

The Coal Area of Cundinamarca is in the center of the country, on the Cordillera Oriental. The province of Cundinamarca has a surface area of 24.210 km² and it is crossed by railways and important roads that connect it to important cities like Bogotá, Medellín, Neiva, Villavicencio and Tunja.

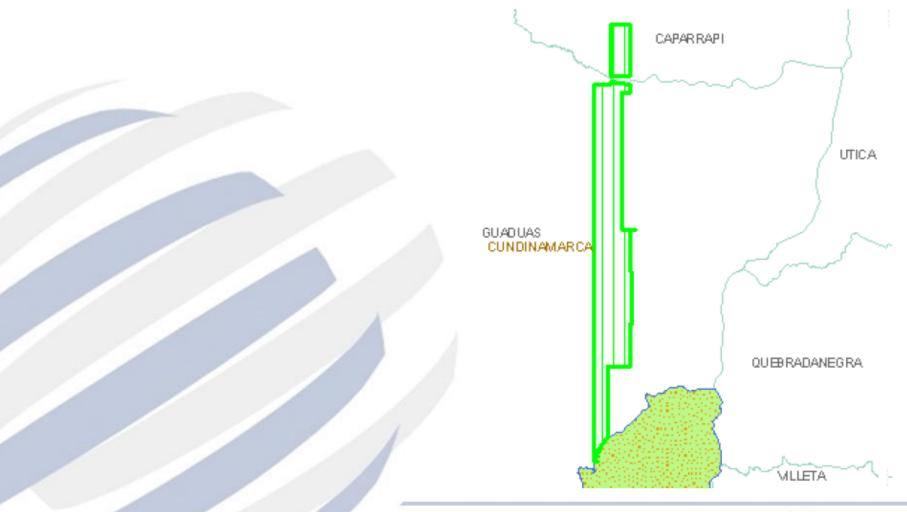






This project is about two areas, named A and B, with total value estimated in approximately \$49 million dolars. The areas are between the cities of Guaduas and Carraparí, both in the province of Cundinamarca, in Colombia, being the sum of the two areas igual to 15 km² approximately.





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To access the area, starting from Bogotá, it is necessary to go through a journey of approximately 4 hours by I-50 highway, totaling about 150 km. The access tends to be easy, because there are paved roads almost until the area.









Physical Aspects

In Cundinamarca it can be seen 3 great complexes: on the west, a narrow strip of lowland for the valleys for the Magdalena River; at the center, a long the highlands from the Cordillera Oriental, that covers the most part of the province; and on the east the Piedemonte Llanero, of smooth topography.

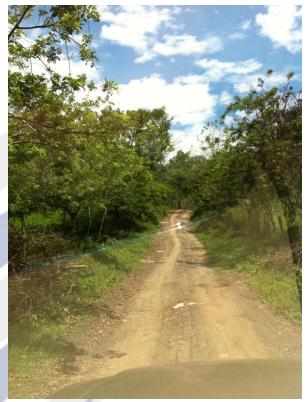


Physical Aspects





Physical Aspects



Accessing road



Landscape of the area



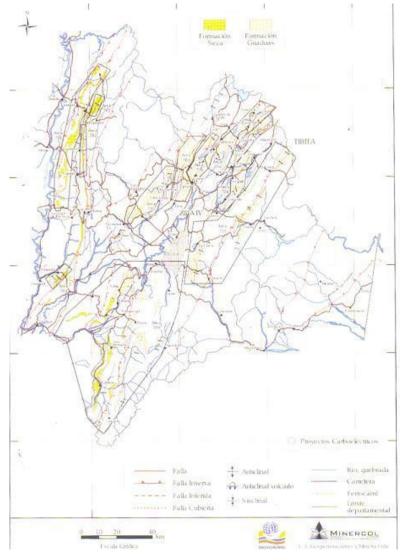
Geology

Dating from the late Cretaceous and early Cenozoic, the lithostratigraphic coal units (Guaduas, Umir, La Seca and Arcillas del Limbo formations) occupy an area extended from the region of Guataquí-Caparrapí, in Cundinamarca, until Jericó in the northern part of Boyacá, and until Lebrija in Santander. These units are over vast areas, showing in regional level deep differences in facies and thickness that are the consequence not only of marginal position within the basin, but tectonic movements within the same.



Geology

Geological Map of the Carbon Zones of Cundinamarca



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Coal Zones

In the basin of Cundinamarca, therefore referring to the carbon, starts in the region of Jerusalén, where the Seca Formation that contains, in the lower part, black lodolites with carbon that develop in facies more similar to the Guaduas Formation, which goes toward the northeast. Towards the north of Jerusalén, in the south of Caparrapí, the facies of red iodolites change to greenish gray and black lutites that soon change to, with the Córdoba Formation subjacent, to clay and black lodolitic facies, with carbon from the Umir Formation.



Coal Zones







Coal Outcrop



From Guaduas, the coal should be sent to Puerto Serviez, through land routes, where it would be waterway transported in boats to Barranquilla, accessing the Atlantic.

The first part of the trip, from Guaduas to Puerto Serviez, lasts for approximately 3,5 hours, and would be done by trucks carrying 38 tons each, being transported a total of 59.280 tons per month. The total cost of this first stage is estimated in US\$ 1.364.440/month.



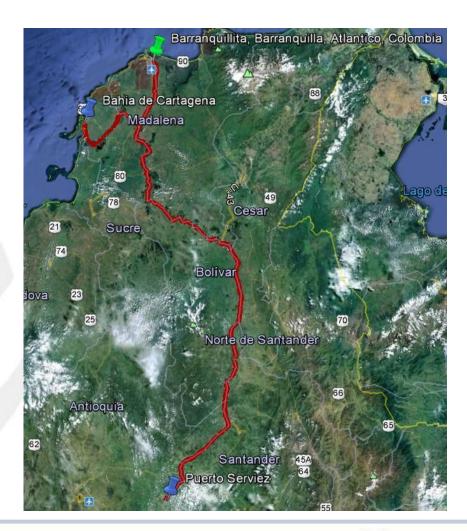


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From Puerto Serviez, the coal would be waterway transported, through Magdalena River, until the Cartagena Bay or Barranquilla, which are coast cities that would give access to the Atlantic Ocean, thus, allowing the exportation of the product. The estimated average cost for this stage is US\$ 655.200/month.





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Economic Viability

The coal reserves are estimated in 100.000.000 tons, and there are three possibilities for selling the ore:

- 1. FOB, by US\$ 55/ton;
- 2. In the port (being part of the transportation costs already paid), by US\$ 90/ton; and
- 3. CIF, by US\$ 97/ton.

Bellow it is a table showing the estimated cash flow for each year the project would be active.





Economic Viability

ESTIMATED CASH FLOW (US\$)

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	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
SELLS										
Total	58.200.000	126.540.768	135.398.622	513.342.019	549.275.960	1.028.519.236	1.100.515.581	2.803.694.458	4.599.928.041	4.921.923.003
COSTS										
Operation Costs	15.000.000	30.480.000	30.480.000	108.000.000	108.000.000	189.000.000	189.000.000	450.000.000	690.000.000	690.000.000
Distribuition Costs	21.107.088	43.840.439	44.745.950	154.737.726	157.927.556	272.056.157	277.677.577	937.711.992	989.070.708	1.009.464.699
TOTAL RODUCTION COSTS	36.107.088	74.320.439	75.225.950	262.737.726	265.927.556	461.056.157	466.677.577	637.711.992	1.679.070.708	1.699.464.699
SALES PROFIT	22.092.912	52.220.329	60.172.672	250.604.293	283.348.404	567.463.079	633.838.004	1.087.711.992	2.920.857.333	3.222.458.304
OPERATING EXPENSES	934.801	52.646.218	59.121.429	60.954.195	62.890.448	56.911.514	66.956.240	1.715.982.466	71.490.395	73.855.504
OPERATING PROFIT	21.158.111	-425.889	1.051.243	189.650.098	220.457.956	502.551.565	566.881.764	69.229.989	2.849.366.938	3.148.602.800
NON-OPERATING EXPENSES	0	0	0	0	0	0	0	0	0	0
EBITDA	21.158.111	-425.889	1.051.243	189.650.098	220.457.956	502.551.565	566.881.764	1.646.752.477	2.849.366.938	3.148.602.800
TAXES	6.982.177	-140.543	346.910	62.584.531	72.751.125	165.842.016	187.070.982	543.428.317	940.291.091	1.039.038.924
FREE CASH FLOW	14.175.934	-285.346	704.333	127.065.567	147.706.831	336.709.549	379.810.782	1.103.324.160	1.909.075.848	2.109.563.876

