

RONDA

COLOMBIA 2021

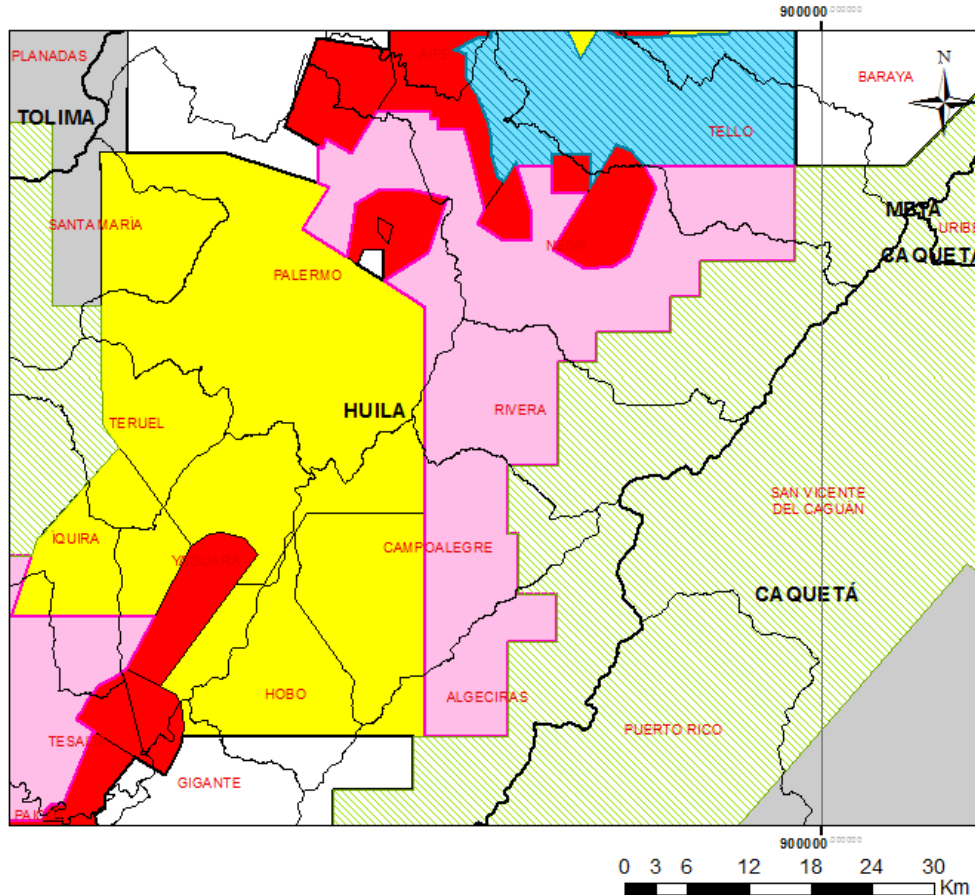
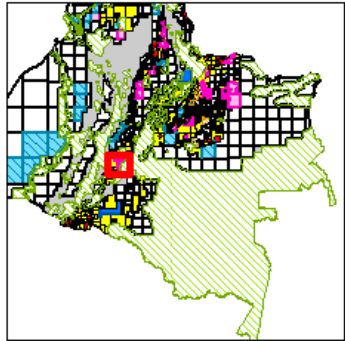
Upper Magdalena Valley
VSM 13-2

November 12, 2021

Content

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

Location



LEYENDA

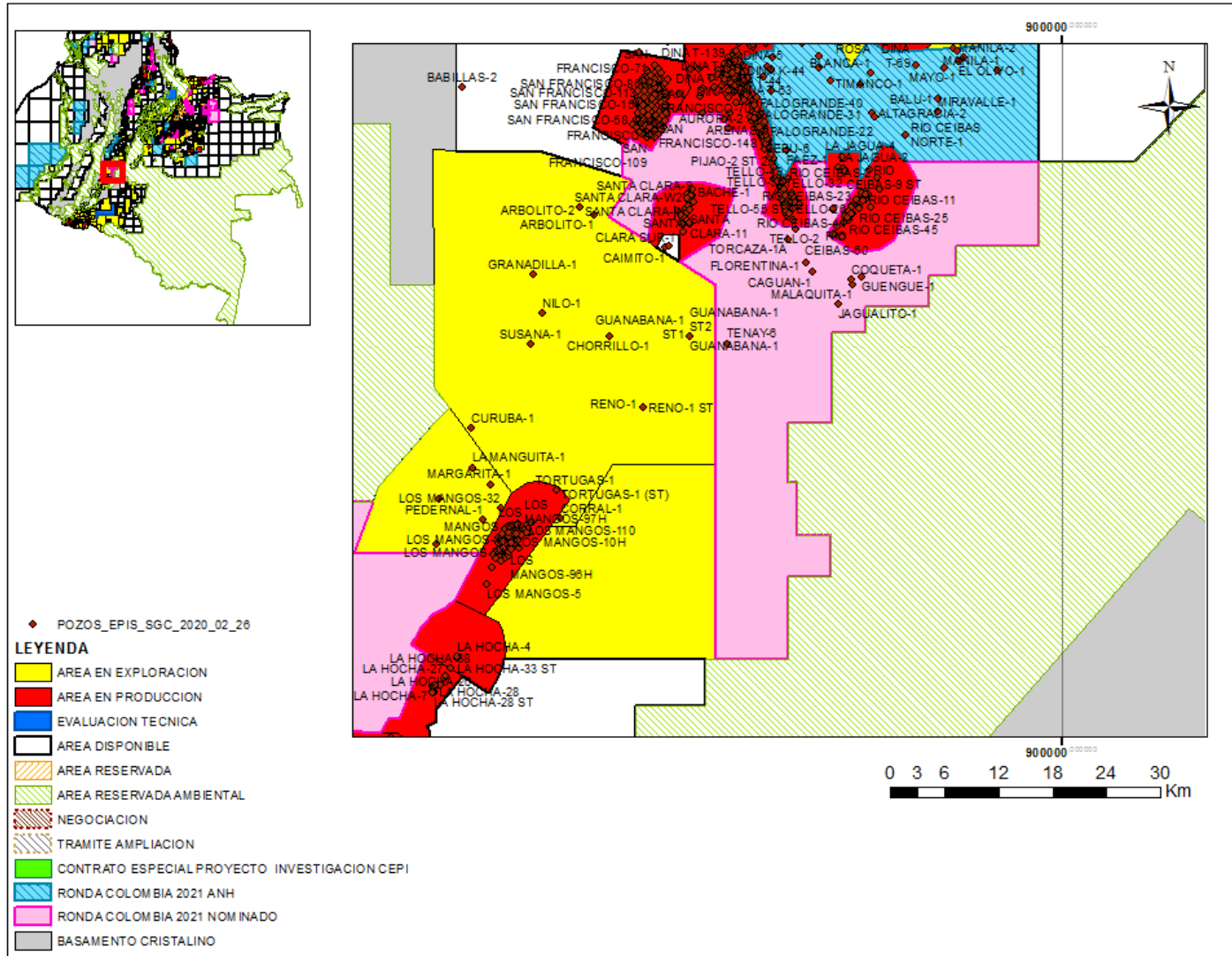
- AREA EN EXPLORACION
- AREA EN PRODUCCION
- EVALUACION TECNICA
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- RONDA COLOMBIA 2021 ANH
- RONDA COLOMBIA 2021 NOMINADO
- BASAMENTO CRISTALINO

Basin: Upper Magdalena Valley

Department: Huila

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

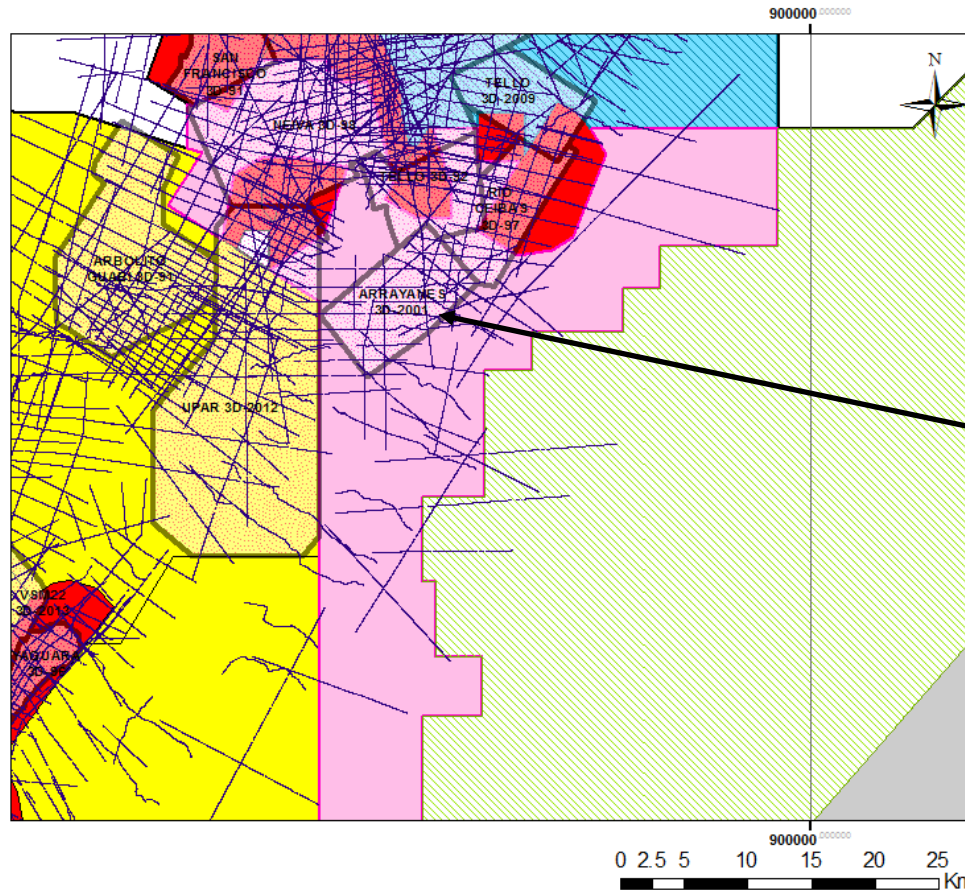
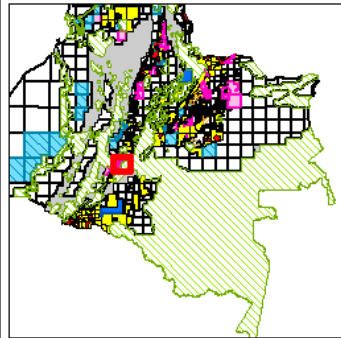
Infraestructura - Wells



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"

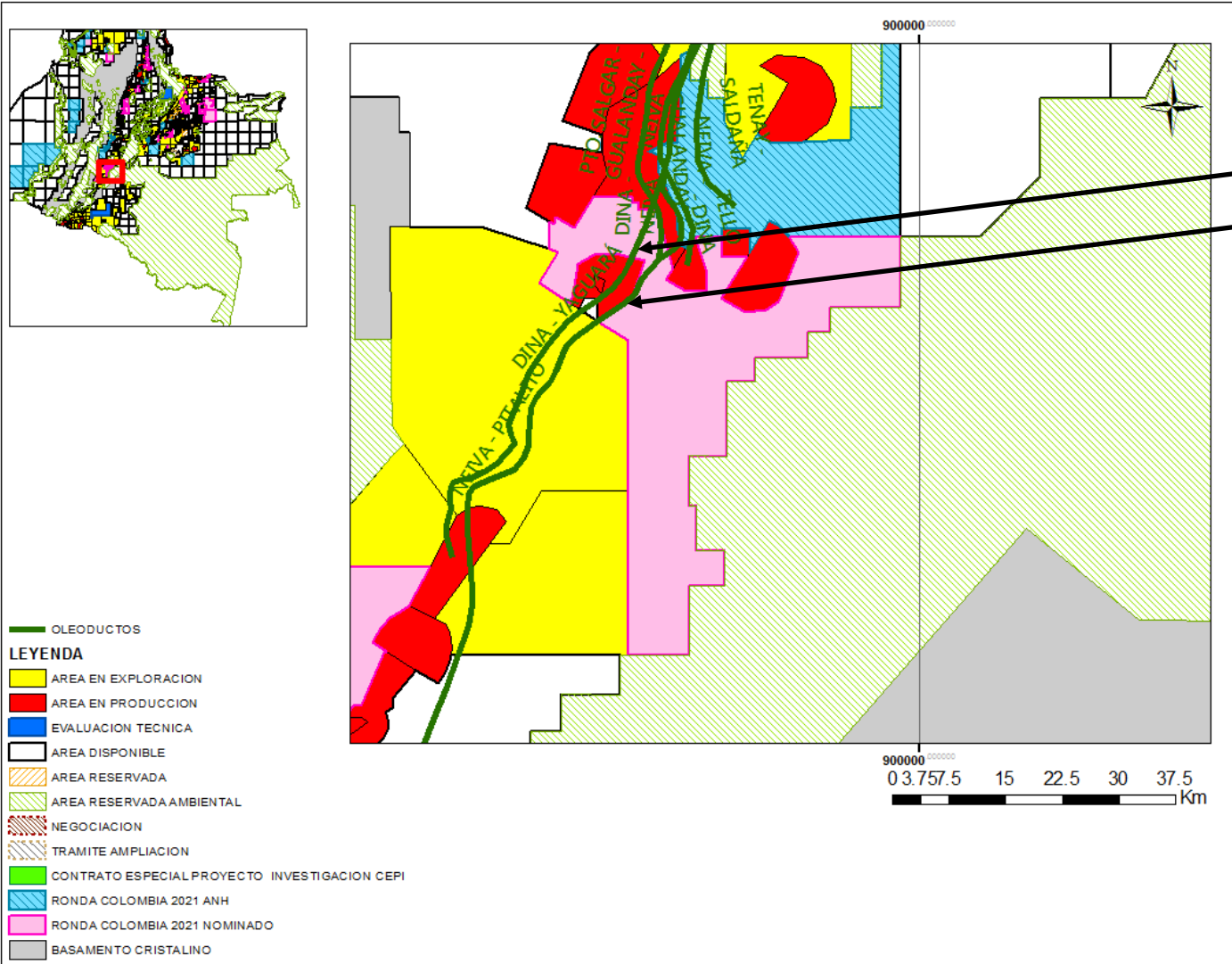
3D Seismic :

3D Arrayanes 2001 (71.4 Km2)

3D Neiva-98



Infraestructura – Oil production



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)

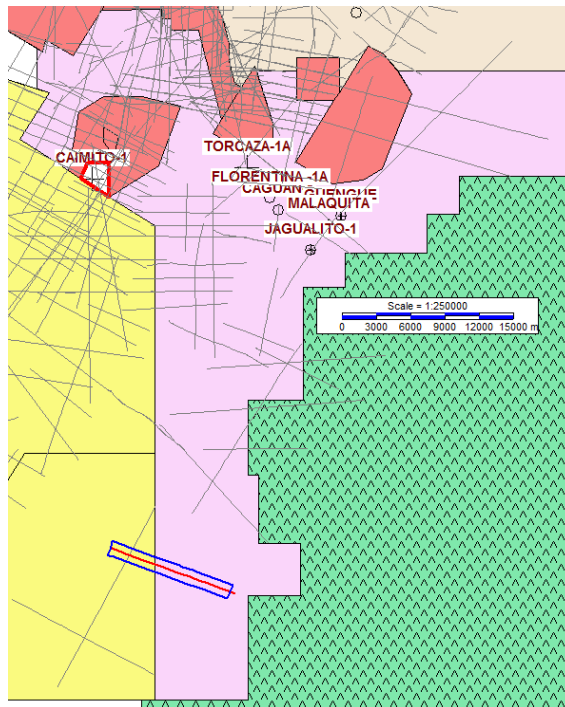
San Francisco (Palermo – Ecopetrol)

Tenay (Pijao Potrerillo – Ecopetrol)

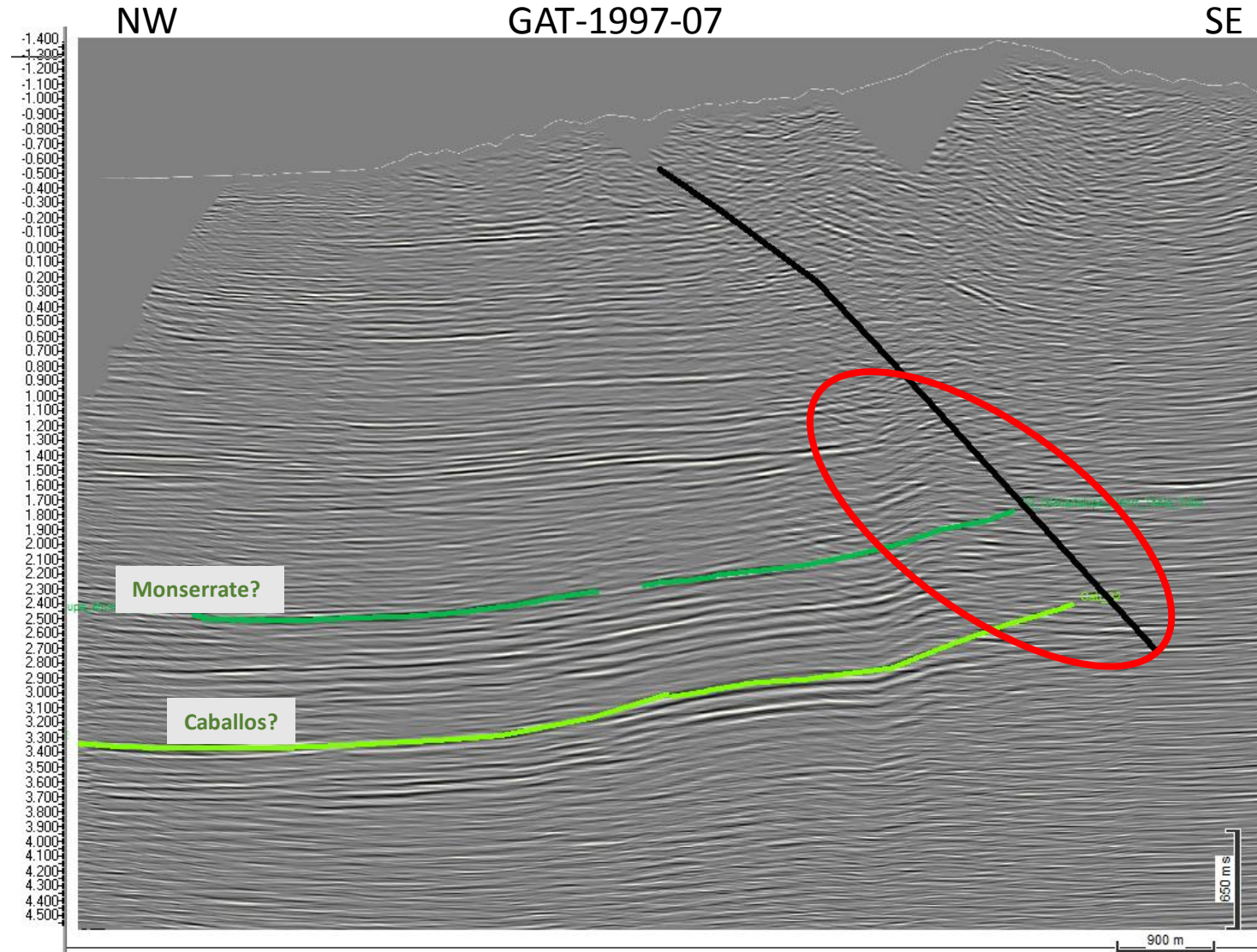
Wells

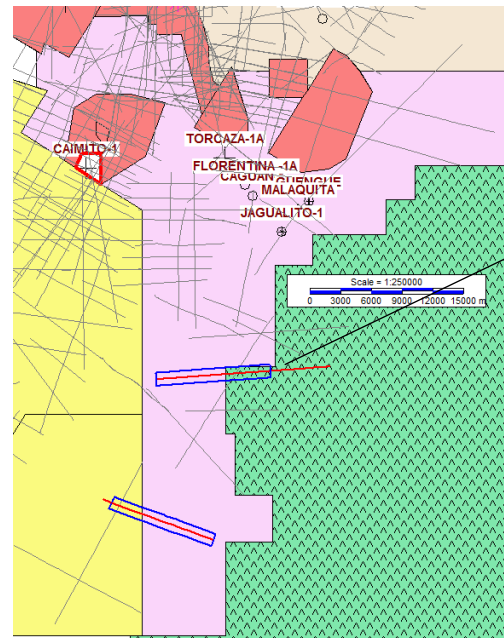
- Jagualito-1 (Intercol 5-06-1987 / 15-06-1987)
 - Test-1
 - 5660-5665
 - Presión inicial de fondo 2627 psi
 - Agua 1350 ppm Cl
 - Test-2
 - 5392-5396
 - 5400-5410
 - 5424-5444
 - Water 1250ppm Cl traces of oil and gas
- Malaquita-1 (Petrobras 4-12-1999)
 - Grupo Honda discordant on Caballos formation
 - 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

Prospectivity



Sub thrust structural trap model for Caballos and Monserrate Formations

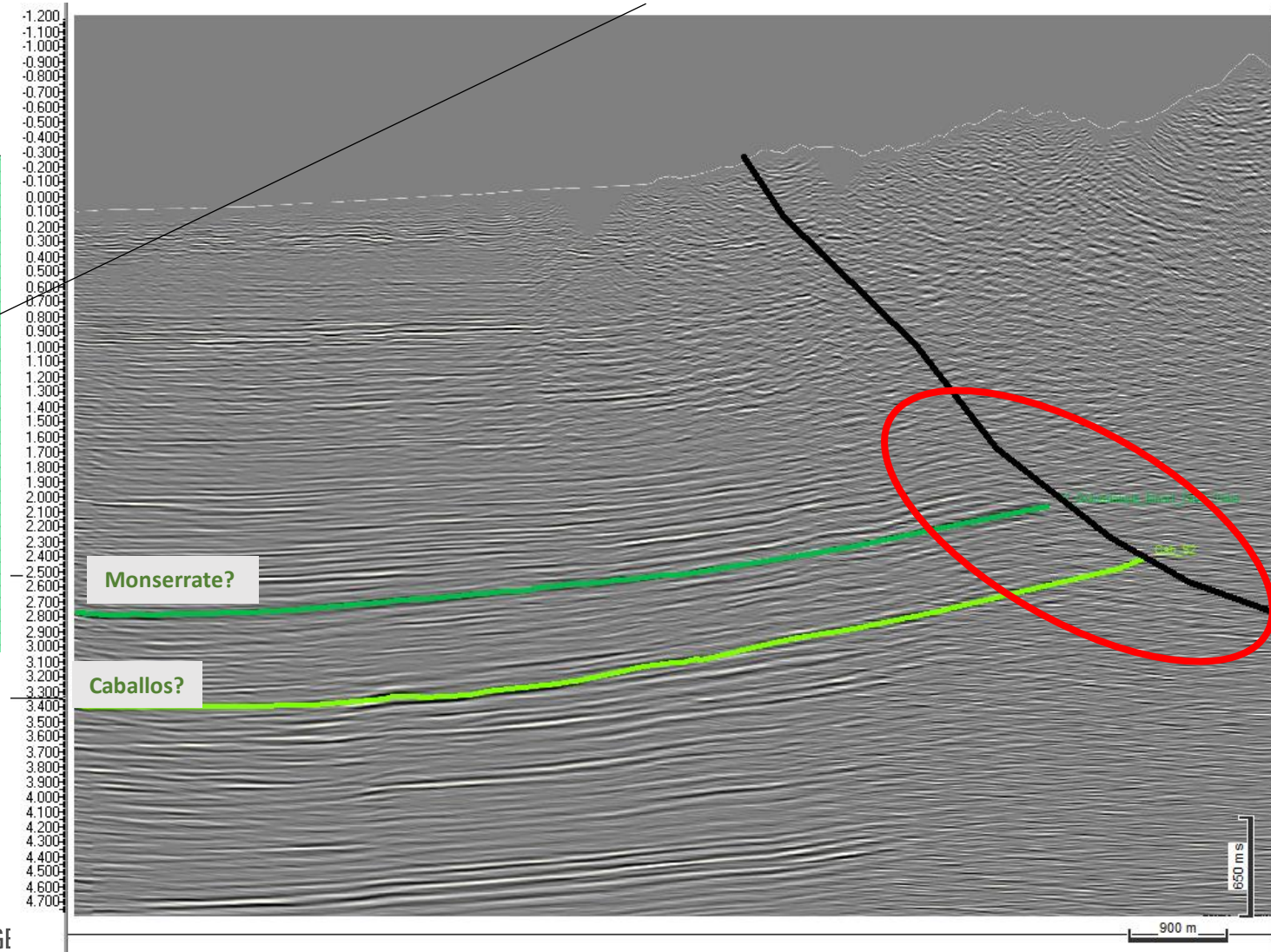




NW

GAT-1999-14

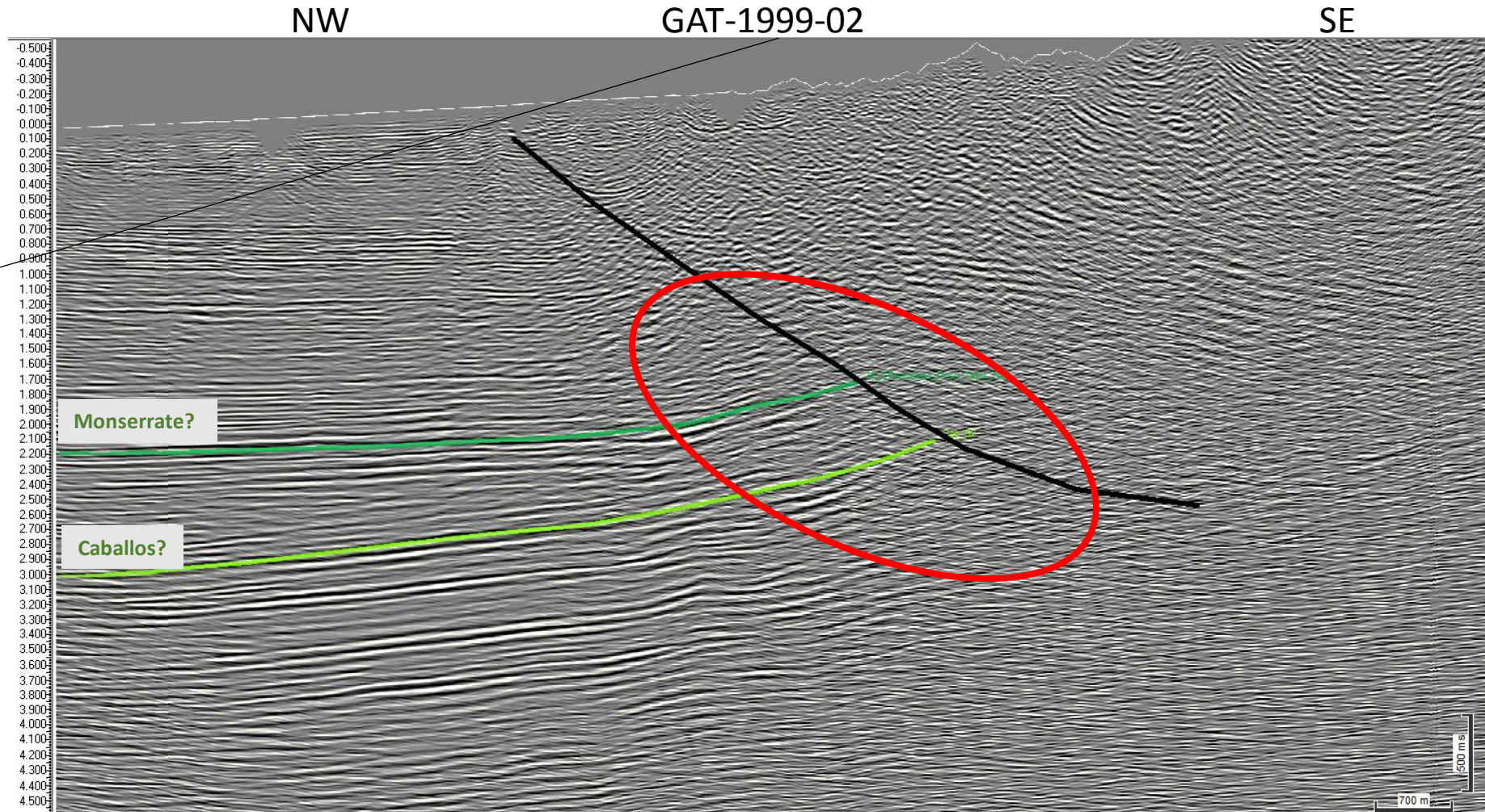
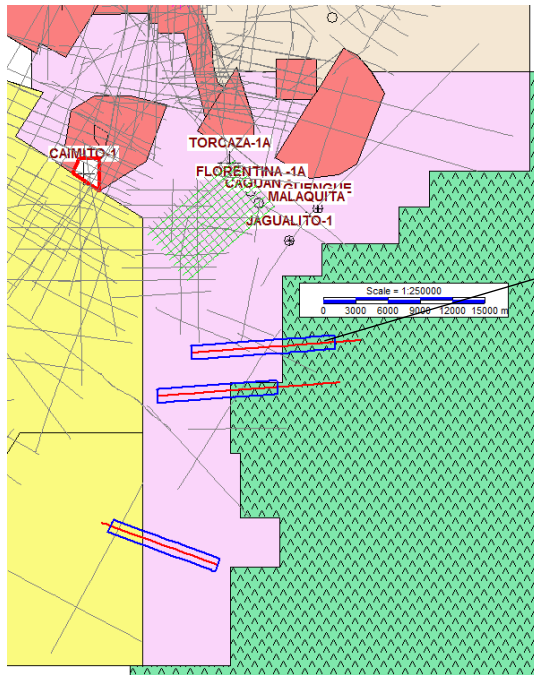
SE



Sub thrust structural trap model for Caballos
and Monserrate Formations

AGI

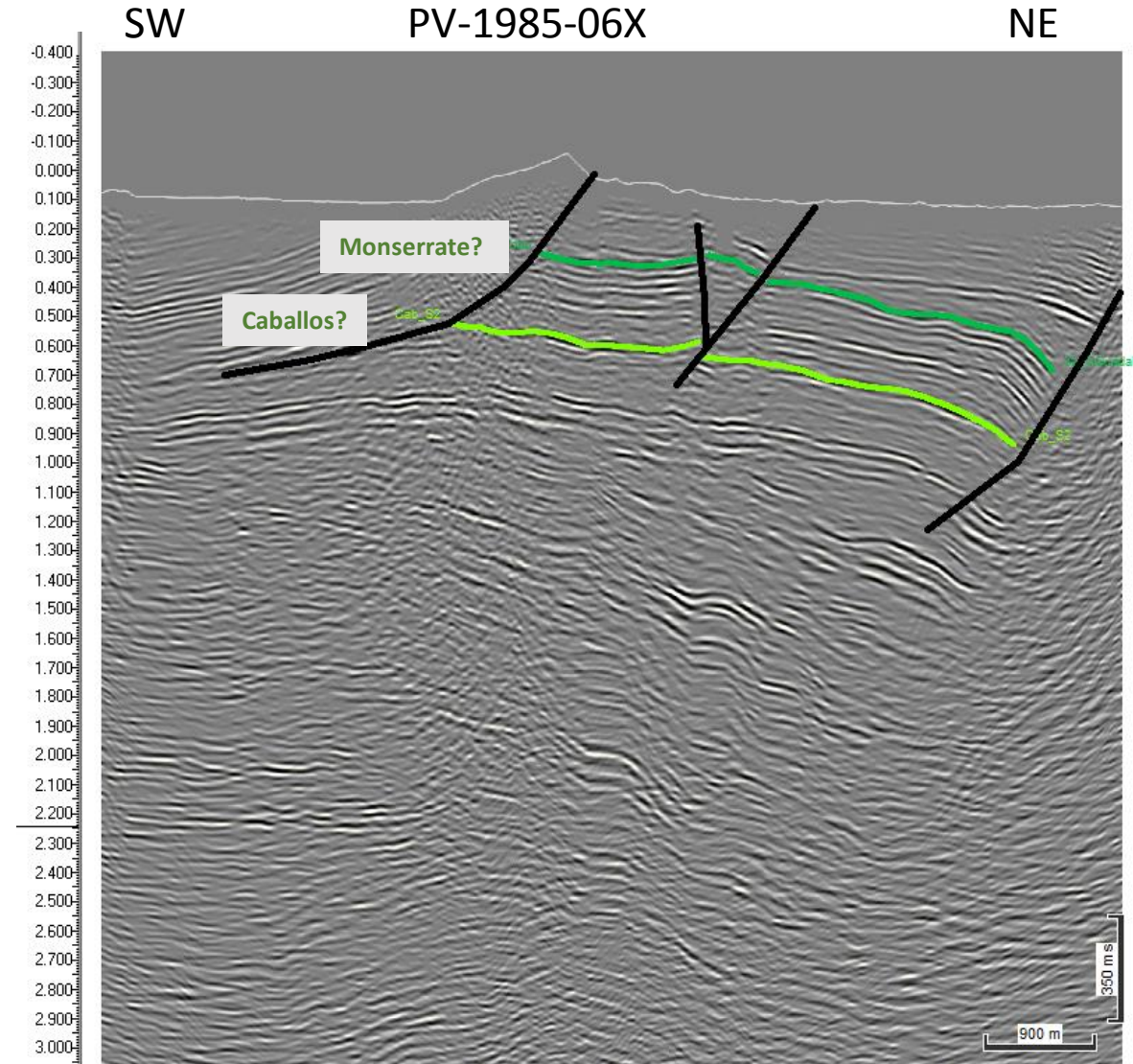
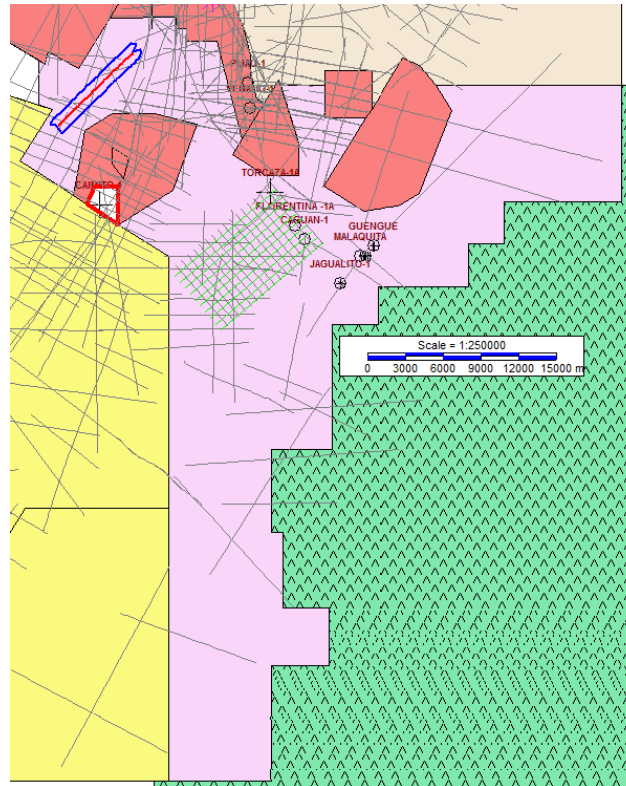
Prospectivity



Sub thrust structural trap model for Caballos
and Monserrate Formations

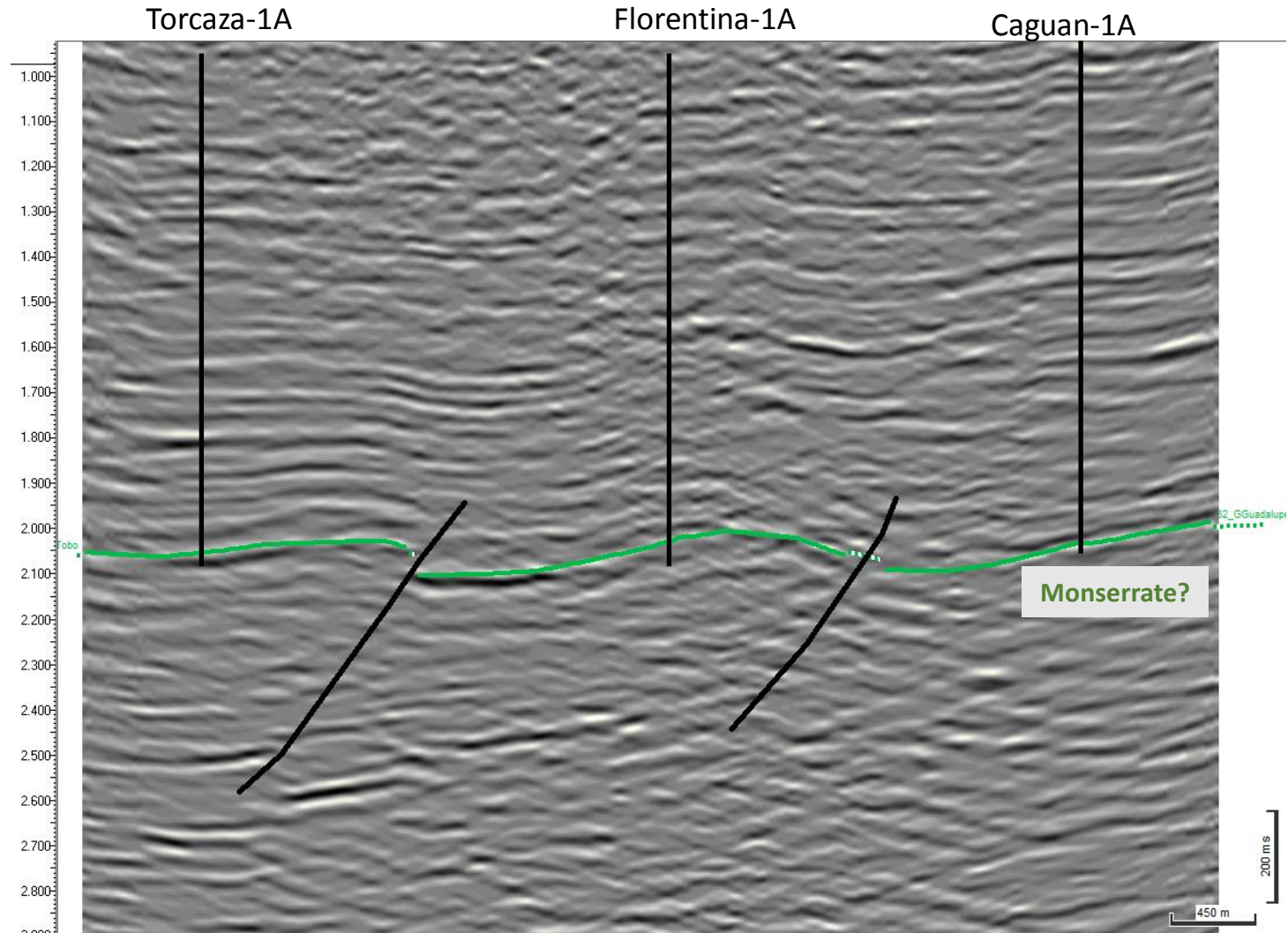
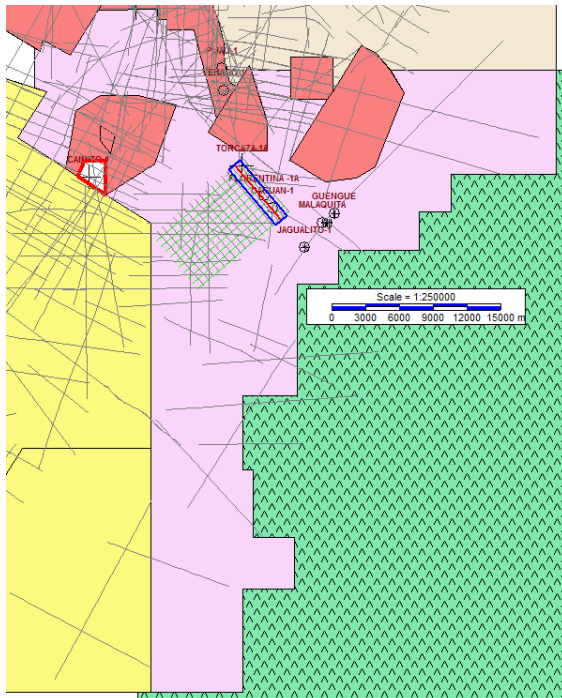
Prospectivity – south San Francisco field

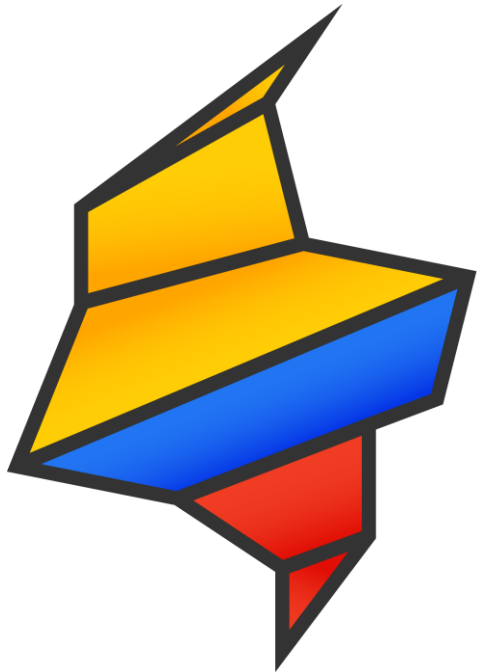
Possible anticlinal structure



Location of Torcaza, Florentina and Caguan wells

3D Arrayanes – Inline 386





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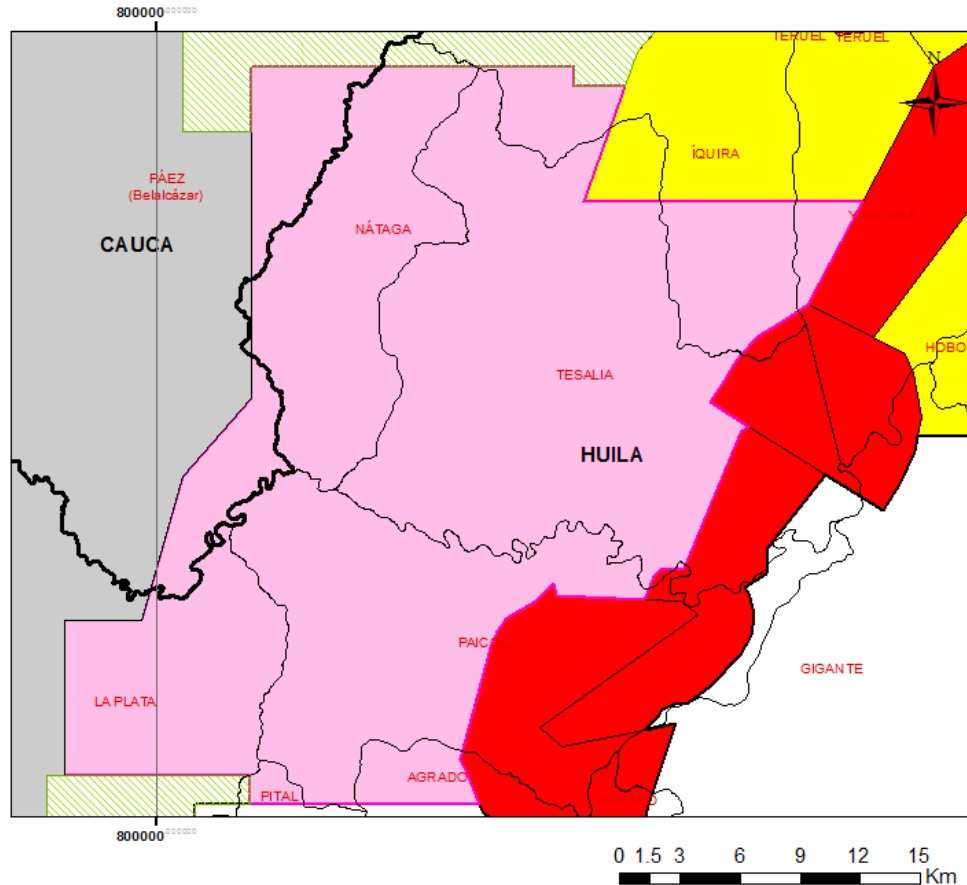
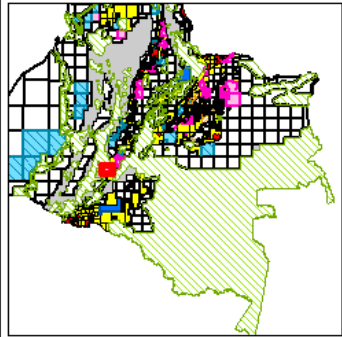
Upper Magdalena Valley
VSM 14-1

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



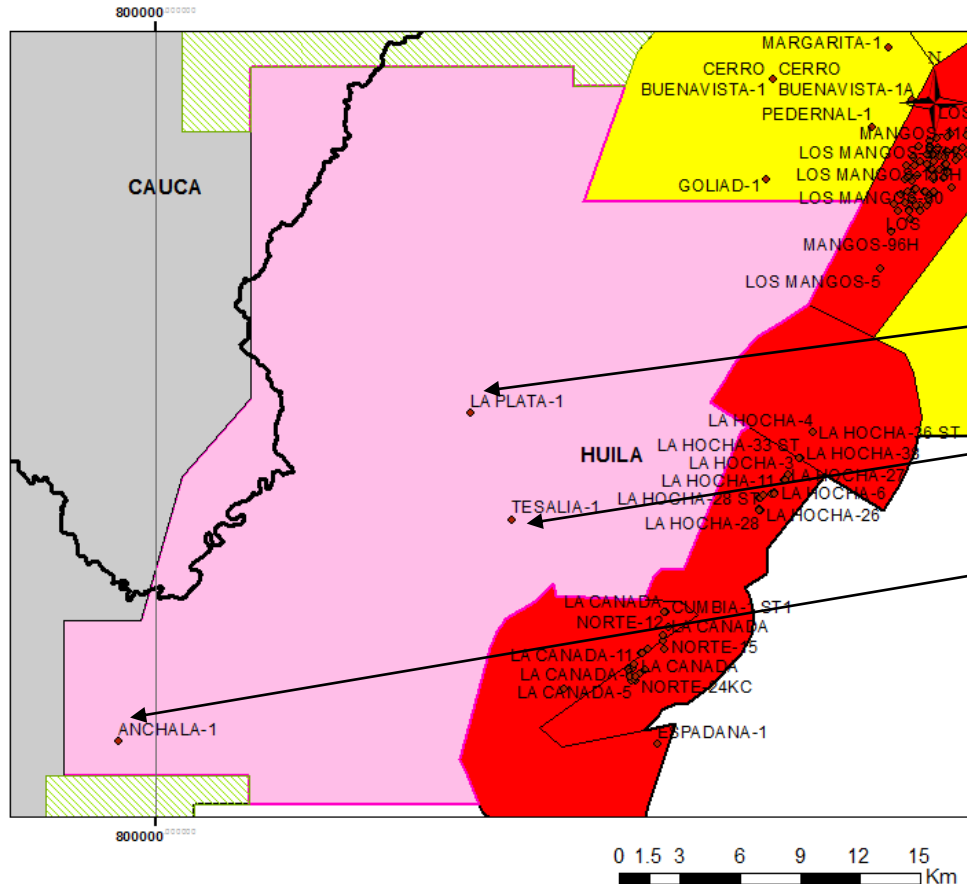
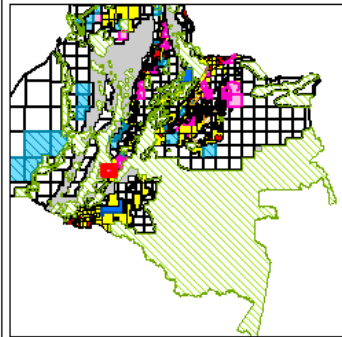
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 - BASAMENTO CRISTALINO

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

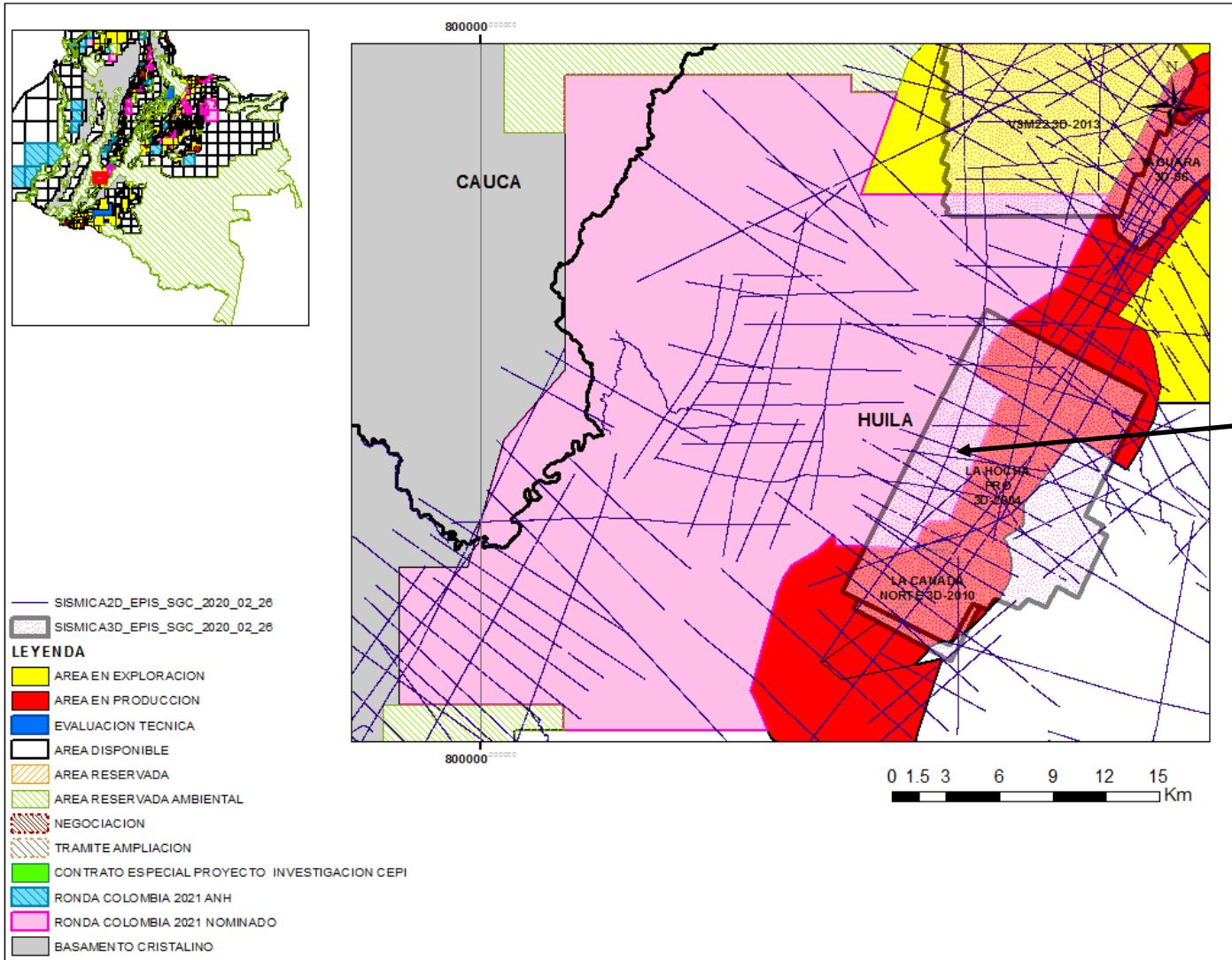
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La Plata – 1

Tesalia – 1

Anchala -1

Infraestructura - Seismic

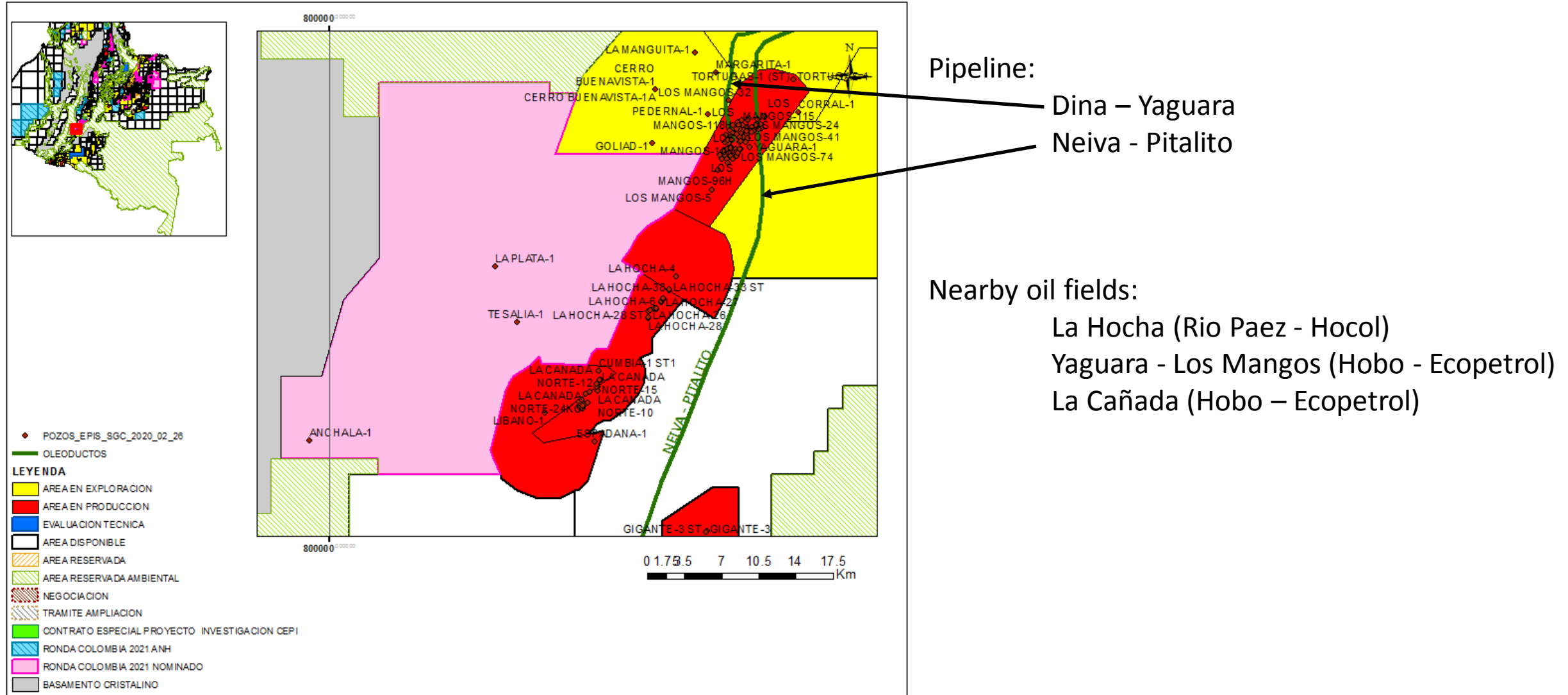


2D Seismic line: 94

2D Seismic line: 79 "Lenght 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

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

KB: 3134'

TD: 4890' MD / 4883' TVD

Tops:

Guaduala Teruel: 180' MD

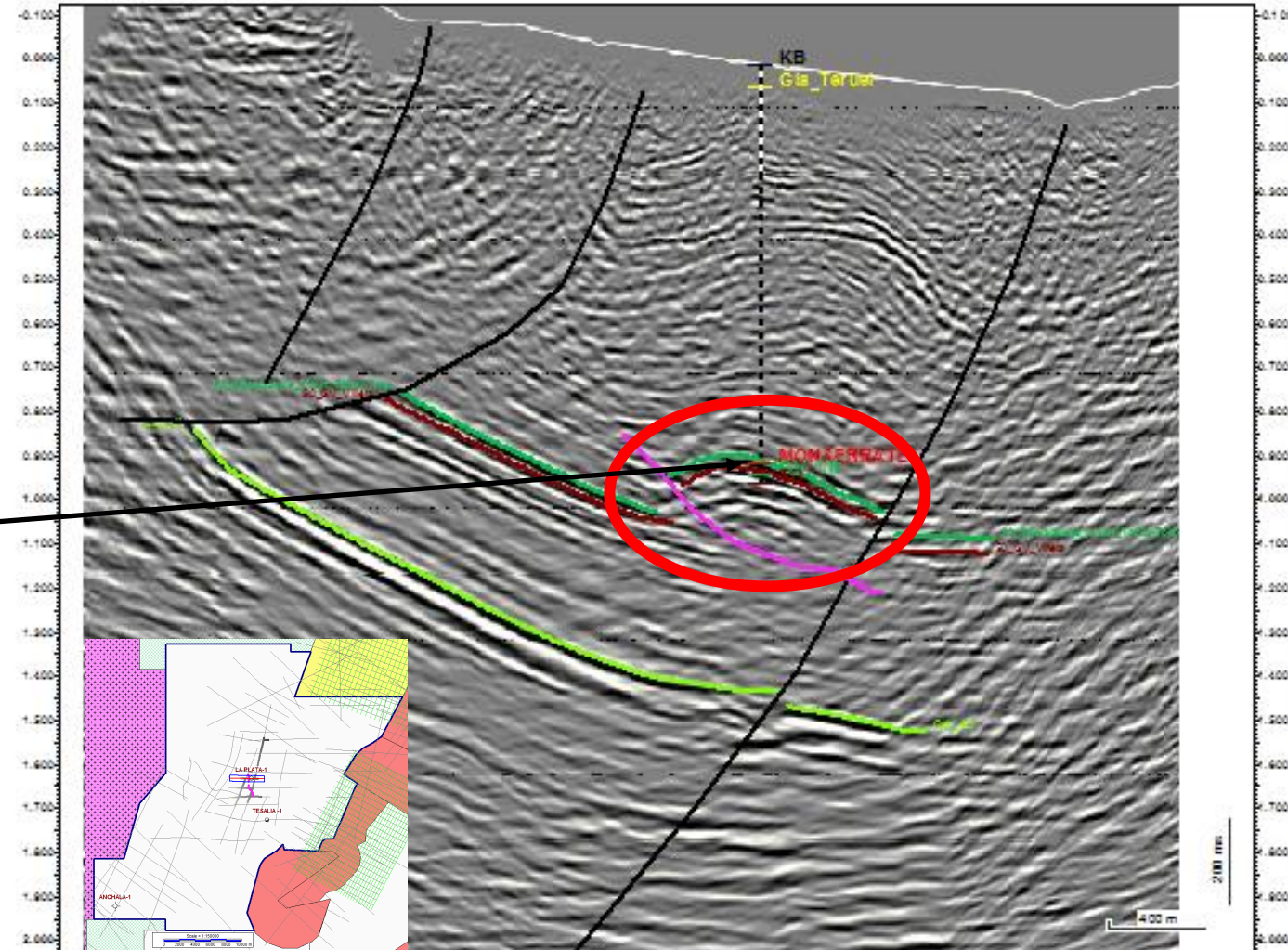
Monsserate: 4598' MD

GV_Villeta: 4808' MD Contrato de asociación
la plata informe (4750' MD)

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

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

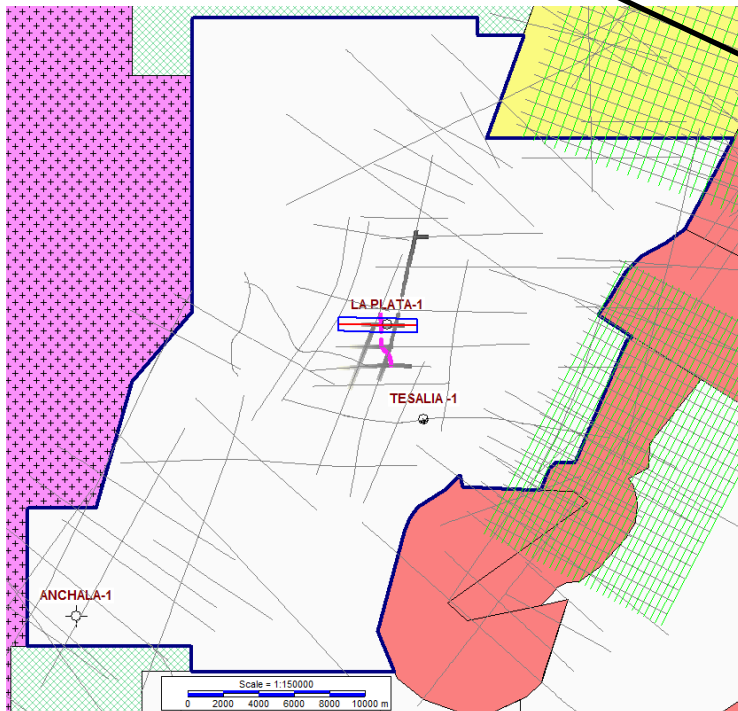
Line: ELP-1987-10



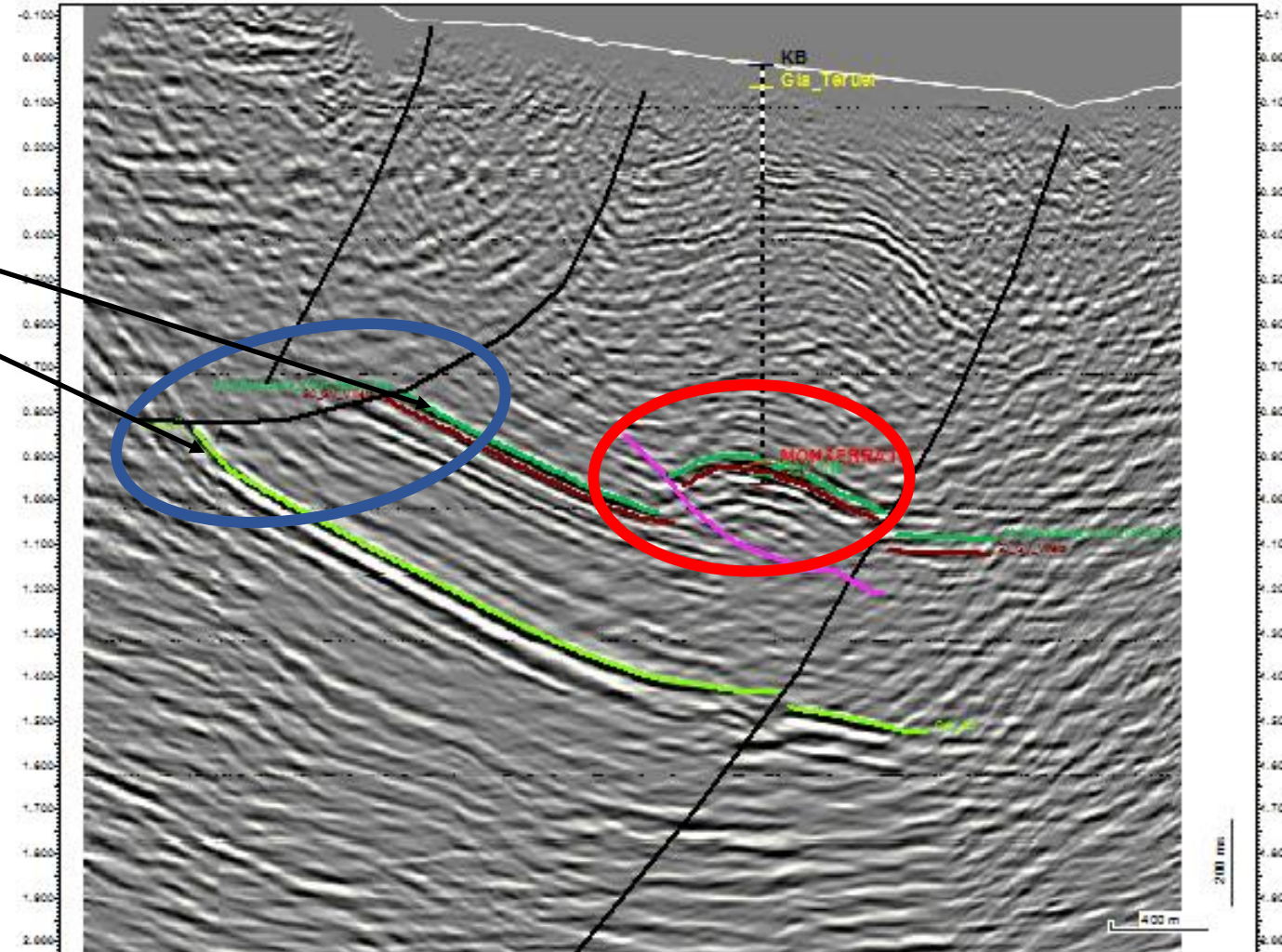
Prospectivity – near La Plata-1 well

Sub thrust estructura
Oportunidad

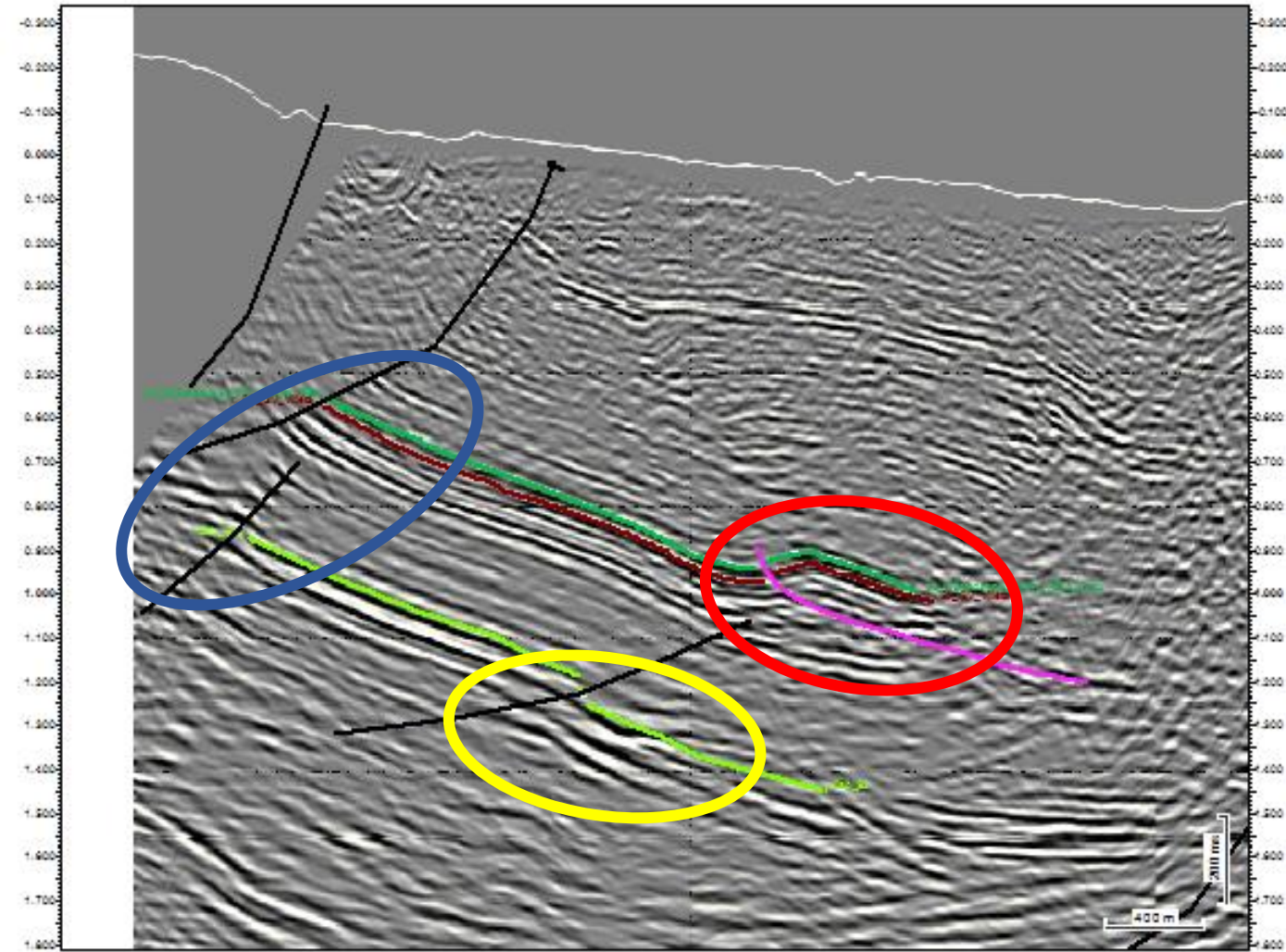
Monserate Formation
Caballos Formation “Oil?”



Line: ELP-1987-10

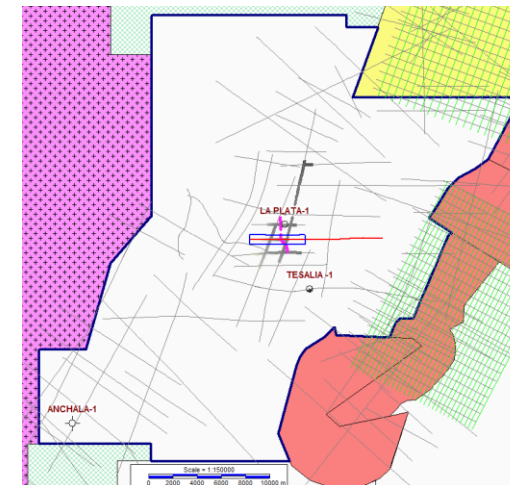


Prospectivity – near La Plata-1 well



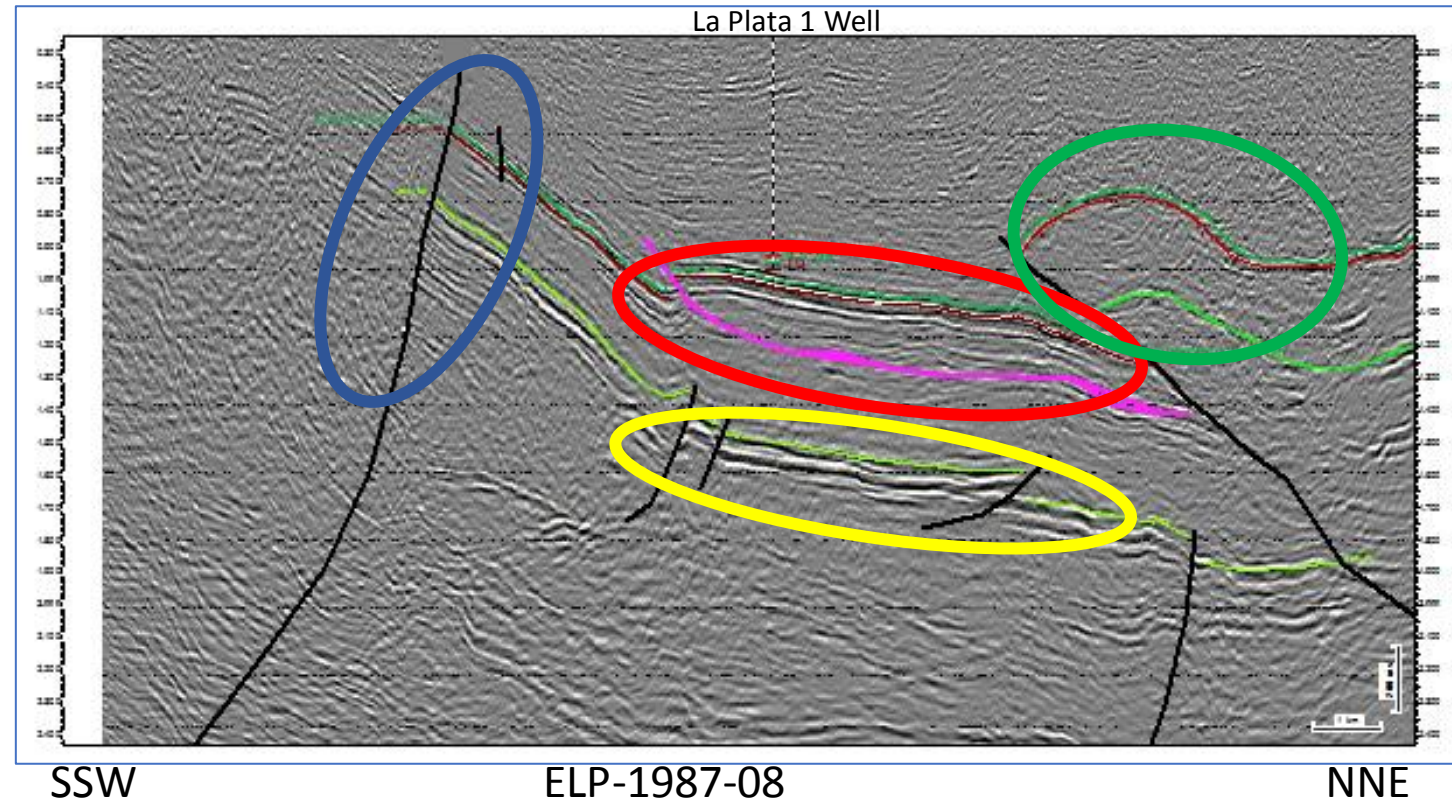
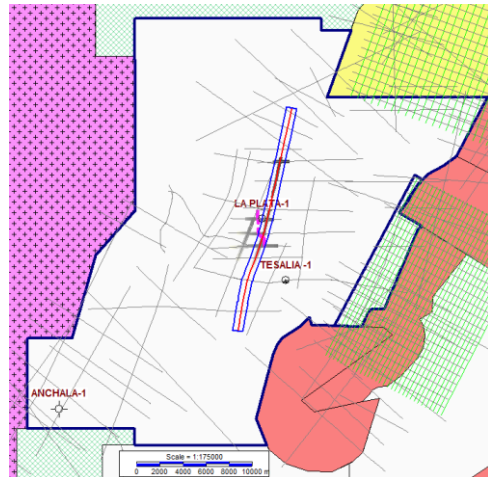
Line: ELP-1987-06

Line located south of the La-Plata-1 well



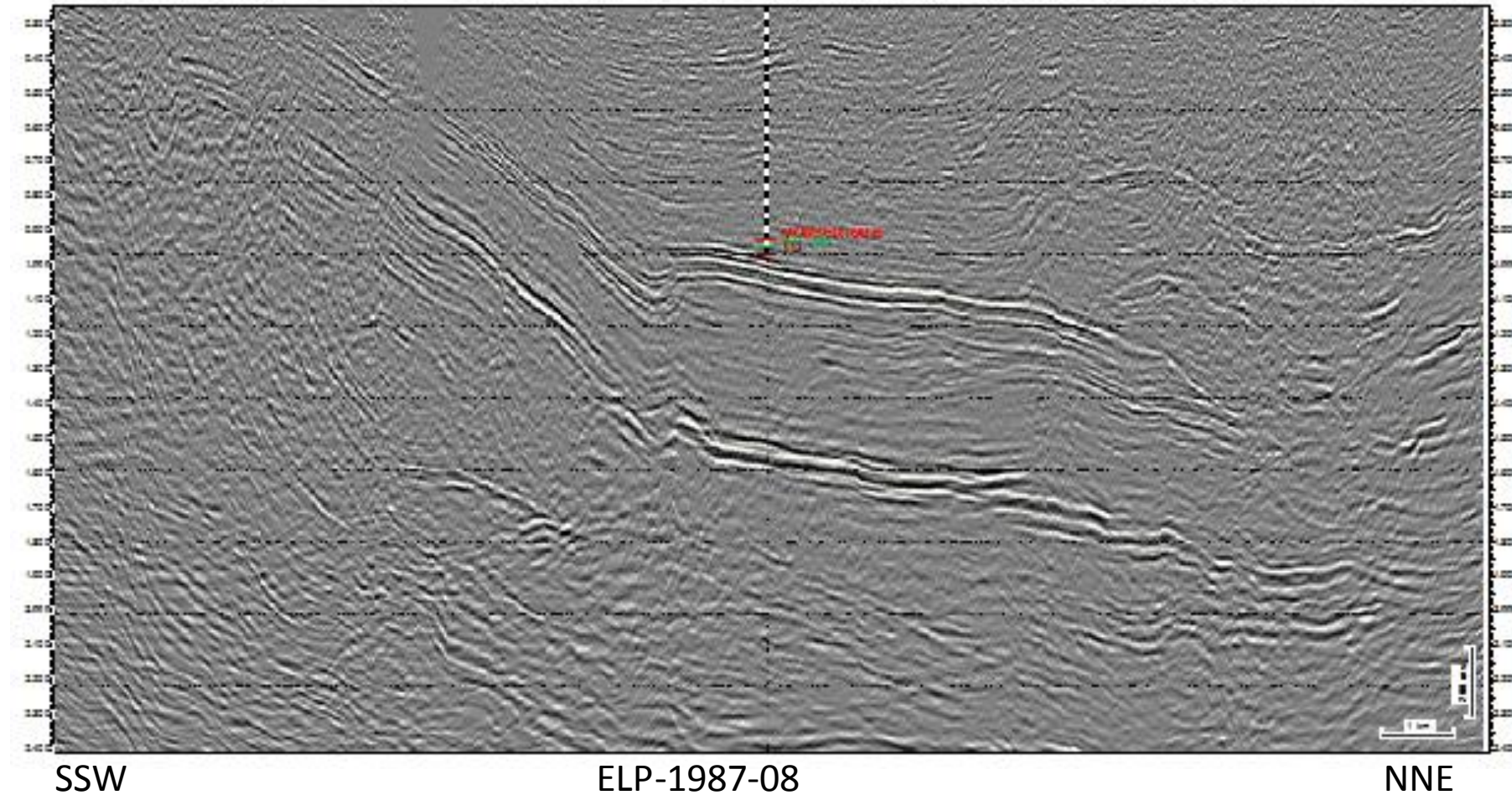
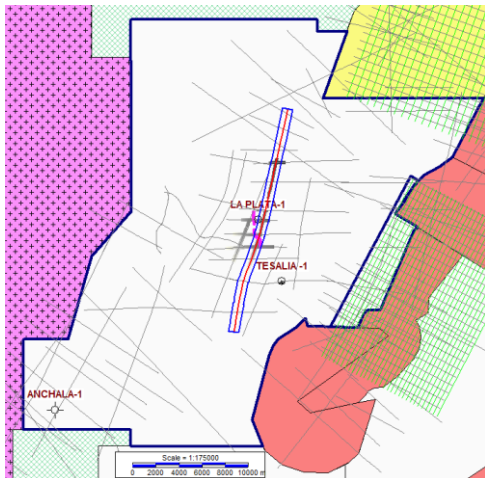
Prospectivity – near La Plata-1 well

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

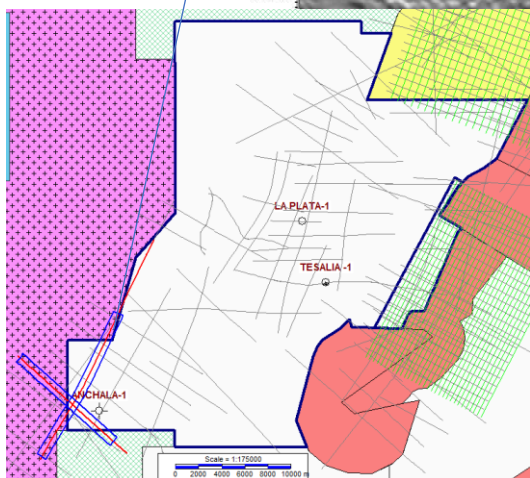
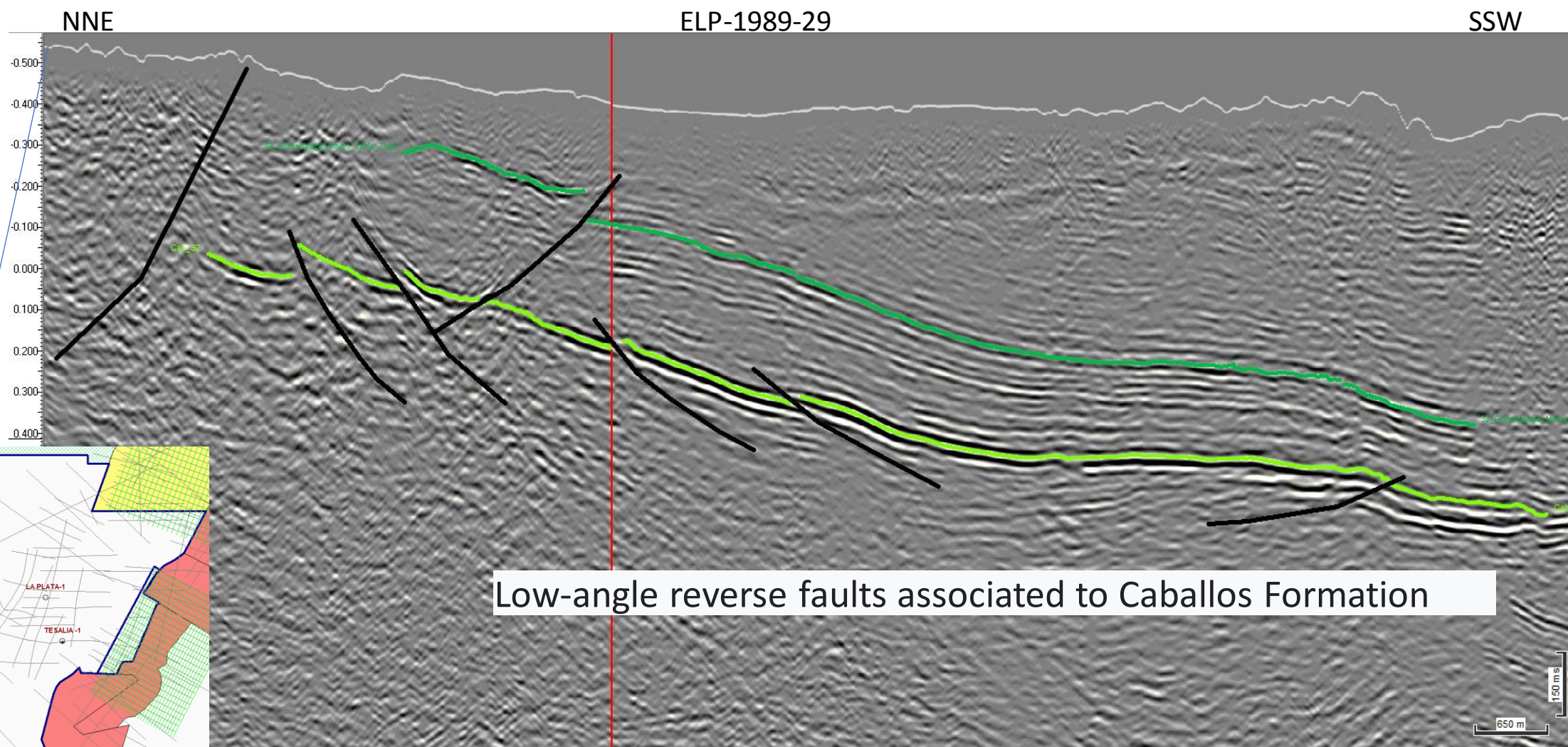


Prospectivity – near La Plata-1 well

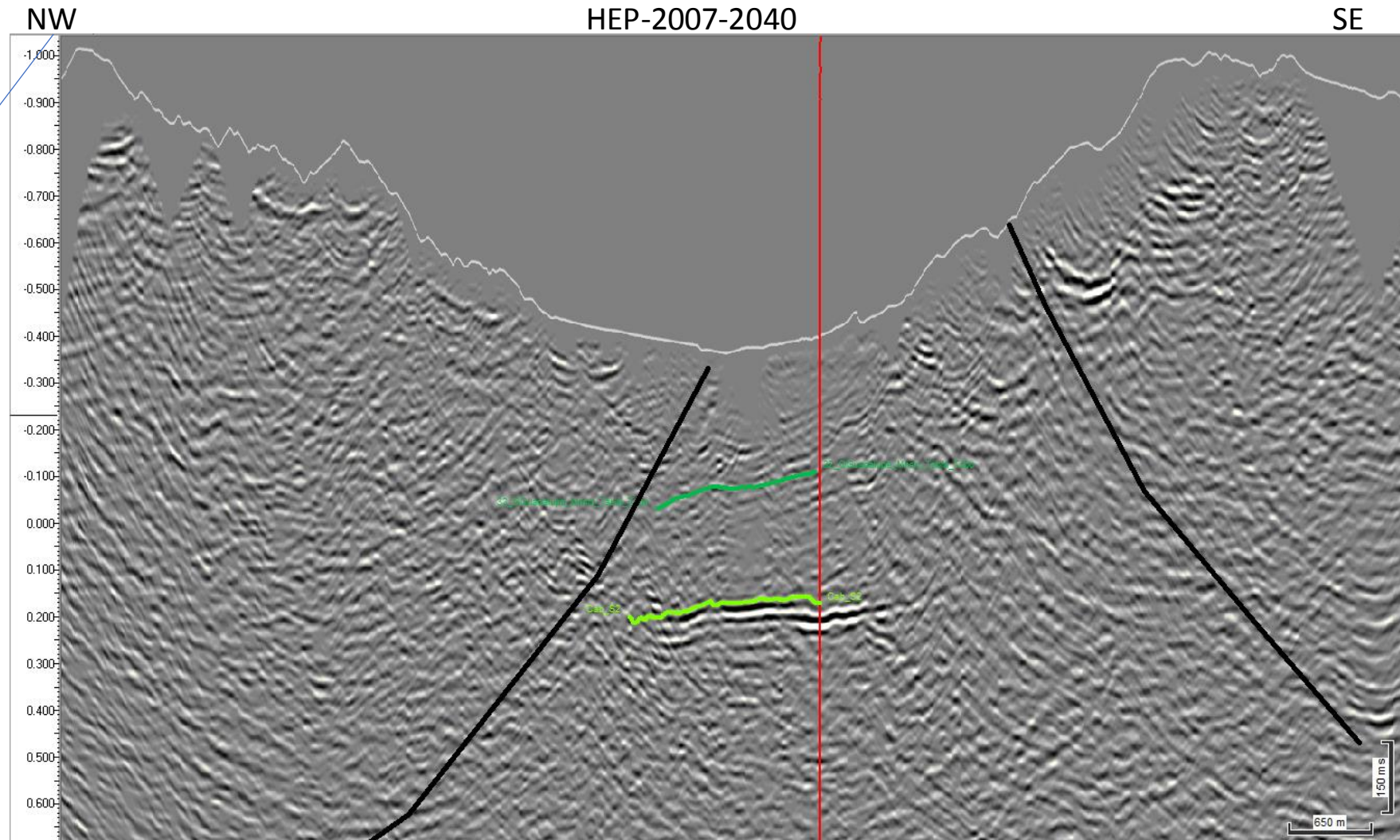
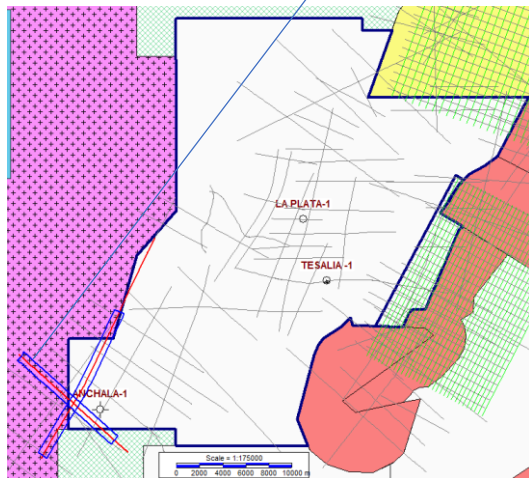
Seismic line without
interpretacion



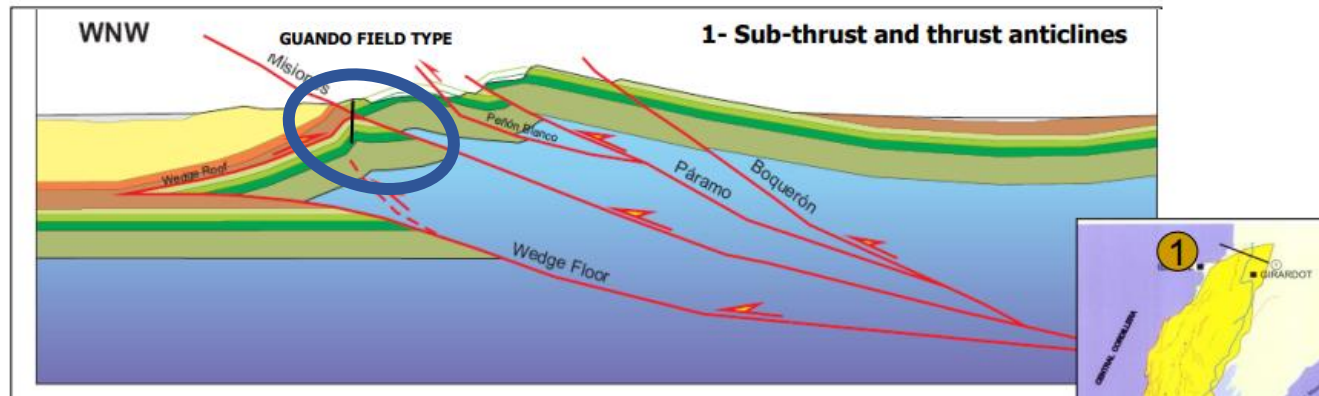
Prospectivity – near Anchala-1 well



Prospectivity – near Anchala-1 well

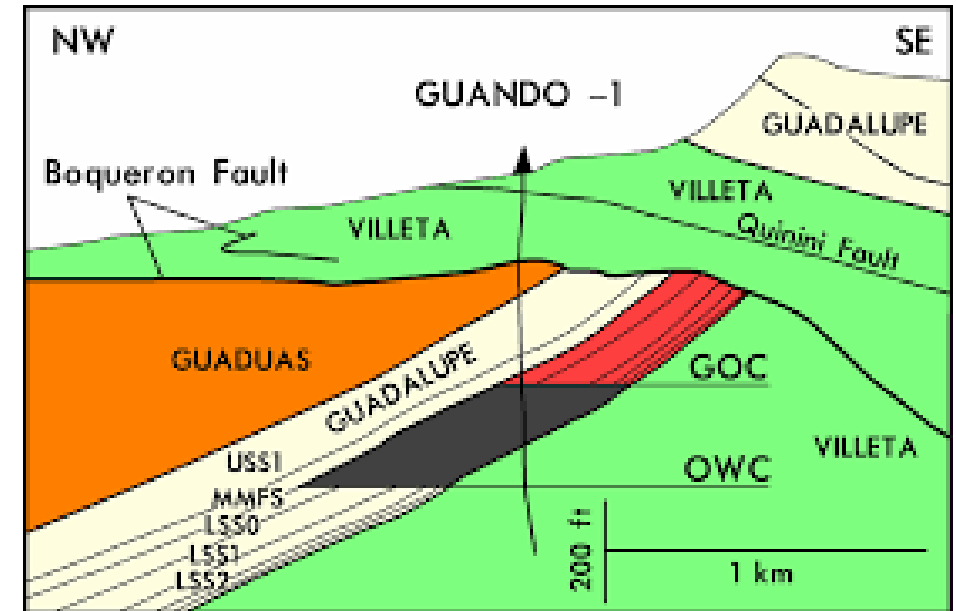


Sub Thrust prospectivity analogs



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