TALARA BASIN

OIL & GAS OPPORTUNITIES

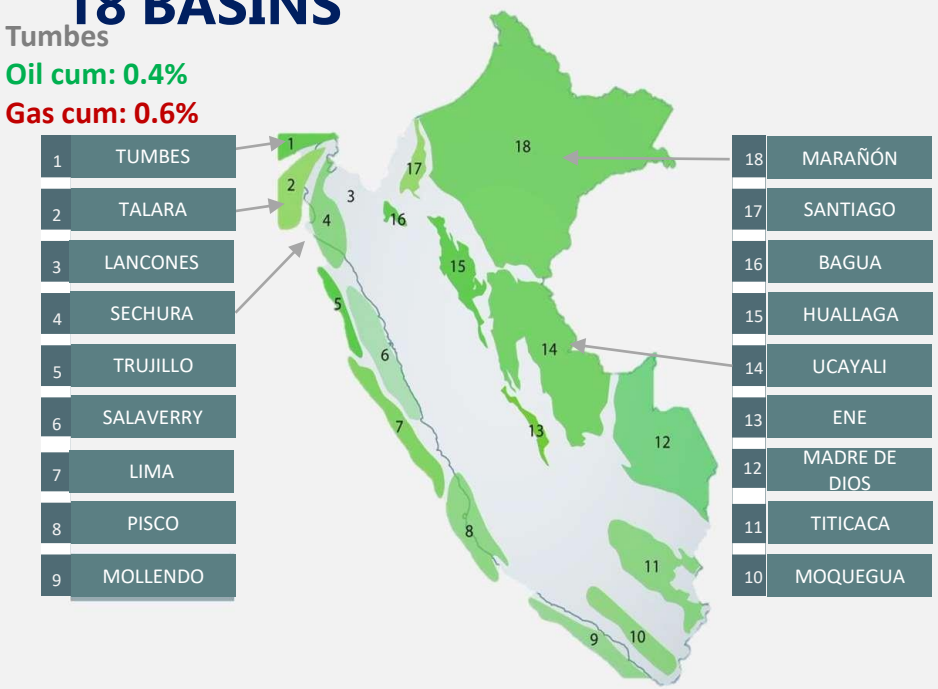
Perú petro

OIL & GAS PRODUCTION

PERU ☐ 4,286* MMBOE

Produces Oil & Gas since 1869

18 BASINS



Tumbes
Oil cum: 0.4%
Gas cum: 0.6%

Talara
Oil cum: 57%
Gas cum: 30%
NGL cum: 1%

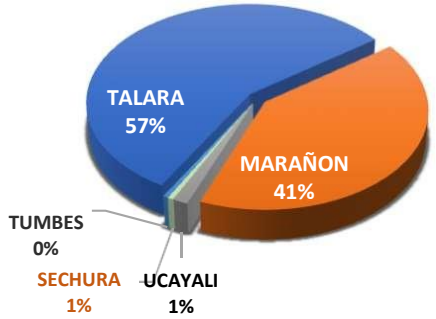
Sechura
Oil cum: 0.6%
Gas cum: 0.4%

Marañón
Oil cum: 41%

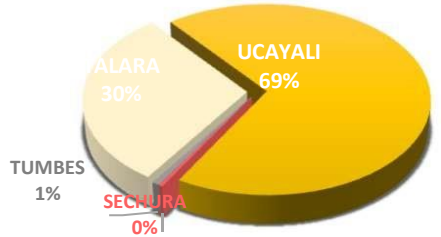
Ucayali
Oil cum: 1%
Gas cum: 69%
NGL cum: 99%

(*) Total Historical Production of Oil, Gas and NGL.

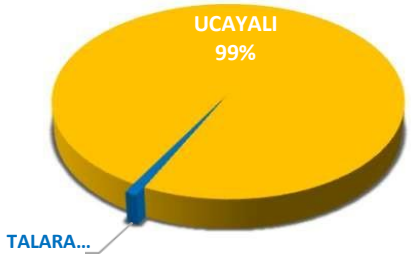
OIL
2,577 MMBLS



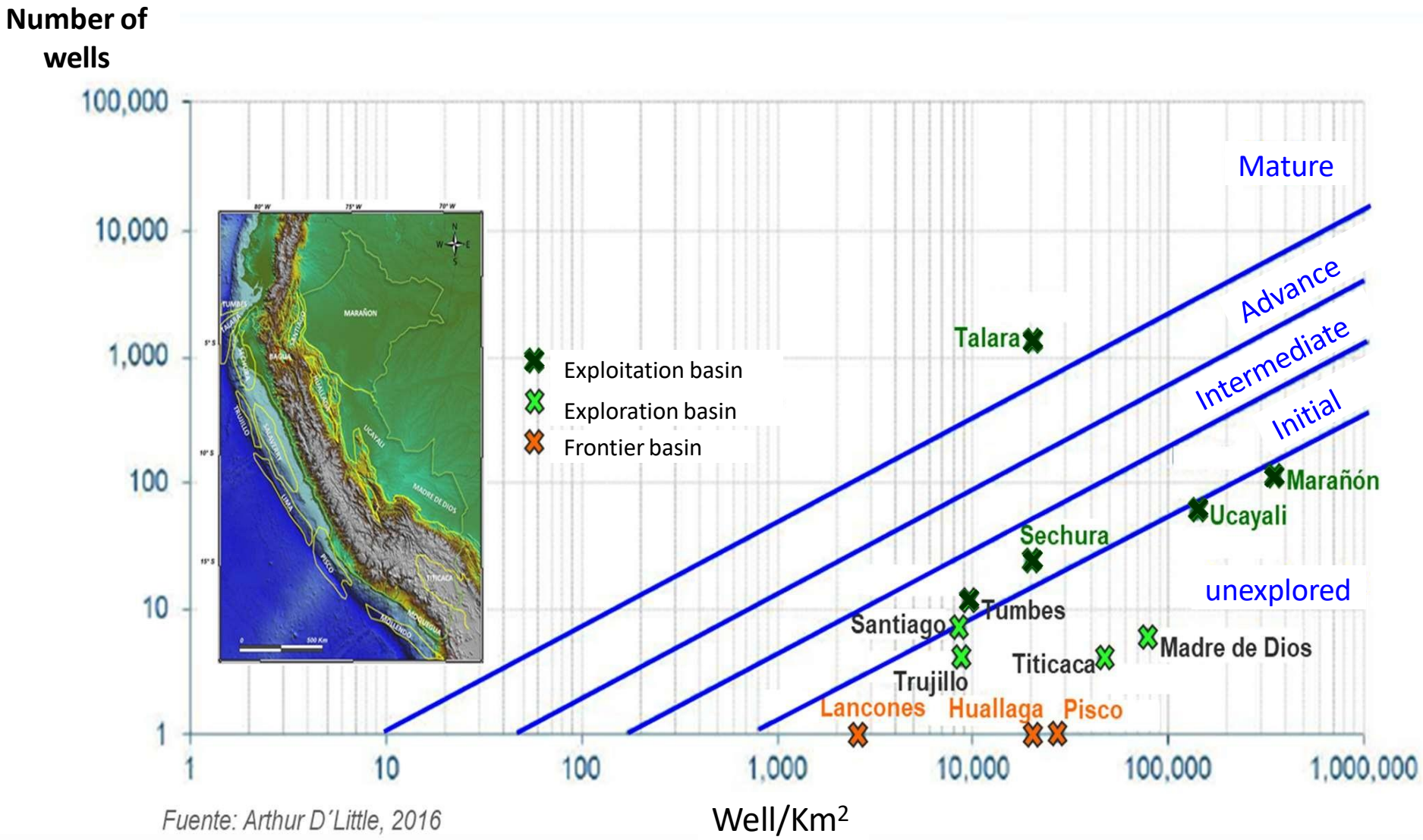
GAS
7,374 BCF



NGL
398 MMBLS

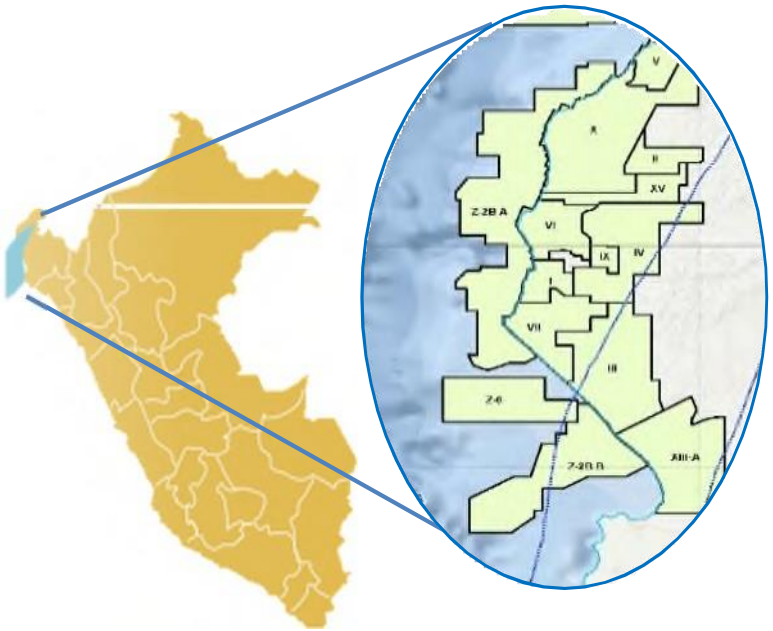


PERUVIAN HYDROCARBON BASINS



Fuente: Arthur D´Little, 2016

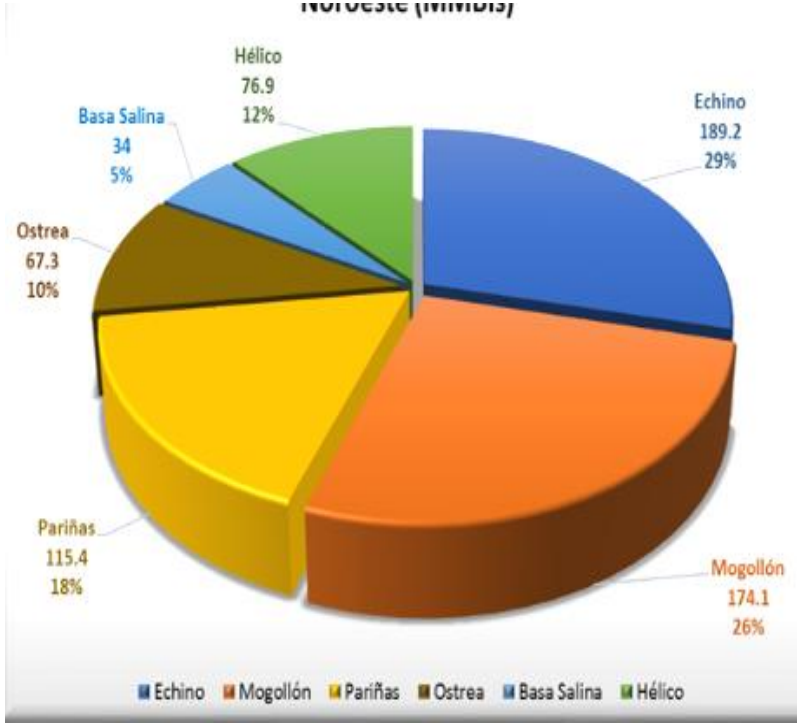
TALARA BASIN



CHARACTERISTICS

- Light oil
- Solution gas
- Low permeability reservoirs
- Mostly Primary development
- Hydraulically fractured
- Mostly Vertical wells
- Commingled production
- Recovery Factor: 3% - 17%

Cumulative Production Distribution Northwest Reservoirs (MMBLS)



STRUCTURAL AND REGIONAL STRATIGRAPHY

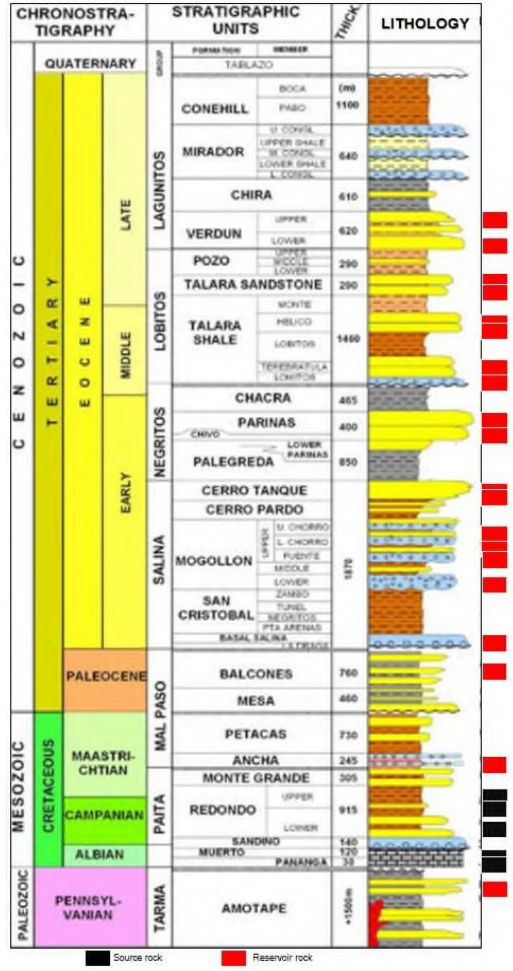
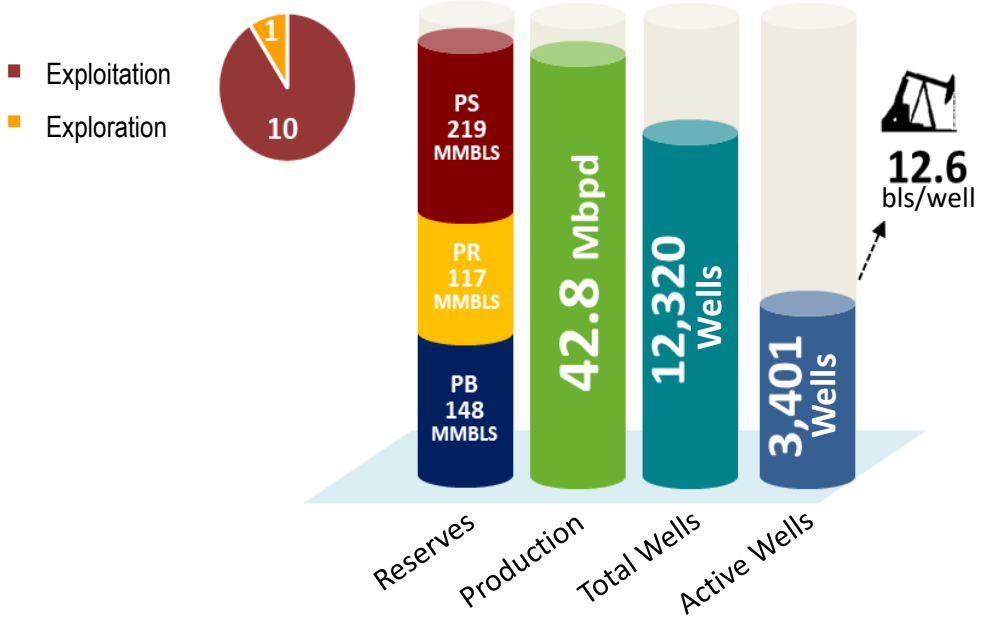


Figure. Stratigraphic column Talara Basin

TALARA BASIN CONTRACTS (1994 – 2019)

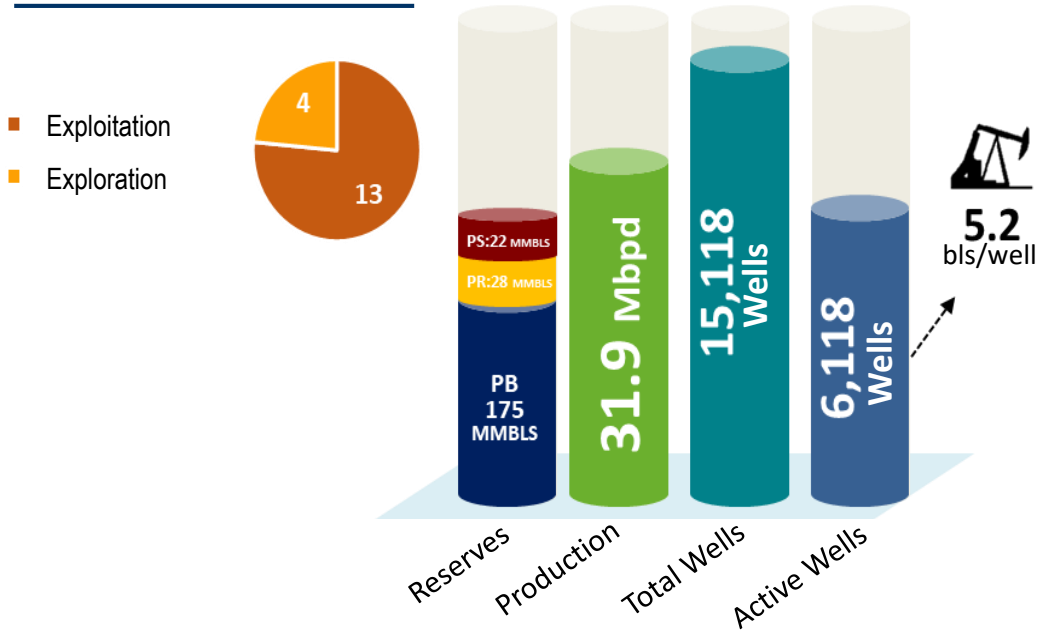
1994

11 CONTRACTS



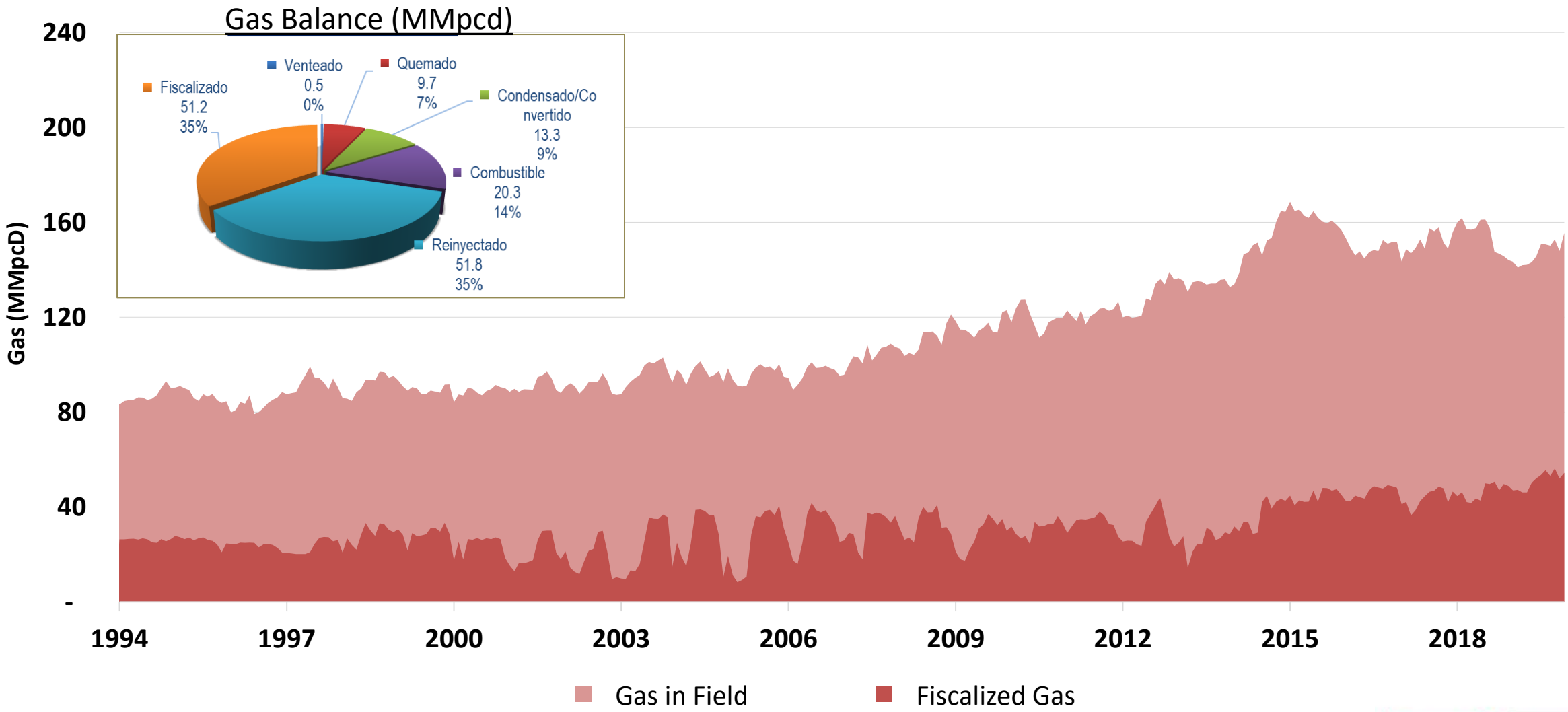
2019

17 CONTRACTS

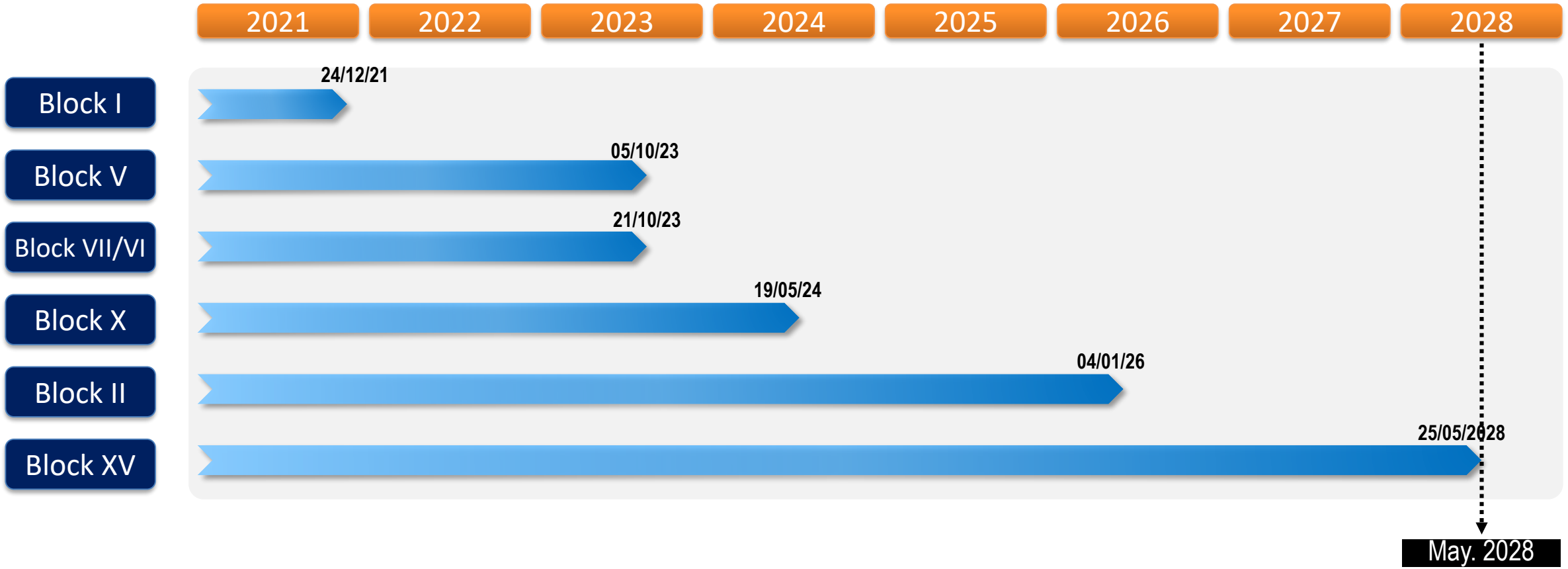


Cumulative 1994-2019: Oil, 329 MMBls; Gas, 305 BCF; Investments, 3,744 MMUS$; Royalties, 4,775 MMUS$

GAS PRODUCTION IN TALARA

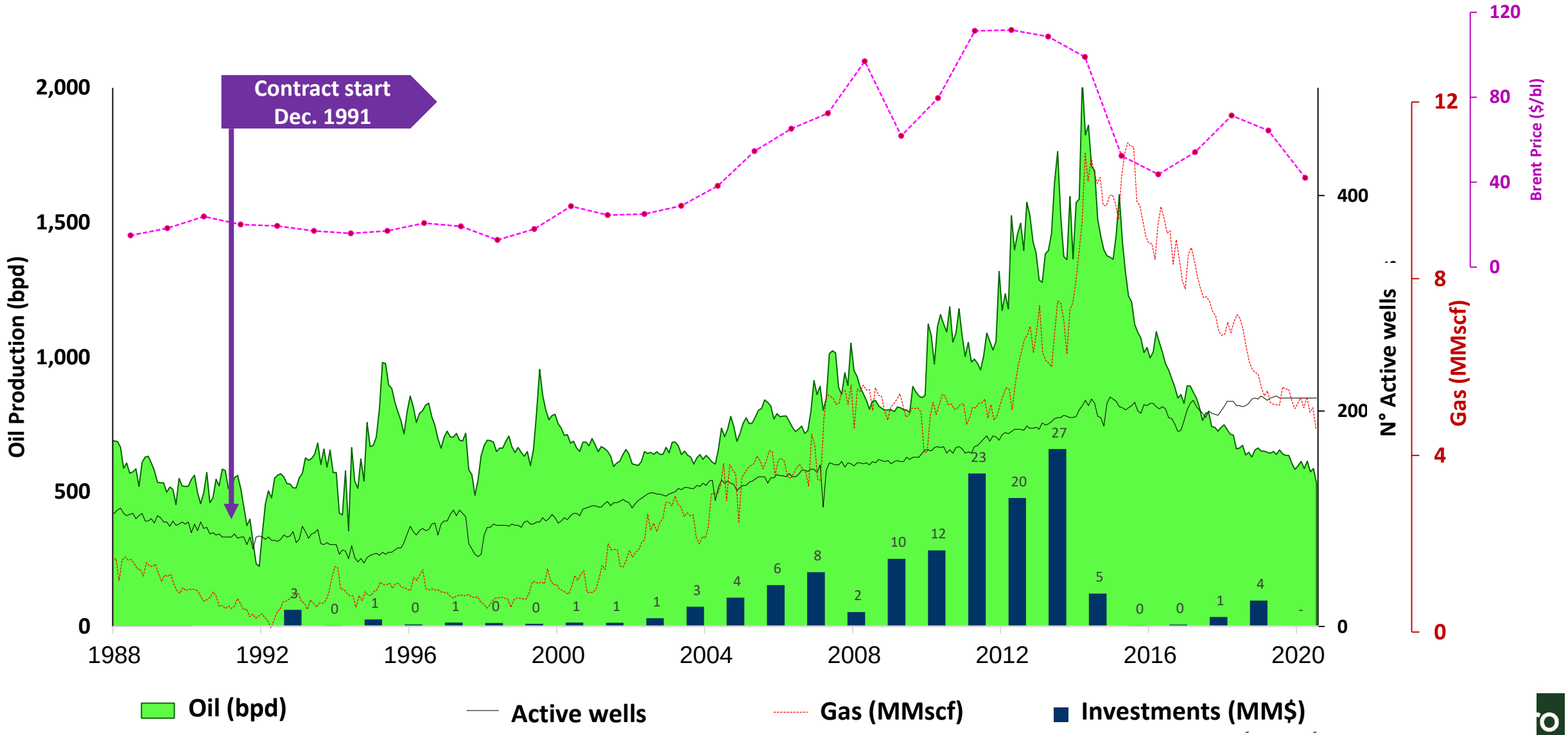


BLOCKS TO END

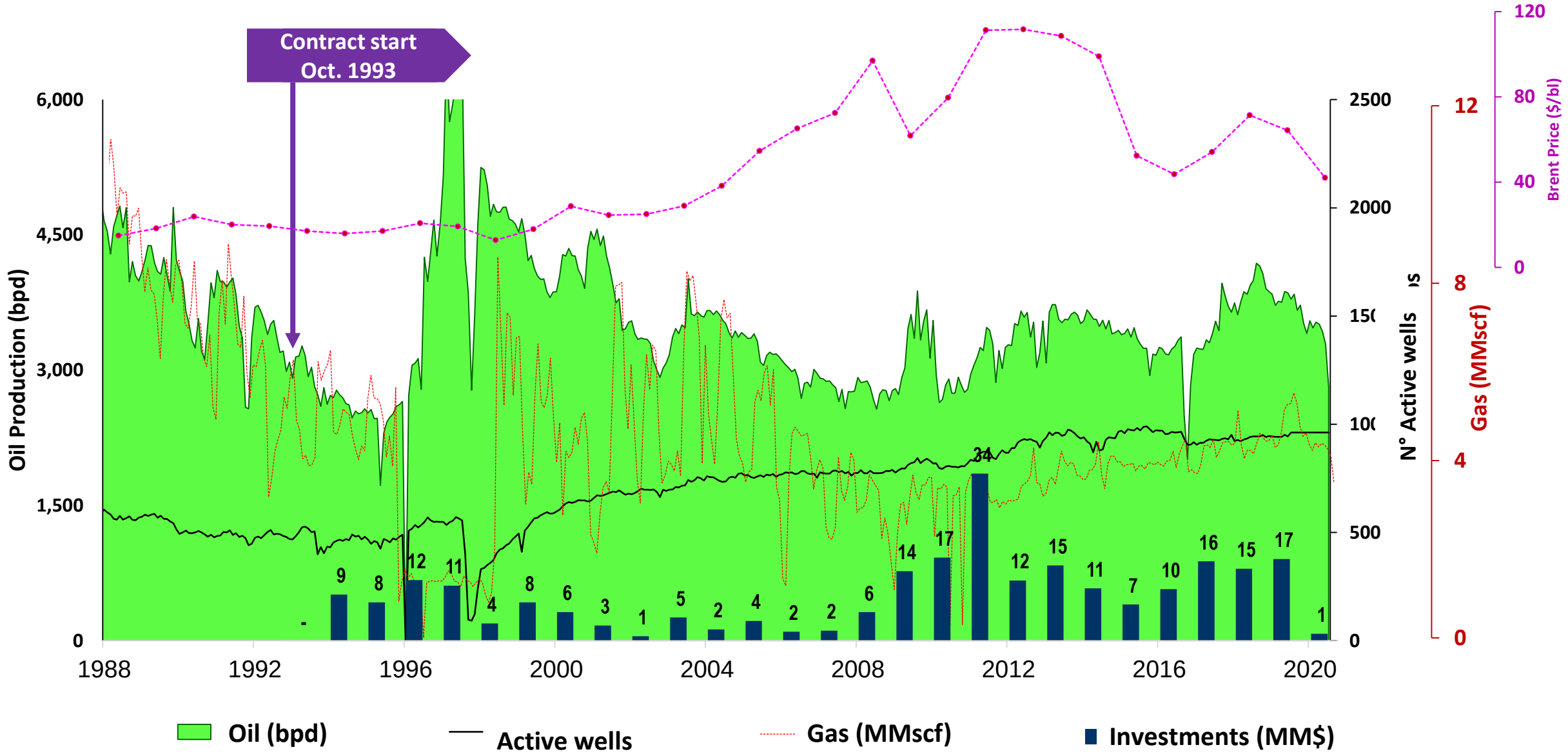


New investment will contribute to increase production

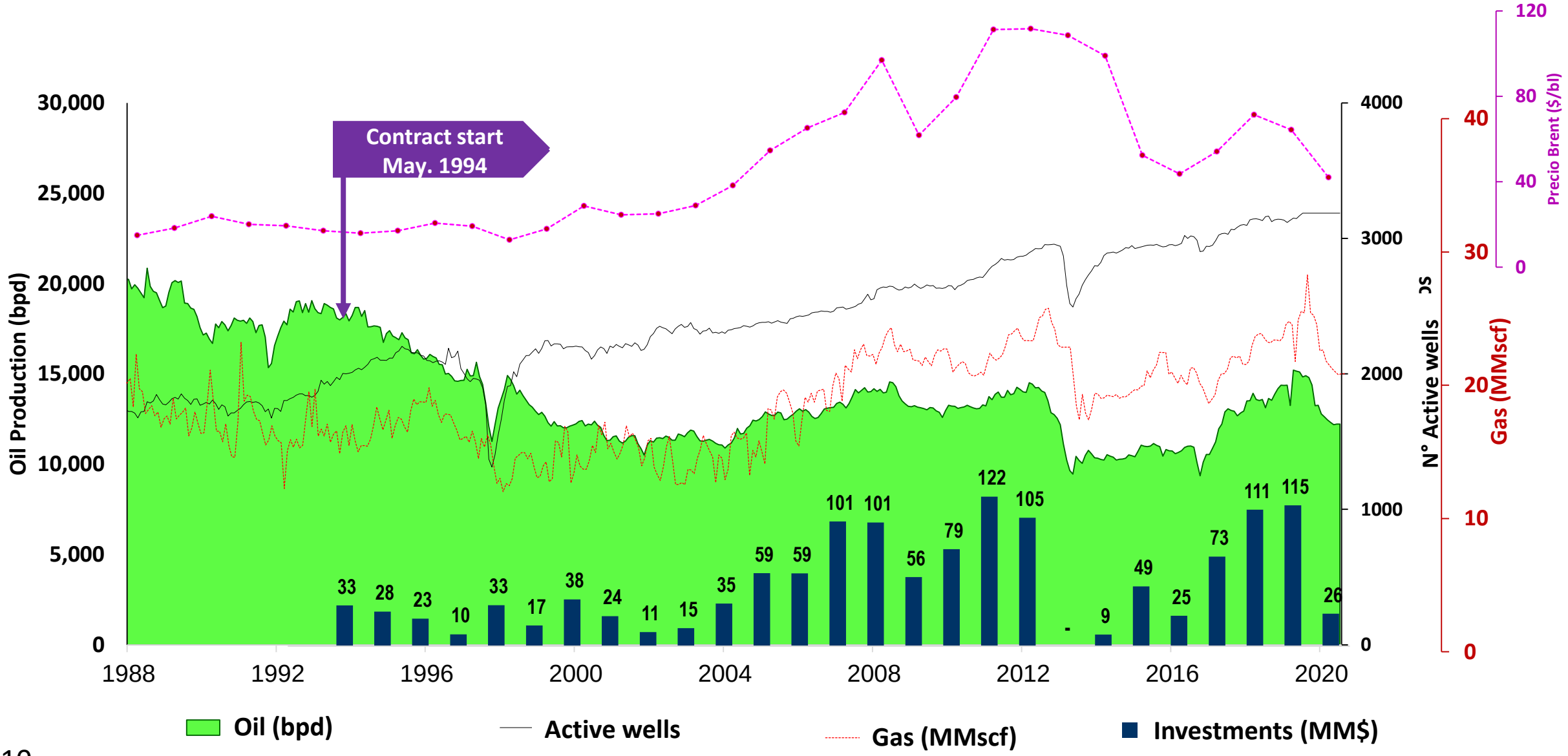
BLOCK I


Contract start
Dec. 1991
Oil Production (bpd)
2,000
1,500
1,000
500
0
1988
1992
1996
2000
2004
2008
2012
2016
2020
400
200
0
N° Active wells
120
80
40
0
Brent Price ($/bl)
12
8
4
0
Gas (MMscf)
3
0
1
0
1
0
0
1
1
1
3
4
6
8
2
10
12
23
20
27
5
0
0
1
4
Oil (bpd)
Active wells
Gas (MMscf)
Investments (MM$)

BLOCK VII/VI

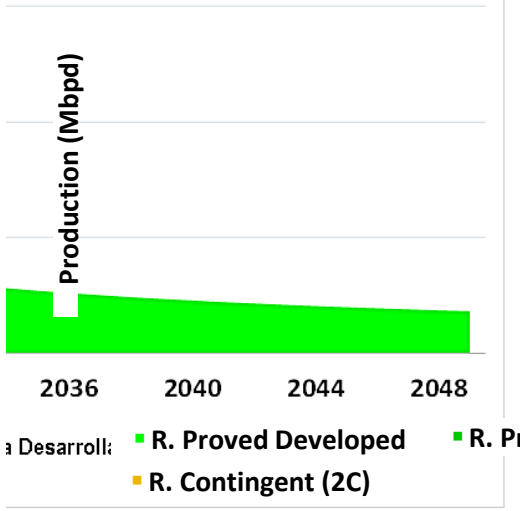

Contract start
Oct. 1993
Oil Production (bpd)
6,000
4,500
3,000
1,500
0
2500
2000
150
100
500
0
N° Active wells
12
8
4
0
Gas (MMscf)
120
80
40
0
Brent Price ($/bl)
1988
1992
1996
2000
2004
2008
2012
2016
2020
9 8 12 11 4 8 6 3 1 5 2 4 2 2 6 14 17 24 12 15 11 7 10 16 15 17 1
Oil (bpd)
Active wells
Gas (MMscf)
Investments (MM$)

BLOCK X

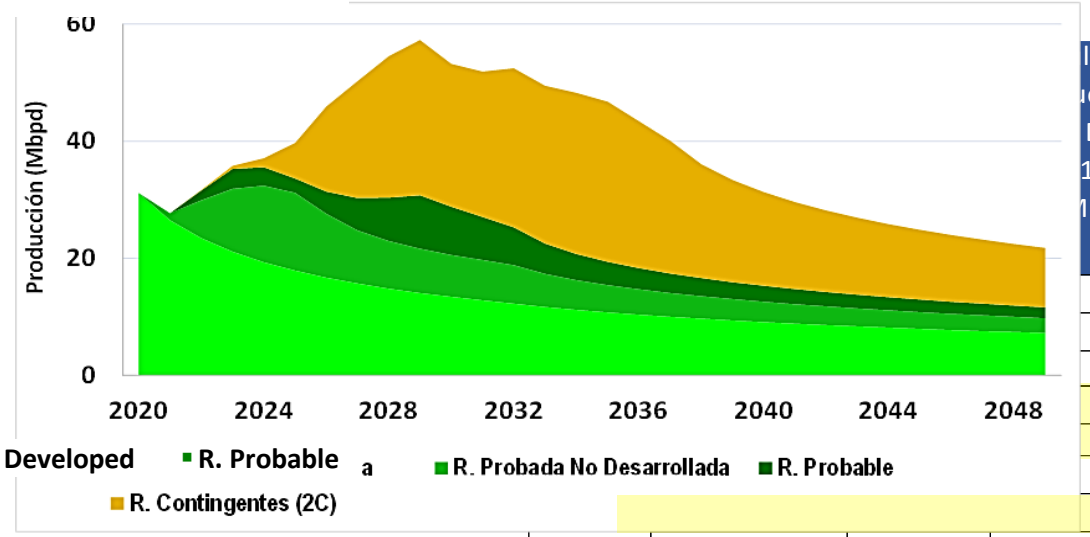

Contract start
May. 1994
Oil Production (bpd)
N° Active wells
Gas (MMscf)
Precio Brent ($/bl)
30,000
25,000
20,000
15,000
10,000
5,000
0
4000
3000
2000
1000
0
120
80
40
0
40
30
20
10
0
1988
1992
1996
2000
2004
2008
2012
2016
2020
33
28
23
10
33
17
38
24
11
15
35
59
59
101
101
56
79
122
105
-
9
49
25
73
111
115
26
Oil (bpd)
Active wells
Gas (MMscf)
Investments (MM$)

POTENTIAL DEVELOPMENT IN TALARA

Change Conditions Develop Potential



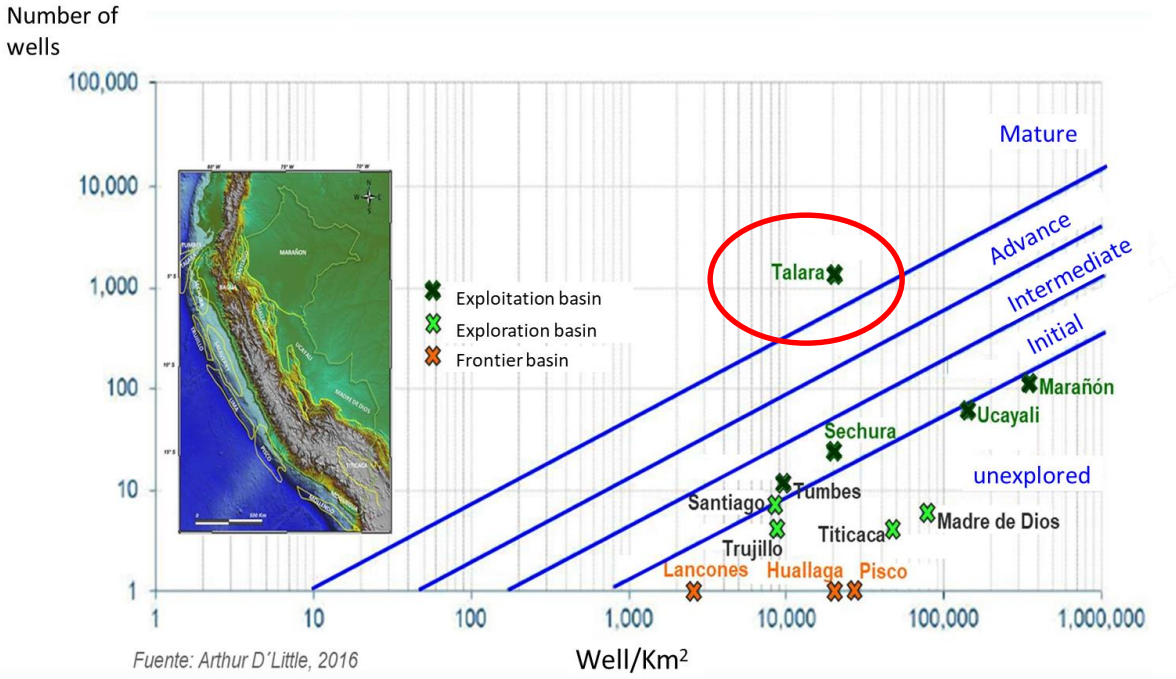
Cambiar Condiciones Desarrollar Potencial



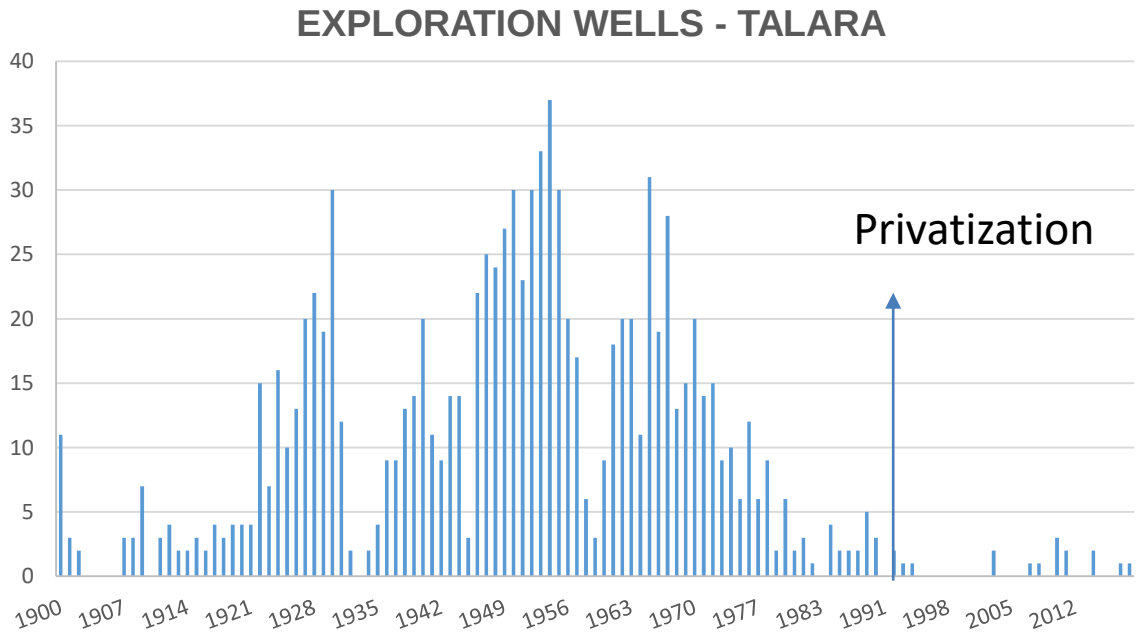
			lative uction Dec. 19 MBls)	Recovery Factor as of Dec. 2019 (%)	N° wells to be drilled in the next 10 years	Reserves to be developed per reservoir (MMBls)	Inceremental Recovery Factor 30 years (2P) (%)
			76.1	40.2%	21	1.28	40.90%
			11.7	6.3%	49	3.28	8.00%
			20.4	17.6%	14	1.08	18.50%
			19.7	8.4%	105	5.46	10.70%
			6	4.9%	91	3.55	7.90%
			2.82	13.9%	8	0.32	15.50%
			0.54	4.7%	4	0.03	4.90%
	Verdún	6.5	1.77	27.3%	4	0.07	28.40%
VI	Pariñas	131.5	38.72	29.4%	93	3.81	32.30%
	Basal Salinas	444.6	13.6	3.1%	108	5.18	4.20%
VII	Mogollón	123.2	14.56	11.8%	87	3.31	14.50%
	Mogollón	2278.0	128.75	5.7%	260	11.44	6.20%
X	Ostrea	720.0	54.19	7.5%	181	2.90	7.90%
	Echinocyamus	1207.0	124.96	10.4%	80	1.60	10.50%

- Boost economic reactivation and generates employment.
- Decrease Importation cost.
- Ensure supply to Petroperu refinery.
- Improve royalty income by increasing production.
- To create a socio-environmental Fund.
- Prepare Talara for energy transition.
- Improve the gas offer.

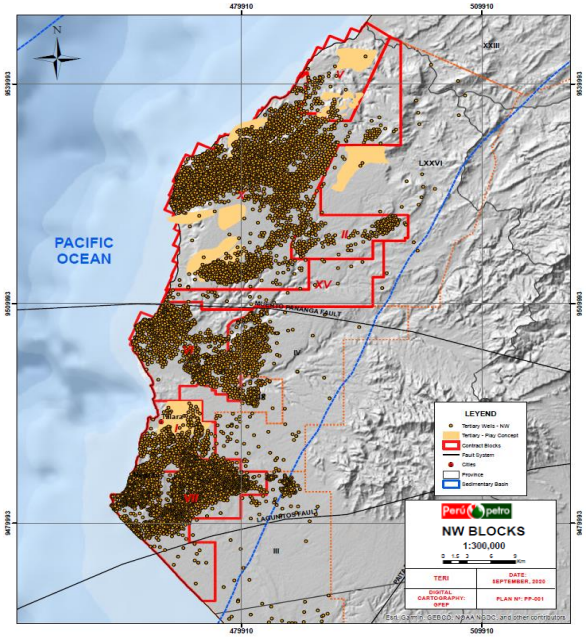
EXPLORATORY EFFORTS

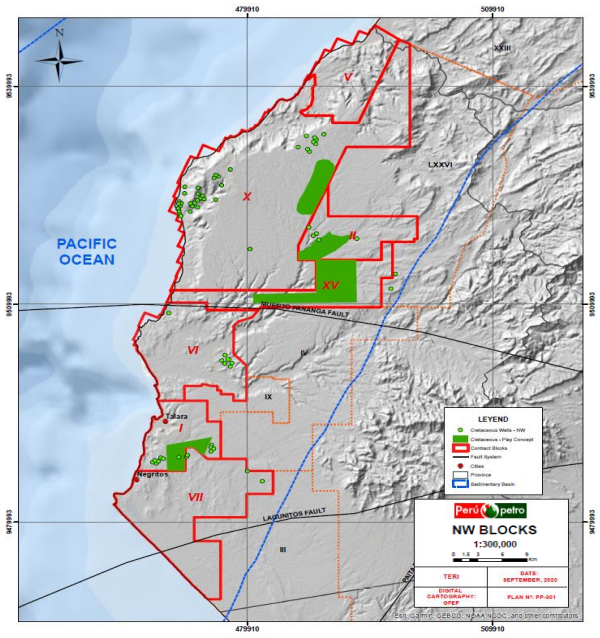


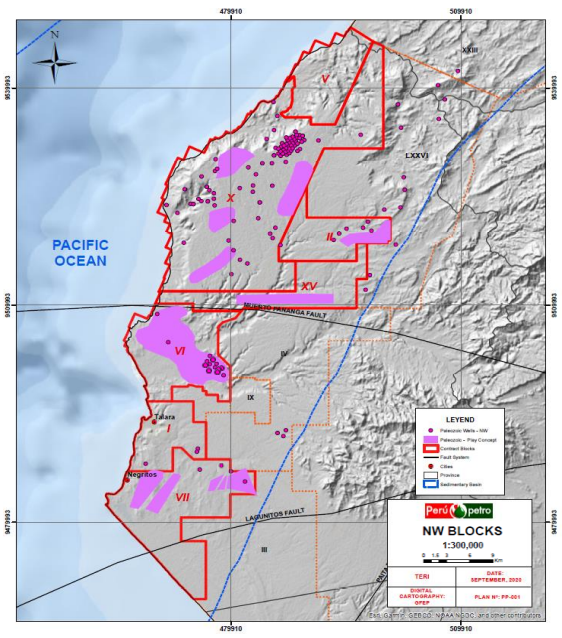
- Most basins unexplored or initial phase
- Talara had intensive exploration activity up the 70s.



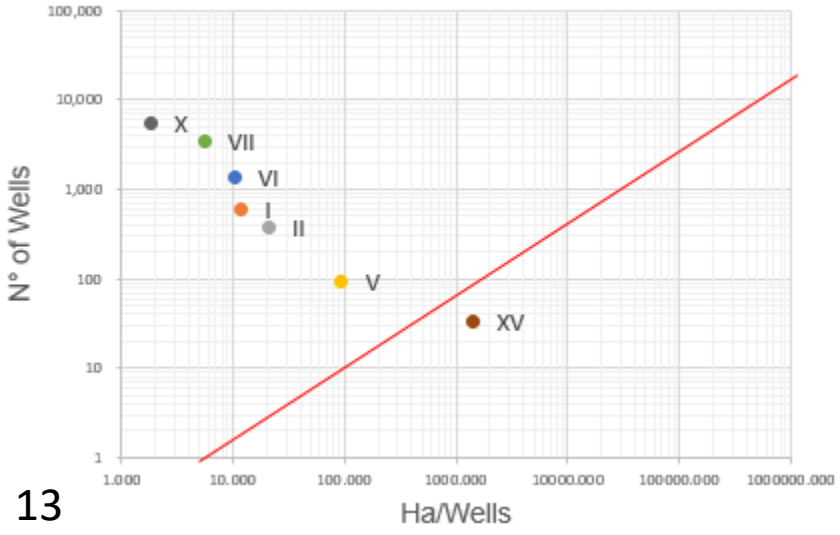
EXPLORATION OPPORTUNITIES IN DEEPER HORIZONS



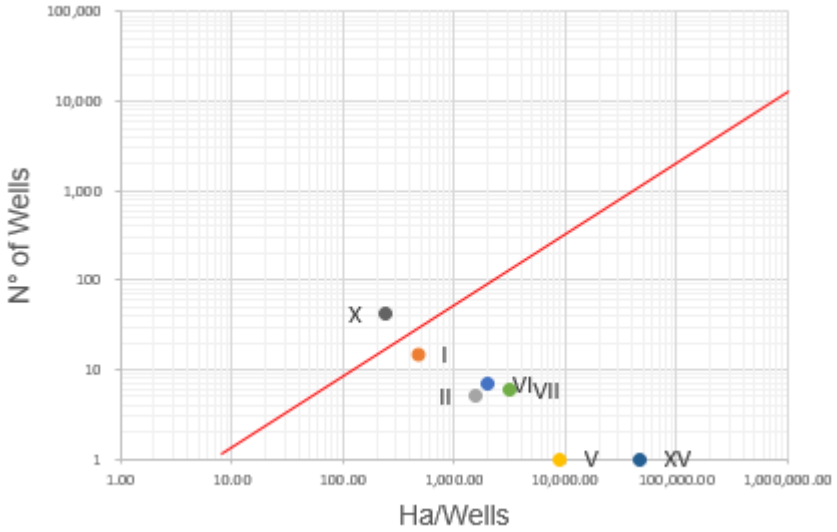




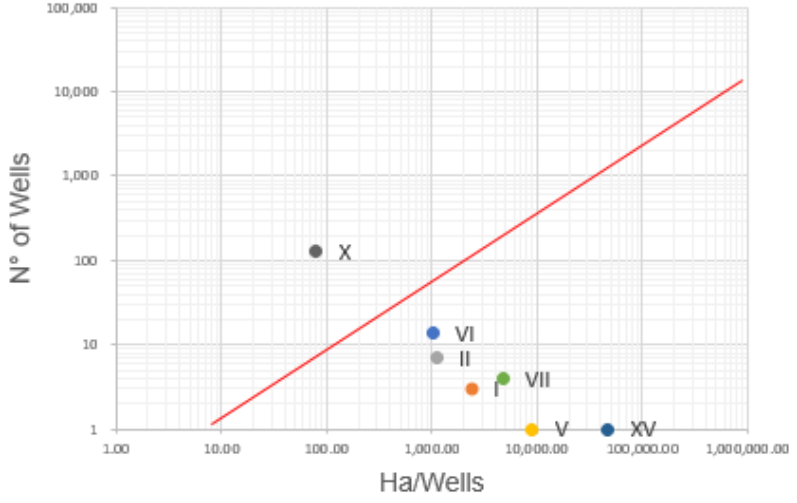
Exploratory Maturity for Paleogene Reservoirs



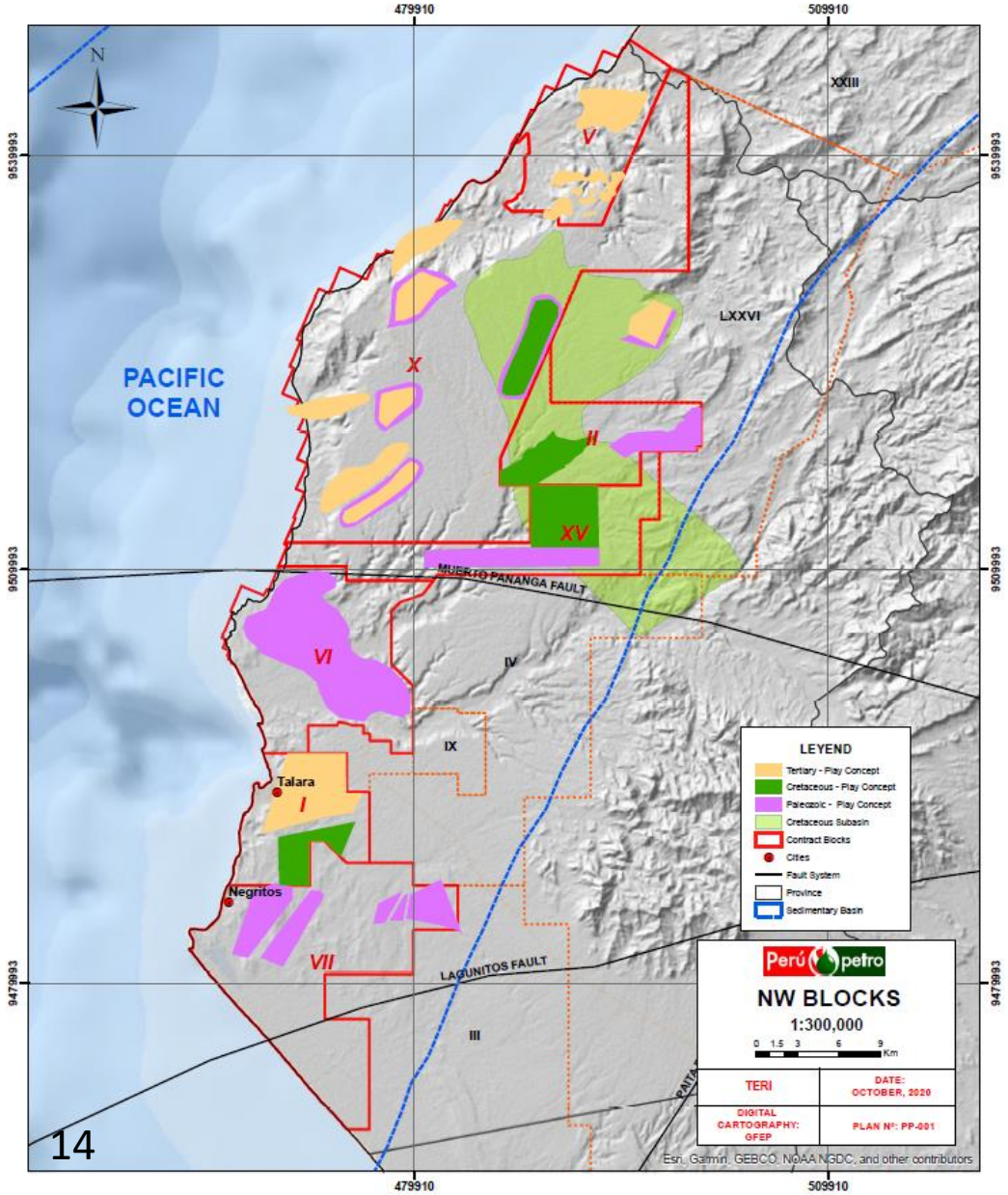
Exploratory Maturity for Cretaceous Reservoirs



Exploratory Maturity for Paleozoic Reservoirs



PLAYS AND LEADS IDENTIFIED IN TALARA BASIN



Type	BLOCK	PERIOD	OOIP Mean (MMSTB)
Leads	7 Blocks	Paleogene	536.2
Leads	7 Blocks	Cretaceous	219.9
Leads	7 Blocks	Paleozoic	467.7
			1223.8

Type	BLOCK	PERIOD	OOIP Mean (MMSTB)
Play	7 Blocks	Paleogene	211.9
Play	7 Blocks	Cretaceous	160.9
Play	7 Blocks	Paleozoic	599.3
			972.1

CONCLUSIONS

- Mature fields and Initial exploration phase in the same basin
- Leads and plays identified in deep horizons
- Blocks under production
- Still room to improve the recovery in fields under development

Database REMARKS

- Information free of cost
- Available Block data
- Multiclient data