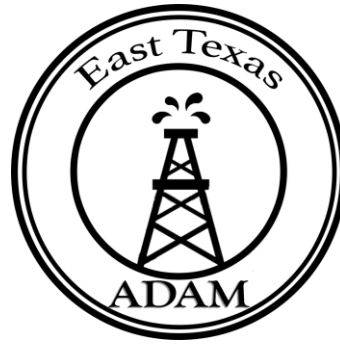




Defining the Goalpost: How Do We Score the Western Haynesville

>> *East Texas ADAM*
>> *Tyler, TX*

September 10, 2025



Jerry Has Leveled Up...

“The most that I had ever spent on one well in my entire life was \$800k...”

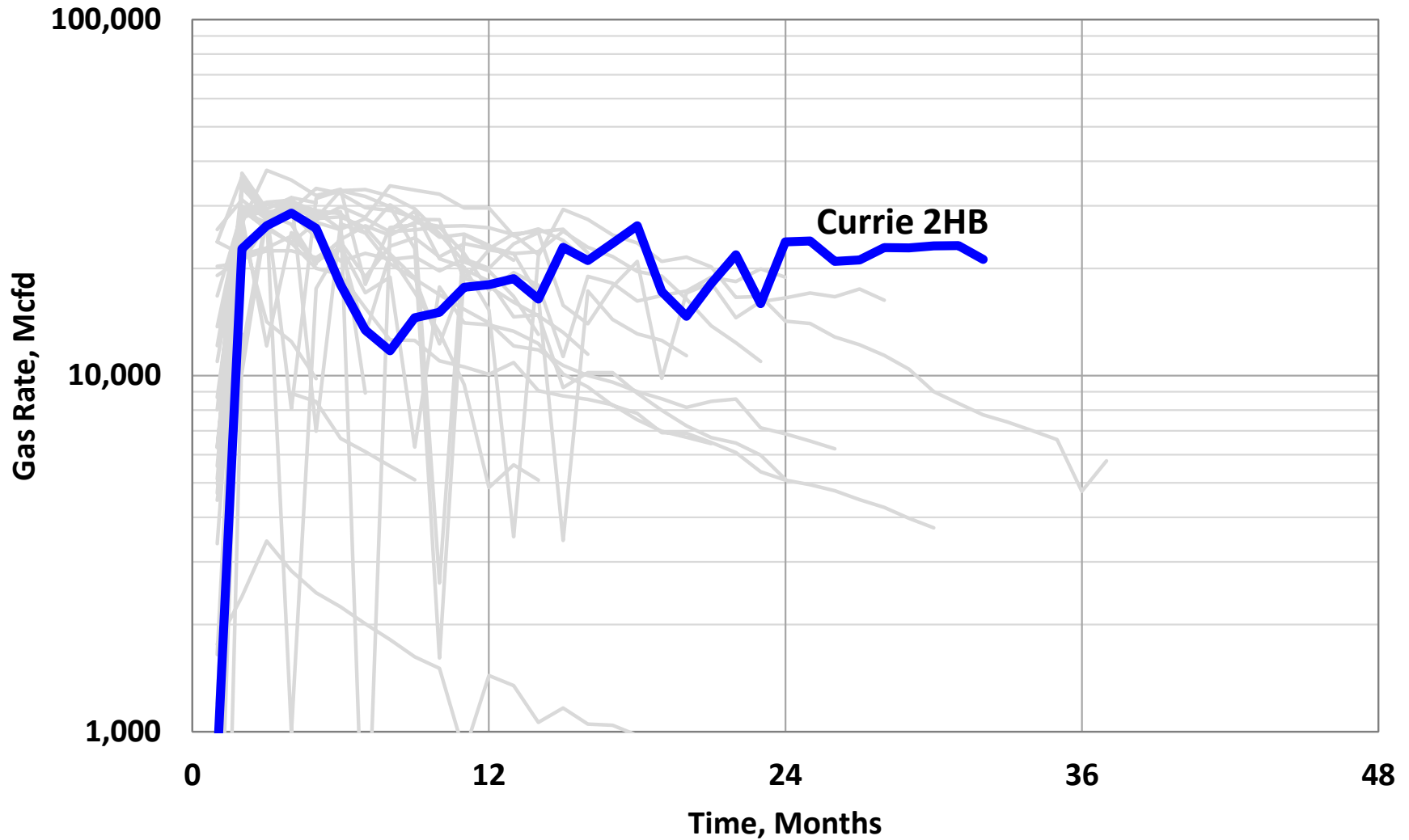


“... and with that one well, I made \$100million.”

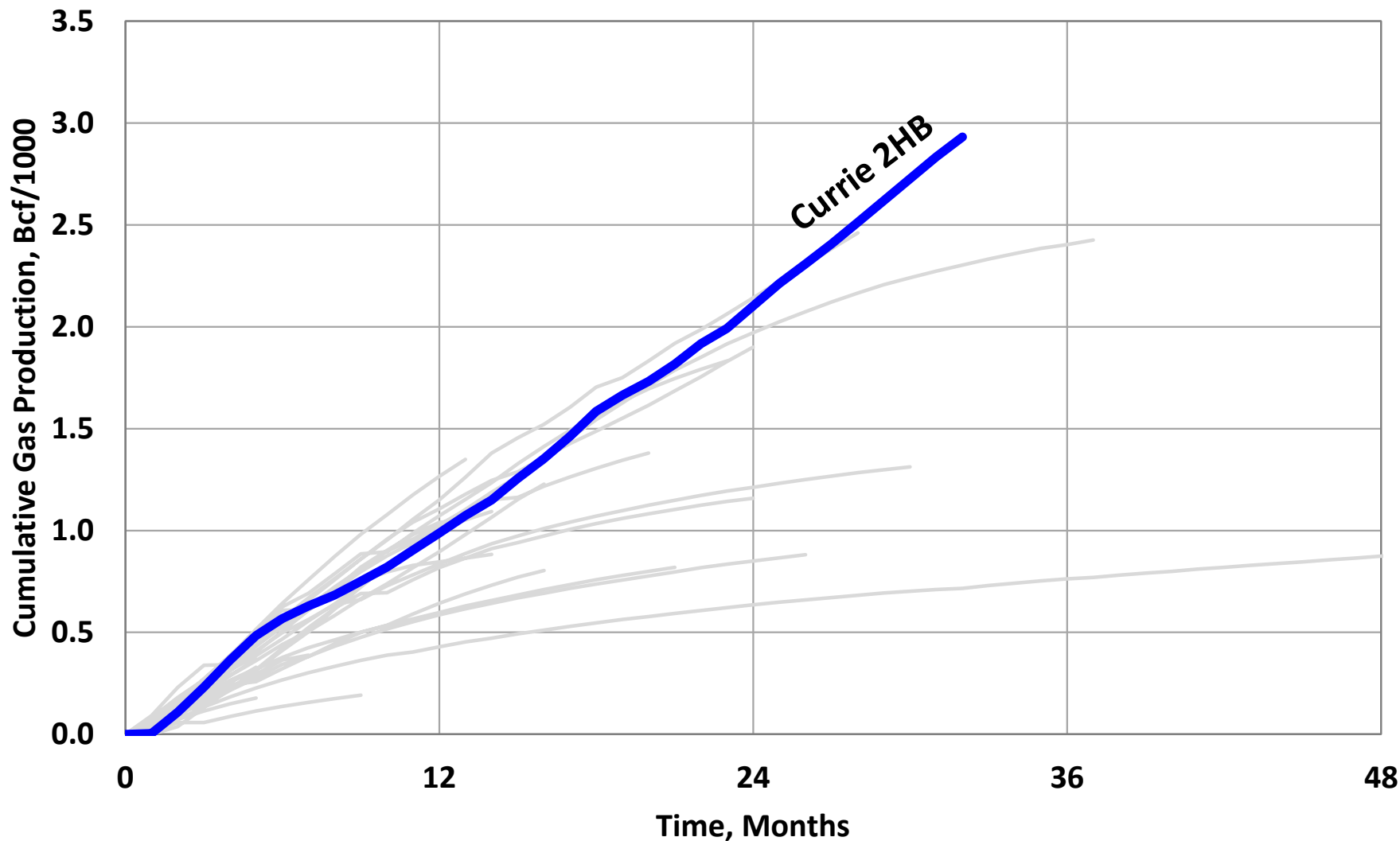
*Credit: Netflix Doc “America's Team: The Gambler and His Cowboys”, Ep 1



Jerry is Now Drilling \$20-40mm Wells... for 25mmcfpd



Jerry is Now Drilling \$20-40mm Wells... for >3.0Bcf/1000 EUR



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Unless otherwise expressly stated herein any analysis or outlook discussed in this Presentation express VSO's views only as of November 2024.



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2. Reserves... What's the EUR?
3. Operational Challenges... Getting D&C Costs Down?
4. Illustrative Economics... What Do They Need To Make it Work?
5. Geologic Framework... Defining the Fairway

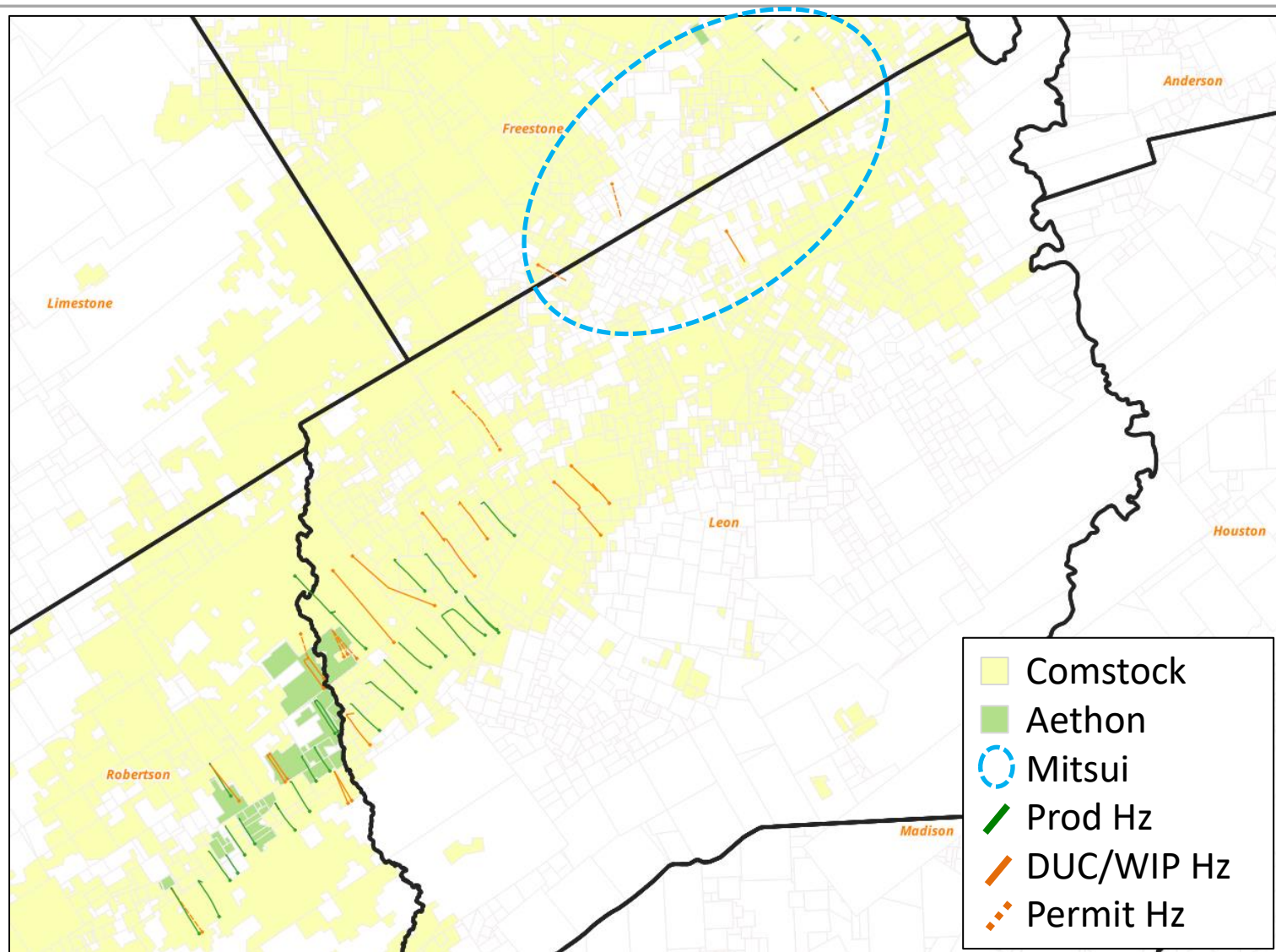


Review of Development History

ETX ADAM



Western Haynesville Today

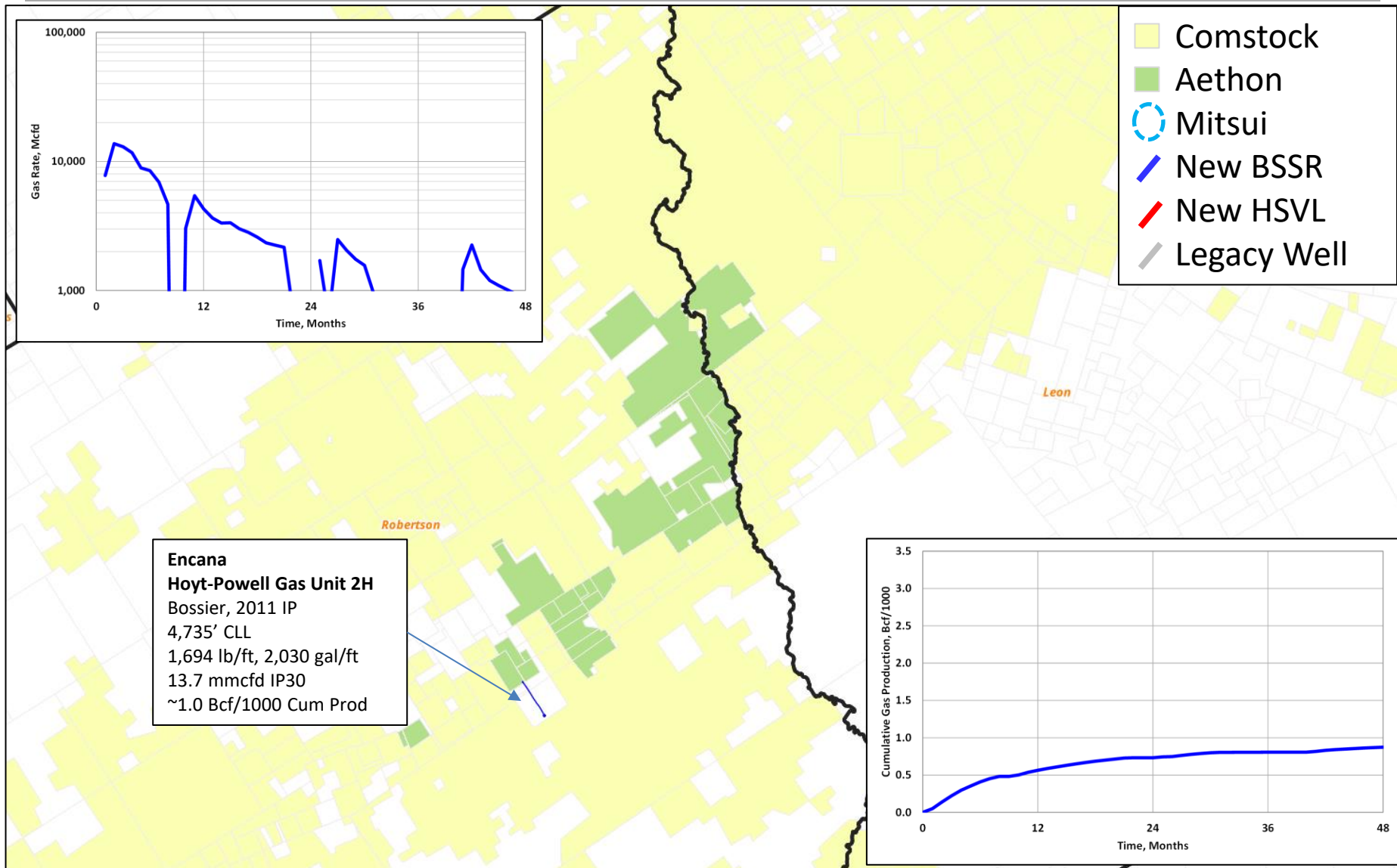


*Acreage from Enverus 'operator land' data.



Evolution of the Waynesville

2011 – Encana ‘Discovery’ Hz Bossier Well

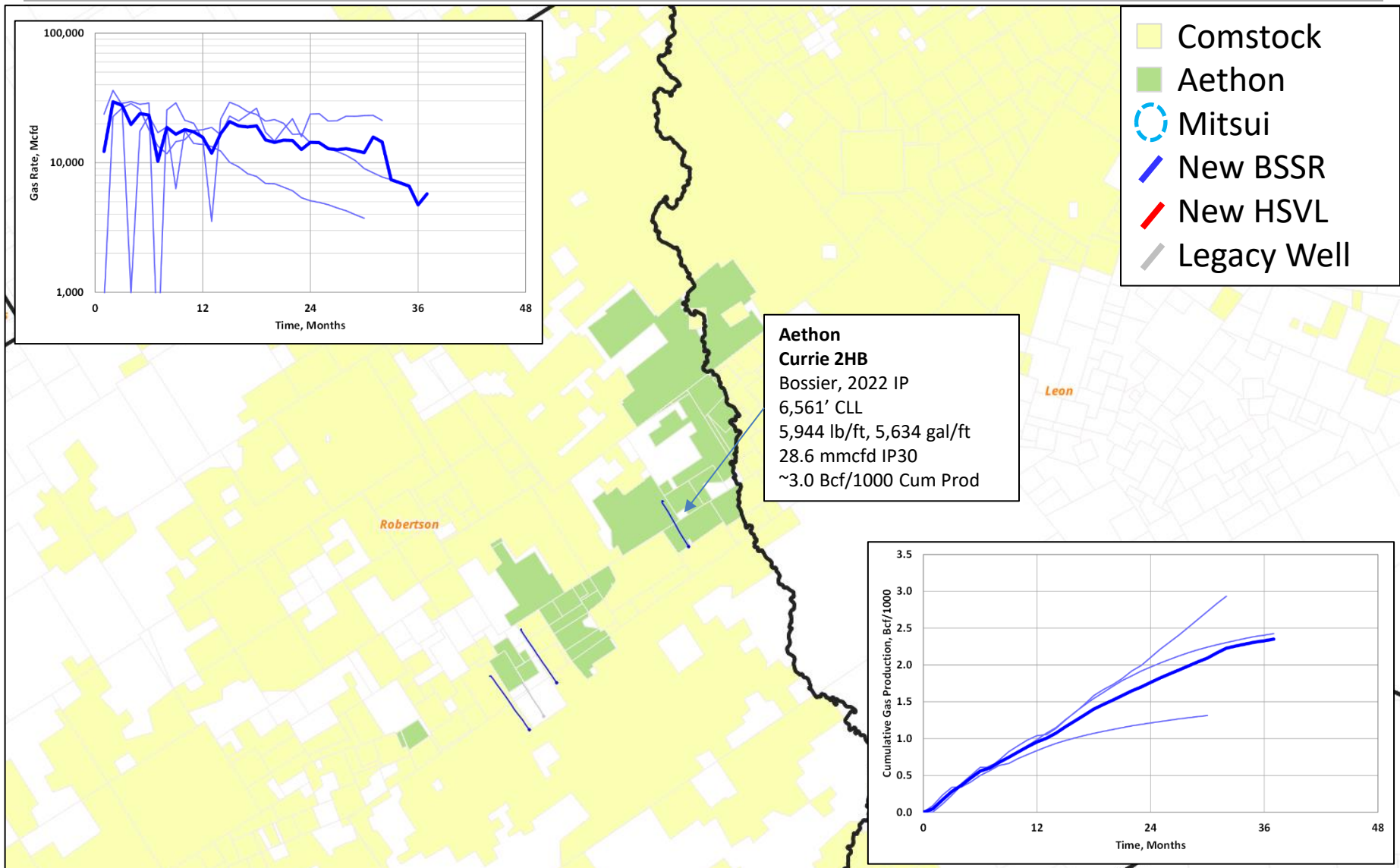


*Acreage from Enverus ‘operator land’ data.



Evolution of the Waynesville

2022 – Aethon/Comstock Makes Splash with 3 Bossier Wells

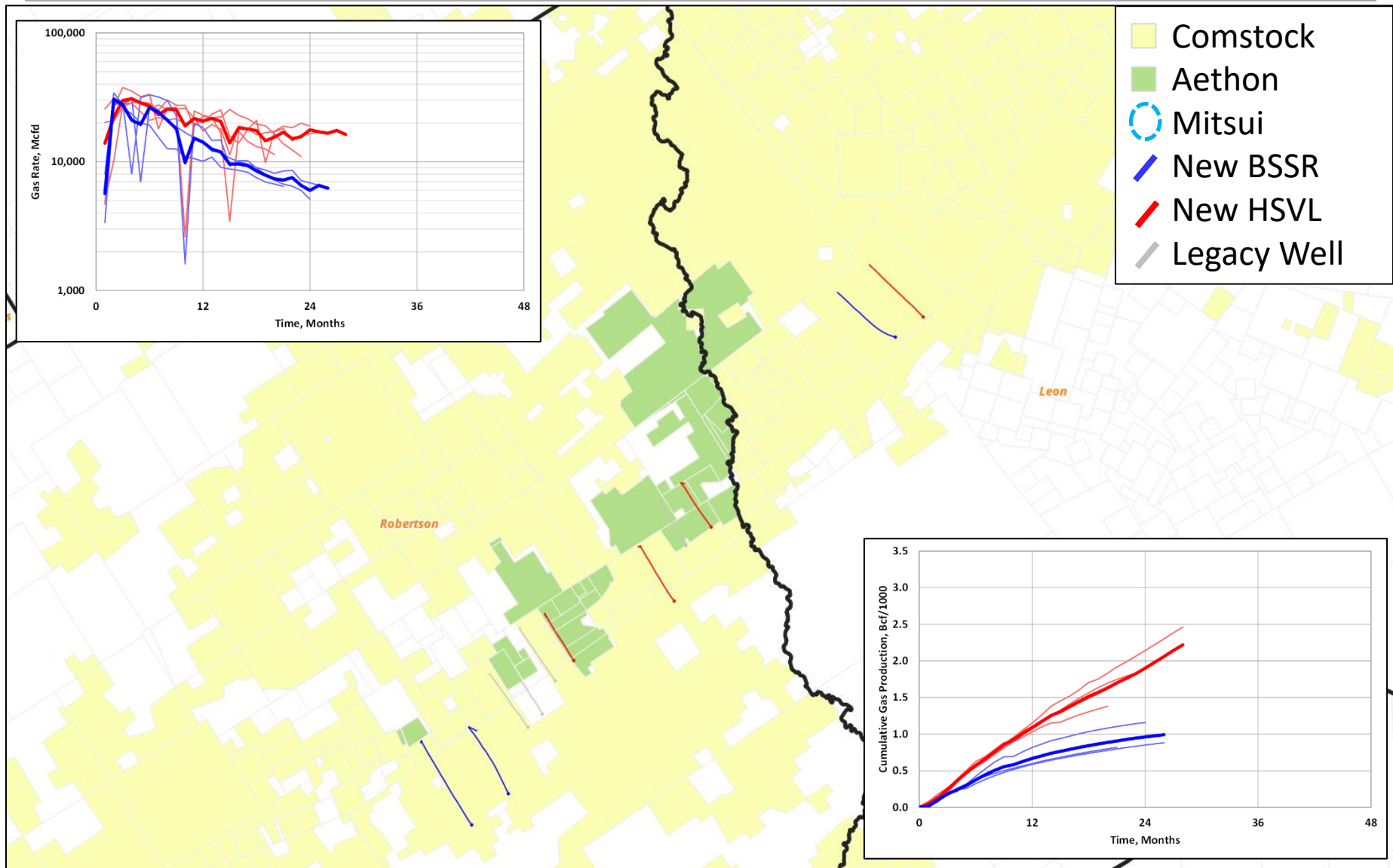


*Acreage from Enverus 'operator land' data.



Evolution of the Waynesville

2023 – Haynesville Added (4) and More Bossier (3) Delineation

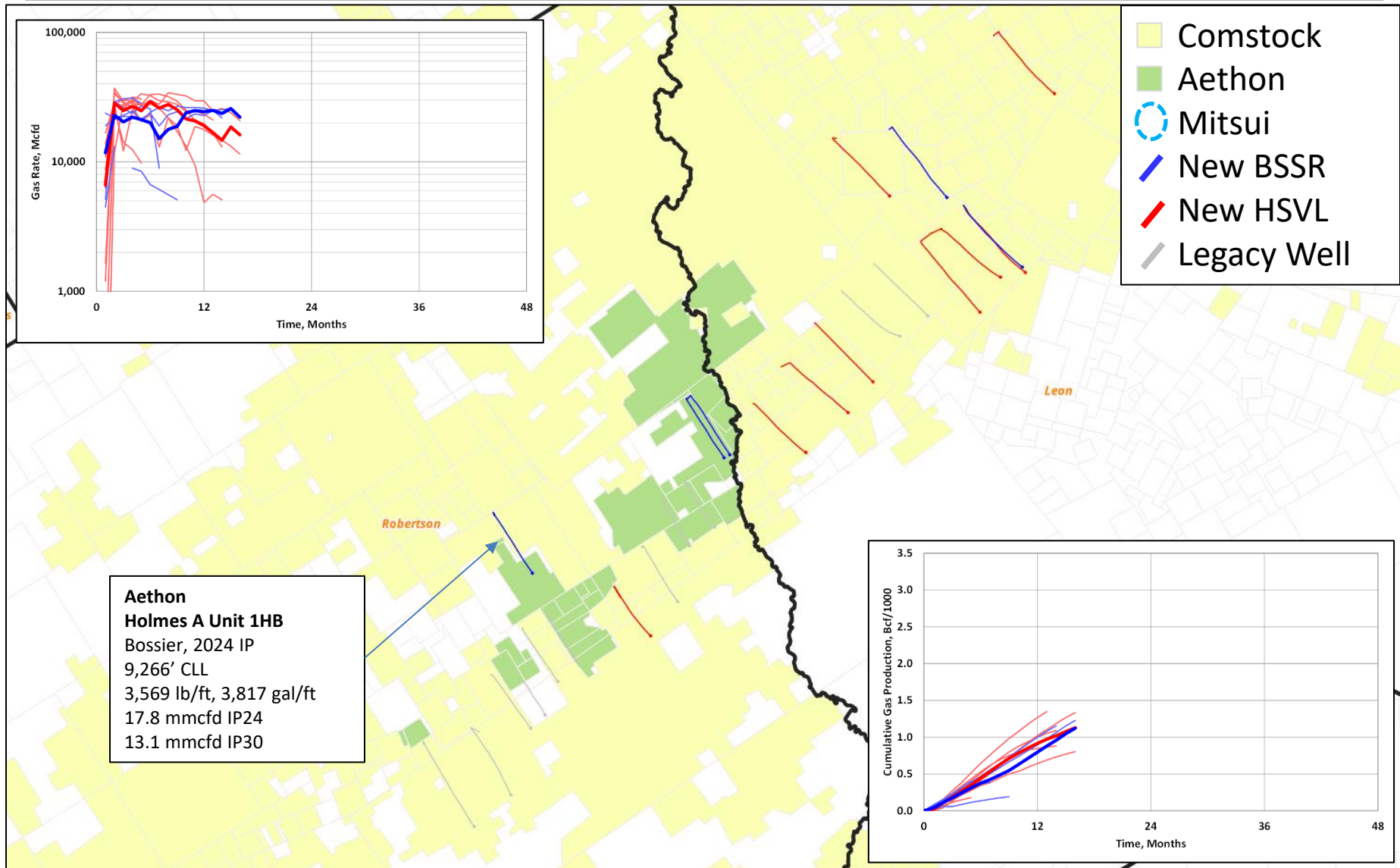


*Acreage from Enverus 'operator land' data.



Evolution of the Waynesville

2024 – More Haynesville (9) and More Bossier (5)

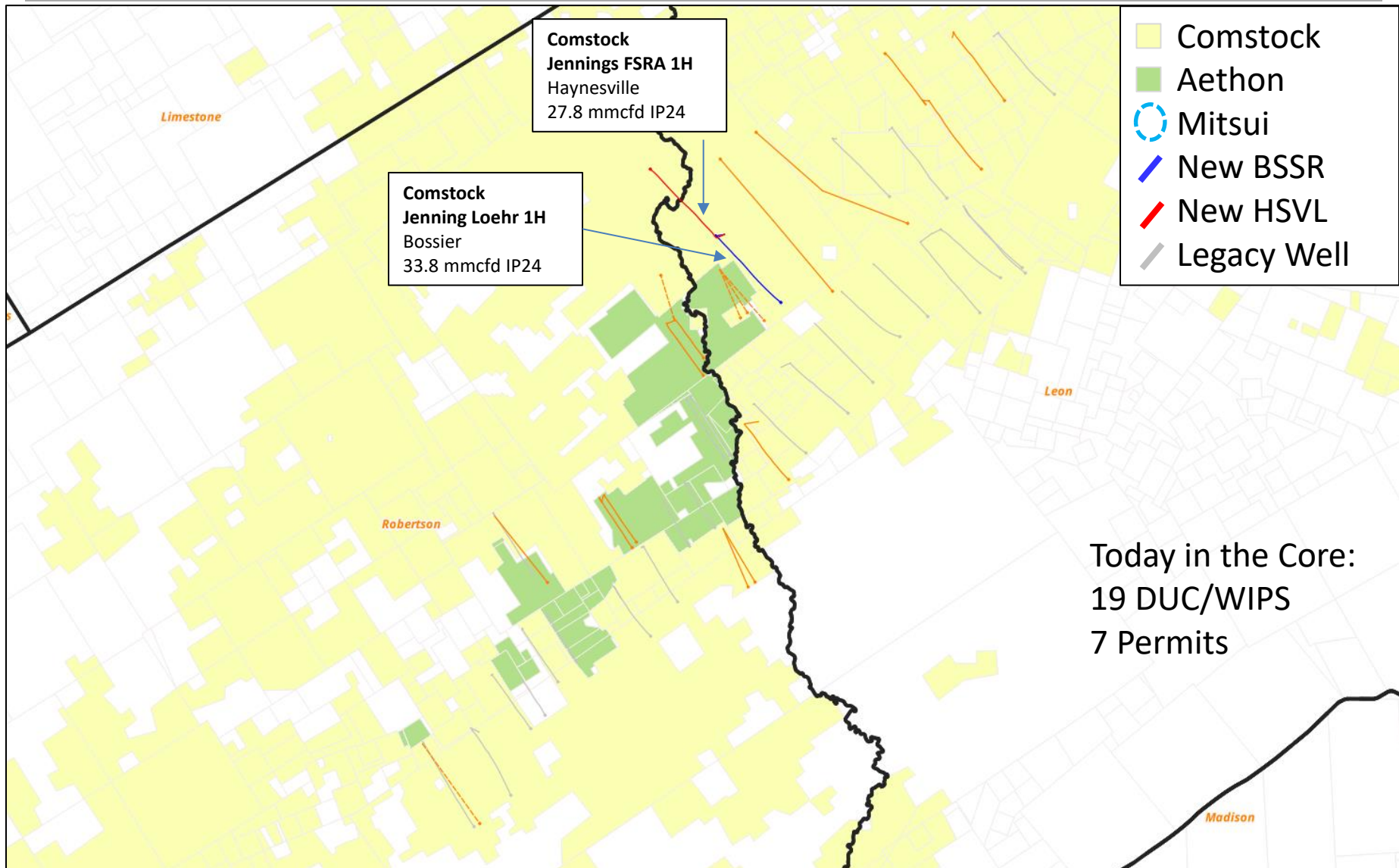


*Acreage from Enverus 'operator land' data.



Evolution of the Waynesville

2025 – DUC/WIP Building in the Core...

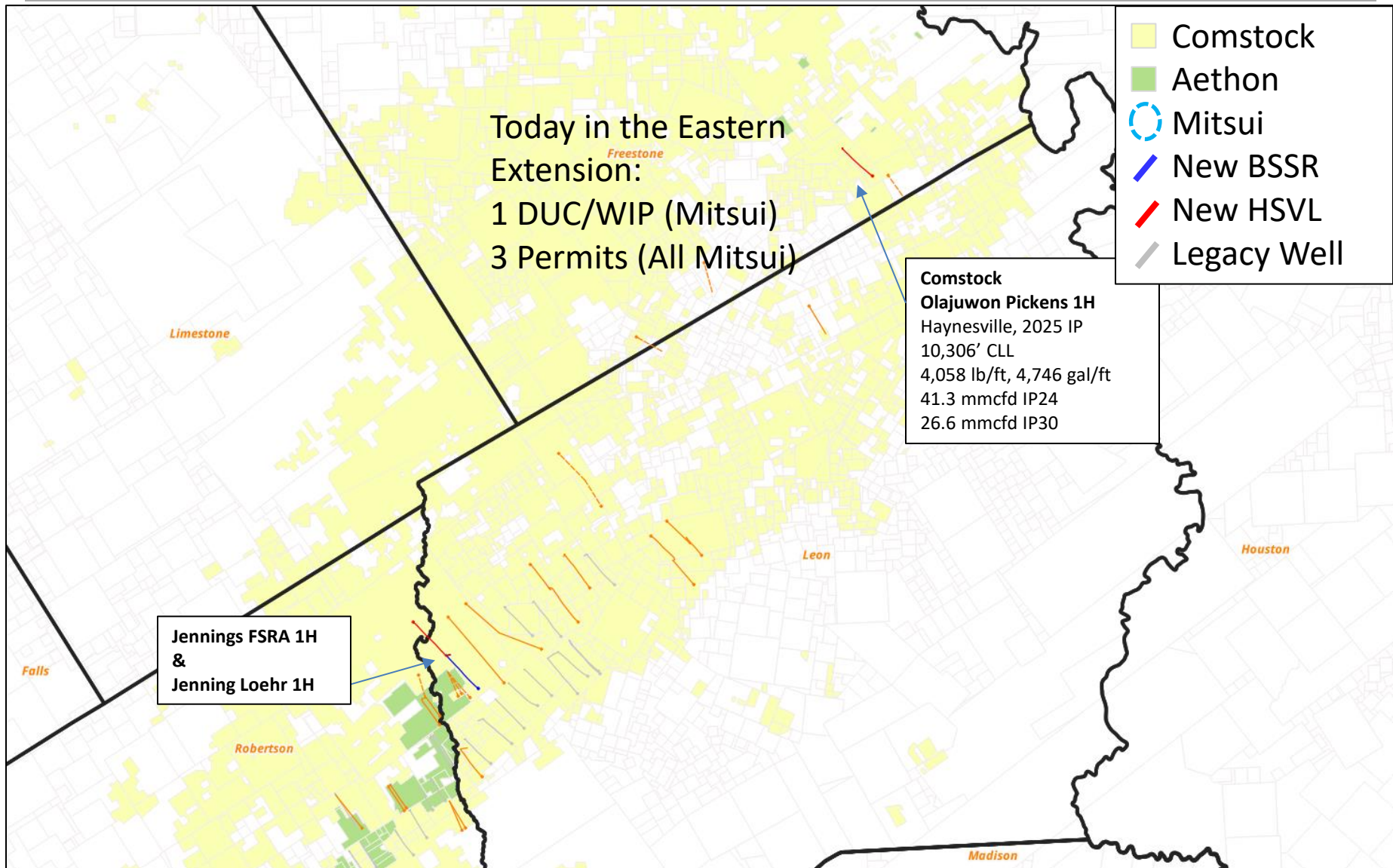


*Acreage from Enverus 'operator land' data.



Evolution of the Waynesville

2025 – ...And the Delineation of the Eastern Extension



*Acreage from Enverus 'operator land' data.

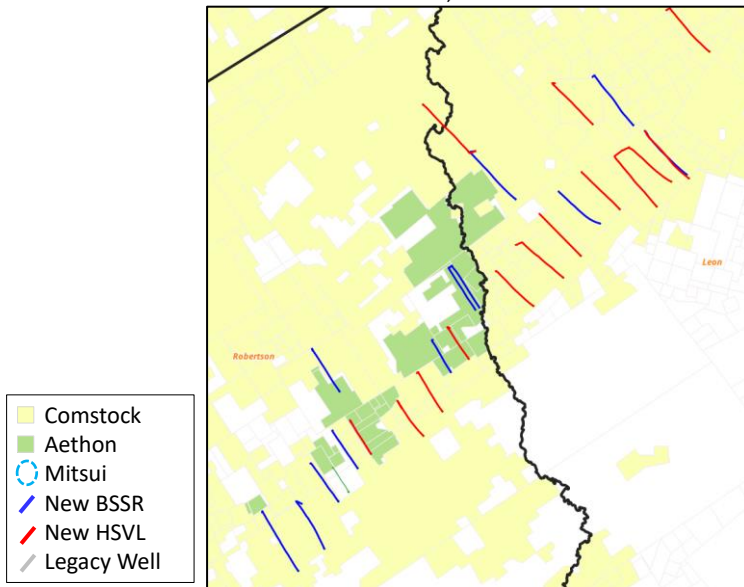
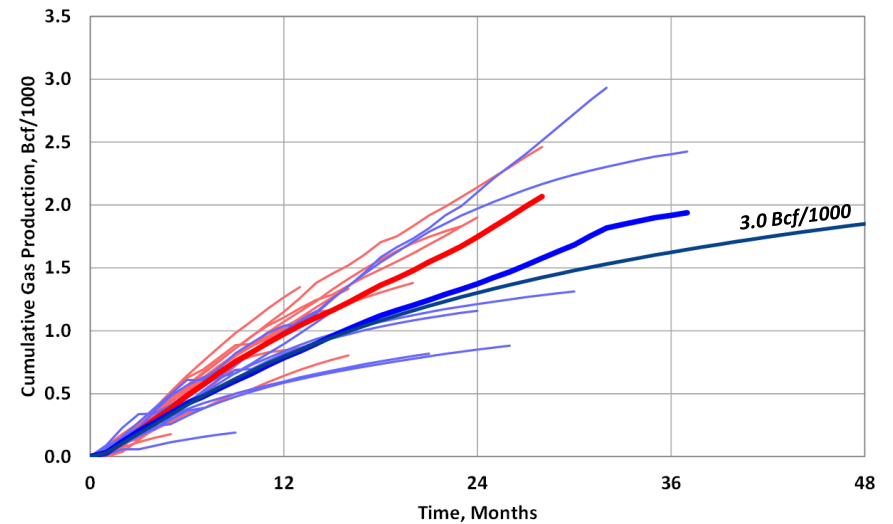
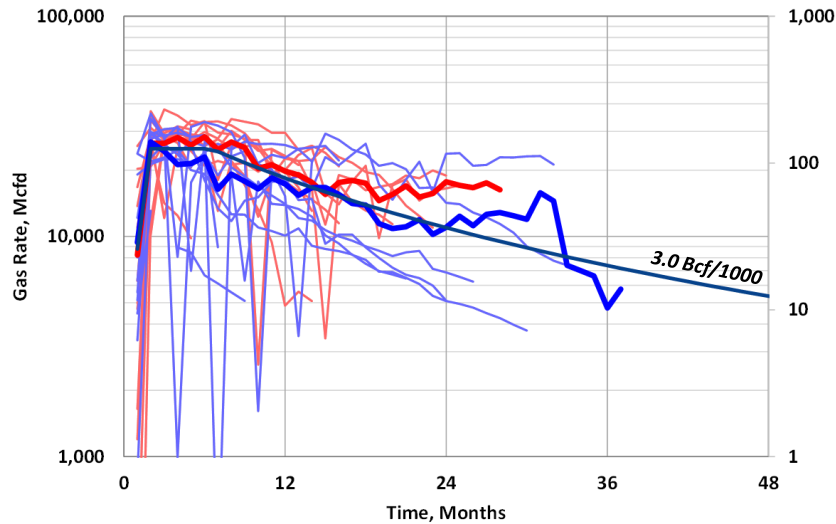


Reserves... What's the EUR?

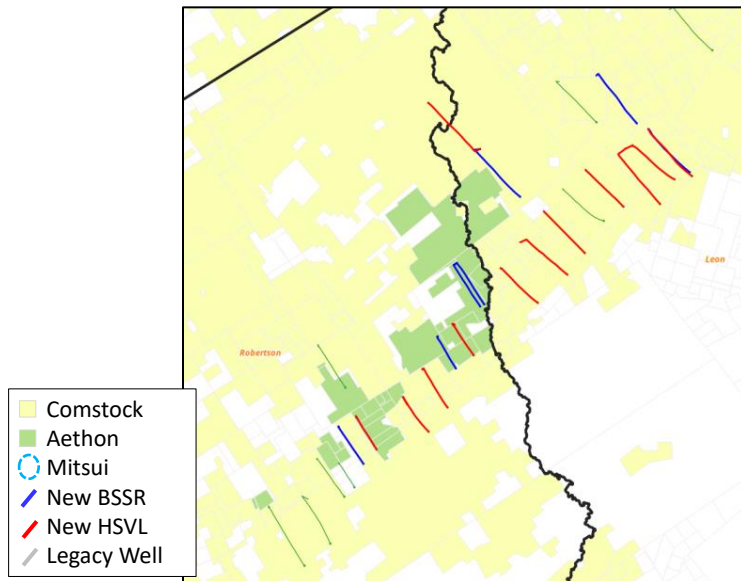
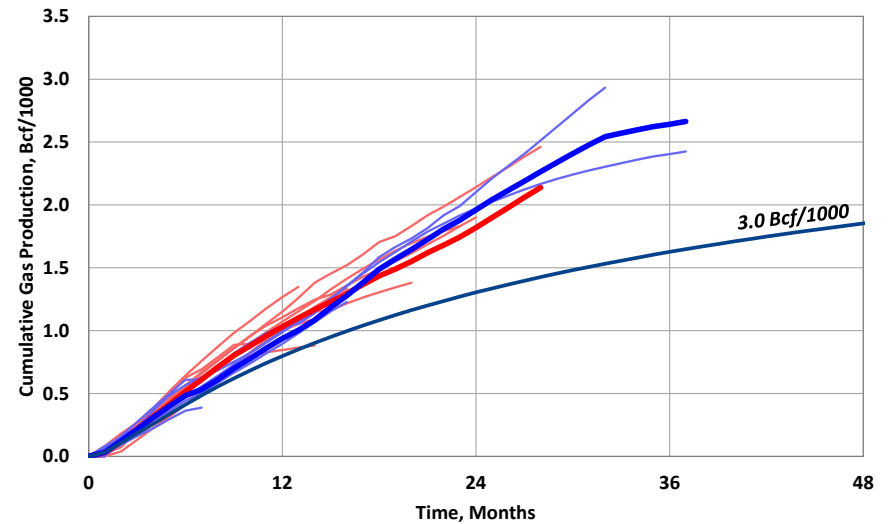
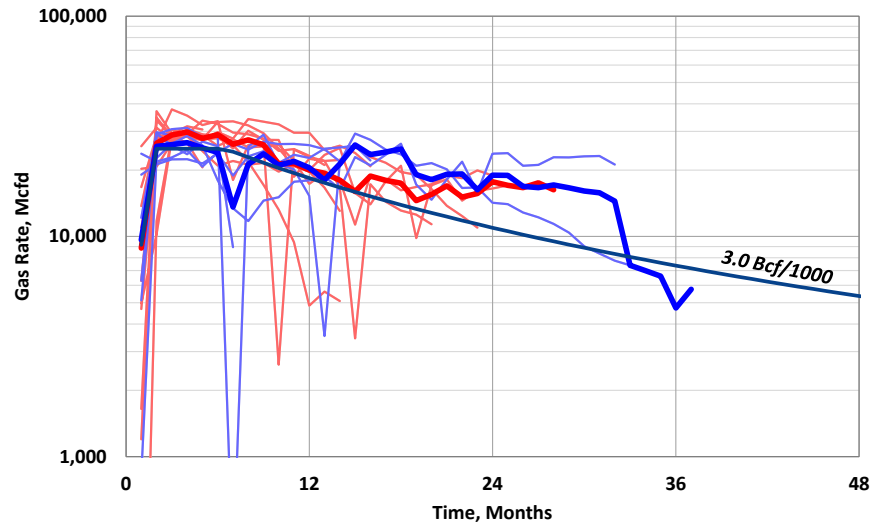
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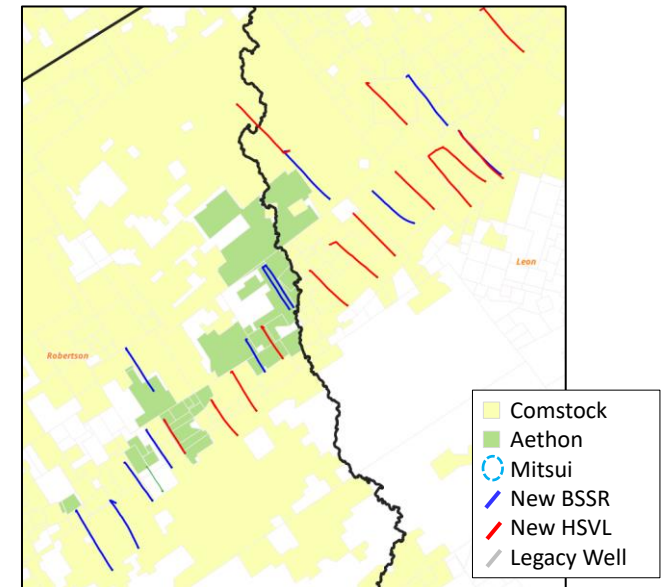
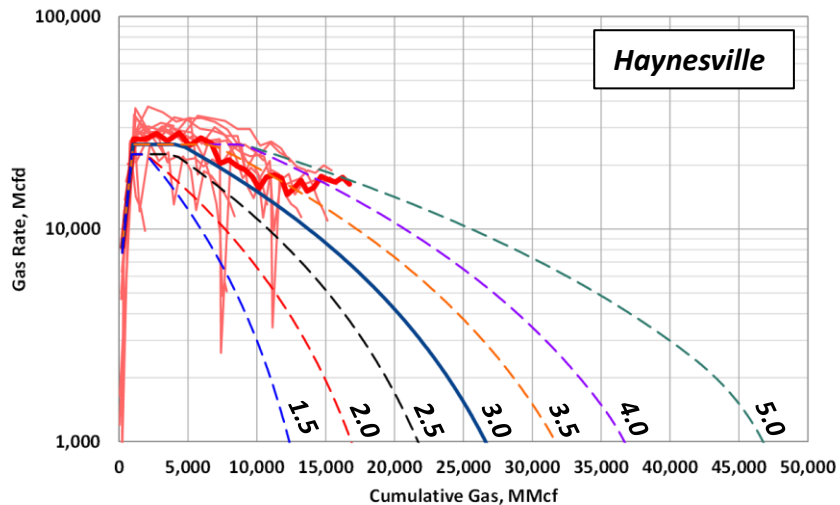
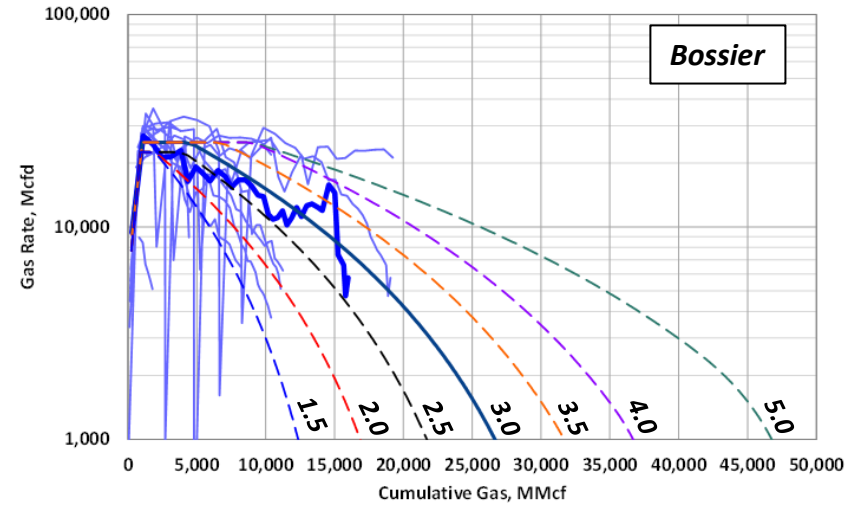
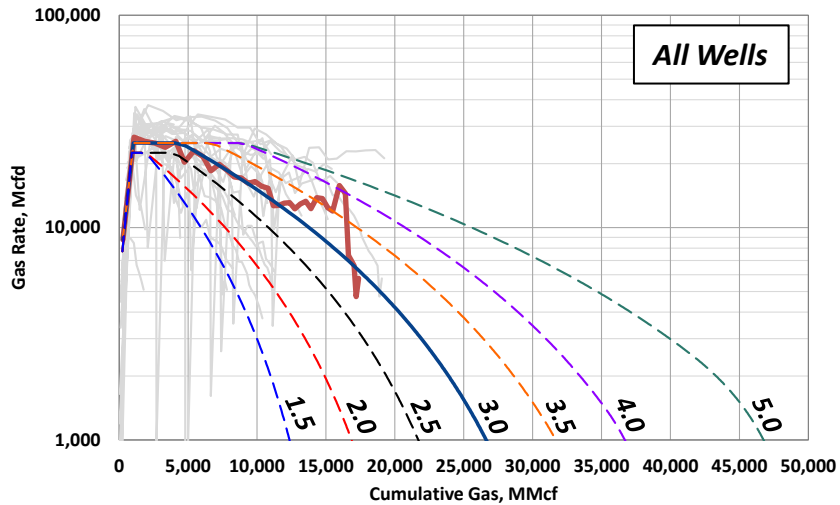
3.0 Bcf/1000 Comparison – All Wells



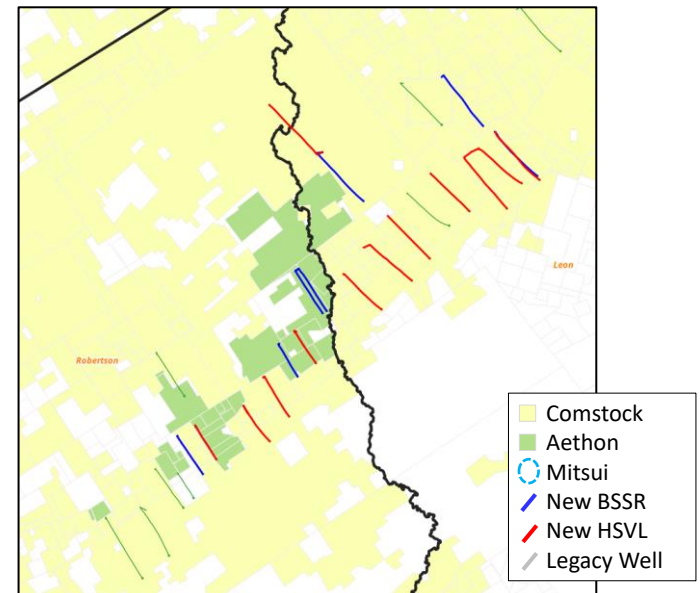
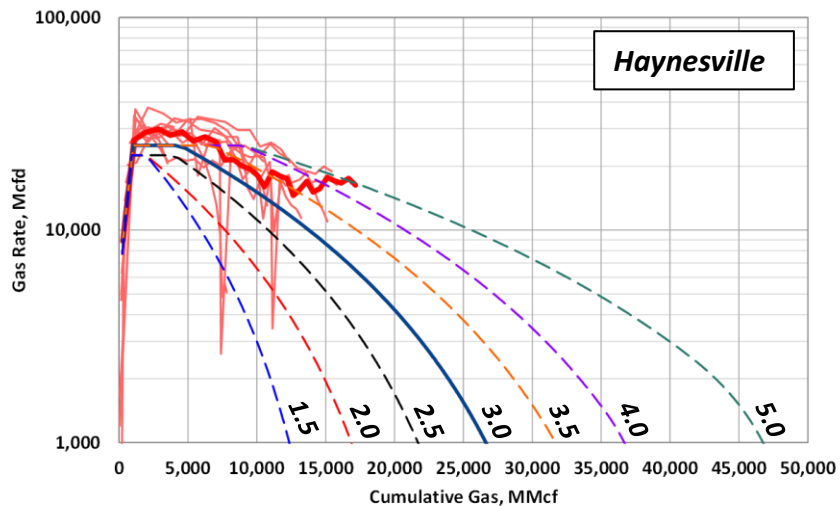
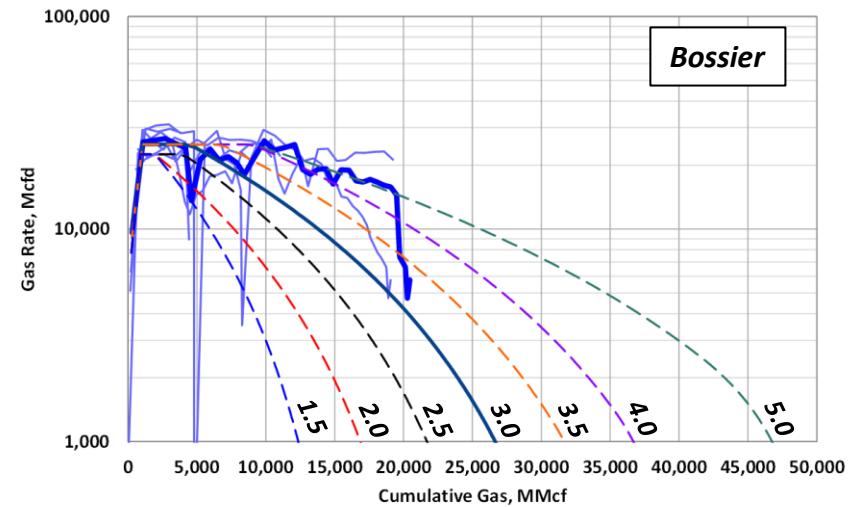
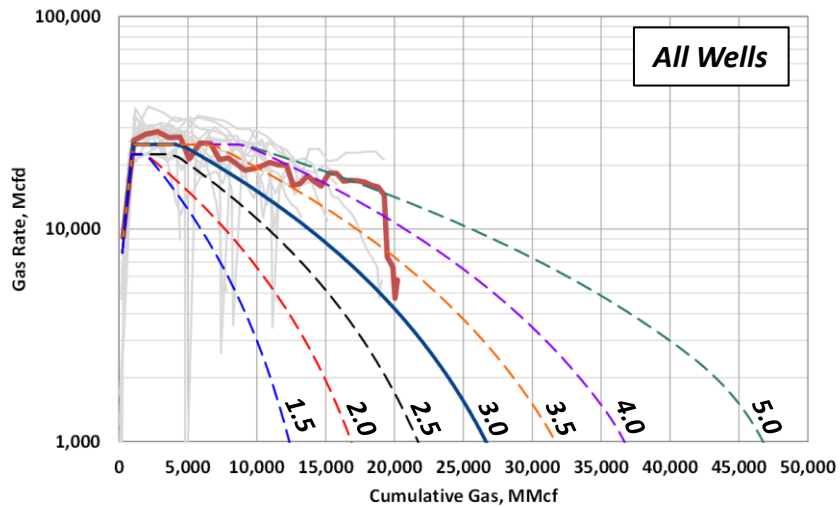
3.0 Bcf/1000 Comparison – Best Wells Only



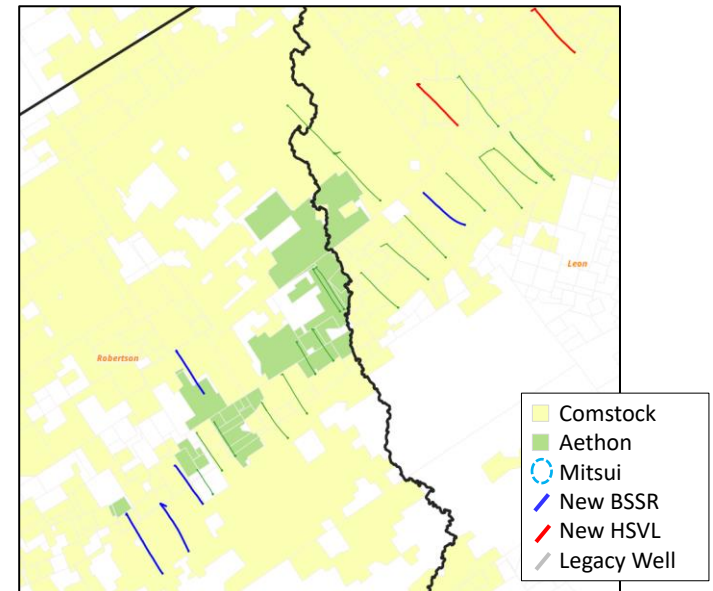
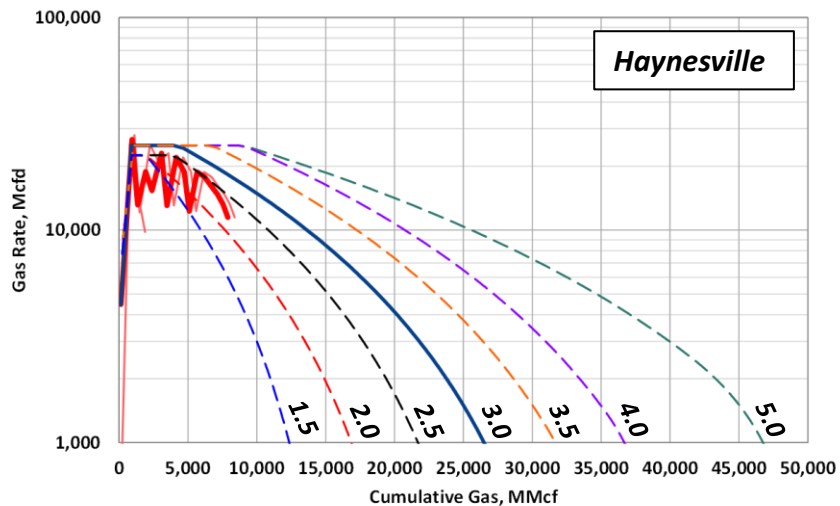
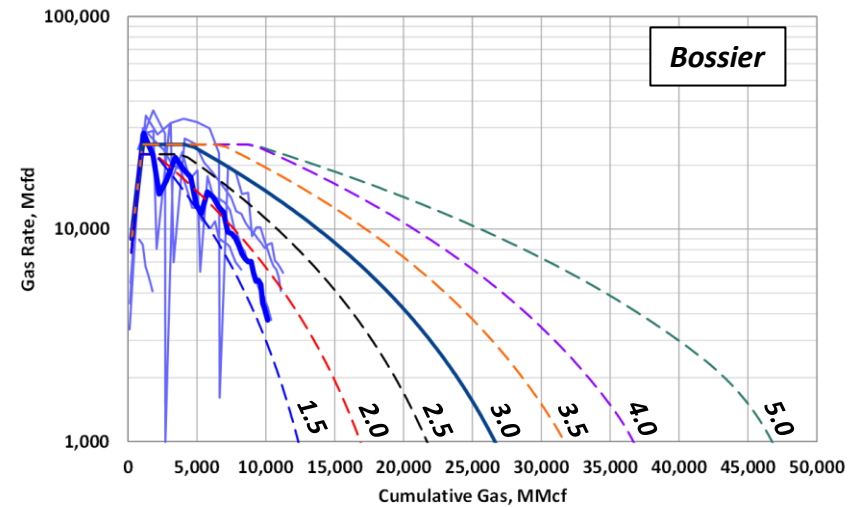
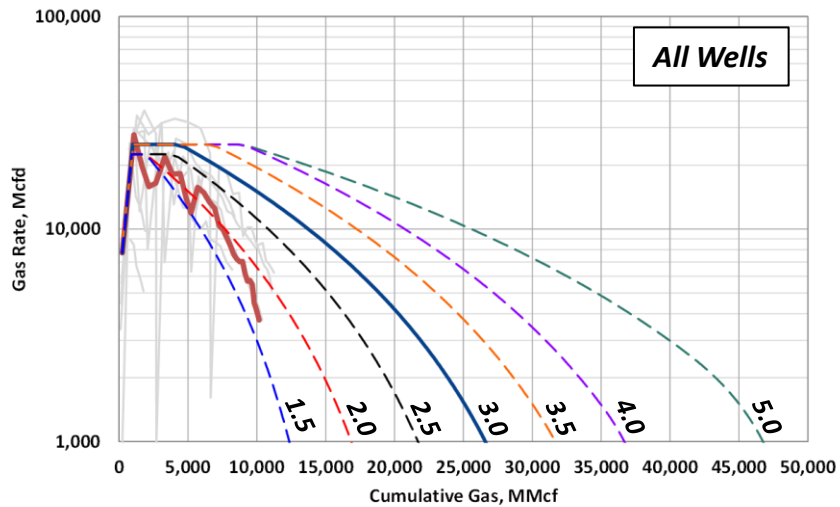
What's the EUR?



What's the EUR?



What's the EUR?



Operational Challenges... Getting D&C Costs Down?

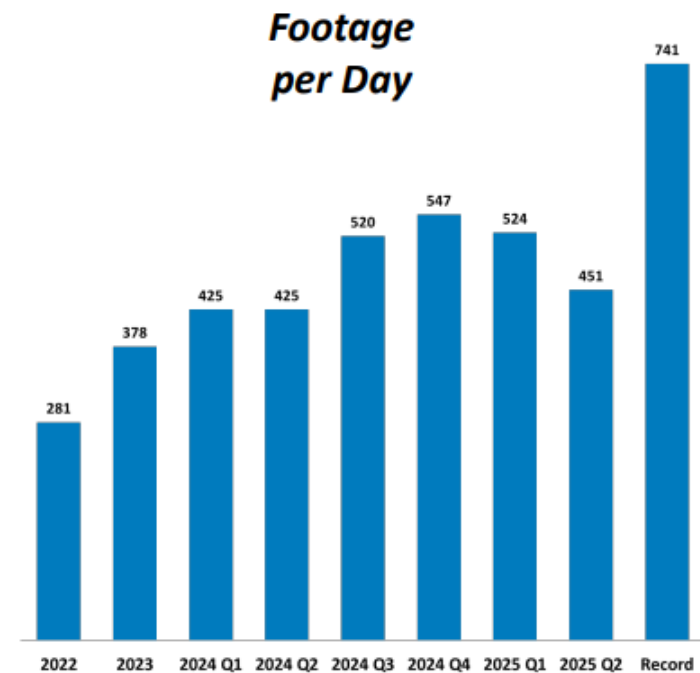
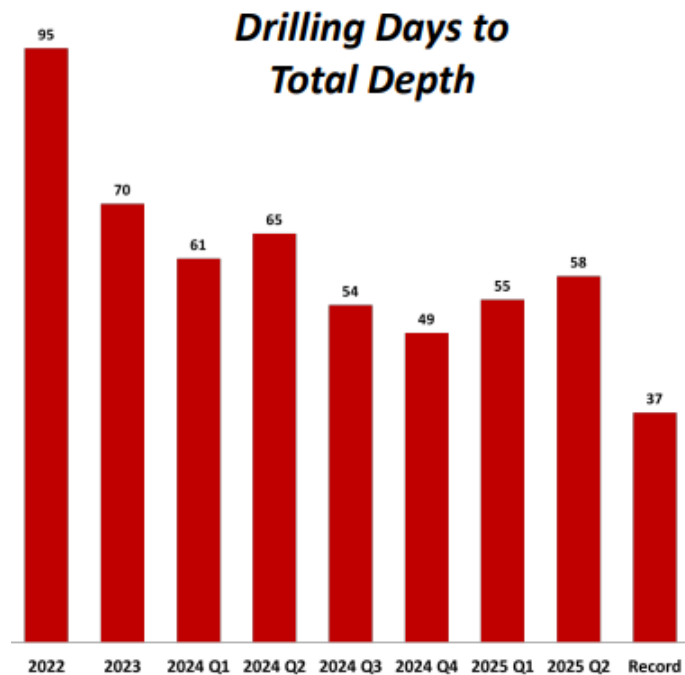
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Operational Challenges – Western Haynesville

(Comstock & Aethon)

- ❑ **Depth / Temperature / Pressure (HP/HT)** “We are drilling the deepest, hottest stuff”
 - TVD ~19,000’
 - BHT > 400 °F
 - Pressure > 17,000 psi
- ❑ **Directional & Mechanical** – Initial wells required ~95 days to reach total depth. By 2025 the average has dropped to 57 days (with best well drilled in 37 days).



Source: Comstock Resources 2ne Quarter 2025 Presentation



Operational Challenges – Western Haynesville

(Comstock & Aethon) - Continued

❑ Specialized Equipment

- Thermal (Insulated) Drill Pipe
- Mud Chillers
- HP/HT Mud Motors

❑ Fracture Stimulation

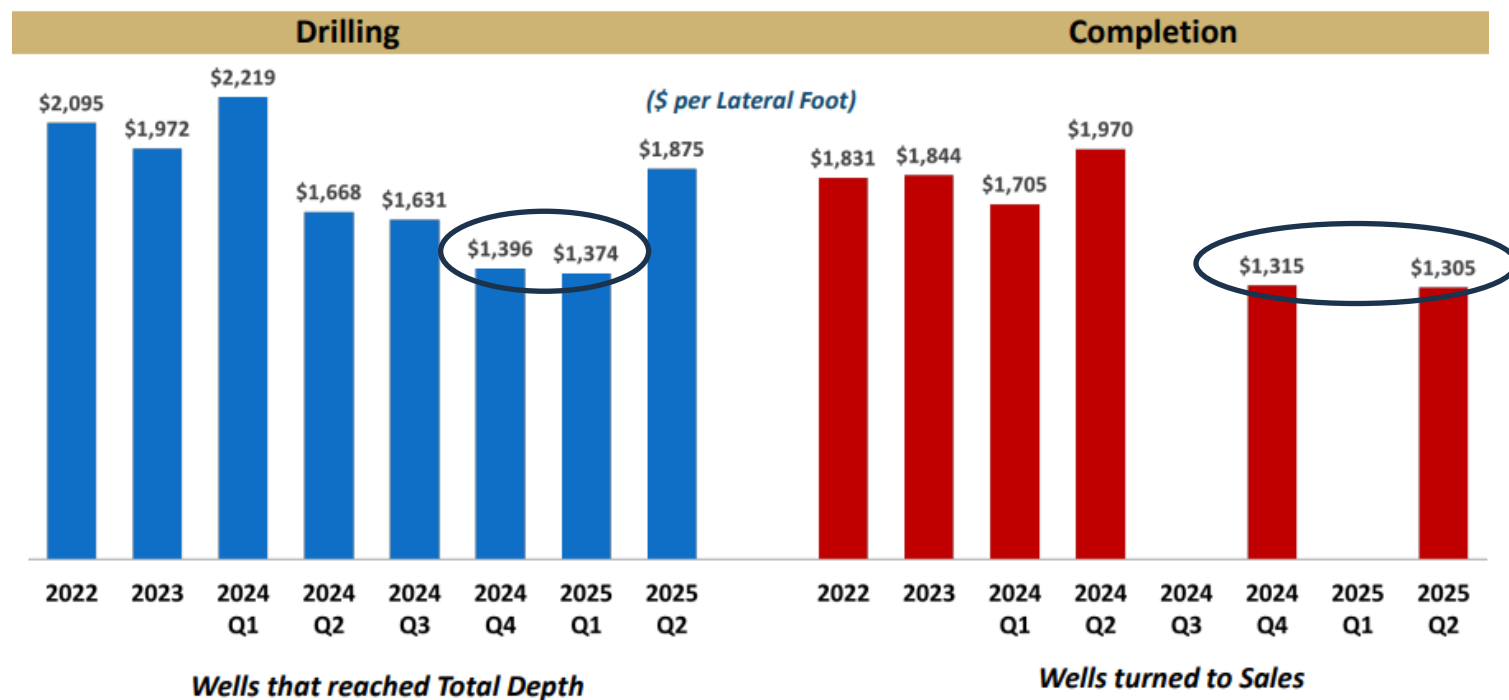
- High Frac Gradients (0.85 – 0.95 psi/ft)
- High treating pressures (+10,000 psi)
- 30,000 – 40,000 HHP per frac (legacy Haynesville 15,000 – 25,000 HHP)
- \$10MM - \$13MM per well!
- Safety and Environmental management



Drilling and Completion Cost Trends

(Comstock & Aethon)

- ❑ Initial 2022 D&C costs ~\$40 million
- ❑ Current D&C Costs \$23 million - \$27 million
 - Comstock – \$2,647/foot (five wells turned to sales in 2Q 2025)
 - Aethon – “We’re around the \$23 million to \$24 million mark”⁽¹⁾



Source: Comstock Resources 2ne Quarter 2025 Presentation

(1) -Gordon Huddleston quoted in 01/22/2025 Hart Article: “Aethon Dishes on Western Haynesville Costs as Gas Output Roars On”



Drivers of D&C Reduction

(Comstock & Aethon)

- ❑ **Drilling days collapsed⁽²⁾:** first Western wells required ~95-100 days; best in class examples now 37-57 days to TD.
 - Faster verticals (improved bit selection)
 - Consistent laterals (better downhole motor performance, thermal drill pipe)
 - Casing-point selections – streamlined casing designs
- ❑ **Learning-curve on completions**
 - Crew efficiencies
 - Multi-well pads
 - Fuel blends – implementing gas-diesel blends leads to lower fuel costs and emissions
- ❑ **Guidance for future D&C Savings?**
 - Neither Comstock nor Aethon have provided forward-looking D&C cost metrics.
 - Most analysts assuming \$23MM - \$24MM go-forward costs.

(2) 02/19/2025 Hart Article: “Comstock Doubling Rigs as Western Haynesville Mega Wells’ Cost Falls to \$27MM”

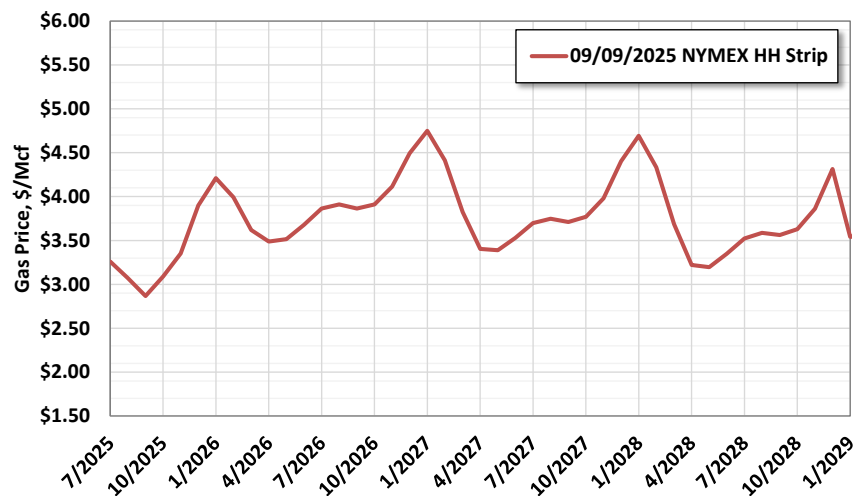
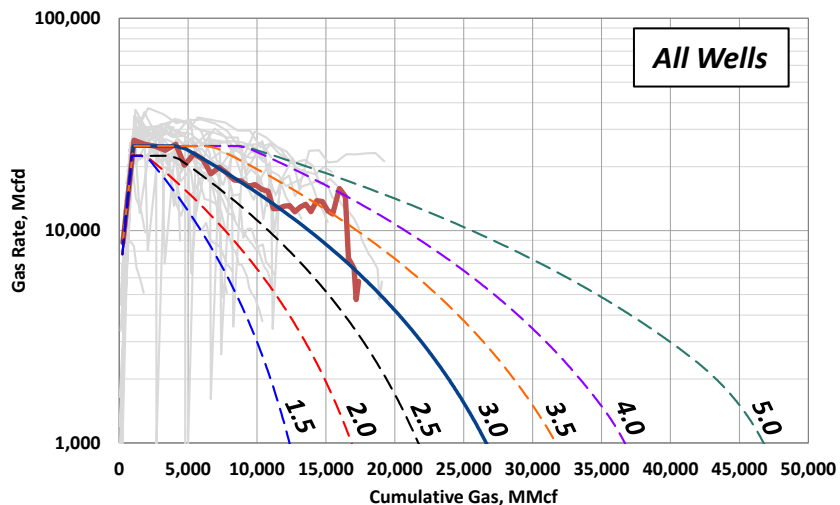


Illustrative Economics... What Do They Need To Make it Work?

ETX ADAM



Defining the Goalposts



Break Even HH Gas Price (PV20, \$/mmbtu)							
Type Curve EUR, Bcf/1000							
	1.5	2.0	2.5	3.0	3.5	4.0	5.0
D&C	\$7.17	\$6.02	\$5.10	\$4.50	\$4.06	\$3.73	\$3.41
Costs,	\$6.39	\$5.38	\$4.58	\$4.05	\$3.66	\$3.38	\$3.10
\$/ft	\$5.62	\$4.75	\$4.06	\$3.61	\$3.27	\$3.03	\$2.79
\$2,647	\$5.07	\$4.31	\$3.70	\$3.29	\$3.00	\$2.78	\$2.57
\$2,000	\$4.07	\$3.48	\$3.02	\$2.71	\$2.49	\$2.33	\$2.16

Single Well IRR, % (@ \$3.00/mmbtu HH Gas)							
Type Curve EUR, Bcf/1000							
	1.5	2.0	2.5	3.0	3.5	4.0	5.0
D&C	-17%	-9%	-4%	0%	4%	8%	13%
Costs,	-15%	-7%	-1%	4%	8%	13%	18%
\$/ft	-12%	-4%	3%	9%	14%	19%	25%
\$2,647	-9%	-1%	7%	14%	20%	26%	32%
\$2,000	-2%	9%	20%	29%	38%	46%	52%

Single Well IRR, % (@ \$3.50/mmbtu HH Gas)							
Type Curve EUR, Bcf/1000							
	1.5	2.0	2.5	3.0	3.5	4.0	5.0
D&C	-12%	-5%	1%	6%	11%	16%	22%
Costs,	-10%	-2%	5%	11%	17%	22%	28%
\$/ft	-6%	3%	10%	18%	25%	32%	38%
\$2,647	-3%	7%	16%	25%	33%	41%	47%
\$2,000	8%	20%	34%	47%	58%	67%	74%

Single Well IRR, % (@ \$4.00/mmbtu HH Gas)							
Type Curve EUR, Bcf/1000							
	1.5	2.0	2.5	3.0	3.5	4.0	5.0
D&C	-8%	0%	6%	13%	19%	25%	31%
Costs,	-5%	3%	11%	19%	27%	33%	39%
\$/ft	-1%	9%	19%	28%	37%	45%	51%
\$2,647	4%	15%	27%	38%	48%	56%	63%
\$2,000	19%	33%	50%	66%	79%	90%	97%

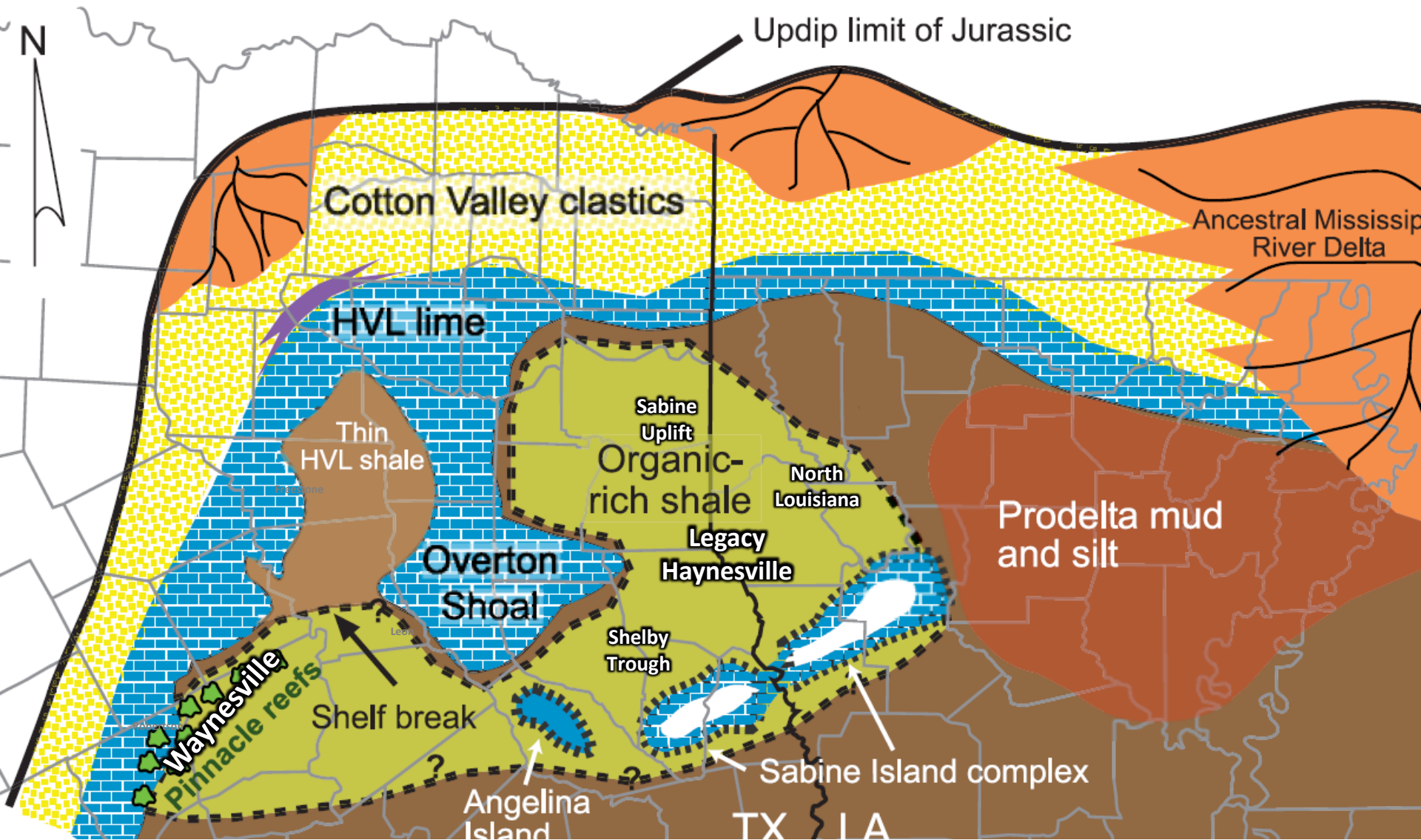


Geologic Framework... Defining the Fairway

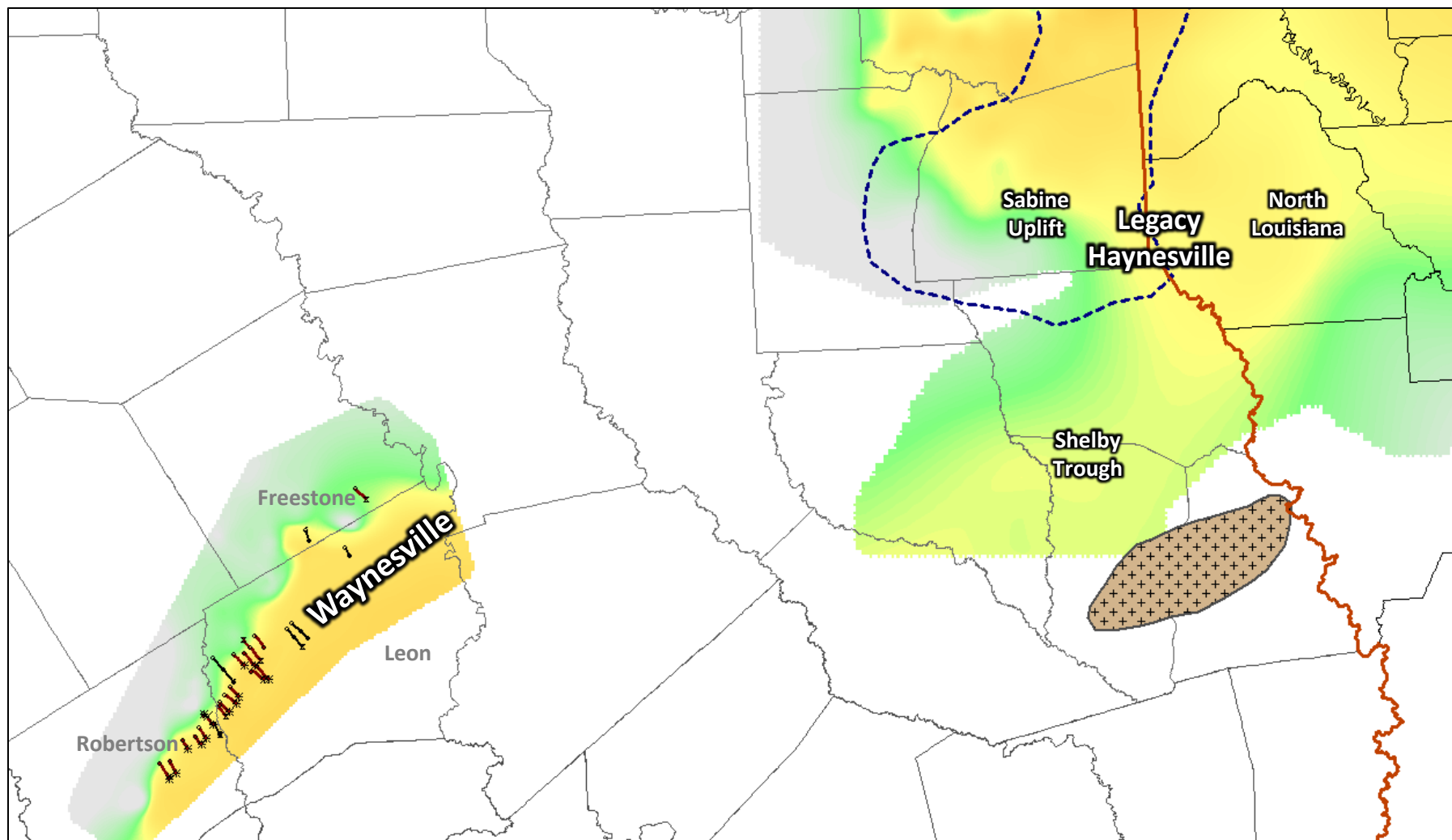
ETX ADAM



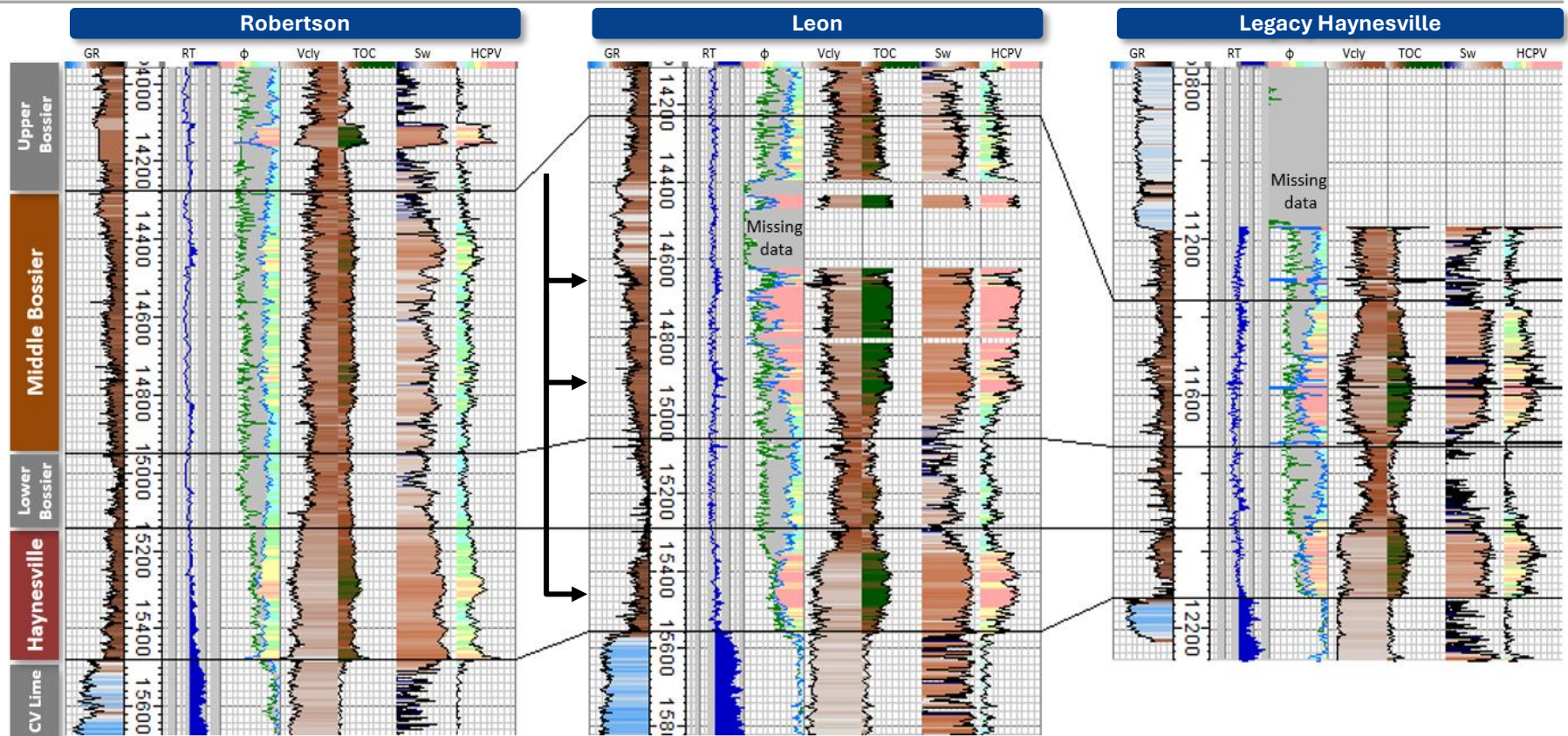
Haynesville & Bossier Plays



Haynesville & Bossier Plays



Haynesville & Bossier Plays

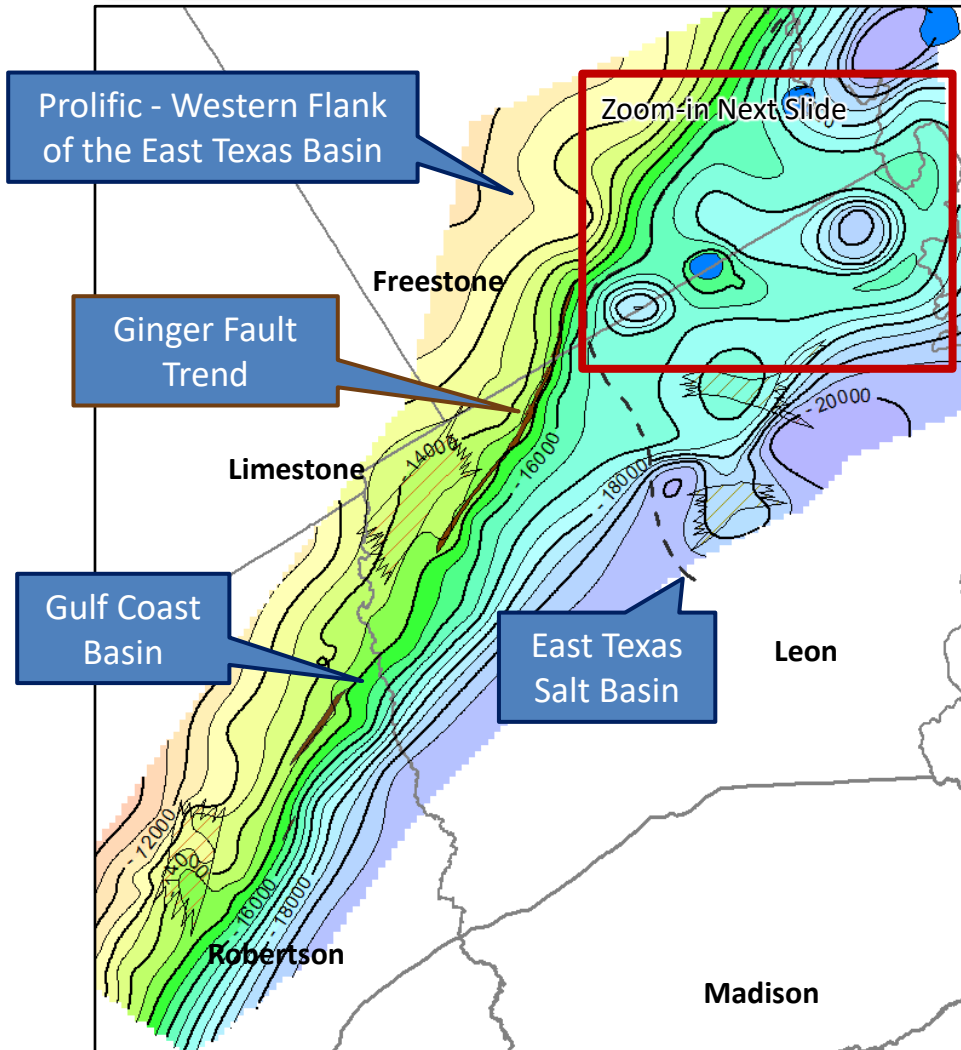


Middle Bossier	Gross (ft)	676	830	378
	Net (ft)	207	455	277
	Avg ϕ (%)	9%	14%	12%
	Avg. Sw (%)	37%	25%	34%
	HCPV (ft)	11.5	47.0	22.5
Haynesville	Gross (ft)	337	265	179
	Net (ft)	197	211	158
	Avg ϕ (%)	10%	12%	12%
	Avg. Sw (%)	25%	22%	32%
	HCPV (ft)	14.2	19.4	12.7

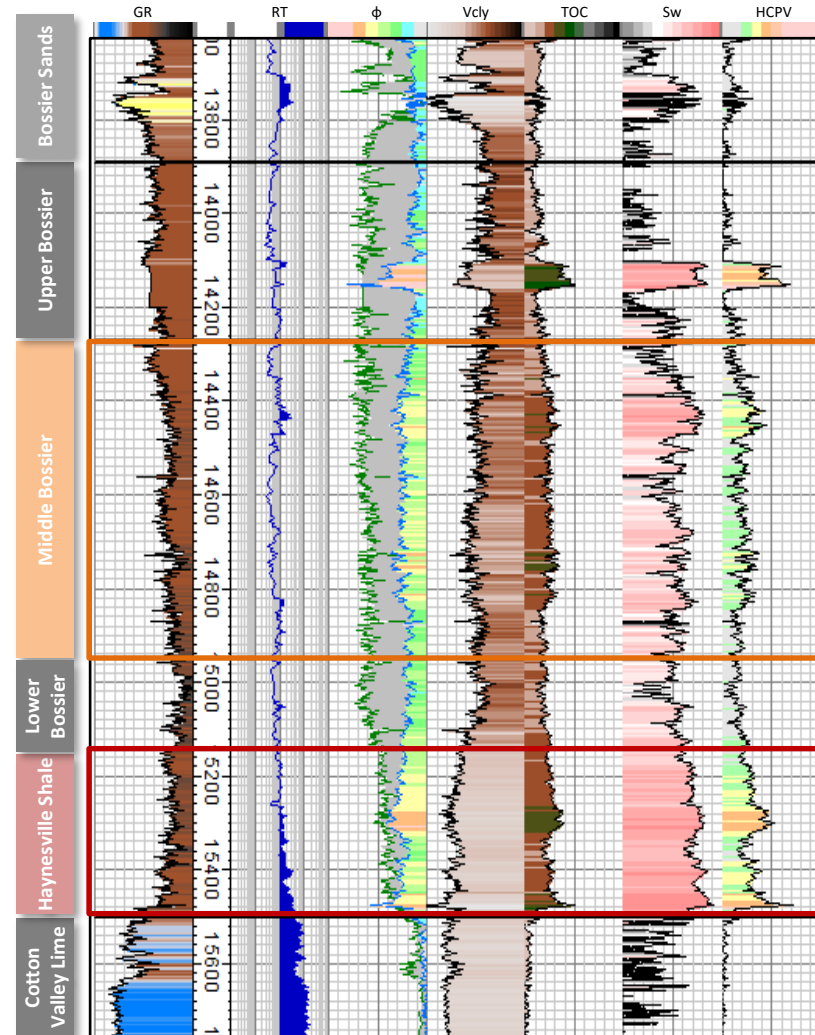
Waynesville Geology

Two World Class Targets in Two Distinct Structural Provinces

Haynesville Shale – Structure (SSTVD)



★ Type Log

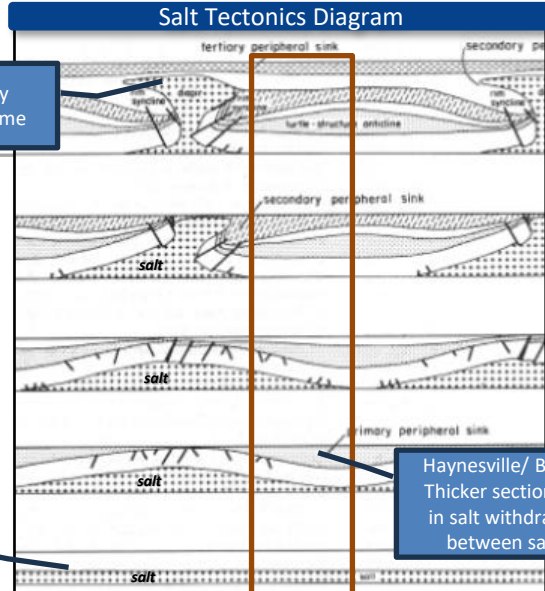


Waynesville Geology

Salt Kinematics & Thickness Trends

- Well log control is limited across the Oakwood Dome area the nearest offset well control shows thickness of the Haynesville shale of 200-250 ft with Mid Bossier thickness of 600-800 ft.
- Salt movement is playing a role in thickening trends in the Haynesville and Mid Bossier, well 3 is near Oakwood salt diapir. Well 3 would have been on a salt pillow at Haynesville/ Bossier time. Haynesville and Bossier deposition loaded the Louanne salt creating thicker section to the South of Oakwood Dome (location of wells 1, 2 & 4)
 - In the absence of well log data, 2D and 3D seismic isochron mapping of the interval between Bossier and Cotton Valley Lime horizons should help identify areas with thick Bossier and Cotton Valley Lime.

Present Day
Oakwood Dome



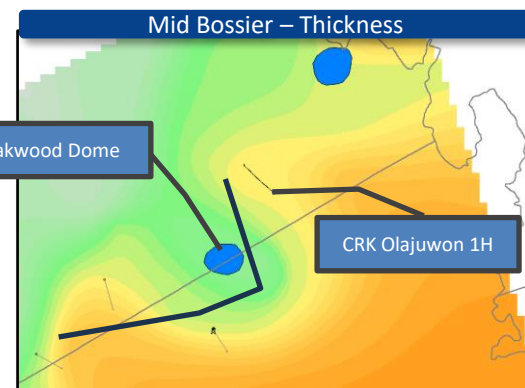
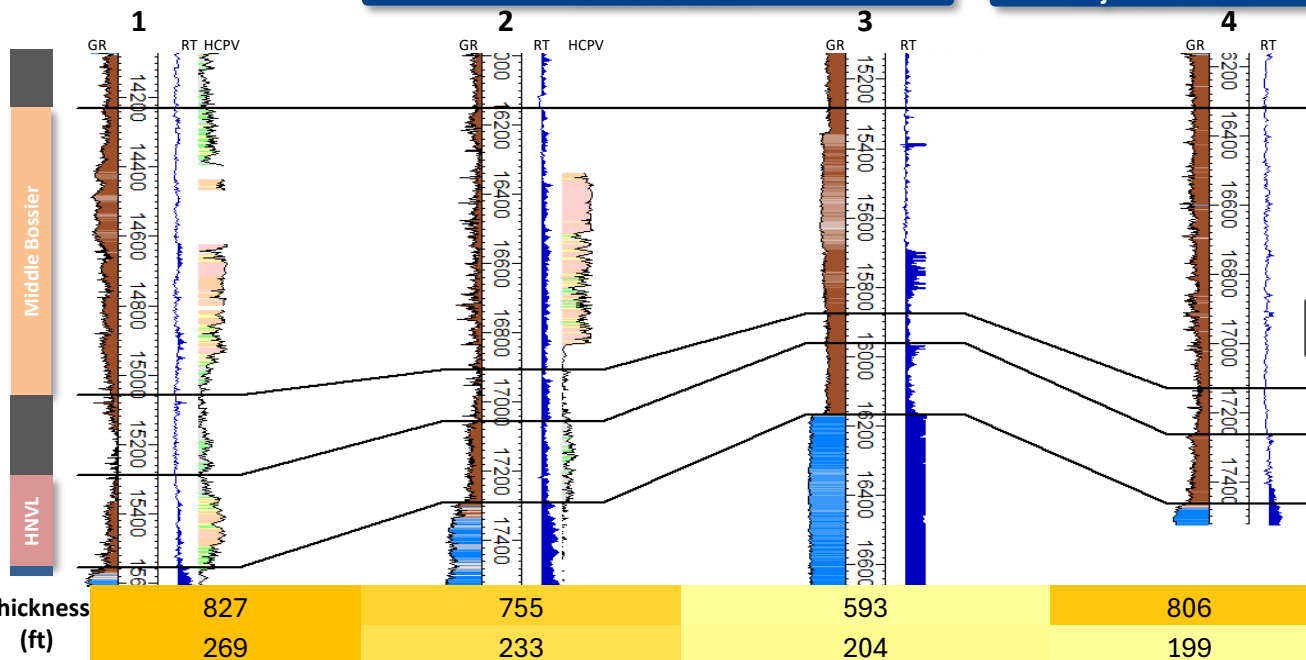
Haynesville/ Bossier time,
Thicker section deposited
in salt withdrawal basins
between salt pillows

Louanne Salt/ Smackover
time

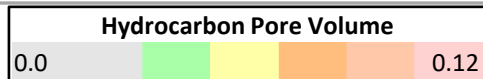
Flanks of
Oakwood Dome

Oakwood Dome

Olajuwon PP 1H



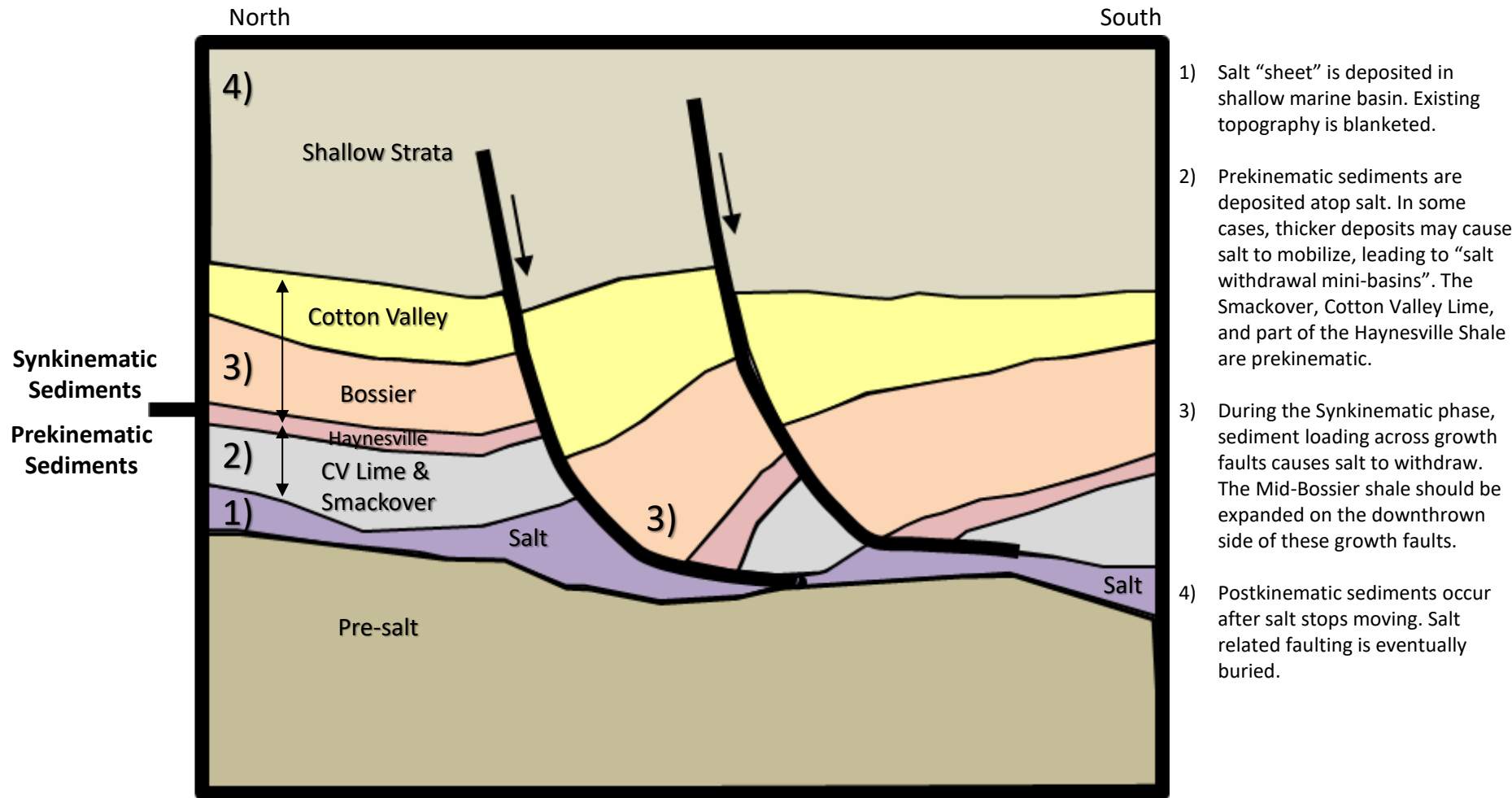
Mid. Bossier
Haynesville



Waynesville Geology

Salt Kinematics & Thickness Trends

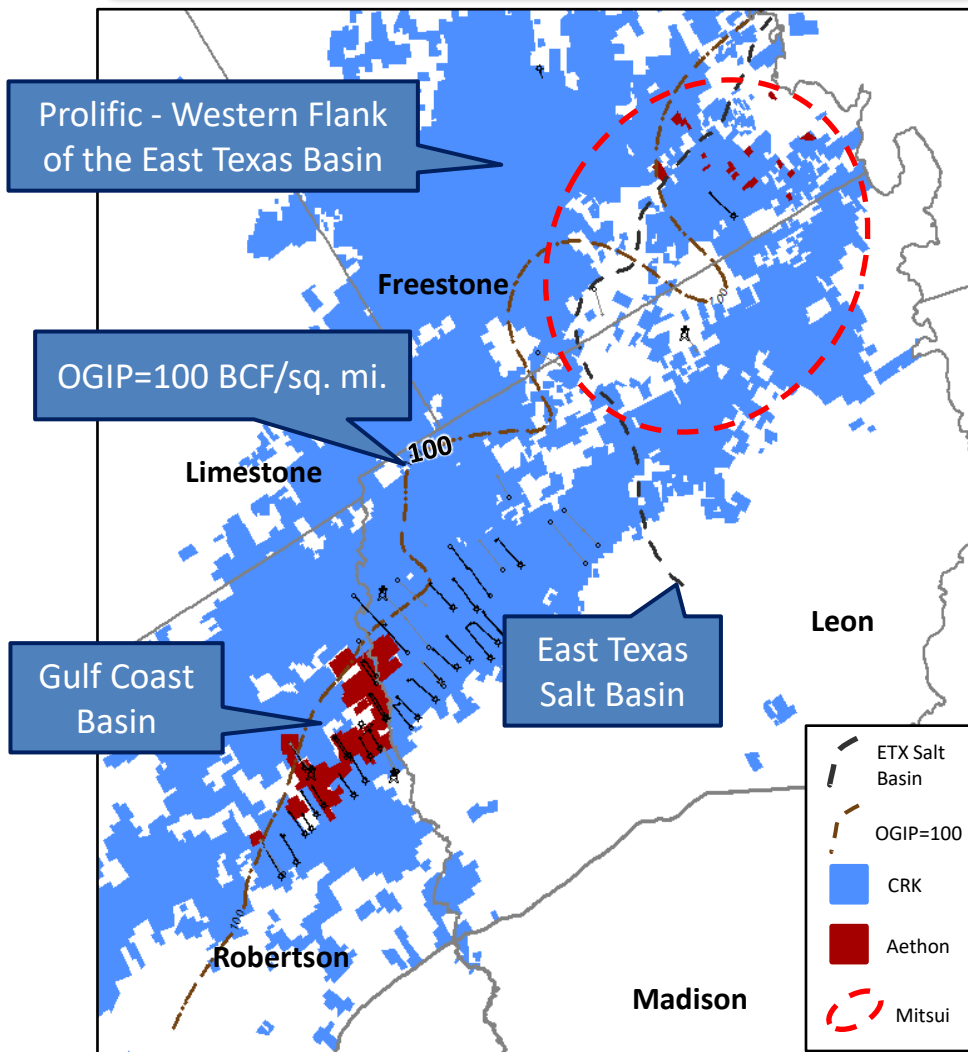
Red River Parish - Natchitoches Fault Zone Analog



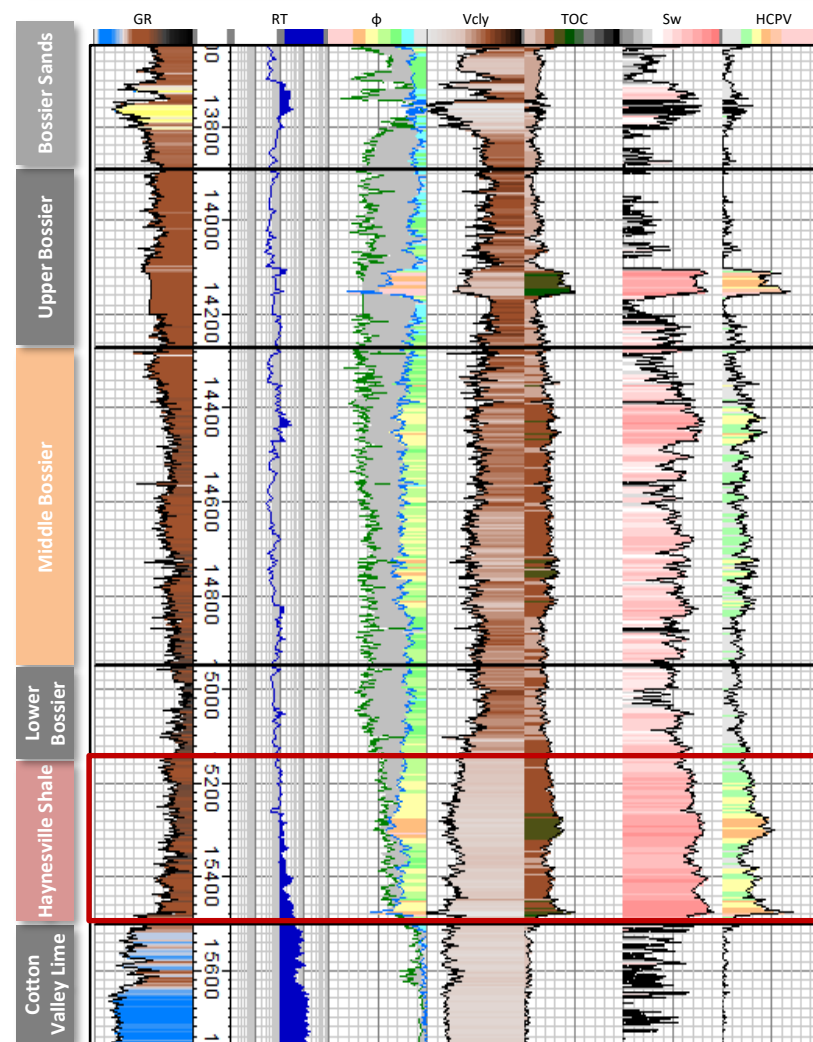
Waynesville Geology

Waynesville Play Map – Lay of the Land

Waynesville Play Map

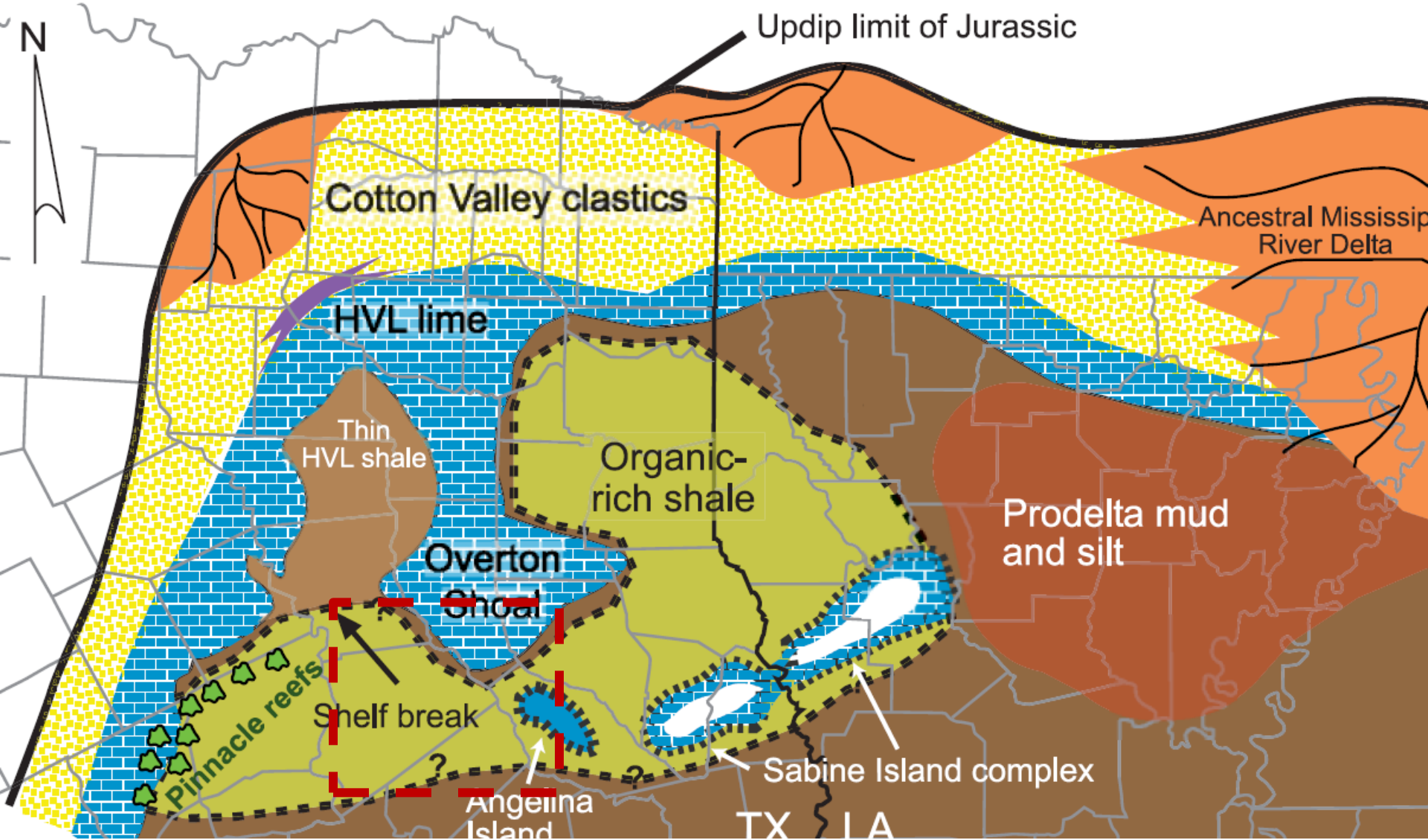


Type Log

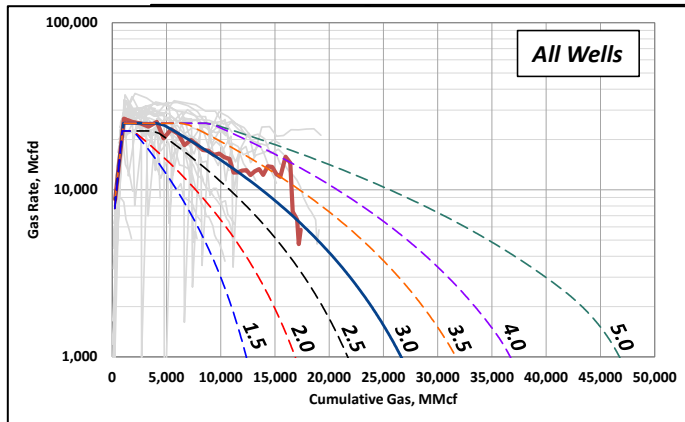


Waynesville Play

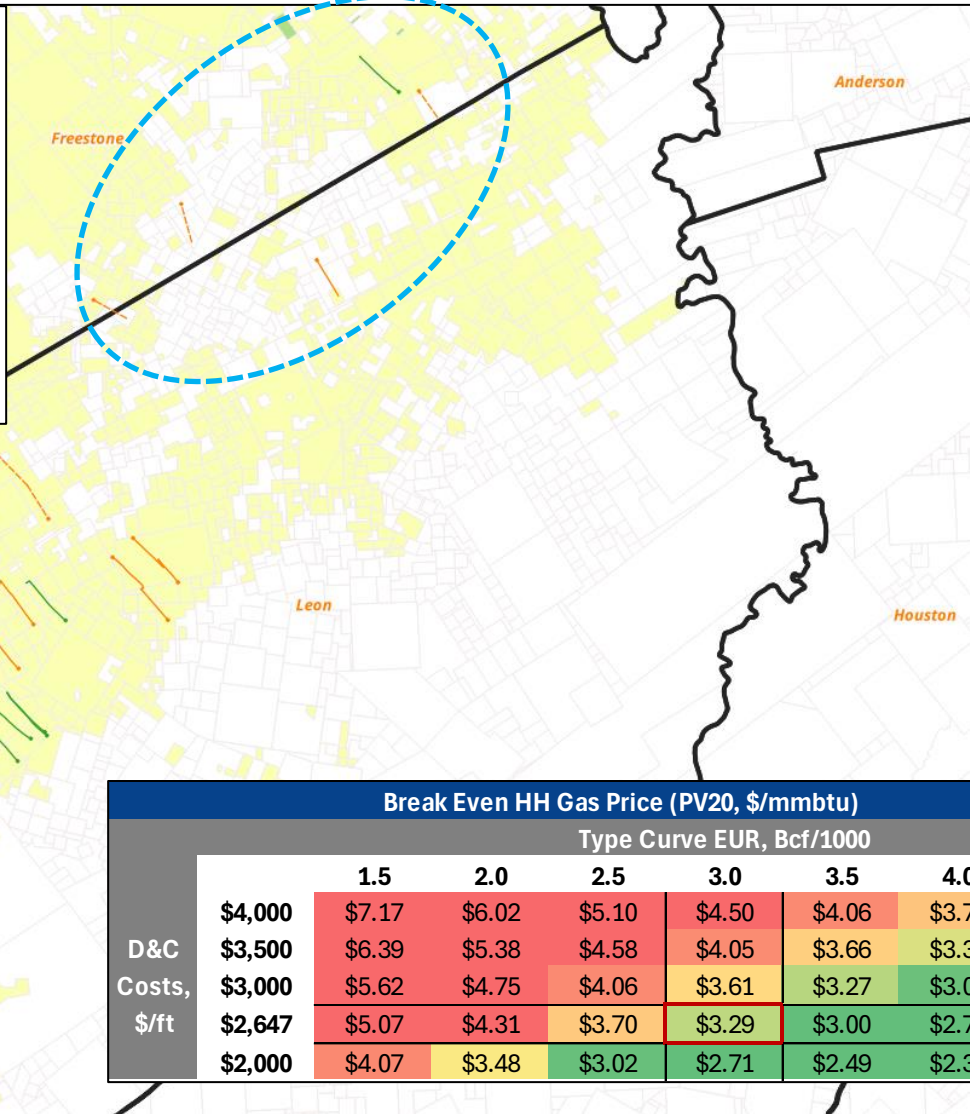
What's Next?? – Play is Pushing East to Connect the Shelby Trough!!



Western Haynesville Today



- Comstock
- Aethon
- Mitsui
- Prod Hz
- DUC/WIP Hz
- ⋯ Permit Hz



Break Even HH Gas Price (PV20, \$/mmbtu)								
		Type Curve EUR, Bcf/1000						
		1.5	2.0	2.5	3.0	3.5	4.0	5.0
D&C Costs, \$/ft	\$4,000	\$7.17	\$6.02	\$5.10	\$4.50	\$4.06	\$3.73	\$3.41
	\$3,500	\$6.39	\$5.38	\$4.58	\$4.05	\$3.66	\$3.38	\$3.10
	\$3,000	\$5.62	\$4.75	\$4.06	\$3.61	\$3.27	\$3.03	\$2.79
	\$2,647	\$5.07	\$4.31	\$3.70	\$3.29	\$3.00	\$2.78	\$2.57
	\$2,000	\$4.07	\$3.48	\$3.02	\$2.71	\$2.49	\$2.33	\$2.16

*Acreage from Enverus 'operator land' data.

