



*Confidential  
and Proprietary*

# Introduction



June, 2024





## Company - Overview

- Overview
- Team
- Commodities
- Supply Chain
- Risk Management
- Project Pipeline

- The Commodities Mining Exchange (CMX™), our Proprietary Platform provides a unique Trade Finance Hub for Investors, Mining Companies, Energy Providers, Manufacturers and Technology alike, with Significant Arbitrage Opportunities and Solutions for both Short-Term and Long-Term Off-Take Agreements.
- SEC is a Physical Commodities Trading & Mining company. We trade and supply Indonesian Thermal Coal, Colombian Thermal and Metallurgical Coal. Additionally, Venezuelan Thermal Coal, Petroleum Coke, Iron Ore, Crude Oil, and Fuel Oil are available only if OFAC Licenses are available to its global consumers.
- SEC has strict corporate governance and a disciplined approach to our due diligence process regarding any projects we undertake.
- Our team of industry veterans and professionals brings with them over 200 years of combined experience in the international commodities, shipping and logistics businesses.
- Our goal is to become a leading provider of mining and petroleum-based products to global end-users. We look forward to professionally supporting and servicing our valued clients and partners.





## Supply Chain Hub

# A Physical Commodities Trading and Investing Ecosystem



Mining Companies



Investors



Energy Industry

Trade Finance Opportunities

# CMX

The Commodities Mining Exchange (CMX™) via our Proprietary Platform, identifies specific lucrative Physical Commodities Transactions available for funding, with the ability to share in part of the Arbitrage Spread, when Buying and Re-Selling the Cargos. For the first time, Investors and Shareholders alike participate in the business that "Makes the World Go Round".

Royalty Agreements



Streaming Agreements



Trading Physical Commodities



Trade Arbitrage





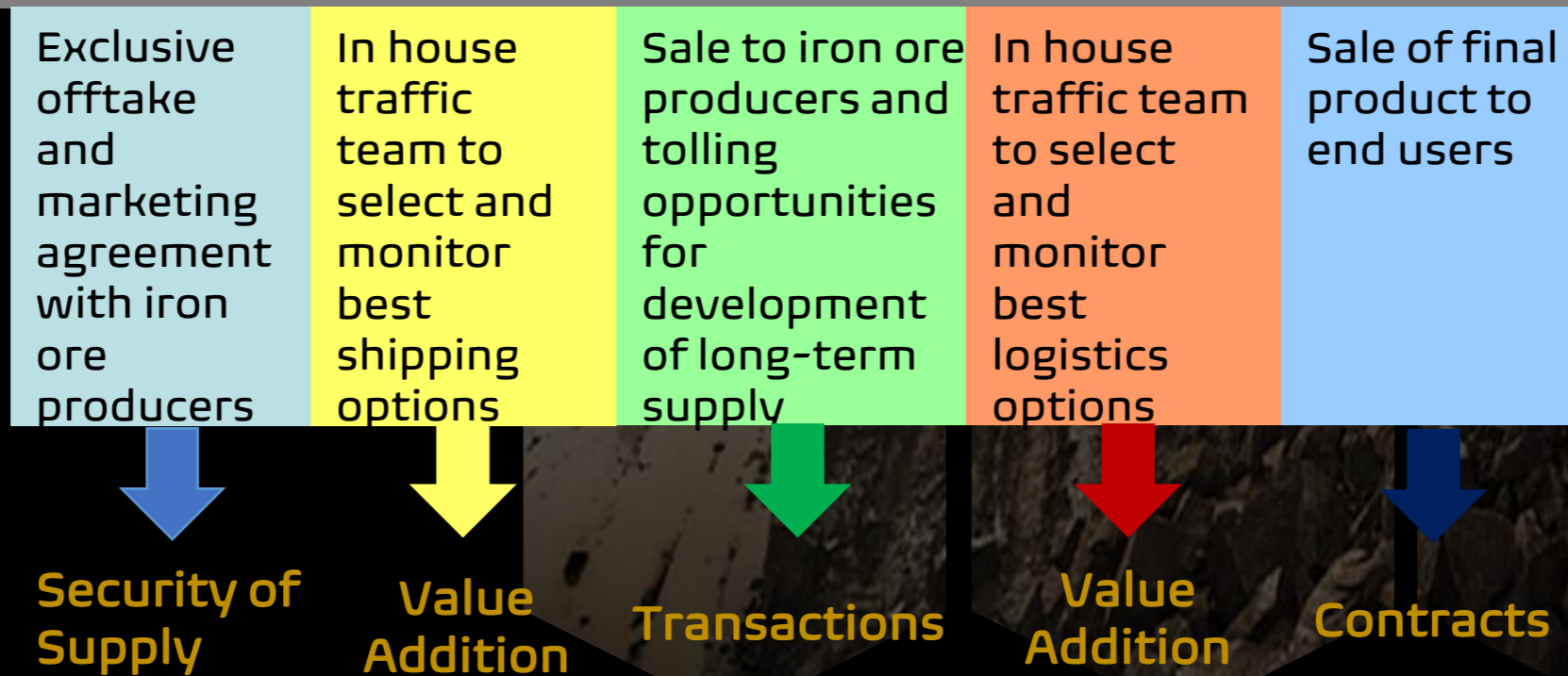


# Global Supply Chain Management

- Overview
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## Contracts incurred through the entire Supply Chain





## Management Team



CEO/Chairman  
**DAVID MACIAS**

- A 23-year Veteran in the Physical Trade & Sourcing at Sunshine Energy and Commodities, participating in Physical Bulk Cargos of Commodities like Crude Oil, Coal, Iron Ore, and others. Mr. Macias' negotiations capabilities, combined with knowledge of Shipping and Logistics of these Raw Materials in Institutional size, give access to the Supply Chain end-user participants in various Refineries, Steel Mills, and Power Plants Globally.
- Previously served as Chairman and CEO of Upower, Inc., where he developed and funded with The World Bank, Latin America's largest photovoltaic solar power plant in Honduras for \$232mm in 2015, eventually was sold to FinnFund (The sovereign wealth fund of Finland).
- Brings 37+ years of Wall Street financial experience, serving as a Senior Vice President of several different FINRA broker-dealer firms where he managed \$400,000,000+ in assets for over 3,500 Clients. Instrumental in the initial launch in underwriting SPAC's as financial instruments in 1992.
- David has raised \$50 million dollars in private capital raises, and participated in over 154 publicly traded companies since 1987.



PRESIDENT  
**JORGE AIZCORBE**

- Mr. Aizcorbe, is a proven leader with 30 years as a Pioneer in the Solar Energy industry. Having worked as a Strategic Consultant, Investment Banker, and Investor, his divested set of experiences have provided the ability to fuse operational strategy and corporate finance to maximize value creation .
- Managing Director at RedRock Energy Ventures, Inc..
- Jorge has deployed several hundred Megawatts of successful utility scale projects to date, in addition to being Founder of Principal Solar, Inc.. Mr. Aizcorbe was former President of Upower, a renewable energy developer of Solar Projects Internationally focused on Utility-Scale Solar Plants.
- Recently raised capital for the largest lithium brine project in the USA.
- Mr. Aizcorbe is an Investment Banker for over 30 years. Worked at W.R. Grace & Co., one of the first true conglomerate corporations in the USA in Corporate Development and Merger & Acquisitions. Mr. Aizcorbe has structured numerous successful transactions for clients such as Madison Dearborn Partners, Bechtel Corporation, Chase Capital Partners, Scott's Miracle Grow, Hunt Corporation.
- Assisted family in the Real Estate development of communities, including Wellington (WPB) and Palm Beach Point.



## Company- Team

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### **RABBI LEVY ABDURAKHMANOV – VP of Corporate Finance & Trade Finance**

Rabbi Levy currently serves as Chief Financier of Sunshine Energy & Commodities, specializing in all aspects of Corporate Finance and Trade Finance. Tasks include capital investing, financing, and liquidity management. Rabbi Levy obtains financing to facilitate business and extension of credit in many cases. Rabbi Levy's credentials leverage an ability to facilitate international trade and commerce for the firm, since 2020. Rabbi Levy also is an Ambassador for The Foundation for a Drug-Free World, a Non-Profit Organization empowering both Youth and Adults alike to live Drug-Free Worldwide. See below links:



<https://youtu.be/QTvJvjJvB24>

<https://www.drugfreeworldamericas.org/about-us>

<https://www.foundationforadrugfreeworldnewyorkchapter.org/about-us--contact-information.html>

### **GEOFF BRIGHT – VP OF PLANNING & BUSINESS DEVELOPMENT**

Geoff has been actively involved in the shipping & trading sectors for more than 30 years. In 1981 he joined The John Bull Group of Companies and became Managing Director of the newly formed Britannia Liner Services which he built from scratch and under his leadership quickly became a mainstream player in the UK liner agency & forwarding industry culminating in key appointments with several major shipping lines which remain with the management to this day. Geoff has worked for a number of trading entities and managed their operations including, steel trading, steel scrap, coal trading, non-ferrous metals coal processing and terminal operations which were all linked to a wide range of trade on the global markets. Geoff has extensive experience in setting up, building, formulating corporate strategy and direction for global trade and consequently has the ability to be a key player in any such organization.

### **ROBERT J. DILLON – VP OF SHIPPING & LOGISTICS**

Robert John Dillon is the President of John F. Dillon & Co., LLC ([www.JFD.com](http://www.JFD.com)) in Norwalk, CT. Robert joined JFD in the spring of 1982 and spent time in the Tokyo freight markets during his formative years (1983-1986). He has served as the President of JFD since January 1st of 2000. He has also been a board member of the Association of Shipbrokers & Agents of North America since 1996. JFD was founded in 1965 as the leading dry cargo brokerage firm in the North American freight market. JFD ships dry cargo commodities globally including iron ore, coal, grains, steel, petroleum coke, sugar, salt, and fertilizers. Its team of highly professional and experienced freight advisors and brokers have extensive experience in the logistics of moving dry cargo from the point of origin to the point of destination, including but not limited to the contractual terms and nuances surrounding each different trade. The company maintains two offices in Norwalk, CT USA and Shanghai, China.

### **WILLIAM RODRIGUEZ – VP OF COLOMBIAN & LATIN AMERICAN OPERATIONS**

Mr. Rodríguez has a specialization in Marketing and Customer Service Management earned at the Universidad San Martín de Colombia. With more than 10 years of experience in the commodities sector, Mr. Rodríguez serves customers and suppliers throughout the Latin American region. Rodríguez also has a specialization in Logistics, Transportation, and Customs & Cargo Security of raw materials, including Coal, Iron Ore, Petcoke and Crude Oil.

### **FELIPE SAAVEDRA – VP OF MARKETING & SALES**

Mr. Saavedra has been a Trade Executive for SEC since 2021 and VP of Investments for Li3 Group. Started off as intern at SEC and Upower Group.





## Strategy- Risk Management

### Risk Types and Mitigation

#### Market Risk

- All trades have security of underlying physical commodity
- Trading software with mark to market capability and monitoring of cargo movement

#### Counterparty and Credit Risk

- Use of irrevocable LCs, counterparty screening, diversity of customer base

#### Operational Risk

- In-house experienced logistics personnel and network of proven service providers
- Cargo insurance for loss, damage and theft
- Procedures for trade execution and LC opening; multiple layers of approval

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## Company- Commodities

- Indonesian Thermal Coal
- Colombian Thermal Coal
- Colombian Metallurgical Coal
- Venezuelan Thermal Coal\*
- Venezuelan Iron Ore\*
- Venezuelan Crude Oil\*
- Venezuelan Fuel Oil\*
- Venezuelan Petcoke\*

\* Venezuelan Thermal Coal, Petroleum Coke, Iron Ore, Crude Oil, and Fuel Oil are available only if OFAC Licenses are available to its global consumers.

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## Project Pipeline

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### Mining & Petroleum-based

- Thermal Coal mining in Indonesia, Colombia, and Venezuela\*
- Metallurgical Coal mining in Colombia
- Iron Ore mining in Venezuela\*
- Petroleum (Crude Oil, Fuel Oil, and Petcoke) mining in Venezuela\*

\* Only with a OFAC License



## Indonesian Thermal Coal Mine - Overview

Name		Pt.Saijaan Prima Coal
Location		Kabupaten Kota Baru,South Kalimantan
Concession Number		T.182.RKAB/MB.05/DJB.B.2024
Mining Method		Open Pit
Preparation System		American Society For Testing And Materials (ASTM)
Quality Control System		Any Reputable Surveyor Available In Indonesia
START Production		April-10
Transportation	Mine To Jetty	Truck
	Jetty To Vessel	Conveyor Belt
Distance From Mine		27 Km
Stocking Capacity		700 MT/ Hour (conveyor loading )+ Manual Loading
Port Name		South East Kalimantan Port
Equipment	Type	Crusher (Exca Crusher)
	Capacity	300-500 MT/ Hour
Loading Capacity		500-700 MT/ Hour





# Specifications

## Indonesian Thermal Coal Mine

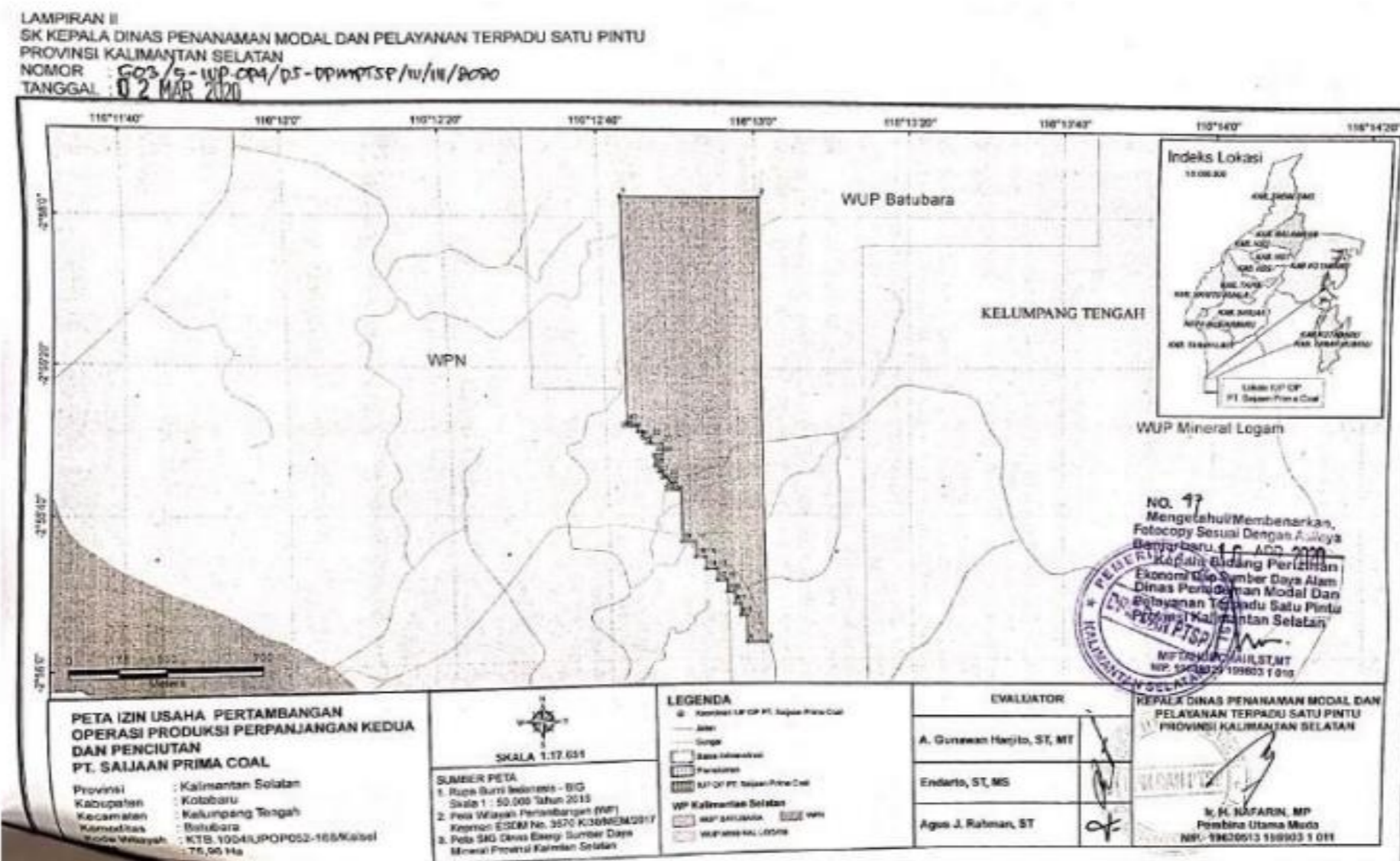
S.NO	Parameter	Basis	Unit	Typical
1	Gross Calorific Value	ADB	Kcal/kg	5800 6000
2	Total Moisture	ARB	%	9.0
3	Inherent Moisture	ADB	%	4.0-5.0
4	Ash Content	ADB	%	16.0-20.0
5	Volatile Matter	ADB	%	42.0 (Approx.)
6	Fixed Carbon	ADB	%	By Difference
7	Total Sulphur	ADB	%	0.8-1.5
9	Hard Grove Index (HGI)	Index		46.0-50.0 (Approx.)



# Indonesian Thermal Coal Mine - Map



**PT. SAIJAAN PRIMA COAL**  
 GENERAL CONTRACTOR - MINING - JETTY







## Colombian Thermal Coal Mine - Overview

Name		C.I. Carbones Del Porvenir Sas
Location		Norte De Santander
Mining Method		Open Pit / Underground Mining
Preparation System		American Society For Testing And Materials (ASTM)
Quality Control System		Any Reputable Surveyor Available In Colombia
Area's Width	Total Concession Area	860 Hectares
	Active Area	400 Hectares
Coal Reserve	Mineable	20,000,000 Metric Tons
START Production		June-3
Production Volume	Daily	6,000 Metric Tons
	Monthly	180,000 Mt
	Yearly	2,160,000 Metric Tons
Transportation	Mine To Jetty	Truck
	Jetty To Vessel	Conveyor Belt
Distance From Mine		576 Km
Stocking Capacity		300,000 Metric Tons
Port Name		Puerto Brisa, Dibulla, Guajira, Colombia
Equipment	Type	Conveyor
	Capacity	5,000 MT/Hr
Loading Capacity		40,000 MT/Day
Stocking Capacity/Width		200,000 MT (Or More)
Barge Size		
Distance From Port To Point Off Shore Trans		Up To 70 Feet 3 Hours.



# Specifications

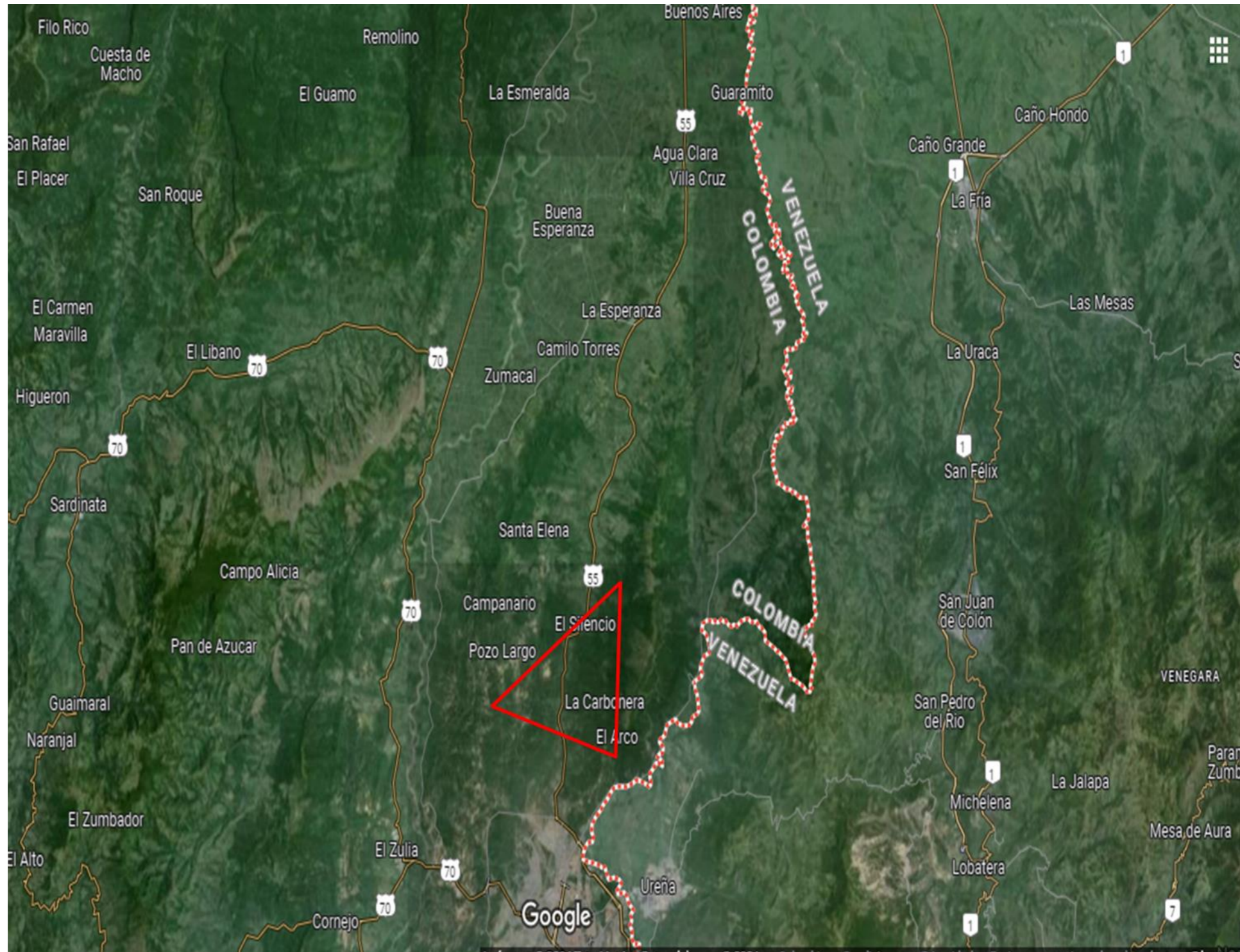
## Colombian Thermal Coal Mine

S.NO	Parameter	Basis	Unit	Typical
1	Gross Calorific Value	ADB	Kcal/kg	6947
2	Total Moisture	ARB	%	-10.0
3	Inherent Moisture	ADB	%	
4	Ash Content	ADB	%	10.0 -12.0
5	Volatile Matter	ADB	%	38.0 – 44.0
6	Fixed Carbon	ADB	%	By Difference
7	Total Sulphur	ADB	%	0.9
8	Size	0 -50mm	%	Size Distribution for Discussion
9	Hard Grove Index (HGI)	Index		45-50





# Colombian Thermal Coal Mine - Map





## Technical Specifications of the Loading Port

Basic Information	Name	Puerto Brisa
	Location	Dibulla, Colombia
	Port Code	CORCH
	Port Type	Bulk
	Latitude	11° 15' 37,96" N
	Longitude	73° 22' 56,11"W
Port Access	Length	2,000 meters
	Ancho de solera	220 meters
	Depth	17.5 meters
	Buque de diseño	180,000
Dock Information	# of Docks	1
	Docking Positions	2
	Area of Dock	380 x 22 m <sup>2</sup>
	Length of Dock	380
	Viaducto	1,180





## Colombian Metallurgical Coal Mine (Low Volatility) -1 Overview

Name		Mina La Aurora
Location		Zulia – Colombia
Mining Method		Underground Mining
Preparation System		ASTM
Quality Control System		SGS Internacional Laboratory
Area's Width	Total Concession Area	898 Hecatares
	Active Area	898 Hectatares
Coal Reserve	Mineable	15,571,000 Metric Tons
START Production		Is In Production
Production Volume	Daily	1000 Metric Tons
	Monthly	30,000 Metric Tons
	Yearly	360,000 Metric Tons
Transportation	Mine To Jetty	Truck
	Jetty To Vessel	Conveyor Belt
Distance From Mine		576 Km
Stocking Capacity		30,000 MT (Or More)
Port Name		Puerto Brisa
Equipment	Type	Conveyor
	Capacity	5000 MT / Hr
Loading Capacity		150,000 Metric Tons
Stocking Capacity/Width		3,000,000 Metric Tons



# Specifications

## Colombian Metallurgical Coal Mine (Low Volatility) -1

S.NO	Parameter	Basis	Unit	Typical
1	Gross Calorific Value	ADB	BTU	12,300
2	Gross Calorific Value	ADB	Kcal/kg	6833
3	Humidity	ARB	%	10.0
4	Ash Content	ADB	%	≤ 11.0
5	Volatile Matter	ADB	%	≤ 23.0
6	Fixed Carbon	ADB	%	≥ 73.0
7	Sulfur Content	ADB	%	≤ 1.1
8	Size	0-50mm	mm	
9	FSI			≥ 5





# Colombian Metallurgical Coal Mine (Low Volatility) - 1 Map







## Technical Specifications of the Loading Port

Basic Information	Name	Puerto Brisa
	Location	Dibulla, Colombia
	Port Code	CORCH
	Port Type	Bulk
	Latitude	11° 15' 37,96" N
	Longitude	73° 22' 56,11"W
Port Access	Length	2,000 meters
	Ancho de solera	220 meters
	Depth	17.5 meters
	Buque de diseño	180,000
Dock Information	# of Docks	1
	Docking Positions	2
	Area of Dock	380 x 22 m <sup>2</sup>
	Length of Dock	380
	Viaducto	1,180





## Colombian Metallurgical Coal Mine (Medium Volatility)-2 Overview

Name		Mina San Mateo
Location		Boyacá – Colombia
Mining Method		Underground Mining
Preparation System		ASTM
Quality Control System		SGS Internacional Laboratory
Area's Width	Total Concession Area	758 Hectares
	Active Area	520 Hectares
Coal Reserve	Mineable	14,800,000 Metric Tons
START Production		Is In Production
Production Volume	Daily	1000 Metric Tons
	Monthly	30,000 Metric Tons
	Yearly	360,000 Metric Tons
Transportation	Mine To Jetty	Truck
	Jetty To Vessel	Conveyor Belt
Distance From Mine		927,5 Km
Stocking Capacity		30,000 MT (Or More)
Port Name		Puerto Brisa
Equipment	Type	Conveyor
	Capacity	5000 MT / Hr
Loading Capacity		150,000 Metric Tons
Stocking Capacity/Width		3,000,000 Metric Tons



# Specifications

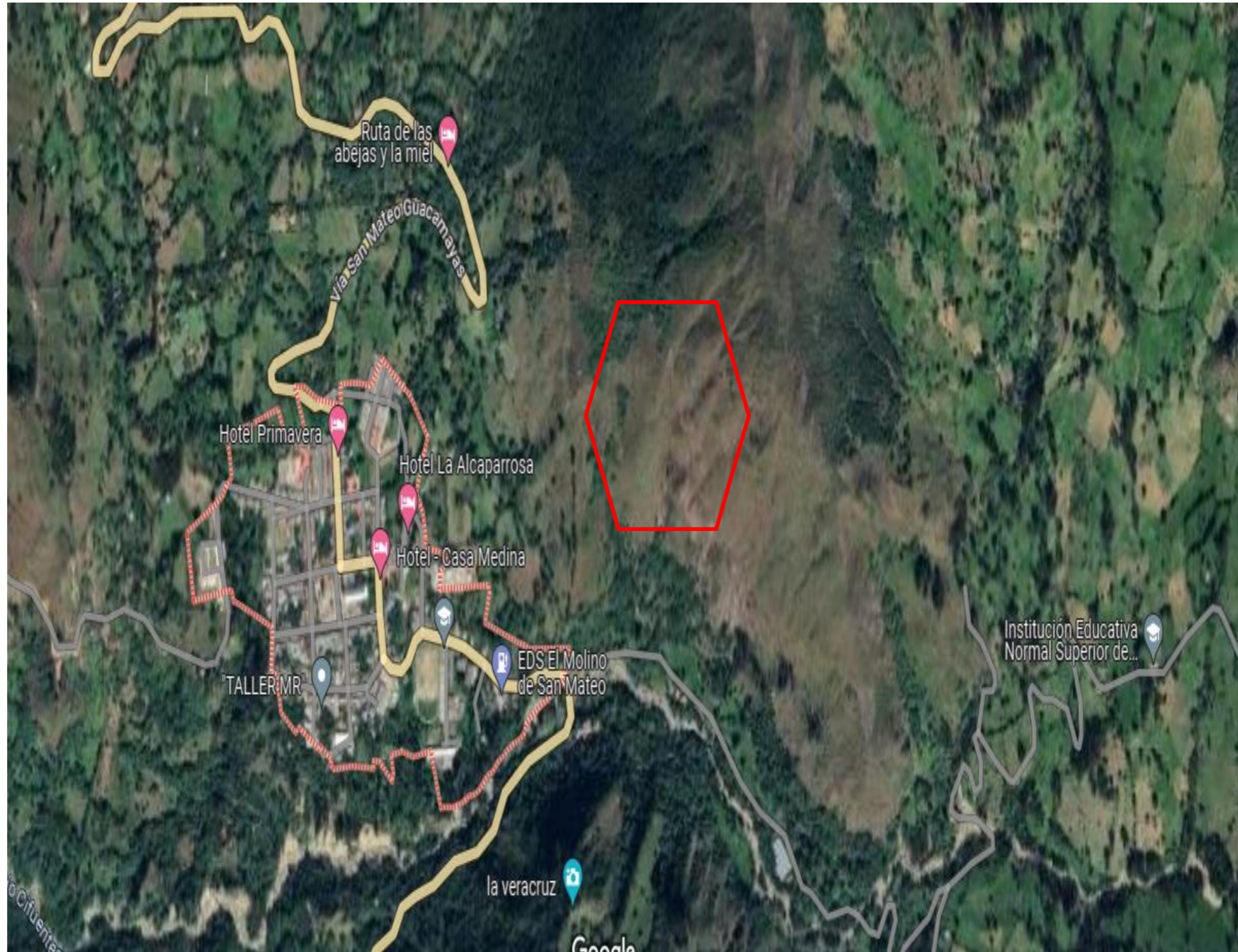
## Colombian Metallurgical Coal Mine (Medium Volatility) -2

S.NO	Parameter	Basis	Unit	Typical
1	Gross Calorific Value	ADB	BTU	12,300
2	Gross Calorific Value	ADB	Kcal/kg	6833
3	Humidity	ARB	%	≤ 10.0
4	Ash Content	ADB	%	≤ 11.0
5	Volatile Matter	ADB	%	≤ 29.0
6	Fixed Carbon	ADB	%	≥ 73.0
7	Sulfur Content	ADB	%	≤ 1.1
8	Size	0-50mm	mm	
9	FSI			≥ 5





# Colombian Metallurgical Coal Mine (Medium Volatility) - 2 Map





## Technical Specifications of the Loading Port

Basic Information	Name	Puerto Brisa
	Location	Dibulla, Colombia
	Port Code	CORCH
	Port Type	Bulk
	Latitude	11° 15' 37,96" N
	Longitude	73° 22' 56,11"W
Port Access	Length	2,000 meters
	Ancho de solera	220 meters
	Depth	17.5 meters
	Buque de diseño	180,000
Dock Information	# of Docks	1
	Docking Positions	2
	Area of Dock	380 x 22 m <sup>2</sup>
	Length of Dock	380
	Viaducto	1,180





## Colombian Metallurgical Coal Mine (High Volatility) -3 Overview

Name		Mina Sucre
Location		Santander – Colombia
Mining Method		Underground Mining
Preparation System		ASTM
Quality Control System		SGS Internacional Laboratory
Area's Width	Total Concession Area	1700 Hectares
	Active Area	640 Hectares
Coal Reserve	Mineable	12,360,000 Metric Tons
START Production		Is In Production
Production Volume	Daily	1000 Metric Tons
	Monthly	30,000 Metric Tons
	Yearly	360,000 Metric Tons
Transportation	Mine To Jetty	Truck
	Jetty To Vessel	Conveyor Belt
Distance From Mine		927,5 Km
Stocking Capacity		30,000 MT (Or More)
Port Name		Puerto Brisa
Equipment	Type	Conveyor
	Capacity	5000 MT / Hr
Loading Capacity		150,000 Metric Tons
Stocking Capacity/Width		3,000,000 Metric Tons



# Specifications

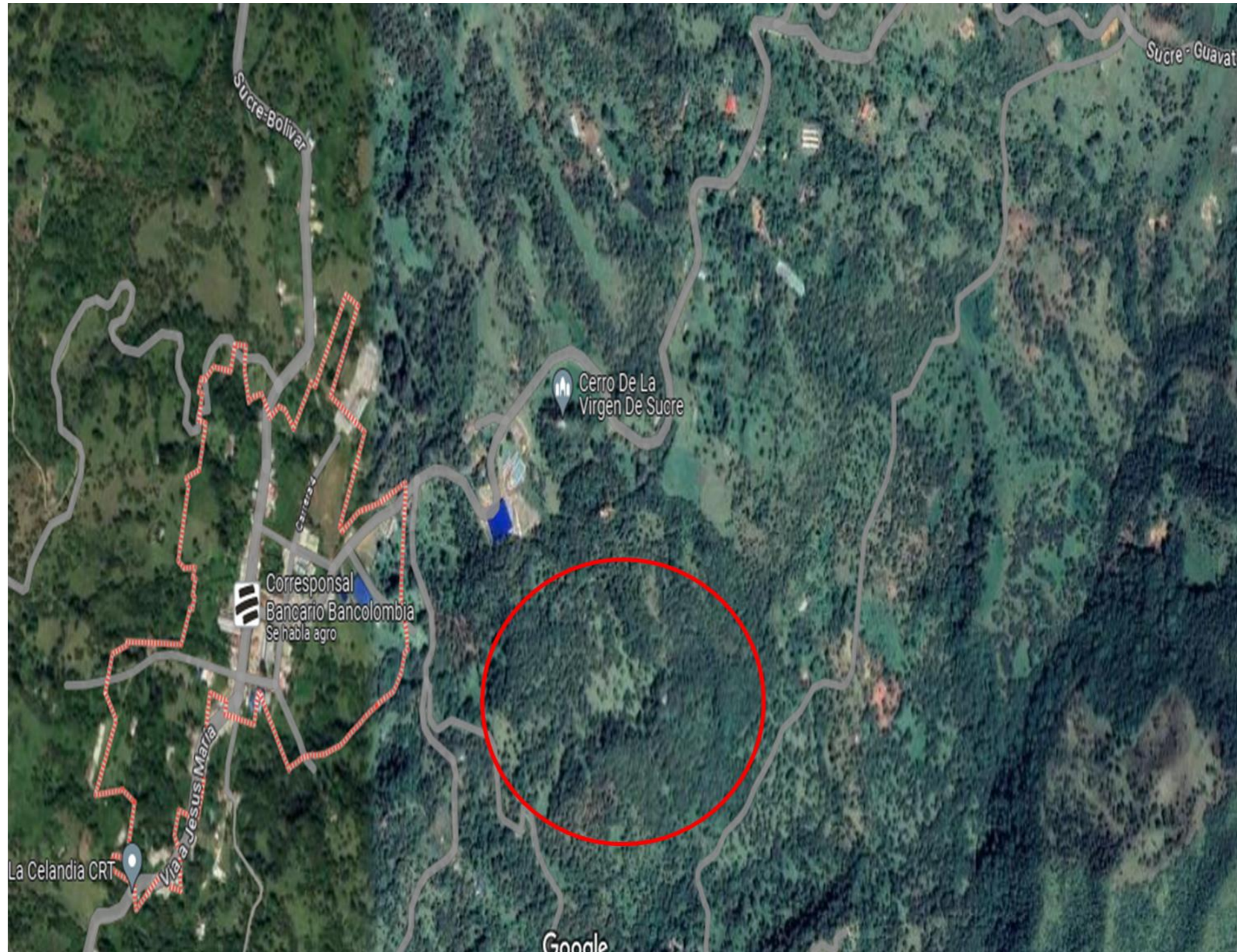
## Colombian Metallurgical Coal Mine (High Volatility) -3

S.NO	Parameter	Basis	Unit	Typical
1	Gross Calorific Value	ADB	BTU	12,300
2	Gross Calorific Value	ADB	Kcal/kg	6833
3	Humidity	ARB	%	≤ 10.0
4	Ash Content	ADB	%	≤ 12.0
5	Volatile Matter	ADB	%	≤ 35.0
6	Fixed Carbon	ADB	%	≥ 73.0
7	Sulfur Content	ADB	%	≤ 1.1
8	Size	0-50mm	mm	
9	FSI			≥ 5





## Colombian Metallurgical Coal Mine (High Volatility) - 3 Map





## Technical Specifications of the Loading Port

Basic Information	Name	Puerto Brisa
	Location	Dibulla, Colombia
	Port Code	CORCH
	Port Type	Bulk
	Latitude	11° 15' 37,96" N
	Longitude	73° 22' 56,11"W
Port Access	Length	2,000 meters
	Ancho de solera	220 meters
	Depth	17.5 meters
	Buque de diseño	180,000
Dock Information	# of Docks	1
	Docking Positions	2
	Area of Dock	380 x 22 m <sup>2</sup>
	Length of Dock	380
	Viaducto	1,180





## Venezuelan\* Thermal Coal Mine - Overview

Name		Paso De Diablo
Location		Estado Zulia
Mining Method		Open Pit
Preparation System		Astm D 5192-99
Quality Control System		Incolab International Laboratory
Area's Width	Total Concession Area	24,192 Hectares
	Active Area	12,000 Hectares Aprox.
Coal Reserve	Mineable	150 Million Metric Tons
START Production		Is In Production
Production Volume	Daily	1,400 Metric Tons
	Monthly	36,400 Metric Tons
	Yearly	840,000 Metric Tons
Transportation	Mine To Jetty	Truck
	Jetty To Vessel	Barges
Distance From Mine		83 Km
Stocking Capacity		70,000 Metric Tons
Port Name		Santa Cruz ( Load in Gabarras)
Equipment	Type	Barges
	Capacity	11,000 Metric Tons
Loading Capacity		9,000 MT / Day
Stocking Capacity/Width		100,000 MT (Or More)





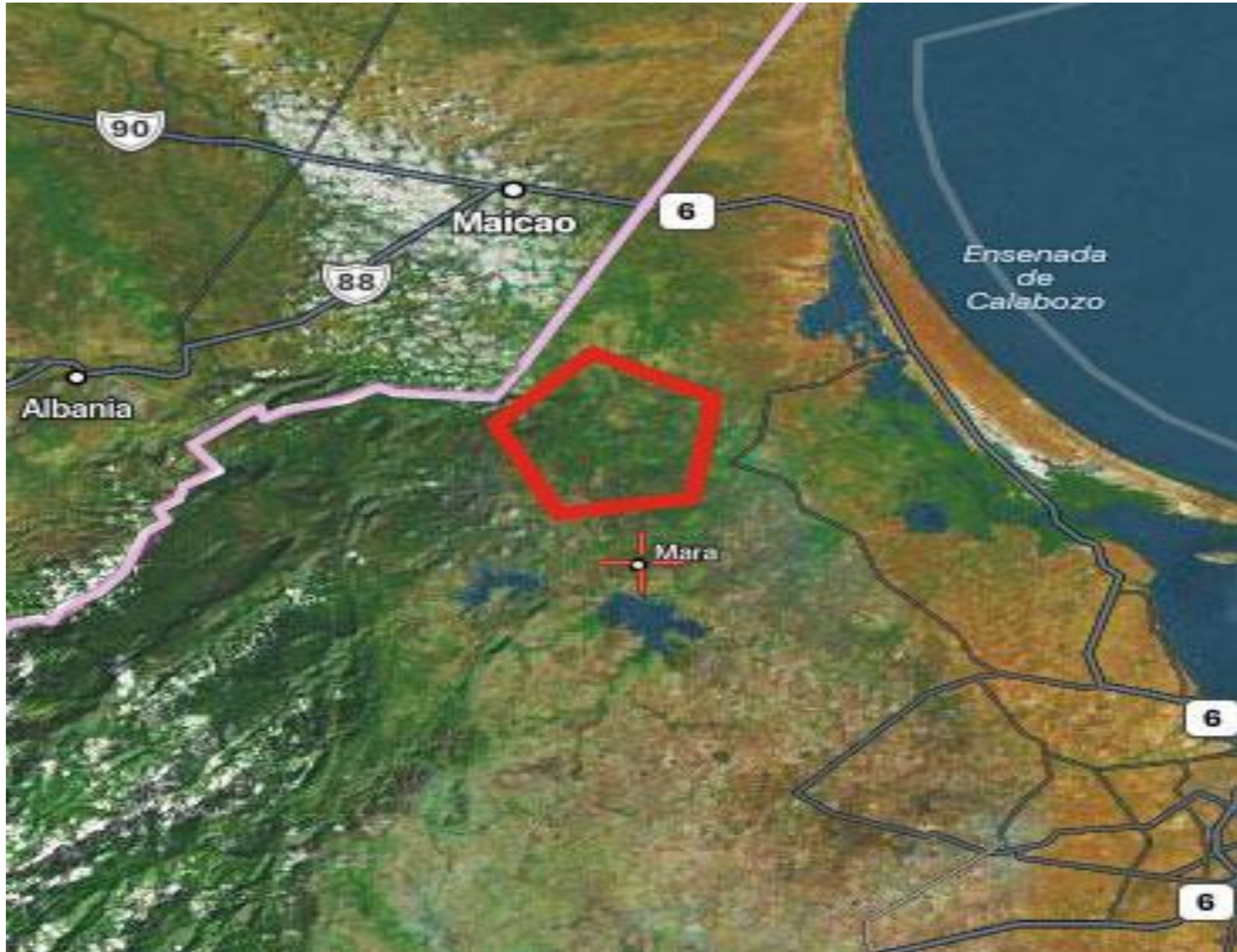
# Specifications

## Venezuelan\* Thermal Coal Mine

S.NO	Parameter	Basis	Unit	Typical
1	Gross Calorific Value	ADB	Kcal/kg	6,900
2	Total Moisture	ADB	%	7.50
3	Inherent Moisture	ADB	%	
4	Ash Content	ADB	%	9.0
5	Volatile Matter	ADB	%	34.00
6	Fixed Carbon	ADB	%	49.5
7	Total Sulphur	ADB	%	1
8	Size	0-50mm	mm	
9	Hard Grove Index (HGI)	Index		45-50



# Venezuelan\* Thermal Coal Mine - Map





## Technical Specifications of the Loading Port

Basic Information	Name	Guanta Cruz Port
	Port Authority	Ferrominera Orinoco CA
	Port Code	VEGUA
	Location	Guanta Port, Edo Anzoategui, Venezuela
	Latitude	10° 14' 42" N
	Longitude	64° 35' 30" O
	Port Type	Sea
Water Depth	Channel	66 to 75 feet, 20.1 to 21.3 meters
	Loading Dock	21 to 25 feet, 6.4 to 7.6 meters
	Mid Tide	1 foot
	Anchorage	46 to 50 feet, 14 to 15.2 meters
	Oil Terminal	Small
Other Services	Boat Repairs	For emergencies only





## Venezuelan\* Iron Ore Mine - Overview

NAME		Ferrominera del Orinoco
Location		Estado de Bolivar Venezuela
Mining Method		Open Pit
Preparation System		ATSM
Quality Control System		Incolab International Laboratory
Area's Width	Total Concession Area	94,000 Km2
	Active Area	55,000 Km2
Ore Reserve	Mineable	460 Million MT ( Proved Reserves)
START Production		Is in Production
Production Volume	Daily	1,900 Metric Tons
	Monthly	55,000 Metric Tons
	Yearly	669,000 Metric Tons
Transportation	Mine to Jetty	Truck
	Jetty to Vessel	Barges
Distance from Mine		231 km
Stocking Capacity		70,000 Metric Tons
Port Name		Ordaz Port
Equipment	Type	Barges
	Capacity	11,000 Metric Tons
Loading Capacity		9,000 MT / day
Stocking Capacity/Width		100,000 Metric Tons



# Specifications

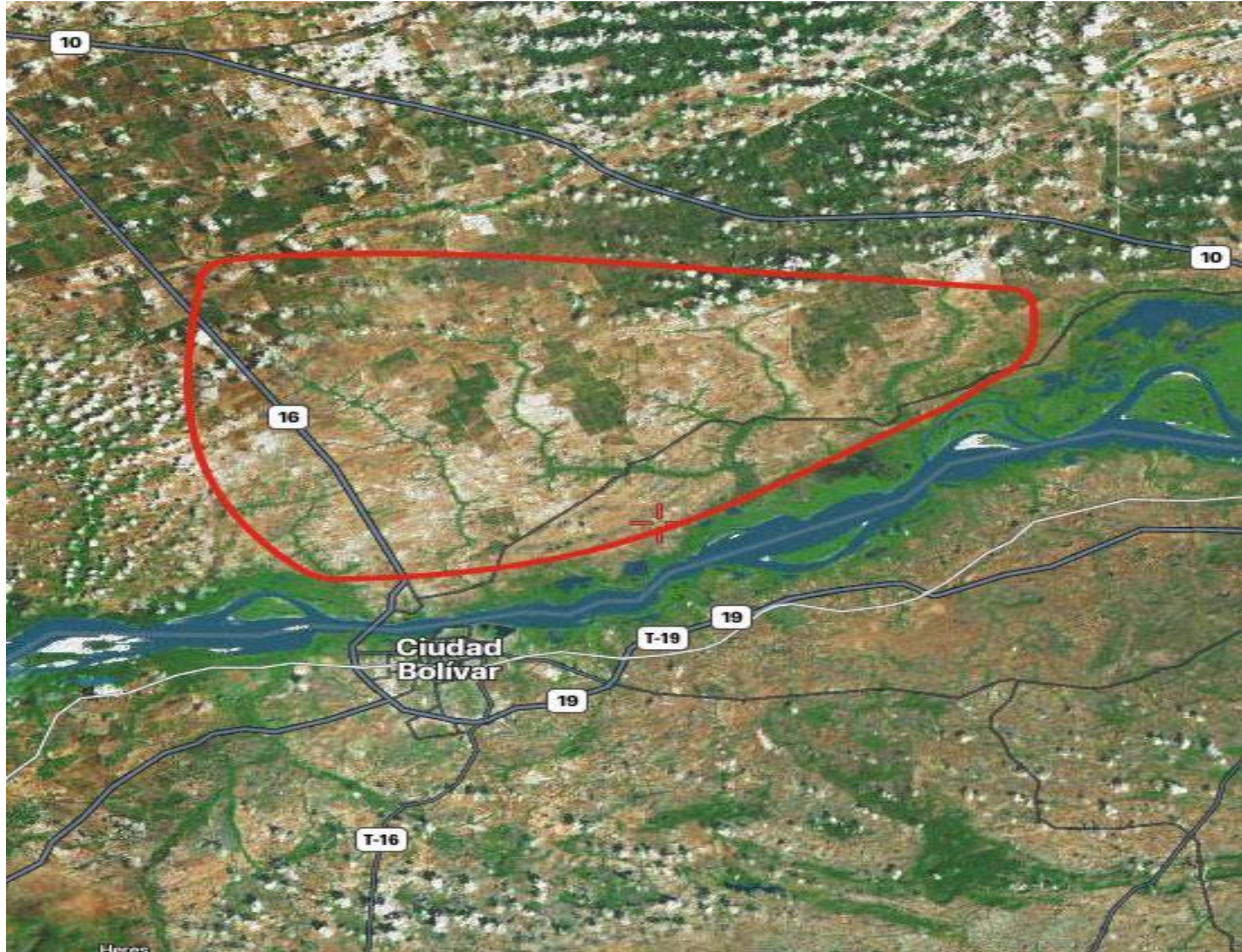
## Venezuelan\* Iron Ore Mine

S.NO	Parameter	Unit	Typical
1	Fe	%	62
2	FeO	%	10.80
3	S	%	0.046
4	Sb	%	<0.01
5	Na <sub>2</sub> O	%	0.036
6	K <sub>2</sub> O	%	0.025
7	Cu	%	0.056
8	As	%	<0.02
9	Pb	%	0.006
10	SiO <sub>2</sub>	%	3.64
11	Al <sub>2</sub> O <sub>3</sub>	%	1.70
12	CaO	%	0.23
13	MgO	%	0.42
14	MnO	%	0.042
15	P	%	0.033
16	TiO <sub>2</sub>	%	0.11
17	Mg	%	0.25





## Venezuelan\* Iron Ore Mine - Map







## Technical Specifications of the Loading Port

Basic Information	Name	Ordaz Port
	Port Authority	Ferrominera Orinoco CA
	Port Code	VEPZO
	Location	Ordaz Port, Edo Bolivar, Venezuela
	Latitude	8° 19' 0" N
	Longitude	62° 42' 0" W
	Port Type	River
Water Depth	Channel	31 to 35 feet, 9.4 to 10 meters
	Loading Dock	26 to 30 feet, 7.1 to 9.1 meters
	Mid Tide	5 feet
	Anchorage	36 to 40 feet, 11 to 12.2 meters
	Oil Terminal	36 to 40 feet, 11 to 12.2 meters
Other Services	Boat Repairs	For emergencies only



## Venezuelan\* Crude Oil Terminal – Overview

NAME		PDVSA
Quality Control System		Any reputable surveyor available in Venezuela
Port Name		Jose Port Terminal
Shipping Rates		1,000,000-2,000,000 bbls/ Month



# Specifications

## Venezuelan\* Crude Oil Terminal

CARACTERISTICAS DEL CRUDO			HIDROCARBUROS LIVIANOS				INFORMACION GENERAL									
GRAVEDAD API 60 ° F	*API	15,9	CROMATOGRAFIA DE GASES				LOS DATOS ANALITICOS EN ESTA HOJA REPRESENTAN LOS DE UNA EVALUACION COMPLETA REALIZADA EN DICIEMBRE DEL 2020 INTEVEP.									
GRAVEDAD ESPECIFICA 60/60 ° F	Adim	0,9600	PIE-20 20-100 100-150 150-200													
VISCOSIDAD CINEMATICA A 100 ° F	cSt	791,9	% VOL													
VISCOSIDAD CINEMATICA A 122 ° F	cSt	329,8	C1 y C2 0,004													
AZUFRE	% Peso	2,71	C3 0,089 0,0136 0,0029 0,0004													
CONTENIDO DE PARAFINAS	% Peso	5,63	ISO C4 0,116 0,0000 0,0019 0,0004													
PUNTO DE FLUIDEZ	° C	-15	N-C4 0,292 0,0408 0,0044 0,0011													
FACTOR DE CARACTERIZACION K (UOP)	Adim	11,40	ISO-C5 0,218 0,0983 0,0072 0,0020													
H2S EXISTENTE	ppm p/p	<1	N-C5 0,201 0,1222 0,0079 0,0019													
PRESION DE VAPOR REID	100°F, psi	2,06	C6+ 0,093													
PUNTO DE INFLAMACION	° C	12														
CONTENIDO DE SAL	lbs / Mbls	21,8														
CLORUROS INORGANICOS	ppm p/p	35														
FRACCIONES		° C	DESTILACION													
FACTOR DE CARACTERIZACION K (UOP)	Adim	11,4	PIE-20	20-100	100-150	150-200	200-250	250-300	300-343	343-402	402-461	461-500	343+	402+	461+	500+
RENDIMIENTO EN EL CRUDO	% Peso		0,63	1,26	2,62	3,14	5,32	7,18	6,37	11,10	9,76	7,47	73,48	62,47	52,71	45,24
RENDIMIENTO EN EL CRUDO	% Vol		1,00	1,56	3,29	3,75	6,03	7,88	6,78	11,37	9,87	7,44	69,72	58,35	48,48	41,04
RENDIMIENTO ACUMULADO	% Peso		0,63	1,89	4,51	7,65	12,97	20,15	26,52	37,62	47,38	54,85	100,00	100,00	100,00	100,00
RENDIMIENTO ACUMULADO	% Vol		1,00	2,56	5,85	9,60	15,63	23,51	30,29	41,66	51,53	58,97	100,00	100,00	100,00	100,00
RENDIMIENTO PROMEDIO ACUMULADO	% Vol			1,28	4,20	7,71	12,58	19,53	26,84	35,90	46,50	55,14				
GRAVEDAD ESPECIFICA 60/60 ° F	Adim	0,9600		0,7096	0,7665	0,8063	0,8488	0,8762	0,9042	0,9315	0,9509	0,9646	1,0136	1,0224	1,0336	1,0499
GRAVEDAD API A 60 F	*API	15,9		67,9	53,1	44,0	35,2	30,0	25,0	20,4	17,3	15,2	8,1	6,9	5,4	3,3
DESTILACION ASTM, PIE	° C	D-5307	D-88	D-88	D-88	D-88	D-88	D-88	D-88	D-1160	D-1160	D-2887	D-1160	D-1160	D-1160	D-5307
* 5% VOL RECOBRADO	° C	50,4	40,0	101,9	143,1	213,9	259,6	310,2	360,7	397,3	289,1	357,5	391,5	445,5	485,3	
* 10% VOL RECOBRADO	° C	155,5	48,0	113,9	155,1	220,9	268,3	315,7	369,8	409,1	423,2	386,0	432,5	493,5	527,1	
* 20% VOL RECOBRADO	° C	220,4	56,0	117,2	160,1	224,0	270,1	316,9	373,9	418,5	441,4	397,3	452,0	513,5	551,6	
* 30% VOL RECOBRADO	° C	296,8	64,0	120,6	165,5	225,5	272,2	317,7	378,0	427,2	458,7	427,5	491,5		593,2	
* 40% VOL RECOBRADO	° C	358,8	71,0	123,6	170,9	227,1	273,6	318,1	378,0	430,4	470,3	466,0				
* 50% VOL RECOBRADO	° C	422,4	77,0	126,7	174,4	229,2	275,3	318,5	378,4	426,3	479,6	510,0				
* 60% VOL RECOBRADO	° C	483,9	81,0	129,8	178,8	231,1	277,2	319,4	384,0	435,6	488,1					
* 70% VOL RECOBRADO	° C	559,0	86,0	132,9	182,6	233,4	273,4	321,3	390,3	445,2	496,3					
* 80% VOL RECOBRADO	° C		92,0	136,5	186,0	235,9	282,0	323,7	396,9	451,4	504,7					
* 90% VOL RECOBRADO	° C		96,0	140,7	191,6	239,4	285,1	325,9	406,5	459,3	514,9					
* 90% VOL RECOBRADO	° C		101,0	147,2	199,3	244,6	289,9	330,6	415,7	470,3	531,0					
PFE	° C	614,0	118,0	163,6	218,2	253,6	298,0	339,3	425,8	477,7	601,9	524,0	526,5	514,5	604,2	
VISCOSIDAD CINEMATICA A 70°F	cSt	3494														
VISCOSIDAD CINEMATICA A 100°F	cSt	791,9				1,06	2,10	4,22	9,97							
VISCOSIDAD CINEMATICA A 122°F	cSt	329,8				0,91	1,68			23,99	106,60	427,5				
VISCOSIDAD CINEMATICA A 140°F	cSt	179,60				0,81	1,44	2,58	5,11	15,93	59,80	205,1				
VISCOSIDAD CINEMATICA A 180°F	cSt												1780	11750	233319	N/A
VISCOSIDAD CINEMATICA A 210°F	cSt					0,56	0,89	1,40	2,34	5,05	12,26	28,60	574,7	2912	33982	124377
VISCOSIDAD CINEMATICA A 275°F	cSt												98,33	302,9	1761	4304
VISCOSIDAD ABSOLUTA 60 ° C	Poise												12	150	5951	
MERCAPTANOS (Como S)	ppm p/p	46,47		2,58	19,91	35,67	9,42	17,59	25,46							
AZUFRE	% Peso	2,73		0,0054	0,015	0,112	0,421	1,10	1,83	2,31	2,27	2,43	3,01	3,49	3,79	3,85
CORROSION A LA LAMINA DE COBRE	50°C/3h			1a	3b	3b+	3a									
PUNTO DE FLUIDEZ	° C	-15				<-50	<-50	-36	-24	9	15	33	36	57	69	90
PUNTO DE NUBE	° C					<-50	<-50	-21	-6	18						
PUNTO DE INFLAMACION	° C	12				32	82	117	160	180	223	250	239	303	330	339
PRESION DE VAPOR REID (MICRO)	psi	2,06		9,09	2,80	1,31										
CLORUROS ORGANICOS	ppm p/p	35		<12	<12	<12	<12									
NUMERO DE NEUTRALIZACION	mgKOH/g	1,22				0,079	0,18	0,64	1,08	1,50	2,02	2,14	1,43	1,24	0,98	0,71
ASFALTENOS	% Peso	8,2											11,8	13,7	16,7	18,2
RON, (MOTOR)	Octanos			70	59	50										
MON, (MOTOR)	Octanos			69	58	50										
AROMATICOS (HPLC)	% Peso						23,41	33,91	44,28	52,51	54,60	58,50				
SATURADOS (HPLC)	% Peso						76,56	65,77	54,82	44,67	39,64	31,01				
RESINAS (HPLC)	% Peso						0,04	0,33	0,91	2,82	5,76	10,49				
AROMATICOS - FIA	% vol				17,2	17,4										
SATURADOS - FIA	% vol				82,2	82,6										
PARAFINAS - PNA	% Peso			26,07	14,73	12,08										
PARAFINAS - PNA	% vol			28,52	16,04	13,28										
ISO PARAFINAS - PNA	% Peso			31,79	29,21	22,51										
ISO PARAFINAS - PNA	% vol			33,68	31,21	24,50										
NAFTENOS - PNA	% Peso			31,72	33,32	20,14										
NAFTENOS - PNA	% vol			29,38	32,69	19,71										
AROMATICOS - PNA	% Peso			10,40	22,43	36,17										
AROMATICOS - PNA	% vol			8,41	19,77	33,05										
Ni + A	% Peso			42,13	55,76	56,32										
Ni + A	% vol			37,79	52,46	52,76										
PUNTO DE HUMO	mm					23,5	20,5	15,5								
PUNTO DE CONGELACION	° C					<-75	-53,0	-24,0								
NUMERO LUMINOMETRO (CALCULADO)	Adim					52,9	45,5	31,8								
NAFTALENOS	% Vol					0,38	2,57	5,99								
INDICE DE REFRACCION A 20°C(67°C)	Adim					1,4460	1,4640	1,4810	1,4980	1,5155	1,5090	1,5175				
RELACION CARBONO / HIDROGENO	Adim			5,73	6,16	6,32	6,67	6,97	7,27	7,44	7,59	7,60				
NITROGENO TOTAL	ppm p/p	3657						55	252	994	1769	2608	5582	6193	6975	7134
NITROGENO BASICO	ppm p/p								183	443	559,5	816,3	1445,5			





# Venezuelan\* Crude Oil Terminal





## Venezuelan\* Fuel Oil – Overview

NAME		PDVSA
Quality Control System		Any reputable surveyor available in Venezuela
Port Name		Amuay Port Terminal
Shipping Rates		1,000,000-2,000,000 bbls/ Month



# Specifications

## Venezuelan\* Fuel Oil

S.NO	Parameter	Unit	Typical
1	Aluminum Content	PPM	30.0
2	API Gravity @60F (15.5°C)	API	10.0
3	Ash Content	%WT	.01500
4	Carbon Conradson	%WT	16.00
5	Flash Point	°F	150.0
6	Pour Point	°F	60.0
7	Water & Sediment	%VOL	100
8	Silicon Content	PPM	50.0
9	Sodium Content	PPM	70.0
10	Sulphur Content	%WT	3.5
11	Vanadium Content	PPM	500
12	Kinematic Visc @122°F (50°C)	mm <sup>2</sup> /s	650,000-850,000





## Venezuelan\* Fuel Oil - Refinery





## Venezuelan\* Petcoke - Overview

NAME		PDVSA
Quality Control System		Any reputable surveyor available in Venezuela
Shipping Rates		50,000 (x2) MT / Month
Port Name		Petro San Felix
	Draft	10 Meters
Loading Rate		700 MT / Hour
		8,000-10,000 MT SHINC / Day
Port Name		Petro Petrocedeño
	Draft	10-12 Meters
Loading Rate;		600 MT / Hour
		7,000-9,000 MT SHINC



# Specifications

## Venezuelan\* Petcoke

S.NO	Parameter	Unit	Test Method	Value
1	Ash- Dry Basis	%WT	D3174	1.20
2	Gross Calorific Value	BTU/lb	D2015	14,000
3	Moisture	%WT	D3173/D3302	12
4	Size Less Than 10cm	%	D293	98
5	Sulphur- Dry Basis	%WT	D4294/D4239	5
6	Vanadium & Metals Content	PPM	D3683	5,000
7	Hardgrove Index		D409	50





# Venezuelan\* Petcoke - Refinery







# Mine Pictures







# Mine Pictures







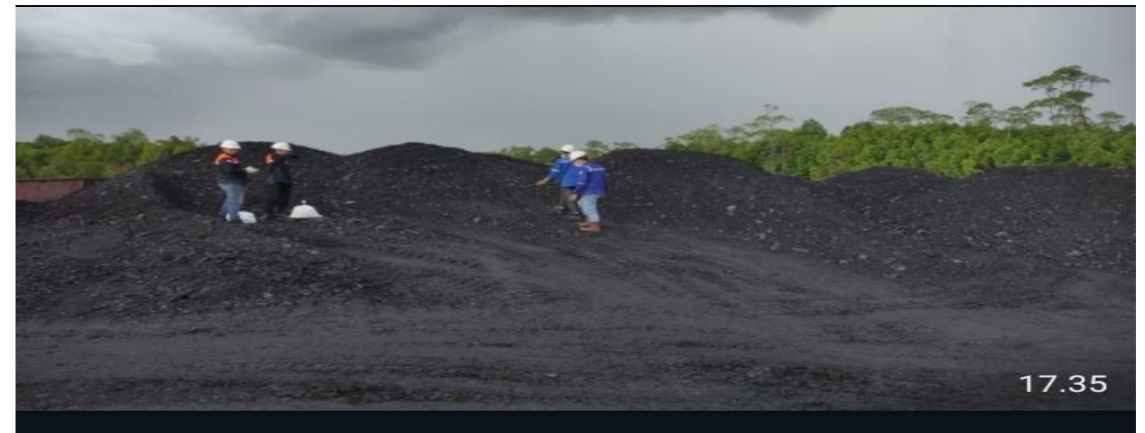
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Sunshine Energy & Commodities

**THANK YOU!**

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