Sprott   E	quity Research		13 February 2023
Ticker: EFR CN	Cash: US\$204m (pro forma)	Project: White Mesa / Bahia	101 Condary 2020
Market cap: C\$1,554m	Price: C\$9.86/sh	Country: US (Utah) / Brazil	

REC. (unc): BUY TARGET (+0.50): C\$16.50/sh

RISK RATING (unc): HIGH

We think today's Energy Fuels' (EFR) REE update, including closing of the Bahia acquisition and updated REE separation timelines, is excellent for three reasons: 1) We love the locations. Brazil is becoming the place to be for upstream deposits while the USA has aggressively moved to become a hub for REE downstream process – now EFR is well positioned for both. 2) The staged approach is practical and achievable – starting with 4-5ktpa REO of separation, expanding to 7.5-15kt in stage 2, and adding heavies in stage 3. 3) This is the first mention of HREE separation but again this is a great opportunity as current Dy and Tb supply is China-dominated and Energy Fuels has the unique ability to treat monazite ores in the US. Big picture, this is a major step forward for Energy Fuels to quantify its strategy for the market and for counterparties, and secure its own source of REE feed to provide critical mass for its monazite sourcing efforts. We maintain our BUY rating and lift our nominal valuation for Bahia to US\$50m from US\$28.5m, which lifts our price target to C\$16.50/sh price target based on 1.0xNAV<sub>7% PT-LT \$150/kg NdPr+US\$60/lb U308</sub>. Stepping back, Energy Fuels has a unique and timely value offering: The ability to treat radionuclide bearing REE ores in an already operating and permitted facility – this unlocks the majority of REE deposits for the US supply chain. While the pushback we get on the thesis is on uncertain catalysts and timelines, the acquisition of the Bahia project gives Energy Fuels access to baseload volumes and a foothold in Brazil, where the geology appears to be fertile for world class monazite and ionic clay deposits.

### Major steps forward as Bahia acquisition closed and Stage 1 separation underway

Energy Fuels gave a comprehensive update on its rare earth production and separation plans.

<u>Bahia</u>: EFR closed acquisition of the 150.9km<sup>2</sup> Bahia rare earths project, including receipt of government approvals, and the final payment of US\$21.9m. Energy Fuels guided that the project has potential to supply 3-10ktpa of monazite concentrates (1.5-5.0ktpa of REE oxides) for decades. Phase 1 (2,250m) sonic drilling commenced prior to close and will conclude this month. Phase 2 drilling is expected to start in 3Q23 to inform a maiden S-K 1300 complaint MRE and NI 43-101 Technical Report.

<u>White Mesa:</u> Construction on Phase 1 separation, with capacity for 8-10ktpa of monazite processing into 4-5ktpa TREO including 0.8-1.0ktpa of NdPr commenced this year with guided completion in late 2023/early 2024 for US\$25m phase 1 capital. Phase 2, including a dedicated monazite crack and leach circuit, and separation capacity expansion to 15-30 of monazite into 7.5-15ktpa TREO (1.5-3.0tpa NdPr) is guided for 2026 completion. Phase 3, adding heavy REE separation, including 100-300tpa of Dy and Tb is guided for 2027 completion.

Project	Monazite conc (ktpa)	TREO separation (kt)	Magnet product	Vehicle eq REE content*	Completion target				
Bahia	3.0-10.0			0.15-1.0 million	TBD				
White Mesa Phase 1	8.0-10.0	4.0-5.0	800-1,000tpa NdPr	0.4-1.0 million	Late 2023 / early 2024				
White Mesa Phase 2	15.0-30.0	7.5-15.0	1,500-3,000tpa NdPr	0.75-3.0 million	2026				
White Mesa Phase 3	same as P2	same as P2	100-300tpa Dy and Tb	~1.0-3.0 million	2027				

#### Figure 1: Energy Fuels Bahia and White Mesa production plans

Source: Energy Fuels; \* assumes 1-2kg of NdPr and 0.1kg of Dy per EV



#### Our view: Bahia allows EFR to control own destiny, separation volumes

We have no doubt that Energy Fuel's White Mesa facility will play a major role in the US rare earths supply strategy but the closing of Bahia allows EFR to vertically integrate baseload supply, which adds gravity to its monazite sourcing strategy. The agreement with Chemours is already in place but there are other US mineral sands producers that could participate, plus Western-owned facilities overseas in Africa such as Rio's South Africa and Madagascar Ops. The separation update is in line with our estimates, which we estimate could deliver ~US\$200m/year of FCF at spot Dy/Tb and US\$150kg NdPr, or ~US\$150m at spot – in short not only is White Mesa strategically vital, we think it will be a profitable/cash generative enterprise. Big picture, a permitted facility with minimal startup capex, that enables an industry as crucial as automotive production is a rare opportunity and we think the market is only now starting to wake up to Energy Fuels significance and equity upside.

#### Why we like Energy Fuels

- Radionuclide disposal permits that can be used for rare earths and uranium
- Opportunity to produce up to 3ktpa of NdPr oxides = up to 3m EV motors per year
- 2<sup>nd</sup> largest US uranium producer in past 20 years = trusted counterparty to power utilities

#### Catalysts

- 2023: Maiden MRE and scoping study on Bahia monazite sands project
- 4Q23/1Q24: Completion of Phase 1 LREE separation (4-5ktpa TREO incl 0.8-1.0ktpa NdPr)
- 2026: Completion of Phase 2 LREE separation (7.5-15ktpa TREO incl 1.-3.0ktpa NdPr)
- 2027: Phase 3 HREE separation incl 100-300tpa Dy and Tb

#### Research

- Justin Chan (London) M: +44 7554 784 688 jchan@sprott.com
- Eleanor Magdzinski (Toronto) M: +1 705 669 7456 emagdzinski@sprott.com
- Konstantinos Kormpis (Toronto) M: +1 778-957-3623 <u>kkormpis@sprott.com</u>

# **Equity Research**

Ticker: EFR CN / UUUU US	Price / mkt caj	p:	C\$9.86/sh,	C\$1554m		Market P/NAV:	0.41x		Assets:	White Mes	1
Author: J Chan / E Magdzinski	Rec / PT:		BUY / C\$16	.50		1xNAV FD:	C\$17.90/sh		Country:	Utah, USA	
Group-level SOTP valuation	3Q22	4Q22				Resource / Reserve	Mibs U308	% U308	EV/Ib U308	Mlbs Cu	Mibs V205
		US\$m	0/ship	NAVx	C\$/sh	Measured, ind. & inf.	85	0.20%	11.7	11	18
White Mesa REE Hydromet NPV 7% 4Q22		870	100%	1.00x	7.19	Commodity price	2022	2023	2024	2025	2026
White Mesa REE Separation NPV7% 4Q22		724	100%	1.00x	5.98	NdPr price (US\$/kg)	110	128	150	150	150
Brazil REE + exploration		50	100%	1.00x	0.41	U308 price (US\$/lb)	51	60	60	60	60
Uranium portfolio @ US\$5/lb		419	100%	1.00x	3.46	Share data					
Central SG&A & fin costs 4Q22		(156)	-	1.00x	(1.29)	Basic shares (m): 157.6		ptions (m):		FD/FF	
Cash and securities pro-forma asset sales 3Q		204	-	1.00x	1.68	Ratio analysis	2022	2023	2024	2025	2026
Physical inventories - U308 and V205, plus co Debt 3Q22	ontracts	56	-	1.00x 1.00x	0.47 (0.00)	FD shares out (m) EPS (US\$/sh)	158 0.26	158 (0.22)	187 0.05	187 (0.03)	187 0.16
1xNAV7% spot fully diluted, pre-funded		(0) 2,167	-	1.00x	(0.00) 17.90	CFPS before w/c (US\$/sh)	(0.42)	(0.22)	(0.04)	(0.03)	0.16
Assumed equity raised		2,167		1.00x	1.05	FCFPS pre growth (US\$/sh)	(0.42)	(0.06)	0.04)	0.08	(0.58)
1xNAV7% spot fully funded		2,367		1.00x	16.51	FCF/sh (US\$/sh)	(0.49)	(0.22)	(0.25)	(0.18)	(0.58)
1x fully funded NAVPS sensitivity to NdPr pri	ice and discourt		tinle		10.51	FCF yield pre growth (US\$/sh)	(0.48)	(2%)	0%	1%	(6%)
Valuation (C\$/sh)	\$130/kg	\$140/kg	\$150/kg	\$160/kg	\$170/kg	FCF yield (%)	(5%)	(2%)	(3%)	(2%)	(6%)
9% discount	11.91	12.78	13.65	14.52	15.38	EBITDA margin (%)	(484%)	(60%)	9%	5%	22%
8% discount	12.98	13.96	14.95	15.93	16.91	FCF margin (%)	(657%)	(65%)	(42%)	(26%)	(47%)
7% discount	14.27	15.39	16.51	17.63	18.75	ROA (%)	15%	(7%)	2%	(1%)	4%
6% discount	15.84	17.13	18.41	19.70	20.98	ROE (%)	16%	(8%)	2%	(1%)	6%
5% discount	17.77	19.25	20.74	22.22	23.70	ROCE (%)	(22%)	(8%)	1%	(1%)	5%
WM REE Crack / Leach NPV7% (US\$m)	\$130/kg	\$140/kg	\$150/kg	\$160/kg	\$170/kg	PER (x)	38x	(46x)	169x	(381x)	63x
9% discount	536	599	661	724	787	P/CF (x)	(129x)	(42x)	79x	293x	31x
8% discount	615	686	757	828	898	Fwd EV/EBITDA (x)	(144x)	(30x)	111x	200x	25x
7% discount	710	790	870	951	1,031	Income statement	2022	2023	2024	2025	2026
6% discount	824	916	1,007	1,099	1,191	Revenue (US\$m)	12	54	114	134	235
5% discount	963	1,068	1,173	1,279	1,384	COGS (US\$m)	(12)	(51)	(71)	(95)	(152)
WM REE Separation NPV7% (US\$m)	\$130/kg	\$140/kg	\$150/kg	\$160/kg	\$170/kg	Gross profit (US\$m)	(1)	3	43	38	83
9% discount	412	467	522	578	633	Expenses (US\$m)		(42)	(26)	(37)	(59)
8% discount	489	552	614	676	738	Impairment & other (US\$m)	(5)				
7% discount	583	653	724	794	865	Net finance costs (US\$m)	112	5	7	(1)	(6)
6% discount	696	776	857	937	1,018	Tax (US\$m)	(2)		(1)		(2)
5% discount	834	926	1,019	1,112	1,204	Minority interest (US\$m)					
Valuation over time	Today	Dec '22	Dec '23	Dec '24	Dec '25	Net income attr. (US\$m)	104	(35)	23	(0)	17
REE Crack and Leach (US\$m)	870.5	861.6	935.4	1,003.4	1,081.7	EBITDA (US\$m)	(56)	(32)	11	6	51
REE Separation (US\$m)	723.6	716.3	777.1	841.6	892.6	Cash flow	2022	2023	2024	2025	2026
Uranium in-situ valuation + Brazil REE	525.8	469.4	469.4	469.4	469.4	Profit/(loss) after tax (US\$m)	45	(34)	10	(5)	29
Cntrl G&A & fin costs (US\$m)	(156.4)	(156.7)	(154.5)	(122.0)	(93.7)	Add non-cash items (US\$m)	(109)	6	7	10	15
Net cash at 1Q (C\$m)	203.6	89.6	254.7	267.0	232.7	Less wkg cap / other (US\$m)	(3)	18	(24)	(8)	(17)
1xNAV (US\$m)	2,167	1,980	2,282	2,460	2,583	Cash flow ops (US\$m)	(66)	(10)	(7)	(3)	27
P/NAV (x):	0.55x	0.59x	0.56x	0.56x	0.54x	PP&E (US\$m)	(10)	(25)	(41)	(31)	(136)
1xNAV share px FD (C\$/sh)	17.92	16.78	17.68	17.54	18.42	Other (US\$m)	53		60		
ROI to equity holder (% pa)	82%	30%	21%	15%	13%	Cash flow inv. (US\$m)	43	(25)	19	(31)	(136)
Sources and uses of cash						Debt draw (repayment) (US\$m)	)		100	100	50
SCPe MREC capex (US\$150m)		SCP	e current cas			Equity issuance (US\$m)		200			
SCPe separation capex				ebt package		Other (US\$m)					
SCPe G&A + working cap pre-positive FCF			Ec	quity Raised	US\$200m	Cash flow fin. (US\$m)		200	100	100	50
Contingency						Net change post forex (US\$m)	(23)	165	112	66	(59)
Total uses				al proceeds		FCF (US\$m)	(76)	(35)	(48)	(34)	(109)
Production (100%)	Dec '24	Dec '25	Dec '26	Dec '27	Dec '28	Balance sheet	2022	2023	2024	2025	2026
Crack/leach throughput (k metric tonnes)	4.5	5.0	10.0	10.0	20.0	Cash (US\$m)	110	275	387	453	394
Production (kt REE in MREC)	2.4	2.6	5.2	5.0	10.1	Accounts receivable (US\$m)	4	4	28	22	29
NdPr in MREC (kt)	0.5	0.6	1.2	1.2	2.3	Inventories (US\$m)	34	16	19	36	54
DyTb in MREC (t)	33	37	73	70	141	PPE & exploration (US\$m)	149	168	142	163	284
MREC revenue (US\$/kg REE)	32.3	32.3	32.3	32.3	32.3	Other (US\$m)	4	4	4	4	4
MREC cash cost (US\$/kg REE)	23.9	27.3	23.5	23.6	22.6	Total assets (US\$m)	301	467	<b>580</b>	678 300	764
MREC AISC (US\$/REE)	27.3	30.4	25.0	25.2	23.4	Debt (US\$m)			100	200	250
Separation TREO produced	1.7	3.0	5.0	4.8	9.5	Other liabilities (US\$m)	20	20	23	26	33
NdPr produced (kt)	0.4	0.7	1.1	1.1	2.2	Shareholders equity (US\$m)	626	826	826	826	826
DyTb produced (t)	24	43	69	67	134	Retained earnings (US\$m)	(349)	(383)	(373)	(378)	(348)
REE Separation revenue (US\$/kg REE)	42.9	42.9	42.9	42.8	42.9	Minority int. & other (US\$m)	4	4	4	4	4
REE Separation cash cost (US\$/kg REE)	36.6	36.6	36.6	34.4	33.4	Liabilities+equity (US\$m)	301	467	<b>580</b>	678	122
REE Separation AISC (US\$/REE)	41.3	39.2	38.2	36.0	34.2	Net cash (US\$m)	90 7 84	255 (22.0vl	267 (63.0vl	233 (4.5v)	123
Capex (US\$m)	(10)	(25)	(41)	(31)	(136)	Net debt to NTM EBITDA (x)	2.8x	(23.9x)	(4 <i>3.9x</i> )	(4.5x)	(1.8x)

Source: SCP estimates



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## **Equity Research**

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TENDER:	0		
NOT RATED:	0		
TOTAL	55		

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