portofino Resources	TSX.V	POR	0.11	0.10	10	0.26	0.05	8.7	7.0
Argentina Lithium and Energy	TSX	LIT	0.16	0.09	78	0.26	0.05	4.6	3.7
			GBP	GBP		GBP		£ million	US\$ million
Bacanora Lithium	4) AIM	BCN	57.00	63.00	-10	69.00	20.05	148.9	206.9
European Metals Holdings	AIM	EMH	77.00	64.00	20	102.50	10.10	125.9	175.0
Savanna Resources	AIM	SAV	3.78	4.40	-14	5.97	1.58	66.3	92.1
Kodal Minerals	AIM	KOD	0.20	0.10	100	0.23	0.03	31.2	43.3

1) name change from NRG Metals effective October 19, 2020

2) also gold assets in Australia

3) name change from Dajin Resources effective January 20, 2020

4) NewView Capital of China holds a 19.89% equity interest

Overview of listed COBALT focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	CNY billion	US\$ billion
Zhejiang Huayou Cobalt	Shanghai 603799		CNY 81.77	CNY 79.30	3	CNY 116.52	CNY 31.05	CNY billion 99,155.0	US\$ billion 14,873
First Cobalt	TSX.V	FCC	C\$ 0.36	C\$ 0.37	-4	C\$ 0.46	C\$ 0.12	C\$ million 170.4	US\$ million 138.0
Nickel 28	1) TSX.V	NKL	0.78	0.48	63	0.85	0.13	66.0	53.5
Fortune Minerals	TSX.V	FT	0.17	0.08	120	0.27	0.05	56.1	45.4
Canada Silver Cobalt Works	TSX.V	CCW	0.40	0.58	-31	0.77	0.39	49.5	40.1
Cobalt Blockchain	TSX.V	COBC	0.07	0.07	-7	0.17	0.04	14.1	11.4
Sienna Resources	2) TSX.V	SIE	0.11	0.06	100	0.17	0.05	12.9	10.4
Fuse Cobalt	3) TSX.V	FUSE	0.11	0.04	175	0.33	0.03	12.1	9.8
Cruz Cobalt	CNX	CRUZ	0.09	0.05	80	0.18	0.03	9.0	7.3
Fjordland Exploration	4) TSX.V	FEX	0.11	0.11	-5	0.27	0.04	8.3	6.7
Bolt Metals	CNX	BOLT	0.44	0.29	50	0.70	0.09	4.9	4.0
Global Energy Metals	TSX.V	GEMC	0.25	0.30	-17	0.35	0.10	4.4	3.5
Quantum Battery Metals	5) CNX	QBAT	0.71	0.30	137	0.85	0.10	4.3	3.5
Power Group Projects	TSX.V	PGP	0.08	0.07	-50	0.10	0.03	1.2	1.0
Jervois Mining	ASX	JRV	A\$ 0.45	A\$ 0.39	15	A\$ 0.59	A\$ 0.15	A\$ million 361.0	US\$ million 278.0
Cobalt Blue Holdings	ASX	COB	0.35	0.18	94	0.52	0.08	87.0	67.0
Ardea Resources	ASX	ARL	0.50	0.41	23	0.63	0.24	63.8	49.1
A-Cap Energy	6) ASX	ACB	0.05	0.03	67	0.08	0.006	43.6	33.6

1) name change from Conic Metals effective January 12, 2021

2) cobalt-nickel-copper project in Sweden

3) name change from Lico Energy Metals effective March 10, 2020

4) Nickel-copper-PGE project in Manitoba, USA and Nickel-copper-cobalt project in Newfoundland and Labrador, Canada

5) name change from Quantum Cobalt effective March 23, 2021

6) besides farm-in and Joint Venture Agreement with Blackham Resources to acquire a 75% interest in cobalt and nickel associated metals of the Wilconi Project in Western Australia, also major uranium project in Botswana

Overview of listed GRAPHITE focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	A\$ million	US\$ million
			A\$	A\$		A\$	A\$	A\$ million	US\$ million
Syrah Resources	ASX	SYR	1.17	0.96	21	1.38	0.23	575.1	442.8
Talga Resources	ASX	TLG	1.54	1.62	-5	2.15	0.32	465.5	358.4
Magnis Energy Technologies	ASX	MNS	0.34	0.20	70	0.50	0.05	285.0	219.5
Ecograf	1) ASX	EGR	0.57	0.17	232	1.10	0.06	253.8	195.4
Bass Metals	ASX	BSM	0.007	0.003	133	0.014	0.002	30.3	23.3
			C\$	C\$		C\$	C\$	C\$ million	US\$ million
Nouveau Monde Graphite	TSX.V	NOU	16.48	10.30	60	27.40	1.80	585.9	474.6
NextSource Materials	TSX.V	NEXT	0.36	0.09	294	0.53	0.03	258.3	209.2
Zen Graphene Solutions	TSX.V	ZEN	2.09	3.58	-42	3.77	0.33	179.8	145.6
Graphite One	TSX	GPH	1.41	0.49	188	2.40	0.20	94.7	76.7
Mason Graphite	TSX.V	LLG	0.64	0.48	33	1.19	0.15	83.1	67.3
Focus Graphite	TSX.V	FMS	0.12	0.06	109	0.28	0.02	55.6	45.0
SRG Mining	TSX.V	SRG	0.54	0.58	-7	1.05	0.33	43.3	35.0
Northern Graphite	TSX.V	NGC	0.45	0.29	58	0.70	0.15	33.9	27.5
Lomiko Metals	TSX.V	LMR	0.14	0.06	155	0.28	0.02	24.5	19.8
Ceylon Graphite	TSX.V	CYL	0.20	0.22	-11	0.62	0.06	22.8	18.5
Canada Carbon	TSX.V	CCB	0.15	0.18	-17	0.37	0.12	20.3	16.4
Eagle Graphite	TSX.V	EGA	0.17	0.05	267	0.38	0.03	5.9	4.7
			US\$	US\$		US\$	US\$	US\$ million	US\$ million
Westwater Resources	2) NASDAQ	WWR	4.18	4.93	-15	14.50	1.31	130.0	130.0

1) also lithium and uranium properties

Overview of listed VANADIUM focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	£ million	US\$ million
			GBP	GBP		GBP	GBP	£ million	US\$ million
Bushveld Minerals	AIM	BMN	16.40	19.70	-17	24.50	10.22	200.2	278.3
			A\$	A\$		A\$	A\$	A\$ million	US\$ million
TNG	1) ASX	TNG	0.09	0.09	0	0.13	0.05	115.0	88.5
Australian Vanadium	ASX	AVL	0.02	0.01	100	0.04	0.009	67.4	51.9
Technolpgy Metals Australia	ASX	TMT	0.34	0.33	5	0.48	0.12	51.0	39.3
Vanadium Resources	ASX	VR8	0.05	0.03	60	0.08	0.02	20.1	15.5
			GBP	GBP		GBP	GBP	£ million	US\$ million
Aura Energy	2) AIM	AEE	0.11	0.40	-73	0.13	0.21	39.2	54.5
			C\$	C\$		C\$	C\$	C\$ million	US\$ million
Silver Elephant Mining *	3) TSX	ELEF	0.37	0.49	-26	0.59	0.17	73.7	59.7
Blue Sky Uranium	4) TSX.V	BSK	0.25	0.19	35	0.33	0.09	39.7	32.2
First Vanadium	TSX.V	FVAN	0.55	0.47	18	0.63	0.16	36.0	29.2
Vanadium One Iron	5) TSX.V	VONE	0.29	0.13	123	0.30	0.05	24.4	19.7
CellCube Energy Storage	CNX	CUBE	0.03	0.03	0	0.06	0.02	4.6	3.7
Vanadian Energy	TSX.V	VEC	0.09	0.05	80	0.10	0.03	4.0	3.2

* featured as a **Special Situation** and included in 2020 Shortlist of investment recommendations

1) vanadium-titanium-iron project

2) also uranium project in Mauretania

3) name change from Prophecy Development, effective March 19, 2020

4) uranium-vanadium project

5) vanadium-iron-titanium project; name change from Vanadium One Energy effective June 5, 2019

Overview of listed MANGANESE focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization million	
			May 5 2021	year-end 2020		H	L	local	US\$
			C\$	C\$		C\$	C\$	C\$ million	US\$ million
American Manganese	TSX.V	AMY	1.21	0.41	195	2.86	0.13	256.2	202.4
Euro Manganese	TSX.V	EMN	0.52	0.48	9	0.85	0.05	192.7	152.2
Giyani Metals	TSX	EMM	0.50	0.38	32	0.87	0.08	63.3	50.0
Manganese X Energy	TSX.V	MN	0.40	0.28	44	1.11	0.08	46.5	36.7
			A\$	A\$		A\$	A\$	A\$ million	US\$ million
Element 25	ASX	E25	2.02	1.51	34	2.90	0.19	300.6	228.4

Overview of listed TUNGSTEN focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	C\$ million	US\$ million
			C\$	C\$		C\$	C\$	C\$ million	US\$ million
Almonty Industries	TSX	All	1.05	0.64	64	1.30	0.50	207.0	163.5
			A\$	A\$		A\$	A\$	A\$ million	US\$ million
EQ Resources	1) ASX	EQR	0.03	0.04	-14	0.05	0.02	38.9	29.6

1) formerly Carbine Tungsten; new name change from Specialty Metals effective December 2, 2020; also lithium assets in Chile and gold exploration licences in NSW, Australia

Overview of listed TITANIUM focused companies (by market capitalization)

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization	
			May 5 2021	year-end 2020		H	L	US\$ million	US\$ million
			US\$	US\$		US\$	US\$	US\$ million	US\$ million
Tronox	NYSE	TROX	23.37	14.62	60	23.40	5.69	3,550.0	3,550.0
Kronos Worldwide	NYSE	KRO	18.27	14.91	23	18.30	8.19	1,980.0	1,980.0
			A\$	A\$		A\$	A\$	A\$ million	US\$ million
Iluka Resources	ASX	ILU	8.14	6.49	25	10.42	4.88	3,440.0	2,614.4
			GBP	GBP		GBP	GBP	£	
BlueJay Mining	1) AIM	JAY	8.76	12.38	-29	15.76	4.40	84.6	115.9

1) Dundas ilmenite project in Greenland; a; so joint venture and earn-in agreement with Rio Tinto to advance Enonkoski nickel project in Finland

Overview of listed REE focused companies (by market capitalization) - traditional countries

May 5, 2021		Trading symbol		Share price		Change in %	12 months prices		Market capitalization million	
		May 5 2021	year-end 2020	US\$	US\$		US\$	US\$	US\$ million	US\$ million
US:										
Rare Element Resources	1)	OTC US	REEMF	1.82	1.08	69	4.14	0.48	185.9	185.9
Texas Mineral Resources		OTC US	TMRC	2.18	1.77	23	4.70	0.86	154.1	154.1
Ucore Rare Metals										
		TSX V	UCU	C\$ 1.20	C\$ 1.18	2	C\$ 2.97	C\$ 0.70	C\$ million 57.8	US\$ million 46.8
Canada:										
Appia Energy		CNSX	API	C\$ 0.61	C\$ 0.41	51	C\$ 0.84	C\$ 0.13	C\$ million 57.1	US\$ million 46.3
Search Minerals		TSX V	SMY	0.19	0.07	192	0.37	0.03	55.1	44.6
Commerce Resources		TSX V	CCE	0.46	0.33	40	0.47	0.20	33.6	27.2
Medaillon Resources		TSX V	MDL	0.39	0.29	35	0.75	0.09	25.1	20.3
Canada Rare Earth	2)	TSX V	LL	0.10	0.10	-5	0.22	0.05	19.2	15.6
Eagle Plains Resources		TSX V	EPL	0.17	0.15	14	0.19	0.10	16.0	12.9
Marvel Discovery	3)	TSX V	MARV	0.12	0.07	85	0.15	0.03	9.4	7.6
Australia:										
Lynas Rare Earths		ASX	LYC	A\$ 5.70	A\$ 4.18	36	A\$ 6.82	A\$ 1.65	A\$ million 5,130.0	US\$ million 3,950.1
Alkane Resources	4)	ASX	ALK	0.86	0.97	-12	1.54	0.66	509.1	392.0
Hastings Technology Metals		ASX	HAS	0.18	0.19	-3	0.27	0.06	312.9	240.9
Northern Minerals		ASX	NTU	0.04	0.04	11	0.07	0.02	193.8	149.2
Arafura Resources		ASX	ARU	0.17	0.13	32	0.30	0.05	193.2	148.7
Western Europe:										
Greenland:										
Greenland Minerals	5)	ASX	GGG	A\$ 0.08	A\$ 0.28	-73	A\$ 0.36	A\$ 0.07	A\$ million 102.0	US\$ million 78.5
Leading Edge Materials	6)	TSX V	LEM	C\$ 0.31	C\$ 0.37	-16	C\$ 0.45	C\$ 0.08	C\$ million 41.9	US\$ million 33.9

1) approximately 49% held by Synchron, an affiliated General Atomics privately held group of companies

2) vertically integrated REE business

3) also uranium assets

4) also gold producer

5) world's largest undeveloped multi-element REE-uranium-zinc occurrence

6) also graphite and lithium properties in Sweden and cobalt-nickel project in Romania

Overview of listed REE focused companies (by market capitalization) - emerging countries

May 5, 2021	Trading symbol		Share price		Change in %	12 months prices		Market capitalization million		
			May 5 2021	year-end 2020		H	L			
Africa:										
Namibia:										
Namibia Critical Metals	6)	TSX.V	NMI	C\$ 0.32	C\$ 0.25	31	C\$ 0.37	C\$ 0.15	C\$ million 58.4	US\$ million 47.3
Angola:										
Pensana Plc		AIM	PRE	GBP 1.44	GBP 1.94	-26	GBP 2.08	GBP 0.20	£ million 305.5	US\$ million 418.5
Tanzania:										
Peak Resources		ASX	PEK	A\$ 0.04	A\$ 0.07	-47	A\$ 0.06	A\$ 0.01	A\$ million 127.8	US\$ million 98.4
Burundi:										
Rainbow Rare Earths		AIM	RBW	GBP 15.25	GBP 10.75	42	GBP 21.50	GBP 2.20	£ million 71.3	US\$ million 99.1
Malawi:										
Mkango Resources		TSX.V	MKA	C\$ 0.46	C\$ 0.28	67	C\$ 0.47	C\$ 0.06	C\$ million 70.5	US\$ million 57.1
Globe Metals and Mining		ASX	GBE	A\$ 0.04	A\$ 0.04	0	A\$ 0.06	A\$ 0.01	A\$ million 18.2	US\$ million 14.0
Central Asia:										
Kyrgyzstan:										
Stans Energy		TSX.V	HRE	C\$ 0.01	C\$ 0.01	0	C\$ 0.01	C\$ 0.005	C\$ million 1.8	US\$ million 1.4

6) heavy rare earths joint venture with JOGMEC of Japan

CALENDAR OF MINING EVENTS



Uraniumletter INTERNATIONAL

Strategic Metals & Rare Earths Letter
INTERNATIONAL

May	25 – 26	BME Mining Investment Botswana – Gaborone, Botswana
June	2 – 4	WAMPEX 2021 – Accra, Ghana
June	9 – 11	Mining Peru – Lima, Peru online event
June	15 – 17	DRC Mining Week – Lubumbashi, DRC
June	25 – 26	Mines and Money Online Global
September	8 – 10	World Nuclear Symposium - London
September	13 – 14	MINEX Kazakhstan – Nur Sultan, Kazakhstan
October	5 – 7	DRC Mining Week – Lubumbashi, DRC
October	25 – 27	Mines and Money / IMARC Intern. Mining – Melbourne, Australia
November	16 – 17	The Mining Show – Dubai
November	30	MINEX Eurasia – London

CALENDAR OF MINING EVENTS 2022

February 7 – 10 **African Mining Indaba – Cape Town, South Africa**

mines and money
ONLINE ROADSHOW
APAC 6 May • EMEA 13 May • AMERICAS 18 May

3 days over 3 consecutive weeks,
across 3 separate time zones

REGISTER FOR FREE

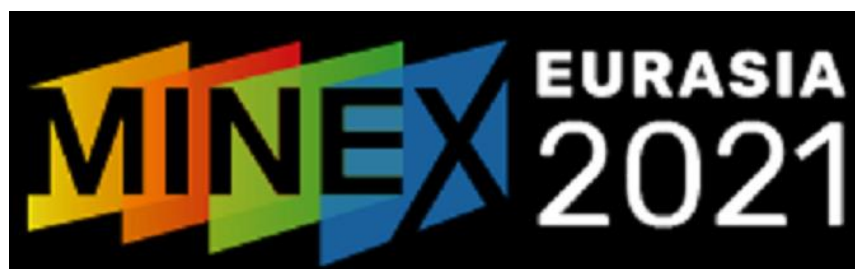
BOTSWANA MINING & ENERGY
BME
CONFERENCE & EXPO

WAMPEX
WEST AFRICAN MINING & POWER EXPO

 **DRC MINING WEEK** EXPO & CONFERENCE

15-17 JUNE 2021
Back to business in Lubumbashi!

GET INVOLVED



Strategic Metals & Rare Earths Letter International • a publication by Metal Commodities Investment Platform, the Netherlands • Marino G. Pieterse, Publisher and Editor • Information and investment comments are independently and thoroughly researched and believed to be reliable and in good faith. No guaranty of absolute accuracy can be given, however • Investment decisions are fully made for own risk • Chamber of Commerce 58330445 • www.metalcommodities-ip.com • e-mail: marino.pieterse@metalcommodities-ip.com • tel.+31-251-828247