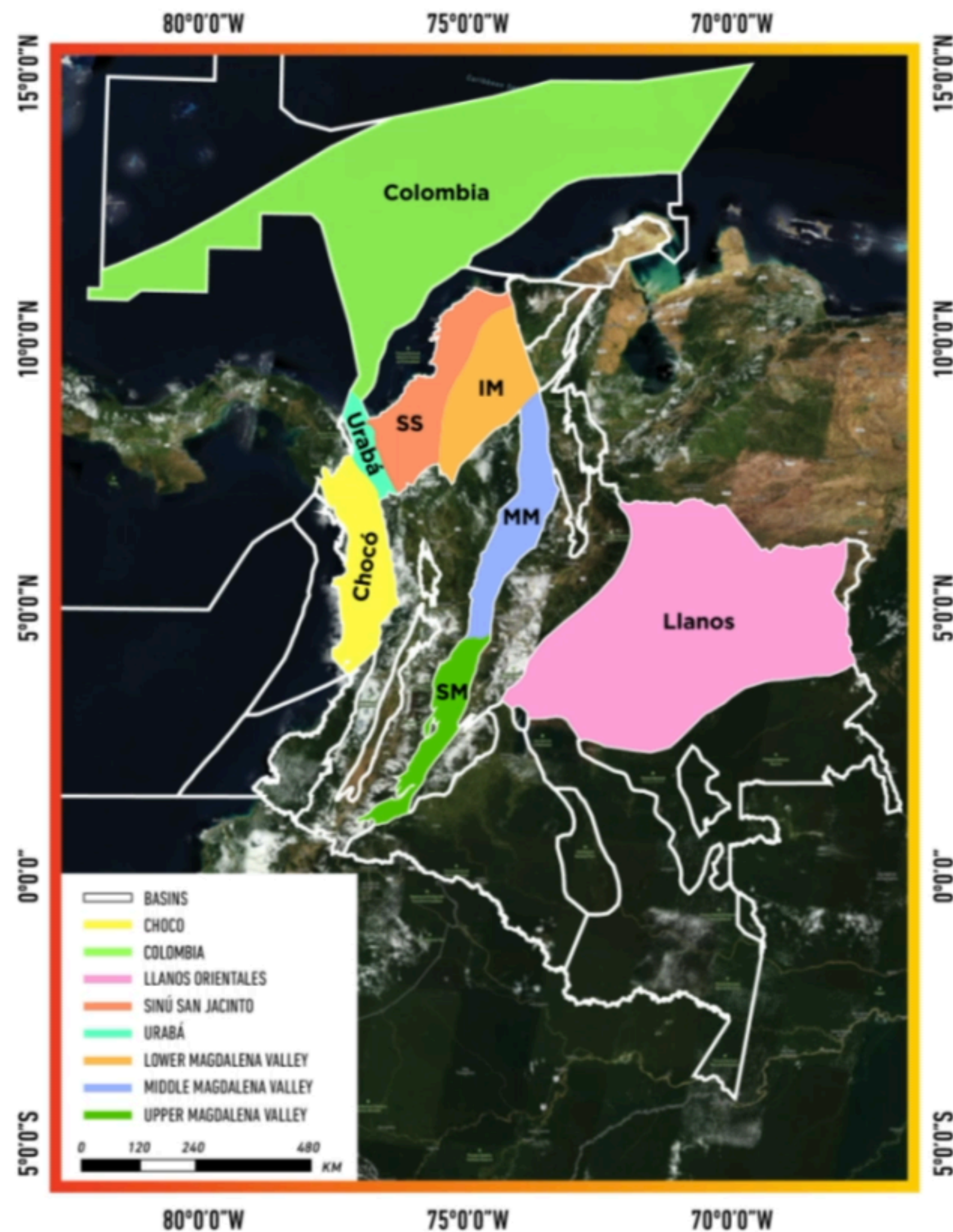


PPAA-CYCLE 4 RONDA 2021

CARLOS JOSÉ RODRÍGUEZ
VICEPRESIDENTE TÉCNICO





10 TEAs / 20 E&Ps WILL BE OFFERED IN 8 BASINS

Offshore

- Colombia
- Urabá

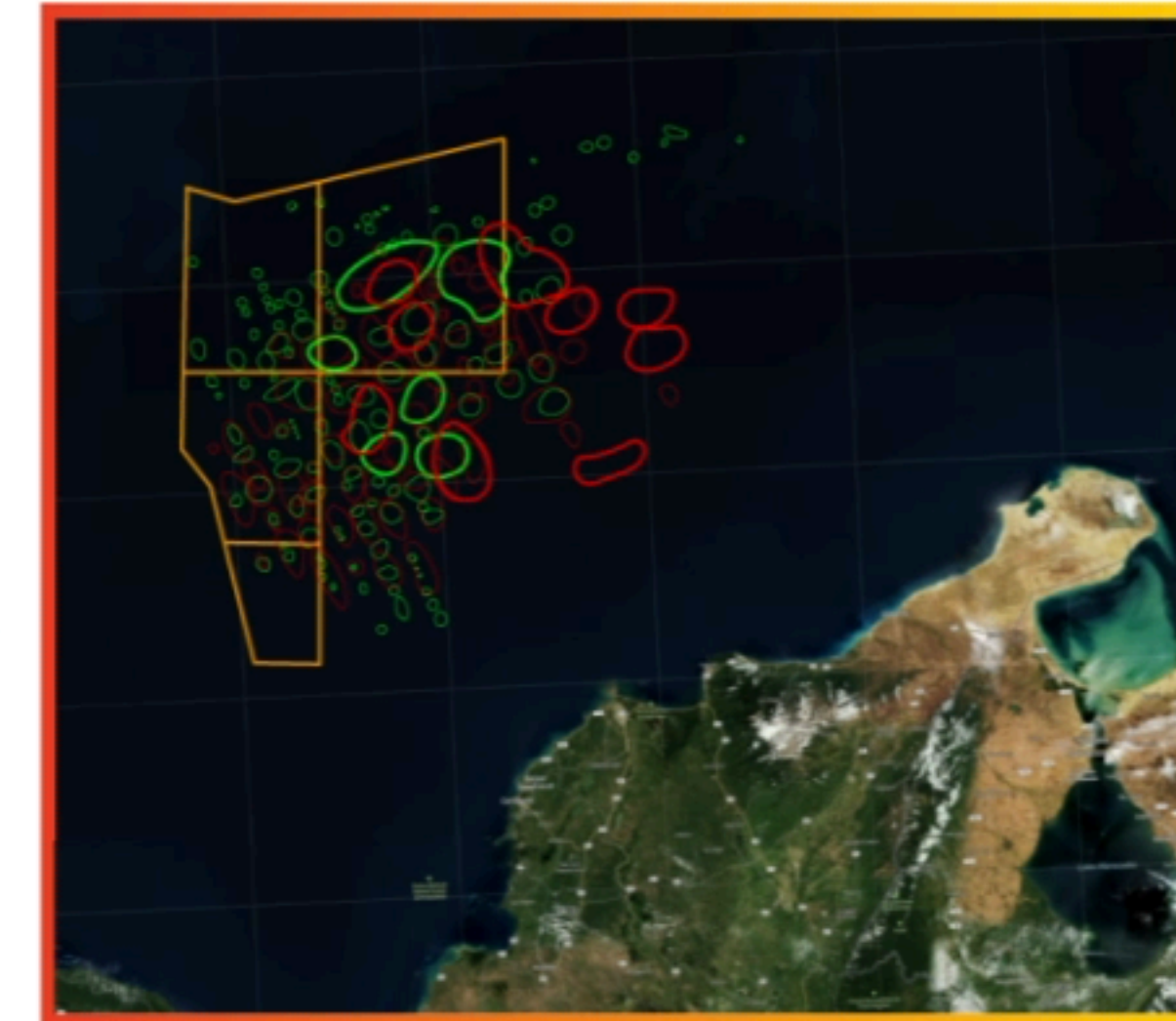
Onshore

- Sinú-San Jacinto
- Chocó
- Valle Inferior del Magdalena
- Valle Medio del Magdalena
- Valle Superior del Magdalena
- Llanos

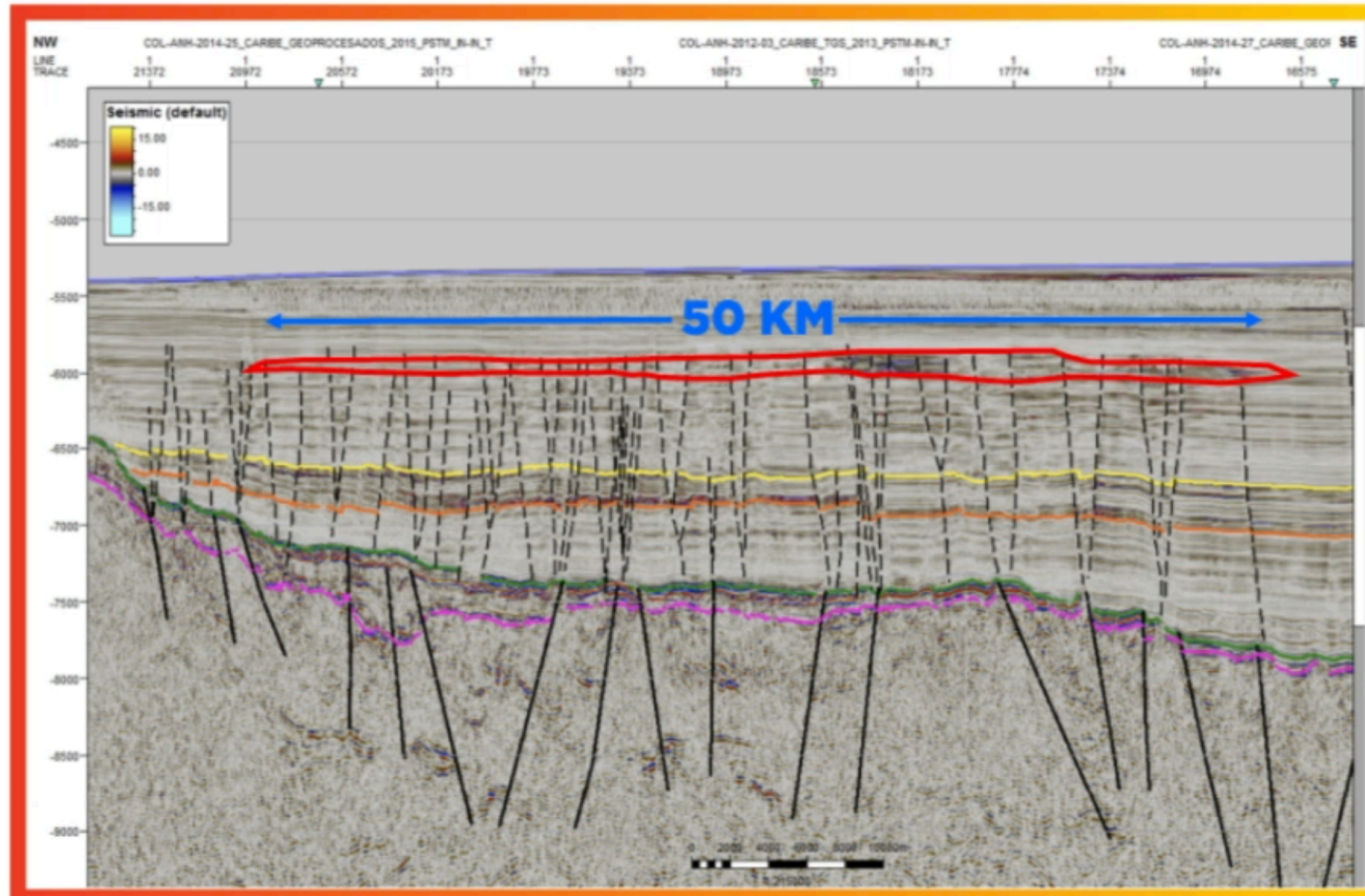
TYPE OF OPPORTUNITIES TO BE OFFERED FOR TEAS

COLOMBIA BASIN OFFSHORE

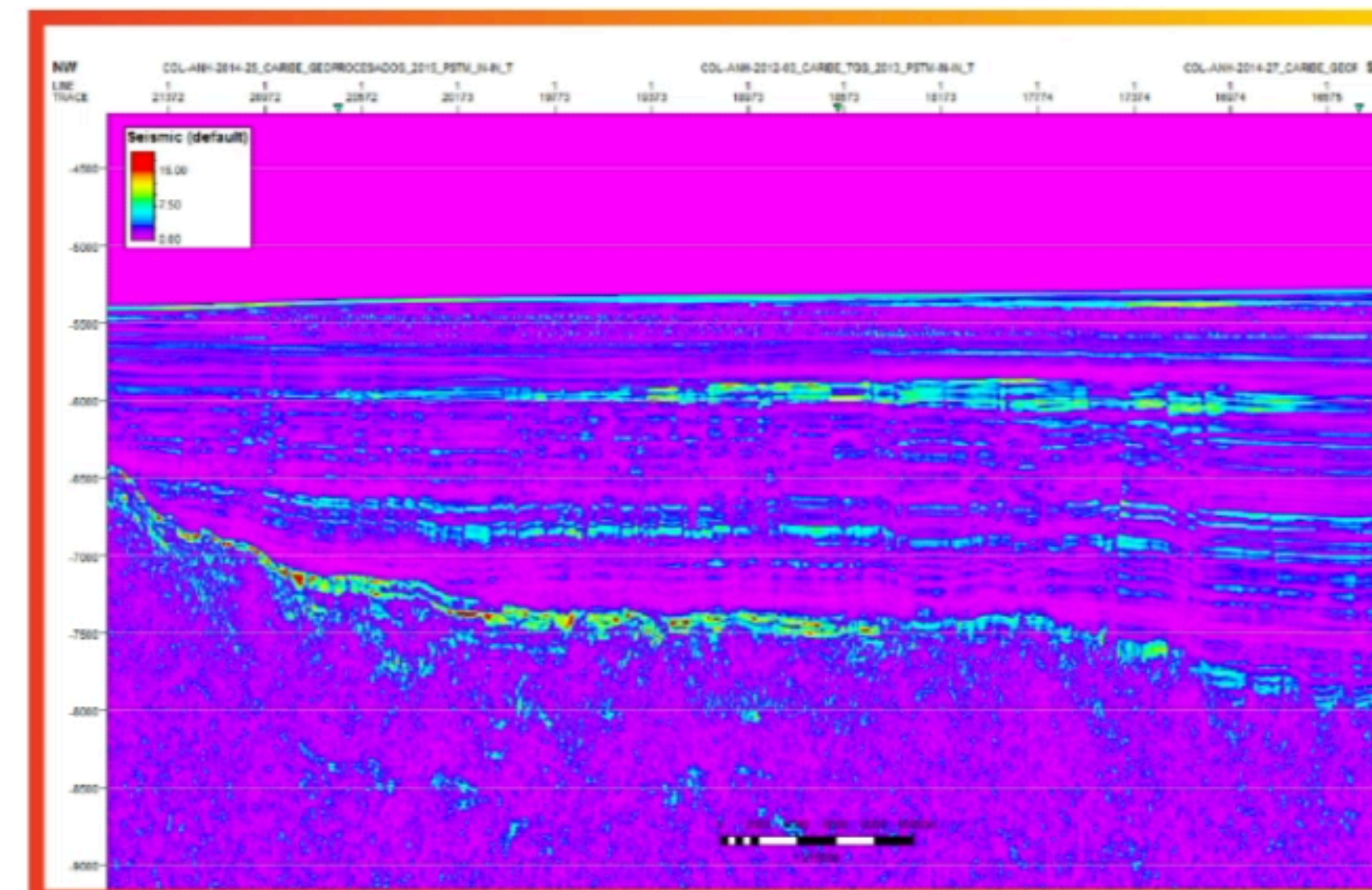
Gas chimneys and sandstones with bright spots Direct Hydrocarbon Indicators



Dip line



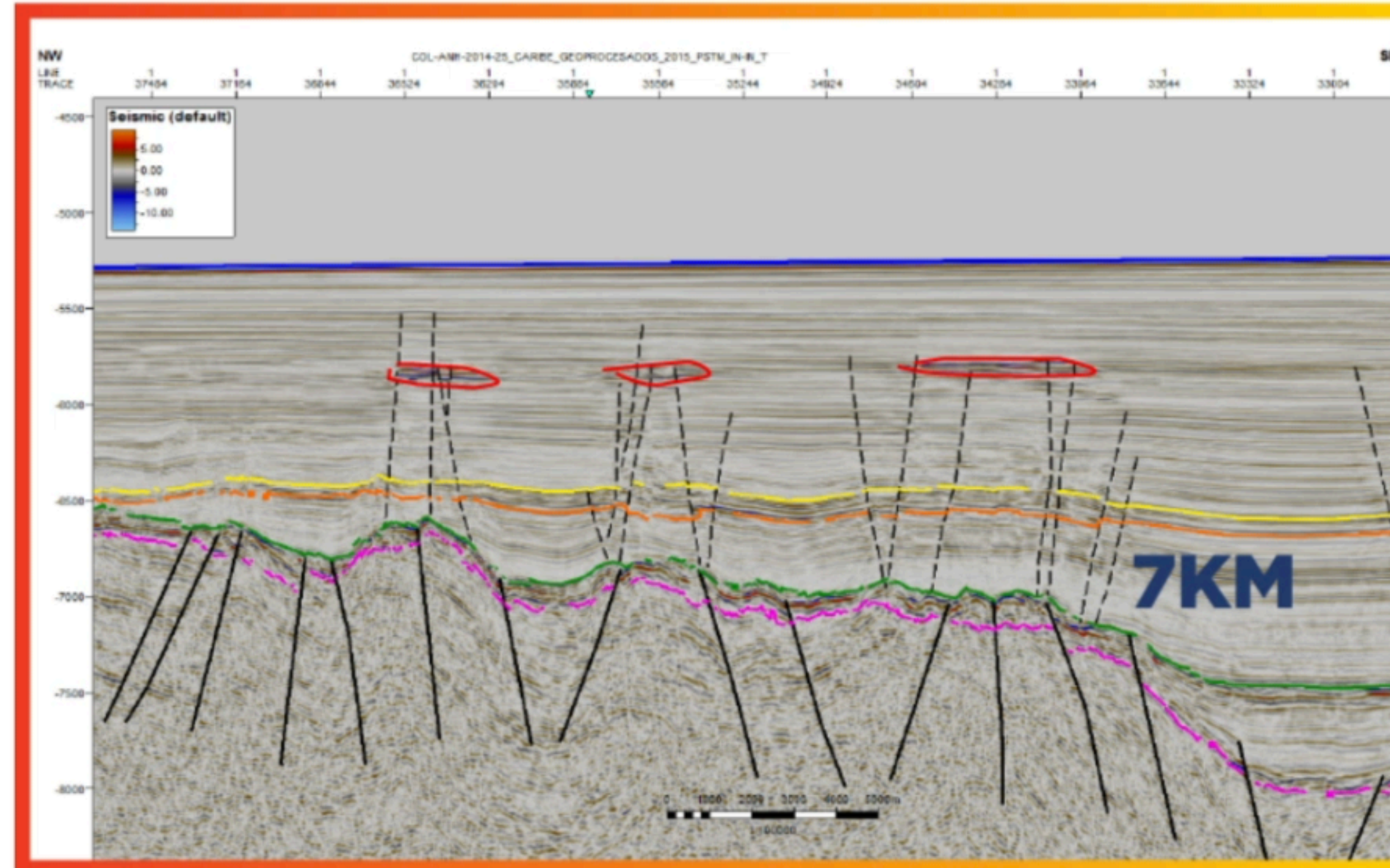
Gas traps



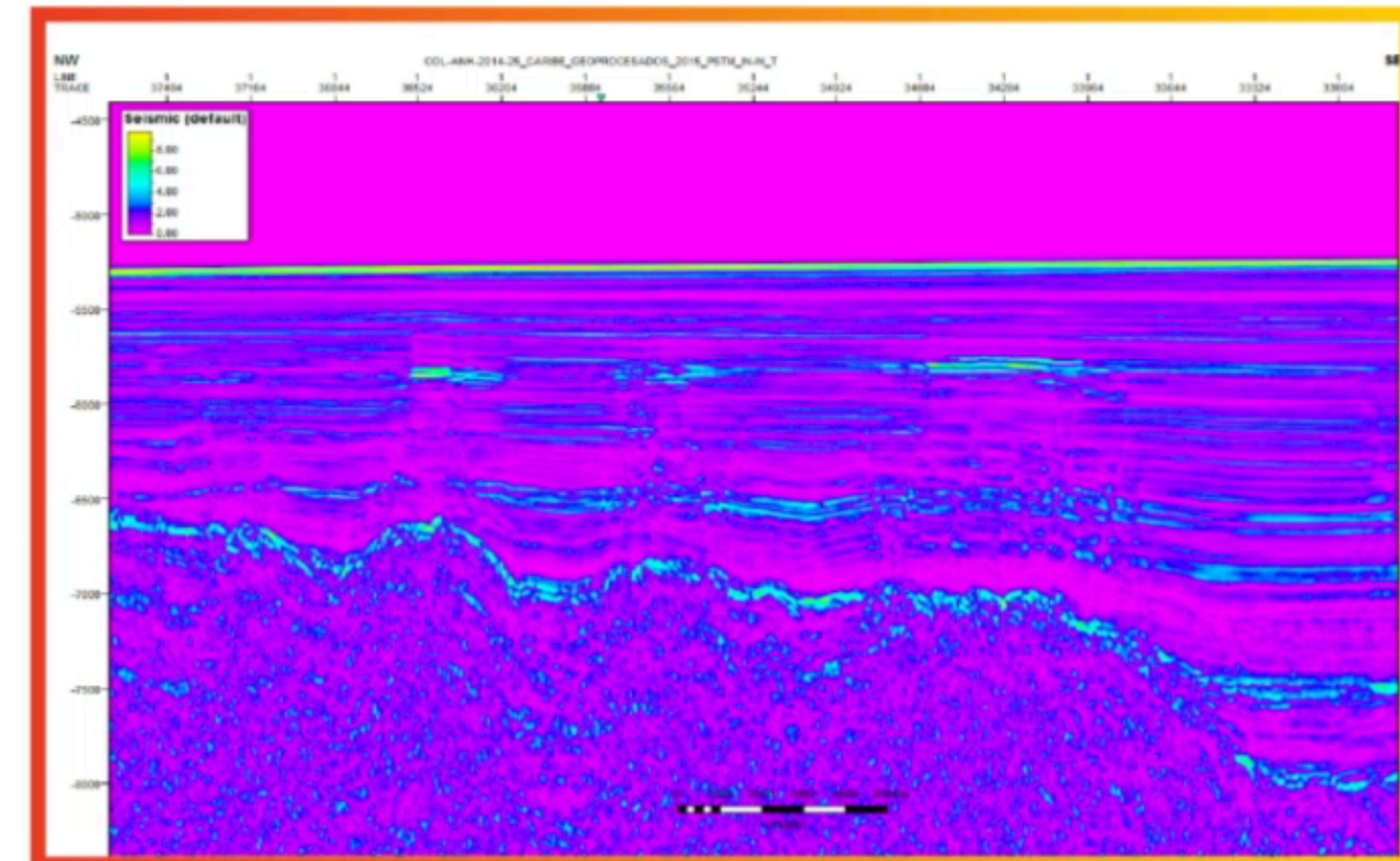
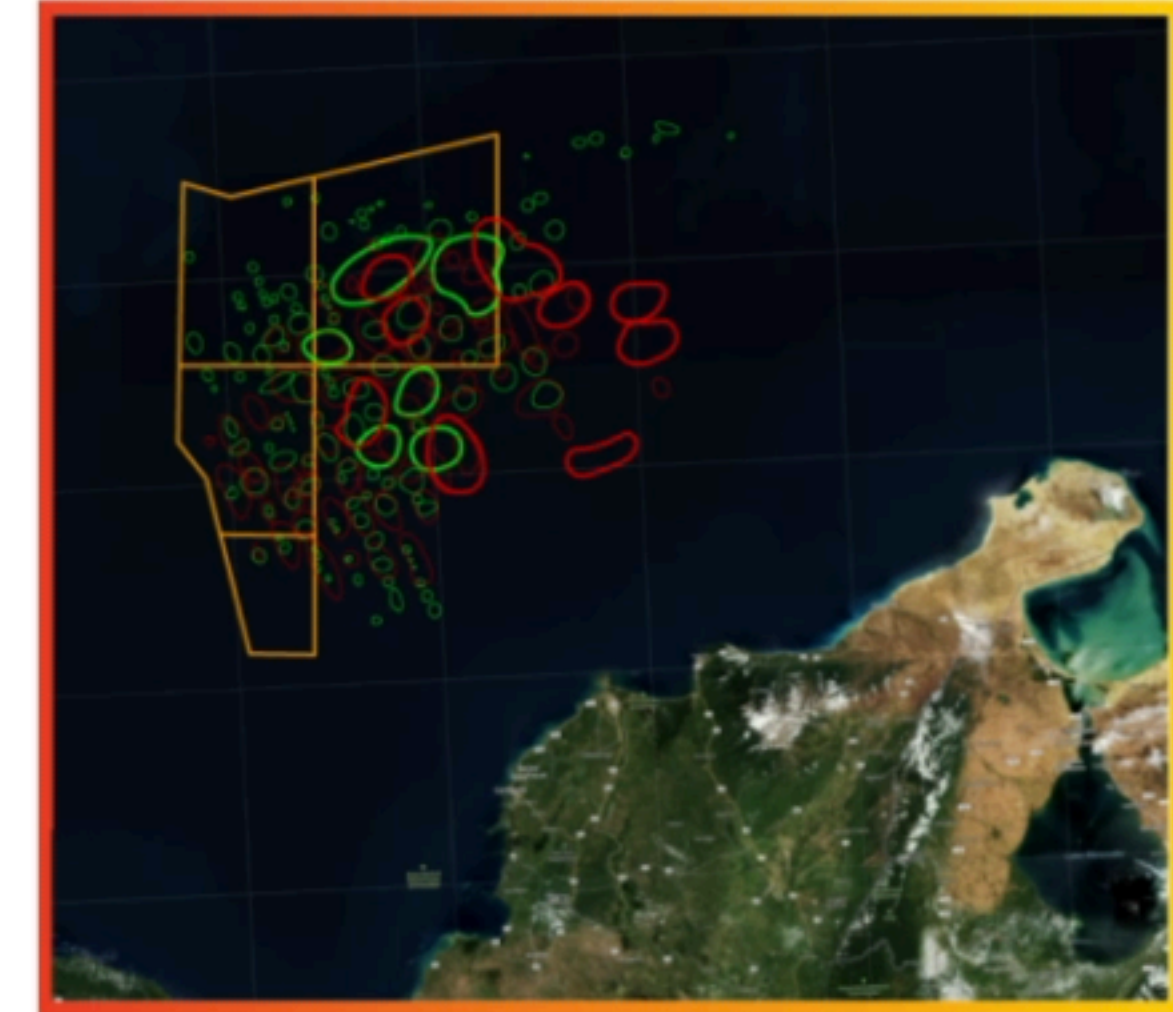
COLOMBIA BASIN OFFSHORE

Potential liquid hydrocarbons in folds over basement structures

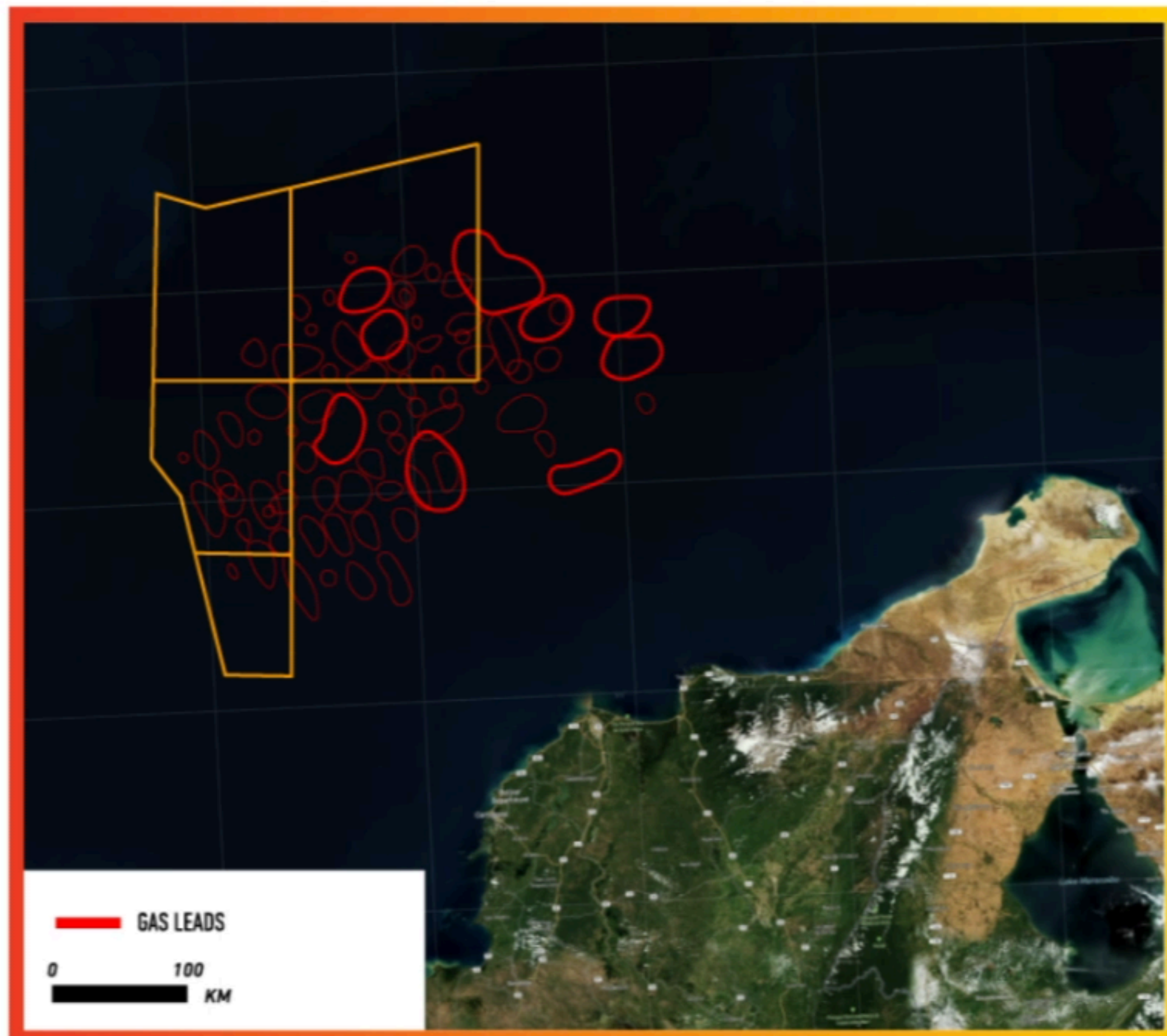
Dip line



Oil Traps



COLOMBIA BASIN Gas Leads

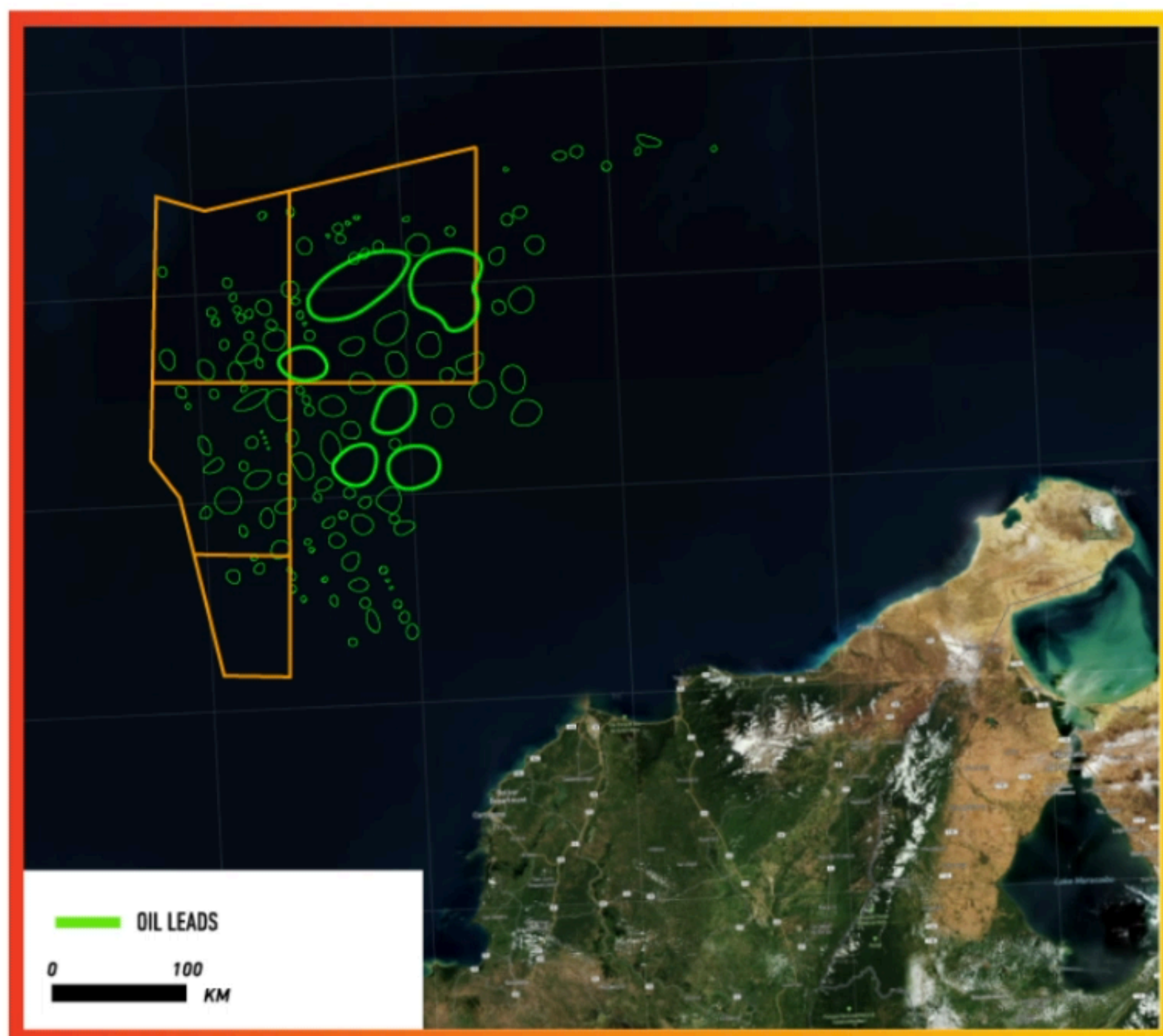


FRONTIER BASINS

COLOMBIA BASIN GAS PROSPECTIVE RESOURCES

Type of contract	TEA
Number of Blocks	4
OGIP (TCFs)	979.2
Recovery factor	80%
Chance of success	10%
Best Estimate (TCFs-BCFs)	39.1

COLOMBIA BASIN Oil Leads



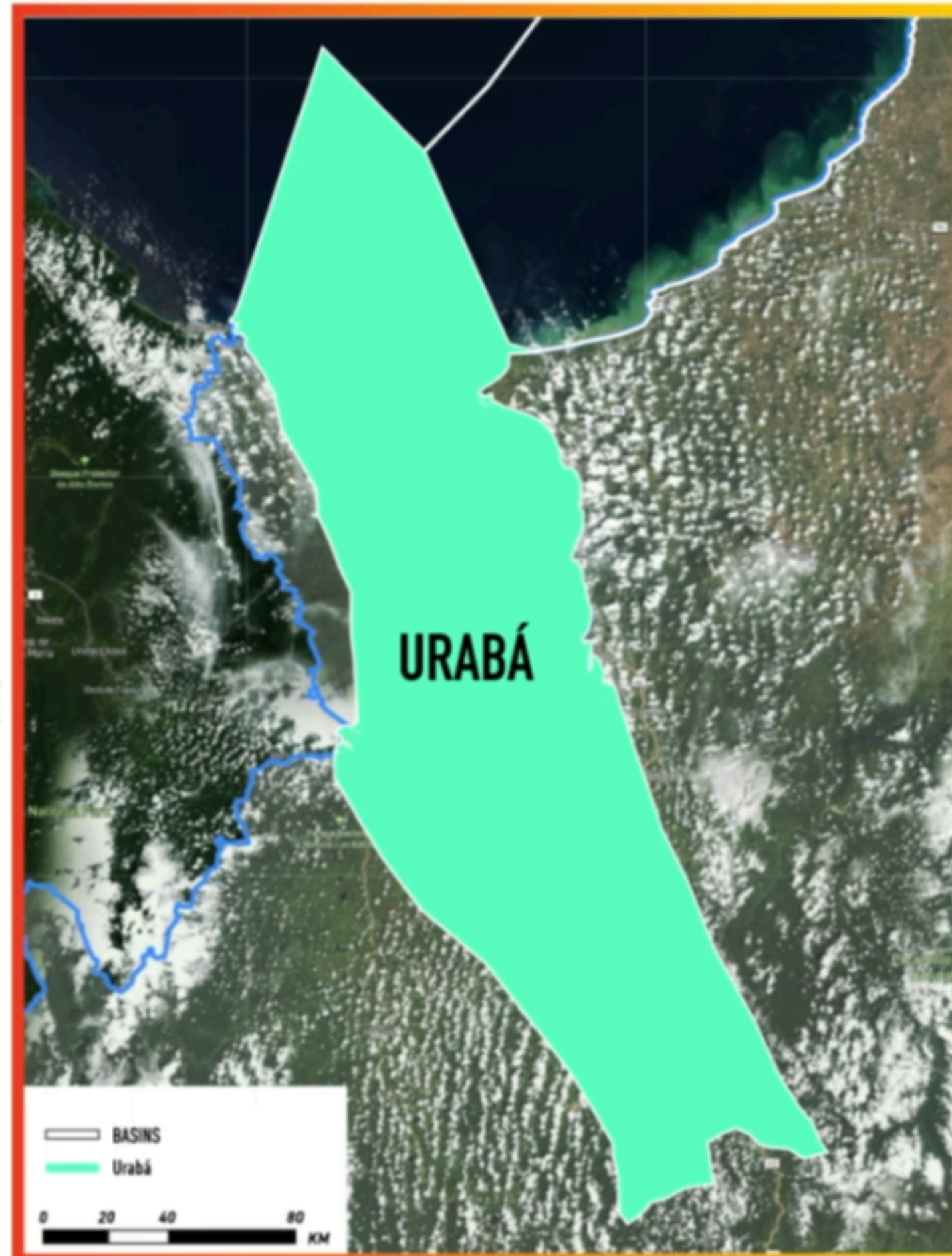
FRONTIER BASINS

COLOMBIA BASIN OIL PROSPECTIVE RESOURCES

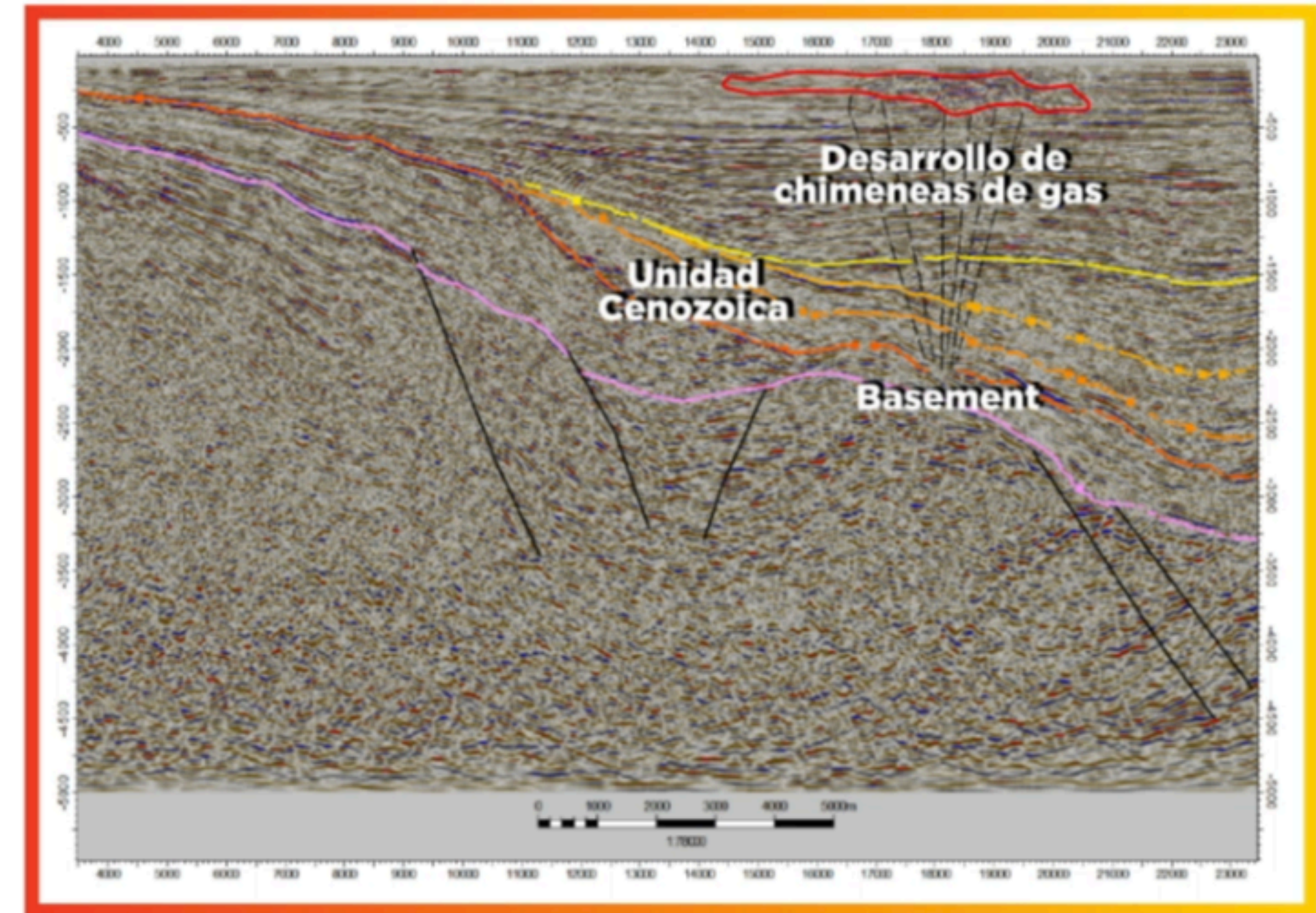
Type of contract	TEA
Number of Blocks	4
OOIP (MMBIS)	112,556.0
Recovery factor	25%
Chance of success	10%
Best Estimate (MMBIs)	1,406.96

URABA BASIN OFFSHORE

Gas chimneys and sandstones with bright spots -Direct Hydrocarbon Indicators



Dip Line



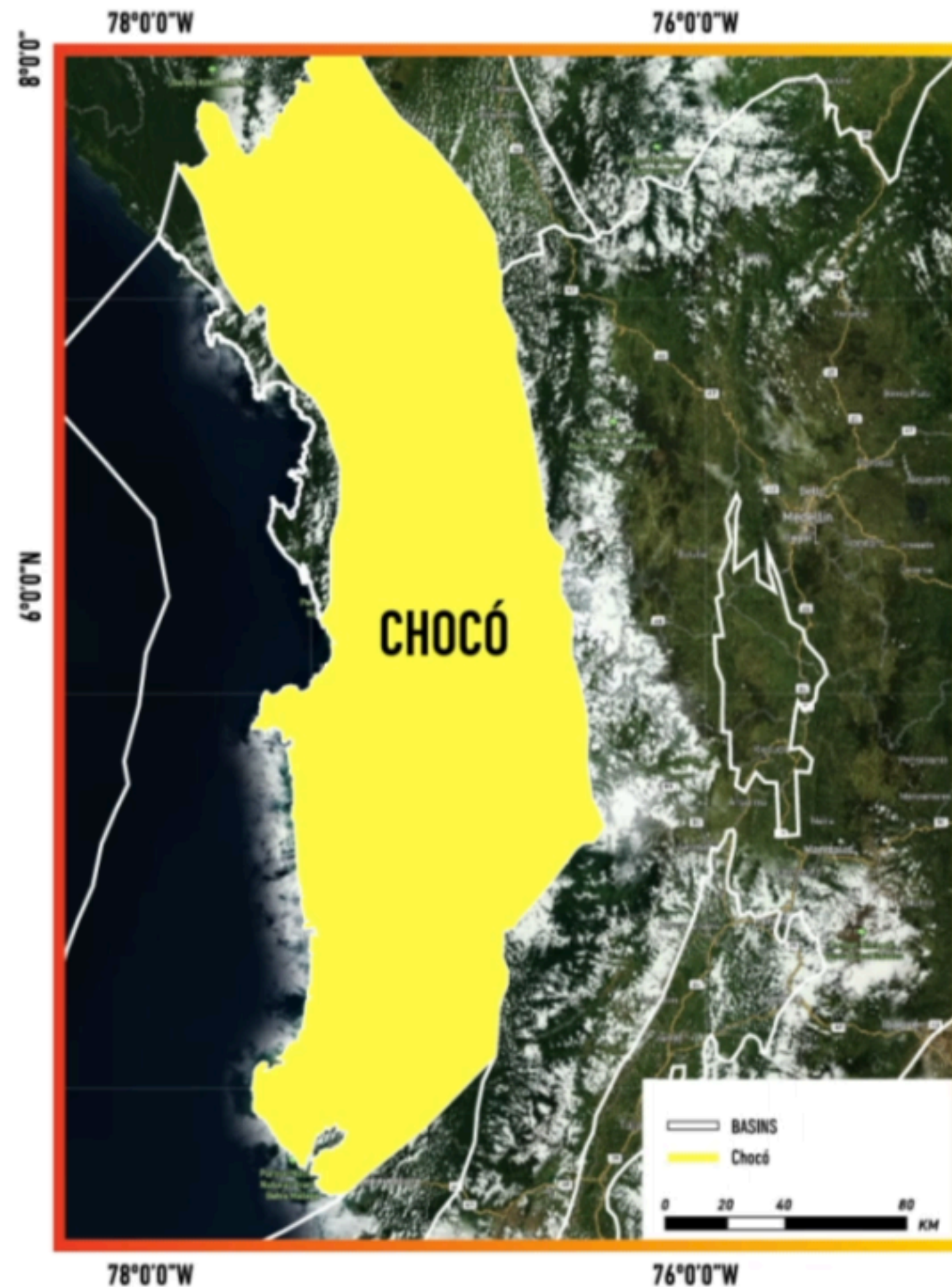
FRONTIER BASINS

URABA BASIN GAS PROSPECTIVE RESOURCES

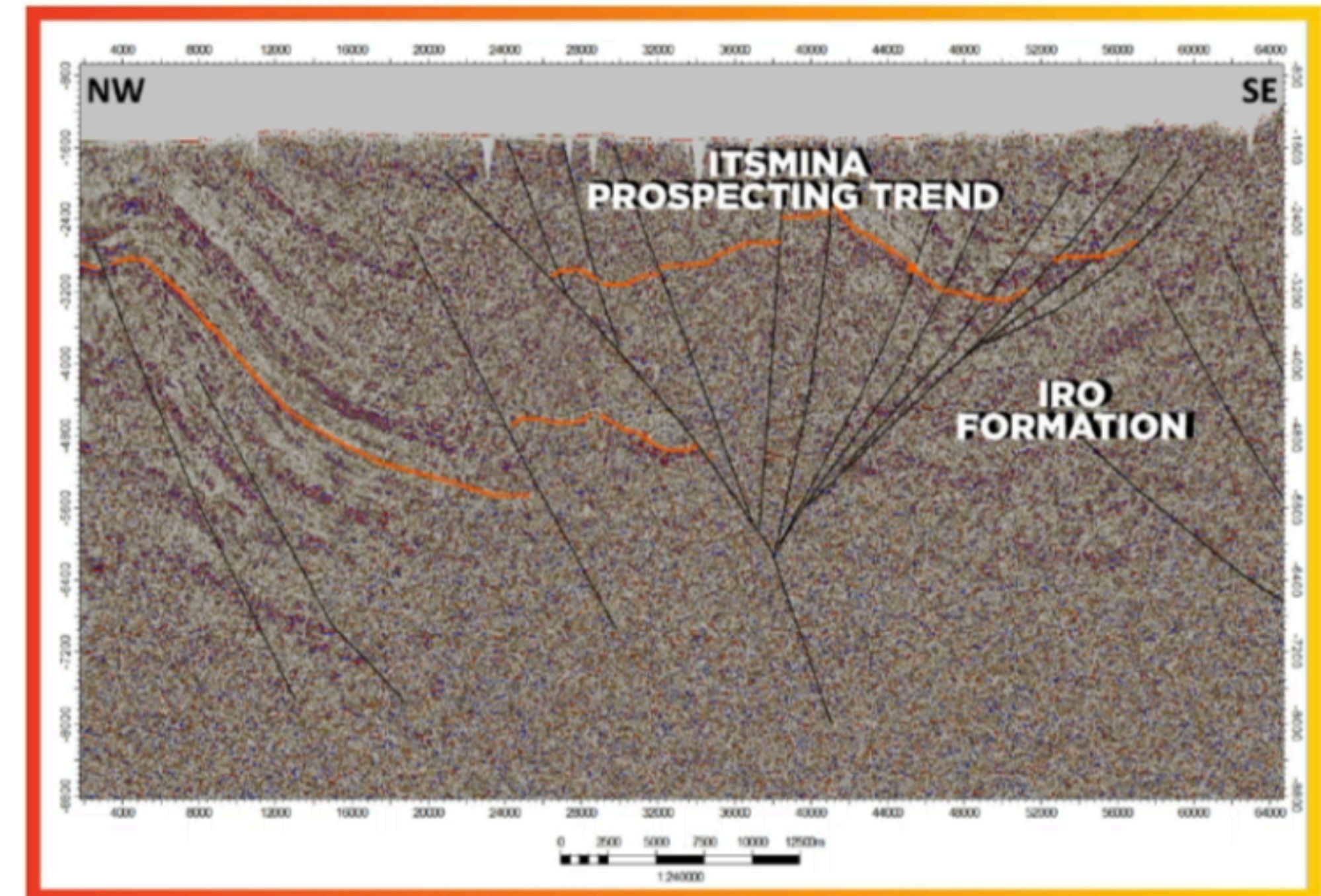
Type of contract	_____	TEA
Number of Blocks	_____	1
OGIP (TCFs)	_____	29.96
Recovery factor	_____	80%
Chance of success	_____	10%
Best Estimate (TCFs/BCFs *)	_____	1,406.96

CHOCO BASIN ONSHORE

Prospective high structure trend



Dip Line



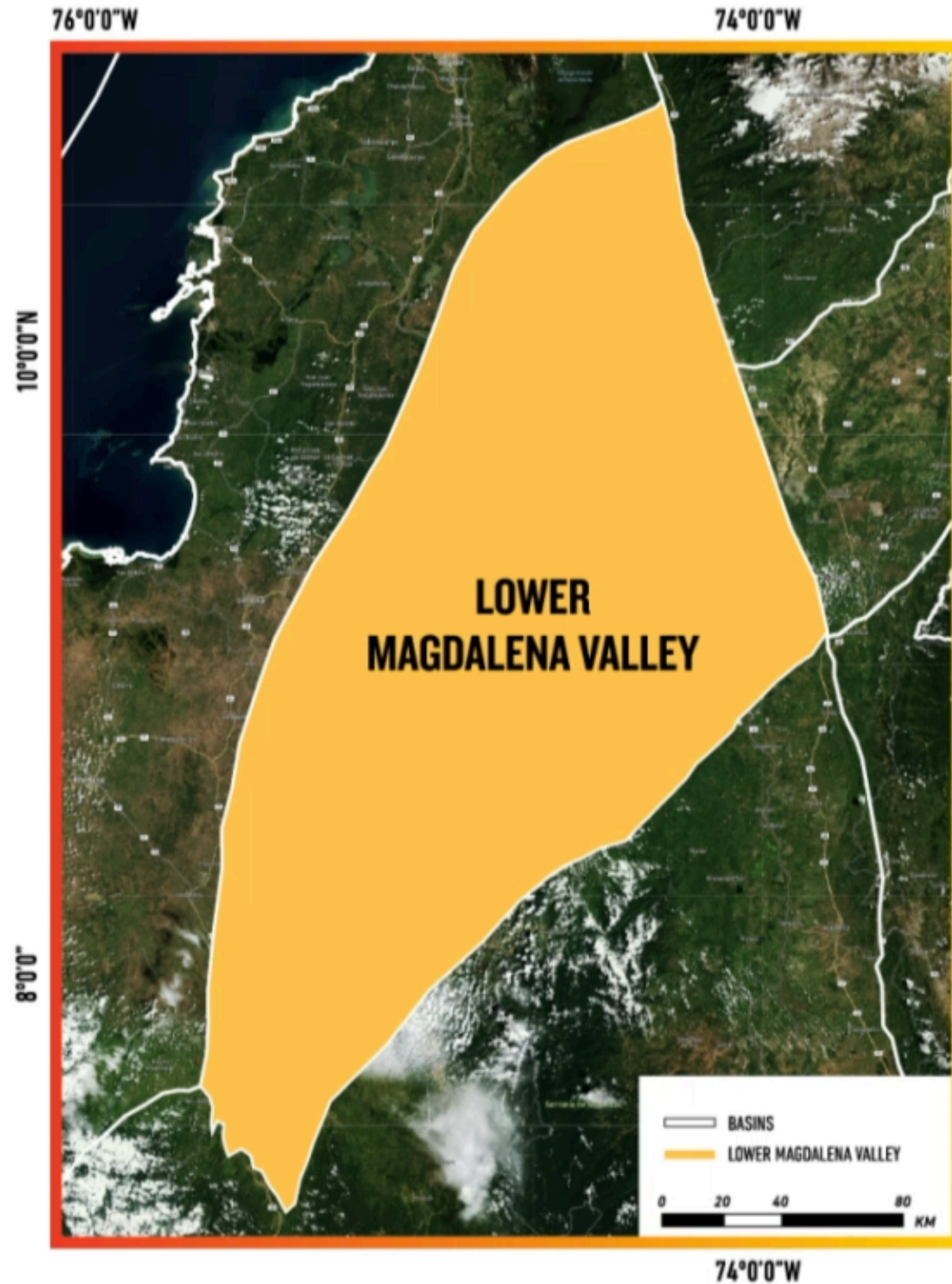
FRONTIER BASINS

CHOCO BASIN OIL PROSPECTIVE RESOURCES

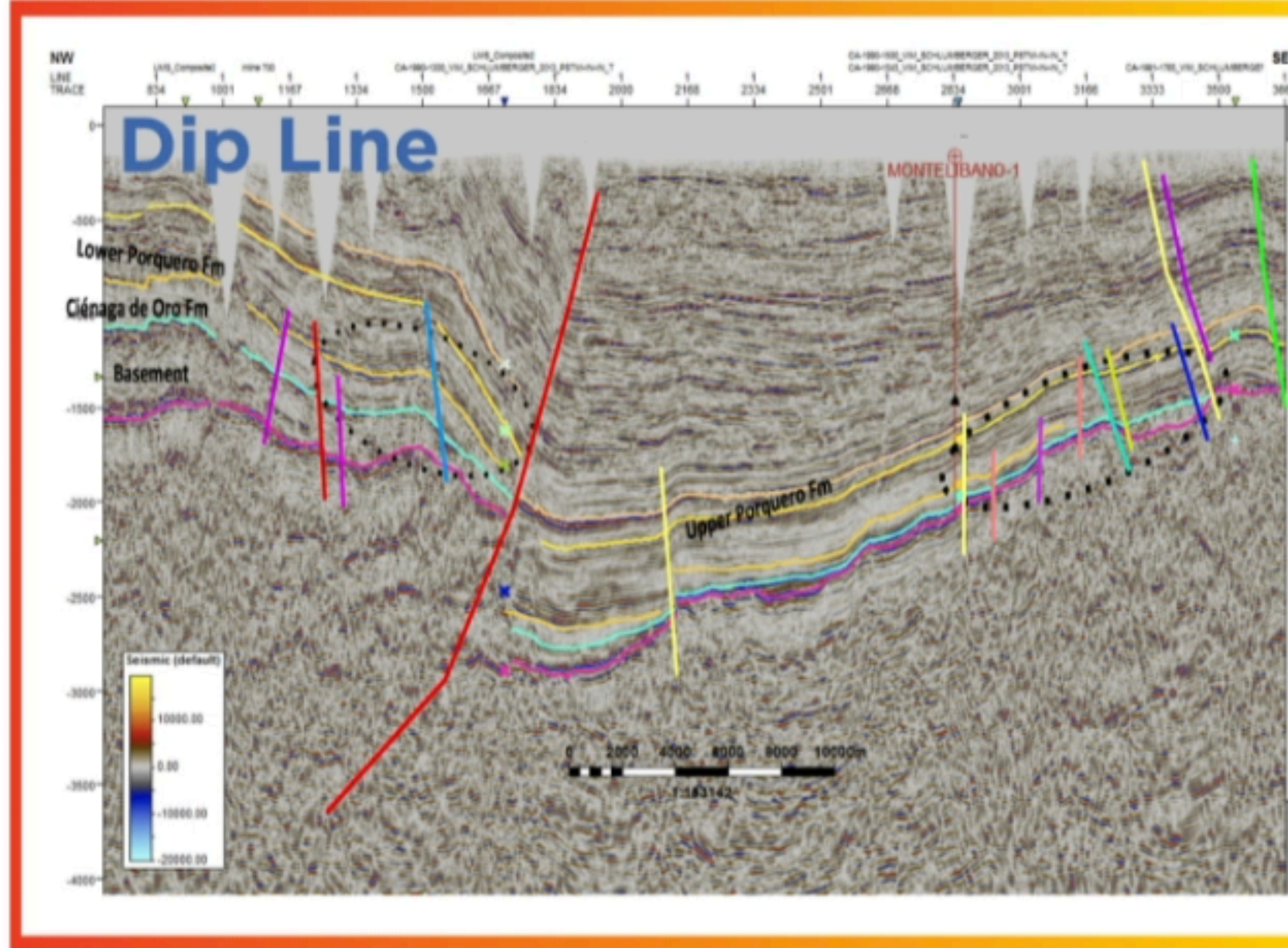
Type of contract	_____	TEA
Number of Blocks	_____	2
OOIP (MMBIs)	_____	18,541.0
Recovery factor	_____	25%
Chance of success	_____	10%
Best Estimate (MMBIs)	_____	231.7

TYPE OF OPPORTUNITIES TO BE OFFERED FOR E&P CONTRACTS

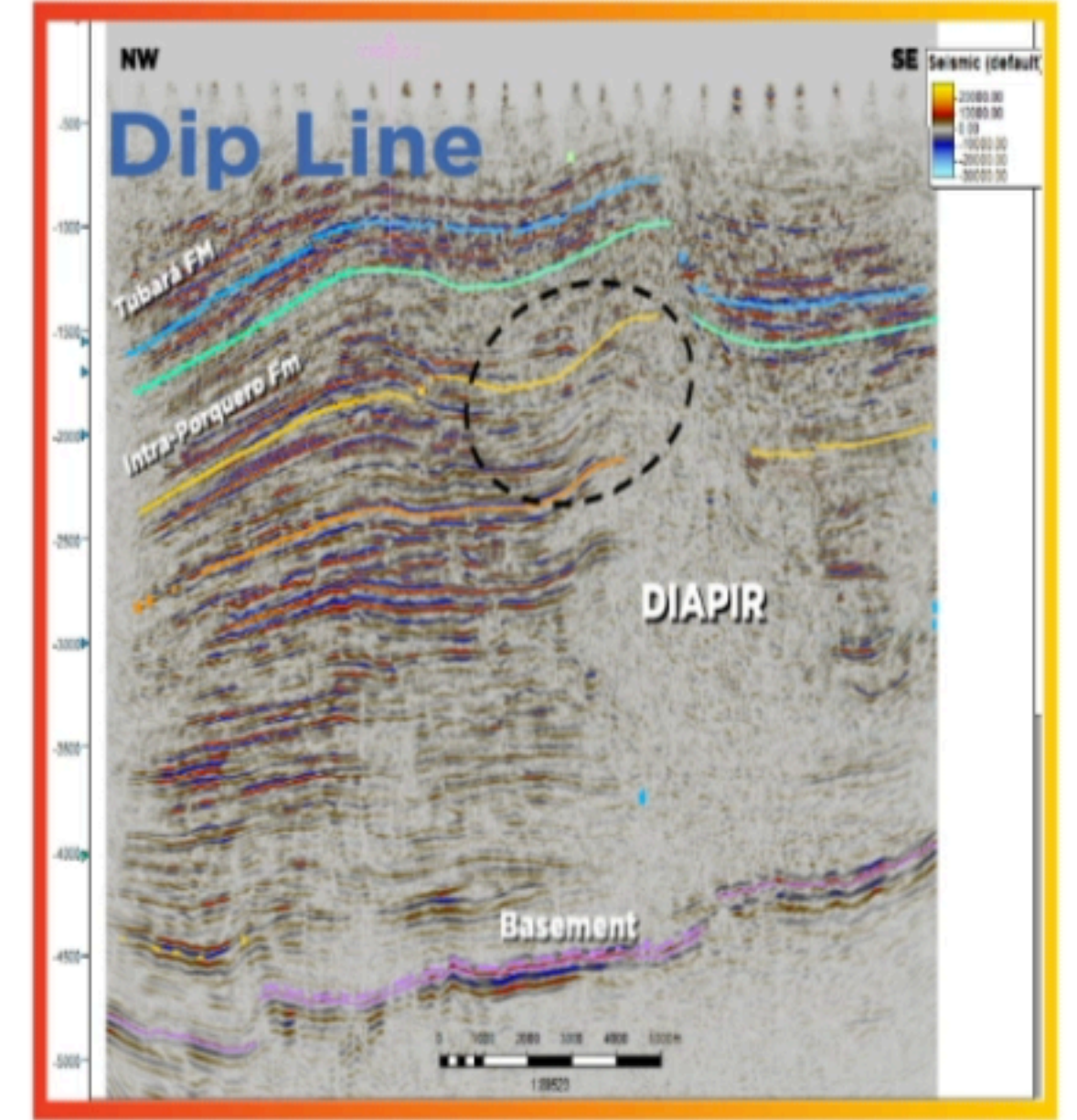
LOWER MAGDALENA BASIN ONSHORE



Gas in Onlap Of Tertiary Rocks Over Basement Paleohighs



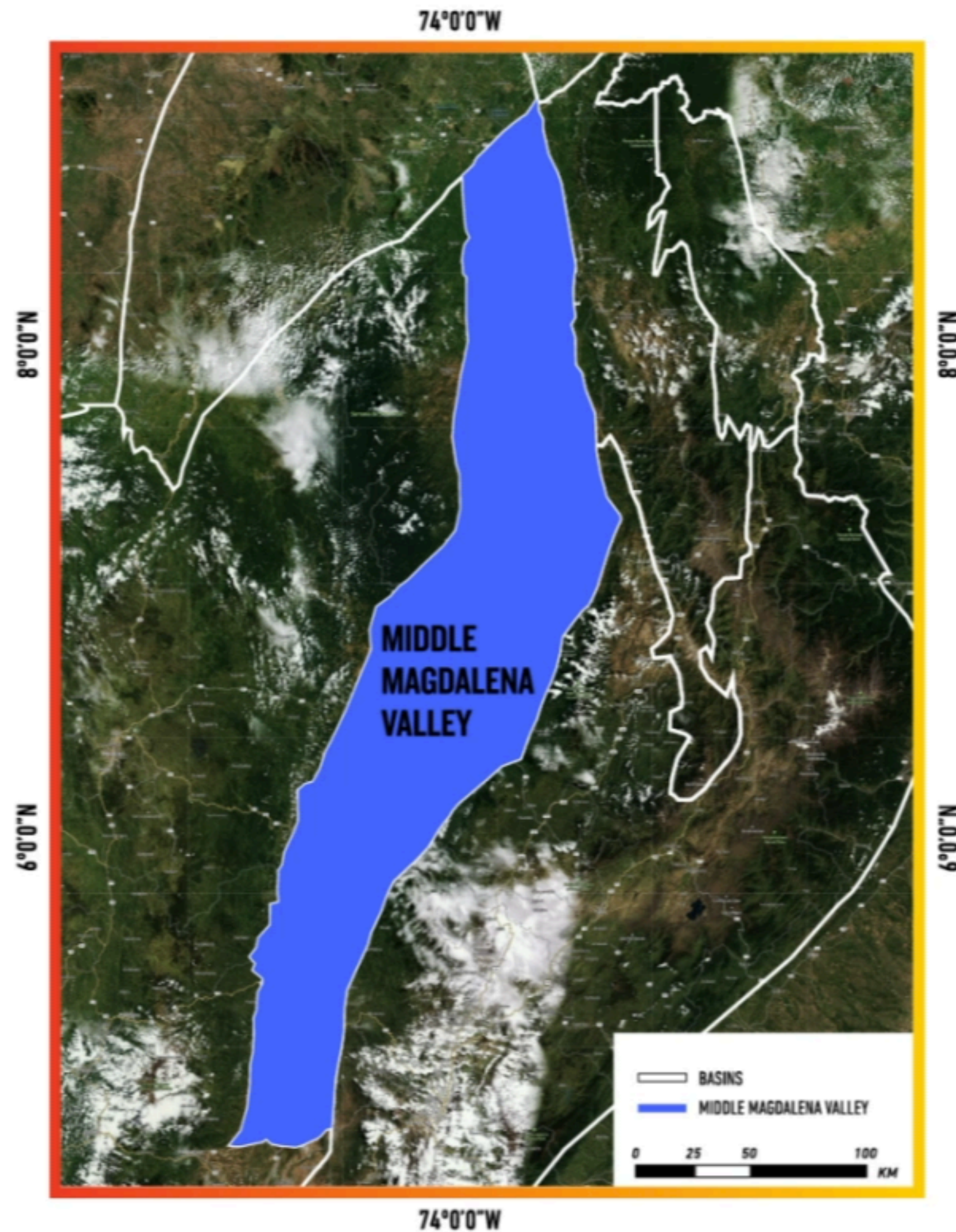
Gas in Structures Associated To Mud Diapirs



EMERGENT & MATURE BASINS LOWER MAGDALENA BASIN GAS PROSPECTIVE RESOURCES

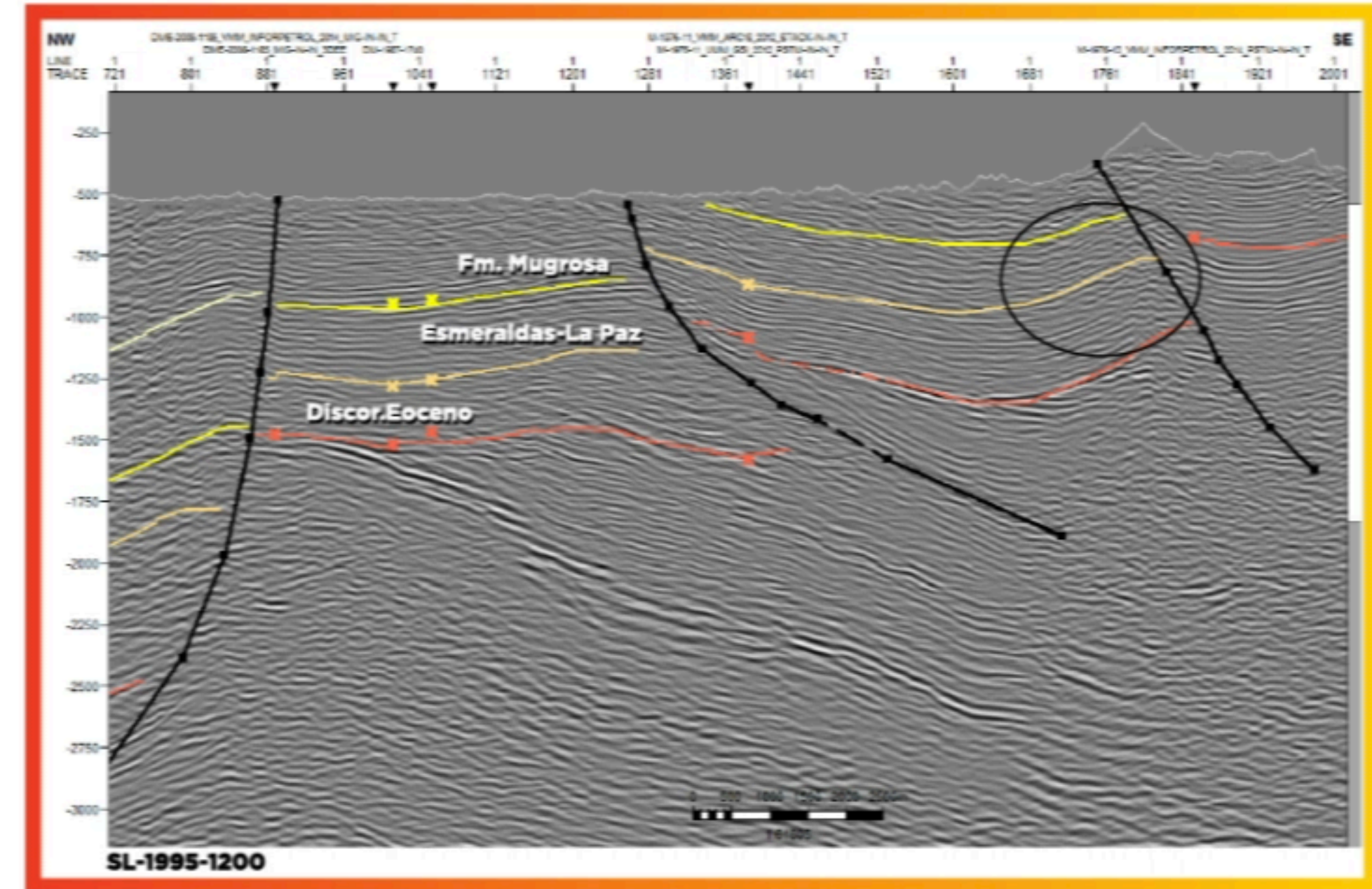
Type of contract	E&P
Number of Blocks	5
OGIP (TCFs)	1.53
Recovery factor	85%
Best Estimate (TCFs/BCFs *)	1.30

MIDDLE MAGDALENA BASIN ONSHORE



Dip Line

Oil in Shallow Subthrust Structures

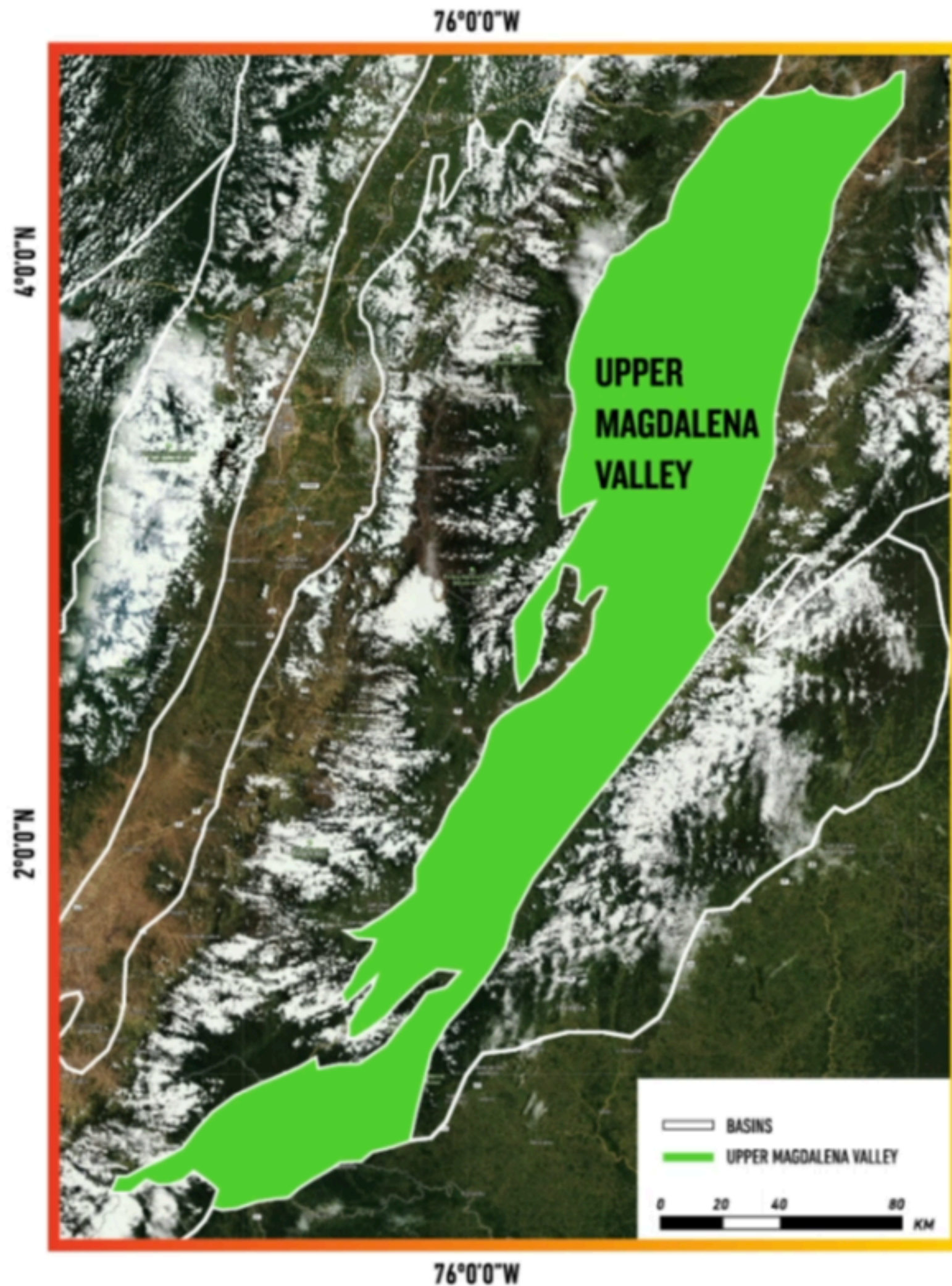


EMERGENT & MATURE BASINS

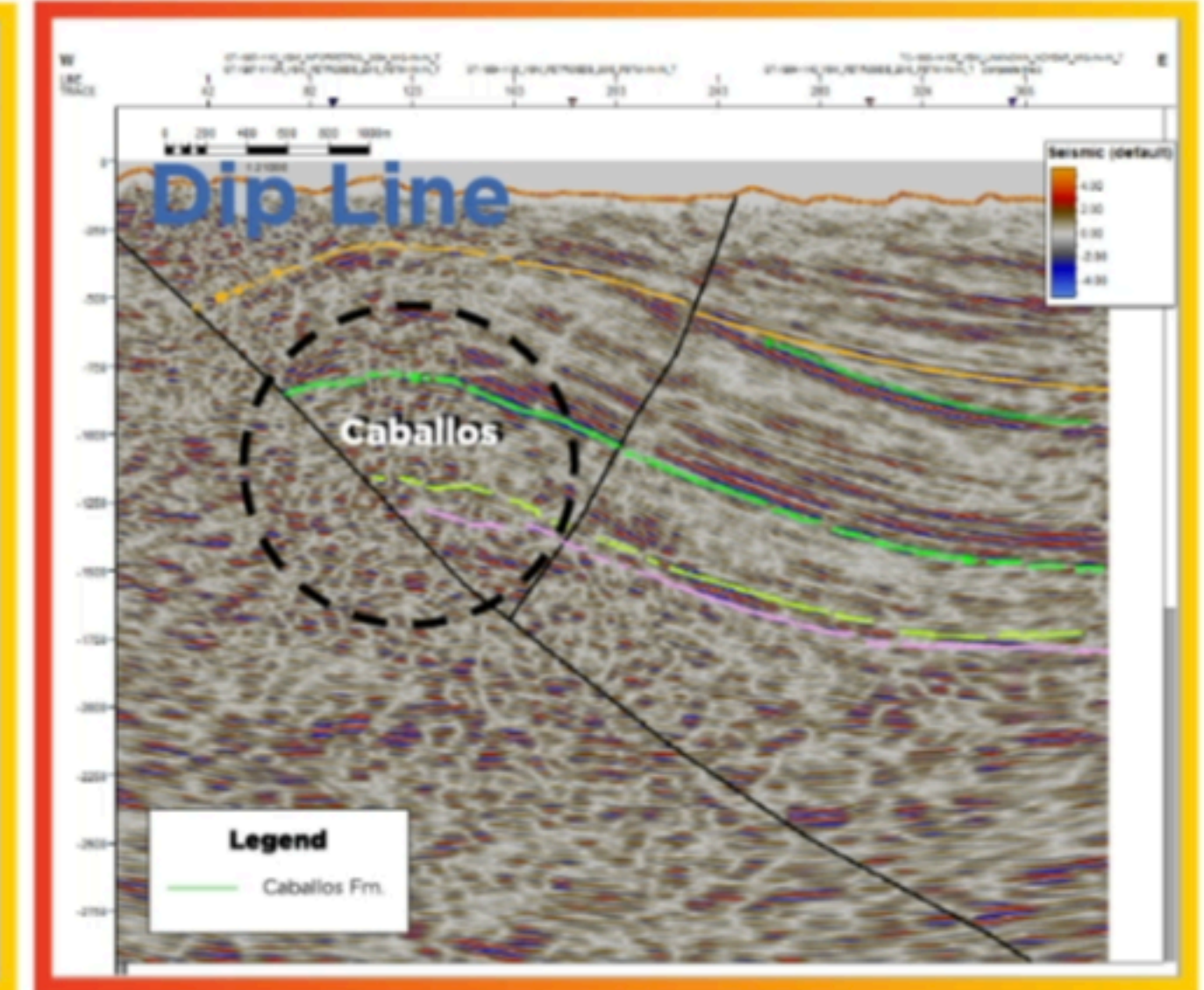
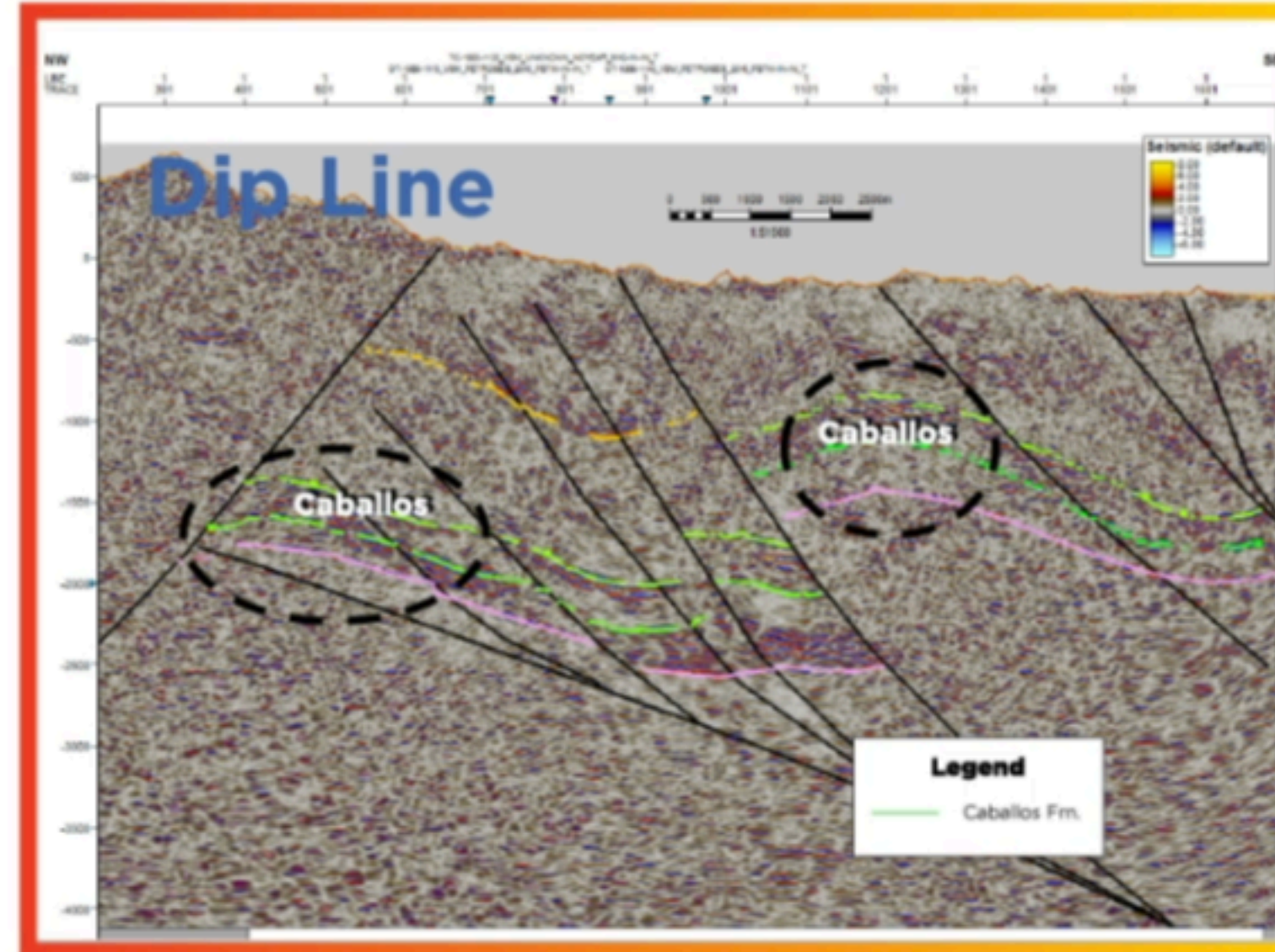
MIDDLE MAGDALENA BASIN OIL PROSPECTIVE RESOURCES

Type of contract	_____	E&P
Number of Blocks	_____	2
OOIP (MMBIs)	_____	690
Recovery factor	_____	25%
Best Estimate (MMBIs)	_____	172.5

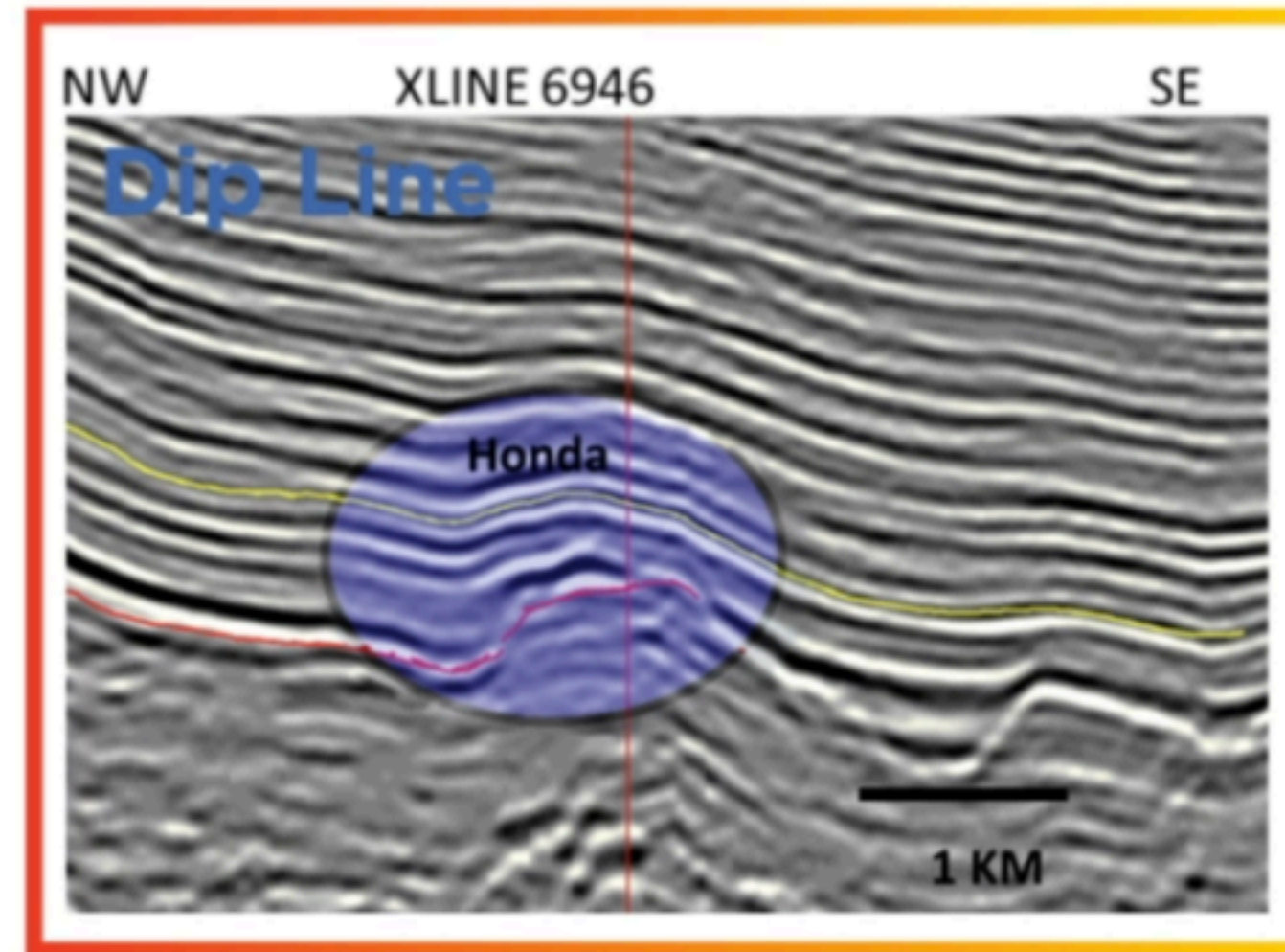
UPPER MAGDALENA BASIN ONSHORE



Oil in Thrust and Subthrust Structures Oil in Inverse Fault Trapping



Four Way Dip Closure Structures

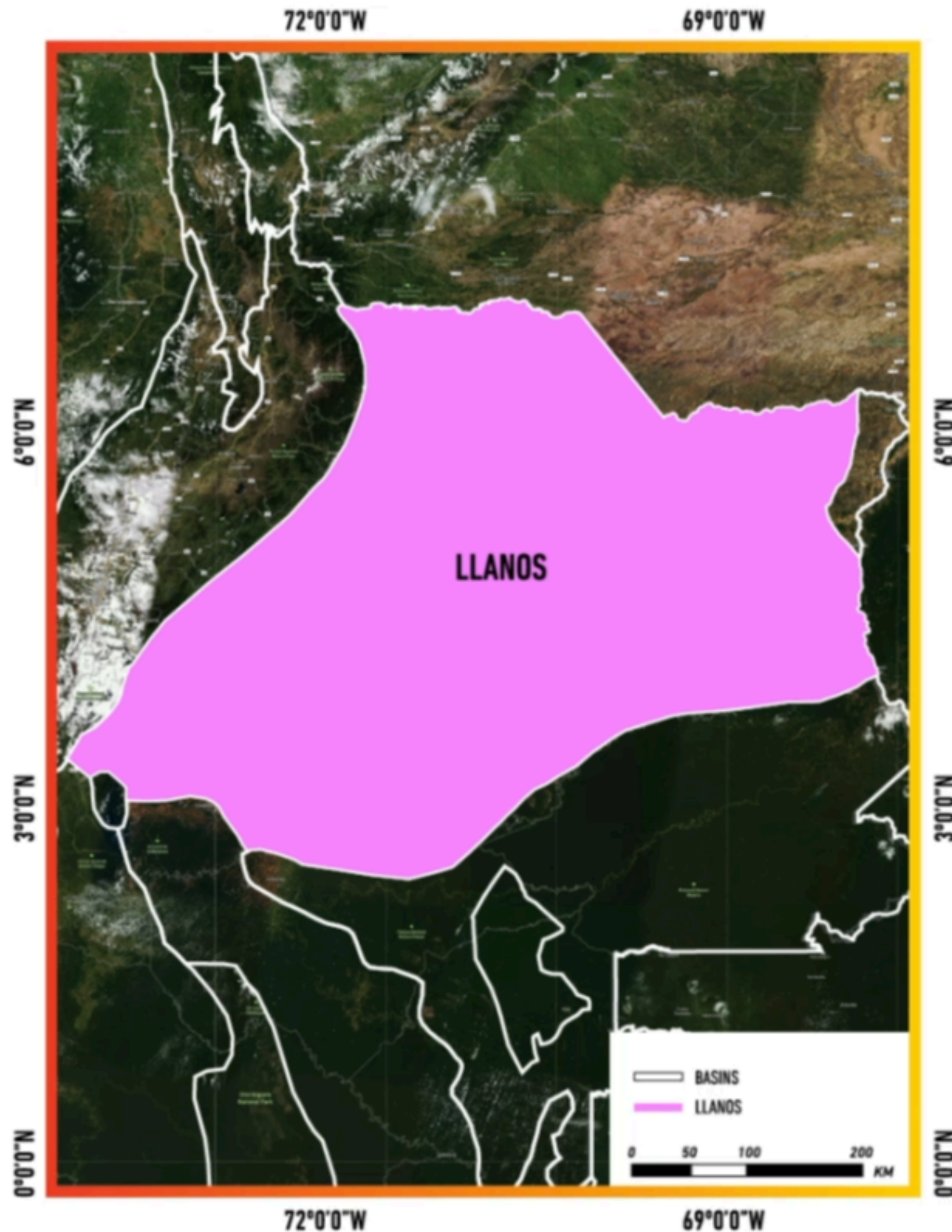


EMERGENT & MATURE BASINS

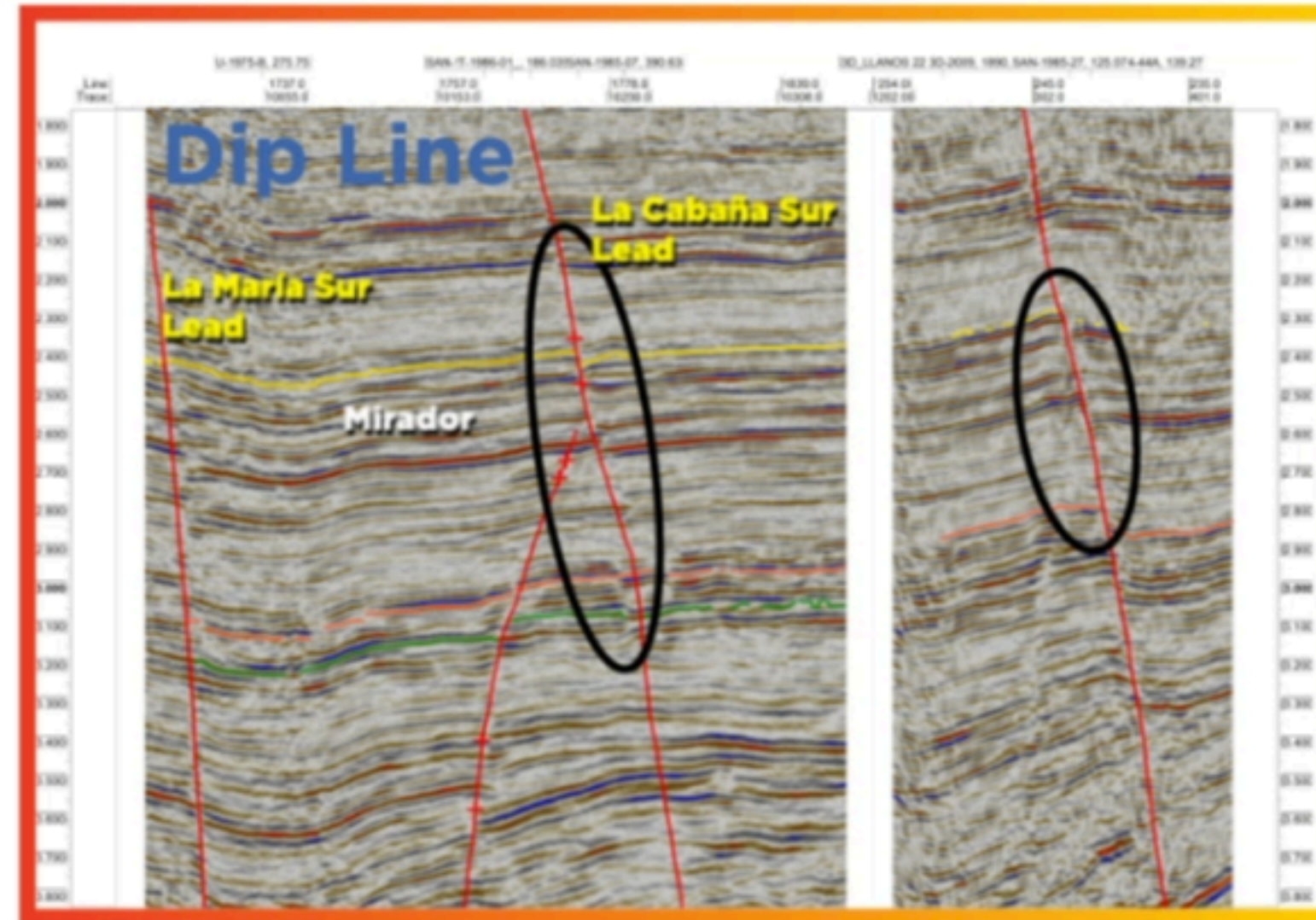
UPPER MAGDALENA BASIN OIL PROSPECTIVE RESOURCES

Type of contract	E&P
Number of Blocks	3
OOIP (MMBls)	1,324
Recovery factor	25%
Best Estimate (MMBls)	331

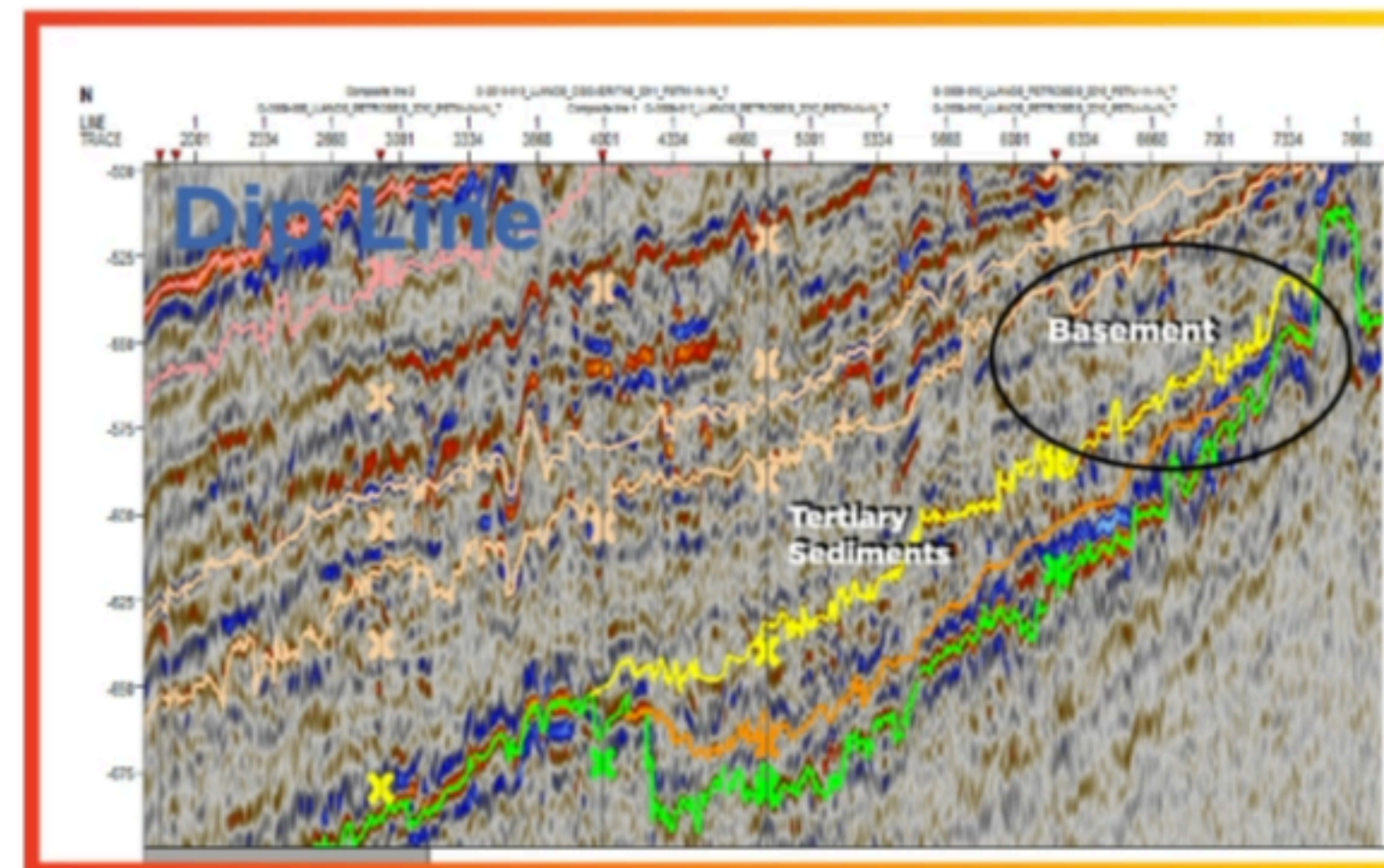
LLANOS BASIN ONSHORE



Oil in Antithetic Normal Fault Traps



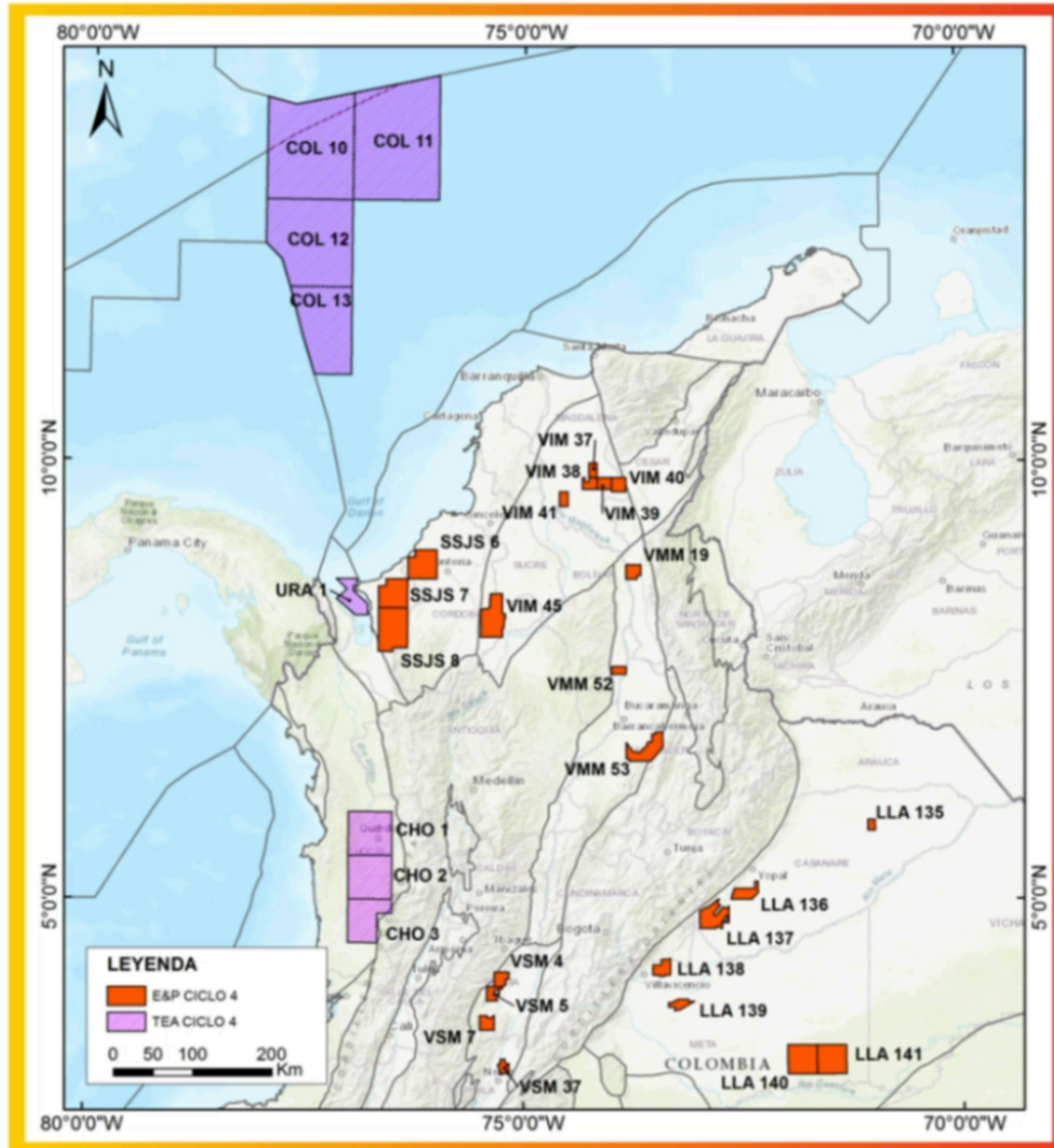
Heavy Oil in Onlap of Tertiary Rocks Over Basement Paleohighs



EMERGENT & MATURE BASINS

LLANOS BASIN OIL PROSPECTIVE RESOURCES

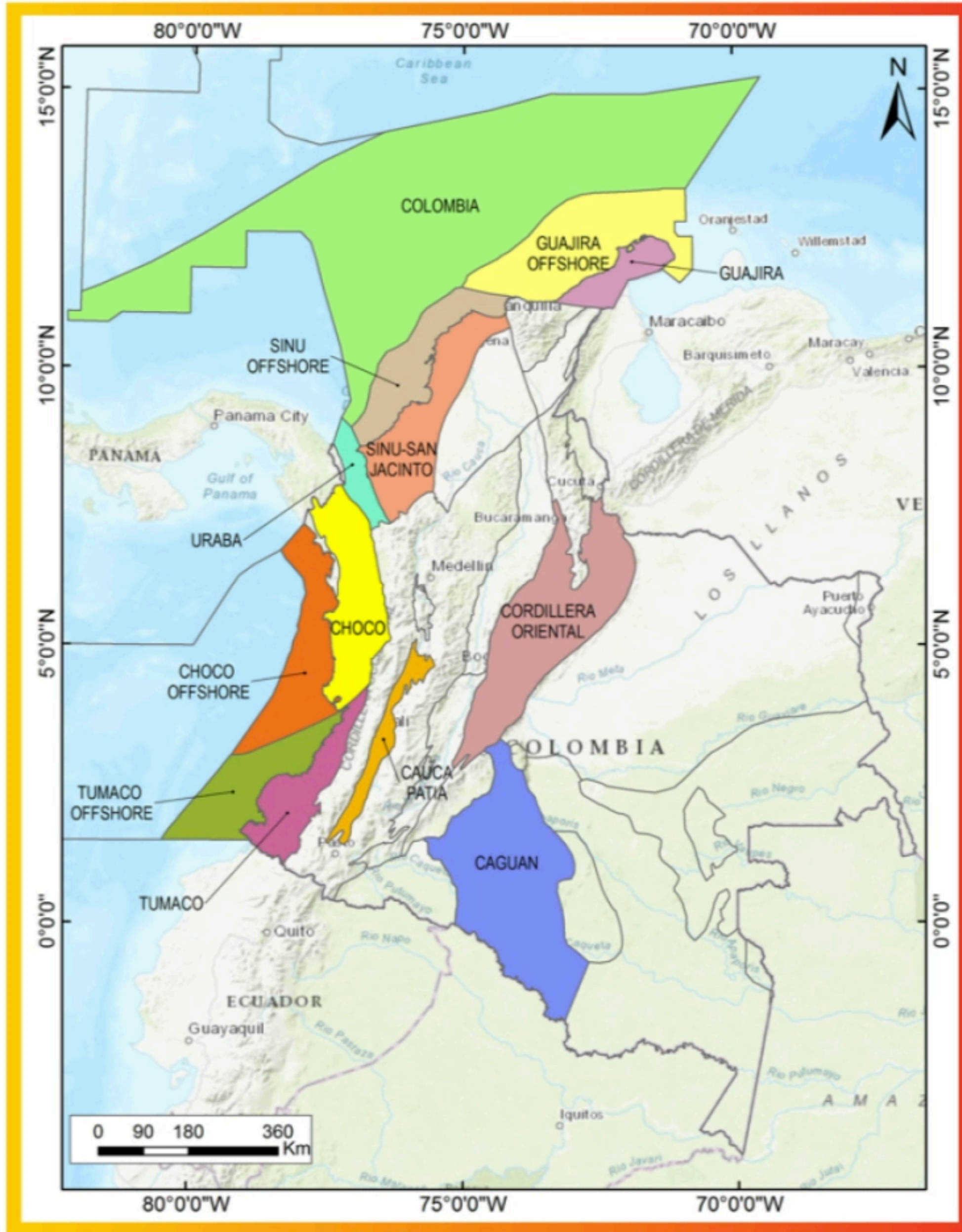
Type of contract	E&P
Number of Blocks	8
OOIP (MMBls)	633
Recovery factor	25%
Best Estimate (MMBls)	158.2



4th CYCLE 2021

PLAN 2020-2040 IN FRONTIER BASINS

NOVEMBER 2020

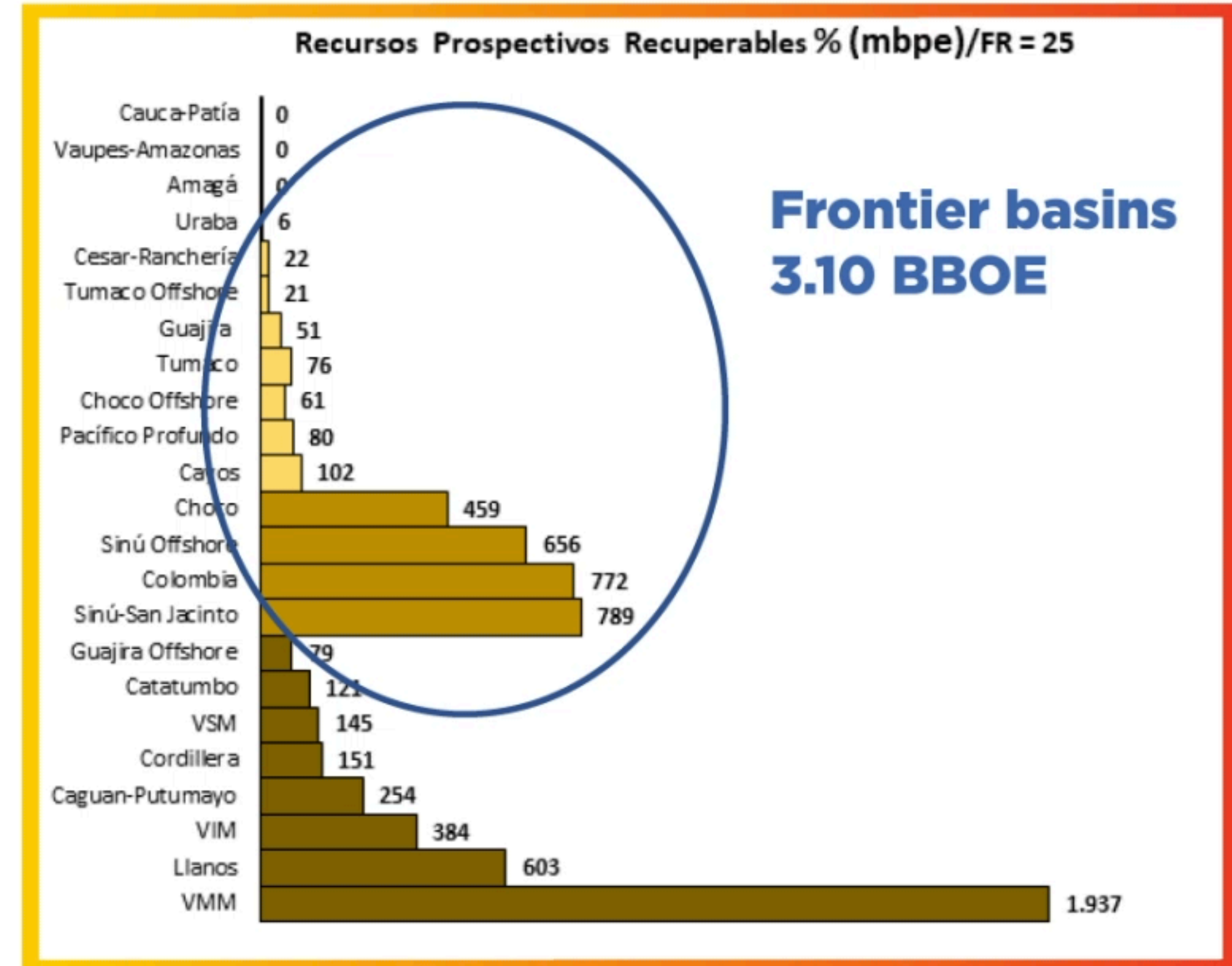


FRONTIER BASINS-COLOMBIA

YTF COLOMBIA / RECOVERABLE PROSPECTIVE RESOURCES

Tipo	Cuenca	Recursos Disponibles (mbpe)	Recursos Descubiertos OOIP (mbpe)	Recursos No Descubiertos (mbpe)	Recursos Prospectivos (mbpe)	Recursos Prospectivos Recuperables (mbpe)
Cuenca con producción comercial	VMM	70.052	18.410	51.642	7746	1937
	Llanos	51.833	35.743	16.090	2414	603
	VIM	11.209	969	10.240	1536	384
	Caguan-Putumayo	16.069	3.635	7.802	1014	254
	Cordillera	5.378	737	4.641	603	151
	VSM	7.092	3.222	3.870	580	145
	Catatumbo	5.438	1.727	3.710	482	121
	Guajira Offshore	3.202	1.100	2.102	315	79
Cuenca Frontera / Prospectividad Media	Sinú-San Jacinto	26.304	16	26.288	3155	789
	Colombia	30.879	0	30.879	3088	772
	Sinú Offshore	21.854	0	21.854	2623	656
	Choco	15.292	0	15.292	1835	459
Cuenca Frontera / Prospectividad Baja	Cayos	4.071	0	4.071	407	102
	Pacífico Profundo	3.208	0	3.208	321	80
	Choco Offshore	2.447	0	2.447	245	61
	Tumaco	2.544	0	2.544	305	76
	Guajira	1.372	0	1.372	206	51
	Tumaco Offshore	848	0	848	85	21
	Cesar-Ranchería	595	360	235	31	8
	Uraba	216	0	216	26	6
Cuenca Frontera No Prospectivas	Amagá	11	0	11	1	0
	Vaupes-Amazonas	9	0	216	1	0
	Cauca-Patía	7	0	7	1	0
TOTAL		279.931	65.919	209.587	27.020	6.755

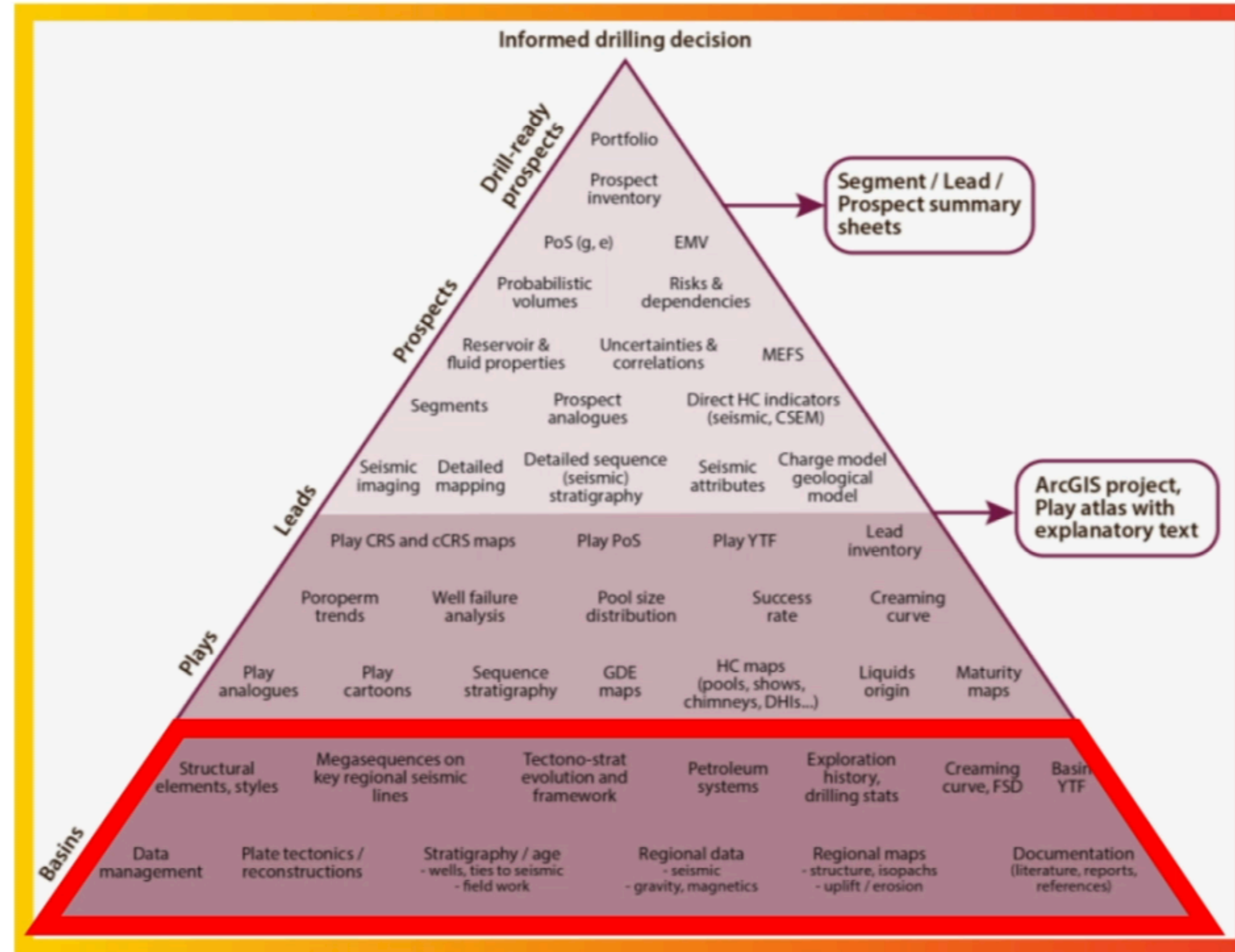
➔ Millions



↑ 6.75 BBOE

EXPLORATION TRIANGLE

PLAN 2040



Milkov, exploration triangle. Colorado School of Mines

Publicación ANH para la III Cumbre de Petróleo y Gas



Convenio 785 (668) de 2019 MINCIENCIAS - ANH

Objeto:

1) El desarrollo de programas que permitan la interacción técnica y científica de visiones del conocimiento hidrocarburífero del subsuelo colombiano.

Título:

ANH PLAN 2020 Aportes a la Exploración de Hidrocarburos en Colombia

Publicación ANH para la III Cumbre de Petróleo y Gas



Convenio 785 (668) de 2019 MINCIENCIAS - ANH

Objeto:

2) La financiación de programas y proyectos de ciencia, tecnología e innovación relacionados a G&G (Geología & Geofísica).

Título:

ANH PLAN 2020 Aportes a la Exploración de Hidrocarburos en Colombia

Publicación ANH para la III Cumbre de Petróleo y Gas



Convenio 785 (668) de 2019 MINCIENCIAS - ANH

Objeto:

3) La planeación, diseño e implementación de estrategias y medios de divulgación del conocimiento geocientífico adquirido por la ANH.

Título:

ANH PLAN 2020 Aportes a la Exploración de Hidrocarburos en Colombia



El futuro
es de todos

Minenergía