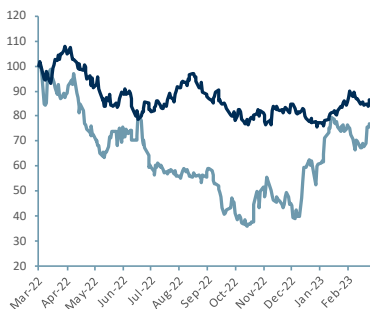


# UPDATE

## VALUE RANGE

USD 6.68 – 7.03



PPTA (lighter line) Nasdaq market vs price relative

### Tuesday, 07 March 2023

Intrinsic Price (USD)	6.86
Value Range Low (USD)	6.68
Value Range High (USD)	7.03
Implied MCAP (m)	452.26
Implied EV (m)	416.29
XNAS	PPTA
TSX	PPTA
Financial YE	31-Dec
Currency	USD

#### Business Activity

Mining E&P

#### Key Metrics

Close Price (USD)	3.56
MCAP (m)	224.32
Net Debt (Cash) (m)	-36.21
EV (m)	188.11
52 Wk Hi	4.88
52 Wk Lo	1.69

#### Key Ratios

(Net Cash) / Shareholder Equity %	-16.14%
FX Rate USD/USD	1.00

#### Mining Sector Research

#### Nasdaq Market Index

#### Analyst Team

+44 20 7419 7928  
mining@acfequityresearch.com

## Perpetua Resources Corp

### Filling the US Critical Minerals Supply Gap

Perpetua Resources Corp. (Nasdaq: PPTA; TSX: PPTA) is an Idaho based (Stibnite jurisdiction), gold-antimony-silver (Au-Sb-Ag) junior explorer/producer. ACF is releasing a valuation increase for PPTA based on milestones achieved since our initiation note. ACF identifies PPTA as a US national strategic asset (Sb) and best-in-class gold asset. On Dec 19, 2022 PPTA received a critical minerals award from the DoD of up to \$24.8m for environmental/engineering studies to complete FEIS, RoD/permits and advance year-1 construction readiness. PPTA is an ESG leader amongst junior miners (long run lower WACC). PPTA holds a unique antimony (Sb) reserve in the US and is positioned to be the only domestically mined source of Sb (supplying ~35% of domestic demand).

- DoD \$24.8m award under Defense Production Act;
- SDEIS comment period closed on-time (January 10, 2023);
- Au: Proven & Probable Reserves at 4.8 Moz gold (Au) @ 1.43 g/t;
- Sb: Proven & Probable Reserves 148 Mlbs at 0.06% in 104 Mt;
- Ambri Inc. partnership for antimony-based liquid battery.

ACF est. \$ (m)	Revenue	EBITDA	EPS (diluted)	CPS	CPS (diluted)
2027E	628.0	435.4	4.79	6.91	6.60
2031E	1,123.6	876.6	7.43	13.91	13.29

Multiples	EV/ Revenue	EV/ EBITDA	P/ EPS (diluted)	P/ CPS	P/ CPS (diluted)
2027E	0.3x	0.43x	0.74x	0.52x	0.54x
2031E	0.2x	0.2x	0.5x	0.3x	0.3x

## Investment Case

Share Price History	No. of Shares in issue	Fully diluted
NoSh (m)	63.01	65.97
Implied Intrinsic Price	7.18	6.86
Value Range Low	6.82	6.68
Value Range High	7.54	7.03
XNAS	PPTA	
Financial YE	31-Dec	
Reporting Currency	USD	
NoSh (m)		63.01
NoSh (m) expected dilution (Exp D)		63.01
NoSh (m) full dilution (FD)		65.97
<b>Key Metrics</b>	<b>\$</b>	<b>adj.</b>
MCAP (m)	224.3	224.3
Net Debt (Cash) (m)	(36.2)	(36.2)
EV (m)	188.1	188.1
52 Wk Hi	4.88	4.88
52 Wk Lo	1.69	1.69
Free Float	26%	26%
<b>*Key Metrics FCF adj.</b>	<b>2027E</b>	<b>2031E</b>
CPS (USD)	6.91	13.9
CPS (Exp D) (USD)	6.91	13.9
CPS (FD) (USD)	6.60	13.3
P/CPS	0.52x	0.26x
P/CPS (Exp D)	0.52x	0.26x
P/CPS (FD)	0.54x	0.27x

Perpetua Resources Corp, an ESG/sustainability focused junior miner is redeveloping the Stibnite Gold Project (SGP), Idaho, previously abandoned after 100+ years of mining activity. PPTA's SGP boasts high grade gold @ 2.2 g/t (est. years 1-4 with M + I resource of 6 Moz Au @ 1.42 g/t). The 2020 feasibility study (FS) suggests superior economics with a post-tax NPV of \$1.86bn (assumptions: 5% discount rate, gold \$1,850/oz) and will be the only domestic mined source of the critical mineral Sb (M+I 206Mlbs @0.07%).

**Top tier gold mine** – PPTA completed a feasibility study (FS) on the Stibnite Gold Project in Dec 2020. The FS recorded Proven & Probable Reserves at 4.8 Moz gold (Au) @ 1.43 g/t, Measure and Indicated (M + I) at 6.0 Moz @ 1.42 g/t. **In contrast, we conservatively model Proven & Probable at Au 4.25 Moz by reducing grade assumptions by 5% as a margin of error vs. the FS.**

The FS provides evidence that Stibnite is one of the largest independent gold projects in the US. Stibnite **could become the second largest gold producing mine in the US** with an average annual production of 463 Koz years 1-4. **We conservatively model average annual production of 457 Koz years 1-4.** The project's exceptional grade and low strip ratio place it in the lowest quartile of the mining cost curve (AISC cost at \$438/oz in years 1-4).

The FS suggests robust project economics of 22% IRR at \$1,600/oz gold and ~28% IRR at \$1,850/oz gold. We assume an aggressive >11.6% WACC and a **\$1,613 t/oz gold price**, which is at the mid-point between the long run (17 years) median gold price and the **current spot price of ~\$1,818 t/oz.**

Our value range is \$6.68 to \$7.03 p/s suggesting 88-97% upside. The stock is up ~78% since our [initiation note of Sep 28, 2022](#).

**Gold – PPTA's superior project economics:** The SGP, is located along the eastern edge of the Idaho Batholith, within the Central Idaho Mineral Belt. There are 3 primary deposits mined as 3 separate open pits and an additional 3m MT of historical tailings at >1.0 gpt.

**Antimony (Sb) - PPTA could reduce US critical minerals supply chain risk:** PPTA plans to supply ~35% of US Sb demand. *Antimony is a critical mineral used in renewables, LDES, defense (ammunition et al), and fire-retardant materials.* Currently, China and Russia dominate global antimony supply, controlling more than 75% of production. PPTA has national strategic value in its ability to become the sole US antimony domestic source of mined production.

**Defense** – On Dec 19, 2022 Perpetua received an award of up to \$28.4m under the Defense Production Act (DPA) for critical minerals, i.e. **Antimony trisulfide**. On Sept 12, 2022, Perpetua announced a \$200k grant by the US Department of Defense (DoD) (through Defense Logistics Agency (DLA)) for two study programs - each to be completed over 12 months – to evaluate PPTA’s military-grade antimony trisulfide resources to see if they meet military specifications (Mil-Spec).

**Renewables** - Antimony’s unique properties make the semi metallic element a key resource in renewable energy (solar panels and wind turbines).

**Long Duration Energy Storage (LDES)** - PPTA’s partner Ambri Inc. is rapidly commercializing an Sb-based liquid battery suitable for long-term energy storage. **Ambri’s** use of antimony delivers a low-cost technology and a system that avoids degradation by fully consuming the negative electrode.

**Healthcare** - Although antimony (Sb) is currently used sparingly in medicine, it has beneficial effects and we expect healthcare AI iterative learning techniques to reveal more uses. Today Sb compounds (meglumine antimonate and sodium stibogluconate) are the principal medications for treating leishmaniasis (kala-azar), caused by a protozoan parasite.

**ESG and Sustainability impact on valuation** - PPTA is a leading exemplar within the junior mining space for ESG/Sustainability. The emphasis on ESG will lower its cost of capital through reduced risk and greater competition from investors. An ESG culture will improve operational margins through better monitored process and mindset. As we approach production this long-term investment will come into play, enhancing our valuation range.

**Since our [initiation note](#)** PPTA also completed its water quality improvements at Stibnite improving Hennessy Creek diversion channel to prevent leakage, removing legacy waste from Defense Mineral Exploration Administration (DMEA) waste rock dump from along the East Fork of the South Fork of the Salmon River (EFSFSR), and creating a lined diversion for surface water around Smelter Flats.

## Catalysts

Final EIS 2H23E; Final permitting decision end 23E/beginning 24E; Rising gold price; Rising antimony demand / supply tightening (ammunition usage and innovation (EVs / clean energy)); Successful Mil-Spec results from DoD project.

## Supporting the US defense supply chain

**PPTA's DPA funding and DoD grant will support the US' re-introduction of domestic antimony production to reduce reliance on foreign supply chains.** Antimony is used in a variety of US military applications such as ammunition, batteries and flame retardants. The Russia-Ukraine war has created a sense of urgency for the US to reinforce its weapons supply chain.

Since the start of the war, the US has committed \$27bn+ in military equipment and supplies to the Ukraine. This has only evidenced the US' shortfall of weapon inventory and the need to speed up replenishment (Center for Strategic and International Studies - CSIS). According to the study, the US' military would not be able to withstand a potential conflict or major war with China over Taiwan. **The US currently has a backlog of \$19bn+ for arms to Taiwan.**

According to the CSIS, the US continues to evoke "risk averse, inefficient and sluggish" efforts in regard to its industrial base, in addition to workforce shortages, obsolete production lines and supply chain disruptions. While this may be the case, the steps that the US government has taken in order to promote PPTA's operations are evidence that the perspective is changing and change is accelerating.

The Biden administration plans to ask Congress for the largest ever Pentagon/national defense budget for 2024 (release date March 9<sup>th</sup>, 2023), expected to be higher than the \$858bn 2023 budget. The Pentagon is preparing itself to be able to fight two large-scale conflicts at the same time.

The US government procures antimony through private industry sources and the amount of antimony needed may vary based on factors such as military spending, technological advancements, and global supply and demand.

As the only known economic reserve of antimony in the US, Perpetua we position PPTA as a US national strategic asset. In order to boost domestic munition production and reduce strategic risk, the US will need to rely on domestic antimony investments as well as foreign allies, rather than on China or Russia. (The US has been producing antimony as a by-product of lead and zinc mining operations however, it currently imports 90%+ of its antimony).

Based upon the proposed defense budget, strategic concerns, geopolitics, electrification and technological innovation, we expect rising US demand for antimony.

## Valuation

### Exhibit 1: PPTA WACC, DCF and Value Range

ACF est. \$ (m)	2027E	2028E	2029E	2030E	2031E
Revenue	628	876	958	958	1,124
EBITDA	435.40	675.99	729.52	729.52	876.58
Net Income	315.8	490.4	529.2	529.2	635.9
FCF	435.37	675.96	729.49	729.49	876.55
CPS (diluted) (USD)	6.60	10.25	11.06	11.06	13.29

#### Stibnite Gold WACC Calc

Pre-tax cost of debt	0.1%
ETR	26.5%
After-tax cost of debt	0.0%
Current Leverage	0.1%
Debt/(Cash)	0.1
Equity	224.3
Target Leverage	30.0%
D / (D+E)	23.1%
ACF $\beta$ adj levered	1.5
rf	2.0%
ERP	5.9%
Cost of equity	10.9%
Risk adj.	3.2%
WACC	11.6%

**Note:** Successful issue of draft EIS and permitting will significantly reduce our WACC.

#### Valuation Range

NPV Stibnite Gold	416.29
NPV FCF (\$m)	416.29
Net Debt/(Cash)	36.09
Fair Value (\$m)	452.26
NoSh (m)	63.01
NoSh (diluted) (m)	65.97
Intrinsic Value Per Share USD	6.86
Close Price USD	3.56
<b>VR (low - high)</b>	<b>6.68 7.03</b>
VR Spread	5.00%
Implied VR Return (low - high)	87.7% 97.4%

**Note:** implied value range in this ACF research note is based upon diluted shares in issue at the date of this note.

*We see fair value of PPTA at USD 6.86 per share (fully diluted).*

## Sensitivity Analysis

*We expect to release further value upon the achievement of major milestones. (DoD \$200k grant for DLA study programs).*

**WACC** - ACF's **valuation is highly conservative**. We have factored in a risk adjustment, producing a **WACC of >11.9%** to account for the facts that Perpetua is not yet permitted and is non-revenue generating, first production is expected in 2027E. ACF has reduced its WACC since our [initiation note of Sep 28, 2022](#) to account for the SDEIS comment period closing on time (Jan 10, 2023), the \$28.4m DPA critical minerals award (Dec 19, 2022) and completion of the 2022 field program.

**Metals Price Deck** - We use a highly conservative metals price deck taking the half-way point for gold between the 17-year median of Au \$1,402.55 t/oz and the current spot price of ~\$1,845 t/oz to give an **Au ~\$1,613 t/oz. Ag \$19.7 t/oz** (2% above the FS assumption) and a price assumption for **Sb of \$4.9 lb** vs. the average 2022 price of \$6.30 lb. Our price deck formula does not capture self-evident long-term structural changes in demand, which will push long term median prices up.

**Production and Grades** - Our total production estimate is achieved **by declining the 2020 FS grades by 5% to account for margins of error**.

**Opex and Inflation** – We have applied inflation rates in the region of 10-15% in the early years of our opex forecasts. In the later years we have assumed that higher energy prices and net zero carbon targets will drive innovation as has happened during previous energy price shocks. Between now and the end of mine life (20 years) we expect compensatory operational savings to materialise via technological innovation, bringing our total project opex in line with the FS. We expect to revisit our inflation assumptions regularly.

**Value Range** - When we substitute our estimates in the DCF valuation this gives us a PPTA intrinsic value fully diluted of **US\$ 6.86**. Assuming a standard deviation of 5%, our **fully diluted valuation range is US\$ 6.68 to 7.03 per share, suggesting an upside of 88%-97% vs. the close price**. This valuation reflects that the project is not yet at construction decision.

**Future Valuation Upgrades** - **we anticipate releasing valuation increases after successful major milestones**.

## Exhibit 2: Valuation sensitivity to Au/Sb/Ag Prices and WACC

WACC (%)	Share Price					
	Gold Price (\$/t oz.)					
		1,513	1,563	1,613	1,663	1,713 (\$/oz)
	10%	7.52	8.48	9.44	10.40	11.36
	11%	6.32	7.20	8.07	8.95	9.83
	12%	5.24	6.05	6.86	7.66	8.47
	13%	4.28	5.02	5.76	6.51	7.25
	14%	3.42	4.11	4.79	5.47	6.16
	15%	2.66	3.29	3.92	4.55	5.18
	16%	1.98	2.56	3.14	3.72	4.30

WACC (%)	Share Price					
	Antimony Price (\$/lbs)					
		3.9	4.4	4.9	5.4	5.9 (\$/lbs)
	11%	7.36	7.72	8.07	8.43	8.79
	11%	7.36	7.72	8.07	8.43	8.79
	12%	6.20	6.53	6.86	7.18	7.51
	13%	5.16	5.46	5.76	6.07	6.37
	14%	4.23	4.51	4.79	5.07	5.35
	15%	3.40	3.66	3.92	4.18	4.44
	16%	2.66	2.90	3.14	3.38	3.62

WACC (%)	Share Price					
	Silver Price (\$/t oz.)					
		16	18	20	22	24 (\$/oz)
	11%	7.98	8.03	8.07	8.12	8.17
	11%	7.98	8.03	8.07	8.12	8.17
	12%	6.77	6.81	6.86	6.90	6.94
	13%	5.69	5.73	5.76	5.80	5.84
	14%	4.72	4.76	4.79	4.83	4.86
	15%	3.85	3.89	3.92	3.95	3.98
	16%	3.08	3.11	3.14	3.17	3.20

Source: ACF Research Estimates; Companies reports; Refinitiv.

## Exhibit 3: Metals/minerals price deck

Metal/Currency	Price (P) assmp. for this Note	Price PPTA FS on 12/22/2020	% Δ	Av. price 2021	Av. price 2022	Av. P 2022 vs. ACF assmp. % Δ	Spot P	Spot P vs. ACF assmp. % Δ
Au (\$/Troy oz)	1,613	1,600	0.78%	1,799	1,802	11.74%	1,818	12.73%
Sb (\$/lb)	5	4	40.71%	5	6	27.92%	5	3.35%
Ag (\$/Troy oz)	20	20	-1.66%	25	22	10.63%	20	2.12%

Source: ACF Research Estimates; Macrotrends.net; Metalsdaily.com.

## Peer Group Comparators - Gold

Exhibit 4: Trailing PPTA peer group metrics – Gold resources only

TTM Metrics / Company Name	Market	Tkr	MCAP US\$(m)	EV \$(m)	EV / REVS	M+I+I (Moz)	MCAP / M+I+I	EV / M+I+I
Perpetua Resources	XNAS	PPTA	314	285	N/M	7.28	43.10x	39.08x
Artemis Gold	XTSX	ARTG	584	536	N/M	11.92	49.04x	44.99x
Skeena Resources	XNYS	SKE	555	536	N/M	4.02	138.01x	133.20x
Integra Resources	XNYS	ITRG	57	46	N/A	3.05	18.84x	15.22x
Marathon Gold	XTSE	MOZ	233	115	N/A	5.06	46.10x	22.79x
<b>Average</b>							<b>62.99x</b>	<b>54.05x</b>
<b>Median</b>							<b>62.99x</b>	<b>54.05x</b>

Source: ACF Research Estimates; Companies reports; Refinitiv.

This peer group is made up of junior gold explorations companies with assets in Canada and the US. These are arguably PPTA's closest and most relevant peers in our view based on PPTA's primary asset. In exhibit 4 above, we have calculated only the gold resources (M+I+I).

The peer group table shows that Perpetua is discounted compared to its peers that have a similar market cap. When we observe the MCAP/M+I+I and the EV/M+I+I multiples, given the stage PPTA is in (i.e. recent milestones highlighted in this note) it is still undervalued compared to its peers that are in the same pre-permitting stage (ARTG, SKE) although PPTA has the second highest value of resources, after ARTG. PPTA's strategic value is not recognized by the market, but in our view, it will eventually close the valuation gap.

PPTA is the only known economic reserve of antimony in the US. Finding a peer based on that asset was not going to be comparable as we would have had to choose Chinese companies, which are far more advanced in the mining stage, or companies representative of the antimony vertical integration. PPTA's main asset is gold, which is what is currently driving its valuation. (\*PPTA reserves and resources in the tables include antimony because the deposits contain zones with elevated antimony-silver mineralization, which is not classified separately from gold and is reported if it lies within gold Mineral Resource estimates.)

PPTA does not make up a constituent of our average or median values in the peer group metrics at the bottom of exhibit 4 above. We have excluded PPTA from these values to make the comparison with the rest of the peer group as clean and undistorted as possible.



## Peer Group Comparators - Gold

Exhibit 5: Trailing PPTA peer group metrics – Total resources

TTM Metrics / Company Name	Market	Tkr	MCAP US\$(m)	EV \$(m)	EV / REVS	M+I+I (Moz)	MCAP / M+I+I	EV / M+I+I
Perpetua Resources	XNAS	PPTA	314	285	N/M	7.93	39.58x	35.89x
Artemis Gold	XTSX	ARTG	584	536	N/M	13.91	42.02x	38.56x
Skeena Resources	XNYS	SKE	555	536	N/M	6.48	85.66x	82.67x
Integra Resources	XNYS	ITRG	57	46	N/A	4.93	11.65x	9.42x
Marathon Gold	XTSE	MOZ	233	115	N/A	5.06	46.10x	22.79x
Average							46.36x	38.36x
Median							46.36x	38.36x

Source: ACF Research Estimates; Companies reports; Refinitiv.

In exhibit 5 above, we have calculated total resources (M+I+I), which includes silver and antimony for Perpetua. For the other peers this includes: silver for Integra, gold equivalent and silver for Artemis, gold equivalent and silver for Skeena (Marathon only has gold resources).

When we observe the MCAP/M+I+I and the EV/M+I+I multiples of total resources, given the stage PPTA is in (i.e. recent milestones highlighted in this note) it is significantly undervalued compared to its peers that are in the same pre-permitting stage (ARTG, SKE). Antimony de-risks the project because it is a unique selling point for the company, providing a further indication of PPTA's competitive advantage as the US' national strategic asset.

In exhibit 6 below, we have calculated gold resources only as a percent of total resources for Perpetua and its gold peers, as well as the price of gold as a percent of total resources if it were valued at the current gold spot price of **\$1,818 t/oz, Ag \$20 t/oz and Sb \$4.9 lb.**

Exhibit 6: Gold as a % of total AuEq resources

Company Name	Market	Tkr	Gold (M+I+I Moz)	Total (M+I+I Moz)	Gold (% of total Moz)	Gold (\$m)	Total (\$m)	Gold (\$m % of total)
Perpetua Resources	XNAS	PPTA	7.28	7.93	91.80%	13,432	14,808	90.71%
Artemis Gold	XTSX	ARTG	11.92	13.91	85.69%	21,987	24,703	89.01%
Skeena Resources	XNYS	SKE	4.02	6.48	62.04%	7,419	9,451	78.49%
Integra Resources	XNYS	ITRG	3.05	4.93	61.87%	5,625	8,635	65.14%
Marathon Gold	XTSE	MOZ	5.06	5.06	100.00%	9,327	9,327	100.00%

Source: ACF Research Estimates; Macrotrends.net; Metalsdaily.com.

## Peer Group Selection - Gold

**Artemis Gold (TSX:ARTG listed)** is a Canadian mining company focused on the exploration, development and production of gold and other precious metals in British Columbia, Canada. The company's flagship project Blackwater is a large-scale open-pit gold and silver mine in the development stage with construction estimated to begin in 2023. In the first 5 years. The project has a project life of mine (LoM) of 17 years, the mine is forecasted to produce an average of 485k oz of gold/year over the first nine years of operation

**Skeena Resources (NYSE:SKE listed)** is a Canadian mining company focused on the exploration, development and production of gold, silver and copper in British Columbia, Canada. The company has two projects: Eskay Creek and Snip. Skeena's Eskay Creek mine has an historical production of 3.3m+ oz of gold and 160m+ oz of silver, with plans to expand resources and advance the project to production.

**Integra Resources (NYSE:ITRG listed)** is a Canadian mining company focused on the exploration, development and production of gold and silver in North America, primarily Idaho, USA. The company has two projects: DelAmar and Florida Mountain. The DeLamar project is a high-grade gold and silver deposit with significant potential for exploration and a mineral resource estimate of 4.4m oz AuEq.

**Marathon Gold Corp. (TSX:MOZ listed)** is a Canadian mining company focused on the exploration and development of gold in Newfoundland and Labrador, Canada. Marathon's primary asset, the Valentine Gold Project, includes four main deposits: Leprechaun, Marathon, Sprite and Victory. Permitting for the Valentine Gold Project was issued in Aug 2022 following the EA release, with early works construction commenced in Oct 2022. The project has a total M+I+I estimated resources of 5Moz of Au.

## Peer Group Comparators - Antimony

Exhibit 7: Trailing PPTA peer group metrics - Antimony

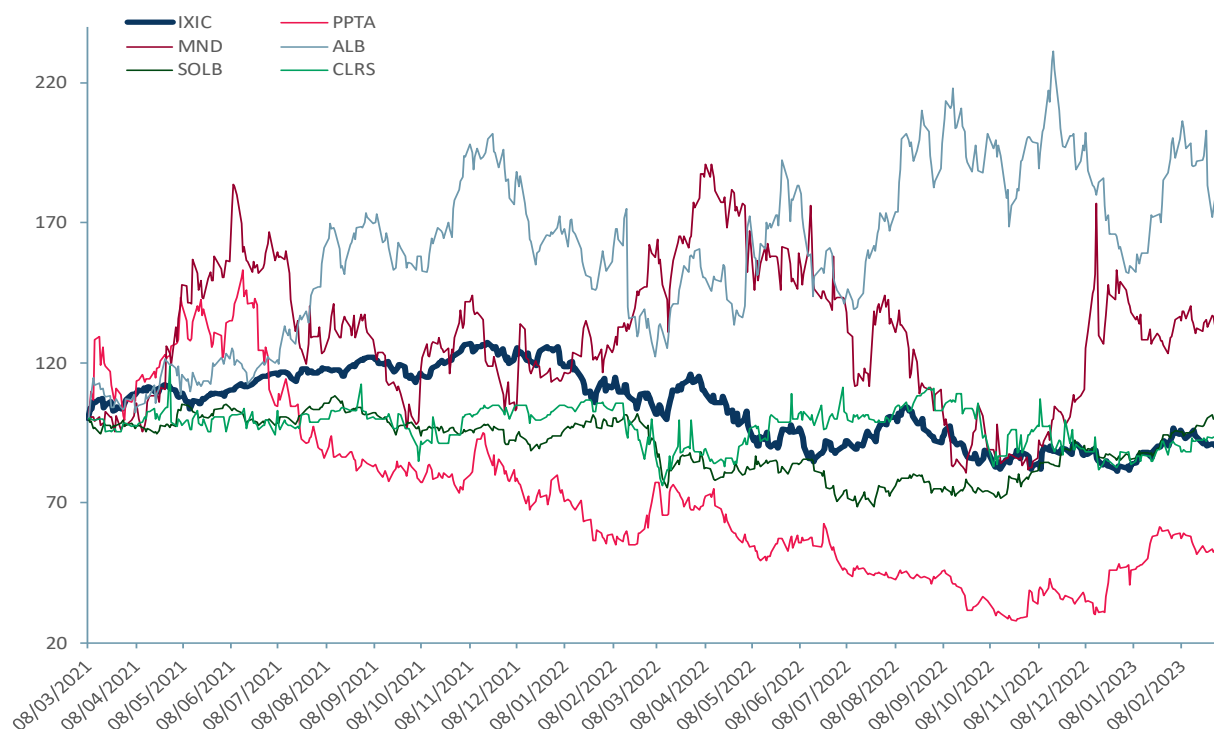
TTM Metrics / Company Name	Market	Tkr	MCAP US\$(m)	EV \$(m)	EV / EBITDA	MCAP / FCF	EV / FCF	EBITDA M%	FCF M%
Perpetua Resources	XNAS	PPTA	314	285	N/M	N/M	N/M	N/M	N/M
Mandalay Resources	XTSE	MND	173	156	1.74x	4.23x	3.81x	46.67%	21.29%
Albemarle Corp.	XNYS	ALB	29,171	31,021	10.81x	N/M	N/M	39.21%	N/M
Solvay SA	XBRU	SOLB	11,865	13,784	3.89x	11.03x	12.81x	20.91%	6.35%
Clariant AG	XFRA	CLRS	5,321	6,109	N/A	6.29x	7.22x	15.77%	15.33%
Average					5.48x	7.18x	7.95x	30.64%	14.32%
Median					5.48x	7.18x	7.95x	30.64%	14.32%

Source: ACF Research Estimates; Companies reports; Refinitiv.

This peer group represents antimony vertical integration, including companies that mine/produce minerals or chemicals including antimony by-products for various applications, e.g., lead-acid batteries (LAB), flame-retardant materials and alloys.

These peers provide an indication as to what valuation PPTA could achieve were it measured solely on its strategic antimony asset. Exhibit 5 shows that these antimony peers have either outperformed or an in line with a major index (Nasdaq).

Exhibit 8: PPTA antimony peer group price relative versus Nasdaq



Sources: ACF Research Estimates; Refinitiv.

## Peer Group Selection - Antimony

**Mandalay Resources Corporation (TSX:MND listed)** is a Canadian mining company producing gold, silver and antimony with operations in Australia and Sweden. Mandalay produces antimony as a by-product of gold and silver mining operations in Australia, and gold concentrate in Sweden. The company focuses on implementing sustainable mining practices while working closely with its local communities.

**Albemarle Corporation (NYSE:ALB listed)** is a global specialty chemical company that produces a wide range of chemical products, including antimony-based compounds and flame retardants headquartered in Charlotte, NC, USA. Albemarle produces antimony trioxide, which is a flame retardant used in a variety of plastics, textiles, and other materials. The company's antimony trioxide product is marketed under the brand name Martinal, and it is one of the most widely used flame retardants in the world. Albemarle's antimony-based products are produced in the US and China.

**Clariant AG (CLN.SW listed)** is a global specialty chemicals company producing antimony-based chemicals and phosphorous-based flame retardants based in Switzerland. Clariant produces antimony trioxide, which is used in flame retardants in various industries, such as textiles, plastics, and electronics under the brand name Exolit, and the product is marketed as a high-quality flame retardant with excellent performance characteristics. Clariant's antimony-based products are produced at the company's manufacturing facilities around the world, including Europe, Asia, and North and South America.

**Solvay SA (SOLB.BR listed)** is a publicly listed company headquartered in Brussels, Belgium and it operates in four segments: Materials, Chemicals Solutions and Corporate & Business Services. Solvay incorporates antimony in its formulations - specializing in cleaner solutions for the automotive and aerospace industries, facilitating the shift to electric and hybrid vehicles in automotive and meeting the needs for advanced solutions to produce more fuel-efficient aircrafts in aerospace.

## Financial Projections

P&L \$ (m)	2027E	2028E	2029E	2030E	2031E
<b>Revs</b>	<b>628</b>	<b>876</b>	<b>958</b>	<b>958</b>	<b>1,124</b>
gr%		39%	9%	0%	17%
Total Expenses	-193	-200	-229	-229	-247
<b>EBITDA</b>	<b>435</b>	<b>676</b>	<b>730</b>	<b>730</b>	<b>877</b>
% Revs	69%	77%	76%	76%	78%
FV adj.	0	0	0	0	0
% Revs	N/M	N/M	N/M	N/M	N/M
<b>EBIT</b>	<b>435.3</b>	<b>675.9</b>	<b>729</b>	<b>729</b>	<b>877</b>
EBT	435	676	729	729	877
% Revs	NM	1	1	1	1
ETR	0	0	0	0	0
<b>NI</b>	<b>316</b>	<b>490</b>	<b>529</b>	<b>529</b>	<b>636</b>
% Revs	NM	56%	55%	55%	57%
Adj EPS (p)	4.8	7.4	8.0	8.0	9.6
Basic EPS (p)	5.0	7.8	8.4	8.4	10.1
Diluted EPS (p)	4.8	7.4	8.0	8.0	9.6
Balance Sheet \$ (m)	2027E	2028E	2029E	2030E	2031E
PP&E	0	0	0	0	0
<b>Total Fixed Assets</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Current assets	1	2	2	2	2
Cash	235	726	1,256	1,786	2,424
<b>Total Current Assets</b>	<b>236</b>	<b>728</b>	<b>1,257</b>	<b>1,788</b>	<b>2,426</b>
<b>Total Assets</b>	<b>236</b>	<b>728</b>	<b>1,257</b>	<b>1,788</b>	<b>2,426</b>
Creditors	3	4	4	4	5
Other liabilities	0	0	0	0	0
Loans	0	0	0	0	0
<b>Total Liabilities</b>	<b>13</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>8</b>
<b>Net Assets</b>	<b>223</b>	<b>721</b>	<b>1,250</b>	<b>1,780</b>	<b>2,418</b>
Share Capital	615	615	615	615	615
Accum. Profit/(loss)	0	0	0	0	0
<b>Total Equity</b>	<b>223</b>	<b>721</b>	<b>1,250</b>	<b>1,780</b>	<b>2,418</b>
<b>Total Equity &amp; Liabilities</b>	<b>236</b>	<b>728</b>	<b>1,257</b>	<b>1,788</b>	<b>2,426</b>
Basic NAV (p)	354	1,144	1,984	2,825	3,838
Diluted NAV (p)	0	0	0	0	0
Cash Flow \$ (m)	2027E	2028E	2029E	2030E	2031E
EBT Profit/(loss)	435	676	729	729	877
Finance costs	2	2	3	3	0
<b>FV adj. + Other adj.</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Cash Taxes	-120	0	0	-120	-186
WCap change	-4	1	0	0	0
<b>Net CFO</b>	<b>312</b>	<b>491</b>	<b>529</b>	<b>529</b>	<b>636</b>

Source: ACF Research Estimates; Companies reports.

## Notes [Intentionally Blank]

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**ACF Equity Research Limited, 125 Old Broad Street, London, EC2N 1AR, U.K.**

**Tel: +44 (020) 7558 8974**

**Website: [www.acfequityresearch.com](http://www.acfequityresearch.com)**