

# RONDA

## COLOMBIA 2021

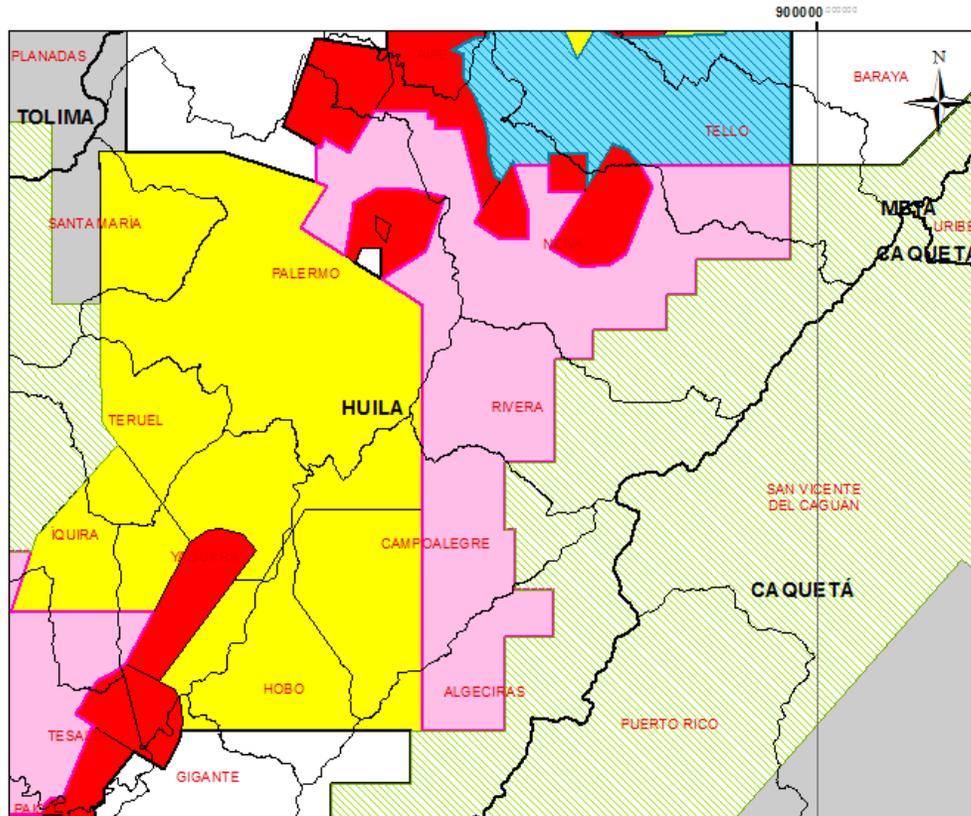
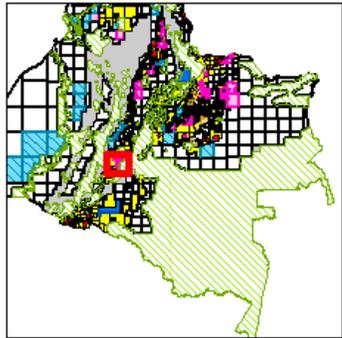
**Upper Magdalena Valley**  
**VSM 13-2**

November 12, 2021

## Content

- Location
- Infraestructure
- Prospectivity
  - Sub thrust prospectivity in the southern part
  - Possible prospectivity south of the San Francisco field

# Location



**LEYENDA**

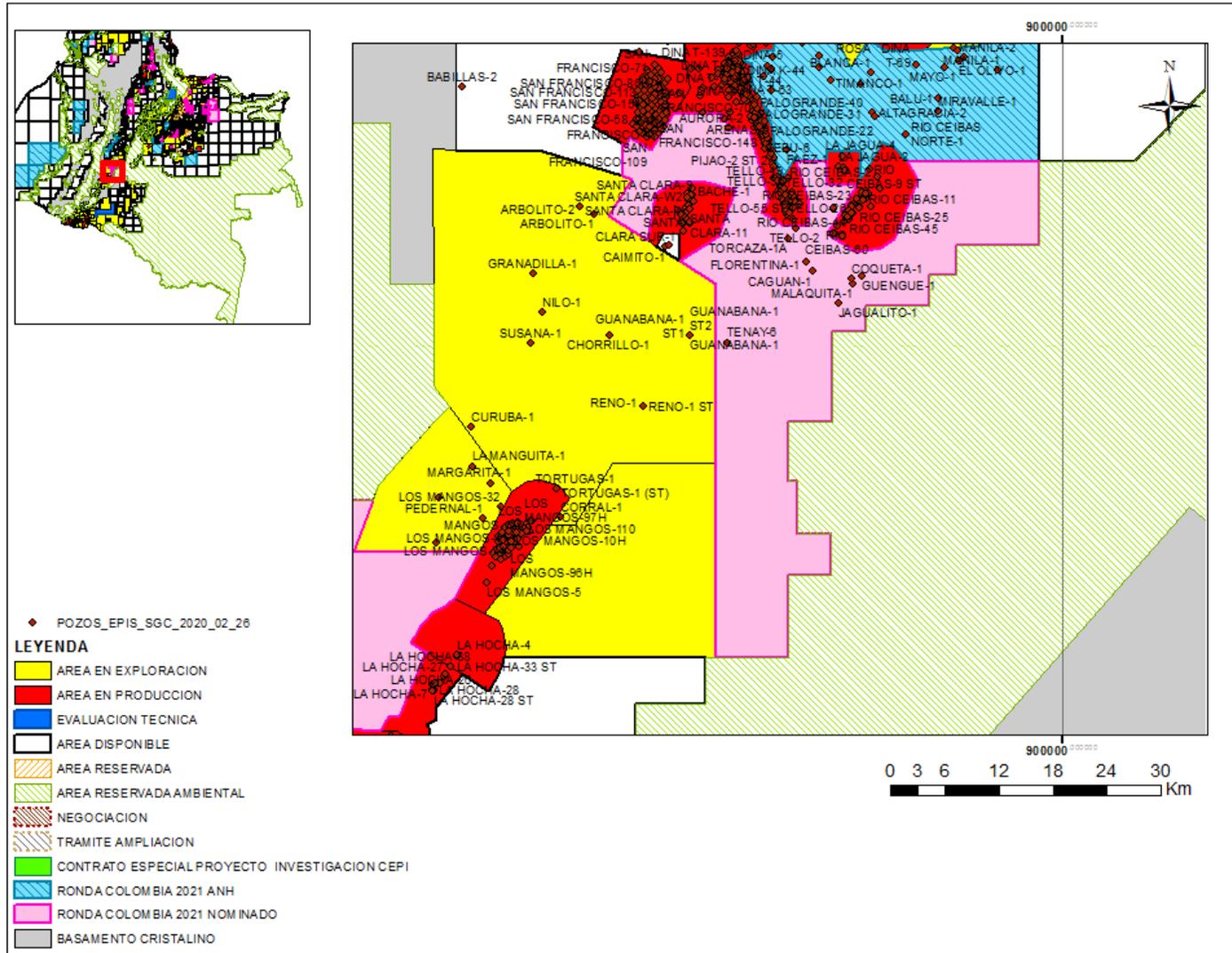
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- AREA RESERVADA
- AREA RESERVADA AMBIENTAL
- NEGOCIACION
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- CONTRATO ESPECIAL PROYECTO INVESTIGACION CEPI
- RONDA COLOMBIA 2021 ANH
- RONDA COLOMBIA 2021 NOMINADO
- BASAMENTO CRISTALINO

Basin: Upper Magdalena Valley

Department: Huila

Municipalities: Tello, Neiva, Rivera, Campoalegre, Algeciras, Palermo

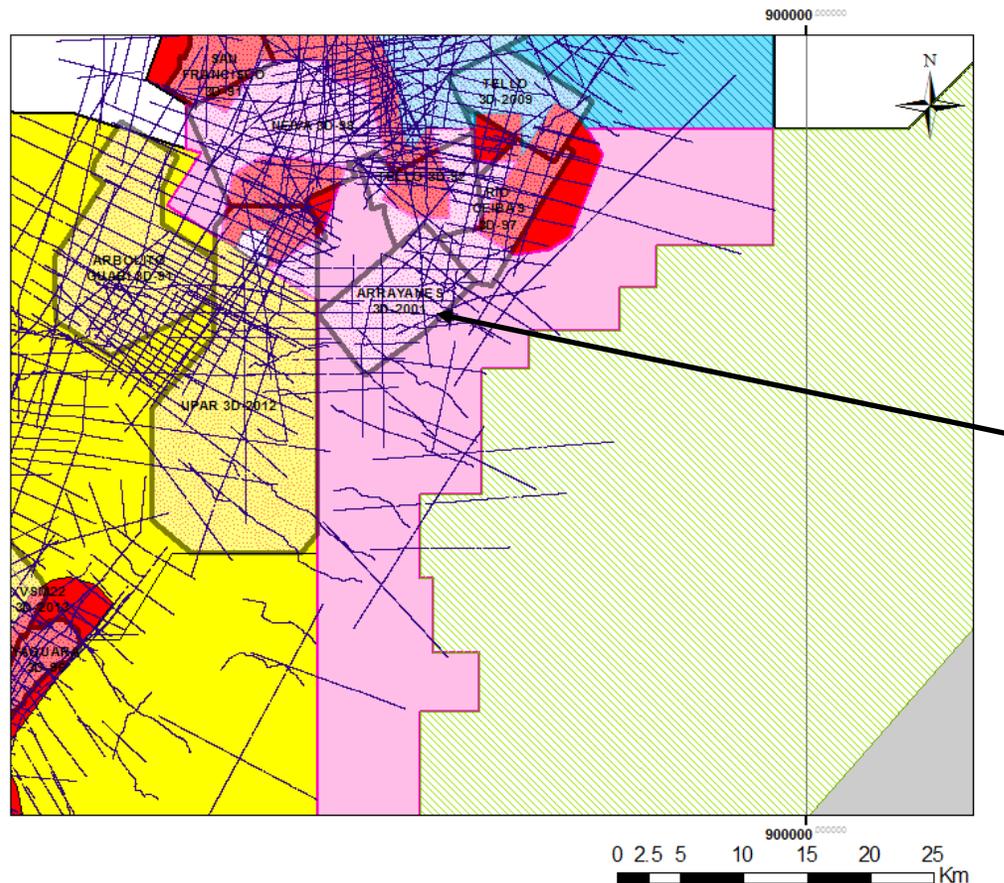
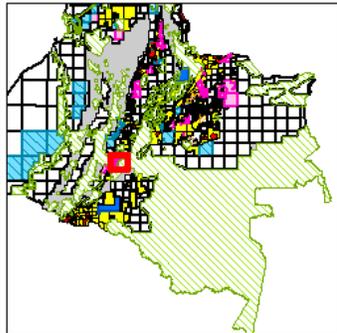
## Infraestructure - Wells



Drilled Wells located in the área (9)

- Torcaza– 1A
- Tello-2
- Florentina-1
- Caguan-1
- Coqueta-1
- Guengue-1
- Malaquita-1
- Jagualito-1
- Tenay-6 ST

# Infraestructura - Seismic



2D Seismic line: 198

2D Seismic line: 176 "Lenght greater than 1 Km"

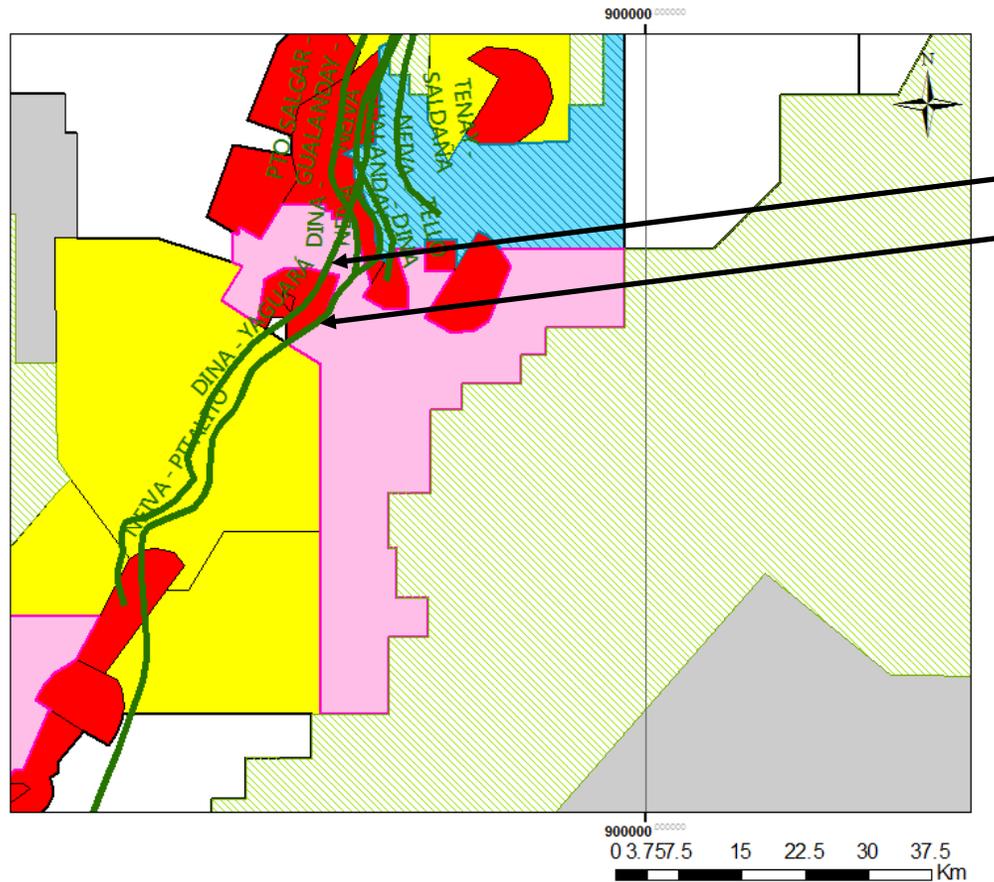
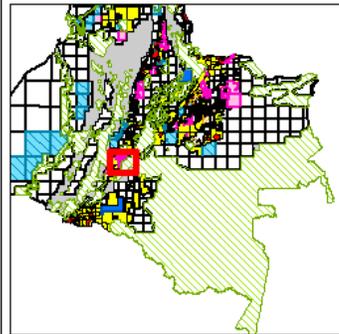
3D Seismic :

3D Arrayanes 2001 (71.4 Km2)

3D Neiva-98

- SISMICA2D\_EPIS\_SGC\_2020\_02\_26
- SISMICA3D\_EPIS\_SGC\_2020\_02\_26
- LEYENDA**
- AREA EN EXPLORACION
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## Infraestructura – Oil production



- OLEODUCTOS**
- LEYENDA**
- AREA EN EXPLORACION
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Pipeline:

Dina – Yaguara

Neiva - Pitalito

Nearby oil fields:

Rio Ceibas (Caguan - Ecopetrol)

La Jagua (Tello – La Jagua - Ecopetrol)

Tello (Tello – La Jagua - Ecopetrol)

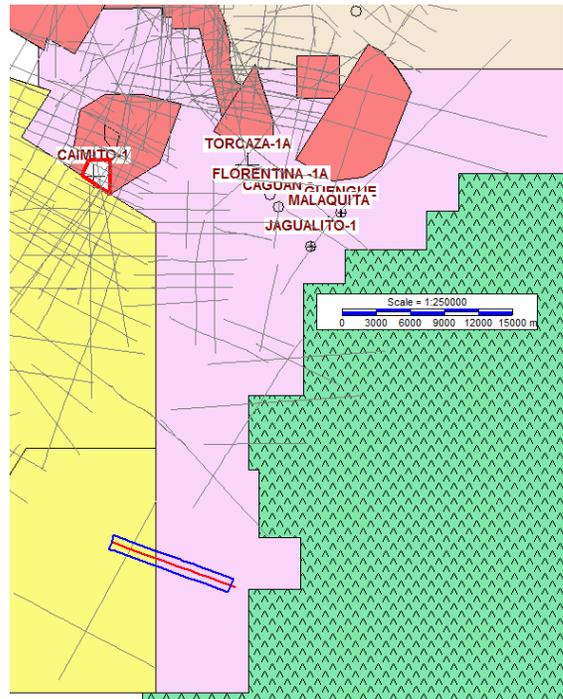
Santa Clara (Santa Clara – Ecopetrol)

San Francisco (Palermo – Ecopetrol)

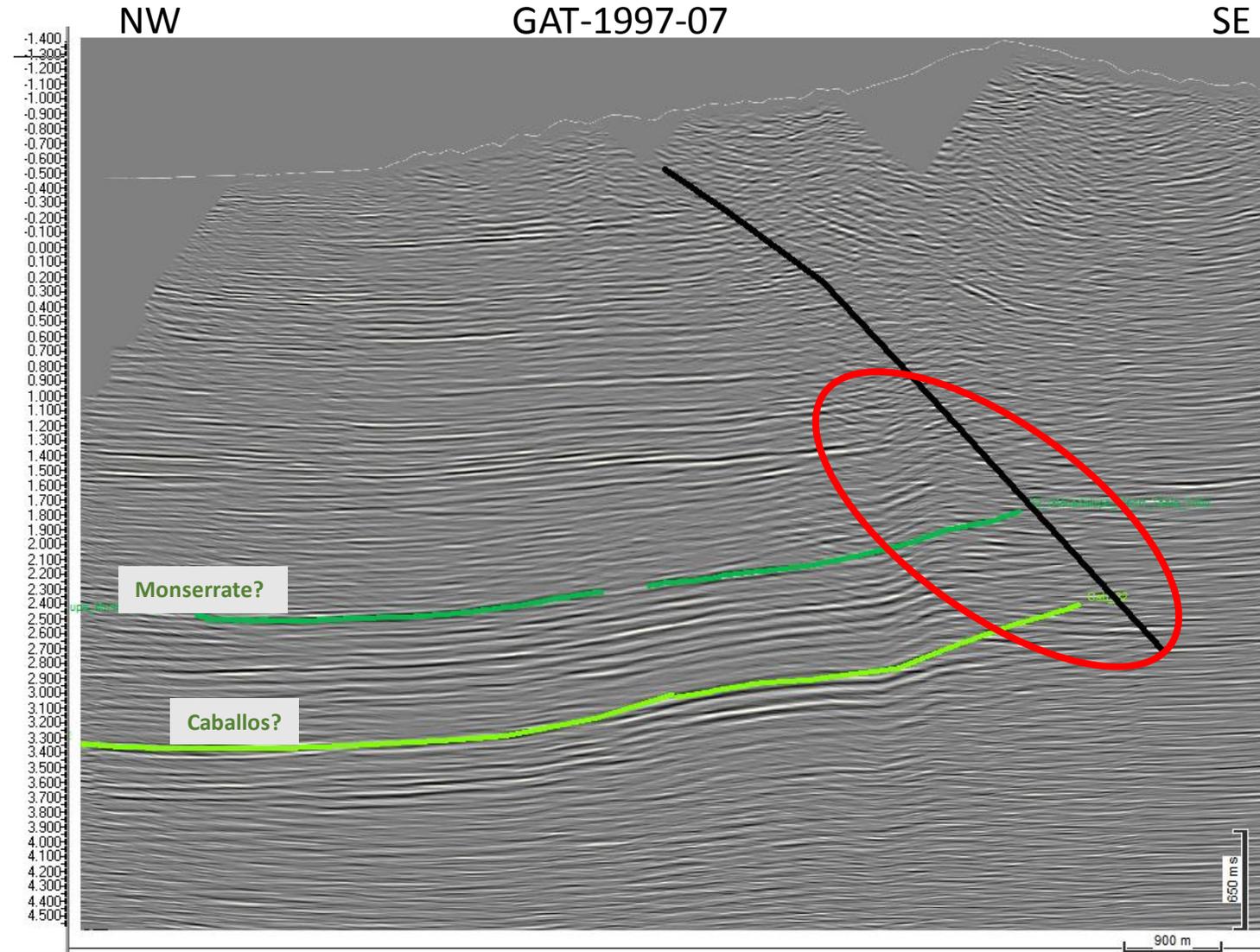
Tenay (Pijao Potrerillo – Ecopetrol)

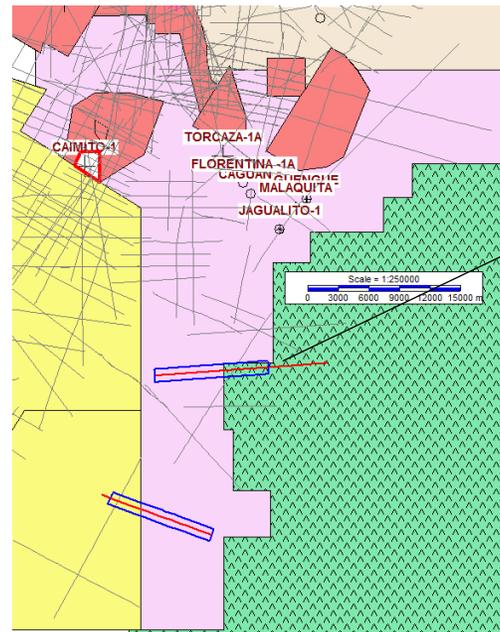
## Wells

- Jagualito-1 (Intercol 5-06-1987 / 15-06-1987)
  - Test-1
    - 5660-5665
    - Presión inicial de fondo 2627 psi
    - Agua 1350 ppm Cl
  - Test-2
    - 5392-5396
    - 5400-5410
    - 5424-5444
    - Water 1250ppm Cl traces of oil and gas
- Malaquita-1 (Petrobras 4-12-1999 )
  - Grupo Honda discordant on Caballos formation
  - Caballos Fm 5018 ´ MD
  - Basement 5034 ´ MD
- Guengue-1 (Esso Colombia)
  - Target: Fm Caballos (structural - stratigraphic, sub thrust San Antonio fault)
  - Minor oil and gas manifestations
- Florentina-1 (11-08-1984 / 26-01-1985 Huila Exploration Co) plugged and abandoned

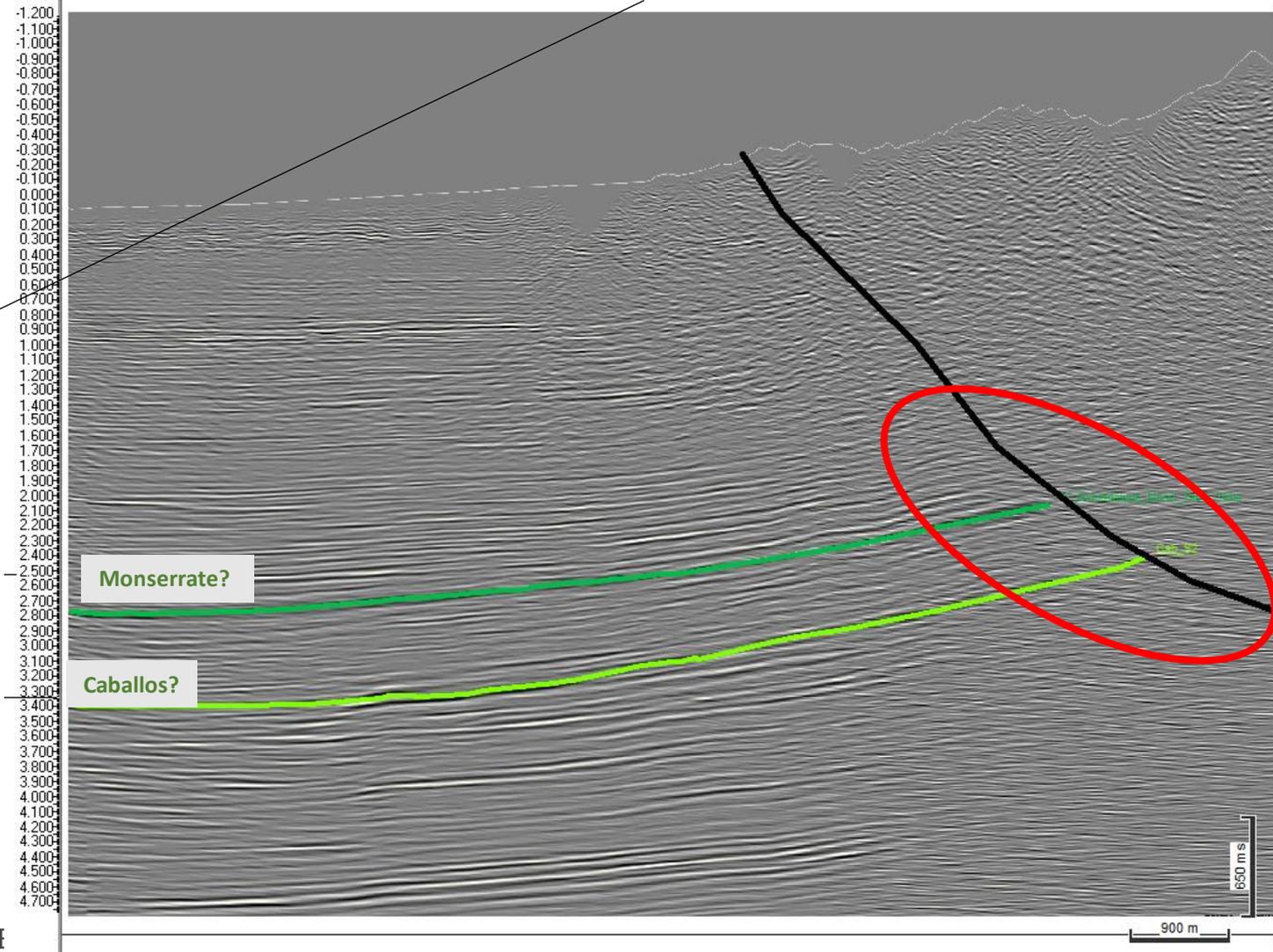


Sub thrust structural trap model for Caballos and Monserrate Formations



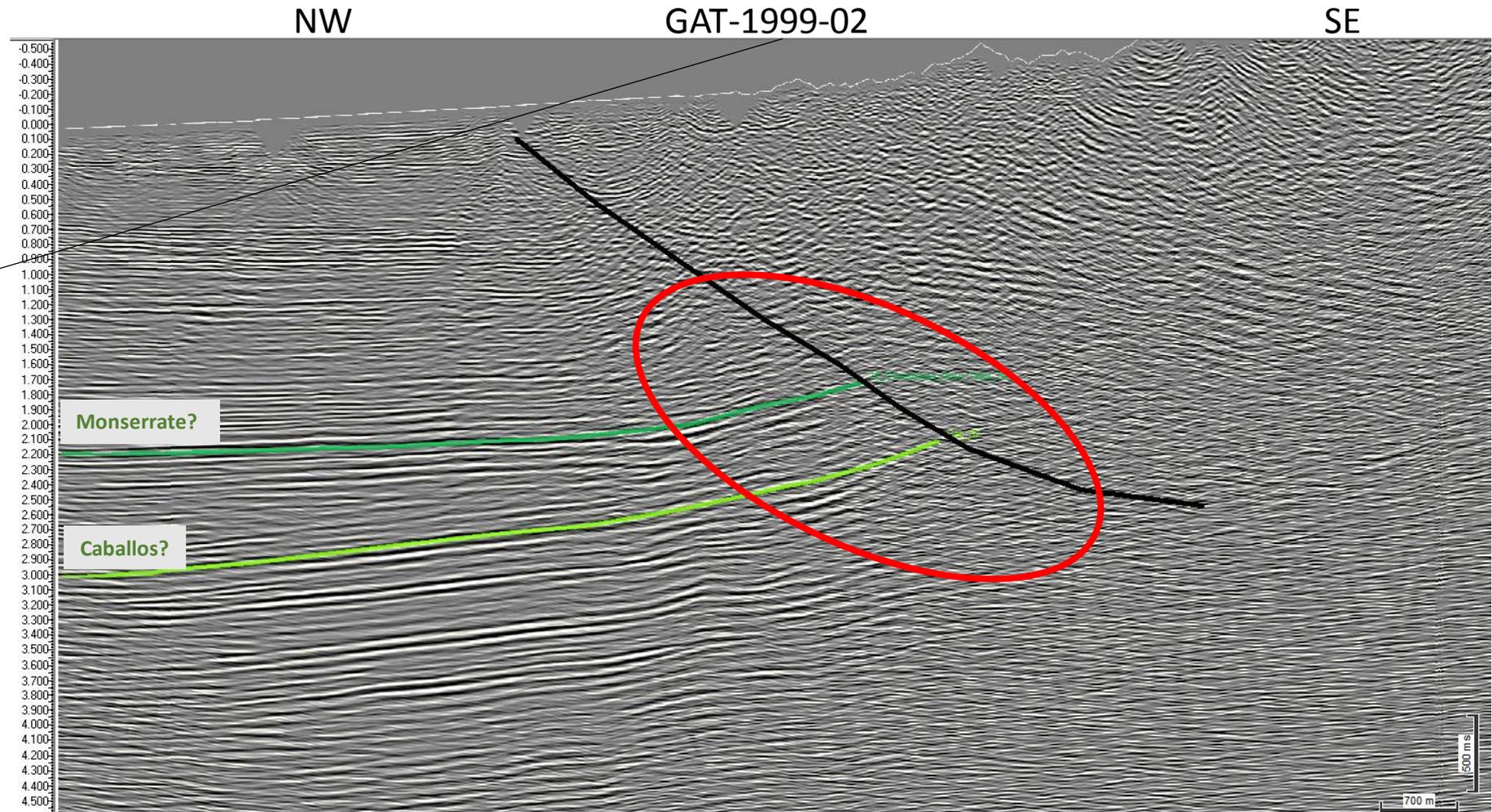
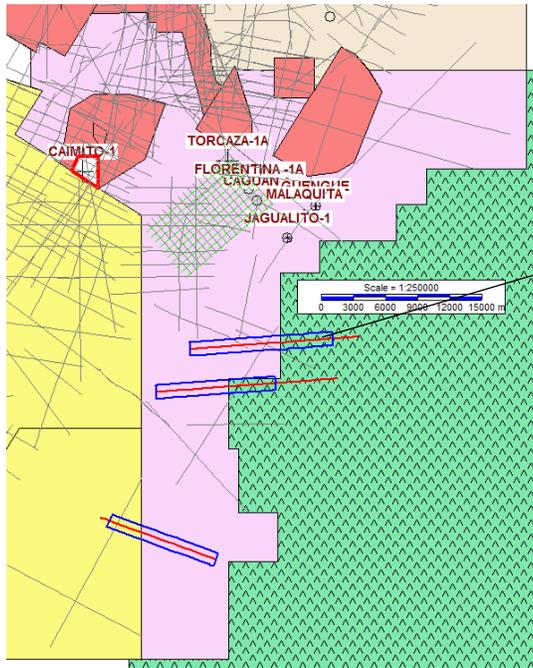


NW GAT-1999-14 SE



Sub thrust structural trap model for Caballos and Monserate Formations

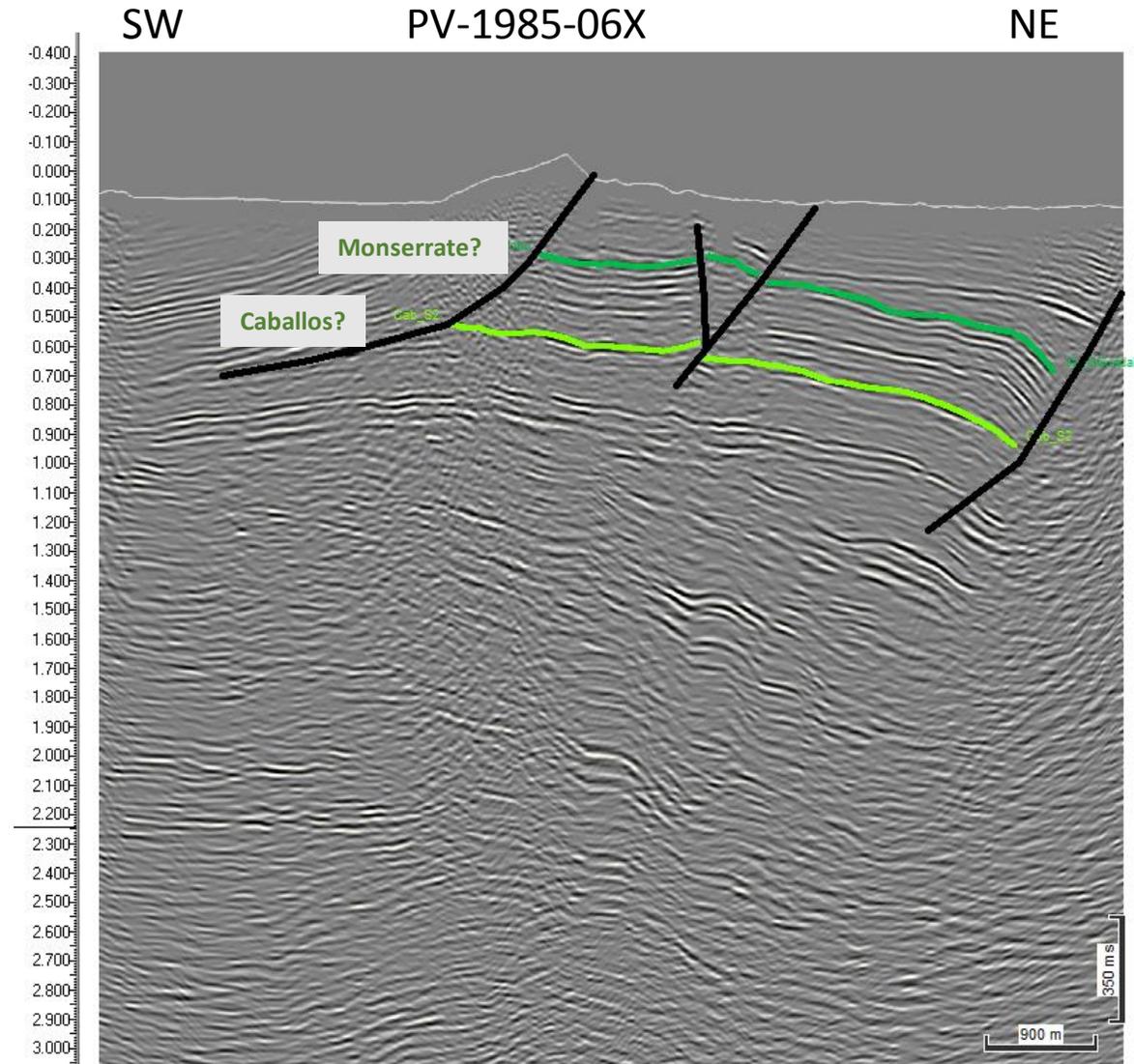
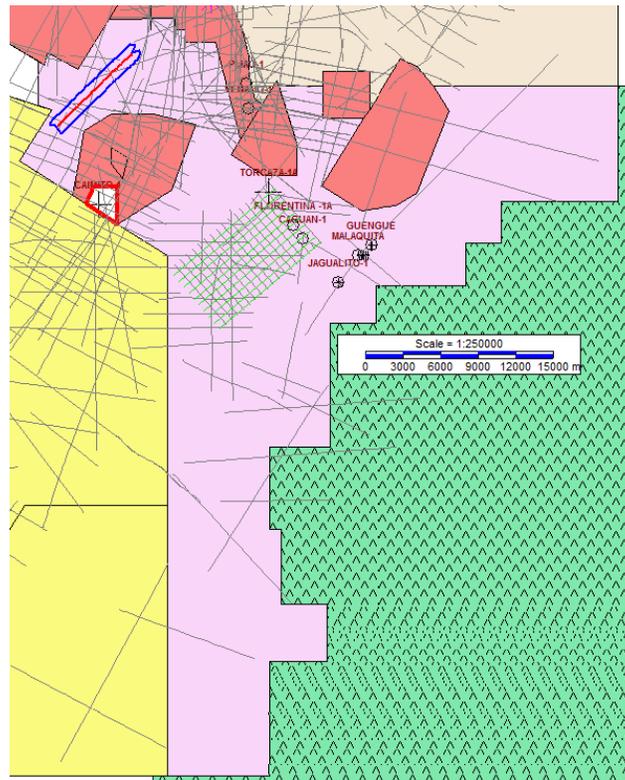
# Prospectivity



Sub thrust structural trap model for Caballos and Monserrate Formations

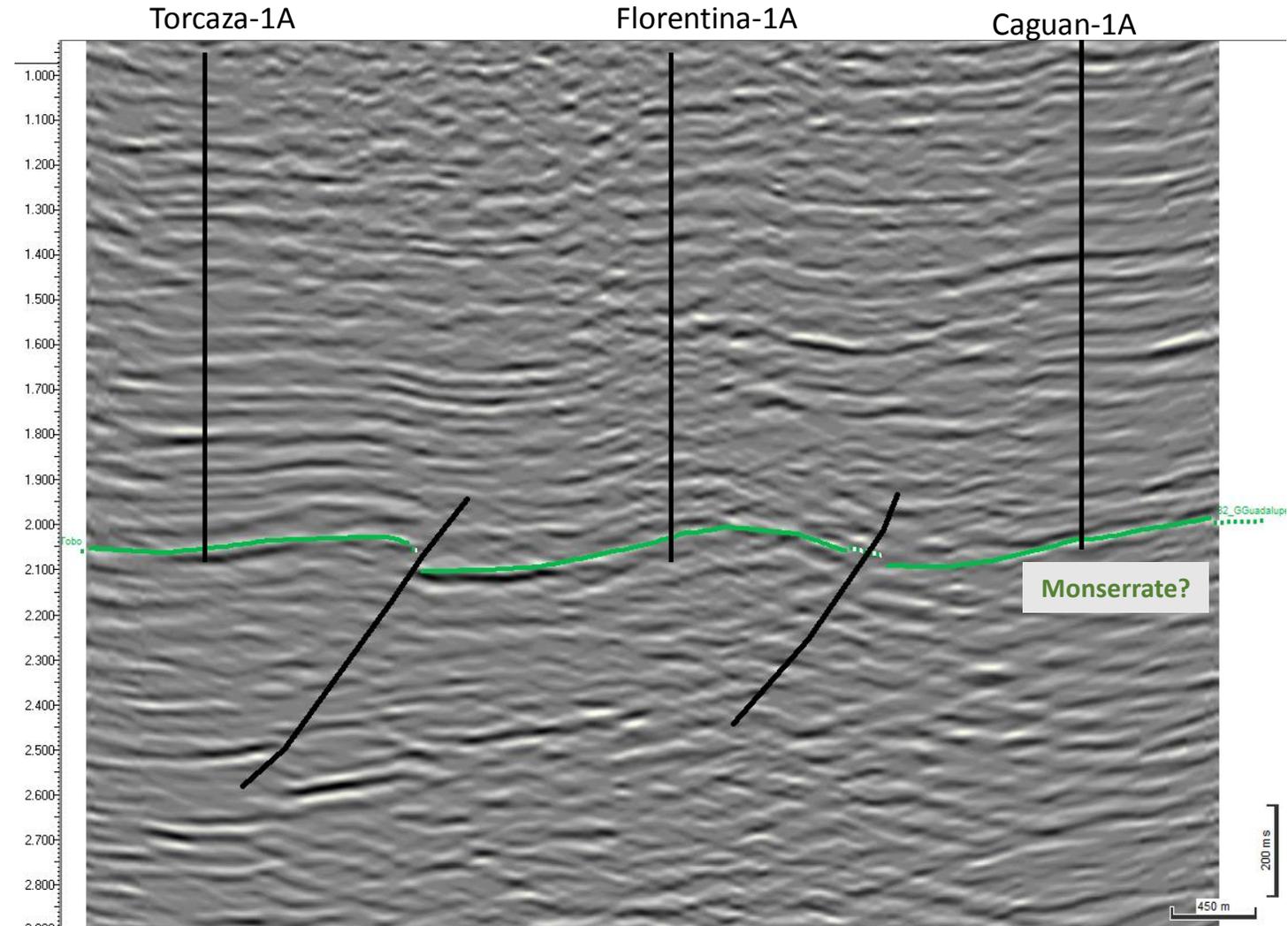
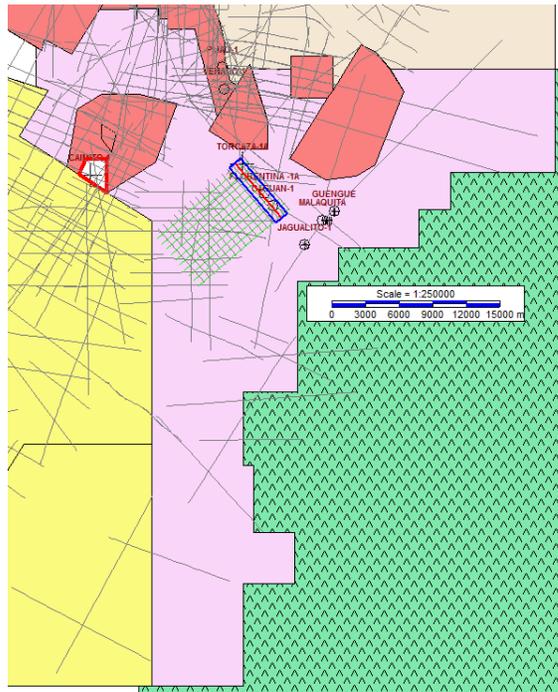
# Prospectivity – south San Francisco field

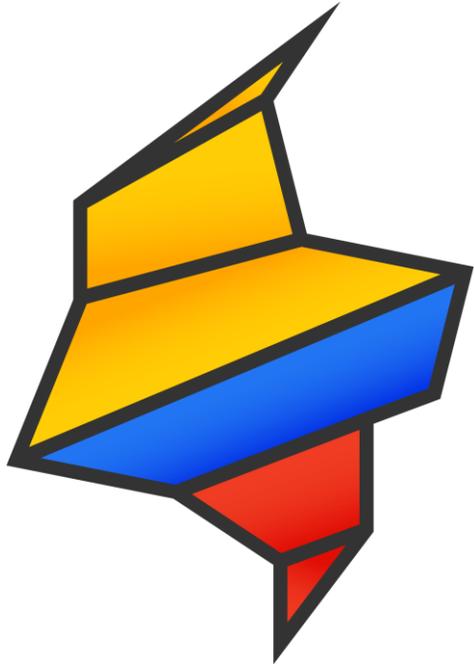
Possible anticlinal structure



# Location of Torcaza, Florentina and Caguan wells

3D Arrayanes – Inline 386





# RONDA

## COLOMBIA 2021

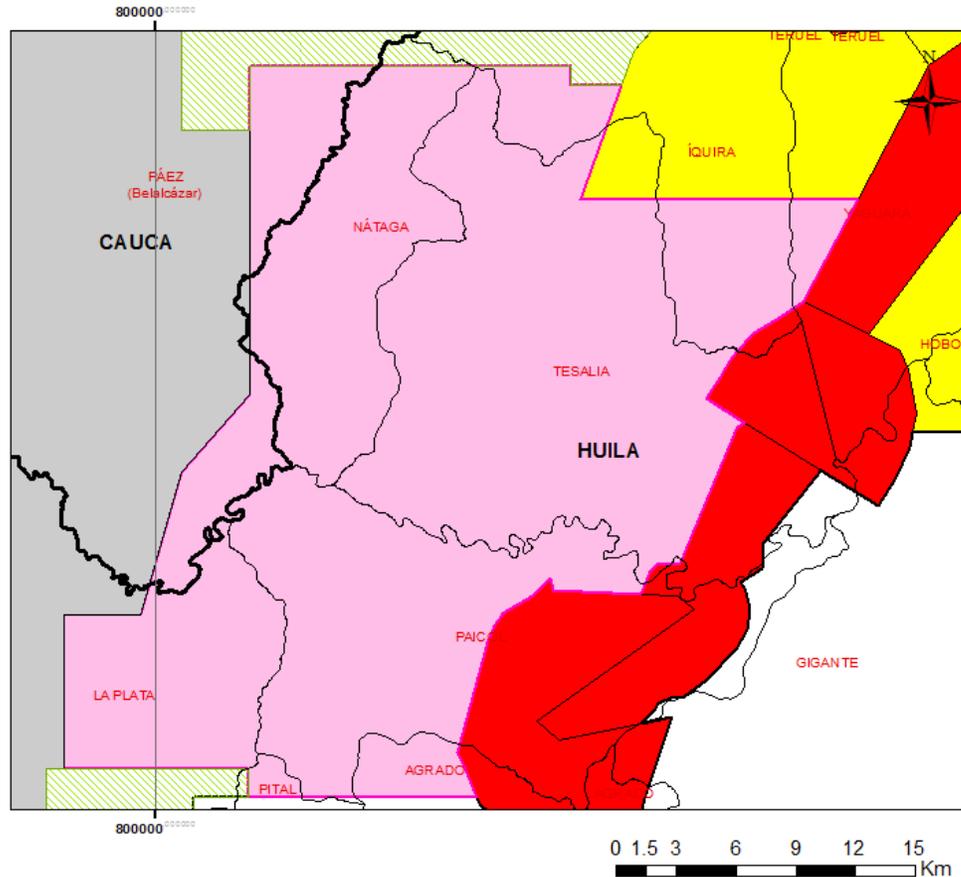
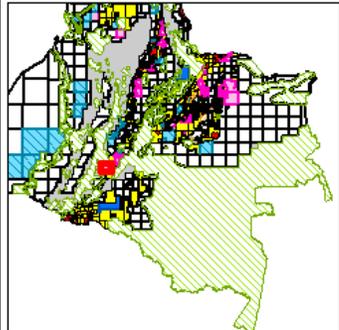
**Upper Magdalena Valley**  
**VSM 14-1**

November 12, 2021

# Content

- Location
- Infraestructure
- Prospectivity
  - Discovered undeveloped reservoir "La Plata 1 well"
  - Near prospectivity "La Plata 1 well"
  - Near prospectivity "Anchala 1 well "

## Location



**LEYENDA**

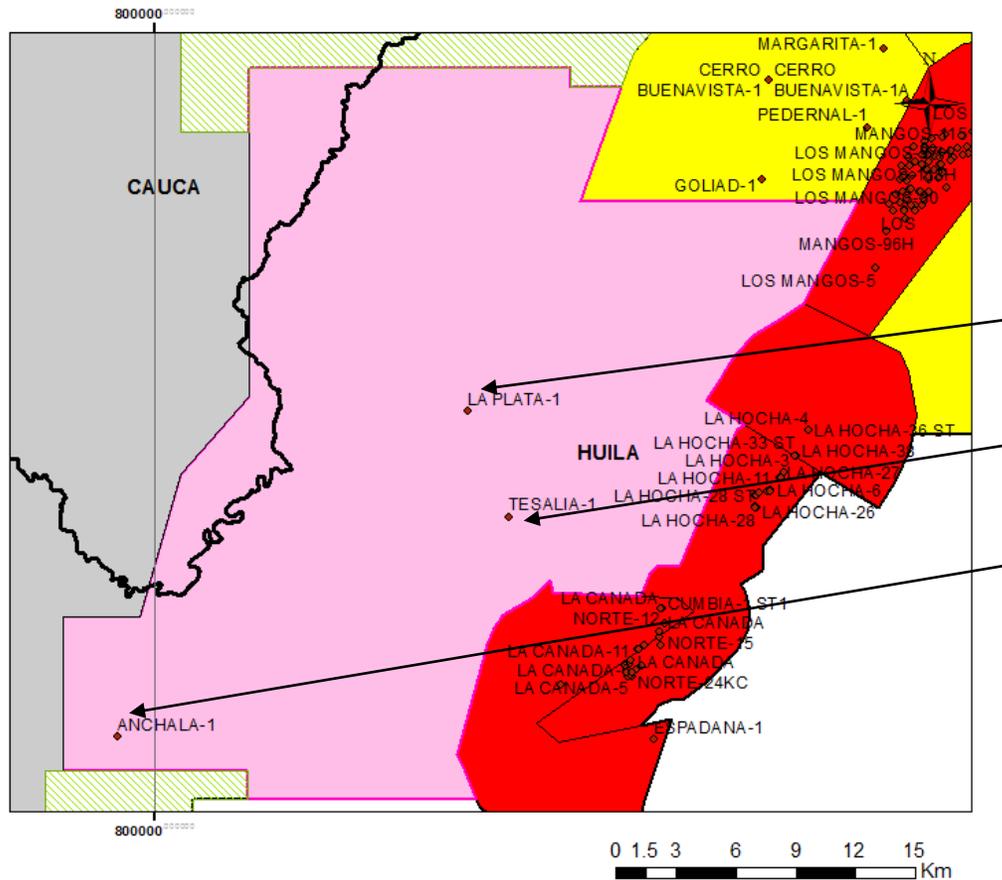
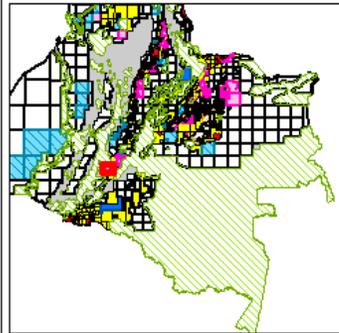
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Basin: Upper Magdalena Valley

Department: Huila and Cauca

Municipalities: Tesalia, Natagaima, La Plata, Agrado, Iquira, Yaguara, Paicol, Pital, Paez

# Infraestructura - Wells



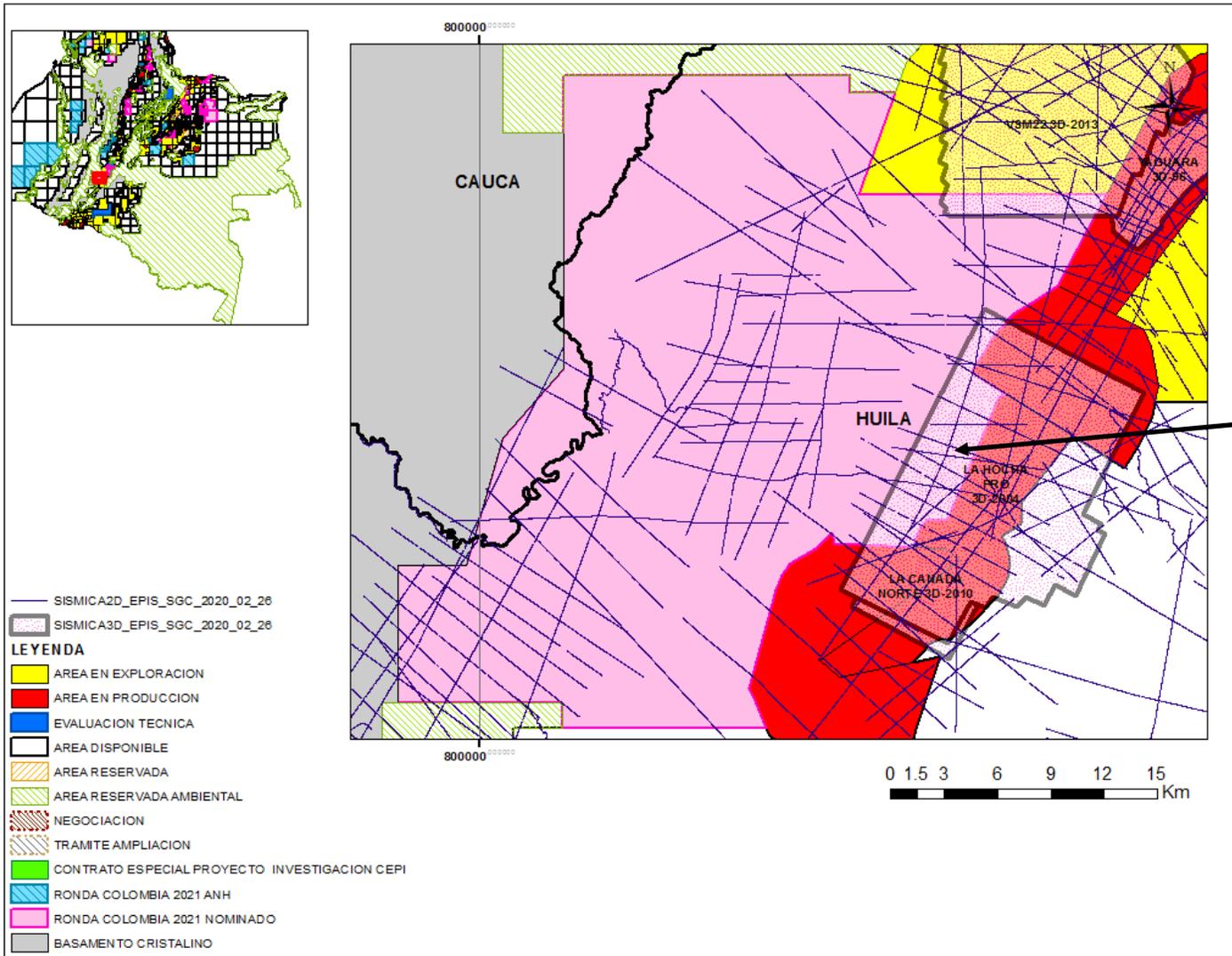
- ◆ POZOS\_EPIS\_SGC\_2020\_02\_26
- LEYENDA**
- AREA EN EXPLORACION
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La Plata – 1

Tesalia – 1

Anchala -1

## Infraestructura - Seismic

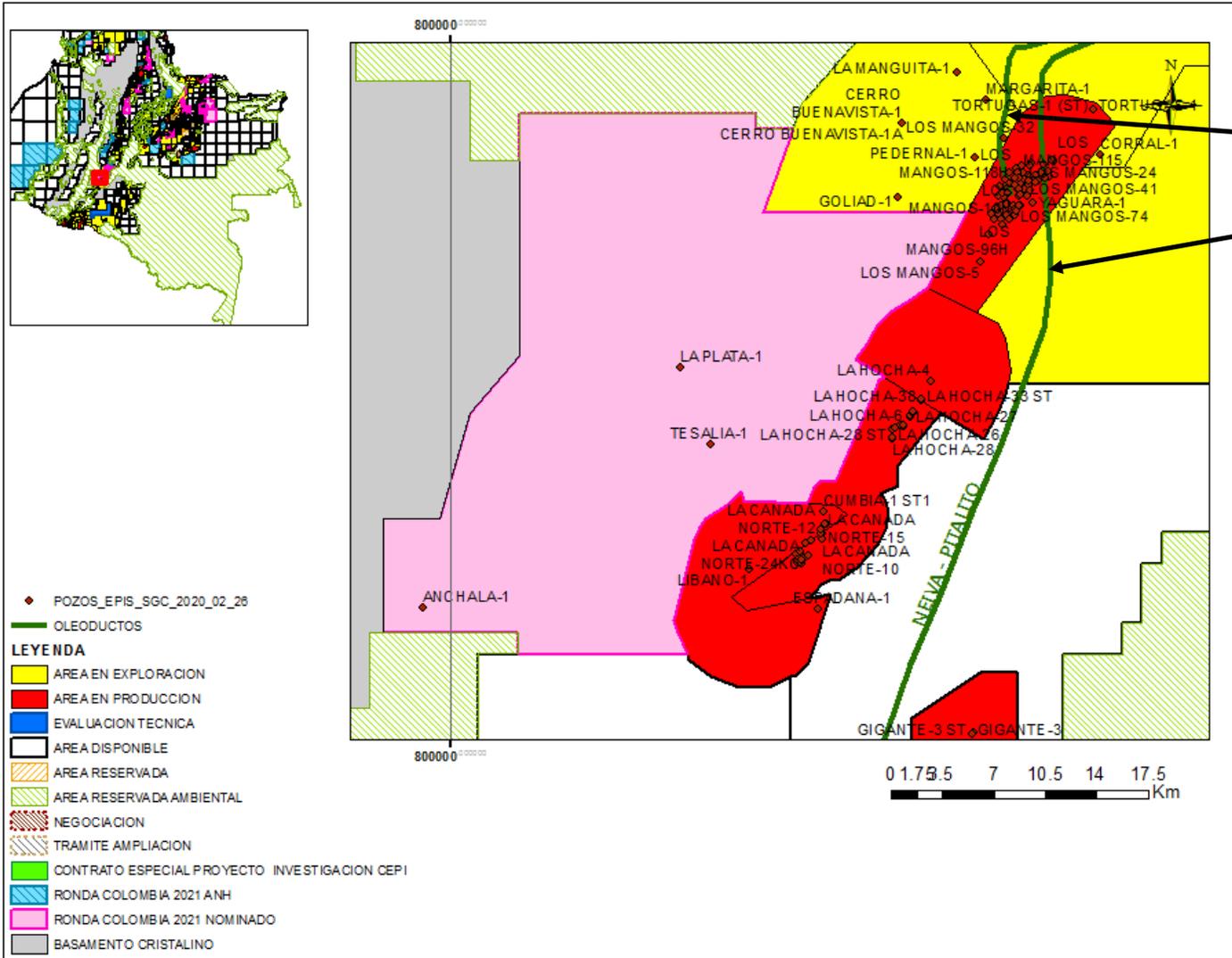


2D Seismic line: 94

2D Seismic line: 79 "Length greater than 3 Km"

3D Seismic : 3D La Hocha "Approximately 30 Km2 with seismic coverage"

## Infraestructura – Oil production



## Prospectivity “Discovered undeveloped reservoir”

Line: ELP-1987-10

Line: ELP-1987-10

Well: La Plata -1 (12/12/1989 – 13/01/1990)

KB: 3134´

TD: 4890´MD / 4883´TVD

Tops:

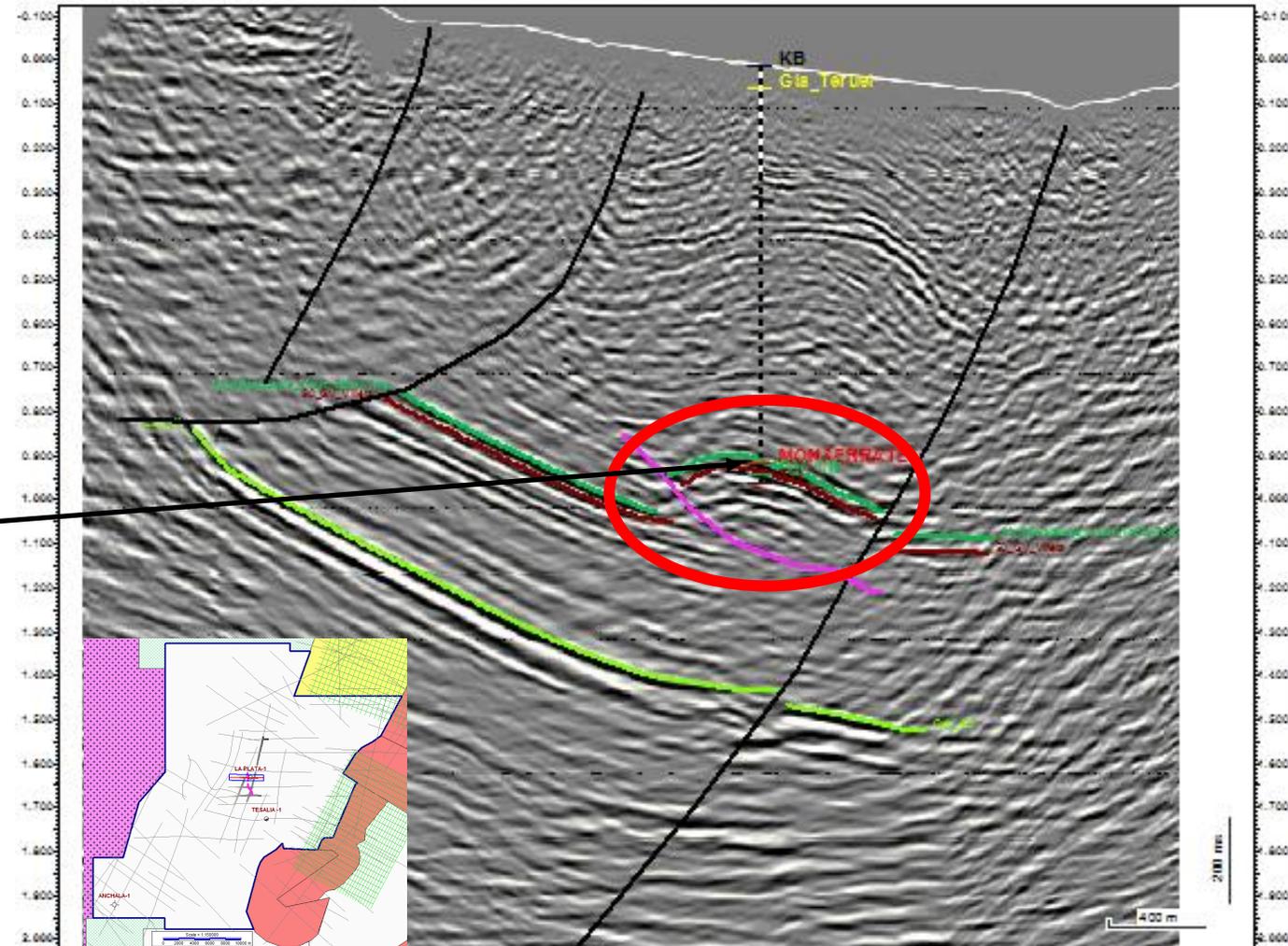
Guaduala Teruel: 180´ MD

Monserate: 4598´MD

GV\_Villeta: 4808´MD Contrato de asociación la plata informe (4750´MD)

DST-1: (4591-4640) Fm Monserate “Upper Sandstone” (Gas 480000 ppm 100% Metane / HP 630psi)

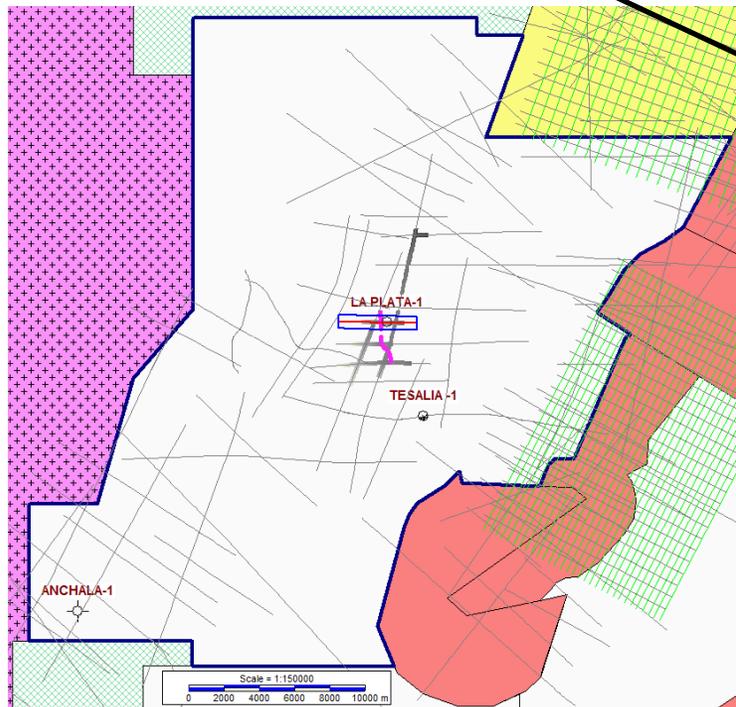
Result: *Dry gas in non-comercial quantities “1990”*



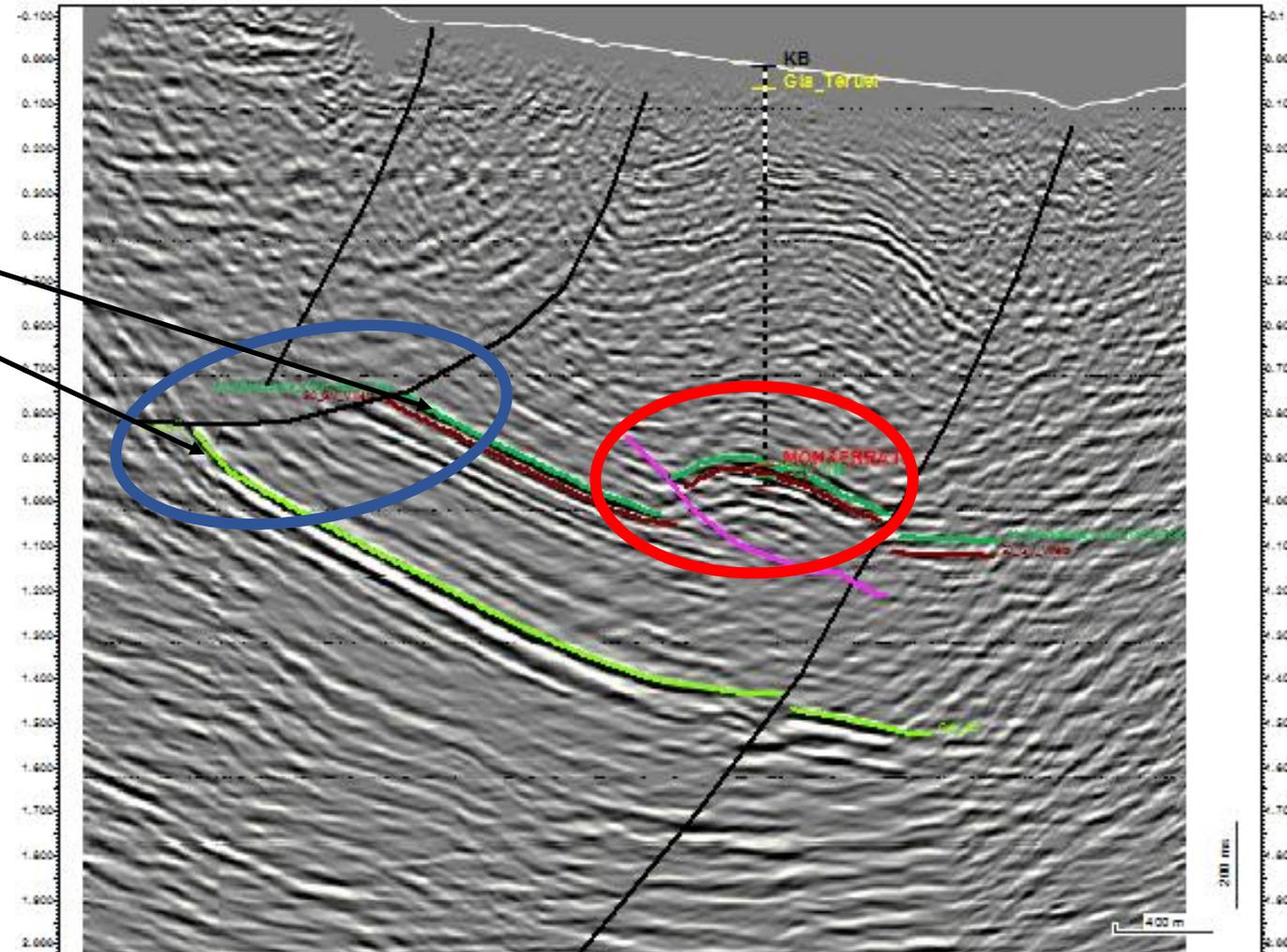
# Prospectivity – near La Plata-1 well

Sub thrust structure  
Opportunity

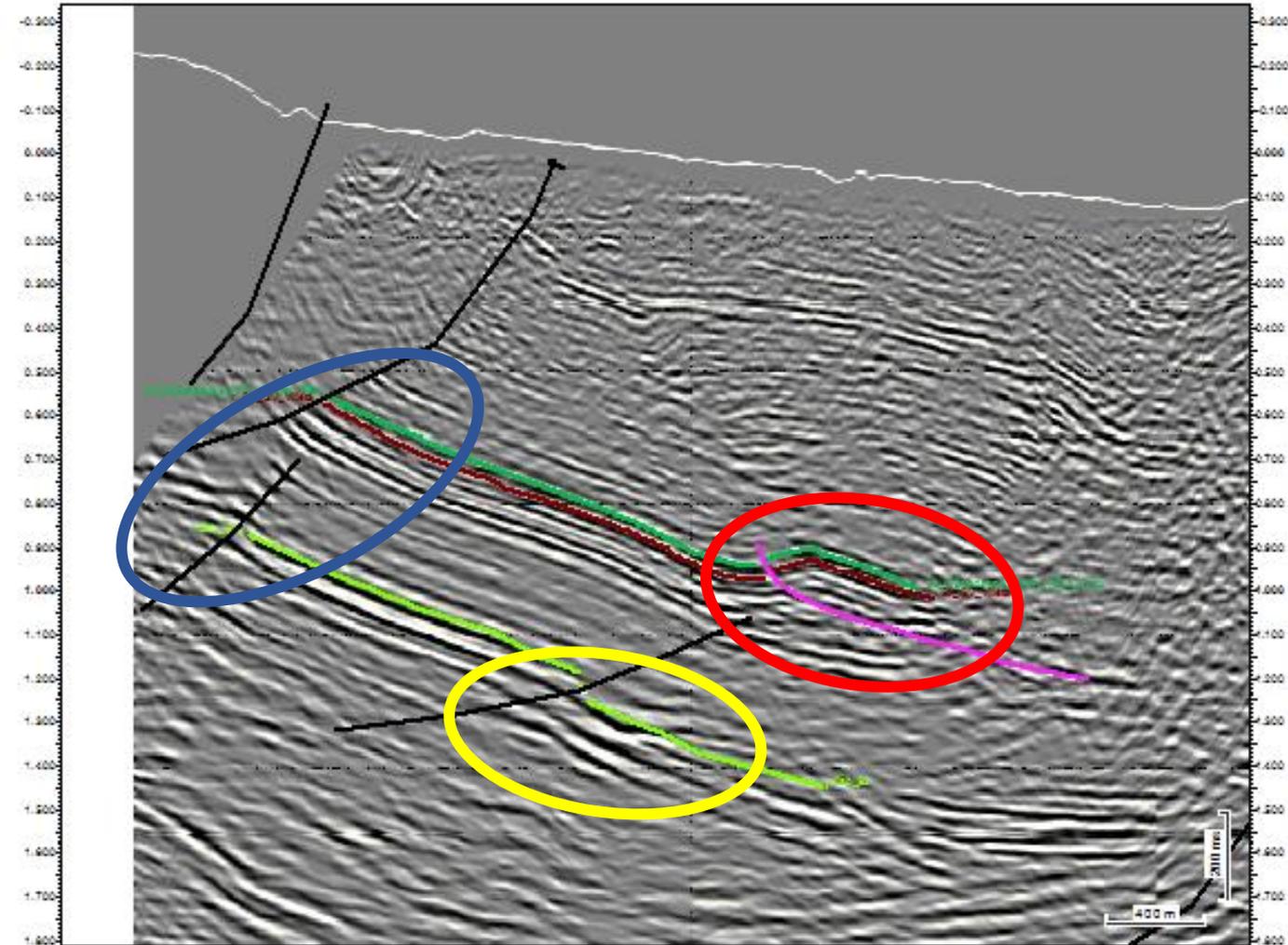
Monserrate Formation  
Caballos Formation "Oil?"



Line: ELP-1987-10

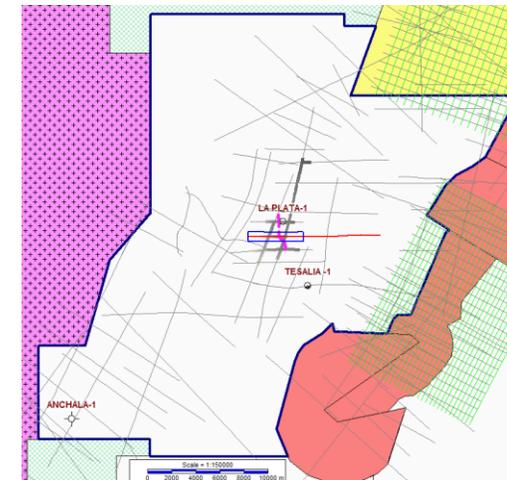


## Prospectivity – near La Plata-1 well



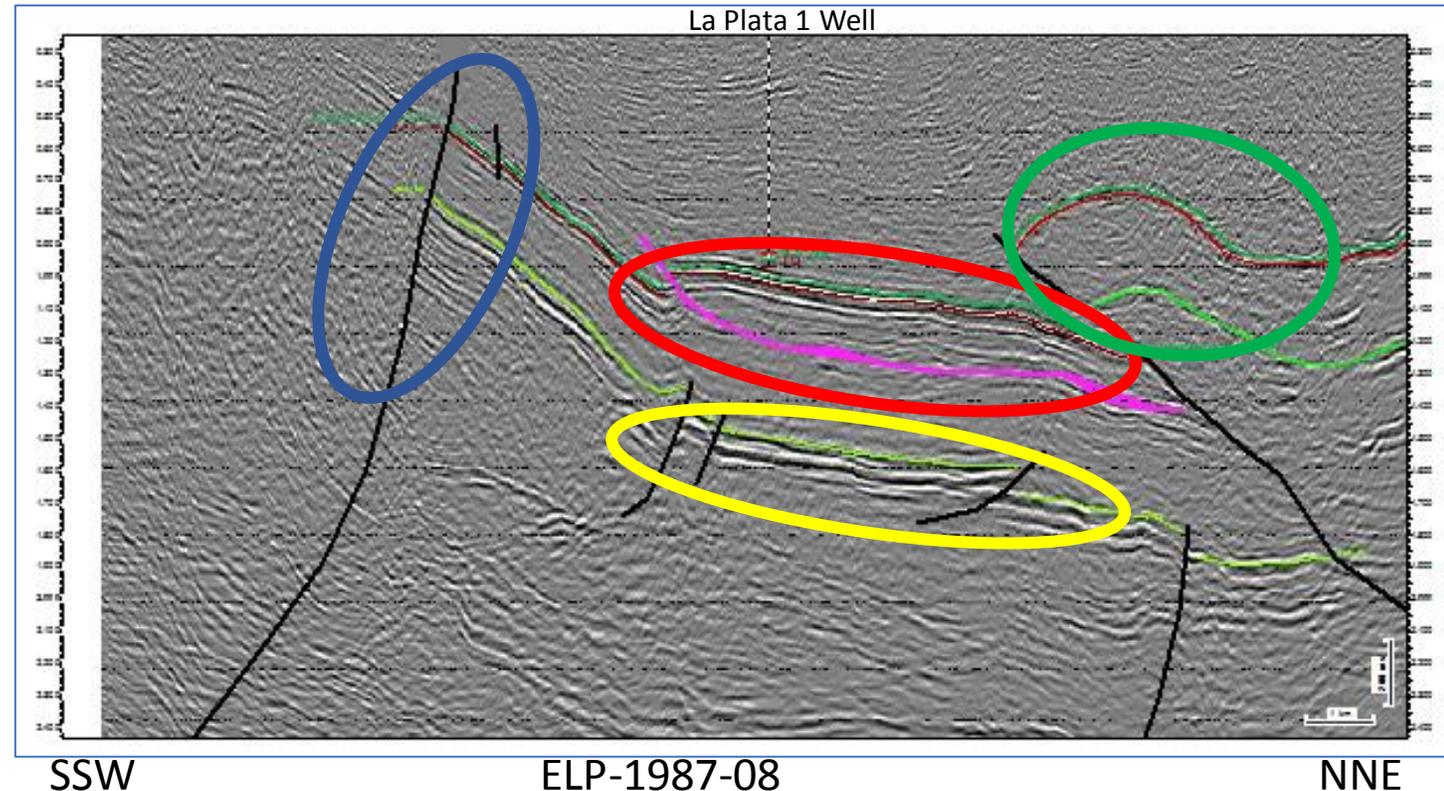
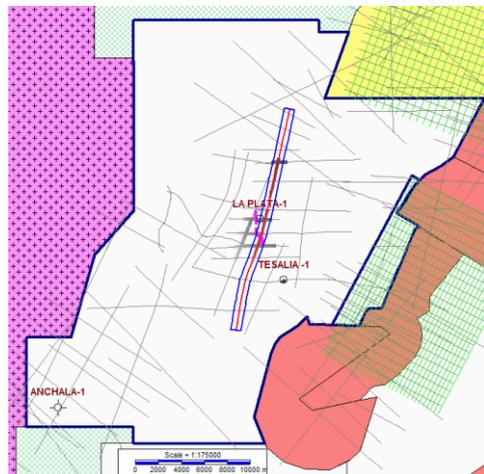
Line: ELP-1987-06

Line located south of the La-Plata-1 well



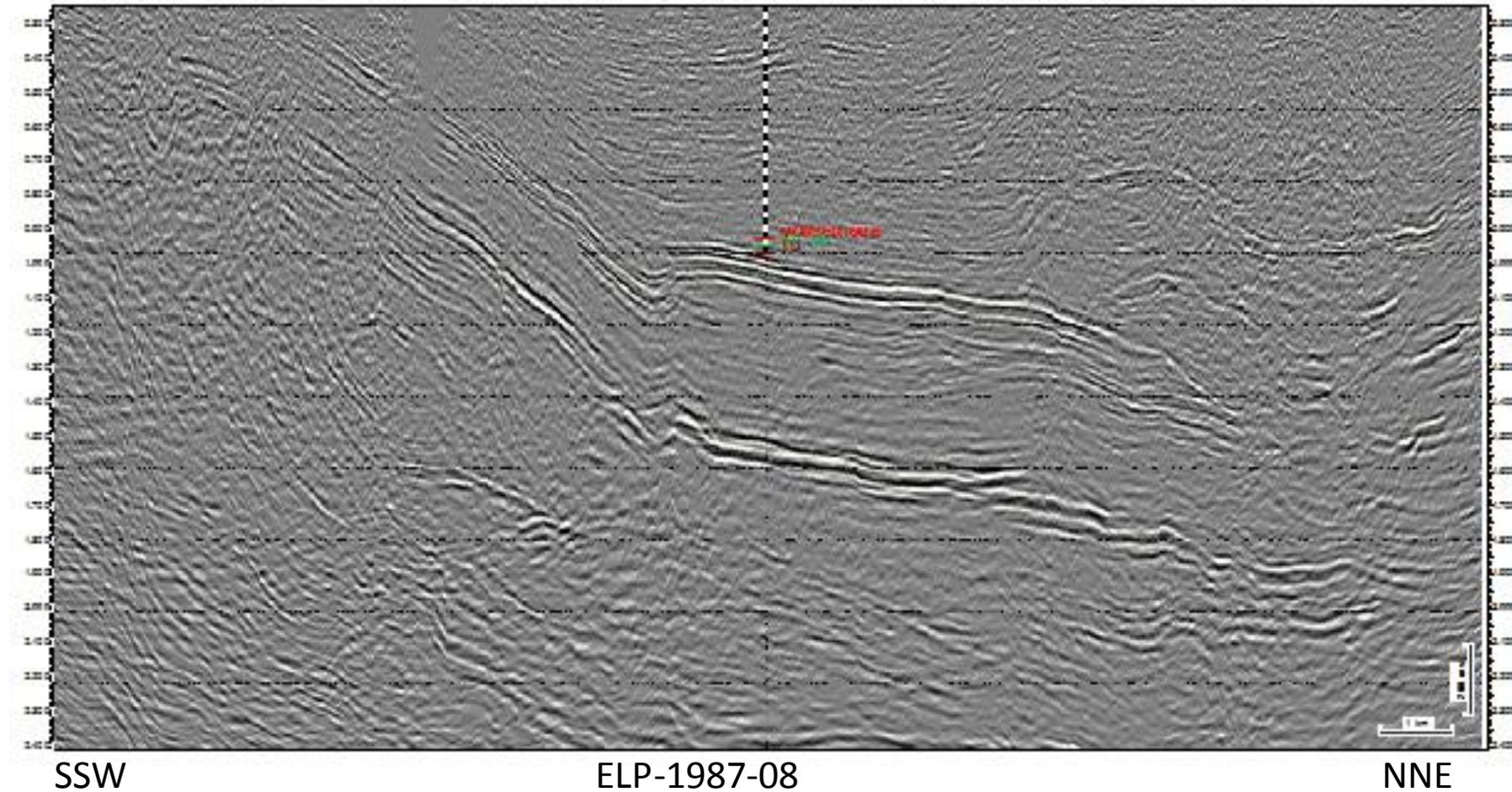
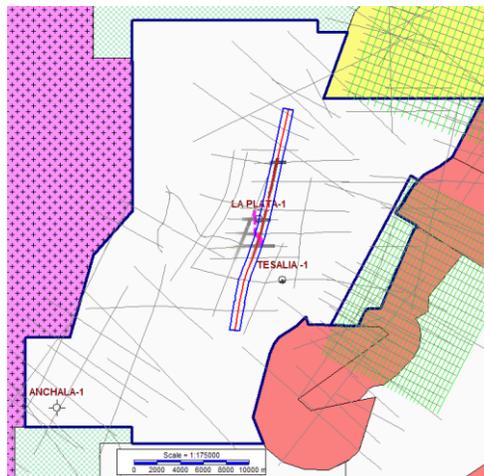
## Prospectivity – near La Plata-1 well

- Reverse fault “Caballos Fm” estructura
- Reverse fault “La Plata 1” estructura
- Reverse fault “Caballos Fm” estructura
- Thrust “Caballos Fm” estructura

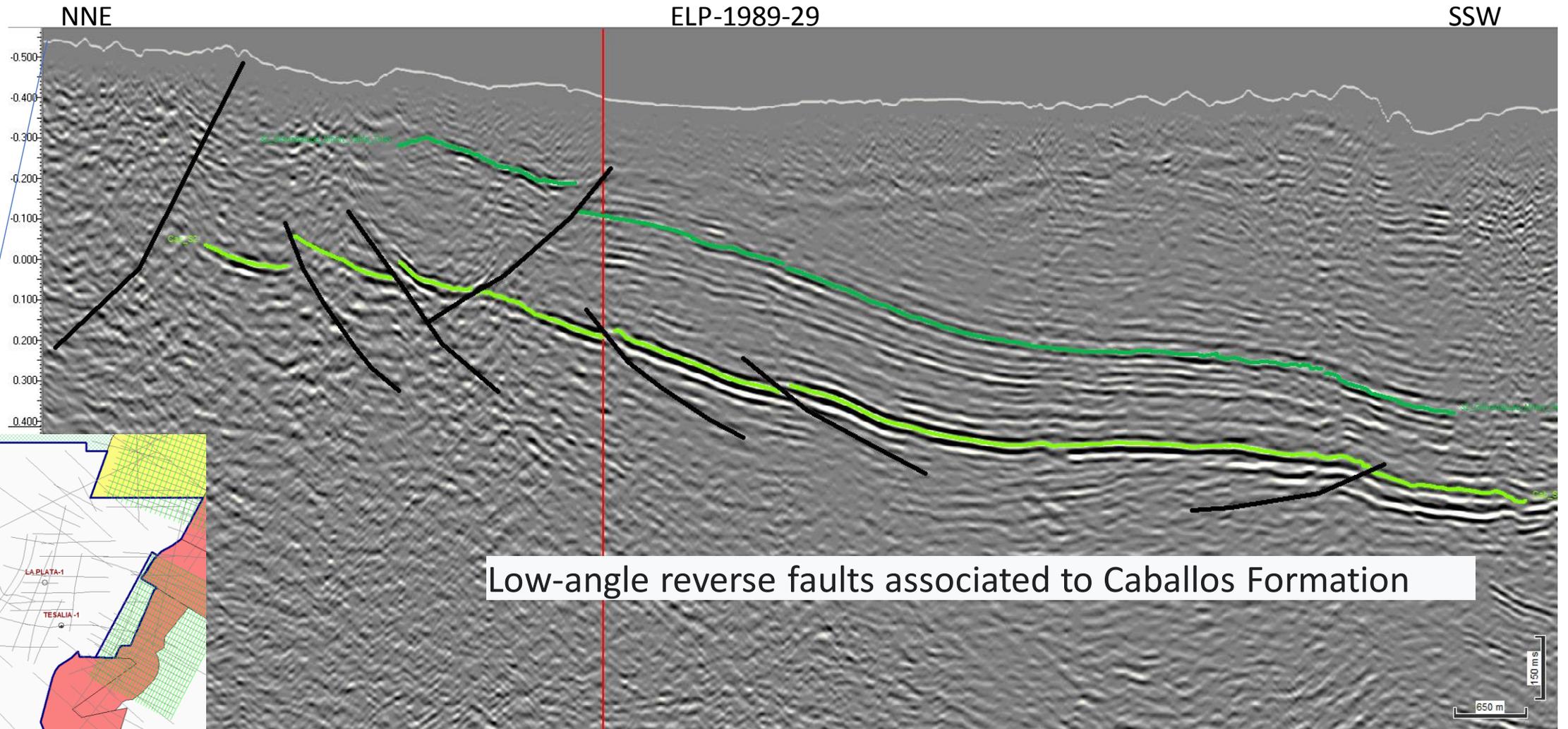


# Prospectivity – near La Plata-1 well

Seismic line without interpretation

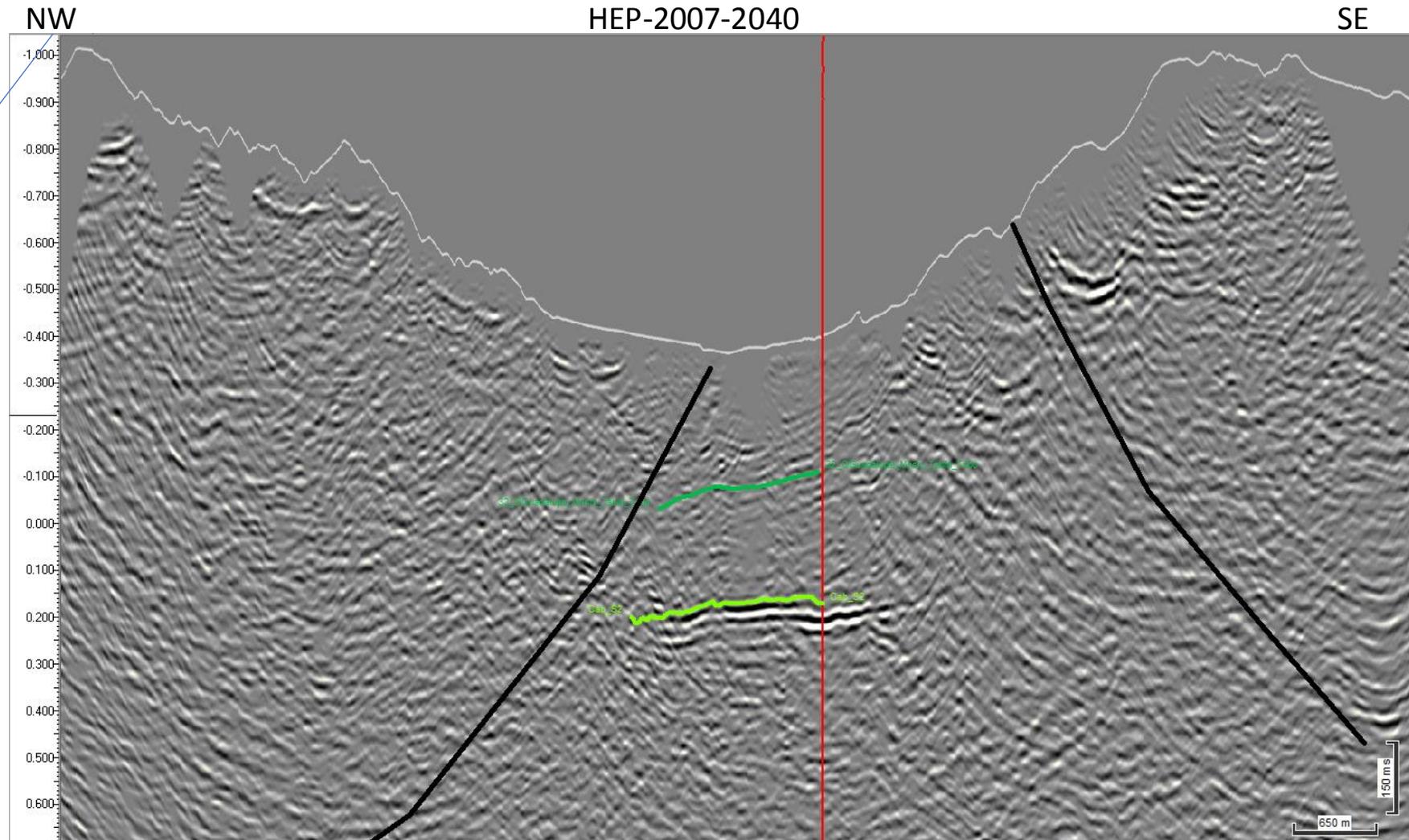
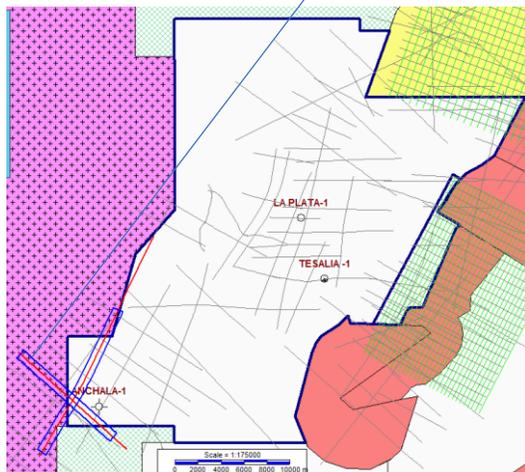


# Prospectivity – near Anchala-1 well

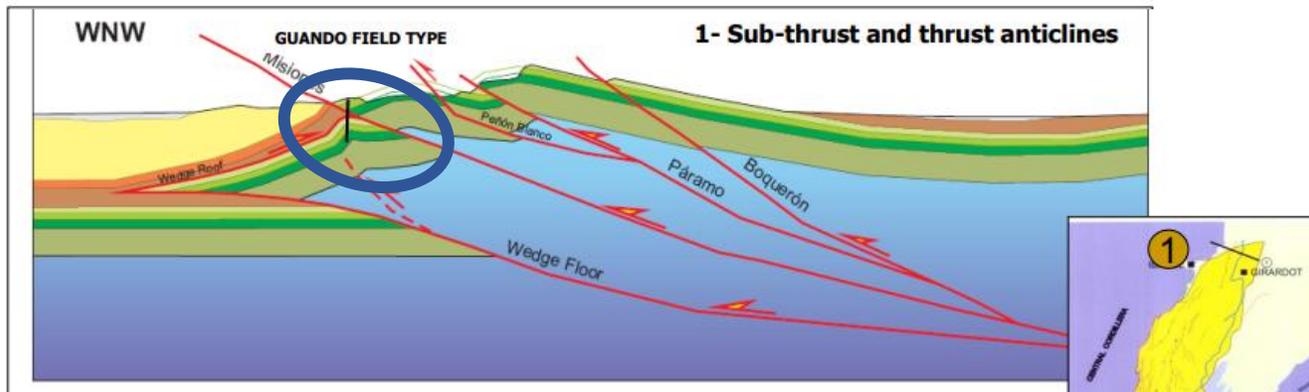


Low-angle reverse faults associated to Caballos Formation

# Prospectivity – near Anchala-1 well

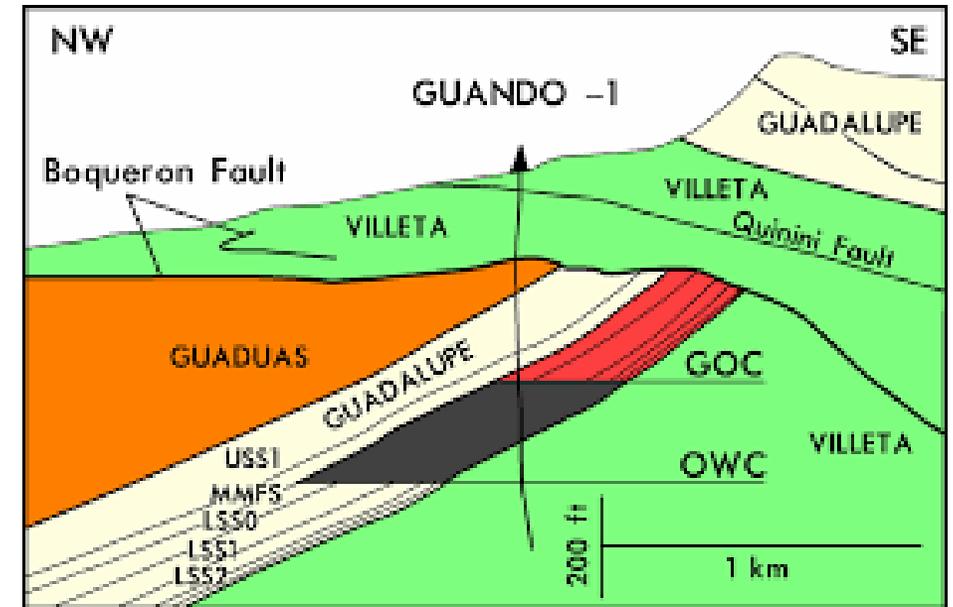


# Sub Thrust prospectivity analogs



Source: Overview of the Oil and Gas Basin of Colombia 2012

## Field Analogous to sub thrust



Source: Paleogeographic implication of the Lower Guadalupe Formation in the Guando Oil field, Colombia