

Ticker: IAU CN	Net cash: US\$132m	Project: Granite Creek
Market cap: C\$639m	Price: C\$2.66/sh	Country: Nevada, USA
REC. (unc): BUY	TARGET (unc): C\$4.75/sh	RISK RATING (unc): HIGH

Our recent tour of I-80's Lone Tree, Granite Creek, McCoy-Cove, and Ruby Hill sites confirms viability of ~ SCPe 400-500koz over 5-10 years, with potential for upwards of 750kozpa from SCPe >10+ years from added Mineral Point. Compared to last year's visit, UG mining has made significant progress, with advance rates and mining cycles now well understood, and current rates supportive of our 704t/day (73.5koz) forecast for 2023. On the soft side, we were impressed with the skills of the team with extensive experience/expertise in Nevada, a key for execution de-risking in our view led by site mine operations manager Timothy George (previous head engineering services Premier). Overall, mining is going very well and the team is capable of delivering targets as exploration continues to find better grade and ounces at both Granite Creek and Ruby Hill (geology outperforming the model), and the autoclave refurb has been designed/studied in great detail (3rd pass) with capex estimates largely quote-driven (~70%). Big picture, 400-500kozpa profile in Nevada is a great concept, just needs delivery to match. Our visit tells us execution is going very well, with a great team / experienced leaders at ops level doing the work. **As such, we maintain our BUY rating and our C\$4.75/sh PT based on 0.60xNAV_{5%-1850}.** We think the returns (current trading at 0.3x NAV_{5%-1700}) and NAV (SCPe US\$1.7bn) are large enough that I-80 will re-rate hard and is worth owning early rather than missing the run. With FCF inflection at Granite Creek in 3Q23 and with key catalysts including updated Granite Creek (adding SCPe 0.5-1Moz SPZ to resource) and Ruby Hill, plus the upcoming Lone Tree Autoclave study, there are plenty of value catalysts plus improving gold sentiment.

Site visit: Mining impressed us, company understands how to hit tonnes, lots of grade

1. Mining is ahead of where you think it is: There are currently five active headings at Granite Creek at rates of 450-1000t/day prior to the recent underground ventilation expansion. With ventilation critical for ramp development, we anticipate rates to be on par with pre-expansion targets once completed. We modelled 700t/day for 2023, and on site it was very clear how that would be achieved: 400t/day to start 2023 ramping up to 1,000t/day, which translates to SCPe 73kozpa in 2023.

To achieve consistent 1000t/day thereafter, ~8-10 headings are required. Although remnant mining in the Otto Zone still remains an option, early success from South Pacific Zone (SPZ) drilling at depth will shift ounce focus here, leaving Otto as an upside opportunity as Ogee mining carries on. Two additional ventilation raises will be installed over the next ~150-200' of vertical ramp development to reach the bottom of Ogee prior to the commencement of drifting towards SPZ with an SCPe 4Q23 ramp completion target (based on SCPe 7.3'/day advance rate).

Figure 1. (A) Granite Creek 4510L Ogee and (B) McCoy-Cove main decline development headings



Source: SCP

2. Getting to 300koz is simple to understand when you're on the ground: I) Granite Creek is the early focus here as the site ramps up to 1,000t/day by the end of 2023 for steady-state ~105kozpa thereafter. Permitting is in place, hydrology studies are underway and decline development is progressing nicely to unlock SPZ zone for high-grade near-term ounce additions. II) Ruby Hill will be next source of high-grade feed beginning with 426 Zone above the water table ahead of advancing Ruby Deeps with first ore slated for SCPe 2024 once autoclave commissioning has been completed and Granite Creek is humming. Following steady-state production by SCPe YE25 Ruby will produce ~97kozpa thereafter. III) McCoy-Cove's thick tabular veins suitable for drift and fill are expected to yield higher productivities and costs per level. This year's 40km drill program from well-advanced UG drill drift should improve conversion of ounces to reserves. Following Ruby Hill's ramp-up, Cove will be the third spoke feeding the Lone Tree Autoclave (hub) facility with SCPe Y1 21koz ramping up to ~123kozpa over two years (2027). Thus, GC's 105kozpa + RH's ~97kozpa with MC's ~123kozpa sees >300kozpa.

3. So many ounces create opportunity to outperform.

Production: Drilling has hit above reserve/resource grades at depth at both Granite Creek and Ruby Hill which provide nice upside for mining at both deposits with additional bonus ore (not modelled) from current heap inventories of ~9koz at Ruby Hill and ~6.5koz at Lone Tree. **Exploration:** Although exploration efforts on target generation is expected to dwindle in coming years, last year's 50/40/10 split for infill/step-out/target generation should be maintained for 2023 with highest priorities focusing on SPZ infill + Northern extensions and Ruby Hill Deeps + 426 infill and Hilltop (no MRE) to continue to focus on resource to reserve conversion to secure low-cost financing in 2023-2024. In this regard, strategic partnerships will allow for additional regional exploration opportunities while I-80 focuses on becoming a lead producer in Nevada. Paycore, directly south of Ruby Hill, is of particular interest in this regard. With growth potential from both existing polymet resource (3.9Mt @ 5.14g/t Au, 196g/t Ag, 7.9% Zn, 3.8% Pb) at depth and near-surface oxides (historically mined) we see easy pick-up here if high-grade hits continue to hold together.

Five observations that made an impression on us (and should for you too)

1. Ground conditions at the bottom of the ramp impressed us: While mining in upper horizons is more challenging and often requires the use of cutters, we were positively surprised by the condition of the main decline which appeared to be of near Archean Greenstone quality. Rock competence allows for more flexibility with shotcrete scheduling as it can allow several rounds to be taken prior to shotcrete deposition. Although ground is competent, this is still a Carlin sedimentary hosted system, thus benefiting from rapid drill rates and ground support installation = the best of both worlds. This translates to greater productivity for higher production rates and lower unit costs.

Figure 2. Granite Creek main decline



Source: SCP

2. People – Potential bottleneck but team coming together nicely: With three mines ramping up to feed central Lone Tree Autoclave, four sites will need to be staffed in the coming years. As many in the region struggle to maintain personnel quotas via owner-operator structures requiring extensive HR resources, contractors continue to be instrumental to the development of I-80's assets. Currently, Small Mine Development (SMD) oversees mine development on a per-footage basis, using their own equipment as I-80 provides consumables. Not only has this alleviated HR time and costs, but it has reduced the carrying costs associated with owning and maintaining key mining equipment. On the technical side, I-80 has become an attractive alternative to the majors in the region, given more opportunities for advancement and a faster paced growth strategy.

We observed a clear operating vision at each site. Key project management personnel were designated to carry out their duties and effectively progress each project independently with lead operations manager liaising between groups to ensure projects progressed on time. This was refreshing to see, as in our experience, junior/mid-tier start-ups frequently encourage project managers to divide their time and roles between sites, which often results in inefficiency through missed details and deadlines. Additionally, the experience equates to a vast network in Nevada mining districts, which was apparent to us, with individuals frequently running into past colleagues. This is clearly a team with the knowledge and connections to operate here.

3. Water is key risk that's clearly top of mind (but also being managed): Water management is one of the biggest challenges in Nevada due to the state's basin and range physiography and thick carbonate sequences. Each of I-80's sites has a unique hydrological environment, with Cove expected to see the highest (upwards of 30,000 gal/min) water inflow rates. Successful Nevada operations such as Goldstrike have discharged 50,000 gal/min, while historic UG Cove managed 25,000-30,000 gal/min during production (orders of magnitude higher than 350-1000gal/min norms in the Canadian Shield). Pumping water is far more ubiquitous in Nevada than it is in most places, with high reliability of dewatering/well systems for municipal, agricultural, and industrial applications readily used across the state. Hence, a key derisking element here is a focus on systematic, early, hydrology studies to provide foresight and action on permitting and well/pumping infrastructure ahead of mining activities.

At Granite Creek, we saw the team drilling dewatering well #6 from surface down to 2,000 feet to test SPZ hydrology, leaving plenty of room for pump installation and dewatering activities for early SPZ mining in SCPe 2023. Studies are ongoing at Cove as part of the EIS permit for mining below the water table (development slated for SCPe 2024). Ruby Hill 426 zone is currently above the water table and can be mined with existing EA permit. Wells will be extended at depth to study Black Jack and Ruby Deeps dewatering requirements and may initiate an EIS (especially if they encounter high-pressure aquitard similar to that at Paycore's FAD property to the south).

Figure 3. (A) Ruby Hill well #10 and (B) Granite Creek underground sump

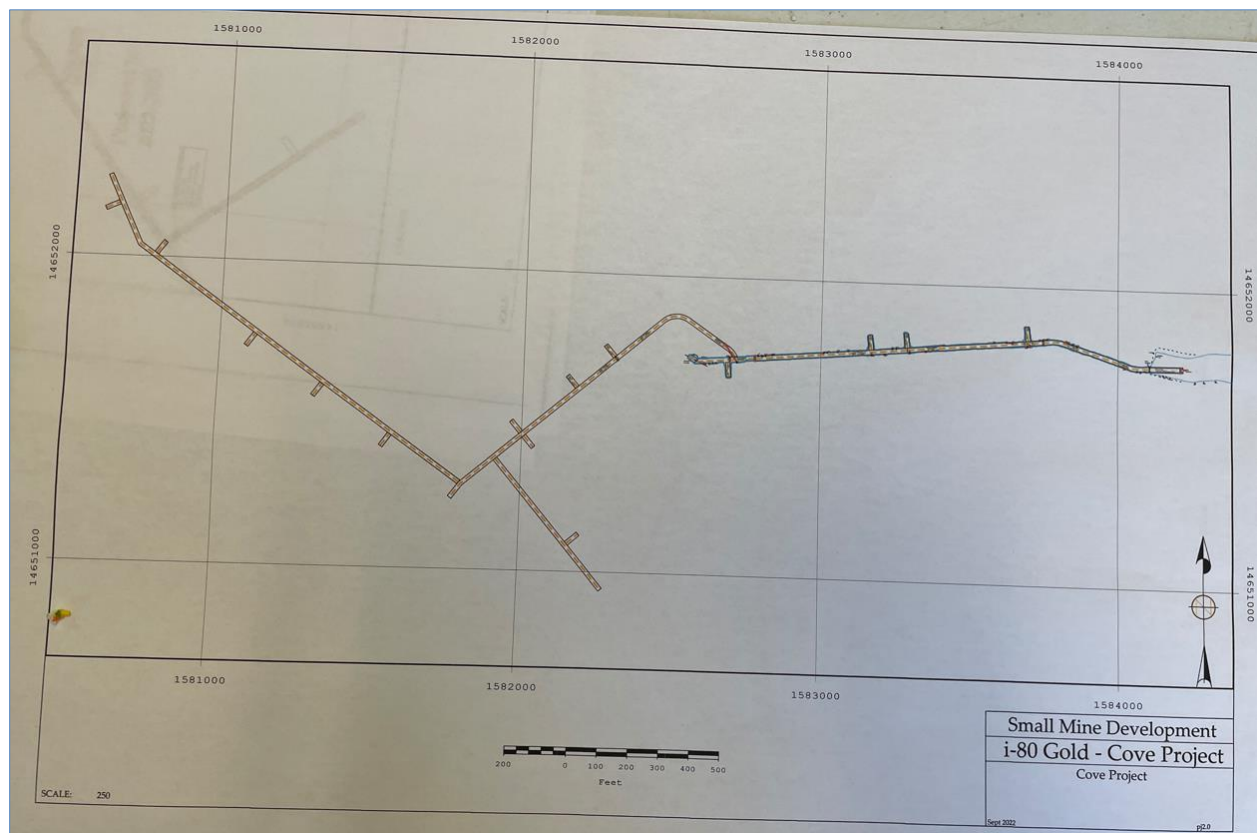


Source: SCP

There are several opportunities here: Ruby's historically low flow rates which may not require EIS initiation if maintained below threshold requirements (~10,000 gal/min). Additionally, the team is looking at the possibility of implementing underground wells (done successfully by other operators in the state) to reduce on costs and time associated with implementing these systems.

4: A deep dive on development rates: In addition to dealing with local aquifers, understanding and managing ground conditions in sedimentary hosted rock is also a key operational risk. Granite Creek employs mechanical cutters in addition to traditional drill and blast (jumbo) development practices depending on ground stability. Under the poorest of conditions, advance rates for cutters range from 2-4' per round. In better ground, jumbos are capable of taking 8' to upwards of 10-12' per round under optimal conditions (on par with Ontario hard rock development advances). While the upper Ogee Zone is seeing an average of 4' a day often with cutters and in-cycle shotcrete, the decline has recently and impressively achieved 16'/day, where competent ground has allowed for up to three rounds to be taken prior to shotcreting headings. To date we estimate the decline advance at SCPe 7.3'/day which includes delays for ventilation changeover/expansion, which is what we project going forward unless ground conditions change. McCoy-Cove ground conditions are considered normal to good, averaging ~8-12' per round for SCPe 9.3'/day (or 7.8'/day including portal development) given easy ramp/cut-out design and no delays for ventilation. Development recently intercepted the poorest ground from a known major NE to SW trending fault spanning 50-75' wide. While crews scale back round lengths and implement in-cycle shotcrete practices through the fault zone, we anticipate rates to speed back up to post portal averages of >9'/day. Approximately 3,800m remain at Cove, with development completion as early as SCPe 3Q23 (with SCPe additional work crews working two headings) to 1Q24 (with current manpower requirements and advance rates).

Figure 4. McCoy-Cove ramp (a) planned development with surveyed face



Source: I-80

5: How to make your tons – team on site knows what they need: The assignment is easy and everyone understands it - simply 100t/day per heading. Thus, Granite Creek will require ~10 headings to comfortably and flexibly mine 1,000t/day (recall 5 headings are currently operational) while Ruby Hill and McCoy-Cove will require ~12 headings to achieve targeted 1,200t/day production rates. We feel this is achievable given vertical and horizontal extents of these deposits leaving plenty of room to establish multiple mining horizons while managing water and ground conditions. This is assuming standard Nevada cut and fill practices that are largely based on UHCF methods. Thus, McCoy-Cove's flat, stacked deposits should see higher productivities with more over hand drift and fill (>ounces per vertical meter). Likewise, Ruby Deep's and SPZ's improved ground conditions at depth could lead to potential bulk LH/BH practices to further improve flexibility, productivities and reduce overall costs compared to traditional UHCF methods. Key here is the team is technical/experienced and are actively looking for opportunities.

Model Changes

1) Ahead of the upcoming autoclave PFS, we have increased our Lone Tree Autoclave capex from US\$235m to US\$300m beginning in 2023. This accounts for both the modifications/upgrade of existing autoclave (with acidulation) facility to run under a more favourable alkaline conditions plus an additional buffer for inflation (+20%). The benefit will be a facility capable of processing 2,500t/day (name plate) high-grade carbonate ore (vs. historic lower carbonate ~3g/t feed) at high (mid to high 80's) recoveries. Although this involves the improvement of boilers that will provide excess heat (vs typical exothermic destruction of sulfur under acidic conditions), the energy costs should be offset by higher recoveries and a reduction in liner maintenance (from upgrade of steel to titanium), commonly the most maintenance intensive component of an autoclave. This switch (alkaline vs acidic) is not uncommon in Nevada, with nearby Goldstrike running autoclaves under alkaline conditions (with some capable of switching between both). Additional system flexibility will be maintained with the acidulation circuit remaining intact for possible future use. With autoclave study nearing completion and based largely on quoted costs (~70%), we anticipate I-80 rolling into FS early next year for quick turn around on construction decision ahead of SCPe YE24 commissioning to process ore – lining up well to carry on from 1,000t/day toll milling agreement ending in October 2024.

Figure 5. Lone Tree Autoclave facility



Source: SCP

2) We've pushed production at McCoy-Cove from 2023 to 2025 beginning with a ~180t/day ramp up. This is a conservative estimate based on SCPe advance rates of ~8'/day from portal start which projects completion of remaining ~3,800ft of development on exploration drill drifts to between 4Q23-1Q24. A 40km drill program will begin in 2023 concurrent with ongoing development. With final rounds of hydrology work underway for background studies, we estimate dewatering to begin next year, continuing

as a key focus in 2024. This will be critical for this operation as the main constraint on development will be dewatering the active decline. In addition, we decreased production to 1,150t/day from ~1200t/day and increased life of mine by 5 years (+230koz @ ~8g/t for total 1.2Moz at 9.4g/t) on the basis of improved reserve conversion from upcoming 40km drill program and the existing 1.7Moz at 11g/t MRE.

Figure 6. McCoy-Cove (A) historic pit to be dewatered and (B) underground development



Source: SCP

3) We've decreased the Granite Creek underground ramp-up in 2023 from 704t/day @ 10.12g/t to 700t/day @ 10g/t reaching 1000t/day over 360 days (vs previous 365) in 2024 and extended the life of mine to account for an additional +600koz (1.9kt) from South Pacific Zone with development targeting the zone into SCPe 2023. Additionally, while UG development tracks well, we push open pit production from 2024 to 2027 to allow for free cash flow generation to self fund open pit preparation in 2025-2026.

4) We've moderated Ruby Hill ramp-up in 2023 from 1,200t/day to 850t/day with full production of 1,150t/day vs ~1,300t/day previously which effectively extends the life of mine an additional five years. Additionally, we push open pit production from 2024 to 2028 to again allow for free cash flow generation to self fund open pit preparation and staggered builds.

Overall changes result in fully funded NAV decreased modestly by US\$36m (2%) to US\$1,741m. Changes to group production, AISC and capex estimates are shown below.

Table 1. Updated SCPe production profile for I-80

New	2022	2023	2024	2025	2026	2027	2028
Production (koz)	43	79	110	192	224	344	442
AISC (US\$/oz)	1,132	1,327	1,106	1,070	905	886	917
Capex (growth plus sust.) (US\$m)	38	220	258	163	109	38	19
Previous	2022	2023	2024	2025	2026	2027	2028
Production (koz)	31	99	227	373	476	476	474
AISC (US\$/oz)	1,556	1,306	1,050	974	912	919	929
Capex (growth plus sust.) (US\$m)	38	190	397	91	37	27	22

Source: SCPe

Why we like I-80

- Among highest grade open pit and underground development assets in US
- One of only three companies with refractory sulphide processing facilities in Nevada
- Ramping up underground methodically with US\$132m of cash to support
- Opportunity to consolidate Nevada and western US gold projects

Catalysts

- 2H22: Updated Granite Creek MRE, Ruby Hill MRE
- 4Q22/1Q23: Lone Tree Autoclave technical report
- 2023: McCoy Cove updated MRE and FS
- 3Q23: SCPe positive FCF at Granite Creek UG

Research

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Appendix: Additional Site Photos

Figure 7. Ruby Hill Archimedes Pit



Source: SCP

Figure 8. Ruby Hill oxide CIL plant (800-1,200tpd)



Source: SCP

Ticker: IAU CN	Price / mkt cap: C\$2.66/sh, C\$639m	Market P/NAV: 0.33x	Assets: Nevada Au portfolio
Authors: J Chan / E Magdzinski	Rec / 1x NAV: BUY / C\$4.75	1xNAV₂₀₂₀ FD: C\$8.03/sh	Country: Nevada, USA

Group-level SOTP valuation						2Q22		3Q22		FD		Resource / Reserve						Mt	Moz	EV/oz	
						US\$m	O/ship	NAVx	C\$/sh	Measured, ind. & inf.						483.43	14.73	35			
						263 <td>100%</td> <td>1.00x</td> <td>1.25</td> <th colspan="6">Mine inventory (SCPe)</th> <td>335.24</td> <td>5.55</td> <td colspan="2">92</td>	100%	1.00x	1.25	Mine inventory (SCPe)						335.24	5.55	92			
Share data																					
Basic shares (m): 240.4						FD shares (m):						281.4	FD + FF	314.9							
Commodity price						CY22E	CY23E	CY24E	CY25E	CY26E											
Gold price (US\$/oz)						1,733	1,713	1,700	1,700	1,700											
Ratio analysis						CY22E	CY23E	CY24E	CY25E	CY26E											
FD shares out (m)						237.7	281.4	281.4	281.4	281.4											
EPS (US\$/sh)						0.061	0.075	0.155	0.306	0.367											
FCF\$ before w/c (US\$/sh)						(0.22)	0.05	0.15	0.28	0.44											
FCF\$ pre growth (US\$/sh)						(0.20)	(0.51)	(0.43)	(0.09)	0.39											
FCF/sh (US\$/sh)						(0.27)	(0.62)	(0.68)	(0.24)	0.07											
FCF pre growth per oz (US\$/oz)						-1,137	-1,808	-1,094	-126	490											
FCF yield - pre growth (%)						(10%)	(26%)	(21%)	(4%)	20%											
FCF yield (%)						(13%)	(31%)	(34%)	(14%)	4%											
EBITDA margin (%)						(40%)	32%	43%	49%	51%											
FCF margin (%)						(112%)	(128%)	(102%)	(21%)	5%											
ROA (%)						(2%)	1%	3%	6%	8%											
ROE (%)						(3%)	2%	5%	11%	13%											
ROCE (%)						0%	6%	9%	13%	14%											
EV (US\$m)						566	767	886	982	967											
PER (x)						43.9x	30.3x	15.2x	7.8x	6.5x											
P/CF (x)						(18.0)	134.2x	26.0x	7.7x	5.3x											
EV/EBITDA (x)						(25.2x)	17.8x	11.0x	6.1x	5.0x											
Income statement						CY22E	CY23E	CY24E	CY25E	CY26E											
Revenue (US\$m)						57	135	186	325	380											
COGS (US\$m)						(37)	(73)	(101)	(159)	(181)											
Gross profit (US\$m)						20	62	86	166	199											
G&A & central						(19)	(19)	(5)	(5)	(5)											
Depreciation						(3)	(8)	(11)	(22)	(26)											
Impairment & other (US\$m)						28	12	15	10	1											
Net finance costs (US\$m)						(18)	(27)	(39)	(43)	(31)											
Tax (US\$m)						2	(12)	(16)	(30)	(36)											
Minority interest (US\$m)						--	--	--	--	--											
Net income attr. (US\$m)						10	9	29	76	102											
EBITDA						(22)	43	81	161	194											
Cash flow						CY22E	CY23E	CY24E	CY25E	CY26E											
Profit/(loss) after tax (US\$m)						(14)	9	29	76	102											
Add non-cash items (US\$m)						(22)	(4)	(3)	12	25											
Less wkg cap / other (US\$m)						(17)	8	17	(10)	(4)											
Cash flow ops (US\$m)						(52)	13	42	78	123											
PP&E (US\$m)						(28)	(178)	(216)	(156)	(107)											
Other (US\$m)						--	(32)	(35)	--	--											
Cash flow inv. (US\$m)						(38)	(220)	(258)	(163)	(109)											
Debt draw (repayment) (US\$m)						--	150	150	50	--											
Equity issuance (US\$m)						3	16	118	--	--											
Other (US\$m)						66	--	--	--	--											
Cash flow fin. (US\$m)						69	166	268	50	--											
Net change post forex (US\$m)						(22)	(41)	52	(35)	15											
FCF (US\$m)						(80)	(165)	(174)	(78)	16											
Balance sheet						CY22E	CY23E	CY24E	CY25E	CY26E											
Cash (US\$m)						67	26	78	43	57											
Accounts receivable (US\$m)						7	7	9	16	19											
Inventories (US\$m)						35	35	20	32	36											
PPE & exploration (US\$m)						532	712	923	1,064	1,146											
Other (US\$m)						47	47	47	47	47											
Total assets (US\$m)						688	827	1,078	1,202	1,306											
Debt (US\$m)						1	151	301	351	351											
Other liabilities (US\$m)						289	253	208	146	148											
Shareholders equity (US\$m)						354	370	487	547	547											
Retained earnings (US\$m)						44	53	82	158	260											
Minority int. & other (US\$m)						--	--	--	--	--											
Liabilities+equity (US\$m)						688	827	1,078	1,202	1,306											
Net Cash						66	(125)	(223)	(308)	(293)											
Net Debt to NTM EBITDA (x)						(1.5x)	1.6x	1.4x	1.6x	1.0x											

Source: SCP estimates

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BUY: The stocks total returns are expected to be materially better than the overall market with higher return expectations needed for more risky securities markets

NEUTRAL: The stock's total returns are expected to be in line with the overall market

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TENDER: The analyst recommends tendering shares to a formal tender offering

UNDER REVIEW: The stock will be placed under review when there is a significant material event with further information pending; and/or when the research analyst determines it is necessary to await adequate information that could potentially lead to a re-evaluation of the rating, target price or forecast; and/or when coverage of a particular security is transferred from one analyst to another to give the new analyst time to reconfirm the rating, target price or forecast.

NOT RATED ((N/R): The stock is not currently rated

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1	SCP and its affiliates collectively beneficially owns 1% or more of any class of the issuer's equity securities ¹	YES
2	The analyst or any associate of the analyst responsible for the report or recommendation or any individual directly involved in the preparation of the report holds or is short any of the issuer's securities directly or through derivatives	NO
3	An SCP partner, director, officer or analyst involved in the preparation of a report on the issuer, has during the preceding 12 months provided services to the issuer for remuneration other than normal course investment advisory or trading execution services	NO
4	SCP has provided investment banking services for the issuer during the 12 months preceding the date of issuance of the research report or recommendation	YES
5	Name of any director, officer, employee or agent of SCP who is an officer, director or employee of the issuer, or who serves in an advisory capacity to the issuer	YES
6	SCP is making a market in an equity or equity related security of the issuer	NO
7	The analyst preparing this report received compensation based upon SCP's investment banking revenue for the issuer	NO
8	The analyst has conducted a site visit and has viewed a major facility or operation of the issuer	YES
9	The analyst has been reimbursed for travel expenses for a site visit by the issuer	NO

Sprott Capital Partners Equity Research Ratings:

Summary of Recommendations as of October 2022	
BUY:	50
HOLD:	1
SELL:	0
UNDER REVIEW:	1
TENDER:	0
NOT RATED:	0
TOTAL	52

¹ As at the end of the month immediately preceding the date of issuance of the research report or the end of the second most recent month if the issue date is less than 10 calendar days after the end of the most recent month