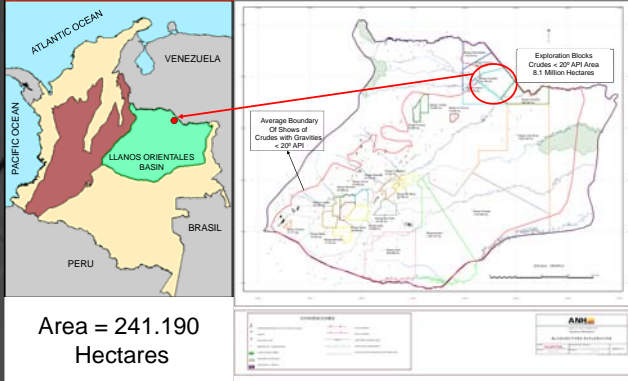
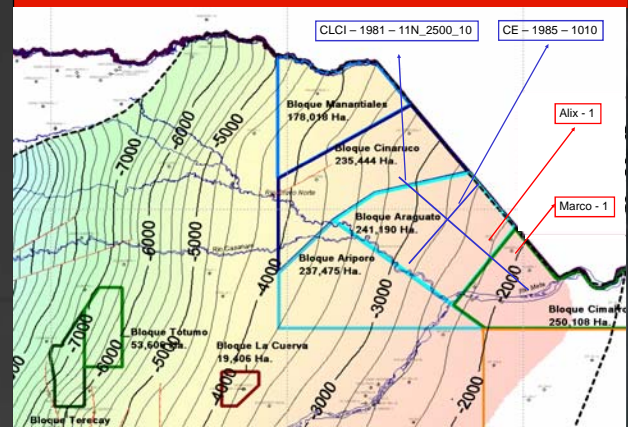


**POSTER 11.3 EXPLORATORY BLOCK ARAGUATO**

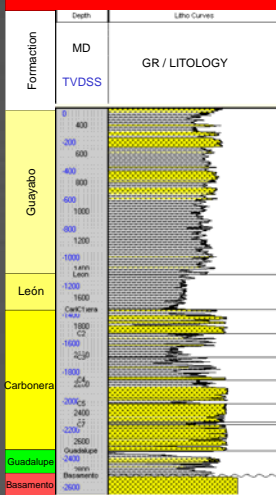
**Location of Araguato Block**



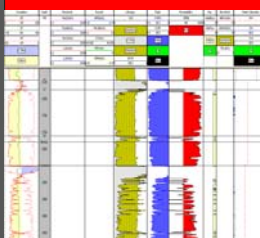
**Structural Map Araguato Block Top of Unit C7**



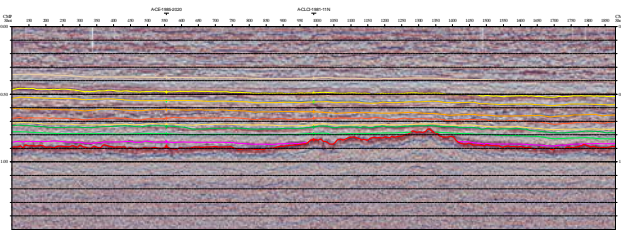
**Marco - 1**



**ALIX - 1 Unit C7**

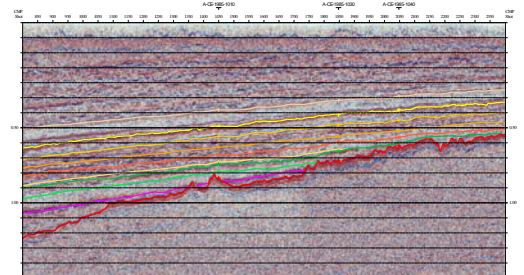


**Seismic Lines**



CE - 1985 - 1010

CLCI - 1981 - 11N\_2500\_10



**Summary**

**RESERVOIR:** All the Cretaceous formations and the C1, C3, C5 and C7 units from the Carbonera Formation. Main objectives start from Une to C3. Unit C1 is secondary.

**PLAYS:** Stratigraphics, principally for Fluvial channels development; there is similarity between the seismic-stratigraphic characteristics with the El Miedo area. In this block is present the pinchout of the Une Formation. Good porosity and permeability; Unit C7 has few thickness and few lateral continuity, sandy development is high in Unit C5.

**TRAPS:** Mainly stratigraphic (sandy sequences - channels that favor lateral facies changes). Paleo topographics over Basement and Paleozoic. Limited presence of transcurrent and normal big faults.

**SEAL:** Good seal in C8 with 80% of VSH. In C6 40% of VSH. In Rubiales this has 60% de VSH and there is seal. The best seal is C2. The Leon Formation has gas shows (La Coral - 1 well), that means a possible leaking across the regional seal.

**MIGRATION:** Block located near to Cano Limon which gives probability of hydrocarbon migration to the blocks of this area near a to the Arauca and Casanare rivers. therefore the risk is given by lack of data according with the low drilling density.

**SHOWS:** La Coral- 1 well to the NW corner showed poor gas dissolved in Leon, C1 - C8 and Mirador.

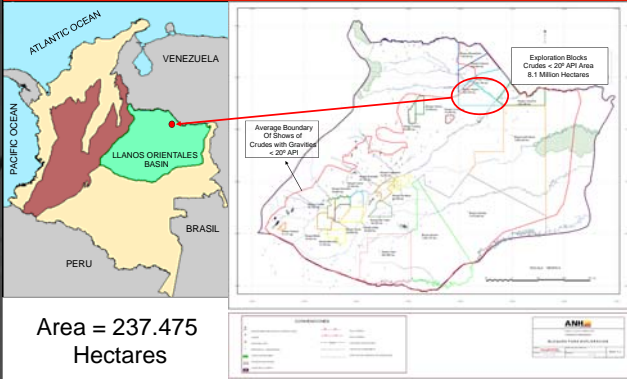
**RECOMENDATIONS:** To improve the current seismic. Is recommended to run 3D seismic in advanced exploration steps, in order to characterize the stratigraphic plays. Wells may be described and with capillarity analysis to the reservoir sandstones and to the seals, in order to quantify el the maximum thickness from the possible oil column. Is recommended to design un program an exploratory program with stratigraphic wells and a surface geochemistry work.

**Properties**

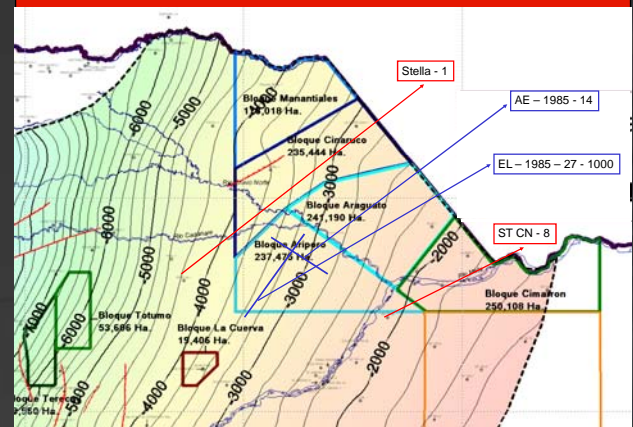
Block : Araguato  
 Área: 241.190 Hectáres  
 Max. depth to Basement/Paleozoic: - 4600 feet  
 Min depth to Basement/Paleozoic: - 2750 feet  
 Main reservoir: All the Cretaceous formations  
 Max. completion thickness: : 250 feet  
 Min. completion thickness: : 50 feet  
 Wells: 1  
 Kilometers of seismic: 940 Aprox. Net: 5x5 Aprox.  
 OOIIP risk (MMBO) C7: 954.60

**POSTER 11.4 EXPLORATORY BLOCK ARIPORO**

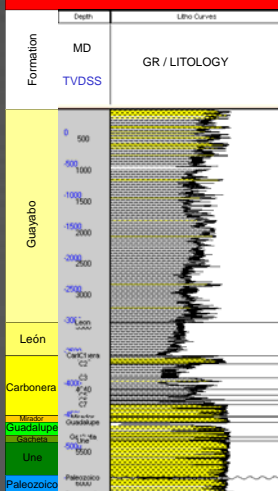
**Location of Ariporo Block**



**Structural Map of Ariporo Block Top of Unit C5**



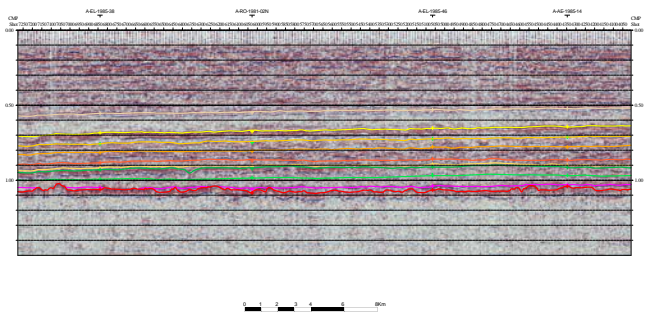
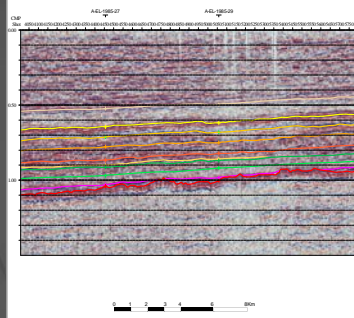
**Stella - 1**



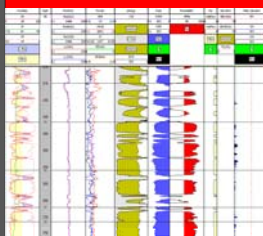
**Seismic Lines**

AE - 1985 - 14

EL - 1985 - 27 - 1000



**ST CN - 8 Uniy C5**



**Properties**

Block : Ariporo  
 Área: 237.475 Hectáres  
 Max. depth to Basement/Paleozoic: - 4950 feet  
 Min. depth to Basement/Paleozoic: - 2600 feet  
 Main reservoir: All the Cretaceous formations  
 Max. completion thickness : 250 feet  
 Min. completion thickness : 50 feet  
 Wells: 0  
 Kilómetros de seismic: 768 Aprox. Net: 5x8 Aprox.  
 OOIP Risk (MMBO) C7: 954.60

**Summary**

**RESERVOIR:** All the Cretaceous formations and C1, C3, C5 and C7 units from the Carbonera Formation.

**PLAYS:** Mainly stratigraphics by fluvial channels development; similarity between the seismic-stratigraphics characteristics with El Miedo area. In this block there are the pinchouts of the Une, Guadalupe and Mirador formations. Good porosity and permeability. Sandy development is high in Unit C5.

**TRAPS:** Mainly stratigraphics (sandy sequences – channels that favor lateral facies changes). Paleo topographic traps over Basement and Paleozoic. Limited presence of transcurrent and normal big faults.

**SEAL:** Good seal in C8 with 80% of VSH. In C6 40% of VSH. In Rubiales this has a 60% of VSH and there is seal. The best seal is C2. The León Formation has gas shows to the north of the block, that means a possible leaking across the regional seal. Toward the east, the quality seal decreases. There is not reliability on the seal integrity, because of the possible presence of transcurrent faults.

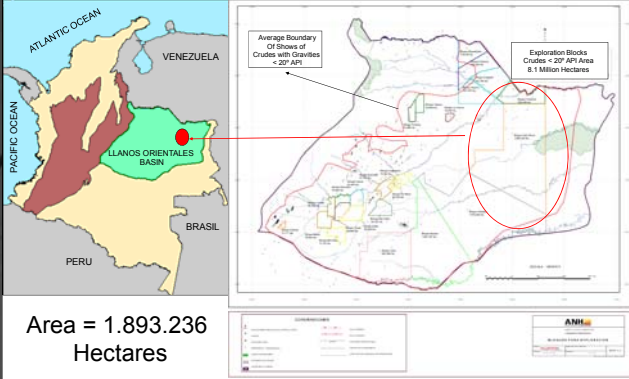
**MIGRATION:** Block located near to Caño Limon, that gives probability of hydrocarbon migration to the blocks of this area near to the Arauca and Casanare rivers. It is located near to the El Miedo Field too. Therefore risk is given by lack of data, according with the low drilling density.

**SHOWS:** There are not wells with shows. To the north corner of the block the La Coral – 1 well showed poor gas dissolved in León, C1 – C8 and Mirador. The ST CI-14 well showed regular and residual gas in C6 and good show in C5. The Pato – 1 well, located to the NW of this block showed poor and residual gas in C7 and Une. In Mirador and Guadalupe it had an oil poor show.

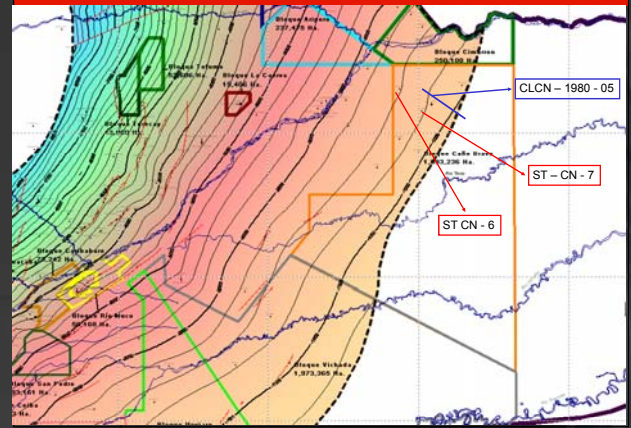
**RECOMMENDATIONS:** To improve the current seismic. Is recommended to run 3D seismic in advanced exploration steps, in order to characterize stratigraphic plays. Wells must be described and with capillarity analysis to the sandstone reservoirs and to the seals, in order to quantify the maximum thickness of the possible oil column. Is recommended to design an exploratory program with stratigraphic wells and a surface geochemistry work.

**POSTER 11.6 EXPLORATORY BLOCK CAÑO BRAVO**

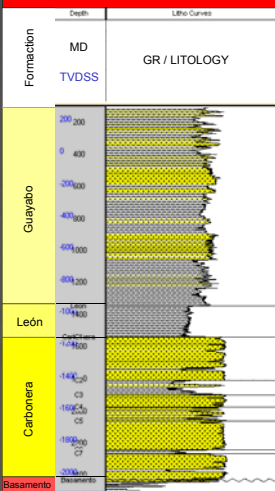
**Location of Caño Bravo Block**



**Structural Map of Caño Bravo Block Top of Unit C3**

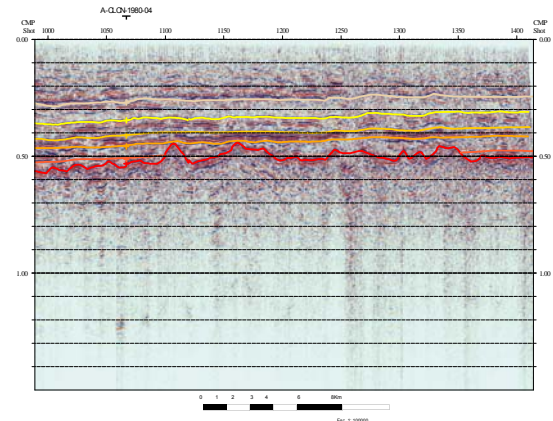


**ST CN - 6**

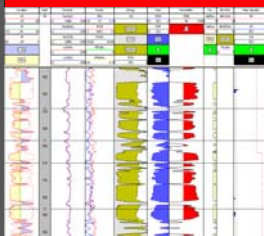


**Seismic Line**

CLCN – 1980 - 05



**ST CN - 7 Unit C3**



**Properties**

Block : Caño Bravo  
 Área: 1.893.236 Hectares  
 Max. depth to Basement/Paleozoic: ~ 2200 feet  
 Min. depth to Basement/Paleozoic: ~ 250 feet  
 Main reservoir: C5, C3, C1  
 Max. completion thickness: ~ 80 feet  
 Min. completion thickness: ~ 30 feet  
 Wells: 6  
 Kilometers of seismic: 348 Aprox. Net: 60x300 Aprox.  
 OOIIP Risk (MMBO) C7: 954.60

**Summary**

**RESERVOIR:** Main reservoirs are C3, C1 and C5. Block located to 50 Km from El Miedo Field which produces from C3.

**PLAYS:** Possibility of pinchout in C5 and C3. The most important plays are fluvial channels in C1, C3 and C5. Border area.

**TRAPS:** Mainly stratigraphics (sandy sequences - channels that favor lateral facies changes). Paleotopographic traps over basement.

**SEAL:** The best seal is the León Formation (regional); The fine units of the Carbonera Formation are considered poor by high sand content. This could be a local seal.

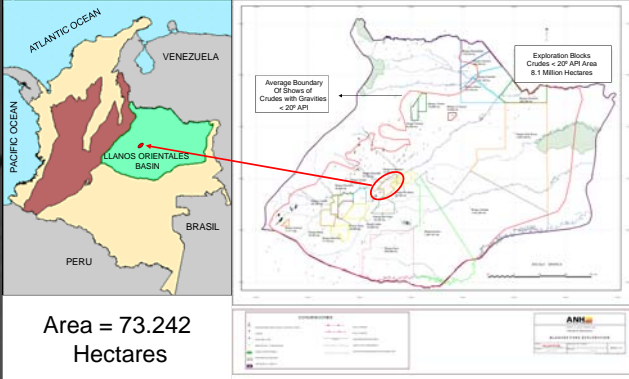
**MIGRATION:** Is a risk factor because of the block location (east corner of the basin). The oil distribution has a hydraulic west-east continuity.

**SHOWS:** Block located to the E of the basin. Kerogen shows in C5 in the ST CN – 6 well. The ST CN – 14 well, located to the north, in the Cimarrón Block (near to the limit of these blocks), had a residual gas show in C7 and good in C6.

**RECOMENDATIONS:** To improve and to interpret the current seismic. To acquire new 2D seismic for semi-detail evaluation (5 Km net). Geochemistry study, surface gas sample. Remote sensors for catching reliable information over this big block with high precision and with a reasonable cost. To Review the wells to see the sandstones development and to do capillarity analysis.

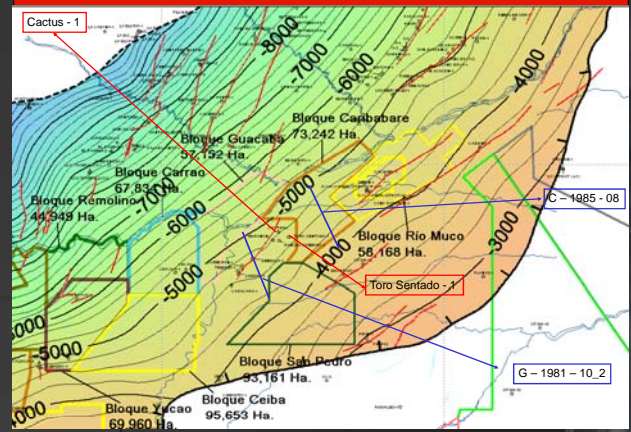
**POSTER 11.11 EXPLORATORY BLOCK CARIBABARE**

**Location of Caribabare Block**

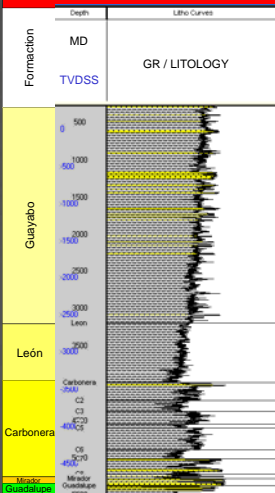


Area = 73.242 Hectares

**Structural Map of Caribabare Block Top of the Mirador Formation**

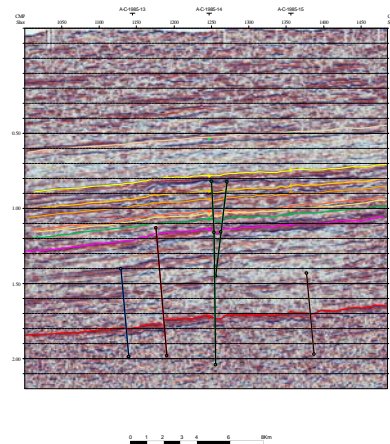


**Toro Sentado - 1**

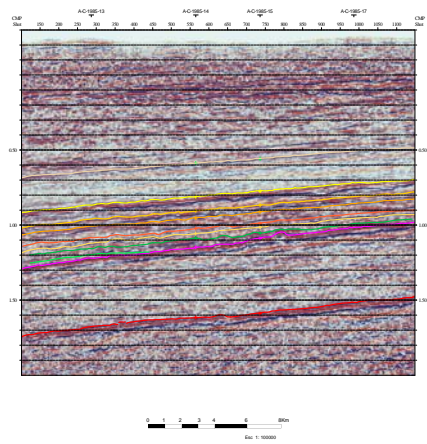


**Seismic Lines**

G – 1981 – 10\_2



C – 1985 – 08



**Cactus – 1 Mirador Formation**



**Properties**

Block : Caribabare  
 Área: 73.242 Hectares  
 Max. depth to Basement/Paleozoic: - 5800 feet  
 Min. depth to Basement/Paleozoic: - 4250 feet  
 Main reservoir: C7/Mirador/Une  
 Max. completion thickness: 100 feet  
 Min. completion thickness: 30 feet  
 Wells: 0  
 Kilometers of seismic: 305 Aprox. Net: 4x6 Aprox.  
 OOIP risk (MMBO) Une: 4.24  
 Mirador: 464.23  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** All the Cretaceous formations, Mirador and C7 - C1 units.

**PLAYS:** Stratigraphics by fluvial channels development in the Mirador Formation and in the C7 - C1 units. Pinchout of the Une Formation over Paleozoic covered by the Gacheta Formation. Another important pinchout is the Guadalupe Formation. This block is located on the structural play strip associated to antithetic faults. It is Located near to the producer Bengala – 1 and Jaguar – 1 wells.

**TRAPS:** Stratigraphics by fluvial channels (location on the drainage system of the C7 Unit sandstones; producer in the Rubiales Field) and pinchout of the Une and Guadalupe formations. Probability of structural traps associated to antithetic faults.

**SEAL:** There are seals in C2, C4, C6 and C8.

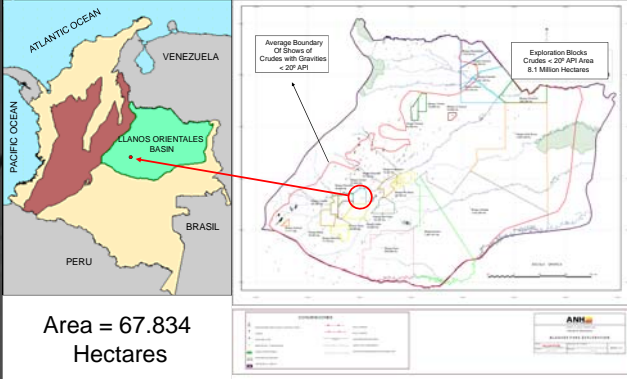
**MIGRATION:** Block located in a migration path (continuous phase). The high heat contribution increases the oil mobility.

**SHOWS:** The Une Formation had oil shows in the Mare – Mare – 1 (continuous phase) and Arimena – 1 (discontinuous phase) wells to the north. In the Gacheta Formation there are residual oil shows in the Morichito – 1 well toward the NW and Arimena - 1 (residual phase). The Guadalupe Formation had a continuous asphalten phase updip.

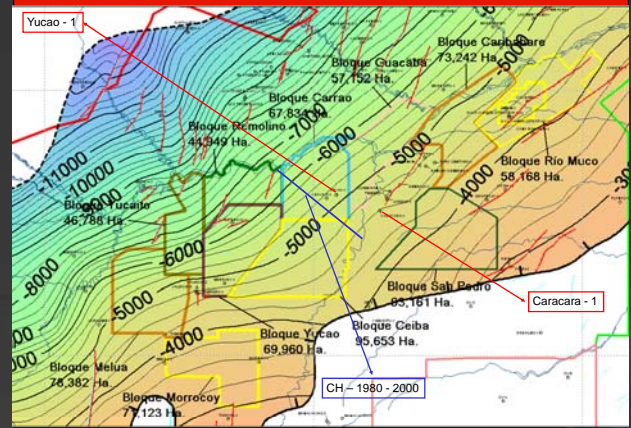
**RECOMENDATIONS:** To improve the actual seismic. To get a regular 2 km seismic net. Capillarity analysis in reservoir and seal rocks cores of the bordering wells.

**POSTER 11.16 EXPLORATORY BLOCK CARRAO**

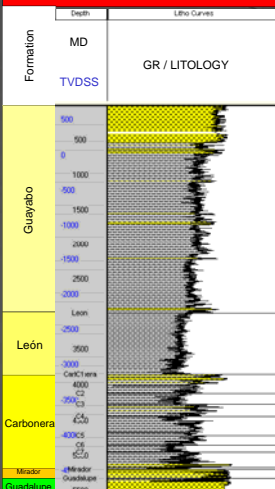
**Location of Carrao Block**



**Structural Map of Carrao Block Top of Mirador Formation**

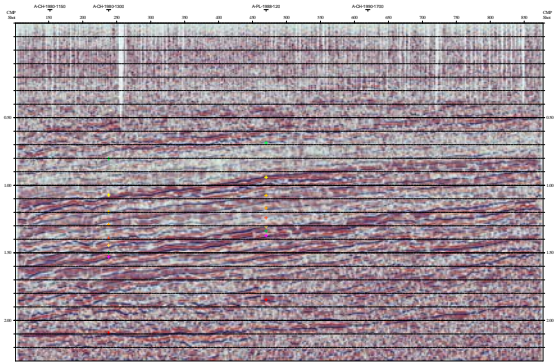
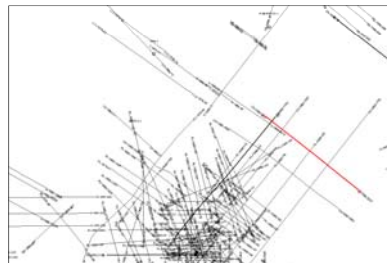


**Caracara - 1**



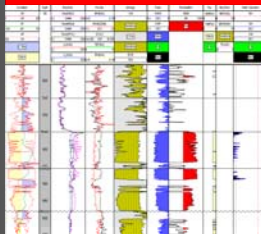
**Seismic Line**

CH – 1980 - 2000



Scale 1:10000

**Yucao – 1 Mirador Formation**



**Properties**

Block : Carrao  
 Área: 67.834 Hectares  
 Max. depth to Basement/Paleozoic: - 7300 feet  
 Min. depth to Basement/Paleozoic: - 5000 feet  
 Main reservoir: Mirador/Une  
 Max. completion thickness : 300 feet  
 Min. completion thickness: 50 feet  
 Wells: 2  
 Kilometers of seismic: 427 Prox. Net: 2.5x4 Prox.  
 OOIP Risk (MMBO) Mirador: 337.80  
 C7: 1960.85  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** Une, Guadalupe and Mirador formations and C7 - C1 units of the Carbonera Formation. probability of the T1 sandy body presence into the C8 Unit.

**PLAYS:** Stratigraphic by the pinchout of the Une Formation. Inside valleys with the sandstones facies of T1 which belongs to C8 Unit. Probability of stratigraphic plays by fluvial channels development in the Mirador Formation and in the sandy units of the Carbonera Formation. Probability of structural play associated to antithetic faults.

**TRAPS:** Stratigraphics by sandstone pinchouts of the Une Formation; filling of incised valley by (T1) and fluvial channels development in Mirador and Carbonera. Little structural traps of antithetic faults.

**SEAL:** Gacheta, shales to the top of the Guadalupe Formation, C8 and C6 units. Possible presence of "tar-mat" which complement the seal of the Une Formation pinchout.

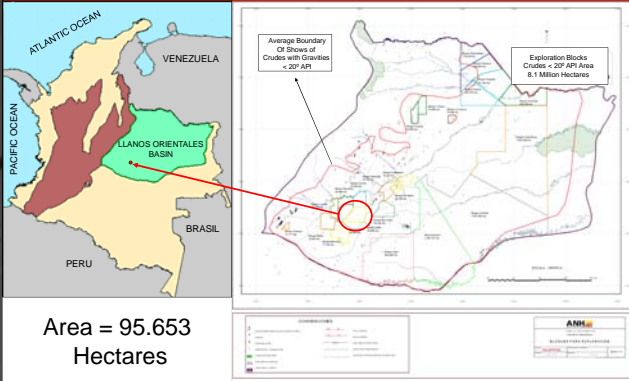
**MIGRATION:** Block located in a migration path surrounded by shows in all levels.

**SHOWS:** Mirador production in the Valdivia-Almagro Field. In the Guadalupe Formation, residual show of good quality in Yucao 1, updip. In the Chaviva - 1 well good quality residual show in C3. The Upia - 1 well, downdip had residual shows in Guadalupe. Accumulation in the Jaguar - 1 well.

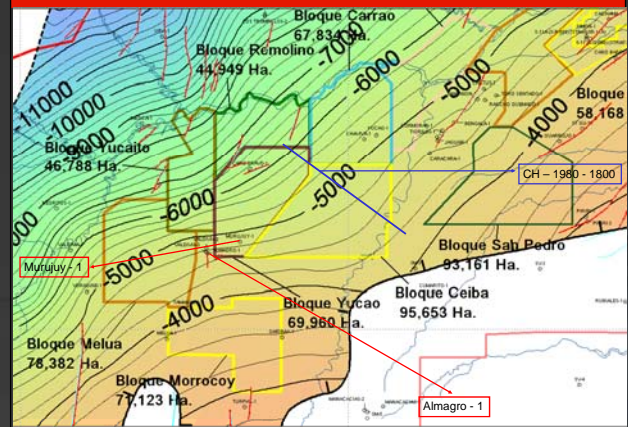
**RECOMENDATIONS:** To improve the current seismic for the stratigraphic interpretation (attributes analysis).

**POSTER 11.18 EXPLORATORY BLOCK CEIBA**

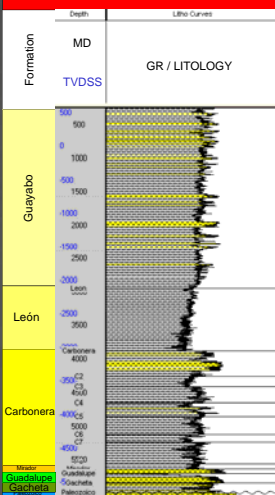
**Location of Ceiba Block**



**Structural Map of Ceiba Block Top of Mirador Formation**

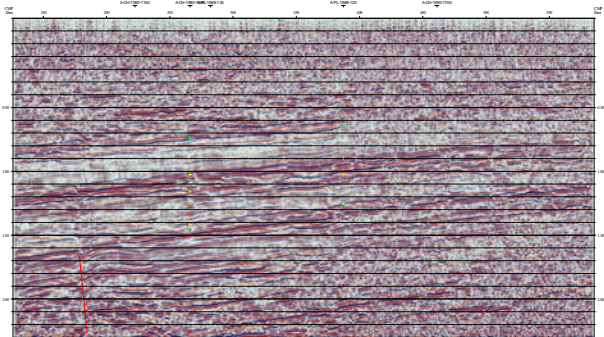
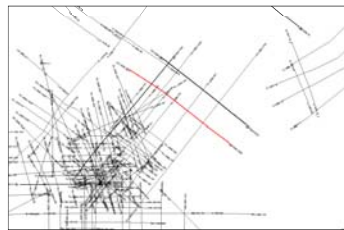


**Murujuy - 1**

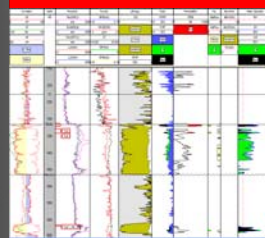


**Seismic Line**

CH – 1980 - 1800



**Almagro - 1 Mirador Formation**



**Properties**

Block : Ceiba  
 Area: 95.653 Hectares  
 Max. depth to Basement/Paleozoic: 5750 feet  
 Min depth to Basement/Paleozoic: - 4250 feet  
 Main reservoir: Mirador/Guadalupe  
 Max. completion thickness: 300 feet  
 Min. completion thickness: 50 feet  
 Wells: 0  
 Kilometers of seismic: 213 Aprox. Net: 8x10 Aprox.  
 OOIIP Risk (MMBO) Guadalupe: 5.62  
 Mirador: 337.80  
 C7: 1960.85  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** The best objectives are the Guadalupe and Mirador formations. Therefore is considered reservoir from the Une Formation to C1 Unit.

**PLAYS:** Pinchout of the Une and Guadalupe formations. In the Mirador Formation and the sandy units from Carbonera; fluvial valleys. Probability of structural play associated to antithetic faults.

**TRAPS:** Stratigraphics. Pinchouts of Cretaceous and fluvial channels development in Mirador and Carbonera formations. Structural by presence of antithetic faults. Its near location to producer zones keeps great expectation about the prospectivity of the block.

**SEAL:** Good seals in the C6 and C8 units and shales to the top of the Guadalupe Formation. Possible presence of "tar-mat" that complements the seal of the pinchout of the Guadalupe Formation.

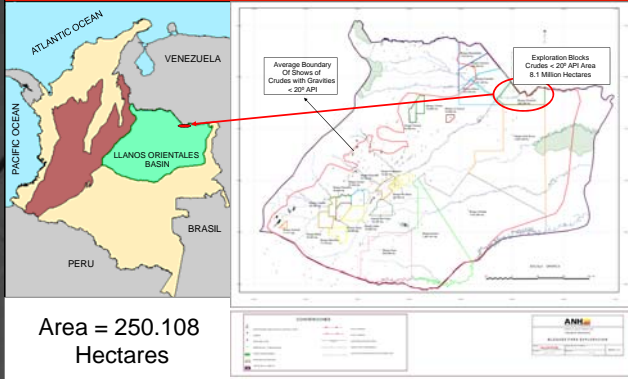
**MIGRATION:** Block located in a migration path surrounded by shows in all levels.

**SHOWS:** In the Guadalupe Formation, In the Caño Bravo – 1 well toward the NW, residual show of good quality. In the Chaviva – 1 well to the north, good quality residual show in C3. The Metica – 1 well, located downdip had a residual show in the Une Formation. The Upia – 1 well, downdip had residual shows in Guadalupe.

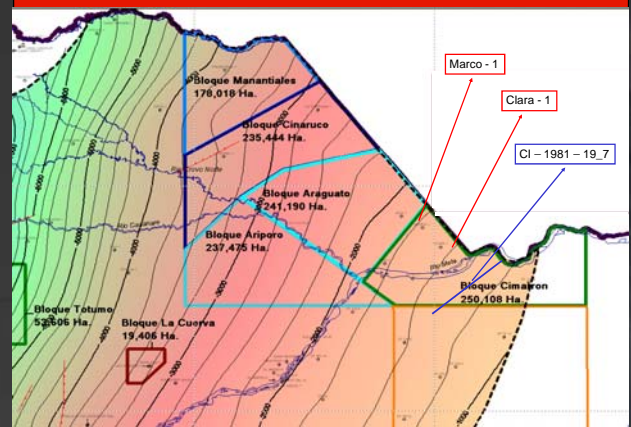
**RECOMENDATIONS:** To improve the current seismic for stratigraphic interpretation (attributes analysis). To make two direct wells.

**POSTER 11.5 EXPLORATORY BLOCK CIMARRON**

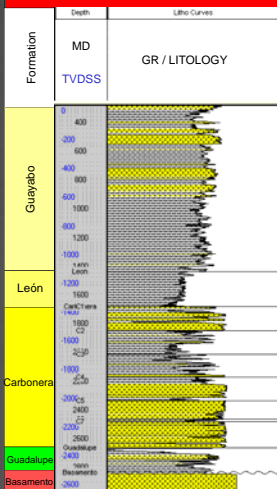
**Location of Cimarrón Block**



**Structural Map of Cimarrón Block Top of Unit C3**

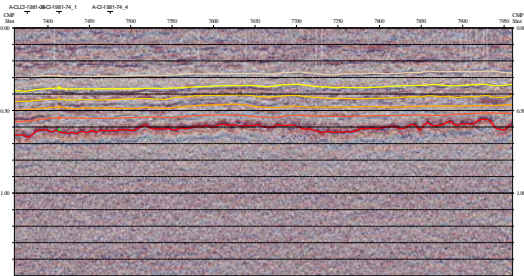
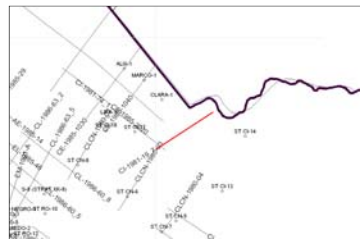


**Marco - 1**



**Seismic Line**

CI - 1981 - 19\_7



**CLARA - 1 C3 Unit**



**Properties**

Block : Cimarron  
Area: 250,108 Hectares  
Max. depth to Basement/Paleozoic: 3000 feet  
Min. depth.to Basement/Paleozoic: - 1000 feet  
Main reservoir: Une,Guadalupe, Mirador and C7-C1  
Max. completion thickness: 250 feet  
Min. completion thickness: 50 feet  
Wells: 6  
Kilometers of seismic: 3423 Prox. Net: 8x20 Prox.  
OOIP Risk (MMBO) C7: 954.60

**Summary**

**RESERVOIR:** Guadalupe and Mirador formations and the C7-C1 units of the Carbonera Formation. The mean objectives are from Une to C3.

**PLAYS:** Stratigraphics, mainly by fluvial channels development; there are similarity between the seismic-stratigraphic characteristics with El Miedo area. In this block there are the pinchouts of the Guadalupe and Mirador formations. Good porosity and good permeability; Unit C7 has few thickness and lateral continuity. Good sandstone facies development en C5.

**TRAPS:** Mainly stratigraphics (sandy sequences - channels that favor lateral facies changes). Paleotopographics traps over Basement and Paleozoic. Limited presence of transcurrent and normal big faults. The east corner of this block does not have information, therefore this part is border area.

**SEAL:** Good seal possibility in C8 with 80% of VSH. In C6 40% of VSH. In Rubiales this has 60% of VSH and there is seal. The best seal is C2. The León Formation has shows of gas, that means possible leaking across the regional seal.

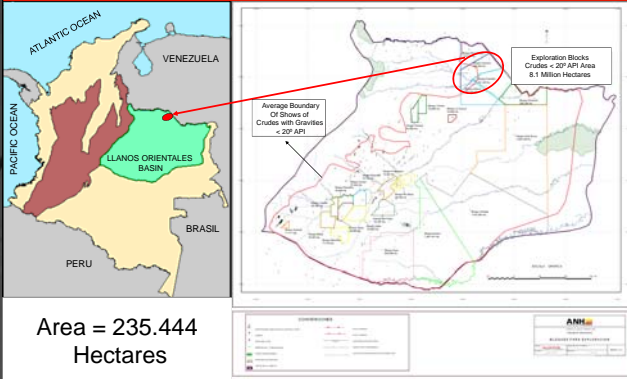
**MIGRATION:** The proximity to Caño Limón gives a hydrocarbon migration probability to the blocks of this area located near to the Arauca and Casanare rivers. It is near to the El Miedo Field. Therefore risk is given by the lack of hydrocarbon shows in four of the five drilled wells in this block.

**SHOWS:** The ST CI - 14 well showed regular and residual gas in C6 and good show in C5.

**RECOMENDATIONS:** To improve the current seismic. Is recommended to run 3D seismic in advanced steps of exploration, for characterize the stratigraphic plays. Wells must be described and with capillarity analysis to the sandstone reservoirs and to the seals, for quantify the maximum thickness of the possible oil column.

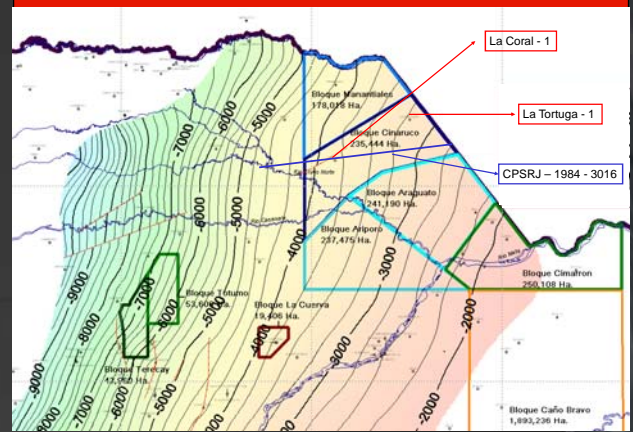
**POSTER 11.2 EXPLORATORY BLOCK CINARUCO**

**Location of Cinaruco Block**

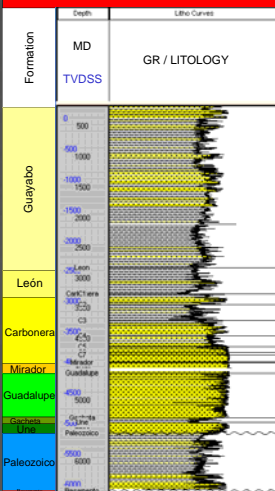


Area = 235.444 Hectares

**Structural Map of Cinaruco Block Top of Unit C7**

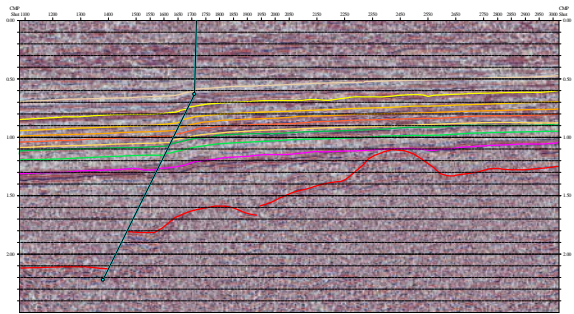


**La Coral - 1**

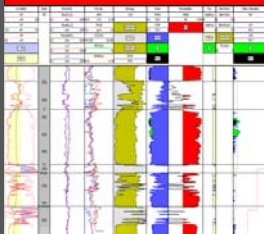


**Seismic Line**

CPSRJ – 1984 – 3016



**LA TORTUGA – 1 Unit C7**



**Properties**

Block : Cinaruco  
 Area: 235.444 Hectares  
 Max depth to Basement/Paleozoico: - 5500 feet  
 Min depth to Basement/Paleozoico: - 3750 feet  
 Main reservoir: All the Cretaceous formations  
 Max. completion thickness : 250 feet  
 Min. completion thickness : 50 feet  
 Wells: 2  
 Kilometers of seismic: 1230 Aprox. Grid: 3x5 Aprox.  
 OOIP Risk (MMBO) Mirador: 195.50  
 C7: 293.68  
 C1, C3 and C5: 217.15

**Summary**

**RESERVOIR:** All the Cretaceous formations, Mirador Formation and units C7 to C1 from the Carbonera Fm. In general good porosity and good permeability. In view of the producer horizons in most of the heavy oil fields are nearby related to the Paleozoic, the principal exploration objectives in this area of the basin are Cretaceous formations, Mirador Formation and C7 Unit.

**PLAYS:** Fluvial channels in the Mirador Formation and units C7 to C1. Stratigraphic characteristics could be similar with El Miedo Field. Unit C5 with excellent facies conditions. Plays had not been proved in this block.

**TRAPS:** Mainly stratigraphics (sandy sequences – channels that favor lateral facies changes). Palaeotopographic traps over the basement and Paleozoic. Limited presence of normal and strike-slip big faults.

**SEAL:** Good seal in C8 with 80% VSH. In C6 40% VSH. In Rubiales this has 60% de VSH and there is seal. The best seal is C2. The León Formation has gas shows (La Coral – 1 well), that means a possible leaking across the regional seal.

**MIGRATION:** Block located near to Caño Limón, which gives probability of hydrocarbon migration to the blocks of this area near to the Arauca and Casanare rivers. Therefore the risk is given by lack of data, according with the low drilling density.

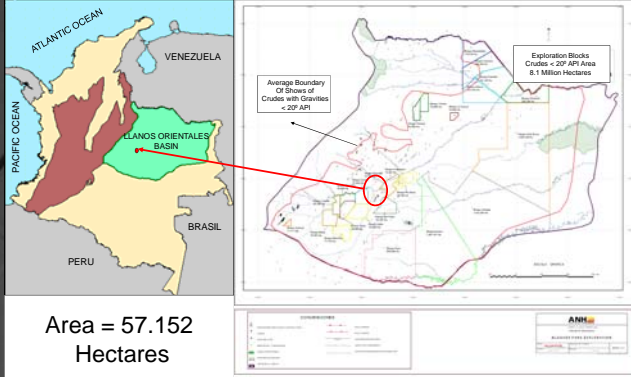
**SHOWS:** La Coral- 1 well showed poor gas dissolved in León, C1 – C8 and Mirador.

**RECOMENDATIONS:** To improve the current seismic. Is recommended to run 3D seismic in advanced exploration steps, in order to characterize stratigraphic plays. Wells must be described. Is important to realize capillarity analysis to the reservoir sandstones and seals, in order to quantify the maximum thickness from the possible oil column. Is recommended to design an exploratory program with stratigraphic wells and a surface geoquimistry work.

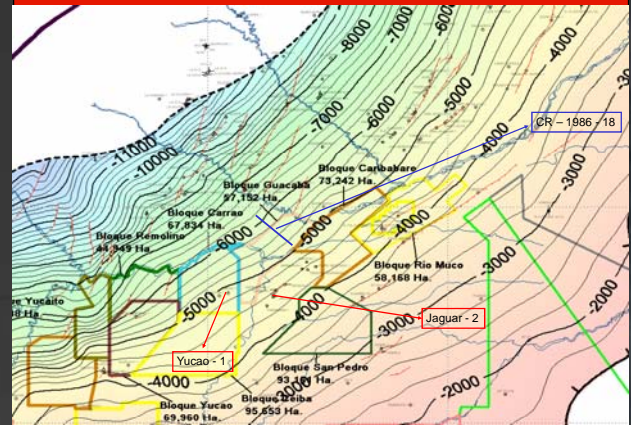


**POSTER 11.10 EXPLORATORY BLOCK GUACABA**

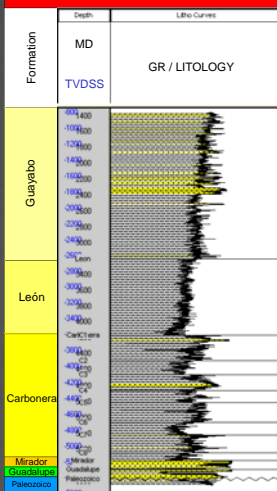
**Location of Bloque Guacaba**



**Structural Map of Guacaba Block Top of Unit C7**

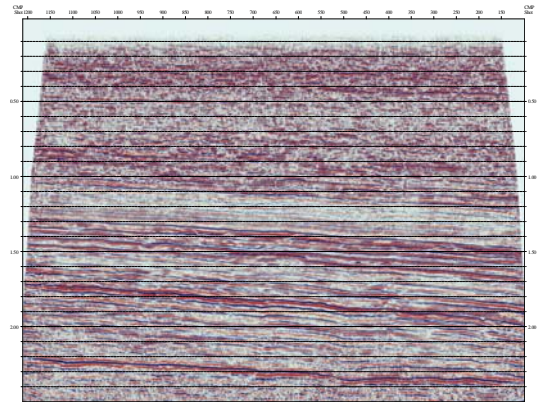
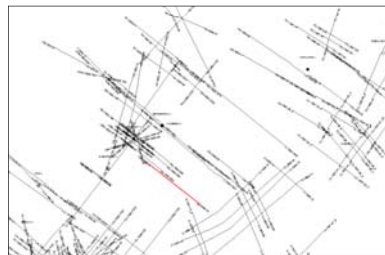


**Yucao - 1**

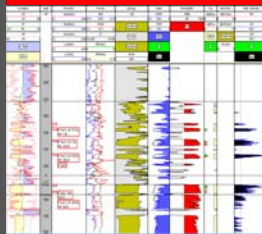


**Seismic Line**

CR – 1986 - 18



**Jaguar - 2 C7 Unit**



**Properties**

Block : Guacaba  
 Area: 57.152 Hectares  
 Max. depth to Basement/Paleozoic: - 6750 feet  
 Min. depth to Basement/Paleozoic: - 5000 feet  
 Main reservoir: C7/Mirador/Une  
 Max.completion thickness: 100 feet  
 Min. completion thickness: 30 feet  
 Wells: 0  
 Kilometers of seismic: 296 Prox. Net: 3x5 Prox.  
 OOIP Risk (MMBO) Mirador: 337.80  
 C7: 1960.85  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** All the Cretaceous formations, Mirador and the C7 - C1 units of the Carbonera Formation.

**PLAYS:** Stratigraphics for the fluvial channels development in the Mirador Formation and C7 - C1 units. Structural play associated to antithetic faults.

**TRAPS:** stratigraphics; channels with bar complex interpreted in well logs; traps associated to antithetic faults; with a seismic coverage equivalent to a 3x5 Km net. Low probability is of structural traps.

**SEAL:** There is seal in Gacheta C2, C4, C6 and C8 units.

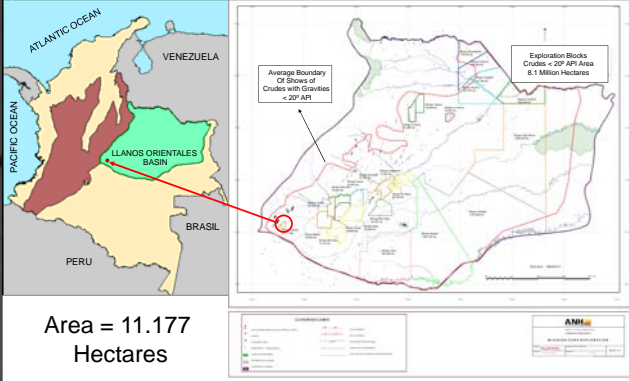
**MIGRATION:** Block located in a migration path (continuous phase). Mobility mechanism similar to the Castilla Field with favorable heat flow.

**SHOWS:** The Une Formation had oil shows in the Mare-Mare – 1 (continuous phase) and Arimena – 1 (discontinuous phase) wells. In the Gacheta Formation there are residual oil shows in the Morichito – 1 well, toward the NE. Guadalupe had a continuous show of asphaltens up dip the block. Unit C7 had residual show in the Cachama – 1 and Simón – 1 wells.

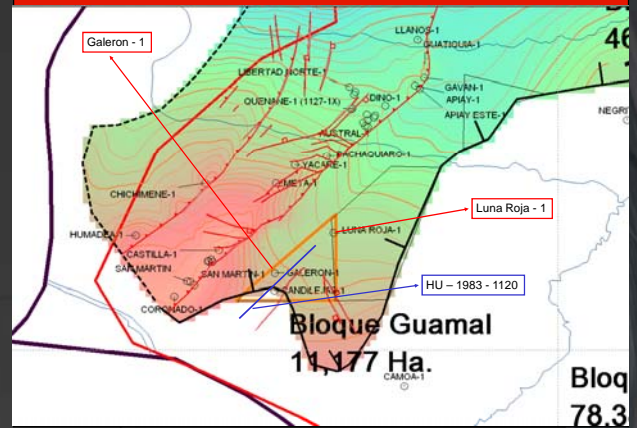
**RECOMENDATIONS:** To improve the current seismic. To get a regular seismic net of 2 Km. Capillarity analysis of sandstone reservoir and seal in cores of the bordering wells.

**POSTER 11.24 EXPLORATORY BLOCK GUAMAL**

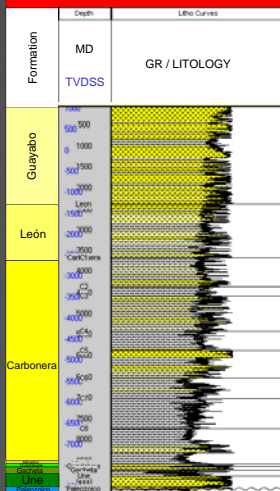
**Location of Guamal Block**



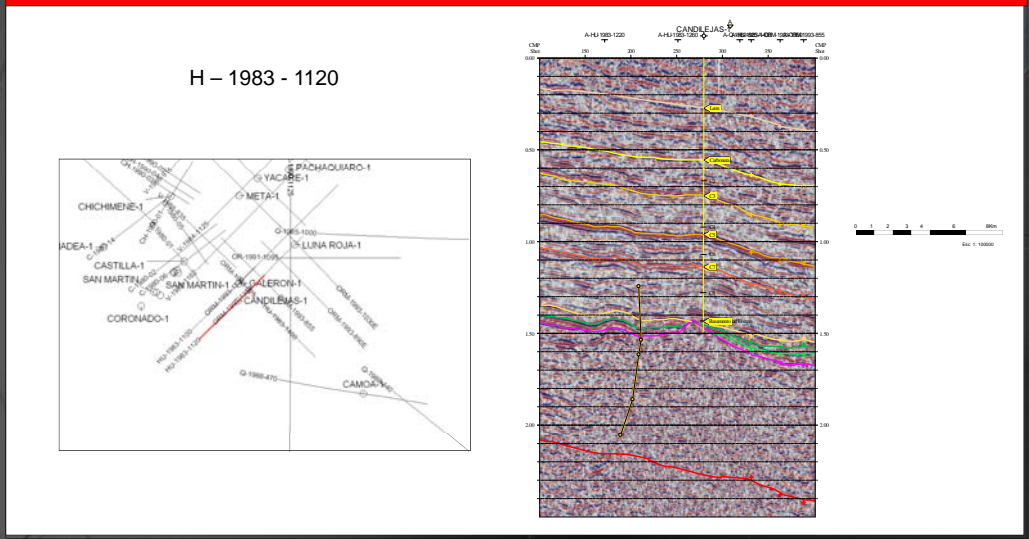
**Structural Map of Guamal Block Top Une Formation**



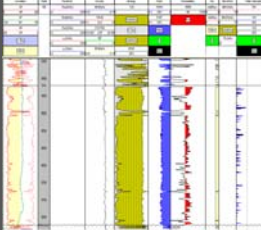
**Galerón - 1**



**Seismic Line**



**Luna Roja - 1 Une Formation**



**Properties**

Block : Guamal  
 Area: 11,177 Hectares  
 Max. depth to Basement/Paleozoic: - 9100 feet  
 Min depth to Basement/Paleozoic: - 6900 feet  
 Main reservoir: Une/Guadalupe  
 Max completion thickness: 300 feet  
 Min. completion thickness: 50 feet  
 Wells: 3  
 Kilometers of seismic: 294 Aprox. Net: 0.6x1 Aprox.

**Summary**

**RESERVOIR:** From the Une Formation to C5 Unit. Presence of T1 (bottom sandstone of C8). The Luna Roja – 1 well was drilled with the incised valley concept and it is filled with T1.

**PLAYS:** Pinchouts of Une and Guadalupe formations. Incised valleys. Fluvial channels in the Mirador Formation. Local pinchouts in the Cretaceous and Tertiary sequences against the Candilejas Paleohigh (formed during the Paleozoic).

**TRAPS:** Stratigraphics associated to local pinchouts of the Cretaceous and Tertiary against Paleozoic highs. Incised valleys filled.

**SEAL:** Seals in the Gacheta and top of Guadalupe Formation. Unit C6, is a good seal.

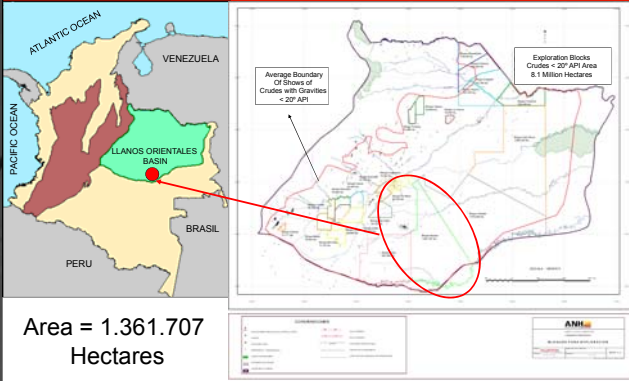
**MIGRATION:** Area located in the downdip block of the Castilla – Apiay Fault, behind the migration barrier of the Castilla-Apiay feature. Updips located the Camoa – 1 well, which is producer

**SHOWS:** Few shows in the Guadalupe Formation. The Une and Gacheta formations in the Luna Roja – 1 well with hydrocarbon shows in formation waters solution. The Camoa – 1 well with shows in Une, Guadalupe and Mirador formations,

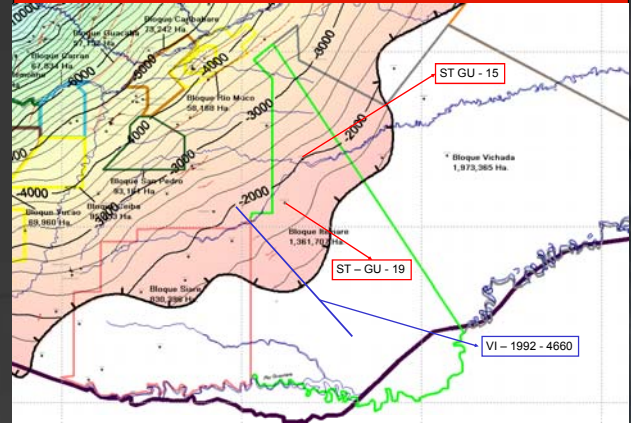
**RECOMENDATIONS:** To improve the current seismic for the stratigraphic interpretation, seismic attributes interpretation. Capillarity analysis in cores. Geochemistry study.

**POSTER 11.8 EXPLORATORY BLOCK ITEVIARE**

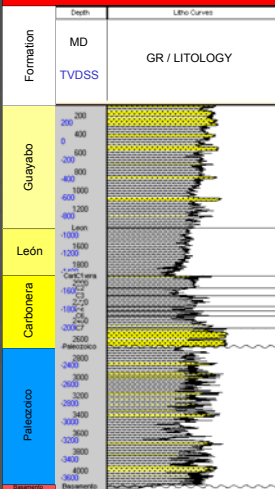
**Location of Iteviare Block**



**Structural Map of Iteviare Block Top Unit C7**

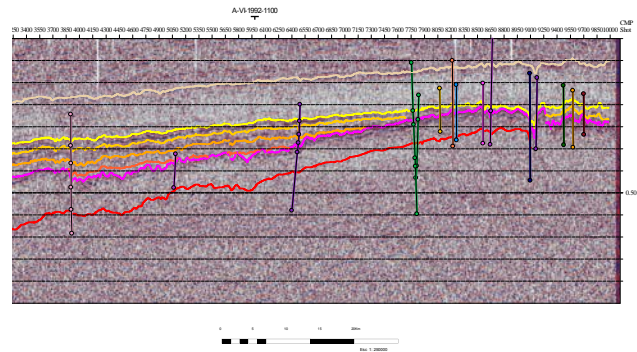
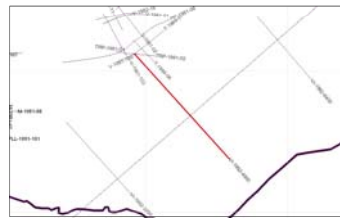


**ST GU - 15**

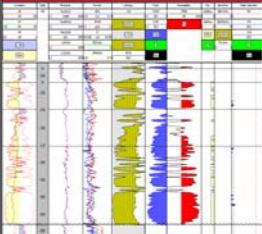


**Seismic Line**

VI - 1992 - 4660



**ST GU - 19 C7 Unit**



**Properties**

Block : Iteviare  
 Area: 1,361,707 Hectares  
 Max. depth to Basement/Paleozoic: - 4000 feet  
 Min. depth to Basement/Paleozoic: ± - 400 feet  
 Main reservoir: C7  
 Max completion thickness: 100 feet  
 Min completion thickness: 50 feet  
 Wells: 2  
 Kilometers of seismic: 374 Aprox. Net: 47x160 Aprox.  
 OOIIP Risk (MMBO) Guadalupe: 40.77  
 Mirador: 154.22  
 C7: 3375.76  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** In C1, C3, C5 and C7 units and in the Mirador Formation. The Mirador Formation overlays the Paleozoic.

**PLAYS:** Plays Rubiales type; structural – stratigraphic combination with the hydrodynamics factor. Fluvial channels en in C1, C3, C5 and C7 units. Pinchouts of C7, C5 and maybe C3 units.

**TRAPS:** Pinchouts against paleotopography, combined traps structural – stratigraphic and hydrodynamics and structural traps normal faults associated Valdivia – Almagro type.

**SEAL:** Units C2 and C4 show good seal characteristics according with its VSH high relation. Unit C6 is sandy and is not a good seal. Similar seal to Rubiales.

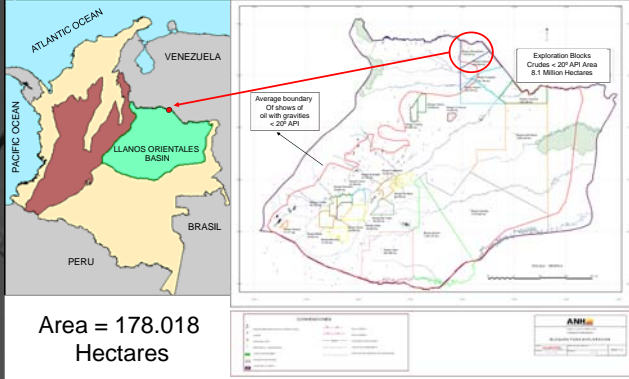
**MIGRATION:** Located at 13 Km. from the Rubiales Field, up dip, so, this could means that it is located in a migration path.

**SHOWS:** The ST GU – 15 well had a show of TAR (Tar – Gilsonita) in a residual way.

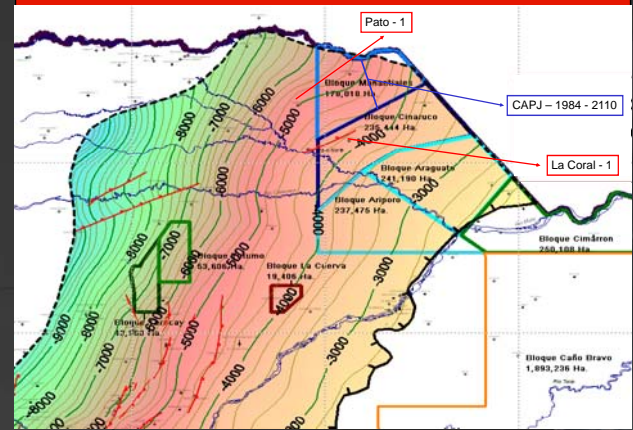
**RECOMENDATIONS:** Geochemistry, gravimetric and magnetometric studies. To check location (coordinates) from lines of the Vichada – 92 Program. To improve and to interpret (280 Km.) and to program new seismic acquisition in a 5 Km net. For semi-detail evaluation.

**POSTER 11.1 EXPLORATORY BLOCK MANANTIALES**

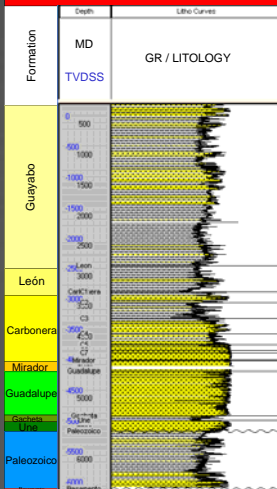
**Location of Manantiales Block**



**Structural Map of Manantiales Block Top of Guadalupe Formation**

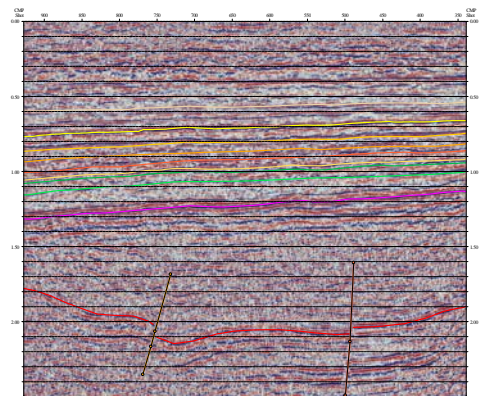
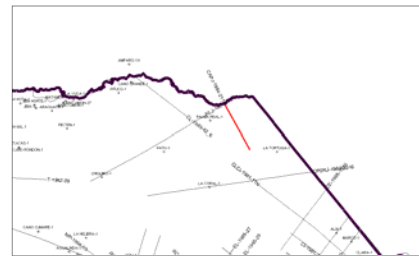


**La Coral - 1**

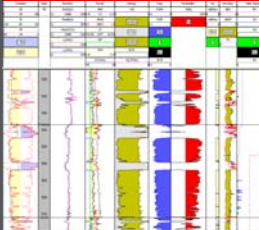


**Seismic Line**

CAPJ – 1984 - 2110



**PATO - 1 Guadalupe Formation**



**Properties**

Block: Manantiales  
 Area: 178.018 Hectares  
 Max depth to Basement/Paleozoic: - 6950 feet  
 Min depth to Basement/Paleozoic: - 4500 feet  
 Main reservoir: All the Cretaceous formations  
 Max. completion thickness : 250 feet  
 Min. completion thickness : 50 feet  
 Wells: 1  
 Kilometers of seismic: 941 Approx. Grid: 3x5 Approx.  
 OOIP Risk (MMBO) Mirador: 195.50  
 C7: 293.68  
 C1, C3 and C5: 217.15

**Summary**

**RESERVOIR:** All the sandy horizons of the basin are present in this block; from the Une Fm. to Unit C1. In view of the producer horizons in most of the heavy oil fields are nearby related to the Paleozoic, the principal exploration objectives in this area of the basin are Cretaceous formations, Mirador and C7 Unit.

**PLAYS:** Fluvial channels in the Mirador Fm. And units C7 to C1. Good porosity and good permeability; Stratigraphic characteristics could be similar with the El Miedo Field. Unit C5 with excellent facies conditions.

**TRAPS:** Mainly stratigraphic (sandy sequences - channels that favor lateral facies changes). Paleotopographic traps over the Basement and Paleozoic. Limited presence of normal and strike-slip big faults.

**SEAL:** Possibility of good seal in C8 with 80% of VSH. In C6 40% of VSH. In Rubiales this has 60% of VSH and there is seal. The best seal is C2. The Leon Formation has gas shows (La Coral - 1 well), that means a possible leaking across the regional seal.

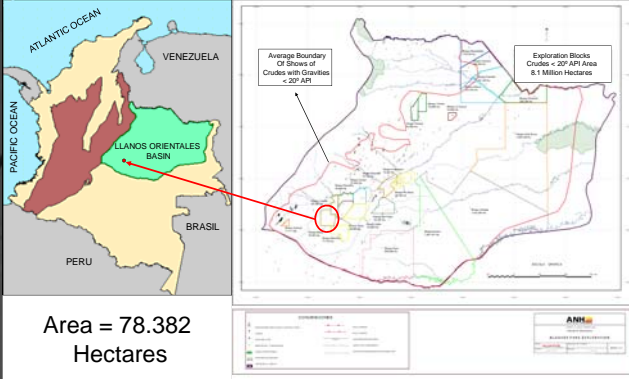
**MIGRATION:** Block located near to Caño Limón, which gives probability of hydrocarbon migration to the blocks of this area near to the Arauca and Casanare rivers. Therefore the risk is given by lack of data, according with the low drilling density.

**SHOWS:** La Coral- 1 well showed poor gas dissolved in León, C1 - C8 and Mirador. The Pato - 1 well, located to the NW corner of the block showed poor residual gas in C7, Los Cuervos and Une. In Mirador and Guadalupe it had a poor oil show. The Caño Grande - 1 well, to the NW corner showed heavy oil.

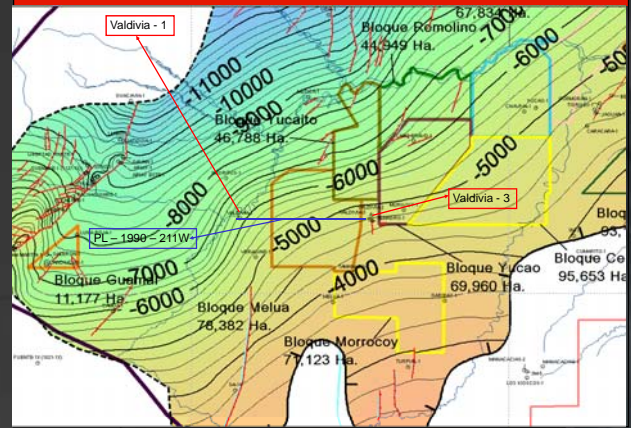
**RECOMENDATIONS:** To improve the current seismic. Is recommended to run 3D seismic in advanced exploration steps, in order to characterize stratigraphic plays. Wells must be described. Is important to realize capillarity analysis to the reservoir sandstones and to the seals, in order to quantify the maximum thickness from the possible oil column. Is recommended to design an exploratory program with stratigraphic wells and a surface geochemistry work.

**POSTER 11.13 EXPLORATORY BLOCK MELUA**

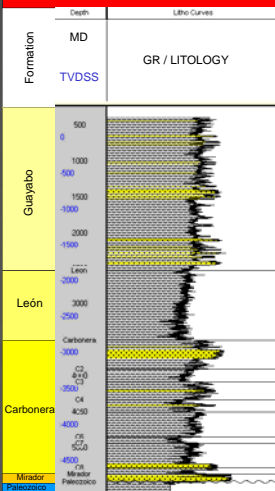
**Location of Melua Block**



**Structural Map of Melua Block Top of Mirador Formation**

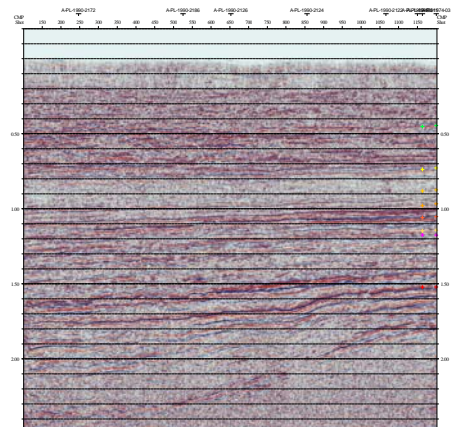
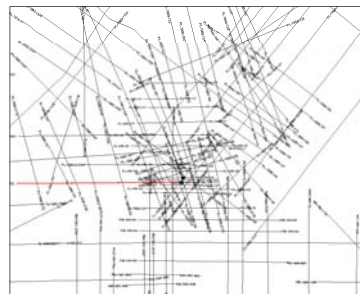


**Valdivia - 3**

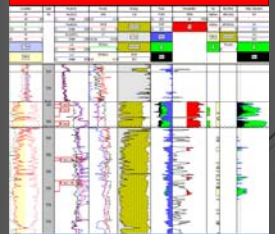


**Seismic Line**

PL – 1990 – 2111W



**Valdivia – 1 Mirador Formation**



**Properties**

Block : Melua  
 Area: 78,382 Hectares  
 Max. depth to Basement/Paleozoic: - 7750 feet  
 Min. depth to Basement/Paleozoic: - 4250 feet  
 Main reservoir: Mirador/Quadalupe  
 Max. completion thickness: 300 feet  
 Min. completion thickness: 50 feet  
 Wells: 0  
 Kilometers of seismic: 840 Aprox. Net: 1.5x2.5 Aprox.  
 OOIP Risk (MMBO) Guadalupe: 166.99  
 C7: 382.02  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** The Guadalupe and Mirador formations and C7 - C1 units from the Carbonera Formation. Sandstones development in T1 into the C8 Unit.

**PLAYS:** Pinchout of the Guadalupe Formation. Local pinchouts of the Mirador Formation and incised valleys with the sandstone facies of T1, which belongs to the C8 Unit. Probability of stratigraphic plays for fluvial channels development in Mirador and sandy units from the Carbonera Formation.

**TRAPS:** Stratigraphics for the pinchouts enumerated above and for the fluvial channels in Mirador and Carbonera formations. Low probability of big structural traps.

**SEAL:** Good seals in C6 and C8 units and shales to the top of the Guadalupe Formation.

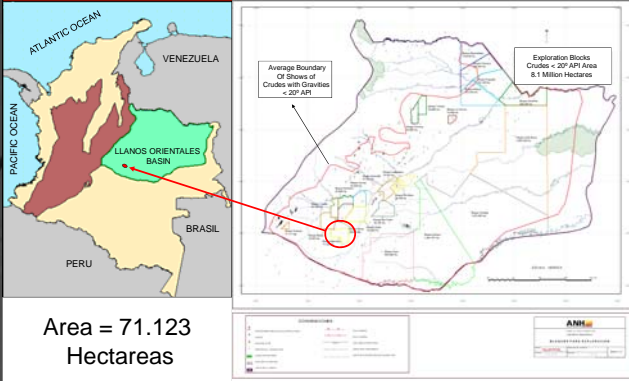
**MIGRATION:** Block located in a migration path surrounded by shows in all levels.

**SHOWS:** Production of the Mirador Formation in the Valdivia-Almagro Field. The Metica – 1 well located downdip had a residual show in Une. the Upia – 1 well, downdip had residual shows in Guadalupe. In the Tamanaco – 1 well, SE there are residual shows in C7, C5 and C3. In the Tamanaco – 1 well there were good quality residual shows in C3 too; shows in the Negrito – 1 well , downdip to the NE.

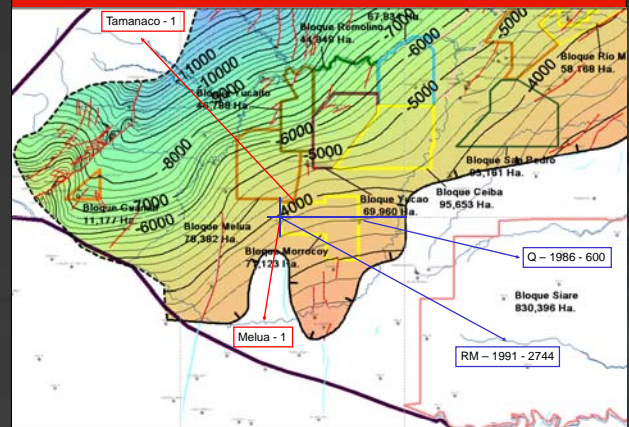
**RECOMENDATIONS:** To improve the current seismic for the stratigraphic interpretation (attributes analysis). To drill two direct wells.

**POSTER 11.12 EXPLORATORY BLOCK MORROCOY**

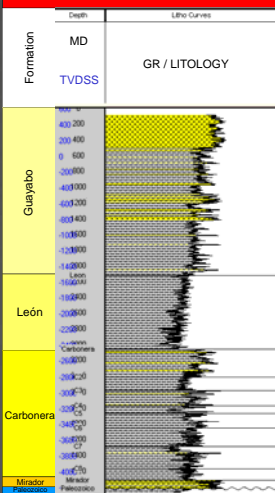
**Location of Morrocoy Block**



**Structural Map of Morrocoy Block Top of Mirador Formation**

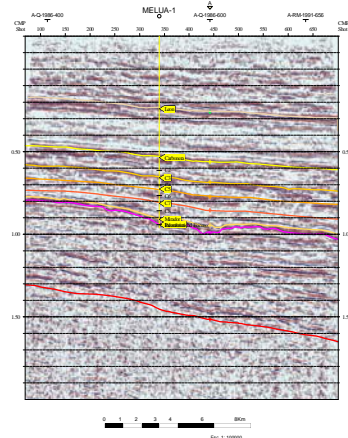


**Tamanaco - 1**

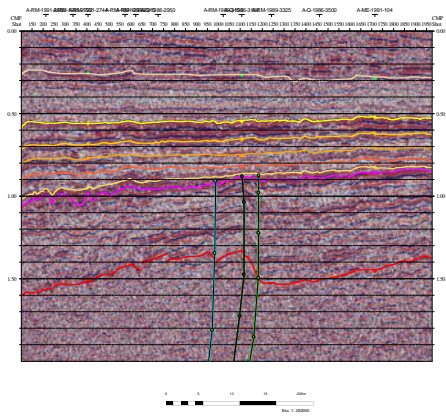


**Seismic Lines**

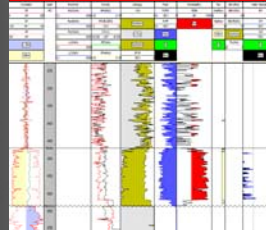
RM – 1991 - 2744



Q – 1986 - 600



**Melua - 1 Mirador Formation**



**Properties**

Block : Morrocoy  
Area: 71,123 Hectares  
Max. depth to Basement/Paleozoic: - 4400 feet  
Min. depth to Basement/Paleozoic: - 3000 feet  
Main reservoir: Mirador/C7  
Max completion thickness: 300 feet  
Min. completion thickness: 50 feet  
Wells: 3  
Kilometers of seismic: 483 Aprox. Net: 2x5 Aprox.  
OOIP Risk (MMBO) Mirador: 131.67  
C7: 382.02  
C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** The Mirador Formation and the C7 - C1 units. Main objectives are Mirador and C7. The C7 Unit is moderately clayey maybe because, to fluvial (borders) channels facies.

**PLAYS:** Stratigraphics for fluvial channels development in Mirador Formation and the sandy units of the Carbonera Formation. Stratigraphics for local pinchouts of the Mirador Formation and for incised valleys with sandstones facies into the C8 Unit (T1 sandstone from Apiay-Castilla), this body T1 produces condensate in the Apiay Field.

**TRAPS:** Stratigraphics of fluvial channels in Mirador and Carbonera formations and probably local pinchouts in Mirador.

**SEAL:** Good seals in the C2, C4, C6 and C8 units

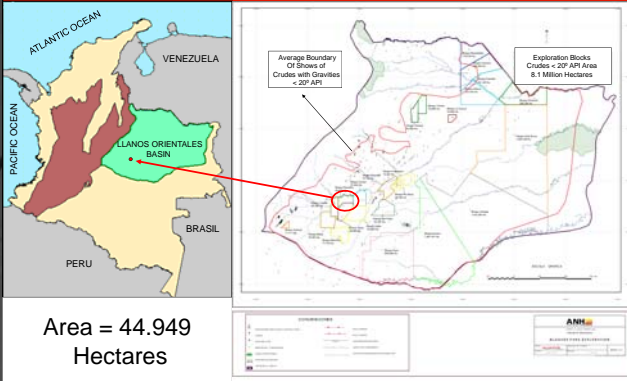
**MIGRATION:** Block located in a migration path surrounded by shows in all levels.

**SHOWS:** Production of the Mirador Formation in the Almagro-Valdivia Field. In Mirador, good quality show in the Turpial – 1 well in the C3 Unit. Shows in the Paso Real – 1 well.

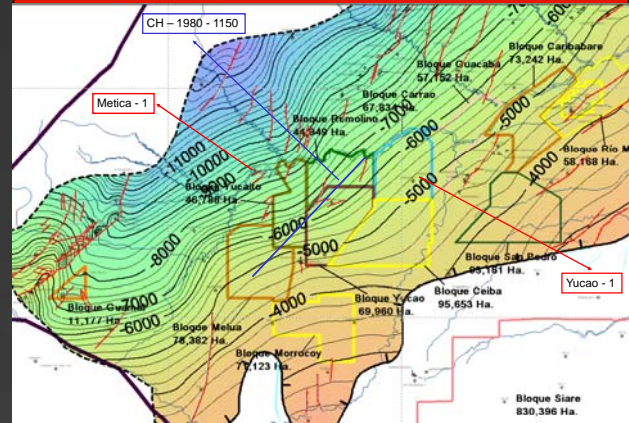
**RECOMENDATIONS:** To improve the current seismic for stratigraphic interpretation (attributes analysis).

**POSTER 11.15 EXPLORATORY BLOCK REMOLINO**

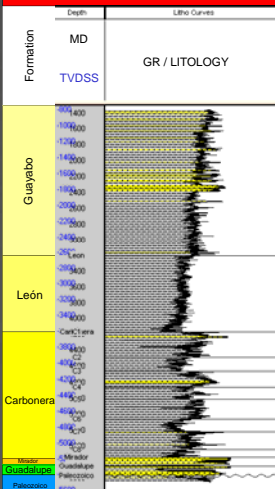
**Location of Remolino Block**



**Structural Map of Remolino Block Top of Mirador Formation**

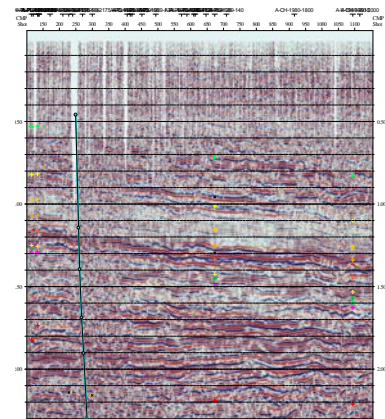
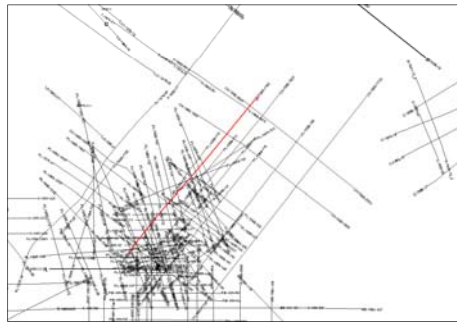


**Yucaco - 1**

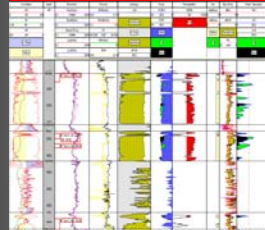


**Seismic Line**

CH – 1980 - 1150



**Metica - 1 Mirador Formation**



**Properties**

Block : Remolino  
 Area: 44,949 Hectares  
 Max. depth to Basement/Paleozoic: 8500 feet  
 Min. depth to Basement/Paleozoic: - 6250 feet  
 Main reservoir: Mirador/Une  
 Max. completion thickness: 300 feet  
 Min completion thickness: 50 feet  
 Wells: 0  
 Kilometers of seismic: 363 Aprox. Net: 2x3 Aprox.  
 OOIIP Risk (MMBO) Mirador: 337.80  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** The Une, Guadalupe and Mirador formations and the C7 - C1 units from the Carbonera Formation. The T1 sandstone could be present into the C8 Unit.

**PLAYS:** Stratigraphic pinchout of the Une Formation. Incised valleys with the sandstone facies of T1 that belongs to C8 Unit. Probability of stratigraphic plays with fluvial channel development in Mirador Formation and the sandstone units from the Carbonera Formation.

**TRAPS:** Stratigraphics. Pinchouts from the Une Formation, Incised valleys filled (T1) and fluvial channels development in Mirador and Carbonera formations.

**SEAL:** In the Gacheta Formation, shales to the top of the Guadalupe Formation and C8 and C6 units. Possible presence of "tar-mat" that complements the seal of the pinchout from the Une Formation.

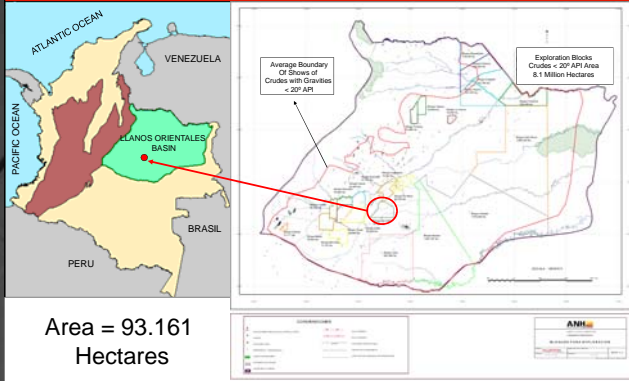
**MIGRATION:** Block located in a migration path surrounded by shows a in all levels.

**SHOWS:** Production of the Mirador Formation in the Valdivia-Almagro Field. The Metica - 1 well had a residual show in the Une Formation. The Upia - 1 well, located downdip had residual shows in Guadalupe. In the Guadalupe Formation, in the Caño Bravo - 1 well, residual and good quality show. In the Yucaco - 1 well there was tar show. In the Tamanaco - 1 well there are residual shows in C7, C5 and C3. In the Chaviva - 1 well toward the E residual and good quality show in C3.

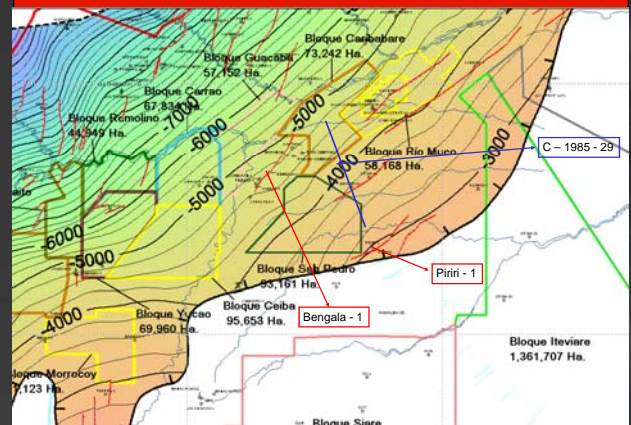
**RECOMENDATIONS:** To improve the current seismic for stratigraphic interpretation (attributes analysis). To drill two direct wells.

**POSTER 11.22 EXPLORATORY BLOCK SAN PEDRO**

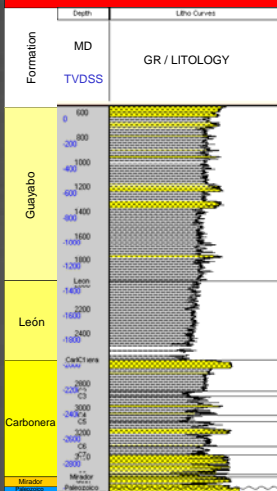
**Location of San Pedro Block**



**Structural Block of San Pedro Block Tope Mirador Formation**

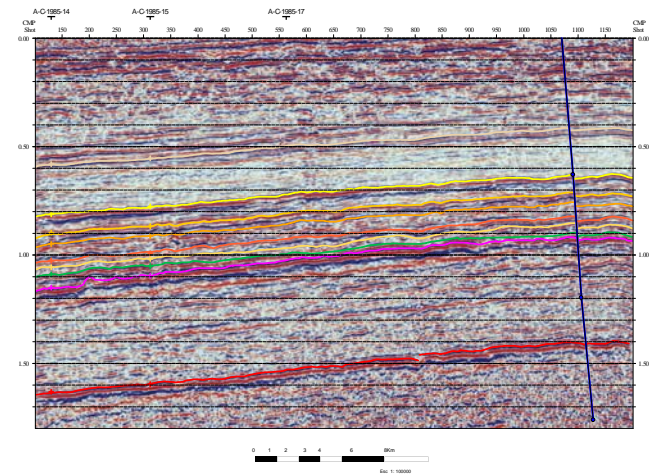


**Piriri - 1**

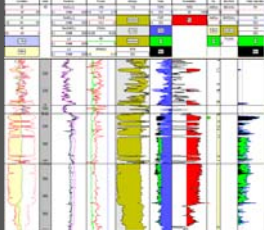


**Seismic Line**

C - 1985 - 29



**Bengala - 1 Mirador Formation**



**Properties**

Block : San Pedro  
 Area: 93.161 Hectares  
 Max. depth to Basement/Paleozoic: - 4500 feet  
 Min. depth to Basement/Paleozoic: - 2850 feet  
 Main reservoir: C7/Mirador  
 Max. completion thickness: 200 feet  
 Min. completion thickness: 50 feet  
 Wells:  
 Kilometers of seismic: 85 approx. Net: 16x30 Aprox.  
 OOP Risk (MMBO) Guadalupe: 7.18  
 Mirador: 492.03  
 C7: 1960.85  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** Good reservoirs, specially in the C5 and C7 units and in the Mirador Formation (incised valleys and fluvial channels).

**PLAYS:** Plays of pinchouts in the Guadalupe Formation; channel plays and pinchouts in the south limit, in the Tertiary (Mirador Formation). Area with similar possibilities to the Rubiales Field. Possibility of antithetic faults in the NW of the block. This could be similar to the Bengala - 1 and Guarrojo - 1 wells faults.

**TRAPS:** Pinchouts and fluvial channels development. Possibility of structural traps of antithetic faults; just probably toward the NW of the block, similar to the traps in Cara Cara - 1, Bengala - 1 and Guarrojo - 1 wells.

**SEAL:** Is excellent in C2 and good in C6 units.

**MIGRATION:** Block located in an effective migration path with commercial accumulations downdip ( Bengala - 1, Jaguar - 1 and Cara Cara - 1 wells) and updip (Rubiales Field).

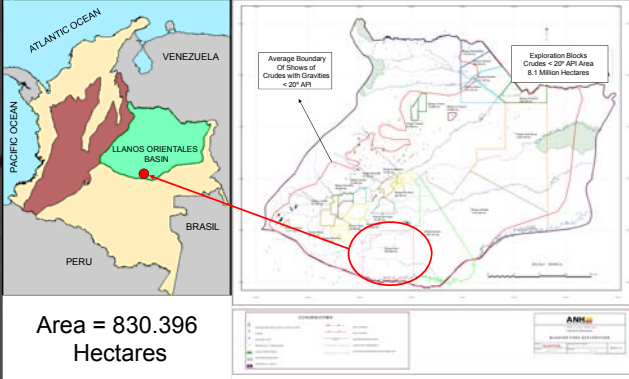
**SHOWS:** Block surrounded by wells with very good shows (asphalt in the Guarrojo - 10 well, in the Guadalupe Formation).

**RECOMENDATIONS:** To Acquire 2D seismic in a 2 km net in order to improve the current cover to check the possibility of structural traps (antithetic faults). Drill a well or acquire 3D seismic, after the 2D seismic. Capillarity analysis to the bordering wells.

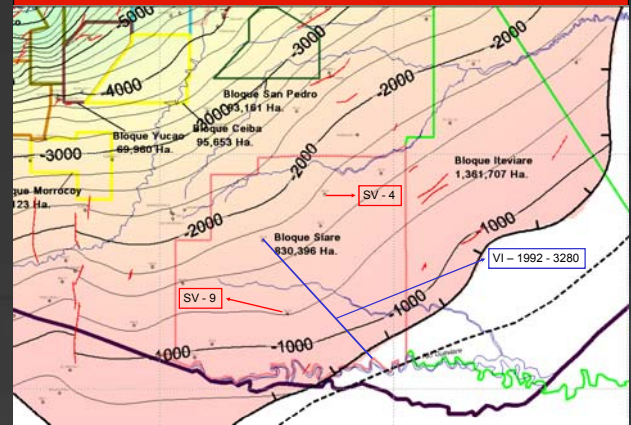


**POSTER 11.9 EXPLORATORY BLOCK SIARE**

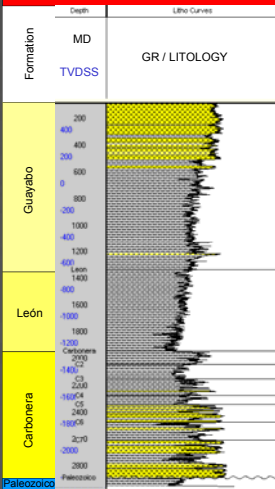
**Location of Block Siare**



**Structural Map of Block Siare Top of C5 Unit**

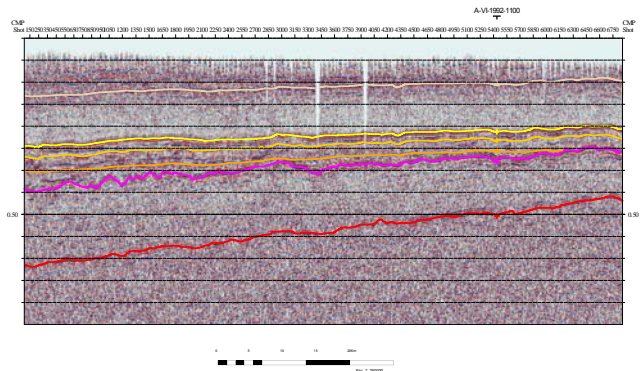
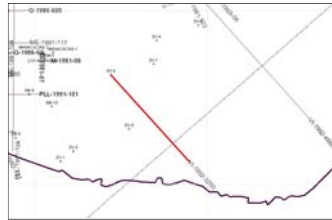


**SV - 4**

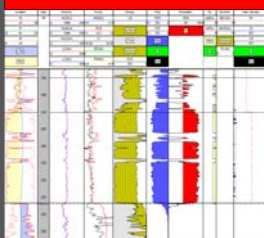


**Seismic Line**

**VI - 1992 - 3280**



**SV - 9 C5 Unit**



**Properties**

Block : Siare  
 Area: 830.396 Hectares  
 Max. depth to Basement/Paleozoic: - 2550 feet  
 Min depth to Basement/Paleozoic: ≤ - 850 feet  
 Main reservoir: C7/C5  
 Max. completion thickness: 100 feet  
 Min. completion thickness: 50 feet  
 Wells: 8  
 Kilómetros de seismic: 374 Aprox. Net: 40x50 Aprox.  
 OOIIP Risk (MMBO) C7: 1977.87  
 C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** In C1, C3, C5 and C7 units.

**PLAYS:** Correspond to pinchouts in C7 and C5; fluvial channels development in C1, C3, C5 and C7 units. Possibility of play Rubiales type.

**TRAPS:** Combined structural - stratigraphic traps by hydrodynamic effect.

**SEAL:** The C6 Unit is relatively sandy in the area, which could decrease its sealing capacity.

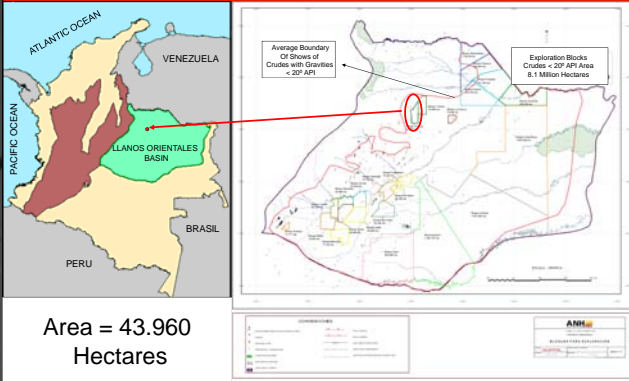
**MIGRATION:** The Manacacias wells had good quality oil shows and in continuous phase in C7 (these are producer wells) and they are located 20 km toward the east of the block, downdip. Continuous phase associated to migration paths and paleo-OWC. It is related to the oil and gas presence, with a connection across the porous net.

**SHOWS:** The SV - 4 well showed residual oil in the C7 Unit. The SV - 7 well showed kerogen in the C7 Unit and the SV - 6 well kerogen in C3. The SV - 9 well in the C5 Unit showed residual kerogen. The dry wells are SV - 5, SV - 7, SV - 8 and SM - 10.

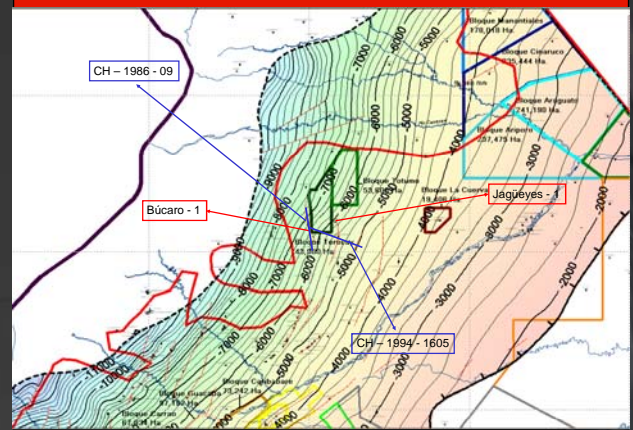
**RECOMENDATIONS:** To improve and to interpret the current seismic (350 Km.), 170 Km. from Vichada 92, 120 Km. From line HP-81-7 - to correlate with the Manacacias wells and 60 Km. From lines T - 89 to correlate with Rubiales Field.

**POSTER 11.19 EXPLORATORY BLOCK TERECAJ**

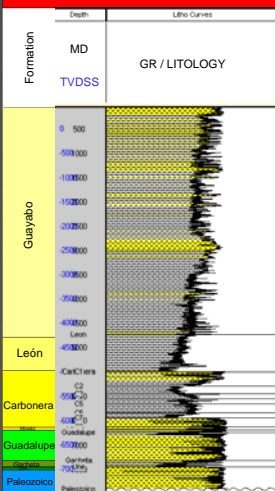
**Location of Terecay Block**



**Structural Map of Terecay Block Top of C7 Unit**

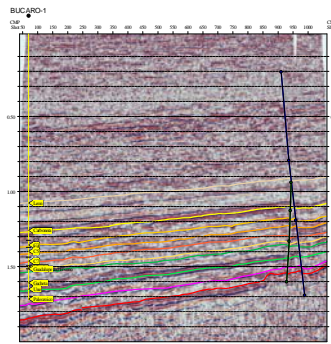


**Jagüeyes - 1**

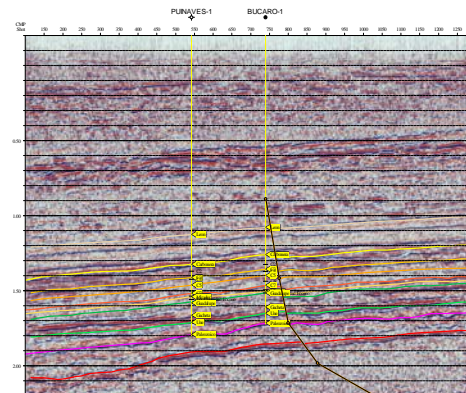


**Seismic Line**

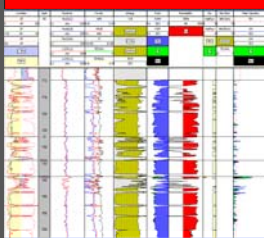
CH – 1994 - 1605



CH – 1986 - 09



**Búcaro - 1 C7 Unit**



**Properties**

Block: Terecay  
 Area: 43,960 Hectares  
 Max depth to Basement/Paleozoic: - 9250 feet  
 Min. depth to Basement/Paleozoic: - 7000 feet  
 Main reservoir: C7/Mirador  
 Max completion thickness: 200 feet  
 Min. completion thickness: 50 feet  
 Wells: 1  
 Kilometers of seismic: 240 Aprox. Net: 3x5 Aprox.  
 OOIP Risk (MMBO) Mirador: 518.89  
 C1, C3 and C5: 217.15

**Summary**

**RESERVOIR:** All the formations from Cretaceous to Tertiary, specially Unit C7 and the Mirador Formation. Unit C1 is well developed and with possibilities of Hydrocarbon reservoir.

**PLAYS:** Located in the structural dominion of antithetic faults . Possible play associated to transcurrent faults near to Caño Limón Field, with big sandstone packets, where transcurrent faults helped to the trap formation. In the C7 Unit there are axial drainage planes of possible channels.

**TRAPS:** Mainly antithetic faults. Possibility of trapping associated to transcurrent faults like presents in Caño Limón Field. Toward the north is the most important area, where could be find transcurrent faults. With the density of seismic covering 3x5 km, there have not been detected big structures. Younger levels of Carbonera could generate stratigraphic traps.

**SEAL:** In Gacheta and shales to the top of Guadalupe Formation and units C8 to C2.

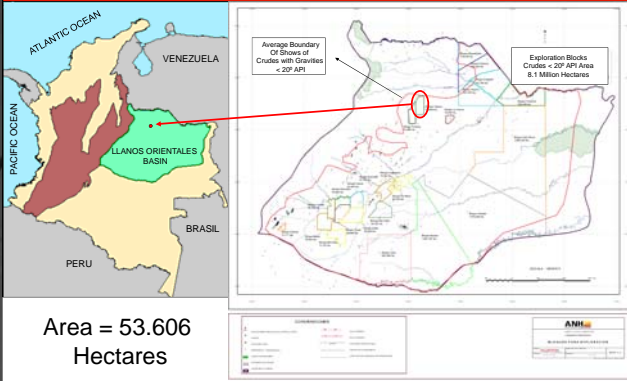
**MIGRATION:** Zone with good hydrocarbon migration paths updip and downdip of block. There is good mobility and fluids connectivity. There is not compartment; this ensures just one flow unit.

**SHOWS:** The only one present well into the block is the Búcaro-1 well with continuous oil phase in C7, Mirador and Guadalupe formations; poor residual show in C8. Continuous phase in the Jagüeyes-1 well, updip in the Guadalupe Formation. Downdip, in the Camungo-1 and Joropo-1 wells residual and good quality shows in the Guadalupe Formation. The Gacheta Formation in the Búcaro-1 and Guahibo-1 wells showed an oil and gas migration path. The Chaparrito Norte -1 well, to the S of the block had residual phase in C7 Unit. Unit C5 showed a poor oil show in residual phase in the Búcaro-1 well. In the Chaparrito Norte-1 well, C3 Unit had a good oil show in continuous phase.

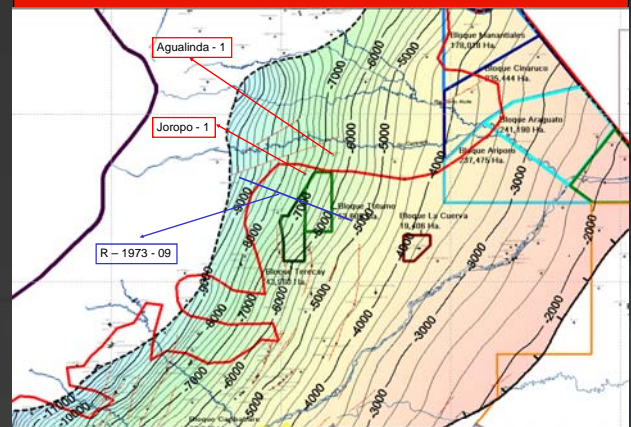
**RECOMENDATIONS:** To improve all the seismic of the block. Structural model to understand possible and subtle traps associated to small faults (antithetic), or transcurrents with few vertical displacement.

**POSTER 11.20 EXPLORATORY BLOCK TOTUMO**

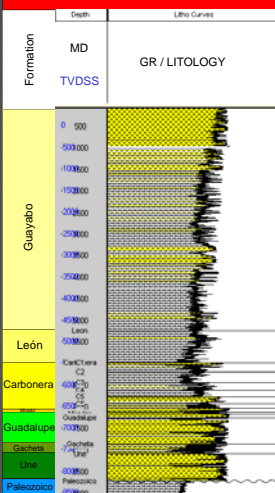
**Location of Totumo Block**



**Structural Map of Totumo Block Top C7 Unit**

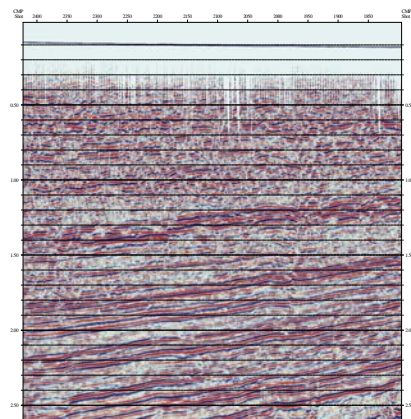
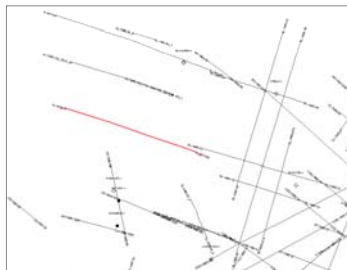


**Agualinda - 1**

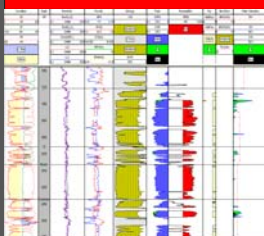


**Seismic Line**

R - 1973 - 09



**Joropo - 1 C7 Unit**



**Properties**

Block : Totumo  
 Area: 53,606 Hectares  
 Max. depth to Basement/Paleozoic: - 9000 feet  
 Min. depth to Basement/Paleozoic: - 6800 feet  
 Main reservoir: C7/Mirador  
 Max. completion thickness: 200 feet  
 Min. completion thickness: 50 feet  
 Wells: 0  
 Kilometers of seismic: 384 Aprox. Net: 2x5 Aprox.  
 OOIP Risk (MMBO) Mirador: 518.89  
 C1, C3 and C5: 217.15

**Summary**

**RESERVOIR:** All the formations to Cretaceous to Tertiary, specially C7 Unit and the Mirador, Uña and Guadalupe formations. Unit C1 is well developed and with possibilities of hydrocarbon reservoir.

**PLAYS:** Located in the structural dominion of antithetic faults . Possible play associated to transcurrent faults near to Caño Limón Field, with big sandstone packets. The 2x5 Km. seismic net had not been enough to detect big structural traps. In C7 there are axial planes of channels.

**TRAPS:** Mainly antithetic faults. Possibility of trapping associated to transcurrent faults like presents in Caño Limón Field. Toward the north is the most important area, where could be find transcurrent faults. Younger levels of Carbonera Formation could generate stratigraphic traps.

**SEAL:** The best seal is C6. C8 is not a good seal.

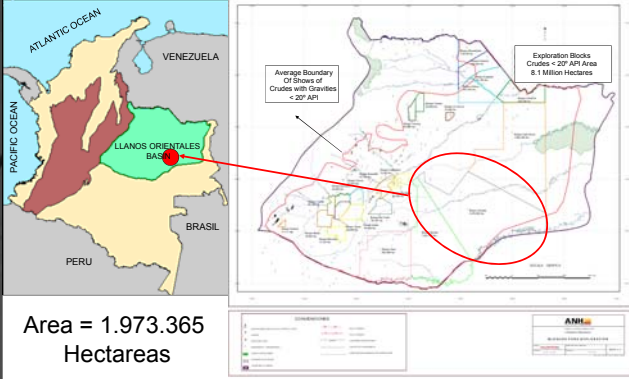
**MIGRATION:** Zone with good hydrocarbon migration paths updip and downdip of block. There is good mobility and fluids connectivity. There is not compartment.

**SHOWS:** Continuous phase in the Jagueyes-1 well to the south, updip in the Guadalupe Formation, downdip, in the Camungo-1 well toward the west and Joropo-1 well to the north there are residual shows of good quality in Guadalupe. The Chaparrito Norte -1 well, toward the south from the block had a residual phase in C7. In C3 had a good oil show in continuous phase. The Gacheta Formation in the Búcaro - 1 and Guahibo - 1 wells showed an oil and gas migration path.

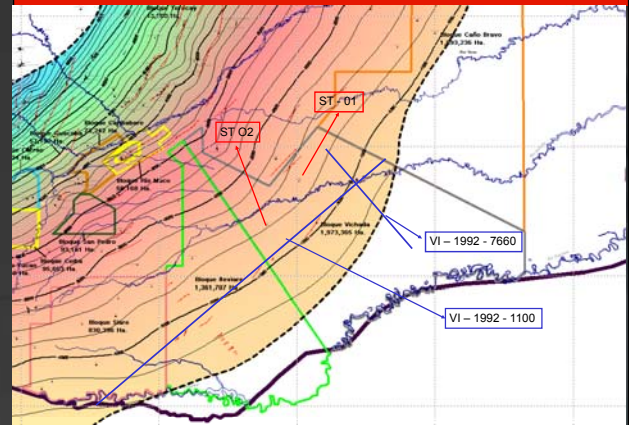
**RECOMENDATIONS:** To improve all the seismic of the block. Structural model to understand possible and subtle traps associated to small faults (antithetic), or transcurrents with few vertical displacement.

**POSTER 11.7 EXPLORATORY BLOCK VICHADA**

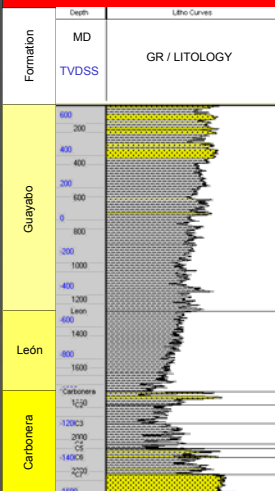
**Location of Vichada Block**



**Structural Map of Vichada Block Top C3 Unit**



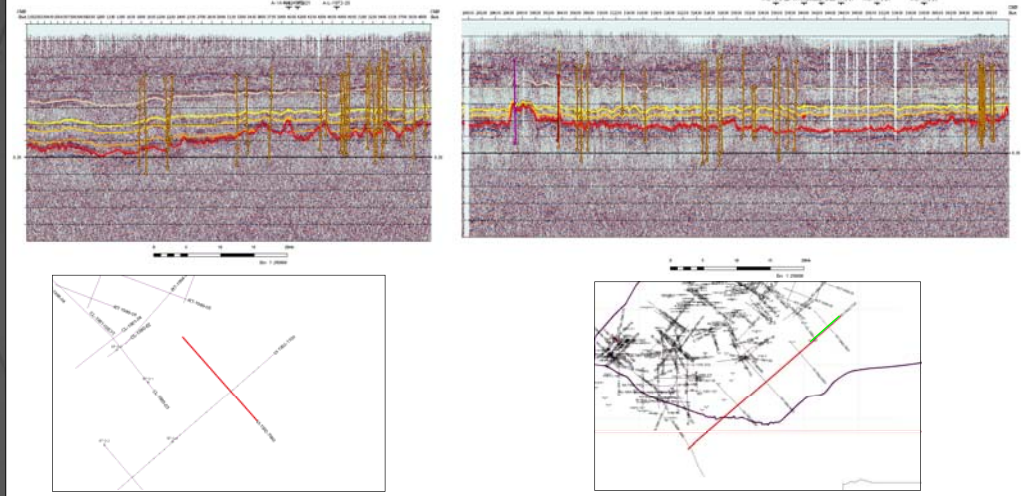
**ST O-2**



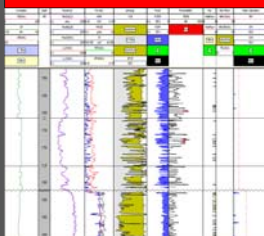
**Seismic Lines**

VI-1992-7660

VI-1992-1100



**ST 0 - 1 Unidad C3**



**Summary**

**RESERVOIR:** In C1, C3, C5 and C7 units and Mirador Formation in the west corner.

**PLAYS:** Possibility of pinchouts from C1, C3, C5 and C7 units; this one in the NW corner of the block, near to the Cabiona – 1 well. Fluvial channels in C1, C3, C5 and C7 units. Play Rubiales type, combined structural – stratigraphic with a hydrodinamism factor, in a NE-SW direction. It has an important roll en in the petroleum acumulation. Because of the few seismic covering there had not been recognized structural plays.

**TRAPS:** Pinchouts. Combined structurals, stratigraphics and hydrodinamics traps.

**SEAL:** Unit C6 is relatively sandy in the area which could indicate a decrease in its sealing quality. Units C2 and C4 have seal characteristics.

**MIGRATION:** The proximity to Rubiales Field (80 Km.) and the shows founded in the ST O2 well permit deduce that this block is located in a migration path.

**SHOWS:** The ST O2 well, in C7 showed oil of good quality in residual en phase.

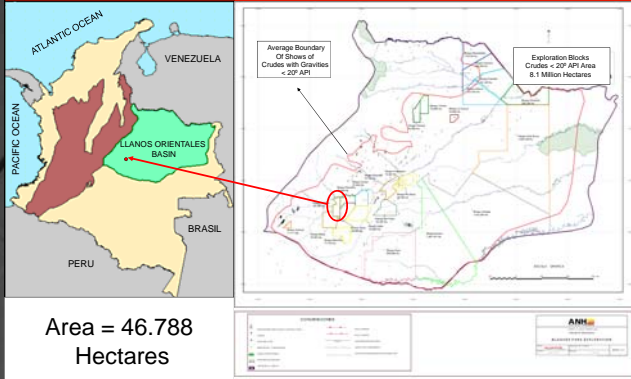
**RECOMENDATIONS:** To check the location of the Vichada 92 lines, to improve and to interpret the existent seismic (350 Km.) and to acquire more seismic in a 5 Km. net (semi detail); because of the low data density of the area. Geochemical study and surface gas sample.

**Properties**

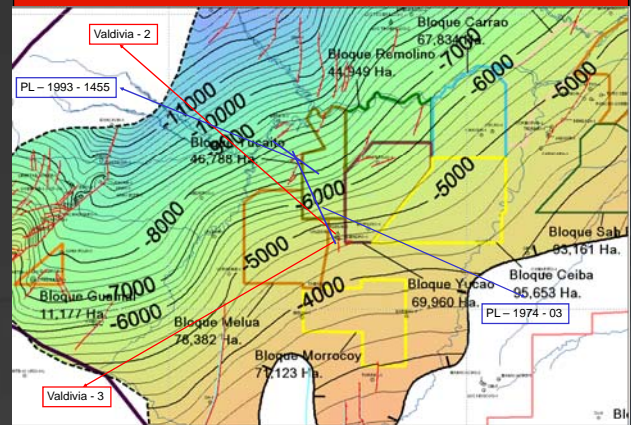
Block : Vichada  
 Area : 1.973.365 Hectares  
 Max. depth to Basement/Paleozoic: - 4000 feet  
 Min. depth to Basement/Paleozoic: - 250 feet  
 Main reservoir: C3  
 Max. completion thickness: 80 feet  
 Min. completion thickness: 50 feet  
 Wells: 3  
 Kilometers of seismic: 548 Aprox. Net: 45x175 Aprox.  
 OOIP Risk (MMBO) Mirador: 154.22  
 C7: 18.37  
 C1, C3 and C5: 282.01

**POSTER 11.14 EXPLORATORY BLOCK YUCAITO**

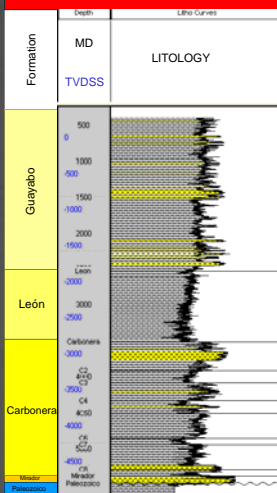
**Location of Yucaito Block**



**Structural Map of Yucaito Block Top Mirador Formation**



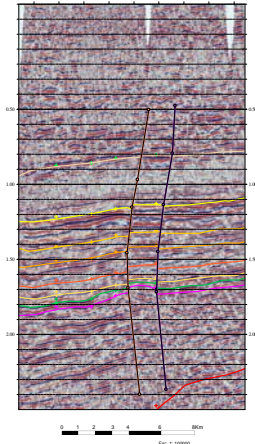
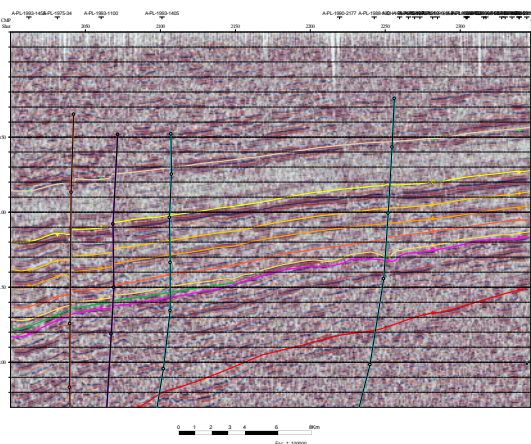
**Valdivia - 3**



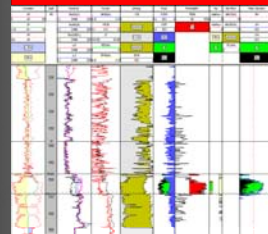
**Seismic Lines**

PL – 1974 - 03

PL – 1993 - 1455



**Valdivia - 2 Mirador Formation**



**Properties**

Block : Yucaito  
 Area: 46,788 Hectares  
 Max. depth to Basement/Paleozoic: - 9500 feet  
 Min. depth to Basement/Paleozoic: - 5250 feet  
 Main reservoir: Mirador/Une  
 Max. completion thickness: 300 feet  
 Min. completion thickness: 50 feet  
 Wells: 0  
 Kilometers of seismic: 477 Aprox. Net: 1.5x3 Aprox.  
 OOIP Risk (MMBO) C1, C3 and C5: 282.01

**Summary**

**RESERVOIR:** Best objectives are the Une and Mirador formations. Therefore is considered reservoir from Une Formation to C1 Unit. The sandstone body, T1 is present in C8 Unit.

**PLAYS:** Pinchout of Une and Guadalupe formations. Local pinchouts of Mirador Formation, incised valleys with T1 (sandstones facies) which belongs to C8 Unit. Probability of stratigraphic plays by fluvial channels development in Mirador and the sandy units from Carbonera Formation.

**TRAPS:** Stratigraphics. Pinchouts in the Cretaceous, local pinchouts of the Mirador Formation and fluvial channels development in Mirador and Carbonera.

**SEAL:** In the Gacheta Formation, shales to the top of Guadalupe Formation and C8 and C6 units.

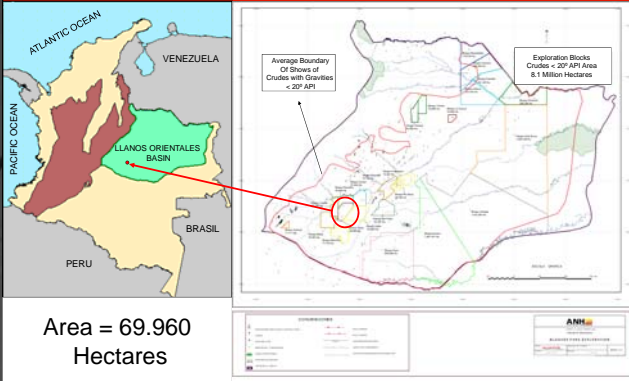
**MIGRATION:** Block located in a migration path surrounded by shows in all levels. The Valdivia – Almagro Field is located updip.

**SHOWS:** The Metica-1 well toward the NW, located downdip had a residual show at the Une Formation. The Upia-1 well to the N, downdip had residual shows in Guadalupe. In this formation, at the Caño Bravo – 1 well to the E, residual and good quality show. In the Tamanaco – 1 well there are residuals in C7, C5 and C3. Shows in the Negritos – 1 well.

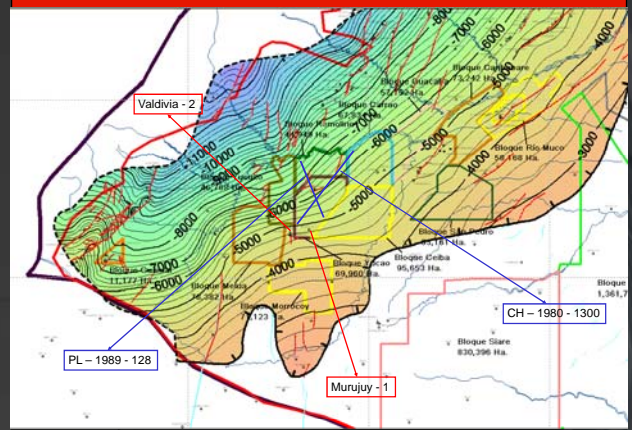
**RECOMENDATIONS:** To improve the current seismic for the stratigraphic interpretation (attributes analysis). To drill to direct wells.

**POSTER 11.17 EXPLORATORY BLOCK YUCAO**

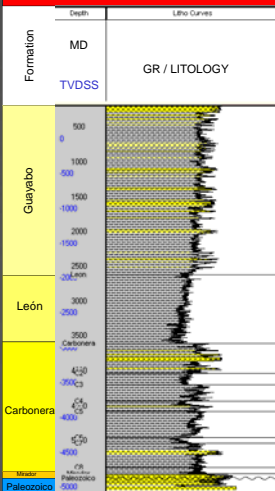
**Location of Yucao Block**



**Structural Map of Yucao Block Top Mirador Formation**

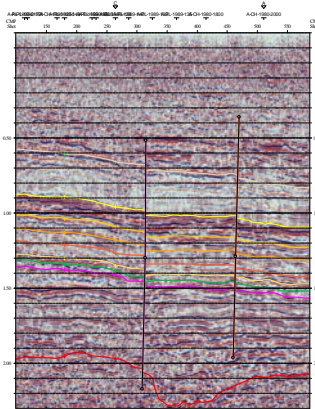


**Valdivia - 2**

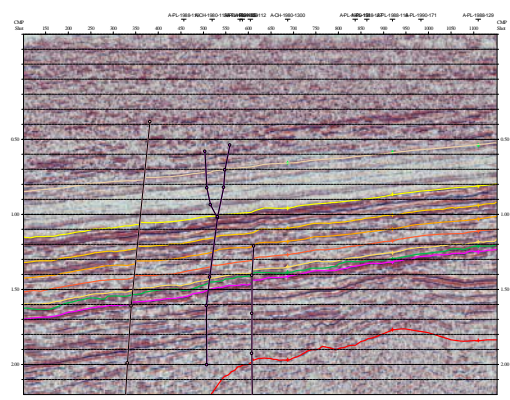


**Seismic Lines**

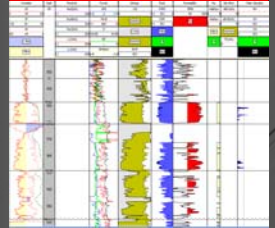
CH – 1980 - 1300



PL – 1989 - 128



**Murujuy - 1 Mirador Formation**



**Summary**

**RESERVOIR:** The Guadalupe and Mirador formations and units C7 - C1 from the Carbonera Formation. Main objectives are Mirador and C7. Possible presence of T1 sandstone into the C8 Unit.

**PLAYS:** Local pinchouts of the Mirador Formation and incised valleys with the sandstone facies from T1, which belongs to C8 Unit. At the Mirador Formation and the units from the Carbonera Formation, there are the possibility of stratigraphic plays for fluvial channels development.

**TRAPS:** stratigraphics by local pinchouts from the Mirador Formation, T1 filling incised valleys and fluvial channels development in the Mirador and Carbonera formations. The Murujuy - 1 and Caño Bravo - 1 wells had like one of their objectives the Guadalupe Formation pinchout, without success.

**SEAL:** Good seals in C6 and C8 units and shales to the top of Guadalupe Formation.

**MIGRATION:** Block located in a migration path surrounded by shows in all levels.

**SHOWS:** In the Guadalupe Formation, in the Caño Bravo - 1 well residual and good quality show.

**RECOMENDATIONS:** To improve the current seismic for the stratigraphic interpretation (attributes analysis).

**Properties**

- Block: Yucao
- Area: 69,960 Hectares
- Max depth to Basement/Paleozoic: - 7350 feet
- Min. depth to Basement/Paleozoic: - 4750 feet
- Main reservoir: Mirador/Guadalupe
- Max. completion thickness: 300 feet
- Min. completion thickness: 50 feet
- Wells: 3
- Kilometers of seismic: 814 Aprox. Net: 1.5x2 Aprox.
- OOIP Risk (MMBO) Mirador: 337.80
- C7: 382.02
- C1, C3 and C5: 282.01