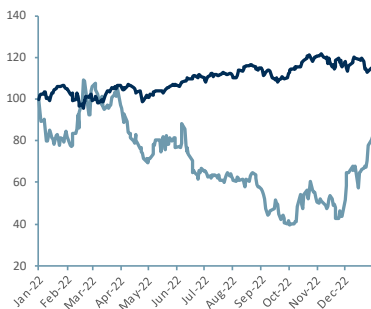


FLASH NOTE

VALUE RANGE

USD 5.26 – 5.53



PPTA (lighter line) Nasdaq market vs price relative

Wednesday, 18 January 2023

Intrinsic Price (USD)	5.40
Value Range Low (USD)	5.26
Value Range High (USD)	5.53
Implied MCAP (m)	356.06
Implied EV (m)	320.09
XNAS	PPTA
TSX	PPTA
Financial YE	31-Dec
Currency	USD

Business Activity

Mining E&P

Key Metrics

Close Price (USD)	3.54
MCAP (m)	222.98
Net Debt (Cash) (m)	-36.21
EV (m)	186.77
52 Wk Hi	4.88
52 Wk Lo	1.69

Key Ratios

(Net Cash) / Shareholder Equity %	-16.24%
FX Rate USD/USD	1.00

Mining Sector Research

Nasdaq Market Index

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Perpetua Resources Corp

The Essential US National Defense Project

Perpetua Resources Corp. (Nasdaq: PPTA; TSX: PPTA) is an Idaho based (Stibnite jurisdiction), gold-antimony-silver (Au-Sb-Ag) junior explorer/producer. 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. On Jan 10, 2023 the comment period for the SDEIS closed on-time (no extensions) and with 18,000+ comments (majority support SGP). 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).

- SDEIS comment period closed on-time (January 10, 2023);
- DoD \$24.8m award under Defense Production Act;
- 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	589.5	396.9	4.37	6.30	6.02
2031E	1,055.1	808.1	6.85	12.83	12.25

Multiples	EV/ Revenue	EV/ EBITDA	P/ EPS (diluted)	P/ CPS	P/ CPS (diluted)
2027E	0.3x	0.47x	0.81x	0.56x	0.59x
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)	62.99	65.95
Implied Intrinsic Price	5.65	5.40
Value Range Low	5.37	5.26
Value Range High	5.94	5.53
XNAS	PPTA	
Financial YE	31-Dec	
Reporting Currency	USD	

NoSh (m)		62.99
NoSh (m) expected dilution (Exp D)		62.99
NoSh (m) full dilution (FD)		65.95

Key Metrics	\$	adj.
MCAP (m)	223.0	223.0
Net Debt (Cash) (m)	(36.2)	(36.2)
EV (m)	186.8	186.8
52 Wk Hi	4.88	4.88
52 Wk Lo	1.69	1.69
Free Float	26%	26%

*Key Metrics FCF adj.	2027E	2031E
CPS (USD)	6.30	12.8
CPS (Exp D) (USD)	6.30	12.8
CPS (FD) (USD)	6.02	12.3
P/CPS	0.56x	0.28x
P/CPS (Exp D)	0.56x	0.28x
P/CPS (FD)	0.59x	0.29x

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 a highly aggressive >12.4% WACC and a **\$1,524 t/oz gold price based on previous model assumptions**, which is below the current spot gold price ~\$1,920 t/oz.

Our value range is \$5.26 to \$5.53 p/s suggesting 48%-56% upside. The stock is up ~70% 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 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. The project will evaluate PPTA's military-grade antimony trisulfide resources to see if they meet military specifications (Mil-Spec) and will support the US' re-introduction of domestic antimony production to reduce reliance on foreign supply chains.

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 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 Record of Decision and 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.

DoD Critical Minerals Award - Key Milestone

On December 19, 2022 Perpetua Resources received a critical minerals award of up to \$24.8m from the Department of Defense (DoD). It is a Technology Investment Agreement under Title III of the Defense Production Act (DPA).

The DPA is the US President's authority to ensure that a private sector resource is available for national defense. Title III provides economic authority to decrease risks and shortfalls associated with the US' domestic industrial base (a critical element that is required for the economic and military power of the US, in this case **Antimony Trisulfide**).

To qualify for DPA Title III funding, a project must meet the following:

- The industrial base/critical element is essential to US national defense;
- Without action from the President, the US industry is unable to provide the resources for the industrial base/critical element required;
- DPA purchases and commitments are the most cost effective and 'practical alternatives' to meeting the defense requirements.

The DoD award will be used to obtain PPTA's Final Environmental Impact State (FEIS – exp. 2H23E) and its Final Record of Decision (Final RoD – exp. end 23E/beginning 24E) via completion of its environmental and engineering studies. The funding will also be used for ancillary permitting and to advance construction readiness.

The DPA funding is separate from the DoD \$200k grant PPTA received in Sep22 for the DLA study programs.

SDEIS Comment Period Closed On-time

Since our last note on [PPTA's Q3 Beat](#), the **comment period for the SDEIS closed on-time on January 10, 2023**. The SDEIS had 18,000+ comments of which the majority were in support of the Stibnite Gold Project. This is another major milestone for the company's permitting process and in reaching its goals to complete the FEIS and RoD for the project.

The **publication of the Supplemental Draft Environment Statement (SDEIS) on Oct 28, 2022** and the Stibnite Gold Project being identified as a **Preferred Alternative** by the USFS, are major milestones for Perpetua Resources - further validating PPTA as an environmental leader amongst its peers (i.e. junior mining companies.)

Notes [Intentionally Blank]

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Is the research provided by a broker and paid for after it has been produced.	NO	<input checked="" type="checkbox"/>
Is the research potentially cross subsidised by other investment banking services.	NO	<input checked="" type="checkbox"/>
Is the research potentially or actually paid for in shares or other financial instruments.	NO	<input checked="" type="checkbox"/>
Has the research been paid for in advance of production via cleared funds.	YES	<input checked="" type="checkbox"/>

I, Christopher Nicholson, hereby confirm that ACF Equity Research Ltd.'s investment research products conform to the above five [5] checks.

Christopher Nicholson
 Managing Director
 Head of Research
 ACF Equity Research Ltd

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