



Funding Prospectus

Saving our World through the strategic use of Green Coal

Version: Submit Ready 8-24-24

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NOTE: This Document is also available online as a downloadable PDF at: <https://GROAL.projects.money>

Executive Summary

A historic Foundation located in the Commonwealth of Virginia, USA (“The Foundation”) owns a coal seam (“the Parcel”); see Appendix A – The Parcel, which survey supports substantial reserves of high-quality coal. The Parcel’s coal value exceeds USD 1.5 bn billion.

Coal, heralded as one of the most polluting fossil fuels, supplied 36% of electricity generation in 2022. Globally, nations have set goals to drop this number to 4% by 2030 and then 0% by 2040. Environmental pressure is growing around the world to reduce the energy use of Coal because it is feared to be a major contributor to global warming. Scientists warn that changes greater than 1.5 degrees C (2.7 degrees F) are not survivable. The impact of the use of Coal for energy is being demonized as one of the most catastrophic contributors to the climate crisis¹. Many countries are phasing out coal-fired power stations entirely. This is why our alternatives are required, if Coal is to have a future.

Due to immense pressure to reduce global warming, coal mines have seemingly reached the end of their lifecycle. Every metric tonne of coal burned releases 2.5 metric tonnes of CO₂².

The social and economic impacts of coal power station closures have consequences for many coal mining communities that rely heavily on the coal industry for jobs and financial stability. Shutting down coal mines can lead to widespread job losses in mining-related sectors, including miners, equipment manufacturers, transportation providers, and support services. These job losses can have ripple effects throughout the local economy, affecting businesses that rely on coal miners as customers.

What if we repurposed the Coal industry by overcoming the need to burn coal, which is believed to be destroying the planet, and were able to do so in a way that shattered all profit margins previously believed possible?

Our processes will generate 25 to 100X more revenue per ton by repurposing the use of Coal.

Given these kinds of profit margins...

Burning Coal would no longer be an optimal choice; it would be insanity!

Our project will enhance the value of coal as a resource and foster a global paradigm shift towards cleaner, more efficient raw material utilization in the development of space age materials, clean energy, and much more.

Our process of making Green Coal will protect and create jobs connected to the coal mine industry. With [NET ZERO](#) emissions guaranteed throughout our process, our commitment to environmental stewardship remains unwavering as we pioneer the transition towards a cleaner, more sustainable future.

This prospectus outlines our approach to use coal without burning.

¹ <https://ember-climate.org/data/data-tools/data-explorer/>

² Source S10X Carbon Fund baseline: every carbon atom binds with two oxygen atoms to form CO₂ (C = 12 amu; O = 16 amu x 2 = 42 amu). The result is 3.5, but S10X use a baseline of 2.5.

The Opportunity

THE FOUNDATION own the rights to a coal seam near [Tom's Creek](#) in Coeburn, West Virginia, USA, a region renowned for its abundant coal deposits.

The coal accessible from this parcel has a value in excess of USD \$1.5 bn (see Appendix A), which provides the necessary security for this Funding.

The development of the Parcel involves several vital phases, including setting up infrastructure, conducting extraction operations, and arranging transportation logistics for a mine.

Our team comprises industry experts with extensive experience in mining and resource management who will ensure the efficient execution of each phase. We are committed to implementing cutting-edge technologies and adhering to stringent safety standards throughout the project lifecycle.

The key highlights of the Parcel are:

- 1. Proven Reserves:** The mining survey and state mineral geo-mapping confirms extensive reserves of high-quality coal, providing a solid foundation for long-term production.
- 2. Strategic Location:** Situated in a prime location with access to transportation networks, the mine offers logistical advantages for efficient distribution and processing.
- 3. Experienced Management:** Our team brings a wealth of expertise in mining operations, ensuring effective resource utilisation and optimal performance.
- 4. Sustainability Focus:** We prioritise environmental stewardship, employing advanced technologies to minimise the project's ecological footprint and mitigate any potential impact. The funding commitment for rehabilitation will be unlocked via the Carbon Markets via our partnership with S10X.
- 5. Revenue Potential:** With the growing demand for coal, the project presents significant revenue-generating opportunities and offers attractive returns on investment.

We will extract rare earth metals, produce graphite, and further refine graphene from the coal processed from the Parcel.

[Graphene](#) is a revolutionary material with vast electronics, renewable energy, and environmental remediation applications. We will enhance the value per ton of coal extracted from the Parcel by at least 25X simply because we will manufacture graphene instead of burning or using the coal as a fossil fuel.

Graphene, a single layer of carbon atoms arranged in a hexagonal lattice, holds immense promise across various industries due to its exceptional properties, such as high conductivity, strength, and flexibility. The market opportunity for graphene is substantial, spanning sectors such as electronics, energy storage, healthcare, aerospace, automotive, and more.

1. Electronics: Graphene's conductivity is an ideal for next-generation electronics, enabling faster more efficient devices, flexible displays, high-speed transistors, capacitors, transformers, nano technology, etc.

2. Energy Storage: Graphene-based materials enhance the performance of batteries and supercapacitors by increasing energy density, improving charge-discharge rates, and prolonging cycle life. This application is crucial for electric vehicles, renewable energy storage, and portable electronics.

3. Healthcare: Graphene's biocompatibility and unique properties make it valuable in biomedical applications like drug delivery systems, tissue engineering, biosensors, and imaging technologies, offering breakthroughs in diagnostics and therapies.

4. Aerospace and Automotive: Graphene's lightweight and robust nature makes it desirable for manufacturing lighter, stronger, and more fuel-efficient aircraft, vehicles, and components, contributing to sustainability efforts and improved performance.

5. Materials Science: Graphene is a building block for developing advanced composite materials, coatings, and additives with enhanced mechanical, thermal, and electrical properties. It impacts industries ranging from construction to textiles.

The Compound Annual Growth Rate (CAGR) for the graphene market is expected to be significant, reflecting the increasing adoption of graphene-based solutions across diverse sectors. While precise figures may vary depending on market dynamics, forecasts suggest a CAGR of 30% to 40% over the next few years.

Factors driving this growth include:

- ongoing research and development efforts,
- technological advancements,
- expanding applications and
- increasing investments from both the public and private sectors.

Graphene presents a lucrative market opportunity with the potential to revolutionise multiple industries and create substantial economic value.

Funding

FINANCE REQUEST AND TERMS

SUMMARY	
<i>Initial Investment Amount</i>	\$250,000,000
<i>Interim Investment Amount</i>	\$265,439,261
<i>Finance period in years (after initial 2 years)</i>	10
<i>Number of payments per year</i>	12
<i>Scheduled monthly payment - after 24 months</i>	\$2,563,101
<i>Scheduled number of payments</i>	120
<i>Total Share In Profit</i>	\$42,132,892
<i>Total Payment</i>	\$292,132,892
<i>Coverage</i>	5,788

We suggest postponing the initial payment of capital plus profits³ to the financier for two years as the mine ramps production to satisfy growing demand.

INDUSTRY EXPOSURE

We will repurpose the Coal Industry and breathe new life into an industry experiencing a global downturn. Our innovation will ensure that coal will again (as we experienced in the '60s) become a popular BUY/HOLD decision for many investors and will no longer be a HOLD/SELL decision. This will ramp up the price of coal shares.

SECURITY

The parcel's coal value is \$1.5 bn (see Appendix A—The Parcel). The Parcel provides significant security for the Finance Request (+ 8,000 times cover!).

LIQUIDITY

In addition to security, the liquidity coverage (100X) can service the Finance Request. See Appendix B – GROAL Holdings, Inc. Financial Forecast. Concurrently, S10X (see below) will unlock liquidity via its unique Carbon Funding MechanismSM - see Appendix C – S10X Carbon Fund, Inc. Financial Forecast.

We will extract the following from the Parcel:

- Graphite / Graphene (we start our journey here),
- Carbon Soil Nutrients,
- Methane Gas to Diamond,
- Rare Earth Element Extraction.

³ The Finance Request is presented in line with the principles of Islamic law (Shariah).

Furthermore, the above use cases significantly enhance GROAL's liquidity potential by at least 1,000 X and have been excluded from the attached financial forecast numbers.

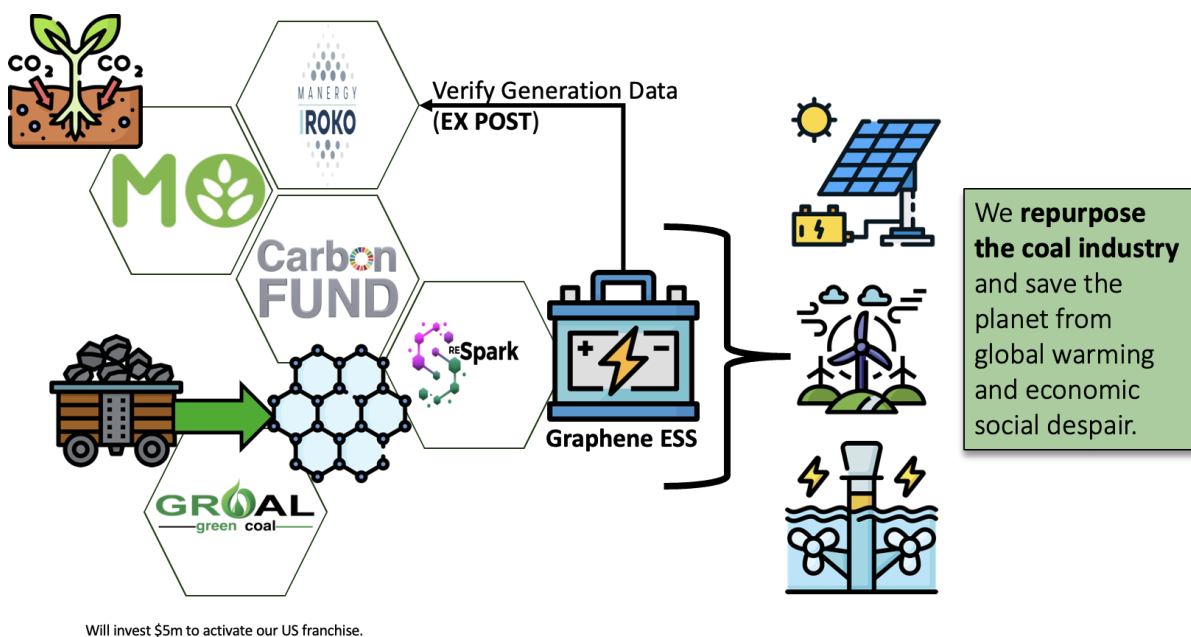
To further mitigate the risk of default, we have contacted multiple large coal buying groups globally, wanting to contract 100 % of the coal extracted from the Parcel. This coal type is very desirable. In short, this project has prospective buyers for ALL of the coal. This gives GROAL the security to guarantee, as a last resort, a settlement of any outstanding amounts owed.

OUR TEAM

We have the best team on board to deliver our strategy centred around repurposing the use of coal by converting it to graphene and other by-products.

GROAL has engaged strategic partners who can execute our mission with equal passion. Through this funding request, GROAL will secure interests in several vital businesses and use the funding to acquire these interests. Initially, this will be done through convertible debt on the same terms negotiated with the appointed funder. These businesses will provide additional liquidity and so mitigate the risk of default.

We capture the entire value chain from coal to graphene-to-graphene ESS, opening access to the global renewable energy sector (any energy source). This is underpinned by the issue of verified carbon credits (done independently by Manergy—IROKO) via the S10X Carbon Fund, whose revenue share can provide the partners with further financial support.



USE OF FINANCE

- The Foundation will hold 100% of GROAL Holdings, Inc.
- GROAL Holdings, Inc. will receive the \$250m funds and allocate as follows:
- Secure the Parcel rights (transferrable) for \$5m from The Foundation as security for the loan.
- Invest \$210m capital/equity in the following corporations:

Partners	Purpose	Interest	Amount
GROAL Mining, Inc.	Invest \$100m in the mining operation to develop and operate the Parcel and implement efficient supply chains.	100%	\$100m
GROAL Biotech, Inc.	Invest \$100m in a corporation to design and build a Graphene manufacturing plant in Wise in partnership with Solar Biotech ⁴	Majority	\$100m
ReSpark Africa https://resparkafrica.com	Invest \$5m to secure offtake from a global Graphene Energy Stored Solutions (ESS) manufacturer.	Minority	\$5m
S10X Carbon Fund, LLC. ("S10X") www.s10xcarbonfund.com	Invest \$5m in S10X to fund the mine rehabilitation and invest in the Sustainable Development Goals – see Impact Investment.	5%	\$5m
S10X	Project advances – mainly to provide ReSpark with access Trade Finance.		\$35m
TOTAL			\$250m

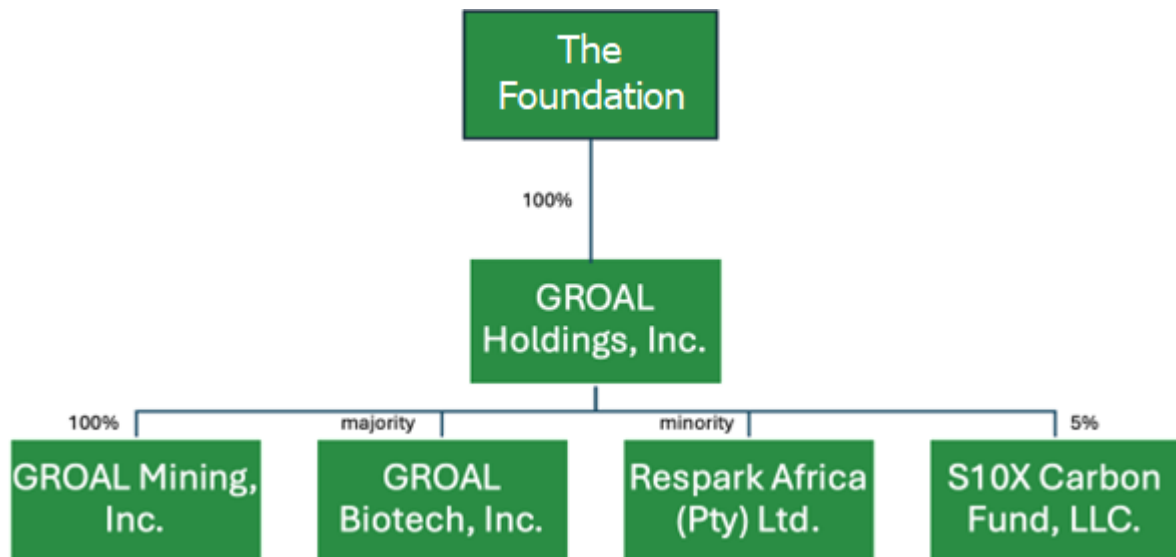
FURTHER FINANCE

GROAL and its partners will require access to further finance (\$1bn—\$5bn) in the medium term (circa 2025).

⁴ <https://www.solarbiotech.com/>

Structures

The following underlying structures allow us to execute our strategy and ensure we are in an excellent position to service the Finance Request:



Impact Investment

GROAL is committed to impact investment because it:

1. **Addresses Social and Environmental Challenges:** Impact investment focuses on generating positive social and environmental outcomes alongside financial returns. With pressing global challenges such as climate change, poverty, inequality, and access to essential services, impact investment provides a mechanism to direct capital towards solutions that address these issues.
2. **Meets Stakeholder Expectations:** Investors, consumers, employees, and communities increasingly expect businesses to operate responsibly and contribute positively to society. Impact investment allows investors to align their financial goals with values by supporting companies committed to sustainability and social responsibility.
3. **Mitigates Risks:** Investing in companies with substantial environmental, social, and governance (ESG) practices can help mitigate various risks, including regulatory, reputational, and operational risks. Companies prioritising sustainability and social impact are often better positioned to adapt to changing market conditions and emerging societal expectations.
4. **Unlocks Market Opportunities:** Impact investment taps into emerging market opportunities driven by shifting consumer preferences, regulatory changes, and technological innovations. Businesses that develop innovative solutions to social and environmental challenges can access new markets, differentiate their products or services, and create sustainable competitive advantages.

5. **Drives Innovation and Collaboration:** Impact investment fosters innovation by encouraging the development of new products, services, and business models that address unmet social and environmental needs. Collaboration between investors, businesses, governments, and non-profit organisations is essential to scale impact initiatives and drive systemic change.
6. **Attracts Talent and Capital:** Companies and funds prioritising impact are often more attractive to talented employees and investors seeking meaningful opportunities to contribute to positive change. As the demand for impact investment grows, additional capital is attracted to the field, creating a self-reinforcing cycle of investment and impact.

To invest in impact, one must create a sustainable financial model to fund impact.

We will develop a sustainable financial model to fund any of the [17 Sustainable Development Goals](#) (“SDGs”) – provided as a grant.

GROAL’s partners are committed to impact investment and have budgeted a portion of their revenue to invest 10% of their profits in the SDGs.

Such impact projects are aimed at changing the world for good and focus on developing, unstable, impoverished, or underserved regions and economies, such as the following:

- The Underserved Appalachian Mountains and the Coalfields of America,
- First Nations Tribes in the United States and Canada,
- Nations in Transition, like those in South America,
- War-torn or Unstable regions like Eastern Europe, South America, the Middle East, and Africa,
- Rural Inland and Island communities in Asia,
- Isolated or Persecuted People Groups in the 10-40 window, and
- Many impoverished or underdeveloped Nations, Regions, Tribes, and Peoples of Africa will provide grants for pre-revenue small businesses with excellent growth potential.

Through this funding round, S10X can unlock over \$100 m of SDG funding in the next five years.

Concluding Word

Repurposing the coal industry by making coal green is a game-changer most would only have believed possible now.

We are pleased to have like-minded partners on board to help us achieve The Foundation's mission. We and our partners will leave a legacy for our children's, children's, children that we can be genuinely proud to have initiated.

Imagine it all started 40 years ago with a piece of land in a small town beside a stream which had coal mixed with river rock. My saintly Mother insisted we purchase that land after saying her prayers one day, and my stately old Father, although previously a coal lobbyist, thought it was a long shot, but daringly took the leap of faith.

Were they living today, what reward that faith and daring would return to them. What has come to light since those humble days is staggering to the imagination. Although they are not here to share in the temporal rewards, it will be certain that their dreams of a better world are actualized.

Together, we will witness a paradigm shift and a revival of the coal industry. This will realistically create positive impacts over the next 1,000 years. By producing, in volume at disruptive prices, the raw materials needed for space-age development, like graphite and graphene, we could potentially leave an impact on this Earth, and Beyond, for the next 10,000 years, into a future we are making.

The Foundation and our partners have a great mission, not merely a task.

Please contact me if you want to positively transform and protect our world, create jobs, and joyfully make a difference in the communities that need economic uplifting.

For those who partner with GROAL, the future, not the past, will be our legacy.

Blessings,



Dr. Tim Collins
The Foundation's CEO & Executive Director
Cell/WhatsApp: +1 (941)266-5497
Email: AACCTTSS@gmail.com

Appendix A – The Parcel

1. Executive Summary

- The Collins Family acquired a property in Southwestern Virginia coal country approximately 40 years ago, revealing high-quality metallurgical coal deposits during initial assessments. The property, now owned by the “The Foundation” is led by Dr. Timothy W. Collins and family, offers access to significant coal resources suitable for surface and deep mining operations. The coal from this site is highly desirable for its low Sulphur, low ash, high BTU, and Metallurgical properties.
- Phase I of the project involves surface mining, essential for preparing the site for long-term deep underground mining in Phase II. Parcel A, a 4.5-acre tract under the foundation's ownership, presents an immediate opportunity for coal extraction incidental to land improvement. This phase, expected to yield approximately 37,000 tons of coal, requires no acquisition cost for Parcel A and can be completed within 120 days from funding.
- Financially, Phase I anticipates a conservative net projection of \$7 million, which will be reinvested into Phase II. Phase II, focusing on deep mining operations, targets the Raven #1 Seam, one of the most significant untapped seams of compliance coal in the Western Hemisphere. With an estimated 10.368 billion tons of coal available, potential net revenues could exceed **\$1.3 trillion at 50% recovery**, and much more considering various revenue streams beyond coal sales, such as Carbon Soil Nutrients, Graphene, and Rare Earth Element extraction.
- The capital raised for Phase II aims to develop access portals for long-term deep mining operations, with potential net income projections reaching \$653.5 billion even if revenues only reached **50% of expectation** (already reduced by a conservative 50% recovery factor above). Scalable deep mining operations, subject to capital availability, offer opportunities for additional revenue streams, expanded infrastructure, and increased operational efficiency.

2. Current Valuation

The conservative value of the Parcel is \$1.5 billion, which is the **security** being offered unless an alternative treasury backed “principal-guaranteed” bond program is desired:

<i>Seam Coverage (acres)</i>	1,152,000
<i>Depth per Acre (feet)</i>	5.50
<i>Tonnes per Acre</i>	9,570
<i>Estimated reserve (Bn tonnes)</i>	11,024,640,000
<i>Recovery rate</i>	50%
<i>Coal Spot Price per Tonne</i>	\$350
<i>Revenue</i>	\$1,929,312,000,000
<i>Cost of Extraction</i>	25%
<i>Less: Cost of Extraction</i>	\$482,328,000,000
	<u>\$1,446,984,000,000</u>

3. Regional Aerials and Maps



Mining can occur on Parcel A alone, with historic permits to verify the same. The proposed acquisition of Parcel B is optional but would simplify and expedite development significantly.

Tom's Creek Coal Prep Station (AKA: SW VA Coal Processing and Coal Loading Facility) is one of the largest in the United States and directly connects via rail to the Norfolk Coal Export and Loading Operations. The site also has a Rail Road Loading Facility with washing, crushing, and storage services, less than 4 miles from the proposed mining site.

We could sell and supply the coal we extract while the Graphite / Graphene Manufacturing plan is being designed, built, tested and commissioned.



Figure 1: Tom's Creek Coal Prep (cleaning) and Railroad Loading Facility



Figure 2: Road to Virginia Coal-Fired Power Plant

This new Dominion Power Coal-Fired power plant supplies 150,000 homes, provides emergency power to Washington, D.C., and burns more than 425,000 tons of coal annually.

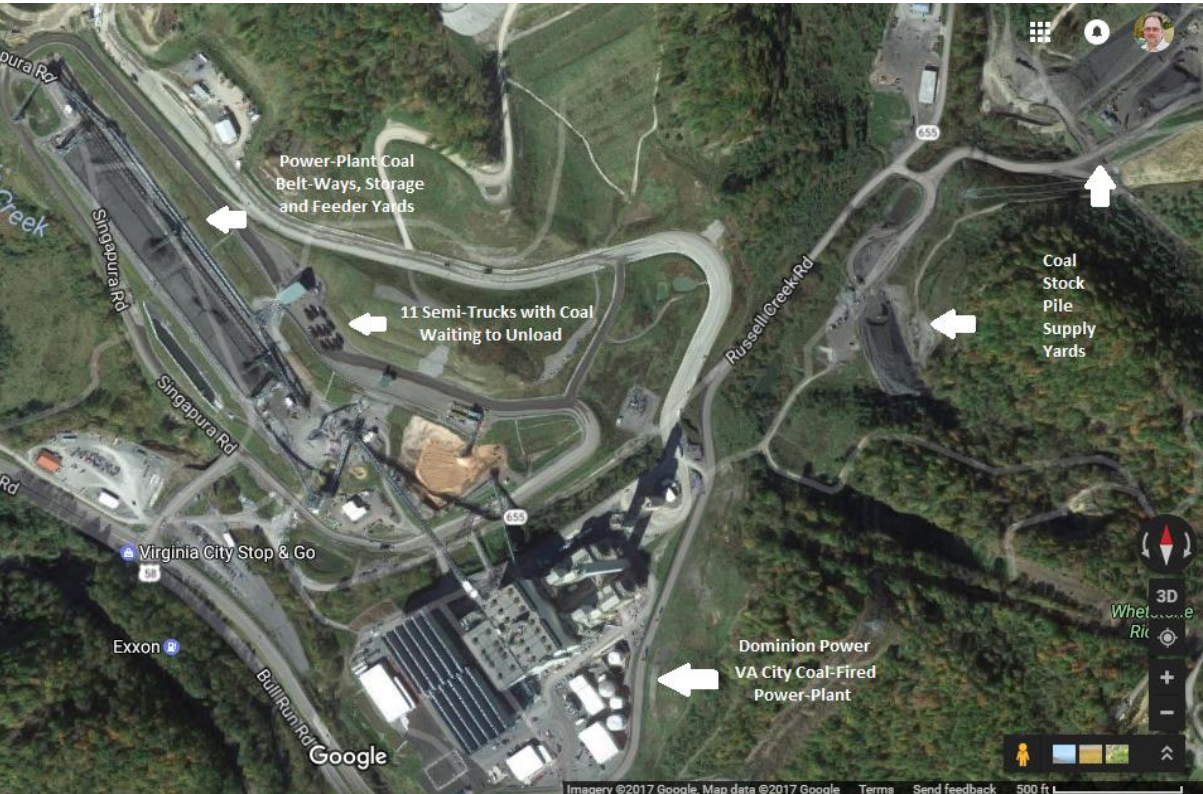


Figure 3: Other Coal-Powered Stations

Two other power plants are close to the mine site; this is the largest and only 11.2 miles from the mine.

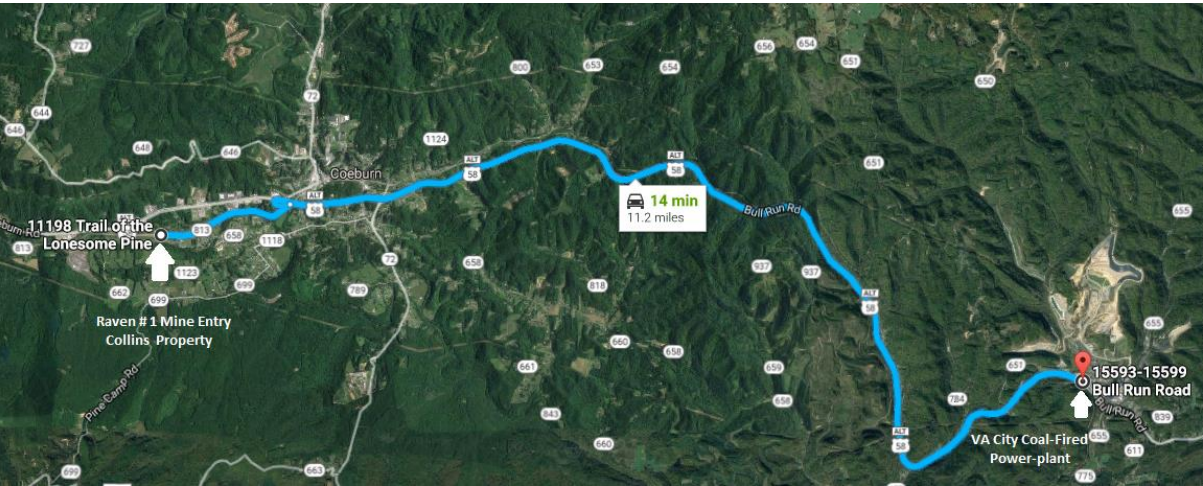


Figure 4: Route to local power station

Raven								
RAW AS RECEIVED								
Ash	Sulfur	Volatile	FSI	BTU	F U S I O N			
					INIT	Soft	I.S.O.	Fluid
8.02				13,765				
11.87	1.19	33.73	6	13,051	2200	2350	2380	2490
7.01	1.40	36.43	4	14,083	2170	2290	2390	2540
14.77	1.44	33.32	5.5	12,409	2210	2390	2430	2520
10.41	3.38	37.01	7	13,543	2010	2140	2190	2220
WASHED (FLOAT 1.60 SP. GR.)								
Recovery	Ash	Sulfur	Volatile	FSI	BTU	Fusion Soft		
95.65	7.54	1.36	33.06	9	13,749	2425		
88.04	6.42	1.06						
98.08	5.83	1.19						
93.30	6.77	2.16						
	11.56	1.82	35.68	6	13,453			

Figure 7: Quality Coal Report 3

5. Engineer's Report

This initial report was written when the mineral rights were in JEC Corp., Dr. Collins' dad's corporation (JEC = James E. Collins). At the time of this report, coal sold for \$60 per ton and cost \$30 to mine.

MULLINS ENGINEERING
716 RIDGE AVENUE
P.O. BOX 827
NORTON, VIRGINIA 24273

24 DECEMBER 1994

PHONE: 703-679-4434
FAX: 703-679-4434

TO: WHOM IT MAY CONCERN.

RE: VALUE OF JEC CORPORATION HOLDINGS - WISE COUNTY, VIRGINIA.

I have analyzed the JEC Corporation holdings as it relates to the underground mining of the Raven #1 coal seam.

I reviewed a very extensive report concerning this property as prepared by Steven G. Breeding, Professional Engineer. The said property is discussed and outlined in his report.

The property consists of a fee simple 4.5 acre tract; a 9.5 acre mineral tract and a 125 acre tract under the control of the JEC Corporation. Thousands of adjoining acres are available for development.

The key for development of the above properties is the 4.5 acre tract which outcrops the Raven #1 coal seam. The Raven #1 coal seam underlies all of the above properties. Slope mining is the most economical means to extract deep underground coal seams. Shaft mining is usually cost prohibitive and to date there are no shaft mine in Wise County, Virginia.

A single mine with one shift yields a net profit of \$4,419,360.00 per year. A pay back investment over 7 years yields a net profit of \$30,935,532.00.

This port of entry could easily accommodate 3 mines with 2 sections each thereby yielding a 7 year net profit of \$185,610,000.00.

The value of the 4.5 acre tract is further enhanced by its peculiar location for an entry into the Raven #1 coal seam, its relative location to coal preparation plants, coal loading facilities, coal brokers, railhead, 2-lane adjacent highway and nearby 4-lane highway. The property is located in Wise County and is zoned for mining.

In this region there has been many developed and undeveloped coal properties sold for millions of dollars. Many of the said properties did not have the unique characteristics of the JEC Corporation holdings.

PREPARED BY: Don J. Mullins, P.E.



Figure 8: Engineers Report

6. Mining Permit

THIS LICENSE IS NOT TRANSFERABLE



Commonwealth of Virginia
Department of Mines, Minerals and Energy
DIVISION OF MINES
Big Stone Gap, Virginia

License No. [REDACTED]
Mine Index No. [REDACTED]

LICENSE TO OPERATE A MINE
This is to certify that on this date a license to operate a mine

was issued to [REDACTED]
whose main office is at [REDACTED] Coeburn, VA 24230
for the operation of Mine #1 Raven (Truck) Raven seam
located at US. 58, Guest River County of WISE

THIS LICENSE EXPIRES DECEMBER 31, 1987
THIS LICENSE IS ISSUED IN COMPLIANCE WITH CHAPTER 45-1-22

Section 45.1-25. Penalty for operating without license; powers of Chief. — In addition to any other power conferred by law, the Chief, or his designated representative, shall have the authority to close any commercial mine which is operating without a license as is required by Section 45.1-22. B. Any person operating a commercial mine within this State without first obtaining a license as provided herein shall upon conviction be guilty of a Class 3 misdemeanor. Each day any person operates any commercial mine without first obtaining such license shall constitute a separate offense.

Issued this 2nd day of MARCH 19 87
Fee \$ 75.00

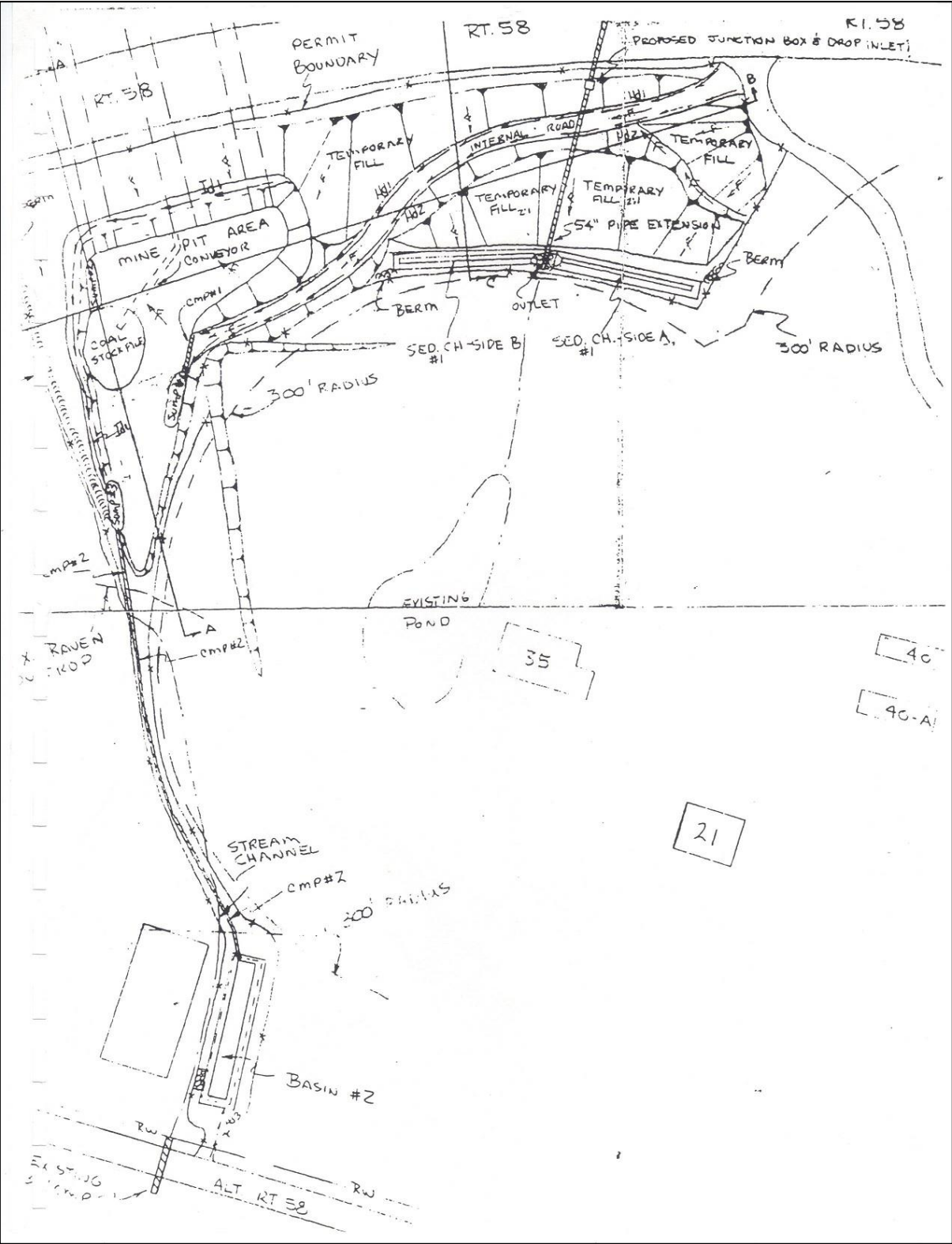
DIVISION OF MINES
HARRY D. CHILDRESS, Chief
By Kathleen Gillespie, Secretary

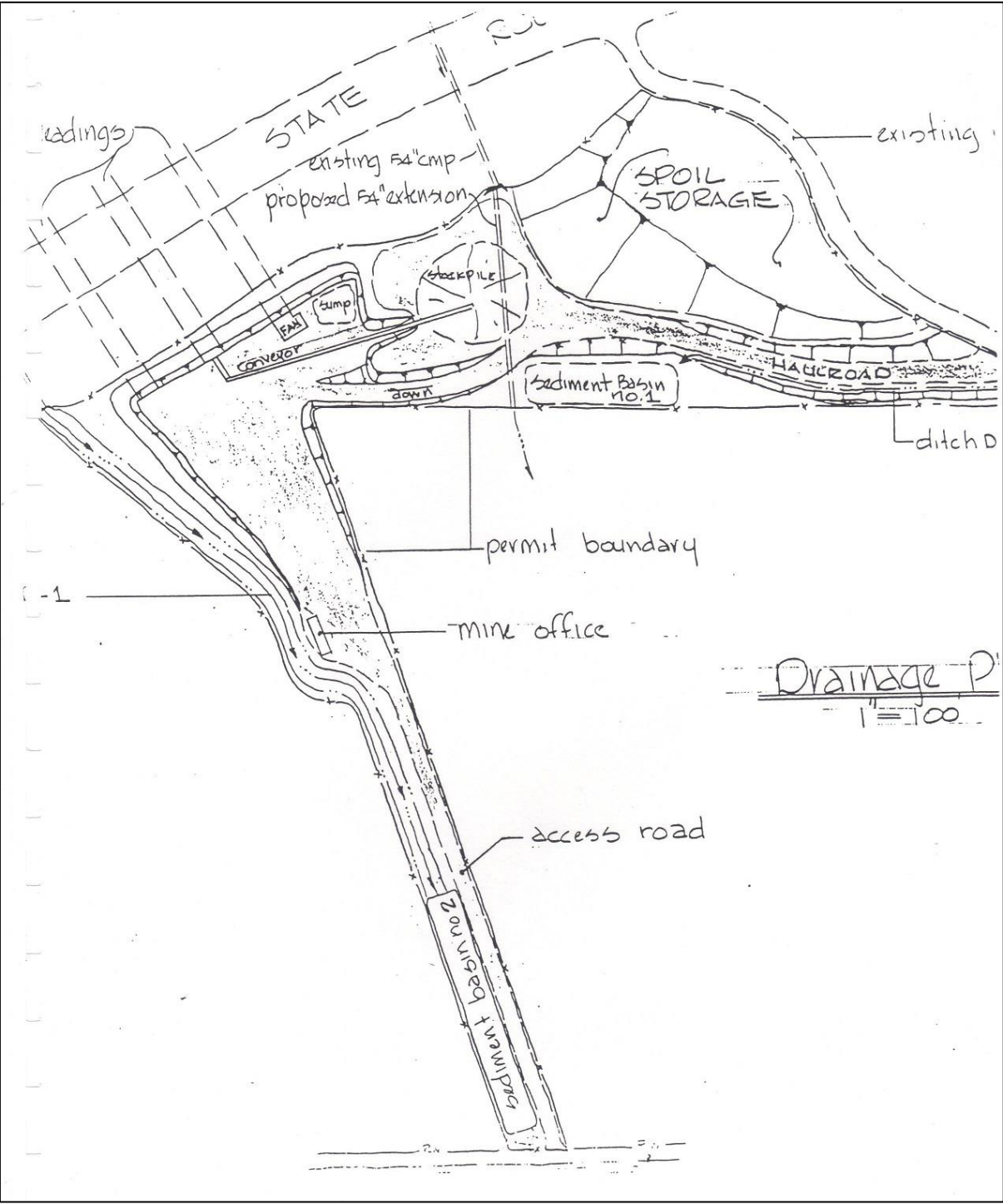
THIS LICENSE MUST BE POSTED NEAR THE MINE ENTRANCE.

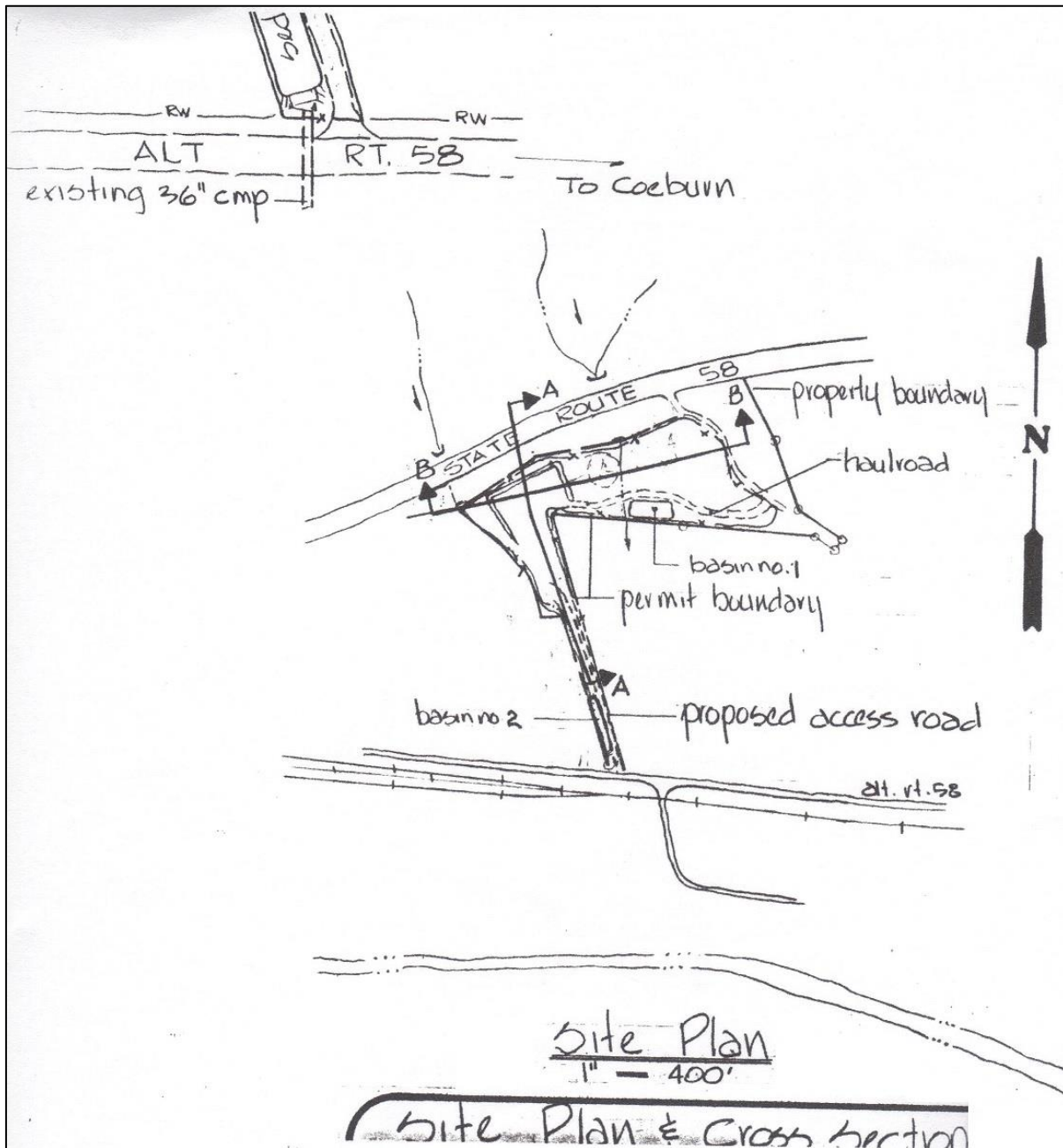
OPERATOR'S FILE COPY

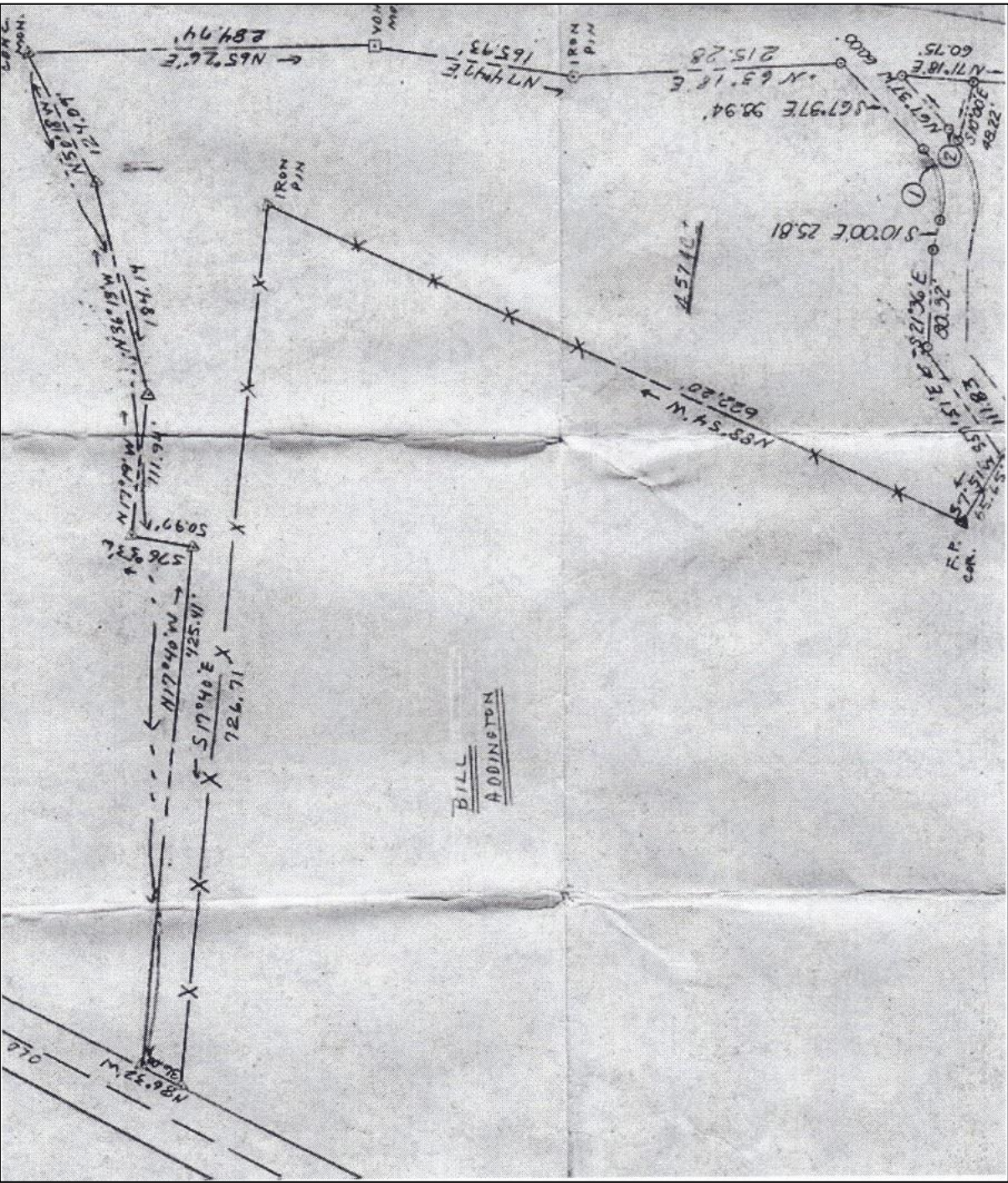
Figure 9: Mining Permit

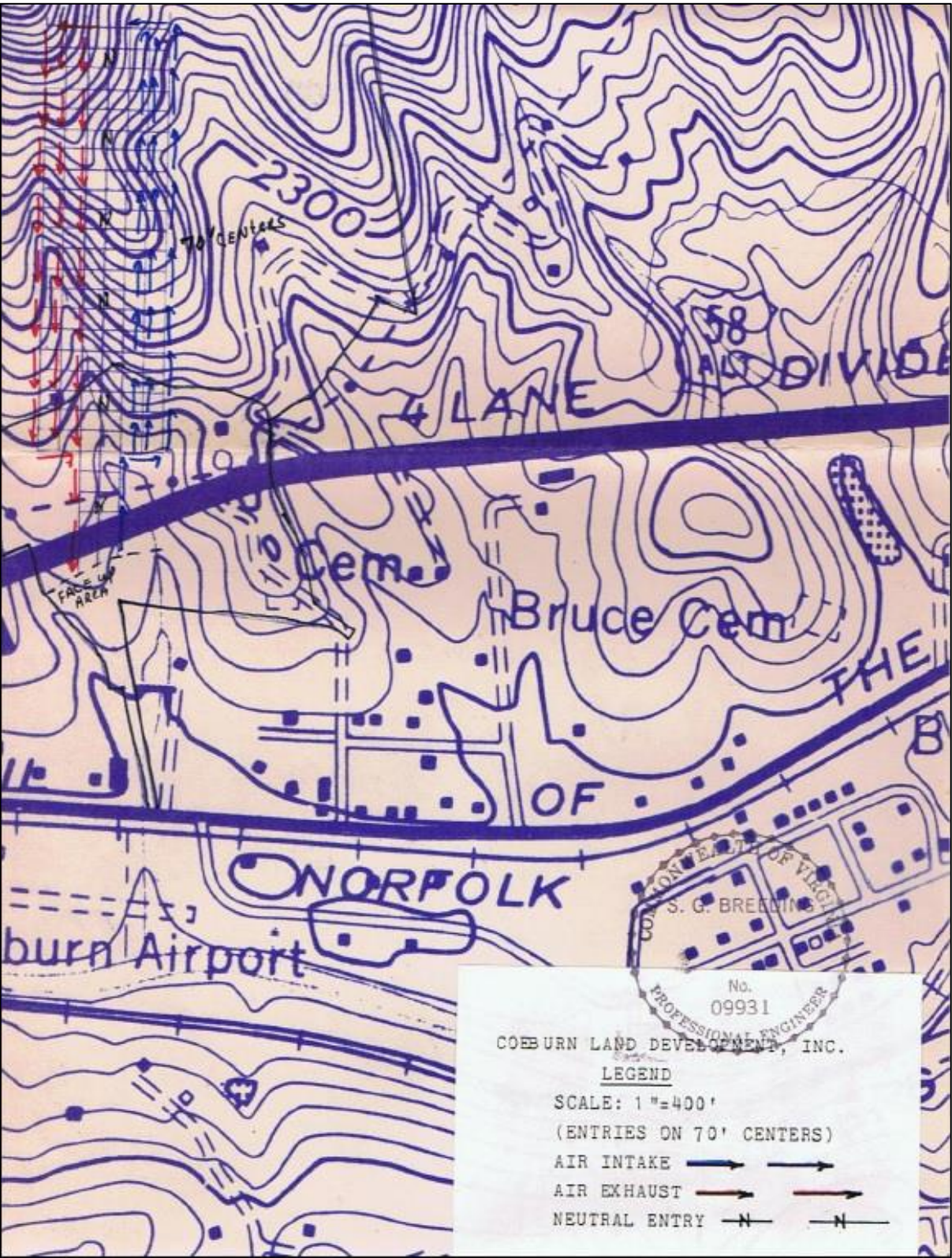
7. Site Plan











Proof of Ownership Documents Below:

8. Deed Receipt and Confirmation of The Foundation ownership



OFFICIAL RECEIPT
WISE COUNTY CIRCUIT COURT
206 E MAIN ST
WISE, VA 24293
276 328-6111

DEED RECEIPT

DATE: 12/13/13 TIME: 13:58:33 ACCOUNT: 195CLR001214323 RECEIPT: 13000012237
CASHIER: SLS REG: WV38 TYPE: DBS PAYMENT: FULL PAYMENT
INSTRUMENT : 001214323 BOOK: PAGE: RECORDED: 12/13/13 AT 13:58
GRANTOR: COLLINS, ADRIAN EX: N LOC: CO
GRANTEE: [REDACTED] FOUNDATION INC EX: N PCT: 100%
AND ADDRESS : [REDACTED] VA. 24224
RECEIVED OF : [REDACTED] FOUNDATION INC DATE OF DEED: 12/21/13
CHARGE: \$132.26
DESCRIPTION 1: 4.57 AC M/L PAGES: 0 OP 0
2: NAMES: 0
CONSIDERATION: [REDACTED] A/VAL: [REDACTED] MAP: [REDACTED]
PIN: 033747
301 DEEDS 145 VSLF [REDACTED]
039 DEEDS & CONTRACTS [REDACTED]
213 COUNTY GRANTEE TAX [REDACTED]
220 GRANTOR TAX [REDACTED]
036 DEED PROCESSING FEE [REDACTED]
035 VOF FEE [REDACTED]
407 CONVENIENCE FEE [REDACTED]
145 VSLF [REDACTED]
038 DEEDS OF CONV. [REDACTED]
212 TRANSFER FEE [REDACTED]
106 TECHNOLOGY TRST FND [REDACTED]
TENDERED : [REDACTED]
AMOUNT PAID: [REDACTED]
CHANGE AMT : [REDACTED]
CLERK OF COURT: J. JACK KENNEDY, JR.

COURT COPY
RECEIPT COPY 2 OF 2

Instrument Control Number 			
Commonwealth of Virginia Land Record Instruments Cover Sheet - Form A			
[ILS VLR Cover Sheet Agent 1.0.59]			
T A X E M P T	C O R P		
Date of Instrument: [12/13/2013] Instrument Type: [DBS] Number of Parcels: [1] Number of Pages: [3] City ☐ County ☒ [Wise County] (Box for Deed Stamp Only)			
First and Second Grantors			
Last Name	First Name	Middle Name or Initial	Suffix
[Collins]	[Adrian]	[J.]	[]
[]	[]	[]	[]
First and Second Grantees			
Last Name	First Name	Middle Name or Initial	Suffix
[AACCTSS Foundation,]	[]	[]	[]
[]	[]	[]	[]
Grantee Address (Name) [] Foundation, Inc. (Address 1) [] (Address 2) [] (City, State, Zip) [] [VA] [24224]			
Consideration [0.00]		Existing Debt [0.00]	
		Assumption Balance [0.00]	
Prior Instr. Recorded at: City ☐ County ☐ [] Percent. in this Juris. [100] Book [] Page [] Instr. No [] Parcel Identification No (PIN) [200902638] Tax Map Num. (if different than PIN) [033747] Short Property Description [Alt. US 58] [Coeburn, VA] Current Property Address (Address 1) [] (Address 2) [] (City, State, Zip) [] [] []			
Instrument Prepared by [Anthony Collins] Recording Paid for by [Grantee] Return Recording to (Name) [Tim Collins] (Address 1) [] (Address 2) [] (City, State, Zip) [] [] []			
Customer Case ID [] [] []			
			
Cover Sheet Page # 1 of 1			

Notarized Deed:

This Instrument Prepared By:
Anthony E. Collins
Collins Law Firm
P.O. Box 3465
Wise, Virginia
(No Title Search Was Conducted)

THIS DEED, made and entered into this the 13th day of December, 2013, by
and between, ADRIAN COLLINS, Grantor, and [REDACTED] Foundation, Inc.,
address: [REDACTED], Grantee;

WITNESSETH:

That for and in consideration of the sum of [REDACTED]
[REDACTED] DOLLARs, cash in hand paid and other good and valuable
consideration, the receipt of which is hereby acknowledged, the said Grantor does
hereby grant, bargain, sell and convey with covenants of General Warranty of Title,
unto the Grantee, a tract or parcel of land situated on Alt. U.S. 58 between Norton
and Coeburn, in the LIPPS Magisterial District of Wise County, Virginia, and more
particularly described as follows, to wit:

BEGINNING at an iron pin on northern edge of Old Coeburn Road, a common corner to Ring Brothers; thence leaving said road and with Ring N 17° -40' W, 425.41' to an iron pipe; thence S 76°-53' W, 50.97' to an iron pipe; thence N 17° -19' W, 111.94' to an iron pin; thence N 36° -13' W, 184.14' to an iron pin; thence N 50 -18' W, 124.09' to a concrete monument on the southern edge of right of way of Alt. U.S. 58; thence leaving Ring and with said right of way N 65° -26' E, 284.74' to a concrete monument; thence N 74° -47'E, 165.93' to an iron pin; thence N 63° -18' E, 215.28' to an iron pin, thence S 67° -37' E, 98.94' to an iron pin on western edge of a road; thence with said road right of way a curve to the right of a delta of 61° -00', radius of 55.00', tangent of 32.40', arc length of 58.56', chord length of 55.83', chord bearing of S 37° -07' E to an iron pin; thence S 10° -00' E, 25.81' to an iron pin; thence S 21° - 36' E, 80.32' to an iron pin; thence S 57° -51 ' E, 111.83' to an iron pin at a wire fence corner; thence leaving said road and with said fence S 7° -51' W. 65.65' to a wire fence corner; thence N 88° -54' W, 622.20' to an iron pin at a wire fence corner; thence S 17° -40' E, 726.71' to an iron pin on northern edge of old Coeburn Road; thence with said road N 86° -32'W, 36.00' to the BEGINNING. Containing 4.57 acres more or less.

NOTE: Included in the 4.57 acre parcel is a .033 acre triangle situated on the northeastern corner of said road right of way on Alternate R. U.S. 58 and described as follows; BEGINNING at an iron pin at intersection of said right of way line; thence N71° -18'E, 60.75' to an iron pin; thence S 10° -00'E, 48.22' to an iron pin; thence with a curve to the left with a delta of 7° -51', radius of 85.00', a tangent of 5.83', arc of 11.65', chord of 11.64' and chord bearing of N 63° -42' W to an iron pin; thence N 67° -37' W, 60.00 to the BEGINNING.

There is further GRANTED and CONVEYED unto Grantee all mineral rights pertaining to the 4.57 acre tract of property herein conveyed, as well as all the minerals and mineral rights which were previously reserved from that tract of property conveyed unto Tim Morgan or Morgan McClure Chevrolet, where the Morgan-McClure car dealership is presently located.

BEING a part of the same tract of land conveyed to Adrian Collins, from Anthony Collins by deed dated August 11, 2009, and recorded in the Clerk's Office of the Circuit Court of Wise County, Virginia, as Instrument Number 200902638.

Excepting and reserving, nevertheless, from this conveyance all exceptions and restrictions which are part of prior deeds of record.

To have and to hold said tract of land unto the Grantee, together with all appurtenances thereunto belonging or in anywise appertaining, their heirs and assigns, in fee simple and forever.

TO HAVE AND TO HOLD unto the Grantee, his heirs and assigns forever in fee simple.

This deed was prepared without the benefit of a title examination nor was one requested.

WITNESS the following signature and seal the day and year first above written.

Adrian Collins (Seal)
Adrian Collins

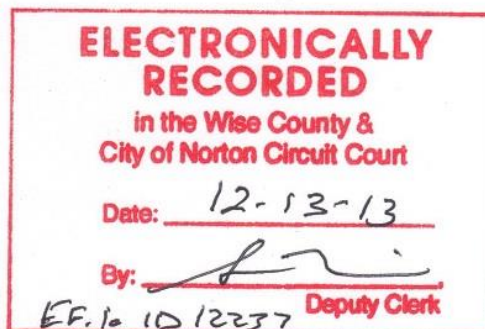
COMMONWEALTH OF VIRGINIA
COUNTY OF WISE, to wit:

I, Teena Ray, a Notary Public in and for the Commonwealth of Virginia at Large, do hereby certify that Adrian Collins did personally appear before me on the 13th day of December 2013, and acknowledge his signature to this Deed and that I have personal knowledge of his identity.

My Commission expires: 4/30/14
My Registration No.: 175622



Teena Ray
NOTARY PUBLIC



Appendix B – GROAL Holdings, Inc. Financial Forecast & GROAL Mining, Inc.

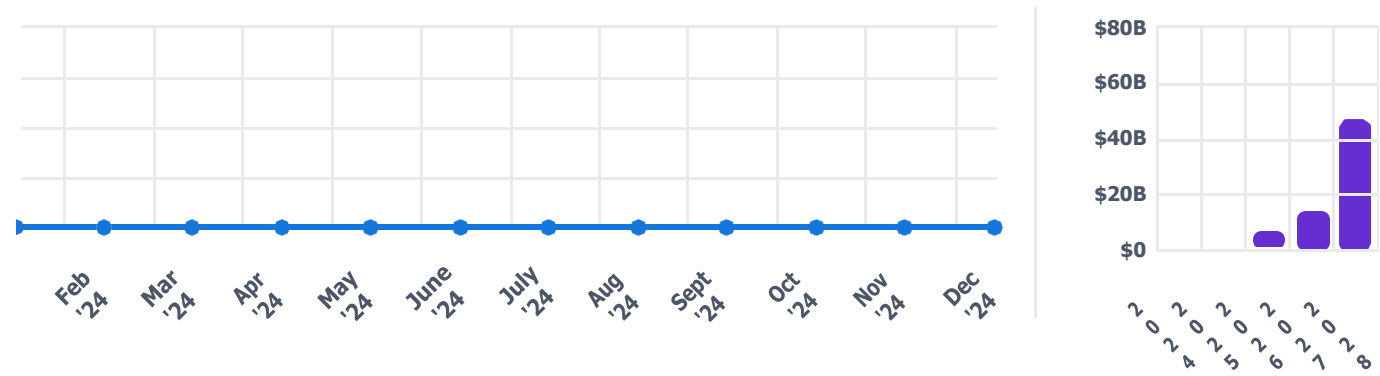


GROAL Holdings Inc

2024-2028 Forecast

Generated August 24, 2024

Projected Profit & Loss

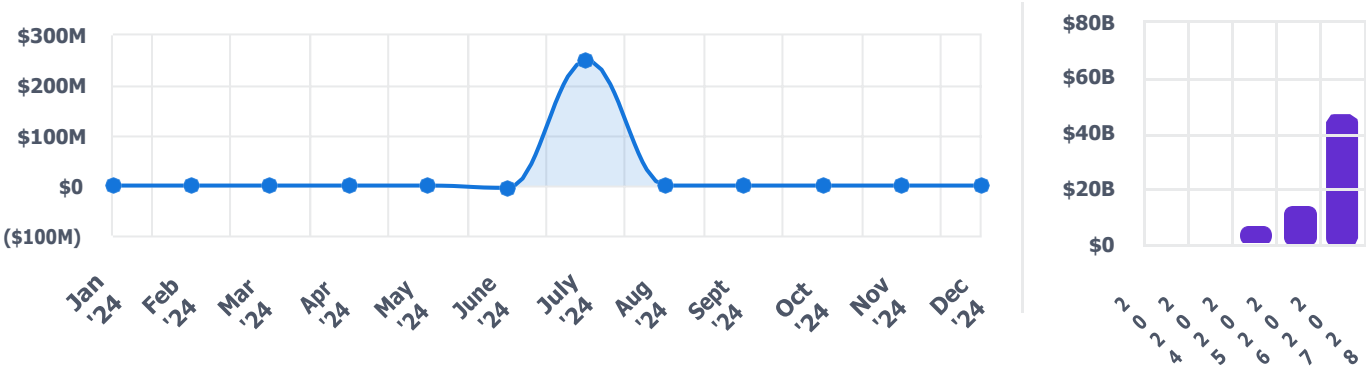


Projected Profit & Loss	2024	2025	2026	2027	2028
Revenue		\$990.8M	\$6.2B	\$14.5B	\$47.6B
Management Fees		\$10M	\$10M	\$10M	\$10M
Dividends - GROAL Mining Inc		\$980.1M	\$5.2B	\$11B	\$29.1B
Dividends - GROAL Biotech Inc			\$950M	\$3.5B	\$18.5B
Dividends - S10X Carbon Fund LLC		\$710,000	\$1.7M	\$2.2M	\$33M
Gross Profit		\$990.8M	\$6.2B	\$14.5B	\$47.6B
Gross Margin		100%	100%	100%	100%
Operating Expenses		\$10M	\$10M	\$10M	\$10M
Operational Expenses		\$10M	\$10M	\$10M	\$10M
Operating Income		\$980.8M	\$6.2B	\$14.5B	\$47.6B
Interest Expense	\$0	\$0	\$0	\$0	\$0
Income Taxes	\$0	\$0	\$0	\$0	\$0
Depreciation and Amortization	\$0	\$0	\$0	\$0	\$0
Total Expenses	\$0	\$10M	\$10M	\$10M	\$10M
Net Profit	\$0	\$980.8M	\$6.2B	\$14.5B	\$47.6B
Net Profit Margin		99%	100%	100%	100%

Projected Balance Sheet

Projected Balance Sheet	2024	2025	2026	2027	2028
Assets	\$250M	\$1.2B	\$7.4B	\$21.8B	\$69.5B
Current Assets	\$245M	\$1.2B	\$7.4B	\$21.8B	\$69.4B
Cash	\$245M	\$1.2B	\$7.4B	\$21.8B	\$69.4B
Accounts Receivable		\$0	\$0	\$0	\$0
Long-Term Assets	\$5M	\$5M	\$5M	\$5M	\$5M
Long-Term Assets	\$5M	\$5M	\$5M	\$5M	\$5M
Accumulated Depreciation	\$0	\$0	\$0	\$0	\$0
Liabilities & Equity	\$250M	\$1.2B	\$7.4B	\$21.8B	\$69.5B
Liabilities	\$250M	\$250M	\$236.8M	\$210.4M	\$184.1M
Current Liabilities	\$0	\$0	\$0	\$0	\$0
Accounts Payable		\$0	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0	\$0	\$0
Sales Taxes Payable		\$0	\$0	\$0	\$0
Long-Term Liabilities	\$250M	\$250M	\$236.8M	\$210.4M	\$184.1M
Long-Term Debt	\$250M	\$250M	\$236.8M	\$210.4M	\$184.1M
Equity	\$0	\$980.8M	\$7.1B	\$21.6B	\$69.3B
Retained Earnings		\$0	\$980.8M	\$7.1B	\$21.6B
Earnings	\$0	\$980.8M	\$6.2B	\$14.5B	\$47.6B

Projected Cash Flow



Projected Cash Flow

Projected Cash Flow	2024	2025	2026	2027	2028
Net Cash from Operations	\$0	\$980.8M	\$6.2B	\$14.5B	\$47.6B
Net Profit	\$0	\$980.8M	\$6.2B	\$14.5B	\$47.6B
Depreciation and Amortization	\$0	\$0	\$0	\$0	\$0
Change in Accounts Receivable		\$0	\$0	\$0	\$0
Change in Accounts Payable		\$0	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0	\$0	\$0
Change in Sales Tax Payable		\$0	\$0	\$0	\$0
Net Cash from Investing	(\$5M)				
Assets Purchased or Sold	(\$5M)				
Net Cash from Financing	\$250M	\$0	(\$13.2M)	(\$26.4M)	(\$26.4M)
Change in Long-Term Debt	\$250M	\$0	(\$13.2M)	(\$26.4M)	(\$26.4M)
Cash at Beginning of Period	\$0	\$245M	\$1.2B	\$7.4B	\$21.8B
Net Change in Cash	\$245M	\$980.8M	\$6.1B	\$14.5B	\$47.6B
Cash at End of Period	\$245M	\$1.2B	\$7.4B	\$21.8B	\$69.4B

GROAL Mining Inc

2024-2028 Forecast Original

Generated August 24, 2024

Projected Profit & Loss

Projected Profit & Loss	2024	2025	2026	2027	2028
Revenue	\$9.4M	\$30.6B	\$94.2B	\$205B	\$216.1B
Coal Sales	\$9.3M	\$30.3B	\$91.9B	\$199.8B	\$209.9B
Unit Sales	37,000	86.5M	250.0M	518.0M	518.0M
Unit Prices	\$250	\$350	\$367.50	\$385.80	\$405.17
Carbon Credits - Green Coal	\$91,520	\$330M	\$2.2B	\$4.9B	\$6B
Unit Sales	45,760	133.1M	681.6M	1.4B	1.5B
Unit Prices	\$2	\$2.48	\$3.24	\$3.65	\$4.05
Carbon Credits - Methane	\$8,880	\$25.7M	\$97.3M	\$227.1M	\$252M
Unit Sales	4,440	10.4M	30.0M	62.2M	62.2M
Unit Prices	\$2	\$2.47	\$3.24	\$3.65	\$4.05
Direct Costs	\$2.3M	\$7.6B	\$23B	\$50B	\$52.5B
Direct Mining Costs	\$2.3M	\$7.6B	\$23B	\$50B	\$52.5B
Gross Profit	\$7M	\$23.1B	\$71.2B	\$155.1B	\$163.7B
Coal Sales	\$6.9M	\$22.7B	\$68.9B	\$149.9B	\$157.4B
Gross Margin	75%	75%	76%	76%	76%
Coal Sales	75%	75%	75%	75%	75%
Operating Expenses	\$1.9M	\$6.1B	\$18.8B	\$41B	\$43.2B
Operational Expenses	\$1.9M	\$6.1B	\$18.8B	\$41B	\$43.2B
Operating Income	\$5.2M	\$16.9B	\$52.4B	\$114B	\$120.4B
Interest Expense	\$1.5M	\$2.7M	\$2.5M	\$2.2M	\$1.9M
Income Taxes	\$0	\$0	\$0	\$0	\$0
Depreciation and Amortization	\$833,333	\$4M	\$7.7M	\$12.7M	\$16.4M
Total Expenses	\$6.5M	\$13.7B	\$41.8B	\$91B	\$95.7B
Net Profit	\$2.9M	\$16.9B	\$52.4B	\$114B	\$120.4B
Net Profit Margin	31%	55%	56%	56%	56%

Projected Balance Sheet

Projected Balance Sheet	2024	2025	2026	2027	2028
Assets	\$98.5M	\$8.6B	\$34.7B	\$91.7B	\$151.9B
Current Assets	\$49.4M	\$8.5B	\$34.5B	\$91.5B	\$151.6B
Cash	\$49.4M	\$8.5B	\$34.5B	\$91.5B	\$151.6B
Accounts Receivable	\$0	\$0	\$0	\$0	\$0
Long-Term Assets	\$49.2M	\$95.2M	\$187.5M	\$274.8M	\$308.4M
Long-Term Assets	\$50M	\$100M	\$200M	\$300M	\$350M
Accumulated Depreciation	(\$833,333)	(\$4.8M)	(\$12.5M)	(\$25.2M)	(\$41.6M)
Liabilities & Equity	\$98.5M	\$8.6B	\$34.7B	\$91.7B	\$151.9B
Liabilities	\$95.7M	\$86.8M	\$77.7M	\$68.4M	\$58.7M
Current Liabilities	\$8.8M	\$9.1M	\$9.4M	\$9.7M	\$10M
Accounts Payable	\$0	\$0	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0	\$0	\$0
Sales Taxes Payable	\$0	\$0	\$0	\$0	\$0
Short-Term Debt	\$8.8M	\$9.1M	\$9.4M	\$9.7M	\$10M
Long-Term Liabilities	\$86.8M	\$77.7M	\$68.4M	\$58.7M	\$48.7M
Long-Term Debt	\$86.8M	\$77.7M	\$68.4M	\$58.7M	\$48.7M
Equity	\$2.9M	\$8.5B	\$34.6B	\$91.7B	\$151.9B
Retained Earnings		(\$8.5B)	(\$17.7B)	(\$22.4B)	\$31.5B
Earnings	\$2.9M	\$16.9B	\$52.4B	\$114B	\$120.4B

Projected Cash Flow

Projected Cash Flow	2024	2025	2026	2027	2028
Net Cash from Operations	\$3.7M	\$16.9B	\$52.4B	\$114B	\$120.4B
Net Profit	\$2.9M	\$16.9B	\$52.4B	\$114B	\$120.4B
Depreciation and Amortization	\$833,333	\$4M	\$7.7M	\$12.7M	\$16.4M
Change in Accounts Receivable	\$0	\$0	\$0	\$0	\$0
Change in Accounts Payable	\$0	\$0	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0	\$0	\$0
Change in Sales Tax Payable	\$0	\$0	\$0	\$0	\$0
Net Cash from Investing	(\$50M)	(\$50M)	(\$100M)	(\$100M)	(\$50M)
Assets Purchased or Sold	(\$50M)	(\$50M)	(\$100M)	(\$100M)	(\$50M)
Net Cash from Financing	\$95.7M	(\$8.5B)	(\$26.2B)	(\$57B)	(\$60.2B)
Dividends & Distributions		(\$8.5B)	(\$26.2B)	(\$57B)	(\$60.2B)
Change in Short-Term Debt	\$8.8M	\$268,809	\$276,985	\$285,410	\$294,091
Change in Long-Term Debt	\$86.8M	(\$9.1M)	(\$9.4M)	(\$9.7M)	(\$10M)
Cash at Beginning of Period	\$0	\$49.4M	\$8.5B	\$34.5B	\$91.5B
Net Change in Cash	\$49.4M	\$8.4B	\$26.1B	\$56.9B	\$60.2B
Cash at End of Period	\$49.4M	\$8.5B	\$34.5B	\$91.5B	\$151.6B

Projected Profit & Loss: 2024 (1 of 2)

Projected Profit & Loss	Jan '24	Feb '24	Mar '24	Apr '24	May '24	June '24	July '24	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	2024
Revenue							\$1.3M	\$1.3M	\$1.5M	\$1.8M	\$1.8M	\$1.8M	\$9.4M
Coal Sales							\$1.3M	\$1.3M	\$1.5M	\$1.8M	\$1.8M	\$1.8M	\$9.3M
Unit Sales							5,000	5,000	6,000	7,000	7,000	7,000	37,000
Unit Prices							\$250	\$250	\$250	\$250	\$250	\$250	\$250
Carbon Credits - Green Coal										\$28,600	\$28,600	\$34,320	\$91,520
Unit Sales										14,300	14,300	17,160	45,760
Unit Prices										\$2	\$2	\$2	\$2
Carbon Credits - Methane							\$1,200	\$1,200	\$1,440	\$1,680	\$1,680	\$1,680	\$8,880
Unit Sales							600	600	720	840	840	840	4,440
Unit Prices						\$2	\$2	\$2	\$2	\$2	\$2	\$2	\$2
Direct Costs							\$313K	\$313K	\$375K	\$438K	\$438K	\$438K	\$2.3M
Direct Mining Costs							\$313K	\$313K	\$375K	\$438K	\$438K	\$438K	\$2.3M
Gross Profit							\$939K	\$939K	\$1.1M	\$1.3M	\$1.3M	\$1.3M	\$7M
Coal Sales							\$938K	\$938K	\$1.1M	\$1.3M	\$1.3M	\$1.3M	\$6.9M
Gross Margin							75%	75%	75%	75%	75%	76%	75%

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Projected Profit & Loss: 2024 (2 of 2)

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Projected Profit & Loss	Jan '24	Feb '24	Mar '24	Apr '24	May '24	June '24	July '24	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	2024
Coal Sales							75%	75%	75%	75%	75%	75%	75%
Operating Expenses							\$250K	\$250K	\$300K	\$356K	\$356K	\$357K	\$1.9M
Operational Expenses							\$250K	\$250K	\$300K	\$356K	\$356K	\$357K	\$1.9M
Operating Income							\$688K	\$688K	\$826K	\$987K	\$987K	\$991K	\$5.2M
Interest Expense							\$250K	\$248K	\$246K	\$245K	\$243K	\$241K	\$1.5M
Income Taxes						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation and Amortization						\$104K	\$104K	\$104K	\$104K	\$104K	\$104K	\$208K	\$833K
Total Expenses						\$104K	\$917K	\$915K	\$1M	\$1.1M	\$1.1M	\$1.2M	\$6.5M
Net Profit						(\$104K)	\$334K	\$336K	\$476K	\$638K	\$640K	\$542K	\$2.9M
Net Profit Margin							27%	27%	32%	36%	36%	30%	31%

Projected Profit & Loss: 2025 (1 of 2)

Projected Profit & Loss	Jan '25	Feb '25	Mar '25	Apr '25	May '25	June '25	July '25	Aug '25	Sept '25	Oct '25	Nov '25	Dec '25	2025
Revenue	\$350.4M	\$875.7M	\$875.8M	\$882.8M	\$1.1B	\$1.8B	\$2.6B	\$3.5B	\$3.5B	\$4.4B	\$5.3B	\$5.3B	\$30.6B
Coal Sales	\$350M	\$875M	\$875M	\$875M	\$1.1B	\$1.8B	\$2.6B	\$3.5B	\$3.5B	\$4.4B	\$5.3B	\$5.3B	\$30.3B
Unit Sales	1.0M	2.5M	2.5M	2.5M	3.0M	5.0M	7.5M	10.0M	10.0M	12.5M	15.0M	15.0M	86.5M
Unit Prices	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350	\$350
Carbon Credits - Green Coal	\$49,650	\$49,650	\$49,650	\$7.1M	\$17.7M	\$17.7M	\$17.7M	\$21.3M	\$35.5M	\$53.2M	\$70.9M	\$88.7M	\$330M
Unit Sales	20,020	20,020	20,020	2.9M	7.2M	7.2M	7.2M	8.6M	14.3M	21.4M	28.6M	35.8M	133.1M
Unit Prices	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48
Carbon Credits - Methane	\$298K	\$685K	\$745K	\$745K	\$894K	\$1.5M	\$2.2M	\$3M	\$3M	\$3.7M	\$4.5M	\$4.5M	\$25.7M
Unit Sales	120,125	300,312	300,312	300,312	360,375	600,625	900,937	1.2M	1.2M	1.5M	1.8M	1.8M	10.4M
Unit Prices	\$2.48	\$2.28	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.48	\$2.47
Direct Costs	\$87.5M	\$218.8M	\$218.8M	\$218.8M	\$262.5M	\$437.5M	\$656.3M	\$875M	\$875M	\$1.1B	\$1.3B	\$1.3B	\$7.6B
Direct Mining Costs	\$87.5M	\$218.8M	\$218.8M	\$218.8M	\$262.5M	\$437.5M	\$656.3M	\$875M	\$875M	\$1.1B	\$1.3B	\$1.3B	\$7.6B
Gross Profit	\$262.8M	\$657M	\$657M	\$664.1M	\$806.1M	\$1.3B	\$2B	\$2.6B	\$2.7B	\$3.3B	\$4B	\$4B	\$23.1B
Coal Sales	\$262.5M	\$656.3M	\$656.3M	\$656.3M	\$787.5M	\$1.3B	\$2B	\$2.6B	\$2.6B	\$3.3B	\$3.9B	\$3.9B	\$22.7B
Gross Margin	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%

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Projected Profit & Loss: 2025 (2 of 2)

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Projected Profit & Loss	Jan '25	Feb '25	Mar '25	Apr '25	May '25	June '25	July '25	Aug '25	Sept '25	Oct '25	Nov '25	Dec '25	2025
Coal Sales	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Operating Expenses	\$70.1M	\$175.2M	\$175.2M	\$176.6M	\$213.7M	\$353.8M	\$529M	\$704.9M	\$707.7M	\$886.4M	\$1.1B	\$1.1B	\$6.1B
Operational Expenses	\$70.1M	\$175.2M	\$175.2M	\$176.6M	\$213.7M	\$353.8M	\$529M	\$704.9M	\$707.7M	\$886.4M	\$1.1B	\$1.1B	\$6.1B
Operating Income	\$192.8M	\$481.8M	\$481.9M	\$487.5M	\$592.4M	\$977.9M	\$1.5B	\$1.9B	\$2B	\$2.5B	\$2.9B	\$3B	\$16.9B
Interest Expense	\$239K	\$237K	\$236K	\$234K	\$232K	\$230K	\$228K	\$226K	\$225K	\$223K	\$221K	\$219K	\$2.7M
Income Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Depreciation and Amortization	\$208K	\$208K	\$313K	\$313K	\$313K	\$313K	\$313K	\$313K	\$417K	\$417K	\$417K	\$417K	\$4M
Total Expenses	\$158M	\$394.3M	\$394.5M	\$395.9M	\$476.8M	\$791.9M	\$1.2B	\$1.6B	\$1.6B	\$2B	\$2.4B	\$2.4B	\$13.7B
Net Profit	\$192.3M	\$481.4M	\$481.3M	\$487M	\$591.9M	\$977.3M	\$1.5B	\$1.9B	\$2B	\$2.5B	\$2.9B	\$3B	\$16.9B
Net Profit Margin	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%	55%

Projected Balance Sheet: 2024 (1 of 2)

Projected Balance Sheet	Jan '24	Feb '24	Mar '24	Apr '24	May '24	June '24	July '24	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	2024
Assets						\$99.9M	\$99.5M	\$99.1M	\$98.9M	\$98.8M	\$98.7M	\$98.5M	\$98.5M
Current Assets						\$75M	\$74.7M	\$74.4M	\$74.3M	\$74.3M	\$74.3M	\$49.4M	\$49.4M
Cash						\$75M	\$74.7M	\$74.4M	\$74.3M	\$74.3M	\$74.3M	\$49.4M	\$49.4M
Accounts Receivable							\$0	\$0	\$0	\$0	\$0	\$0	\$0
Long-Term Assets						\$24.9M	\$24.8M	\$24.7M	\$24.6M	\$24.5M	\$24.4M	\$49.2M	\$49.2M
Long-Term Assets						\$25M	\$25M	\$25M	\$25M	\$25M	\$25M	\$50M	\$50M
Accumulated Depreciation						(\$104K)	(\$208K)	(\$313K)	(\$417K)	(\$521K)	(\$625K)	(\$833K)	(\$833K)
Liabilities & Equity						\$99.9M	\$99.5M	\$99.1M	\$98.9M	\$98.8M	\$98.7M	\$98.5M	\$98.5M
Liabilities						\$100M	\$99.3M	\$98.6M	\$97.8M	\$97.1M	\$96.4M	\$95.7M	\$95.7M
Current Liabilities						\$8.7M	\$8.7M	\$8.7M	\$8.8M	\$8.8M	\$8.8M	\$8.8M	\$8.8M
Accounts Payable							\$0	\$0	\$0	\$0	\$0	\$0	\$0
Income Taxes Payable						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sales Taxes Payable							\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short-Term Debt						\$8.7M	\$8.7M	\$8.7M	\$8.8M	\$8.8M	\$8.8M	\$8.8M	\$8.8M
Long-Term Liabilities						\$91.3M	\$90.6M	\$89.8M	\$89.1M	\$88.3M	\$87.6M	\$86.8M	\$86.8M
Long-Term Debt						\$91.3M	\$90.6M	\$89.8M	\$89.1M	\$88.3M	\$87.6M	\$86.8M	\$86.8M

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Projected Balance Sheet: 2024 (2 of 2)

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Projected Balance Sheet	Jan '24	Feb '24	Mar '24	Apr '24	May '24	June '24	July '24	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	2024
Equity						(\$104K)	\$230K	\$566K	\$1M	\$1.7M	\$2.3M	\$2.9M	\$2.9M
Retained Earnings													
Earnings						(\$104K)	\$230K	\$566K	\$1M	\$1.7M	\$2.3M	\$2.9M	\$2.9M

Projected Balance Sheet: 2025 (1 of 2)

Projected Balance Sheet	Jan '25	Feb '25	Mar '25	Apr '25	May '25	June '25	July '25	Aug '25	Sept '25	Oct '25	Nov '25	Dec '25	2025
Assets	\$194M	\$433.9M	\$673.9M	\$916.6M	\$1.2B	\$1.7B	\$2.4B	\$3.4B	\$4.4B	\$5.6B	\$7.1B	\$8.6B	\$8.6B
Current Assets	\$145M	\$385.2M	\$600.5M	\$843.5M	\$1.1B	\$1.6B	\$2.4B	\$3.3B	\$4.3B	\$5.5B	\$7B	\$8.5B	\$8.5B
Cash	\$145M	\$385.2M	\$600.5M	\$843.5M	\$1.1B	\$1.6B	\$2.4B	\$3.3B	\$4.3B	\$5.5B	\$7B	\$8.5B	\$8.5B
Accounts Receivable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Long-Term Assets	\$49M	\$48.8M	\$73.4M	\$73.1M	\$72.8M	\$72.5M	\$72.2M	\$71.9M	\$96.5M	\$96M	\$95.6M	\$95.2M	\$95.2M
Long-Term Assets	\$50M	\$50M	\$75M	\$75M	\$75M	\$75M	\$75M	\$75M	\$100M	\$100M	\$100M	\$100M	\$100M
Accumulated Depreciation	(\$1M)	(\$1.3M)	(\$1.6M)	(\$1.9M)	(\$2.2M)	(\$2.5M)	(\$2.8M)	(\$3.1M)	(\$3.5M)	(\$4M)	(\$4.4M)	(\$4.8M)	(\$4.8M)
Liabilities & Equity	\$194M	\$433.9M	\$673.9M	\$916.6M	\$1.2B	\$1.7B	\$2.4B	\$3.4B	\$4.4B	\$5.6B	\$7.1B	\$8.6B	\$8.6B
Liabilities	\$95M	\$94.2M	\$93.5M	\$92.8M	\$92M	\$91.3M	\$90.6M	\$89.8M	\$89.1M	\$88.3M	\$87.6M	\$86.8M	\$86.8M
Current Liabilities	\$8.9M	\$8.9M	\$8.9M	\$8.9M	\$8.9M	\$9M	\$9M	\$9M	\$9M	\$9.1M	\$9.1M	\$9.1M	\$9.1M
Accounts Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Sales Taxes Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Short-Term Debt	\$8.9M	\$8.9M	\$8.9M	\$8.9M	\$8.9M	\$9M	\$9M	\$9M	\$9M	\$9.1M	\$9.1M	\$9.1M	\$9.1M
Long-Term Liabilities	\$86.1M	\$85.3M	\$84.6M	\$83.8M	\$83.1M	\$82.3M	\$81.6M	\$80.8M	\$80M	\$79.3M	\$78.5M	\$77.7M	\$77.7M
Long-Term Debt	\$86.1M	\$85.3M	\$84.6M	\$83.8M	\$83.1M	\$82.3M	\$81.6M	\$80.8M	\$80M	\$79.3M	\$78.5M	\$77.7M	\$77.7M

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Projected Balance Sheet: 2025 (2 of 2)

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Projected Balance Sheet	Jan '25	Feb '25	Mar '25	Apr '25	May '25	June '25	July '25	Aug '25	Sept '25	Oct '25	Nov '25	Dec '25	2025
Equity	\$99M	\$339.7M	\$580.4M	\$823.9M	\$1.1B	\$1.6B	\$2.3B	\$3.3B	\$4.3B	\$5.5B	\$7B	\$8.5B	\$8.5B
Retained Earnings	(\$93.3M)	(\$334M)	(\$574.7M)	(\$818.2M)	(\$1.1B)	(\$1.6B)	(\$2.3B)	(\$3.3B)	(\$4.3B)	(\$5.5B)	(\$7B)	(\$8.5B)	(\$8.5B)
Earnings	\$192.3M	\$673.7M	\$1.2B	\$1.6B	\$2.2B	\$3.2B	\$4.7B	\$6.6B	\$8.6B	\$11B	\$14B	\$16.9B	\$16.9B

Projected Cash Flow: 2024 (1 of 2)

Projected Cash Flow	Jan '24	Feb '24	Mar '24	Apr '24	May '24	June '24	July '24	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	2024
Net Cash from Operations						\$0	\$438K	\$440K	\$580K	\$742K	\$744K	\$750K	\$3.7M
Net Profit						(\$104K)	\$334K	\$336K	\$476K	\$638K	\$640K	\$542K	\$2.9M
Depreciation and Amortization						\$104K	\$104K	\$104K	\$104K	\$104K	\$104K	\$208K	\$833K
Change in Accounts Receivable							\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Accounts Payable							\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Income Tax Payable						\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Sales Tax Payable							\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash from Investing						(\$25M)						(\$25M)	(\$50M)
Assets Purchased or Sold						(\$25M)						(\$25M)	(\$50M)
Net Cash from Financing						\$100M	(\$716K)	(\$717K)	(\$719K)	(\$721K)	(\$723K)	(\$725K)	\$95.7M
Dividends & Distributions													
Change in Short-Term Debt						\$8.7M	\$21,766	\$21,820	\$21,875	\$21,930	\$21,984	\$22,039	\$8.8M
Change in Long-Term Debt						\$91.3M	(\$737K)	(\$739K)	(\$741K)	(\$743K)	(\$745K)	(\$747K)	\$86.8M
Cash at Beginning of Period						\$0	\$75M	\$74.7M	\$74.4M	\$74.3M	\$74.3M	\$74.3M	\$0
Net Change in Cash						\$75M	(\$277K)	(\$277K)	(\$139K)	\$21,117	\$21,117	(\$25M)	\$49.4M

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Projected Cash Flow: 2024 (2 of 2)

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Projected Cash Flow	Jan '24	Feb '24	Mar '24	Apr '24	May '24	June '24	July '24	Aug '24	Sept '24	Oct '24	Nov '24	Dec '24	2024
Cash at End of Period						\$75M	\$74.7M	\$74.4M	\$74.3M	\$74.3M	\$74.3M	\$49.4M	\$49.4M

Projected Cash Flow: 2025 (1 of 2)

Projected Cash Flow	Jan '25	Feb '25	Mar '25	Apr '25	May '25	June '25	July '25	Aug '25	Sept '25	Oct '25	Nov '25	Dec '25	2025
Net Cash from Operations	\$192.5M	\$481.6M	\$481.6M	\$487.3M	\$592.2M	\$977.6M	\$1.5B	\$1.9B	\$2B	\$2.5B	\$2.9B	\$3B	\$16.9B
Net Profit	\$192.3M	\$481.4M	\$481.3M	\$487M	\$591.9M	\$977.3M	\$1.5B	\$1.9B	\$2B	\$2.5B	\$2.9B	\$3B	\$16.9B
Depreciation and Amortization	\$208K	\$208K	\$313K	\$313K	\$313K	\$313K	\$313K	\$313K	\$417K	\$417K	\$417K	\$417K	\$4M
Change in Accounts Receivable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Accounts Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Change in Sales Tax Payable	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Net Cash from Investing			(\$25M)						(\$25M)				(\$50M)
Assets Purchased or Sold			(\$25M)						(\$25M)				(\$50M)
Net Cash from Financing	(\$96.9M)	(\$241.4M)	(\$241.4M)	(\$244.2M)	(\$296.7M)	(\$489.4M)	(\$730.3M)	(\$972.7M)	(\$978.3M)	(\$1.2B)	(\$1.5B)	(\$1.5B)	(\$8.5B)
Dividends & Distributions	(\$96.2M)	(\$240.7M)	(\$240.7M)	(\$243.5M)	(\$295.9M)	(\$488.7M)	(\$729.6M)	(\$971.9M)	(\$977.6M)	(\$1.2B)	(\$1.5B)	(\$1.5B)	(\$8.5B)
Change in Short-Term Debt	\$22,094	\$22,150	\$22,205	\$22,261	\$22,316	\$22,372	\$22,428	\$22,484	\$22,540	\$22,597	\$22,653	\$22,710	\$269K
Change in Long-Term Debt	(\$749K)	(\$750K)	(\$752K)	(\$754K)	(\$756K)	(\$758K)	(\$760K)	(\$762K)	(\$764K)	(\$766K)	(\$767K)	(\$769K)	(\$9.1M)
Cash at Beginning of Period	\$49.4M	\$145M	\$385.2M	\$600.5M	\$843.5M	\$1.1B	\$1.6B	\$2.4B	\$3.3B	\$4.3B	\$5.5B	\$7B	\$49.4M
Net Change in Cash	\$95.6M	\$240.2M	\$215.3M	\$243.1M	\$295.5M	\$488.2M	\$729.2M	\$971.5M	\$952.2M	\$1.2B	\$1.5B	\$1.5B	\$8.4B

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Projected Cash Flow: 2025 (2 of 2)

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Projected Cash Flow	Jan '25	Feb '25	Mar '25	Apr '25	May '25	June '25	July '25	Aug '25	Sept '25	Oct '25	Nov '25	Dec '25	2025
Cash at End of Period	\$145M	\$385.2M	\$600.5M	\$843.5M	\$1.1B	\$1.6B	\$2.4B	\$3.3B	\$4.3B	\$5.5B	\$7B	\$8.5B	\$8.5B

Appendix C – S10X Carbon Fund, Inc. Financial Forecast

This Appendix is highly relevant because of the cross-investing plan between GROAL and S10X.

S10X is agreeable to pledging appropriate proportional percentages of their revenue as part of the earning and repayment strategy for GROAL. Their pledge provides a de-risking strategy for any lender or investor to bolster ROI and loan repayment capacity.

Furthermore, S10X has agreed to pledge Carbon Credits from its large and plentiful diversified platform to guarantee that any Carbon Credit Investor wishing to secure “Right-to-Retire” privileges from GROAL’s Project will obtain full access to their platform, guaranteeing that the total number of carbon credits anticipated from GROAL’s development projects are fulfilled through their available substitute Credits, should that necessity arise. This agreement insures Carbon Credit investors against the possibility of shortfall and loss.

Appendix C, and the Project Provenance for Carbon Credits are attached to this PDF.

If either of these two documents are not attached, or have been removed, they may be requested directly by emailing Dr. Tim Collins, aacctts@gmail.com.

NOTE: Beyond S10X we have additional Principal Protecting Strategies not covered in this document.

Attached or available by email in separate PDF files:

- Appendix C
- Project Provenance for Carbon Credits



S10X Carbon Fund, LLC

FY2025-FY2029 Forecast

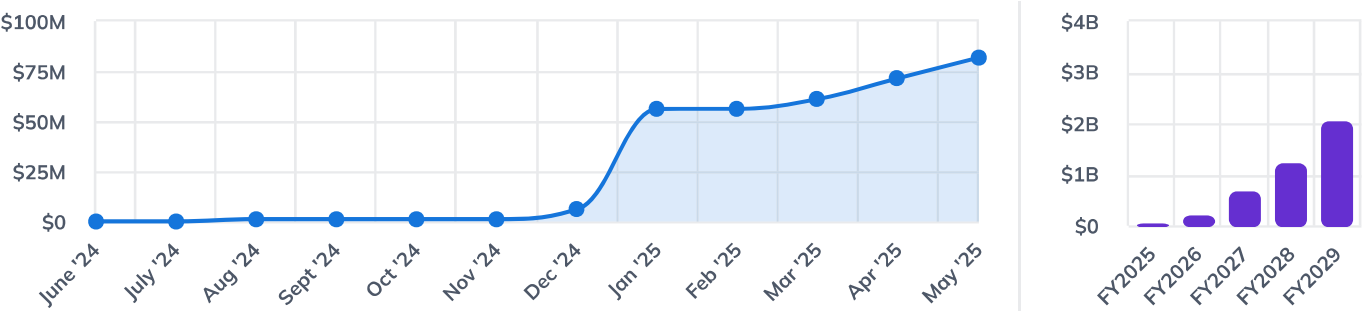
Generated August 24, 2024

Assets

Excluding cash, accounts receivable, etc.

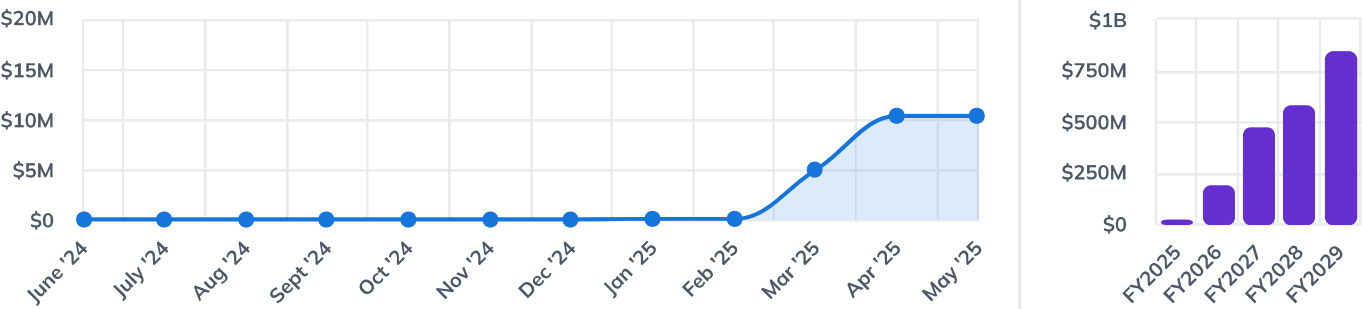
Assets	FY2025	FY2026	FY2027	FY2028	FY2029
Long-term assets		\$42.6M	\$40.4M	\$38.2M	\$36M
Project Advances		\$42.6M	\$40.4M	\$38.2M	\$36M

Financing



Financing	FY2025	FY2026	FY2027	FY2028	FY2029
Amount received	\$56.1M				
New Business Strain	\$50M				
Activate SA	\$1.1M				
Activate US	\$5M				

Projected Profit & Loss (1 of 2)



Projected Profit & Loss	FY2025	FY2026	FY2027	FY2028	FY2029
Revenue	\$61M	\$474.8M	\$1.1B	\$1.4B	\$2B
Carbon Offsets	\$61M	\$474.8M	\$1.1B	\$1.4B	\$2B
Unit Sales	12.3M	77.2M	114.4M	123.8M	162.0M
Unit Prices	\$4.95	\$6.15	\$10	\$11.27	\$12.50
Direct Costs	\$34.2M	\$265.9M	\$640.7M	\$781.5M	\$1.1B
Carbon Credit Share (40%)	\$24.4M	\$189.9M	\$457.6M	\$558.2M	\$810.2M
Warranty Reserving (5%)	\$3.1M	\$23.7M	\$57.2M	\$69.8M	\$101.3M
SDG Contribution (10%)	\$6.1M	\$47.5M	\$114.4M	\$139.6M	\$202.6M
Franchise Commission (1%)	\$610,124	\$4.7M	\$11.4M	\$14M	\$20.3M
Gross Profit	\$26.8M	\$208.9M	\$503.4M	\$614M	\$891.2M
Carbon Offsets	\$26.8M	\$208.9M	\$503.4M	\$614M	\$891.2M
Gross Margin	44%	44%	44%	44%	44%
Carbon Offsets	44%	44%	44%	44%	44%
Operating Expenses	\$1.1M	\$8.3M	\$20M	\$24.4M	\$35.4M
Ops Cost (1%)	\$610,124	\$4.7M	\$11.4M	\$14M	\$20.3M
Asset Management Fees (0.25%)	\$152,531	\$1.2M	\$2.9M	\$3.5M	\$5.1M
Project Referral Fee (0.5%)	\$305,062	\$2.4M	\$5.7M	\$7M	\$10.1M
Operating Income	\$25.8M	\$200.6M	\$483.4M	\$589.6M	\$855.8M
Income Taxes	\$0	\$0	\$0	\$0	\$0
Depreciation and Amortization		\$1.4M	\$2.2M	\$2.2M	\$2.2M

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Projected Profit & Loss (2 of 2)

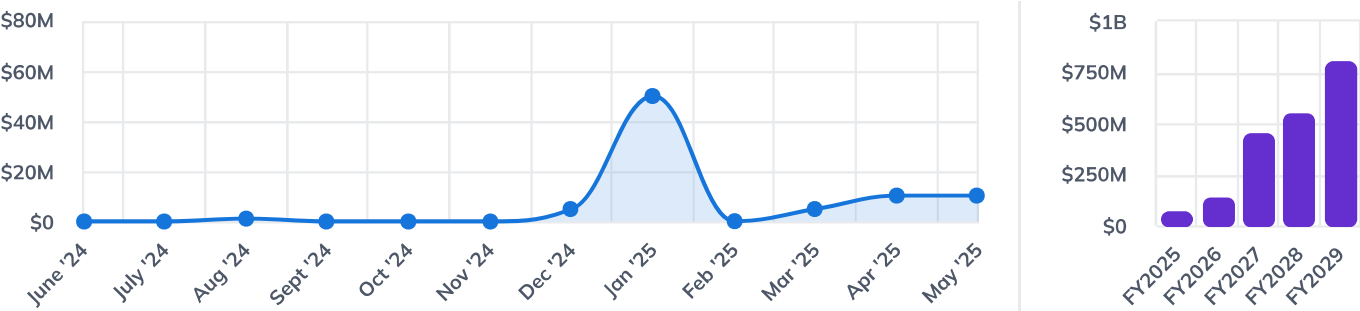
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Projected Profit & Loss	FY2025	FY2026	FY2027	FY2028	FY2029
Total Expenses	\$35.2M	\$275.6M	\$662.9M	\$808.1M	\$1.2B
Net Profit	\$25.8M	\$199.2M	\$481.2M	\$587.4M	\$853.6M
Net Profit Margin	42%	42%	42%	42%	42%

Projected Balance Sheet

Projected Balance Sheet	FY2025	FY2026	FY2027	FY2028	FY2029
Assets	\$81.9M	\$271.2M	\$728.3M	\$1.3B	\$2.1B
Current Assets	\$81.9M	\$228.5M	\$687.9M	\$1.2B	\$2.1B
Cash	\$81.9M	\$228.5M	\$687.9M	\$1.2B	\$2.1B
Accounts Receivable	\$0	\$0	\$0	\$0	\$0
Long-Term Assets		\$42.6M	\$40.4M	\$38.2M	\$36M
Long-Term Assets		\$44M	\$44M	\$44M	\$44M
Accumulated Depreciation		(\$1.4M)	(\$3.6M)	(\$5.8M)	(\$8M)
Liabilities & Equity	\$81.9M	\$271.2M	\$728.3M	\$1.3B	\$2.1B
Liabilities	\$0	\$0	\$0	\$0	\$0
Current Liabilities	\$0	\$0	\$0	\$0	\$0
Accounts Payable	\$0	\$0	\$0	\$0	\$0
Income Taxes Payable	\$0	\$0	\$0	\$0	\$0
Equity	\$81.9M	\$271.2M	\$728.3M	\$1.3B	\$2.1B
Paid-In Capital	\$56.1M	\$56.1M	\$56.1M	\$56.1M	\$56.1M
Retained Earnings	\$0	\$15.8M	\$191M	\$642.8M	\$1.2B
Earnings	\$25.8M	\$199.2M	\$481.2M	\$587.4M	\$853.6M

Projected Cash Flow



Projected Cash Flow	FY2025	FY2026	FY2027	FY2028	FY2029
Net Cash from Operations	\$25.8M	\$200.6M	\$483.4M	\$589.6M	\$855.8M
Net Profit	\$25.8M	\$199.2M	\$481.2M	\$587.4M	\$853.6M
Depreciation and Amortization		\$1.4M	\$2.2M	\$2.2M	\$2.2M
Change in Accounts Receivable	\$0	\$0	\$0	\$0	\$0
Change in Accounts Payable	\$0	\$0	\$0	\$0	\$0
Change in Income Tax Payable	\$0	\$0	\$0	\$0	\$0
Net Cash from Investing		(\$44M)			
Assets Purchased or Sold		(\$44M)			
Net Cash from Financing	\$56.1M	(\$10M)	(\$24.1M)	(\$29.4M)	(\$42.7M)
Investments Received	\$56.1M				
Dividends & Distributions		(\$10M)	(\$24.1M)	(\$29.4M)	(\$42.7M)
Cash at Beginning of Period	\$0	\$81.9M	\$228.5M	\$687.9M	\$1.2B
Net Change in Cash	\$81.9M	\$146.7M	\$459.3M	\$560.2M	\$813.1M
Cash at End of Period	\$81.9M	\$228.5M	\$687.9M	\$1.2B	\$2.1B

PROJECT PROVENANCE

from the earliest known history of the project

SUMMARY

NAME:	Manufacture Graphene
STATUS:	DEVELOPING
UID:	S10X_P_y3HvznzQSqYu
CLIENT:	GROAL Biotech, Inc.
PROJECT OWNER:	Tim Collins
DEVELOPER:	Marc Tison
COUNTRY:	United States

ER SOURCE	Coal
ER IMPACT	Removal
ACCREDITATION STANDARD:	ISO 14064-3
METHODOLOGY:	Coal to Graphene Conversion
PROCEDURE:	Carbon Funding Mechanism™
TCO2E LIFESPAN AVOIDANCE:	6,890,400,000
ANNUAL TCO2E AVOIDANCE:	344,520,000

SDG IMPACTS:	13) Climate Action
UNFFC FUND:	Yes

CONTEXT:

1. Climate Change and Carbon Markets Climate change is a critical global issue driven significantly by industrial GHG emissions. Carbon markets provide an effective mechanism to incentivise emission reduction projects. ISO 14064-3 accredited projects are highly valued in these markets for their rigorous GHG accounting and verification processes.

2. Importance of ISO 14064-3 Accreditation ISO 14064-3 sets the standards for validating and verifying GHG assertions. Accreditation under this standard ensures that the project's emission reduction claims are independently verified, enhancing credibility and trust among stakeholders and potential buyers in the carbon market.

MEETS REQUIREMENT OF ADDITIONALITY?

Yes

MEETS REQUIREMENT OF PERMANENCE?

Yes

POTENTIAL:

The primary objective of projects underpinned by the methodology is to reduce GHG emissions from industrial processes by implementing advanced technologies and energy efficiency measures. The project seeks ISO 14064-3 accreditation to ensure transparency, accuracy, and credibility in GHG accounting and verification.



LOCATION:

13398 Herald Road
Coeburn, Virginia 24230
United States

KEY REQUIREMENTS

Documents	State	Document
Commissioning Certificate	New	
Proof of Senior Funding	New	
Offtake Agreement	New	

PROJECT DESCRIPTION

1. PROJECT OBJECTIVE

The primary objective of this project is to reduce GHG emissions from industrial processes by implementing advanced technologies and energy efficiency measures. The project seeks ISO 14064-3 accreditation to ensure transparency, accuracy, and credibility in GHG accounting and verification.

2. CONTEXT

2.1. Climate Change and Carbon Markets

Climate change is a critical global issue, driven significantly by industrial GHG emissions. Carbon markets provide an effective mechanism to incentivise emission reduction projects. ISO 14064-3 accredited projects are highly valued in these markets for their rigorous GHG accounting and verification processes.

2.2. Importance of ISO 14064-3 Accreditation

ISO 14064-3 sets the standards for validating and verifying GHG assertions. Accreditation under this standard ensures that the project's emission reduction claims are independently verified, enhancing credibility and trust among stakeholders and potential buyers in the carbon market.

3. PROJECT ACTIVITIES

3.1. Implementation of Energy Efficiency Measures

- Technology Upgrades:** Installation of energy-efficient equipment and machinery in industrial facilities.
- Process Optimization:** Enhancing operational processes to reduce energy consumption and GHG emissions.
- Training and Capacity Building:** Training facility staff on energy management and efficient operational practices.

3.2. Adoption of Clean Technologies

- Renewable Energy Integration:** Incorporating renewable energy sources such as solar, wind, and biomass into industrial operations.
- Waste Heat Recovery:** Implementing systems to capture and reuse waste heat from industrial processes.
- Advanced Emission Control:** Installing state-of-the-art emission control technologies to reduce pollutants and GHG emissions.

3.3. Monitoring and Maintenance

- Continuous Monitoring Systems:** Deploying advanced monitoring systems to track real-time energy usage and emissions.
- Regular Maintenance:** Conducting periodic maintenance to ensure optimal performance of installed technologies.
- Data Management:** Establishing robust data management systems to record and analyse energy consumption and emission data.

4. CARBON ACCOUNTING AND VERIFICATION

4.1. GHG Inventory Development

- Baseline Assessment:** Conducting a comprehensive baseline assessment of current GHG emissions from industrial facilities.
- Emission Reduction Targets:** Setting clear and achievable targets based on baseline data.

4.2. Data Collection and Management

- Automated Data Collection:** Utilizing computerised systems for accurate and consistent data collection.
- Manual Data Verification:** Periodic manual verification of collected data to ensure accuracy.

4.3. Independent Verification

- Third-Party Audits:** Engaging accredited third-party auditors to verify the project's GHG reduction claims.
- Verification Reports:** Prepare detailed verification reports in accordance with ISO 14064-3 guidelines and submit them to relevant authorities.

5. PROJECT BENEFITS

5.1. Environmental Benefits

- GHG Emission Reduction:** Significant reduction in GHG emissions from industrial processes.
- Resource Conservation:** Enhanced resource utilisation efficiency, reducing waste and lowering environmental impact.
- Air Quality Improvement:** Reduction in air pollutants, improving air quality and public health.

5.2. Economic Benefits

- Cost Savings:** Reduced energy consumption leading to significant cost savings for industrial facilities.
- Market Competitiveness:** Enhanced competitiveness of participating industries by adopting clean and efficient technologies.
- Revenue Generation:** Potential revenue from selling verified carbon credits in the carbon market.

5.3. Social Benefits

- Employment Opportunities:** Creation of jobs in technology installation, maintenance, and monitoring.
- Community Development:** Improved economic conditions in surrounding communities through enhanced industrial sustainability.
- Stakeholder Engagement:** Active stakeholder engagement fosters a culture of sustainability and environmental responsibility.

6. STAKEHOLDER ENGAGEMENT

6.1. Industry Involvement

- Consultation Processes:** Regular consultations with industry stakeholders to ensure their needs and perspectives are integrated into project planning and implementation.
- Training and Support:** Providing ongoing training and technical support to industrial facility staff.

6.2. Partnerships and Collaborations

- Government Agencies:** Collaborating with government agencies for policy support, regulatory compliance, and technical assistance.
- Non-Governmental Organizations:** Partnering with NGOs for community engagement and capacity building.
- Private Sector:** Engaging private sector partners for funding, technology transfer, and market access.

7. MONITORING, REPORTING, AND VERIFICATION

7.1. MRV Framework

- **Monitoring Protocols:** Developing standardised protocols for regularly monitoring energy consumption and GHG emissions.
- **Reporting Mechanisms:** Establishing transparent and timely reporting mechanisms to communicate project progress and results to stakeholders.

7.2. Continuous Improvement

- **Feedback Loops:** Implementing feedback loops to continuously improve project practices based on monitoring data and stakeholder inputs.
- **Adaptive Management:** Adopting an adaptive management approach to address challenges and incorporate best practices.

8. RISK MANAGEMENT

8.1. Risk Identification

- **Technical Risks:** Identifying and mitigating risks associated with implementing and operating new technologies.
- **Operational Risks:** Addressing risks related to operational disruptions and maintenance issues.

8.2. Risk Mitigation Strategies

- **Contingency Planning:** Developing contingency plans to manage identified risks effectively.
- **Stakeholder Engagement:** Strengthening stakeholder engagement to build trust and reduce operational risks.

9. FINANCIAL PLAN

9.1. Budget Allocation

- **Project Activities:** Detailed budget allocation for technology upgrades, process optimisation, training, and monitoring activities.
- **Administrative Costs:** Budget for project management, reporting, and verification processes.

9.2. Funding Sources

- **Carbon Credits:** Revenue generation through selling verified carbon credits in the carbon market.
- **Grants and Donations:** Securing grants and donations from government agencies, NGOs, and private sector partners.
- **Industrial Contributions:** Leveraging contributions from participating industrial facilities for project implementation.

10. CONCLUSION

The Industrial Emission Reduction and Energy Efficiency Enhancement project aims to significantly impact climate change mitigation by reducing GHG emissions from industrial processes. By adhering to ISO 14064-3 standards, the project ensures transparency, credibility, and effectiveness in its emission reduction efforts. The project will contribute to a sustainable and resilient industrial sector through robust stakeholder engagement, meticulous carbon accounting, and independent verification.

METHODOLOGY

METHOD USED: Coal to Graphene Conversion

PROJECT OBJECTIVE:

The primary objective of projects underpinned by the methodology is to reduce GHG emissions from industrial processes by implementing advanced technologies and energy efficiency measures. The project seeks ISO 14064-3 accreditation to ensure transparency, accuracy, and credibility in GHG accounting and verification.

PROJECT LIFESPAN:

20

DAILY GENERATION HOURS:

0.00

CAPACITY FACTOR:

50.00%

EMISSIONS INTENSITY:

2.5000

ER SOURCE:

Coal

ER IMPACT:

Removal

GLOBAL STANDARD:

CFM™

ACCREDITATION STANDARD:

ISO 14064-3

VERIFICATION CYCLE:

Monthly

PROCEDURES:

Carbon Funding Mechanism™

SITE REFERS TO:

Factory

UNIT REFERS TO:

Ton

AVOIDANCE FACTOR:

1.2500

GHG ER FACTOR CALCULATION

Factor	Math	Result
Project Lifespan	A	20
Sites: Factory	B	1
Units: Tons	C	1
Generation Hours Per Day	E	-
Hours Per Year	F = 365 * E	-
Capacity Factor	G	50%
Annual Production	H = F * G	0.50
Emissions Intensity	G	2.500
Avoidance Factor	I = H * G	1.250

REQUIREMENT OF PERMANENCE:

Introduction to Permanence: The principle of permanence in carbon markets ensures that GHG reductions or removals are not only achieved but are also maintained over a long period. This principle is crucial to avoid temporary solutions that could eventually reverse and release GHGs back into the atmosphere.

Context: A coal mine plans to convert coal into graphite, and subsequently graphene, using a process that does not emit harmful greenhouse gases. The project aims to secure carbon credits by demonstrating the permanence of its GHG reduction benefits.

Defending the Permanence of the Project:

- Stable Conversion Process:**
 - Non-Reversible Process:** The conversion of coal into graphite and graphene must be stable and irreversible, ensuring that once coal is converted, it cannot revert to its original form and release GHGs. This chemical stability is essential for permanence.
 - Long-Term Integrity of Graphene:** Graphene, once produced, is a highly stable material with a long lifespan, meaning it does not degrade quickly or easily release GHGs over time.
- Lifecycle Analysis:**
 - Full Lifecycle Impact:** A comprehensive lifecycle analysis should demonstrate that from extraction to conversion to the final use of graphene, the process remains free of harmful GHG emissions. This analysis should include consideration of all potential GHG emission points and mitigation measures.
 - Sustainable Practices:** Ensure that the entire process adheres to sustainable practices, minimizing the risk of indirect GHG emissions through associated activities.
- Regulatory and Monitoring Framework:**
 - Robust Monitoring:** Implement a stringent monitoring and reporting framework to regularly verify the ongoing GHG benefits of the project. This includes tracking the stability and usage of graphene to ensure it remains a permanent carbon sink.
 - Regulatory Compliance:** Adhere to local and international regulations governing carbon sequestration and emissions reductions, ensuring that the project's practices meet or exceed regulatory requirements for permanence.
- Risk Management and Mitigation:**
 - Risk Assessment:** Conduct a thorough risk assessment to identify and mitigate potential risks that could compromise the permanence of GHG reductions. This includes technological failures, market changes, or policy shifts.
 - Contingency Plans:** Develop and implement contingency plans to address any identified risks, ensuring that GHG reductions are safeguarded against unforeseen events.
- Long-Term Viability:**

- **Economic Viability:** Ensure the long-term economic viability of the project, as financial stability supports the ongoing operation and maintenance of the low-emission process.
- **Technological Advancement:** Commit to continuous improvement and technological innovation to maintain and enhance the GHG reduction capabilities of the process.

6. Environmental and Social Co-Benefits:

- **Co-Benefits:** Highlight additional environmental and social benefits that enhance the project's sustainability and resilience. These might include local economic development, job creation, and reduced environmental degradation from traditional coal mining practices.

Conclusion: The coal mine's project to convert coal into graphite and subsequently graphene without emitting harmful greenhouse gases can be defended under the principle of permanence by demonstrating that the GHG reductions are stable, irreversible, and maintained over the long term. Through robust monitoring, risk management, adherence to regulatory frameworks, and ensuring the long-term economic and technological viability of the project, it can be shown that the GHG benefits are not only achieved but are also permanent. This approach supports the integrity and credibility of carbon markets, ensuring that carbon credits reflect lasting climate mitigation efforts.

REQUIREMENT OF ADDITIONALITY:

Introduction to Additionality: The principle of additionality is fundamental to carbon markets. It stipulates that carbon credits should only be awarded to projects that result in GHG reductions or removals that are additional to what would have occurred in the absence of the project. This means the project must go beyond "business as usual" scenarios and contribute to real, measurable, and long-term benefits for the climate.

Context: A coal mine plans to convert coal into graphite, and subsequently graphene, using a process that does not emit harmful greenhouse gases. This project claims to be environmentally beneficial and seeks carbon credits under the principle of additionality.

Defending the Additionality of the Project:

1. Baseline Scenario Analysis:

- **Business as Usual (BAU) Scenario:** The BAU scenario would involve the continued extraction and combustion of coal, leading to significant GHG emissions.
- **Project Scenario:** The conversion of coal to graphite and graphene without emitting harmful GHGs presents a significant departure from the BAU scenario. The project must demonstrate that, in the absence of this initiative, coal would continue to be used in a manner that results in high emissions.

2. Barrier Analysis:

- **Technological Barriers:** Developing and implementing the technology to convert coal into graphene without emitting harmful gases involves significant R&D, capital investment, and technical expertise, which may not be feasible without the financial incentives provided by carbon credits.
- **Financial Barriers:** The project might require substantial upfront investment and may not be economically viable without additional revenue from carbon credits. This financial support can help bridge the gap between traditional coal mining and environmentally friendly alternatives.

3. Regulatory and Policy Context:

- **Current Regulations:** If current regulations do not mandate the conversion of coal to graphene without emissions, the project exceeds regulatory requirements, thus contributing additional benefits.
- **Policy Drivers:** If there are no existing incentives or mandates encouraging such technological shifts, the project's efforts to mitigate GHGs are indeed additional.

4. Environmental Integrity and Market Credibility:

- **Real, Measurable, and Verifiable Reductions:** The project must provide evidence that its processes result in real, quantifiable GHG reductions compared to the BAU scenario.
- **Long-term Impact:** The project should ensure that the benefits are sustainable over the long term, maintaining its low-emission status and contributing to ongoing climate mitigation.

5. Innovation and Knowledge Sharing:

- **Technological Advancement:** By pioneering a new method of coal utilization that avoids GHG emissions, the project can set a precedent for other industries and promote broader adoption of similar technologies.
- **Knowledge Dissemination:** Sharing the technological advancements and processes can encourage replication and scaling, leading to broader GHG reduction impacts beyond the initial project.

Conclusion: The coal mine's project to convert coal into graphite and subsequently graphene without emitting harmful greenhouse gases can be defended under the principle of additionality if it clearly demonstrates that the GHG reductions are beyond what would have occurred in the BAU scenario. By overcoming technological and financial barriers, adhering to higher environmental standards than current regulations require, and providing measurable and verifiable GHG reductions, the project contributes genuinely additional climate benefits. This not only supports the environmental integrity of carbon markets but also fosters innovation and broader adoption of sustainable practices in the industry.

VERIFICATION REQUIREMENTS:

ISO 14064-3 provides a framework for the verification of greenhouse gas (GHG) assertions, ensuring their accuracy, completeness, and transparency. Applying this to a coal mine converting coal into graphite and subsequently graphene without emitting harmful GHGs involves a series of steps to verify the GHG reductions claimed by the project. Here are the key verification requirements:

1. Pre-Verification Activities

- **Understanding the Project:** Obtain detailed information about the project, including its scope, processes, and intended GHG reductions.
- **Defining Verification Objectives:** Clearly define the objectives, scope, and criteria of the verification process. This includes understanding the baseline scenario and the projected GHG reductions.
- **Engagement Terms:** Establish terms of engagement between the verifier and the project proponents, detailing responsibilities, timelines, and deliverables.

2. Verification Planning

- **Verification Plan:** Develop a comprehensive verification plan outlining the methodology, activities, timelines, and resources needed to perform the verification.
- **Materiality Assessment:** Determine the materiality threshold, which identifies the significance of discrepancies or errors in the GHG assertion that would affect its reliability.

3. Data Collection and Review

- **Data Sources and Collection:** Identify and review all relevant data sources, including project documents, emissions records, process descriptions, and monitoring reports.

- **Data Integrity:** Ensure the accuracy, completeness, and consistency of the data collected, verifying the reliability of the data sources.

4. Verification Process

- **Site Visits and Inspections:** Conduct site visits to observe operations, verify the physical implementation of the project, and ensure that the processes align with documented practices.
- **Interviews and Discussions:** Interview key personnel to gain insights into operational practices, data management, and GHG monitoring systems.
- **Sampling and Testing:** Perform sampling and testing of emissions data, if applicable, to verify the accuracy and reliability of the reported GHG reductions.

5. Assessment of GHG Assertions

- **Baseline Scenario Validation:** Validate the baseline scenario against which the GHG reductions are measured, ensuring it accurately represents the "business as usual" scenario without the project.
- **Quantification Methods:** Assess the methodologies used for quantifying GHG reductions, ensuring they align with recognized standards and best practices.
- **Emission Factors and Calculations:** Verify the emission factors, assumptions, and calculations used in the GHG assertion, ensuring they are scientifically sound and correctly applied.

6. Risk and Uncertainty Analysis

- **Risk Assessment:** Evaluate potential risks that could affect the accuracy and reliability of the GHG assertion, such as data gaps, measurement uncertainties, or operational inconsistencies.
- **Uncertainty Analysis:** Assess the uncertainty associated with the GHG calculations and measurements, ensuring it is within acceptable limits and appropriately documented.

7. Reporting and Documentation

- **Verification Report:** Prepare a detailed verification report documenting the verification process, findings, and conclusions. The report should include:
 - A summary of the verification activities performed.
 - The methodology and criteria used for verification.
 - The materiality threshold and any material discrepancies found.
 - An assessment of the accuracy, completeness, and reliability of the GHG assertion
- **Verification Statement:** Provide a verification statement that includes an opinion on the validity and reliability of the GHG assertion. This statement should indicate whether the GHG reductions are credible, transparent, and in accordance with the defined criteria and standards.

8. Continual Improvement and Feedback

- **Feedback Loop:** Provide feedback to the project proponents on areas for improvement in their GHG monitoring, reporting, and reduction practices.
- **Follow-Up Actions:** Recommend any necessary corrective actions or improvements based on the findings of the verification process.

Application to the Coal Mine Graphene Project

1. Understanding the Project:

- **Project Description:** The project involves converting coal into graphite and graphene without emitting harmful GHGs. Understanding the detailed process, including the technology used, the inputs and outputs, and the emissions control measures, is crucial.

2. Defining Verification Objectives:

- **Verification Objectives:** The main objective is to verify that the project achieves GHG reductions beyond the baseline scenario (traditional coal use) and that these reductions are real, measurable, and permanent.

3. Verification Planning:

- **Developing the Plan:** Outline the steps to verify the entire process from coal extraction to graphene production, ensuring no harmful GHG emissions occur at any stage.

4. Data Collection and Review:

- **Data Review:** Collect and review emissions data, process flow diagrams, and monitoring reports to ensure they accurately reflect the project's operations and GHG emissions.

5. Verification Process:

- **Site Visits:** Inspect the facilities to observe the conversion process, verify the implementation of emission control measures, and confirm the absence of harmful GHG emissions.
- **Interviews:** Conduct interviews with engineers, technicians, and management to understand operational practices and data management.

6. Assessment of GHG Assertions:

- **Baseline Validation:** Ensure that the baseline scenario (coal combustion) is accurately defined and that the project scenario (graphene production) represents a genuine improvement.
- **Quantification Methods:** Verify that the methods used to quantify GHG reductions are appropriate and scientifically sound.

7. Risk and Uncertainty Analysis:

- **Risk Evaluation:** Identify and assess risks related to data accuracy, measurement uncertainties, and operational inconsistencies that could impact the GHG assertions.
- **Uncertainty Analysis:** Ensure that any uncertainties in the data or calculations are documented and within acceptable limits.

8. Reporting and Documentation:

- **Verification Report:** Prepare a comprehensive report that details the verification process, findings, and conclusions. This report should clearly state whether the GHG reductions are credible and meet ISO 14064-3 requirements.
- **Verification Statement:** Provide a formal statement confirming the validity of the GHG assertion, highlighting the permanence and reliability of the reductions.

By adhering to the ISO 14064-3 verification requirements, the project can ensure that its GHG reductions are credible, measurable, and permanent, thus supporting its claims for carbon credits and contributing to global climate mitigation efforts.

SUPPORTING RESEARCH REFERENCE(S)

Title	Publisher	Year	File
Coal Mine Methane Country Profiles Chapter 31	Global Methane Initiative	June 2015	

CARBON FUNDING MECHANISMSM OUTCOMES

PROJECT ADVANCE:	\$20,000,000
REVENUE SHARE:	\$1,358,080,000
SDG ALLOCATION:	\$3,445,200,000

VALIDATION AUDIT

ISO Auditor	Audit Date	Audit Findings	Certificate
No data			

VERIFICATION AUDITS

ISO Auditor	Carbon Credits	Audit Findings	Certificate
No data			