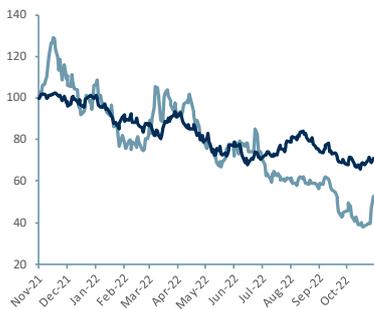


PRE-RESULTS

3Q22E

VALUE RANGE

USD 5.26 – 5.53



PPTA (lighter line) Nasdaq market vs price relative

Tuesday, 01 November 2022

| | |
|------------------------|--------|
| 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) | 2.31 |
| MCAP (m) | 145.50 |
| Net Debt (Cash) (m) | -36.21 |
| EV (m) | 109.29 |
| 52 Wk Hi | 5.94 |
| 52 Wk Lo | 1.69 |

Key Ratios

| | |
|-----------------------------------|---------|
| (Net Cash) / Shareholder Equity % | -24.89% |
| FX Rate USD/USD | 1.00 |

Mining Sector Research

Nasdaq Market Index

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Perpetua Resources Corp

Environmental leader – Steady State Expenses

Perpetua Resources Corp. (Nasdaq: PPTA; TSX: PPTA) is an Idaho based (Stibnite jurisdiction), gold-antimony-silver (Au-Sb-Ag) junior explorer/producer. We expect 3Q22E evidence steady state expenses. Our analysis identifies PPTA as a US national strategic asset (Sb) and a best-in-class gold asset. Since our initiation, on Oct 28, 2022, the USFS chose PPTA's Stibnite Gold Project as the Preferred Alternative on the SDEIS. PPTA is a sustainability/ESG leader amongst junior miners (LR lower WACC) - PPTA has completed its summer 2022 water quality improvement project at Stibnite. PPTA holds the only economic Sb reserve in the US and is positioned to be the only domestically mined source of Sb (supplying ~35% of domestic demand). The US is heavily reliant on Sb for defense and ammunition.

- SDEIS published, with comments due by Jan 10, 2023;
- Add'l relocation of 325k tons of tailings away from EFSFSR in 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 | 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 | 0.2x | 0.23x | 0.46x | 0.32x | 0.33x |
| 2031E | 0.1x | 0.1x | 0.3x | 0.2x | 0.2x |

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 | |
| <hr/> | | |
| NoSh (m) | | 62.99 |
| NoSh (m) expected dilution (Exp D) | | 62.99 |
| NoSh (m) full dilution (FD) | | 65.95 |
| <hr/> | | |
| Key Metrics | \$ | adj. |
| MCAP (m) | 145.5 | 145.5 |
| Net Debt (Cash) (m) | (36.2) | (36.2) |
| EV (m) | 109.3 | 109.3 |
| 52 Wk Hi | 5.94 | 5.94 |
| 52 Wk Lo | 1.69 | 1.69 |
| Free Float | 26% | 26% |
| <hr/> | | |
| *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 | 0.37x | 0.18x |
| P/CPS (Exp D) | 0.37x | 0.18x |
| P/CPS (FD) | 0.38x | 0.19x |

Perpetua Resources Corp, an ESG/sustainability focussed 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**, which is at the mid-point between the long run (17 years) median gold price and the **current spot price of ~\$1,650 t/oz.**

Our value range is \$5.26 to \$5.53 p/s suggesting 163-177% upside. The stock is up 16% 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 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.

3Q22 Expectations

Perpetua Resources: strategy is to advance its Stibnite project to commercial production in 2027E. On 28 Oct 2022, the United States Forest Service released PPTA's Supplemental Draft Environmental Impact Statement (SDEIS) and has identified the Stibnite Gold Project's "Modified Mine Plan" as the Preferred Alternative.

PPTA has 5 other key steps over the next 5 years:

- Final EIS and draft record of decision – publication 2H23E;
- Final record of decision (ROD) – publication end 23E/beginning 24E;
- Ancillary permits and financing expected 1Q24E;
- Construction and legacy restoration to begin 2024E;
- Commercial production start scheduled for 2027E.

PPTA's Stibnite Gold Project is designed to source gold responsibly and is the **only potentially domestic mined source of critical / clean tech metal, antimony**, essential for clean energy and defense supply chains.

We estimate that Perpetua's expenses have hit a run-rate of \$6.6m/quarter, which will continue out to 2Q23E, at which point we shall have reviewed our assumptions. We expect 4Q22E expenses to come in below our \$6.6m quarterly run rate because mining-related activities shut down in the winter.

Exhibit 1: **3Q22E Perpetua Resources Operating Metrics**

| IS \$ (m) | 3Q21A | 4Q21A | 1Q22A | 2Q22A | 3Q22E |
|-------------------|--------------|---------------|--------------|--------------|--------------|
| Revs | 0 | 0 | 0 | 0 | 0 |
| Total expenses | -6.95 | -10.5 | -6.25 | -6.37 | -6.60 |
| % Revs | N/A | N/A | N/A | N/A | N/A |
| EBITDA | -6.95 | -10.49 | -6.25 | -6.37 | -6.60 |
| % Revs | N/A | N/A | N/A | N/A | N/A |
| D&A | 0.0 | 0.1 | 0.0 | 0.0 | 0.0 |
| % Revs | N/A | N/A | N/A | N/A | N/A |
| EBIT | -7.00 | -10.60 | -6.26 | -6.39 | -6.61 |
| EBT | -6.52 | -10.29 | -6.24 | -6.26 | -6.25 |
| ETR | 27% | 27% | 27% | 27% | 27% |
| Tax | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NI | -6.52 | -10.29 | -6.24 | -6.26 | -6.25 |
| % Revs | N/A | N/A | N/A | N/A | N/A |
| EPS | -0.11 | -0.16 | -0.10 | -0.11 | -0.10 |
| EPS fully diluted | -0.11 | -0.16 | -0.10 | -0.11 | -0.09 |
| %Growth | | NM | NM | NM | NM |
| PE | NM | NM | NM | NM | NM |
| PE fully diluted | NM | NM | NM | NM | NM |
| Period end c/p | 4.98 | 4.75 | 4.10 | 3.31 | 2.02 |

Source: ACF Research Estimates; Companies reports.

Notes [Intentionally Blank]

Notes [Intentionally Blank]

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