Cypress Development Corp. (TSXV: CYP) – PFS Lithium Asset With Robust Economics and Strong Offtake Potential

COULOIR CAPITAL

Investment Highlights

- Cypress Development Corp. ("CYP", "company") is a lithium miner with a focus on sedimentary deposits in Nevada. Its Clayton Valley Lithium Project is at the Prefeasibility Study stage and the company is currently looking to build a pilot plant on-site.
- **Robust Economics:** As per the Prefeasibility Study, the Clayton Valley Project has a 40-year mine life, a payback period of 4.4 years, an after-tax IRR of 25.8% and an after-tax NPV@8 of US$1.05 billion.
- **Low Project Value Realization:** Despite the strong mien economics projected by the Prefeasibility Study, CYP's equity valuation is less than 5% of the NPV@8 currently projected for Clayton Valley. Peers with projects at a similar stage are trading over 20% of project NPV@8.
- **Supply Offtake Potential:** Given precedents including the recent supply agreement signed between Piedmont Lithium Ltd (ASX: PLL) and Tesla Inc. (NASDAQ: TSLA), we believe CYP's could attract offtake interest in the near-term as counterparties across the electric vehicle ("EV") value chain scramble to secure long-term supply.
- **Based on our analysis and valuation models, we are initiating coverage with a BUY rating and a fair value per share estimate of $2.48 per share.**

Key Financial Data (FYE - Dec 31) (C$)		2019		Q3-2020
Cash	$	1,518,637	$	1,463,364
Working Capital	$	1,532,143	$	1,419,515
Mineral Assets	$	3,623,868	$	4,417,636
Total Assets	$	5,285,202	$	5,994,705
Net Income (Loss) for the 9M	$	(1,193,780)	$	(631,981)
EPS for the 9M	$	(0.02)	$	(0.01)

Current Price (C$):	$	0.59
Fair Value (C$):	$	2.48
Projected Upside:		320.92%
Action Rating:		BUY
Perceived Risk:		HIGH

Shares Outstanding:		98,700,000
Market Capitalization (C$):	$	58,233,000
P/E		-
P/B		9.91
YoY Return		268.75%
YoY TSXV Return		51.65%

*Note that all $ amounts are C$ unless stated otherwise.

CYP is a lithium miner based in the state of Nevada, with a project in close proximity to a number of advanced development assets (both sedimentary and brine) as well as North America's only producing lithium project. The company published a Prefeasibility Study on its flagship lithium asset in the first half of 2020, and are now looking to build out a pilot mining plant to explore the viability of lithium processing at commercial scale. CYP's portfolio consists of:

- **The Clayton Valley Lithium Project:** A claystone sedimentary deposit that is amenable to large-scale conventional surface mining, CYP are looking to build the project into a 15,000 TPD mine that can eventually produce 27,400 lithium carbonate equivalent ("LCE") of lithium hydroxide, the major lithium compounds used in high-nickel EV batteries.
- **The Gunman Zinc-Silver Project:** A 1,100-acre property prospective for zinc and silver that CYP has completed 50,000 feet of RC drilling on.

Based on our analysis of the company's activities, we believe that the Clayton Valley Lithium Project is likely to be the main focus of the company in the near-to-medium term, and therefore the likely driver of investor's value on a forward basis. With a NPV@8 in excess of US$1 billion and a mine life that far exceeds the projected mine payback period, CYP's project certainly has major value proposition. However, to drive the realization of mineral asset value in CYP's corporate valuation, we believe CYP will need to significantly de-risk Clayton Valley and make it suitably more bankable, in order to facilitate project financing. In the wake of the recently announced Piedmont-Tesla supply agreement that rocked the industry and sent Piedmont's share price flying, we believe CYP's project characteristics and strategic positioning may make it eligible for an offtake of similar calibre.

The Clayton Valley Lithium Project

Located in central Esmeralda country within mineral-rich Nevada, the Clayton Valley Lithium Project comprises 129 unpatented placer mining claims and 212 unpatented lode mining claims that together cover 5,430 hectares. CYP owns the rights to all brines, placer and lode minerals on the property, and the active mining claims on the property are summarized in the table below. CYP's project is subject to a 3% NSR, which can be brought down to 1% via the payment of US$2 million in cash to the original property vendor.

Clayton Valley Active Mining Claims

NMC From	NMC To	Claims
Placer Mining Claims		
NMC1119079	NMC1119089	11
NMC1119046	NMC1119078	33
NMC1120318	NMC1120352	35
NMC1121389	NMC1121394	6
NMC1121397	NMC1121400	4
NMC1124933	NMC1124952	20
NMC1129564	NMC1129565	2
NMC1177632	NMC1177633	2
NMC1177672	NMC1177687	16
Total Placer Claims		129
Lode Mining Claims		
NMC1136414	NMC1136484	71
NMC1162324	NMC1162402	79
NMC1177644	NMC1177645	2
NMC1177656	NMC1177671	16
NMC1179592	NMC1179609	18
NMC1179614	NMC1179639	26
Total Lode Claims		212

Source: Company

The Clayton Valley Lithium Project is situated in an area that has a strong lithium footprint, featuring multiple lithium projects in close proximity to CYP's own property. Companies with lithium projects in the region include:

- **Albemarle Corp (NYSE: ALB), Silver Peak:** A brine operation owned and operated by Albemarle since its acquisition of Rockwood Lithium in 2015, Silver Peak is and has been the only producing lithium asset in North America for over half a century. The operation is capable of producing both lithium carbonate and lithium hydroxide and is located northwest of CYP's project.
- **Pure Energy Minerals Ltd (TSXV: PE), Clayton Valley:** Pure Energy Minerals' property is a prospective brine operation that is adjacent to Silver Peak and has an inferred resource of 217,700 tonnes LCE. Pure Energy Minerals completed a Preliminary Economic Assessment on the project in 2018. In 2019, an earn-in with Schlumberger Ltd (NYSE: SLB) was announced.
- **Noram Ventures Inc (TSXV: NRM), Zeus Claystone Deposit:** The boundaries of Noram Ventures' property are a mile off of Albemarle's Silver Peak, and similar to CYP's property, the Zeus Lithium Project is a sedimentary deposit. The deposit is currently under development and Noram Ventures is actively drilling with goal of resource expansion. The most updated estimate (at a cut-off of 900 ppm Li) on Zeus is an indicated resource of 749,421 tonnes LCE and an inferred resource of 427,653 tonnes LCE.
- **Enertopia Corp (OTC: ENRT), Clayton Valley:** Northwest of CYP's property is Enertopia's claystone sedimentary lithium project, which Enertopia completed an NI 43-101 compliant resource estimate on in March 2020. Enertopia's project, at a cut-off grade of 400 ppm Li,

contains an indicated resource of 487,887 tonnes LCE and an inferred resource of 109,410 tonnes LCE.

- **Spearmint Resources Inc (CSE: SPMT), Clayton Valley:** A prospective sedimentary lithium deposit, Spearmint has recently completed a 10-hole drilling program on its holdings, with each hole intersecting claystone with lithium hosting potential. Intercepts of as high as 1,670 ppm Li have been returned, and Spearmint are advancing the project to resource definition.
- **Sienna Resources Inc (TSXV: SIE), Clayton Valley Deep Basin:** Sienna Resources' prospective lithium holdings lie within Pure Energy Minerals' property, and the company is prospecting the concession for brine deposits. However, based on the lack of activity on the project in recent years, we believe Sienna Resources is focused on its other projects.
- **Private Parties:** In addition to the publicly listed companies with assets in the region, two private operators own properties east of CYP's project and have been conducting drilling campaigns between 2018 and 2020.

In terms of accessibility, CYP's project is located six miles east of the small mining town of Silver Peak, which has a population of less than 200. The regional town of Tonopah (population of around 2,500) is 41 miles northeast of the project, and the city of Reno is approximately 220 miles northwest of the project. Access to the project from Tonopah via driving 22 miles south on national US highway 95, before heading 19 miles west on Silver Peak Road, which is a paved and well-maintained gravel road. Silver Peak Road is being upgraded to facilitate project access via pavement. In terms of local resources, Silver Peak is small community with few commercial services, but Tonopah is considered a full-service town with most essential services available. We consider the nearby major city of Reno as close enough to provide reasonable access to important resources including skilled labour and mining equipment. Air access to the project is possible via Tonopah Airport (13 km east of Tonopah) and Reno-Tahoe International Airport. Power is available via power lines on the north side of the project and substations at Silver Peak, Alkali Hot springs and Millers.

Clayton Valley Lithium Project Location

Source: Company

The property area is situated within a region that exhibits hot summers and cool winters, with the average temperature and precipitation statistics of the area summarized in the table below. Precipitation usually occurs in the form of thunderstorms, which can on occasion be violent and cause wide-spread flooding of considerable strength. Other forms of precipitation are rare and snowfall is fairly limited year-round. Windstorms are also common in the area throughout the year, but typically occur in the summer and the fall seasons.

Clayton Valley Lithium Project Weather Information

Silver Peak, Nevada Average Weather Data						
Month	Jan	Feb	Mar	Apr	May	Jun
Average high in ºF	47	54	62	69	80	90
Average low in ºF	19	24	32	38	49	57
Av. precipitation in inch	0.39	0.3	0.53	0.47	0.37	0.37
Month	Jul	Aug	Sep	Oct	Nov	Dec
Average high in ºF	98	95	86	73	57	46
Average low in ºF	62	59	50	38	26	17
Av. precipitation in inch	0.45	0.39	0.25	0.4	0.31	0.22

Source: Company, U.S. Climate Data

The valley's watershed area approximates 1,430 square-kilometres and the valley floor lies at an altitude of 4,320 feet above sea level. The surrounding mountains rise several thousand feet above the valley floor, with the highest being Silver Peak at 9,380 feet above sea level. There is no permanent surface water in Clayton Valley, as all waterbodies exist only briefly during periods of intense precipitation. At CYP's project, the terrain is dominated by mound-like outcrops of mudstone and claystone, cut by dry gravel washes across a broad alluvial fan.

Mine Economics & Resource Profile

CYP completed a Prefeasibility Study on the Clayton Valley Lithium Project in May 2020, which outlined the operation's projected economics and was further refined with a follow up resource estimate update in August 2020. The following tables outline the resource and reserves profile of Clayton Valley as per the most updated mineral resource estimate. Note that a cut-off grade of 900 ppm Li was used to estimate the resources and reserves of the project.

Clayton Valley Mineral Resources and Reserves

Mineral Resources	Tonnes (Mt)	Grade (ppm Li)	Li (Kg, millions)	LCE (Kg, millions)
Measured	574.1	1081	620.6	3.3
Indicated	355.6	1032	367.0	2.0
Measured & Indicated	**929.6**	**1062**	**987.2**	**5.2**
Inferred	100.4	986	99.0	0.5
Mineral Reserves	**Tonnes (Mt)**	**Grade (ppm Li)**	**Li (Kg, millions)**	**LCE (Kg, millions)**
Probable	222.8	1141	254.3	1.4

Source: Company, Couloir Capital

In addition to the above resource profile, the table below outlines key statistics that project the potential economics of the mine if built-out per the mine plan in the Prefeasibility Study. We note that the Prefeasibility Study utilized LOM LCE pricing of US$9,500 per tonne – whilst this pricing is higher than the current LCE pricing of approximately US$9,000 per tonne for LME-traded lithium hydroxide, we will delve into broader long-term lithium demand-supply mechanisms in a section further below. In addition, as demonstrated below the projected operation breakeven price is significantly under the current market pricing of lithium carbonate.

Clayton Valley Mine Economics

Life of Mine Economics			Unit
Life of Mine (LOM)		40	Years
LOM Average LCE Price	$	9,500	$/T
Average Daily Throughput		15,000	TPD
Average Annual Throughput		5,475,000	TPY
Mill Feed		223,000,000	T
Lithium Recovery		83	%
Average Lithum Grade		1,141	ppm Li
Annual LCE Output		27,400	TPY
LOM LCE Cash Cost	$	3,329	$/T
Breakeven LCE Price	$	4,025	$/T
Mine CAPEX	$	493,284,000	
After-tax NPV@8%	$	1,052,000,000	
After-tax IRR		25.8	%
Payback Period		4.4	Years

**All dollar amounts in the above table are US$*

Source: Company, Couloir Capital

With a mine life of approximately 40 years, the Clayton Valley Lithium Project is expected to be a long-lived asset from a production scheduling stand-point. The projected 40-year production schedule has been broken down into eight pit phases, with the initial mining projected to begin in the southwest portion of the project before gradually moving to the northwest. This is due to the increasingly deeper mining and lower-grade ore / higher occurrence of waste mining that is expected given the current understanding of the deposit. The pit phases are non-uniform in duration and the projected time spent on each pit phase is dependent on the time take to extract resources from each section of the mine. It's expected that it will take two years for operations to hit nameplate capacity, with production hitting 64% of nameplate throughput in year one of operations and reaching 98% in the second year. The production schedule is provided below.

Clayton Valley Production Schedule

Pit Phase	Ore Tonnes (millions)	Low Grade Ore Tonnes (millions)	Waste Tonnes (millions)	Li Contained (millions Kg)	Li Grade (ppm)	Stripping Ratio
1	33.93	0.41	0.79	40.67	1,199	0.02
2	20.04	0.00	1.18	23.00	1,148	0.06
3	28.62	0.59	2.92	32.28	1,128	0.10
4	14.31	1.62	1.83	16.68	1,165	0.11
5	36.47	4.55	7.07	40.45	1,109	0.17
6	33.50	3.80	9.27	38.31	1,144	0.25
7	16.19	0.81	2.42	18.39	1,136	0.14
8	38.40	0.64	10.59	43.24	1,126	0.27
Total	**221.46**	**12.42**	**36.07**	**253.03**	**1,143**	**0.15**

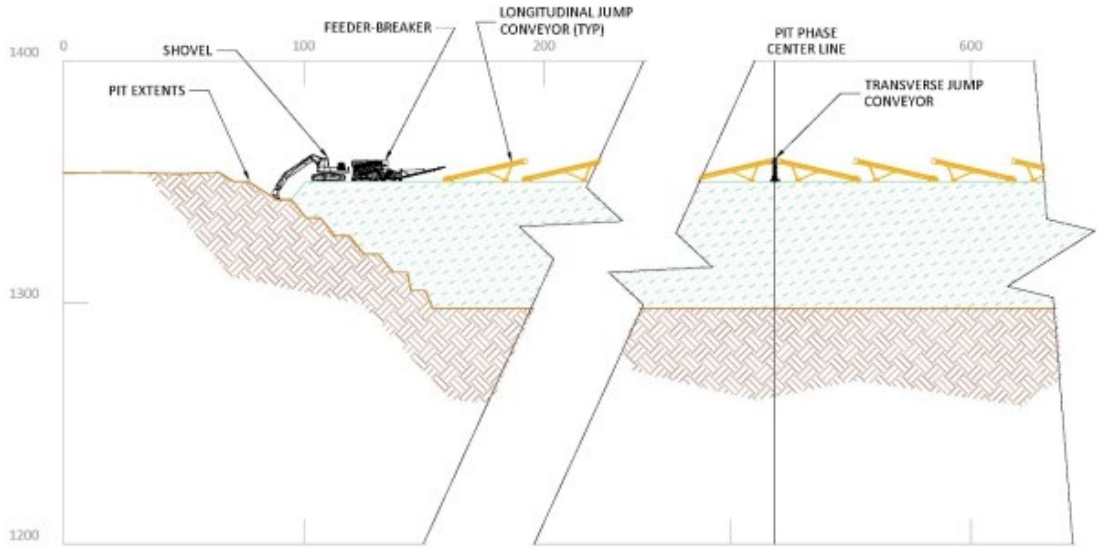
Source: Company

Due to the relatively flat lying nature of the deposit's terrain, the soft sedimentary nature of the extractable material (largely fat clays and silty sands), and the relatively shallow (100-140 meters) depth of the deposit, CYP

expects to use conventional surface mining methods with little to no blasting or drilling. The projected production method, which is the same for each pit phase, is expected to require the following equipment for on-site mining:

- **Wheel Tractor-Scrapers:** For overburden and waste removal. As per the Prefeasibility Study, a scraper with a removal rate of 166 tonnes per hour (such as the CAT 657G) has been deemed ideal.
- **Hydraulic Shovels:** For ore mining, ideally with a bucket capacity of 12 cubic meters and a production rate of 1,265 tonnes per hour. The CAT 6020B shovel has been suggested.
- **Mobile Feeder Breaker:** Will take in feed material to be transferred to portable jump conveyers.
- **Portable Jump Conveyors:** To move material out of pit.
- **Over-Land Conveyors:** A conveyor belt will be used to move material over to either the processing plant or the ore stockpile. Lower grade material between 600 and 900 ppm Li will be transported to the stockpile for future extraction.

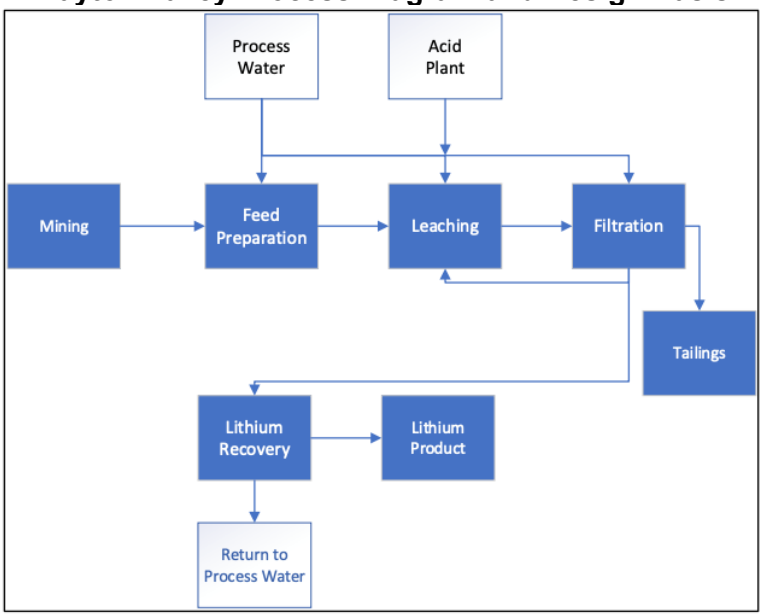
Clayton Valley Mining Method Schematic Profile



Source: Company

On the processing front, the general lithium recovery process envisioned for the Clayton Valley Lithium Project is summarized in the simply flowsheet below. The recovery method is similar to that of lithium brine operations given that material is filtered, evaporated and electrolyzed to come to a final lithium product. Whilst the design basis used in the Prefeasibility Study assumes a default lithium hydroxide product, the mine is also expected to be capable of producing lithium carbonate, and we find the dual compound production capability advantageous given the differing demand-supply mechanics for these compounds.

Clayton Valley Process Diagram and Design Basis



Item	Units	Value
Mine production	kt/yr	5,475
Average lithium grade	% Li	0.114
Overall lithium recovery	%	83
Nominal processing rate	tpd	15,000
Operating schedule	days/year	350
Plant availability	%	92
Feed preparation rate	tph	738
Leach rate (solids), 4 trains	tph	171 x4
Retention time, 2 tanks	min	120 x2
Slurry flow each. train	gpm	2,243
Acid addition, total leach section	tph	86
Filtration rate, 8 filter units	tph (dwt)	92
Tailings to conveyor	tph (wet)	1,200
PLS to lithium recovery	gpm	7,700
Solution to evaporators	gpm	1,100
Make-up water to plant	gpm	2,000
Li Product (LCE)	tpd	72

Source: Company

Based on the mining and processing methods envisioned for Clayton Valley, the following outlines the required project infrastructure:

- **Road Infrastructure:** On-site roads will consist largely of a proposed road south from Silver Peak Road to the proposed plant site, which should be adequate for semi-truck traffic. Access roads to allow capital goods traffic internally on the plant site will also be developed.
- **Buildings and Yards:** On-site facilities are expected to include an administrative building, a laboratory, a mill workshop/ warehouse, a crushing, leaching and filtration area, a processing plant, reagent storage and a mine shop.

- **Sulfuric Acid Plant:** A Dupont MECS plant with 2,500 TPD of sulfuric acid capacity will installed. Sulfuric acid will be produced via the burning of dried sulphur, which will be delivered to the site at a rate of 800 TPD. Acid will be stored in tanks adjacent to the leach plant.
- **Tailings Facility:** Tailings are to be conveyed from the filtration plant to the dry stack tailings facility and placed in the area via a stacking conveyer. The tailings facility supports a 30-meter high stack.
- **Ore Stockpile:** A ROM stockpile by the processing plant with a total capacity of 30,000 tonnes is planned, which will be fed via conveyer and stored via linear stacker.
- **Power Infrastructure:** The sulfuric acid plant is expected to provide the majority of the mine power needs, with secondary power supply provided by the regional grid. There are two 69 kV transmission lines, one of which is in close proximity to the project. A main substation will be erected on-site adjacent to the sulfuric acid plant, and there are provisions for the upgrade of 50 km of transmission lines to facilitate sufficient back up power should the acid plant fail to operate.
- **Water Infrastructure:** With estimated water use in processing totalling 8,000 gpm, and a water recycling rate of 75%, a shortfall makeup water requirement of 2,000 gpm is projected. Whilst the region has groundwater to support operations, water rights are fully allocated, and ownership is fragmented. Acquiring a makeup water source will be important and a potential development risk.
- **Waste Management Infrastructure:** The primary source of waste will be treated effluent from septic systems, but other water discharge to the environment is not expected. Other forms of waste will be disposed of in appropriate containers for transport off-site.

Given the mining infrastructure needs that have been projected, the table below provides a breakdown of estimated capital costs related to mine build-out, as per the Prefeasibility Study on Clayton Valley. Apart from the fact that the estimated CAPEX carries an approximate margin of error of 30% on the upside and 15% on the downside, we also note that the CAPEX budget is based on infrastructure needs implied by process flowsheets, as well as estimates based on vendor quotes, internal data and publicly available information. As a result, factors such as inflation or unexpected new infrastructure needs could result in changes to the actual CAPEX spend. It is expected that the projected US$493 million CAPEX budget will be deployed over a two-year construction phase, with 39% of CAPEX deployed in year one of pre-production mine buildout and the rest deployed in year two.

Clayton Valley CAPEX Profile

Clayton Valley CAPEX Profile				
Facilities	$	5,891,000		
Mine	$	34,757,000		
Plant	$	306,855,000		
Infrastructure	$	25,907,000		
Owner's Costs	$	24,992,000		
Contingency and Working Capital	$	94,883,000		
Total	**$**	**493,284,000**		
Facilities CAPEX Summary:				
Offices and Shops			$	4,458,000
Mobile Equipment			$	800,000
Indirect Costs			$	632,000
Total	$	5,891,000		
Mine CAPEX Summary:				
Development			$	4,388,000
Equipment			$	24,767,000
Other Costs			$	592,000
Indirect Costs			$	5,009,000
Total	$	34,757,000		
Processing Plant CAPEX Summary:				
Feed Preparation			$	10,731,000
Leaching			$	14,358,000
Filtration			$	32,211,000
Tailings			$	3,589,000
Lithium Recovery			$	44,930,000
Acid Plant			$	102,585,000
Direct Cosntruction Costs			$	56,858,000
Indirect Costs			$	41,593,000
Total	$	306,855,000		
Infrastructure CAPEX Summary:				
Power			$	14,595,000
Water			$	5,705,000
Tailings			$	2,597,000
Indirect Costs			$	3,010,000
Total	$	25,907,000		
Owner's Costs CAPEX Summary:				
Project Management and Insurance			$	6,000,000
Feasibility Study			$	5,250,000
Start-Up Costs			$	6,700,000
Permitting and Bond			$	4,750,000
NSR Buy-Down			$	2,000,000
Freight and Tax			$	291,000
Total	$	24,992,000		

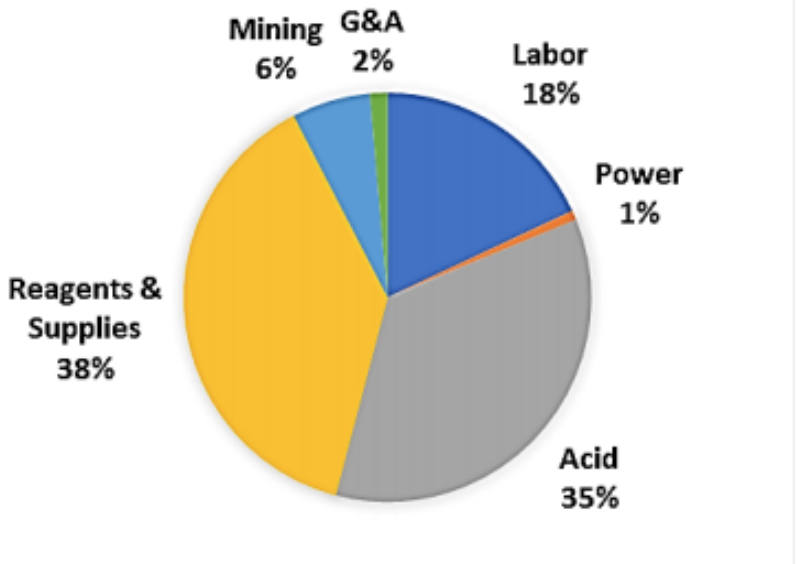
**All dollar amounts in the above table are US$*

Source: Company, Couloir Capital

On the project operating cost side, given the current projected throughput of 15,000 TPD, its estimated that operating costs for the mine could average US$16.78 per tonne. As is common for lithium mining operations, the lion's share of the cost breakdown goes to the processing side, with a large cost projected for the reagents and chemicals required to facilitate lithium processing and recovery. Specifically, around a third of the projected operating cost is associated with the sulfuric acid plant operations, and cost estimations are based on Q1-2020 dry sulphur prices of US$145 per tonne (freight costs included). The vast majority of power (93%) is expected to be supplied by the acid plant, but during periods of plant down-time, it is expected that power will be purchased at a rate of US$0.066 per KwH.

Clayton Valley OPEX Profile

Area	$/yr x 1000	Mill Feed $/t
Mining		
Production Equipment	5,263	0.97
Support Equipment	425	0.08
Mine Labor	4,244	0.78
Mine Operating Costs	**9,932**	**1.83**
Processing		
Reagents & Consumables	67,122	12.35
Power	678	0.12
Plant Labor	9,935	1.83
Process Operating Costs	**77,735**	**14.30**
G&A		
Services and Supplies	1,266	0.23
G&A Labor	2,284	0.42
Total G&A Operating Costs	3,550	0.65
Total Operating Costs	**91,218**	**16.78**



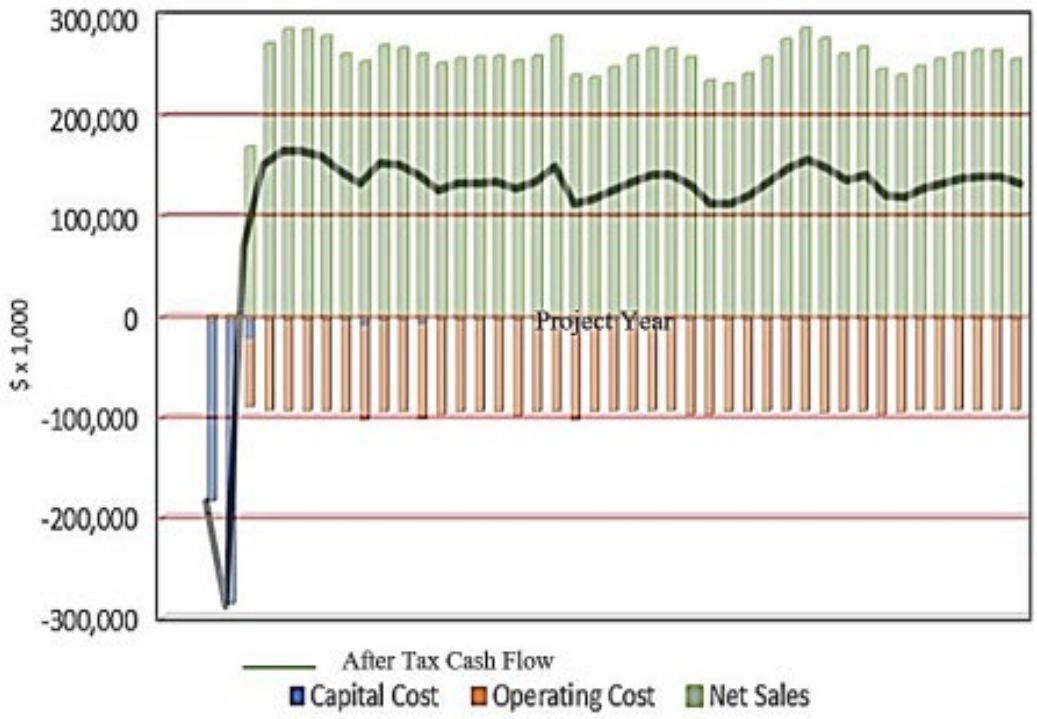
**All dollar amounts in the above table are US$*

Source: Company

After taking into account projected capital and operating costs, and applying the long-term LCE pricing assumptions to the expected production schedule,

the Prefeasibility Study arrived at a mine valuation of US$1.05 billion, on a net present value basis (after-tax, and at a discount rate of 8%). The projected after-tax cash flows of the Clayton Valley Lithium Mine are presented in the below chart:

Clayton Valley Projected Mine Cash Flows



**All dollar amounts in the above table are US$*

Source: Company

In recognition of the possibility for key inputs to vary significantly from those assumed in the Prefeasibility Study, multiple sensitivities were tested to explore the variance in mine valuation given changes in pricing, CAPEX and operating cost. The sensitivity analysis as provided by the Prefeasibility Study is provided in below – note that we have provided our own sensitivity analysis based upon proprietary valuation models, which we outline in a section further below.

Clayton Valley Projected Mine Cash Flows

Variation	60%	100% Base Case	150%
Lithium Price $/t LCE	$5,700	$9,500	$14,250
NPV-8%	$130 million	$1.052 billion	$2.173 billion
IRR	10.5%	25.8%	41.1%
Capital Cost	$296 million	$493 million	$740 million
NPV-8%	$1.352 billion	$1.052 billion	$673 million
IRR	30.1%	25.8%	20.0%
Operating Cost	$1,997/t LCE	$3,329/t LCE	$4,993/t LCE
NPV-8%	$1.229 billion	$1.052 billion	$828 million
IRR	39.6%	25.8%	17.9%

**All dollar amounts in the above table are US$*

Source: Company

Comparable Lithium Projects & Clayton Valley's Positioning

The following compares CYP's Clayton Valley Lithium Project against comparable mining projects owned by other companies, with the key criteria for comparison including development stage of project, type of deposit, and geography. The projects are compared across various metrics that summarize capital and operating cost profiles, returns characteristics, and general mine economics. The difference in key inputs used in the economic analysis of these projects in their respective Technical Reports is also provided. In addition, we compare mine economics to the equity valuations of the owner, in order to build a framework regarding relative value.

Clayton Valley Peer Project Comparison

Project	Owner	Location	Deposit Type	Stage
Clayton Valley Lithium Project	Cypress Development Corp.	Nevada	Sedimentary	PFS
Thacker Pass	Lithium Americas Corp.	Nevada	Sedimentary	PFS
Clayton Valley Brine Project	Pure Energy Minerals Ltd.	Nevada	Brine	PEA
Rhyolite Ridge	Ioneer Ltd.	Nevada	Sedimentary	DFS/ FS
Piedmont Project (Merchant)	Piedmont Lithium Ltd.	North Carolina	Hard Rock	PFS
Piedmont Project (Integrated)	Piedmont Lithium Ltd.	North Carolina	Hard Rock	PFS
Sonora Lithium (77.5%)	Bacanora Lithium PLC	Mexico	Sedimentary	DFS/ FS

Project	After-tax NPV (US$)	Discount Rate	After-tax IRR	Payback Period (Years)
Clayton Valley Lithium Project	$ 1,052,000,000	8%	25.80%	4.4
Thacker Pass	$ 2,590,000,000	8%	29.30%	4.6
Clayton Valley Brine Project	$ 264,100,000	8%	21.00%	4.4
Rhyolite Ridge	$ 1,265,000,000	8%	20.80%	5.2
Piedmont Project (Merchant)	$ 714,000,000	8%	26.00%	3.3
Piedmont Project (Integrated)	$ 1,100,000,000	8%	26.00%	3.2
Sonora Lithium (77.5%)	$ 802,464,000	8%	21.20%	4.0

Project	LCE Cash Cost (US$/t)	CAPEX (US$)	LCE Price Assumption (US$/t)	Cut-off Grade (ppm Li)
Clayton Valley Lithium Project	$ 3,329	$ 493,284,000	$ 9,500	900
Thacker Pass	$ 2,570	$ 1,059,000,000	$ 12,000	2,500
Clayton Valley Brine Project	$ 3,217	$ 297,000,000	$ 12,267	22
Rhyolite Ridge	$ 2,510	$ 785,000,000	$ 13,200	
Piedmont Project (Merchant)	$ 6,689	$ 377,000,000	$ 12,910	4,000
Piedmont Project (Integrated)	$ 3,712	$ 545,000,000	$ 12,910	4,000
Sonora Lithium (77.5%)	$ 3,910	$ 799,868,000	$ 11,000	1,500

Project	Average Grade (ppm Li)	2P Reserves (Mt)	Net Resources (Mt)	Mine Life (Years)
Clayton Valley Lithium Project	1,141	1.353	5.463	40
Thacker Pass	3,283	3.135	7.133	46
Clayton Valley Brine Project	123	N/A	0.109	20
Rhyolite Ridge	1,800	0.580	1.175	26
Piedmont Project (Merchant)	11,100	0.581	0.581	25
Piedmont Project (Integrated)	11,100	0.581	0.581	25
Sonora Lithium (77.5%)	3,956	4.515	6.928	20

Project	Owner	Market Cap (US$)	P/ NPV (%)	NPV/ CAPEX
Clayton Valley Lithium Project	Cypress Development Corp.	$ 45,421,740	4.32%	2.13
Thacker Pass	Lithium Americas Corp.	$ 983,400,928	37.97%	2.45
Clayton Valley Brine Project	Pure Energy Minerals Ltd.	$ 19,995,107	7.57%	0.89
Rhyolite Ridge	Ioneer Ltd.	$ 330,602,400	26.13%	1.61
Piedmont Project (Merchant)	Piedmont Lithium Ltd.	$ 344,625,400	48.27%	1.89
Piedmont Project (Integrated)	Piedmont Lithium Ltd.	$ 344,625,400	31.33%	2.02
Sonora Lithium (77.5%)	Bacanora Lithium PLC	$ 189,801,620	23.65%	1.00

Source: Couloir Capital, Public Disclosures

As shown in the above tables, CYP's project appears to stack up well against comparable late-stage lithium development assets, especially in-terms of

mine longevity and NPV-CAPEX ratio. Despite this, it sits with the lowest NPV to market capitalization realization of the peer group we have selected, with P/NPV@8 at 4.32% versus the group average of 24.14%. We will explore this in the context of valuation considerations later in this report.

Upcoming Catalysts

Based on the conclusions of the Clayton Valley Prefeasibility Study, the next stages in the project's development are expected to be centred around process flowsheet confirmation, test mining and Feasibility Study-level infrastructure design. The below outlines recommendations for CYP vis-à-vis project development for Clayton Valley:

Prefeasibility Study Recommendations

- Processing—Additional test work is needed to confirm the process flowsheet and determine recoveries and reagent consumptions at the pilot stage. Critical information includes,
  - confirm steps and equipment in leaching and filtration
  - conduct further work to enhance solid-liquid separation and reduce acid consumption
  - determine lithium and acid losses in the processing plant, if any
  - optimize solution handling in the plant and determine if bleed streams or additional treatment are needed to recycle solutions
  - determine whether K, Mg, REEs, and other elements have commercial value
- Mining—Drilling or limited test mining is required to obtain material for metallurgical testing.
- Permitting—A field program is required to determine if any species of concern are present and to gather data to prepare a Plan of Operations.
- Infrastructure—Feasibility-level designs for the mine, plant and tailings storage areas can begin. Further determination of project power and water supply are needed.

Source: Company

To this end, the company has most recently been involved with processing confirmation, specifically with metallurgical testing and exploring the use of various reagents in the context of maximizing lithium recovery. In addition to this, off the back of the Prefeasibility Study recommendations CYP intends to build-out a pilot mining plant with daily throughput of approximately one tonne per day. The purpose of this pilot plant is to ensure that all the processes outlined in the Prefeasibility Study can work together as part of an integrated mining operation, whilst also identifying any potential issues. The estimated CAPEX for the pilot plant is broken down in the below table.

Pilot Plant CAPEX Budget

Area	$ x 1000
Pre-program studies	150
Sample procurement	500
Equipment	
Leaching	650
Lithium Recovery	2,600
Operating expenses	1,500
Contingency	1,350
Total Program	**6,750**

Source: Company

Based on updates from the company, CYP appears to have narrowed down its site selection process for the pilot plant and intend to proceed with its build-out upon completing a scoping study related to reagent optimization. If the company successfully erects and operates a pilot plant at Clayton Valley, we would view such an event as de-risking the project and a sign of advancement along the development cycle. Because of this, we see the pilot plant as a near-term catalyst. Outside of the pilot plant, one of the most interesting catalysts to consider for CYP, and perhaps the catalyst that could trigger the next major stage of advancement to eventual commercial production, is the potential for an offtake partner to enter the picture.

Lithium Supply Agreements & Offtake Precedents

The lithium mining space is one that features frequent offtake agreements as lithium converters, EV battery manufacturers and even the EV OEMs themselves look to secure vital inputs. Given the expectations of explosive growth in EV uptake as electrification initiatives take hold globally, many supply agreements are being secured despite the current attractive spot market pricing for offtakers. The table below features several notable offtake agreements that listed lithium miners have signed with offtakers of various profiles, features of these offtake agreements, and the one month stock price change post-agreement.

Lithium Offtake Agreements

Company	Type	Counterparty	Announcement Date	1 Month Return	Notes
Piedmont Lithium Ltd.	Sales Offtake	Tesla Inc.	September 28, 2020	32.14%	5-year, undisclosed fixed price. Approx. a third of 160kt spodumene concentrate.
Altura Mining Ltd.	Sales Offtake	Guangdong Weihua Corp.	August 1, 2019	-29.29%	5-year, US$550-950 per tonne, 50kt per annum of spodumene concentrate.
Altura Mining Ltd.	Sales Offtake	Shandong Ruifu	July 9, 2019	6.06%	5-year, US$550-950 per tonne, 35kt per annum of spodumene concentrate.
Altura Mining Ltd.	Sales Offtake	Ganfeng Lithium Co Ltd.	November 9, 2018	-26.53%	3-year, US$550-950 per tonne, 70kt per annum of spodumene concentrate.
Altura Mining Ltd.	Sales Offtake	Lionergy	July 10, 2017	13.79%	5-year, US$550-950 per tonne, 65kt per annum of spodumene concentrate.
Galaxy Resource Ltd.	Sales Offtake	Chengxin Lithium	November 11, 2020	30.57%	3-year, spot cargo CIF pricing, 60kt per annum of spodumene concentrate.
Galaxy Resource Ltd.	Sales Offtake	Sichuan Yahua Industrial	July 13, 2020	36.78%	3-year, spot cargo CIF pricing, 120kt per annum of spodumene concentrate.
Pilbara Minerals Ltd	Sales Offtake	Contemporary Amperex Technology Ltd.	March 25, 2020	23.53%	5-year, spot cargo CIF pricing. 75kt per annum of spodumene concentrate.

Source: Company

The Piedmont-Tesla supply agreement that was recently signed is particularly significant from a broader industry standpoint as it demonstrated a move by a company on the extreme end of the EV value chain to secure its supply chain at the very source. With Tesla electing to favour domestically sourced lithium as part of its supply chain planning, we expect to see other EV OEMs and automotive companies looking to compete in the EV space do the same, as Tesla is largely seen as a market leader and first mover. Based on our analysis of the circumstances driving previous lithium supply agreements between miners and EV-related counterparties, as well as the key features of the Clayton Valley Lithium Project, we believe CYP's project could be a strong candidate for a pre-production offtake agreement. The key factors driving this view include the following:

- **Long Projected Mine Life:** With 40 years of projected mine life, Clayton Valley offers counterparties significant lithium supply security, some measure of cost predictability and margin protection depending on the pricing terms of the offtake agreement.
- **Dual Compound Capability:** The Clayton Valley Lithium Project is expected to produce battery-grade lithium hydroxide (which is used in high-nickel batteries like the NCA batteries used by Tesla) as a default but can also produce lithium carbonate. This makes it a versatile operation that can produce to the standard of a broader consumer base.
- **Near-term Production Potential:** The Clayton Valley Lithium Project could theoretically be producing within two years of securing funding, assuming the Prefeasibility Study parameters.
- **Location Advantage**: As an onshore U.S. lithium asset, Clayton Valley is one of fairly few domestic development lithium projects. This makes it attractive to battery producers and EV OEMs from a logistics and

delivery standpoint. We note as well that the project is relatively close to the Tesla Gigafactory near Reno.

If CYP were to secure an offtake for part or all of its projected production capacity, there would be multiple benefits worth noting. Pricing is unlikely to be one of these nor vary significantly from market pricing on the upside – in the case of the Piedmont-Tesla offtake, whilst around a third of capacity is contracted under the offtake, Piedmont expects Tesla-bought supply to contribute only 10-20% of future revenues. That implies any contracted offtake is sold at below market pricing, or whatever anticipated pricing is expected on the non-Tesla contracted capacity. Looking at the precedent supply agreements with Chinese lithium converters, miners typically receive spot pricing that takes into account factors such as insurance and freight, with ceiling and floor provisions that constrain the pricing range. As a result, we don't see pricing upside as a particularly important aspect to consider with any potential offtake agreement.

Instead we see the biggest material benefits of a supply agreement being project de-risking and improved bankability. Starting with bankability, if one assumes that CYP could score an offtake partner prior to production and prior to project financing, Clayton Valley becomes significantly more bankable given the improved cash flow visibility on secured future product sales. As a result, CYP's project becomes more attractive and more eligible for cheaper forms of finance, including debt and asset-based financing that carries a cheaper cost. In addition to this, improved cash flow visibility also de-risks the project and removes a degree of uncertainty from its development and the variability of actual free cash flow versus initial projections. In the context of this report and the valuation we apply to the company's mineral assets, an offtake agreement would justify a reduction in the discount rate we use to arrive at CYP's NAV. In addition to this, if we return to the P/ NPV@8 data we compiled for CYP's peers, Piedmont (assuming the merchant project) has the highest NPV realization reflected in its current equity valuation. As a result, we believe there is evidence to suggest that the market responds favourably to supply agreements by pricing mine developers closer to underlying mineral asset values.

History of the Clayton Valley Lithium Project

The project area comprising CYP's property shows signs of limited historic exploration in the form of old weathered pits and trenches, and rare old piled stone rock mound claim corners. The first recorded mining activity in Clayton Valley was in 1864, with the discovery of silver at the town of Silver Peak. In addition to this, the area was mined for salt and explored for potash up until the mid 1950s. It was also during the 1950s that the presence of lithium was first noted. Foote Minerals was the first miner to commercially product lithium, with the company having acquired leases in 1964 and commenced production at Silver Peak by 1967.

In the context of CYP's project, sedimentary lithium deposits in Clayton Valley were reported as early as the 1970s by the United States Geological Survey

("USGS"). Notable exploration results include an assay from the west side of Angel Island returning greater than 2,000 ppm Li. Though sedimentary deposits were identified, the majority of USGS work in Clayton Valley was centred on lithium brine deposits. In 2015, CYP acquired rights to claims on the south and east side of Angel Island. Sampling revealed lithium concentration in surface sediments, further availing previous reports of the presence of sedimentary lithium in Clayton Valley. In 2017, CYP commenced drilling on the Dean claim block, followed by drilling on the Glory claim block. Based on previously published Technical Reports on the project, there is no reason to believe that there has been any historical drilling on Clayton Valley prior to CYP's tenure. The Technical Report history of the Clayton Valley Lithium Project includes:

- **February 2018:** NI 43-101 Technical Report.
- **June 2018:** NI 43-101 Resource Estimate Report.
- **October 2018:** NI 43-101 Preliminary Economic Assessment.
- **May 2020:** NI 43-101 Prefeasibility Study.

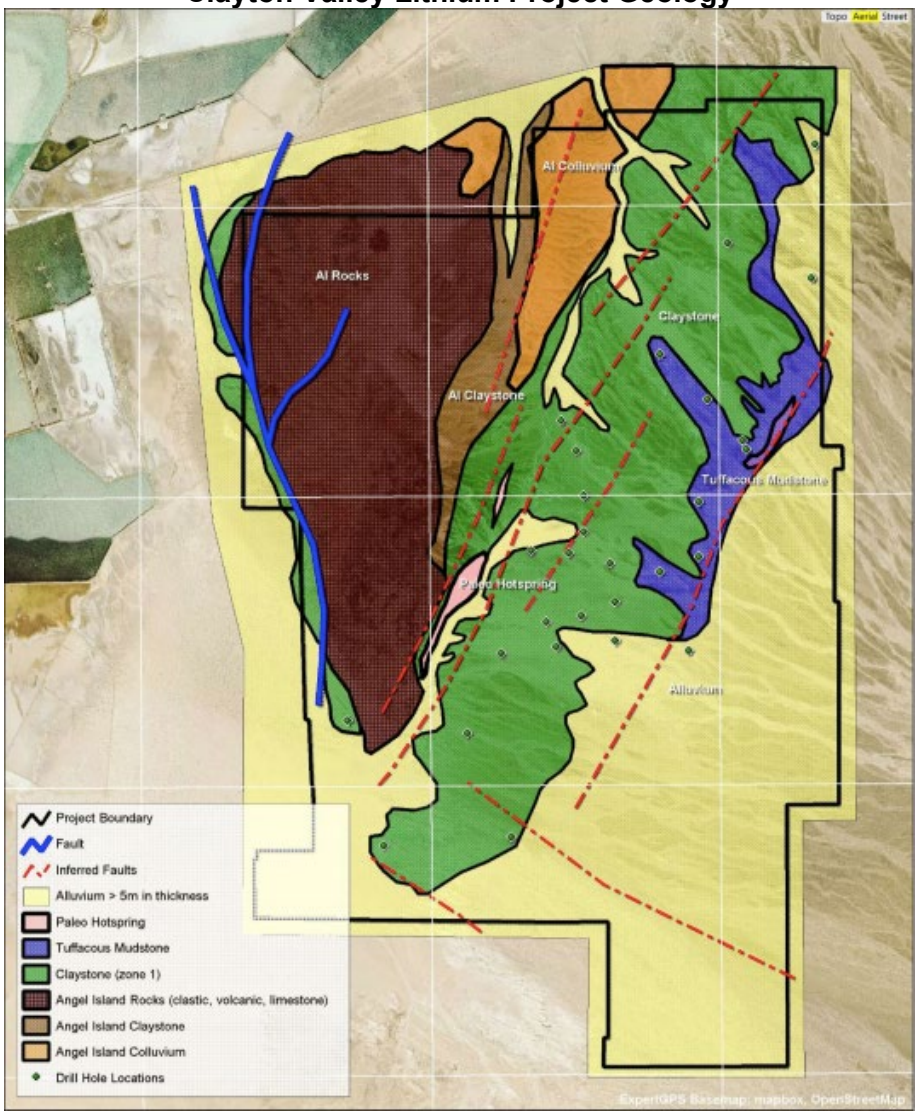
Geology & Mineralization

Clayton Valley is the lowest in elevation of a series of local playa filled basins, with a playa floor (approximately 100 square-kilometres) that collects surface drainage from an area measuring almost 1,300 square-kilometres. The valley is fault-bounded on all sides, delineated by the Silver Peak Range to the west, Clayton Ridge and the Montezuma Range to the east, the Palmetto Mountains and Silver Peak Range to the south, and Big Smokey Valley, Alkali Flat, Paymaster Ridge, and the Weepah Hills to the north. Multiple historical wetting and drying periods are believed to have resulted in the formation of the lacustrine deposits, salt beds, and lithium-rich brines found in the Clayton Valley basin. The Esmeralda Formation contains lacustrine, ash-rich rock bodies that exhibit concentrations of up to 1,300 ppm Li, with the average being 100 ppm Li. Lithium bearing clays in the surface playa sediments have returned 350 to 1,171 ppm Li. In addition to this, more recent exploration on the northeast side of Clayton Valley has found lithium concentrations in the range of 160 to 910 ppm Li. On the basin's eastern flank, concentrations of up to 228 ppm Li have been reported.

The western portion of the Clayton Valley Lithium Project is dominated by the uplifted basement rocks of Angel Island, which consist of metavolcanic and clastic rocks as well as colluvium. In the southern and eastern portions, the uplifted, lacustrine sedimentary units of the Esmeralda Formation dominate. The Esmeralda Formation (as defined with the project boudnaries) is comprised of fine-grained sedimentary and tuffaceous units, with some occasionally pronounced local undulation and minor faulting. The stratigraphic units in the project area include:

- **Alluvium:** This unit consists of polylithic sand, gravel, cobble, and boulder, and covers significant portions of the project. Thickness varies to over 10 meters. Lithium is locally not present in this unit.
- **Tuffaceous Mudstone:** This unit consists of interbedded silty mudstone and hard tuffaceous beds, tan to reddish brown in color. The unit is approximately 70% mudstone and 30% hard tuff layers, going up to 15 meters in thickness with lithium content averaging 850 ppm Li.
- **Claystone:** Ash-rich claystone is the primary lithium-bearing lithology in project area. Below an interbedded top section, this unit is massive with uniform texture and colour, the grain size is consistent, and the clay is generally fat. This unit is between 60 and 120 meters in thickness, and lithium content averages 1,060 ppm Li.
- **Siltstone:** This unit's thickness is largely unknown. Recorded lithium content averages 625 ppm Li.

Clayton Valley Lithium Project Geology



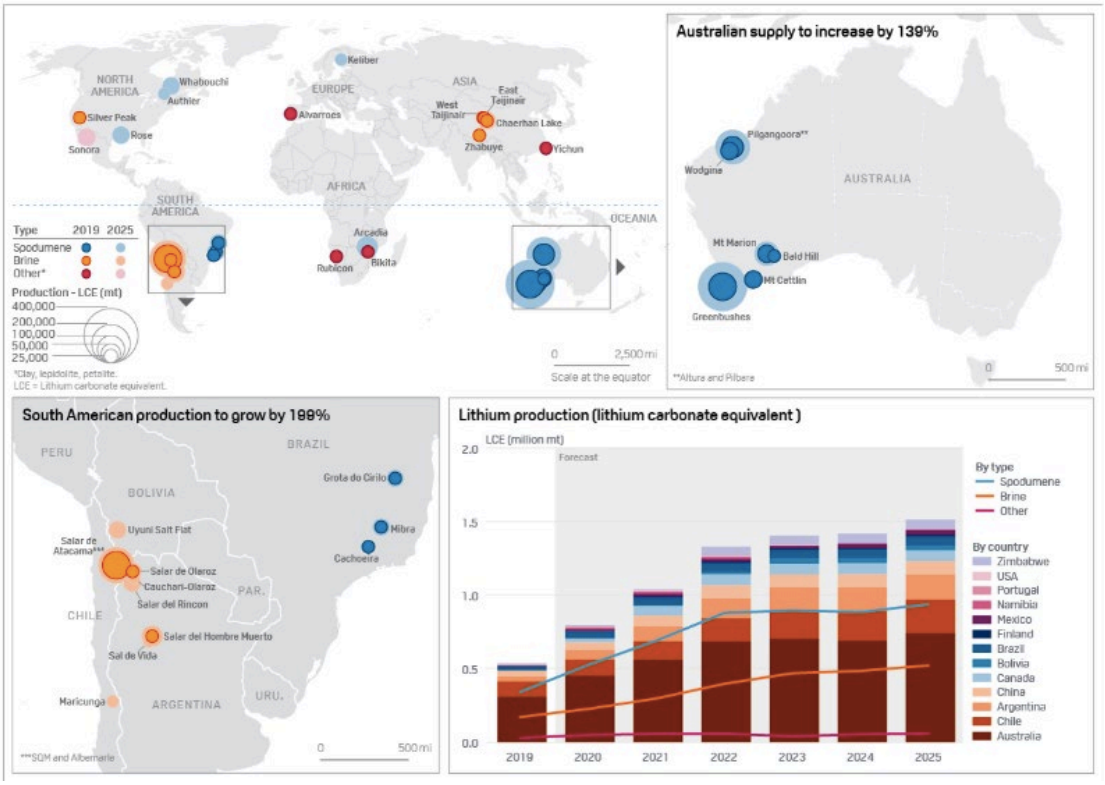
Source: Company

Elevated lithium concentrations have been identified in the sedimentary units of the Esmeralda Formation, where concentrations are generally greater than 600 ppm Li and occur up to least 142 meters below surface. The lithium-bearing sedimentary deposits primarily occur as silica-rich, moderately calcareous, interbedded tuffaceous mudstone, claystone and siltstone. The primary area of mineralization is in a claystone unit consisting of three zones: oxidized claystone, unaltered claystone and an oxidized claystone. The claystone unit is overlain by tuffaceous mudstone in the eastern portion of the project and underlain by a siltstone. Whilst elevated lithium concentrations occur in all the uplifted lacustrine strata encountered, lithium concentrations are notably higher and more consistent in the claystone unit.

Industry Outlook

Though lithium prices have plunged significantly, many industry observers consider the weakness temporary, as short-term roadblocks and oversupply are expected to make way for longer-term lithium demand. Demand projections of LCE quantities required to service various growing end-uses differ by source, often by large margins. However, despite the variance of projections, almost all sources expect large annual increases in the quantity of lithium demanded. The main point of contention between industry pundits lies in where the demand-supply dynamics will stand in the future, with bulls outlining outsized EV battery demand, evolving battery chemistry and supply-side risks of miners as factors underpinning a future supply gap, whilst more sceptical observers believe current nameplate production and announced plant expansions of current lithium producers will surpass any realistic future demand.

Lithium Supply to Triple by 2025



Source: S&P Global Platts

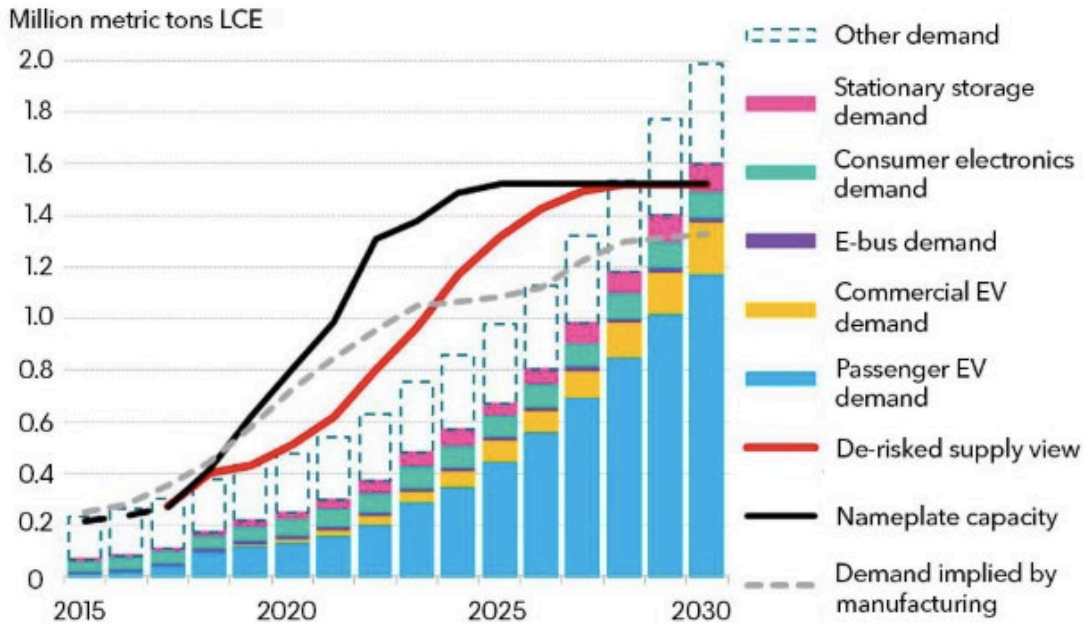
The industry consensus regarding lithium demand in the future typically falls between 1-1.5 million metric tons of lithium carbonate equivalent ("LCE") for 2025, with supply estimates based on announced capacity increases falling between 1.2-1.6 million metric tons of LCE for the same period. Given these estimates, the inference is that the industry expects over-supply (or at the very least demand-supply equilibrium) for the years leading up to 2025. This is assuming only the current supply-base and associated capacity expansions come online by then, without factoring in additional entrants in the period.

The tight supply dynamics are typically forecasted to relax by the time 2030 rolls around, as supply growth is projected to taper whilst demand growth maintains its sharp upwards trajectory. Whilst the industry expects a prolonged supply overhang, we note that projections provided to the market from the supply-side are generally optimistic and based largely on estimates from feasibility studies and production schedule planning. They do not (and realistically cannot) predict disruptions to operations posed by adverse weather conditions, the impact of geological roadblocks, regulatory tightening, declining grades, deviations in recovery rates relative to feasibility studies, forced processing plant shut downs and other factors that impact production. These events, whilst not frequent, can significantly impact production profiles and lead to bottlenecks in the supply chain.

Another factor that is not frequently considered is whether or not the current concentrate supply coming in for processing at the main downstream processing facilities in China is battery grade. This is very important to consider given that EV batteries are by and large considered the number one

growth driver for lithium demand moving forward. This is because lithium usage in lithium-ion batteries is significant, and the growth of EV demand is almost unanimously predicted to take a steep upward trajectory for the foreseeable future. This has been further accentuated by support from governments targeting increased electrification and de-carbonization of their economies.

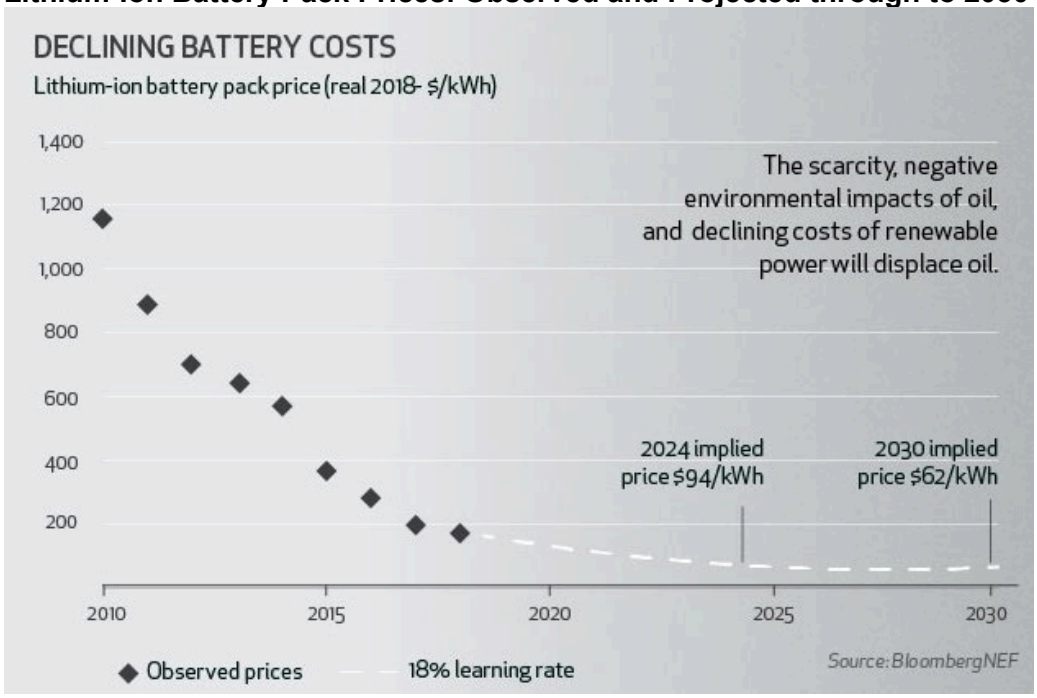
Figure 1: Global lithium supply and demand forecast, comparing methodologies



Source: BloombergNEF, Avicenne

As EV demand grows, we expect demand for EV batteries to expand at an accelerated rate, as the science of EV batteries is still in its youth and constant evolution in battery technology in turn changes the raw material demand. As ESG considerations grow as well, increased focus and investment will go toward improving the efficiency of EVs such that they grow their penetration amongst drivers. To this end, we view the constant and significant drop in lithium-ion battery costs as a bullish factor, as we believe a move towards cost parity with carbon-fuelled vehicles will lead to outsized demand for EVs, their batteries, and therefore the raw materials which form the basis for the battery packs so necessary to power these new age vehicle fleets.

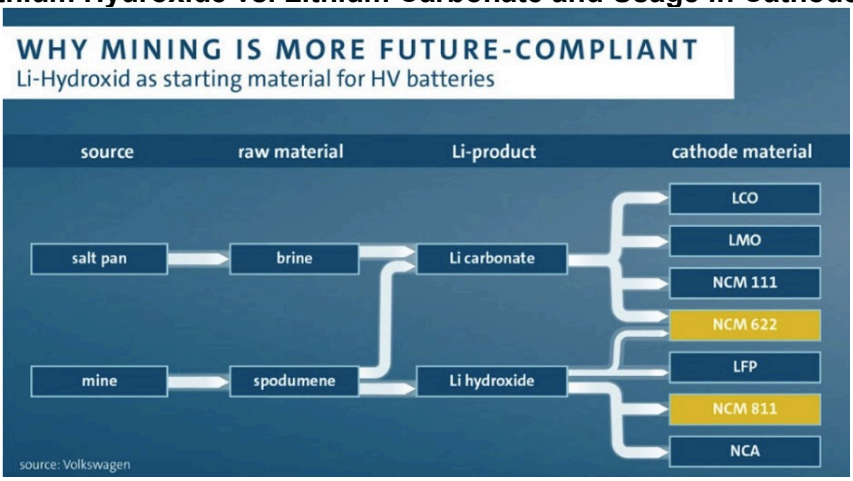
Lithium-Ion Battery Pack Prices: Observed and Projected through to 2030



Source: BloombergNEF

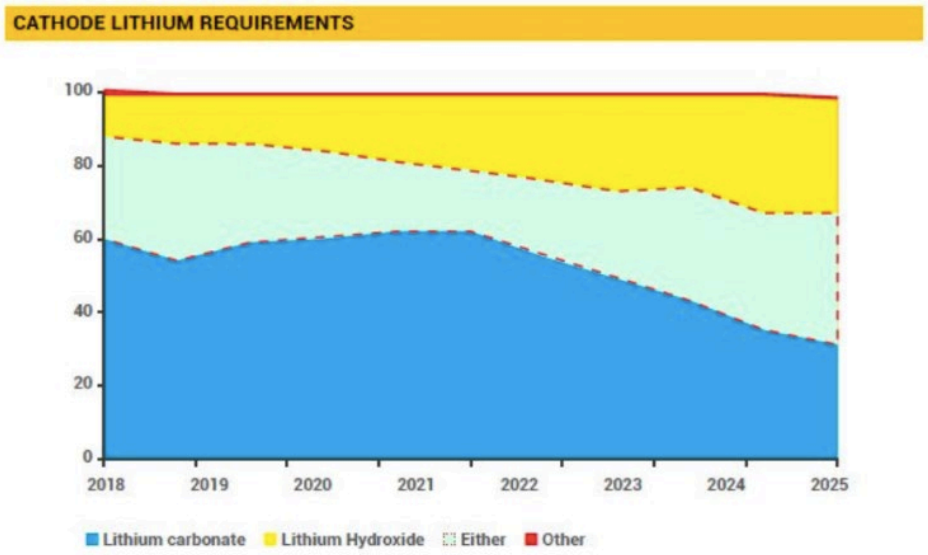
Another major factor to consider in the lithium mining industry is the end-product pricing received by miners. In recent times, the long-term superiority of lithium carbonate as the dominant lithium compound utilized by battery manufacturers has been questioned, as battery chemistries have evolved to utilize different mineral compositions in order to maximize battery performance across various metrics. This has become increasingly necessary over time, for example with the rollback of Chinese EV subsidies such that higher energy densities and driving ranges are required to qualify for government pay-outs. High-nickel content batteries have been highlighted as a potentially dominant battery chemistry for the future, given its superior specific energy, overall good performance across other battery metrics and relatively lower cost compared to other cathode combinations. Specifically, cathodes with 60% nickel or greater, such as NMC622 (60% nickel, 20% cobalt, 20% manganese), NMC811 (80% nickel, 10% cobalt, 10% manganese), and NCA (nickel, cobalt, aluminium, used for Tesla batteries) have all been highlighted as superior cathodes which are expected to see increased usage in EV batteries moving forward.

Lithium Hydroxide vs. Lithium Carbonate and Usage in Cathodes



Source: Volkswagen AG (ETR: VOW3)

These high-nickel content batteries more favourably utilize lithium hydroxide compared to lithium carbonate, with S&P Global Platts stating that this is due the required temperature to synthesize higher-nickel content cathodes. With lithium carbonate, high temperatures are required when the nickel concentration is higher than 60%, and this can damage the crystal structure of the cathode, compromising battery performance. With lithium hydroxide, the required temperatures are much lower. As a result, it is expected that with a shift to higher-nickel battery compositions, lithium hydroxide demand should rise at a higher rate than lithium carbonate.



Source: Benchmark Mineral Intelligence

The expected drop in lithium carbonate's relative usage in the market has various implications, one of which is the potential flip in profitability between brine versus hard rock and sedimentary operations. Brine operations are commonly accepted to be the more profitable extraction process, given the direct processing of lithium concentrated brine into lithium carbonate, and significantly lower capital investment relative to hard rock and sedimentary mining. But if one considers a potential shift to lithium hydroxide as the

dominant lithium compound, then sedimentary and hard rock mining methods benefit from the capacity to either produce lithium hydroxide directly or skip a conversion step. As a result, we see the long-term demand-supply mechanics favouring a shift in profitability to sedimentary and hard rock mining operations, though we acknowledge that the shift has been slow and vulnerable to the existing supply overhang.

Management Overview

Management and insiders own a total of 5.29% of outstanding shares. We see insider shareholding as a positive indicator, as it implies that management and the board are likely to be aligned with investors in their interests and motivations. Generally speaking, insider share ownership above 10% is seen as relatively high. The table below outlines insider shareholding:

Management Shareholding

Name	Position	Shares	% of Total
William Willoughby	CEO & Director	1,620,580	1.65%
James Petit	CFO & Director	234,600	0.24%
Donald Huston	Chairman & President	1,051,559	1.07%
Donald Myers	Director	2,296,000	2.33%
Amanda Chow	Independent Director		0.00%
			5.29%

Source: SEDI, Couloir Capital

The biographies of key management individuals (as provided by the company) are outlined below.

William Willoughby – CEO & Director
Dr. Bill Willoughby serves as a Director and Chief Executive Officer of Cypress Development Corp. Dr. Willoughby is a mining engineer with 38 years of experience in all aspects of natural resources development. Since 2014, he has been principal and owner of consulting firm Willoughby & Associates, PLLC. Prior to that, he was President and COO of International Enexco Ltd., which was acquired by Denison Mines in 2014. He previously held various positions with Teck (Cominco). Dr. Willoughby has been a Professional Engineer since 1985 and received his Doctorate in Mining Engineering & Metallurgy from the University of Idaho in 1989.

James Petit – CFO & Director
Jim Pettit serves as a Director and acting Chief Financial Officer of Cypress Development Corp. Mr. Pettit is currently serving on the board of directors of five publicly traded companies and offers over 25 years of experience within the industry specializing in finance, corporate governance, executive management and compliance. Jim was previously Chairman and C.E.O. of Bayfield Ventures Corp. which was bought by New Gold Inc. in January 2015.

Donald Huston – Chairman & President
Don Huston serves as Chairman of the Board and President of Cypress Development Corp. Mr. Huston has been associated with the mineral

exploration industry for over 30 years and has extensive experience as a financier and in-field manager of numerous mineral exploration projects in North America. He was born and raised in Red Lake, Ontario and spent 15 years as a geophysical contractor with C.D. Huston & Sons Ltd. as mineral exploration consultants in northern Ontario, Manitoba and Saskatchewan. Mr. Huston serves as a director of four Canadian public resource companies.

Donald Myers – Director
Don Myers serves as a non-executive Director and audit committee member of Cypress Development Corp. Mr. Myers serves on the board of directors and manages the investor relations and corporate communications of publicly traded mineral exploration and development companies. He has 30 plus years of experience in public company management and investor relations having helped raise over $350 million in venture capital for resource and technology companies listed on the TSX Venture, NASDAQ and Toronto Stock Exchanges.

Amanda Chow – Independent Director
Amanda Chow serves as an independent Director and audit committee member of Cypress Development Corp. Ms. Chow is a Chartered Professional Accountant (CPA, CMA) and a graduate of Simon Fraser University where she earned her Bachelor of Business Administration degree. She began working with public companies in 1999.

Financials Overview

At the end of Q3-2020, the company had cash and working capital of $1.46 million and $1.42 million, respectively. The company's current ratio of 13.26x demonstrates the ability of current assets to sufficiently cover current liabilities, implying a strong liquidity position at the end of September. Monthly cash burn (negative free cash flow) for the nine months ended September 30, 2020 was $0.13 million, lower than the comparative period in 2019. The company has no debt. The following table summarizes the company's liquidity position:

Key Financial Data (FYE - Dec 31) (C$)		2019		Q3-2020
Cash	$	1,518,637	$	1,463,364
Working Capital	$	1,532,143	$	1,419,515
Current Ratio		18.53		13.26
Debt	$	3,304	$	-
Monthly Cash Burn for the 9M	$	(247,491)	$	(133,740)
Cash from Financing Activities (9M)	$	1,571,577	$	1,148,384

Source: Company, Couloir Capital

The following table outlines the company's outstanding options and warrants. The italicized lines indicate share issuances on option/ warrant exercises subsequent to quarter end.

Options	Strike		Exercise Value
810,000	$	0.08	$ 64,800
794,000	$	0.11	$ 83,370
230,000	$	0.10	$ 23,000
1,245,000	$	0.18	$ 224,100
2,220,000	$	0.22	$ 488,400
50,000	$	0.22	$ 11,000
1,205,000	$	0.18	$ 216,900
350,000	$	0.35	$ 120,750
(125,000)	*$*	*0.20*	*$ (25,500)*
Warrants	**Strike**		**Exercise Value**
569,500	$	0.06	$ 31,323
120,000	$	0.06	$ 6,600
4,691,138	$	0.22	$ 1,032,050
7,845,600	$	0.33	$ 2,589,048
(3,289,270)	*$*	*0.30*	*$ (996,277)*

Source: Company, Couloir Capital

The company currently has 6.78 million options (weighted average exercise price of $0.18 per share), and 9.94 million warrants (weighted average exercise price of $0.27 per share) outstanding. At this time, all options and all warrants are in-the-money. Should the options and warrants be exercised, CYP will be able to raise $3.87 million, suggesting significant reserve liquidity.

Revenue and EPS Forecasts

At current, CYP has yet to signal advancement to the construction phase of the project, which would imply a two year timeline to production and associated cash flow generation. As a result, we will not be providing near-term revenue and EPS forecasts, as such forecasts are typically provided when there is two-year visibility on commercial operations.

Net Asset Valuation Model

Our models assume the production schedule outlined in the Prefeasibility Study, as well as many of the report's base case assumptions, but incorporates our own assumptions on LOM average lithium hydroxide price and discount rate. **Our base case DCF model, which assumes a long-term lithium hydroxide price of $8,000 per tonne and a discount rate of 12%, implies an NAV per share of $3.54.** Our discount rate of 12% is higher than the Prefeasibility Study's base case 8% discount rate, and we believe more accurately reflects the risk profile of the company at this point in time. Our pricing is also far more bearish than the pricing used by the Prefeasibility Study analysis, and we believe this better reflects the short-term structural oversupply and the potential for battery technology to develop significantly enough to displace currently utilized lithium ion batteries over the mine's LOM.

The sensitivity table provided below outlines the various NAV per share given changes in the long-term lithium hydroxide price or discount rate:

	LOM LCE Price Assumption				
	$ 7,000	$ 7,500	$ 8,000	$ 8,500	$ 9,000
8%	$ 5.16	$ 6.54	$ 7.92	$ 9.30	$ 10.68
10%	$ 3.14	$ 4.24	$ 5.35	$ 6.45	$ 7.56
12%	$ 1.72	$ 2.63	**$ 3.54**	$ 4.45	$ 5.36
14%	$ 0.68	$ 1.45	$ 2.22	$ 2.98	$ 3.75
16%	$ (0.09)	$ 0.57	$ 1.22	$ 1.88	$ 2.54

Source: Couloir Capital

Comparables Valuation

As our other source of valuation, we consider CYP's relative valuation against other lithium mining companies that we believe to be comparable. As we discussed earlier, CYP has the lowest NPV to market capitalization realization of the peer group we have selected, with P/NPV@8 at 4.32% versus the group average of 24.14%.

Project	Owner	Market Cap (US$)	P/ NPV (%)	NPV/ CAPEX
Clayton Valley Lithium Project	Cypress Development Corp.	$ 45,421,740	4.32%	2.13
Thacker Pass	Lithium Americas Corp.	$ 983,400,928	37.97%	2.45
Clayton Valley Brine Project	Pure Energy Minerals Ltd.	$ 19,995,107	7.57%	0.89
Rhyolite Ridge	Ioneer Ltd.	$ 330,602,400	26.13%	1.61
Piedmont Project (Merchant)	Piedmont Lithium Ltd.	$ 344,625,400	48.27%	1.89
Piedmont Project (Integrated)	Piedmont Lithium Ltd.	$ 344,625,400	31.33%	2.02
Sonora Lithium (77.5%)	Bacanora Lithium PLC	$ 189,801,620	23.65%	1.00

Source: Couloir Capital, Public Disclosures

Based on the peer group P/NPV@8, we believe CYP should be trading at an equity valuation of $165.07 million or $1.43 per share on an P/NPV@8 basis, implying that the company is trading at a discount to fair value. Note that we applied a 50% discount to the peer average, which we believe reflects intrinsic risks of CYP and its lack of a supply agreement, which some of the selected peers in the comparable group do possess.

Conclusion

After accounting for our valuation methodologies, we have arrived at fair value per share estimate of $2.48 per share. We are initiating coverage on CYP with a BUY rating, and expect the following catalysts to materially impact our valuation estimate:

- News regarding any potential lithium supply agreement with a reputable offtaker, as this will de-risk the project and provide longer-term cash flow visibility.
- Any news regarding project financing or events impacting project bankability.
- Any news suggesting a delay in the mine development timeline.

- Financing-related news that in any way significantly alters the company's capital structure.
- The completion of additional feasibility work on Clayton Valley.

Risks

The following outlines some of the key risk considerations that investors should keep in mind when evaluating CYP as an investment opportunity:

- **Delays in Achieving Key Development Milestones:** CYP has not given guidance on when it intends to reach commercial production, but the two-year guidance embedded in the recent Prefeasibility Study will likely serve as a measuring stick for investors looking at CYP as an investment opportunity. Assuming that time frame as an approximate development period, inability to roll-out significant developments (i.e. advancing the project to a Feasibility Study, attaining project financing, beginning construction) will likely lead to a deterioration in the company's intrinsic valuation as free cash flow generation gets delayed.
- **Unproven Recoveries at Commercial Scale:** The 83% lithium recovery used in the Prefeasibility Study on Clayton Valley has not been proven at commercial scale – as a result a pilot plant will be needed to verify that such recoveries can be replicated in a larger operation. If actual recoveries at scale come in lower than expected, it will likely impact project valuation and therefore CYP's corporate valuation.
- **Uncertainty Around Permitting:** CYP requires multiple permits identified in the Prefeasibility Study, and inability to secure permitting (such as environmental permitting) can significantly hold up project development.
- **Market Price Exposure and Impact on Execution Risk:** As CYP moves closer to commercial production milestones, the greater we perceive both the sunk capital burden as well the near-term capital needs of the company. Until a project financing deal to facilitate mine construction is secured, exposure to market pricing is significant as CYP will be subject to investor sentiment (which can be vulnerable to deteriorations in broader industry conditions, such as poor commodity pricing). In addition, the project's largest valuation sensitivity is to lithium hydroxide pricing, with 0% IRR on pricing below the project's breakeven LCE lithium hydroxide pricing.
- **Capital Structure Deterioration Related to Ongoing Cash Burn:** There is the potential that the company's cash burn could sap liquidity to the point of the company needing to raise capital. Assuming no cash flows, there is a chance that CYP would do so via equity issuance. Depending on the price of the issuance, such issuance could be dilutive to existing shareholders.

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Each company within an analyst's universe, or group of companies covered, is assigned:

1. A recommendation or rating, usually BUY, HOLD, or SELL;

2. A 12-month target price, which represents an analyst's current assessment of a company's potential stock price over the next year; and

3. An overall risk rating which represents an analyst's assessment of the company's overall investment risk.

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The analyst believes that the security will outperform other companies in their sector on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) BUY rating.
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The analyst believes that the security is expected to perform in line with other companies in their sector on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) HOLD rating.
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Investors are advised to sell the security or hold alternative securities within the sector. Stocks in this category are expected to under-perform other companies on a risk adjusted basis or for the reasons stated in the research report the analyst believes that the security is deserving of a (continued) SELL rating.
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