

Carlo Christina

Presents

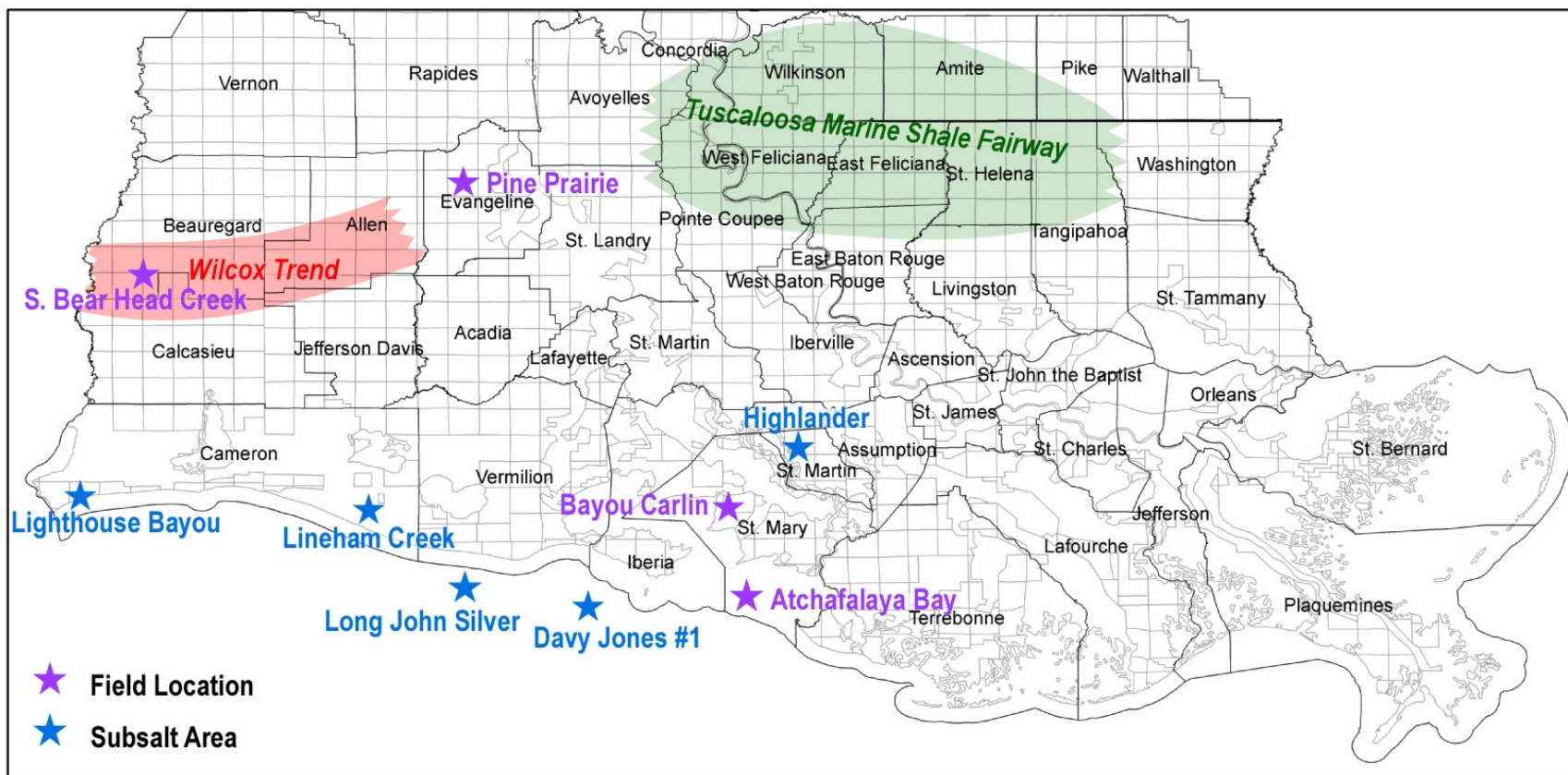
*Geological Hot Spots in Our
Own Backyard*

PLANO

October 8, 2012

Geological Hot Spots

Index Map



2011 Gas Production Ranking by Field

Sonris: Lafayette District, Onshore, 2011

Rank	Field Id	Field Name	Natural Gas	Casinghead Gas	Gas Total
1	141	ATCHAFALAYA BAY	14,730,859	0	14,730,859
2	498	BAYOU CARLIN	13,626,894	0	13,626,894
3	4799	JUDGE DIGBY	12,439,483	0	12,439,483
4	2440	CHALKLEY	9,589,447	19,063	9,608,510
5	4957	LAC BLANC	8,050,207	15,312	8,065,519
6	4851	KENT BAYOU	7,534,486	0	7,534,486
7	4082	GOLDEN MEADOW	6,671,939	400,713	7,072,652
8	6530	MARCEAUX ISLAND	6,369,370	0	6,369,370
9	1908	BRETON SOUND BLOCK 33	6,175,404	0	6,175,404
10	1416	BELLE ISLE	6,095,779	0	6,095,779
11	4040	GIBSON	5,863,657	13,269	5,876,926
12	3968	FRESH WATER BAYOU	5,548,972	16,812	5,565,784
13	6870	MORGANZA	5,096,884	0	5,096,884
14	8453	SOUTH PASS BLOCK 24	5,095,317	2,830,370	7,925,687
15	4010	GARDEN CITY	4,923,991	80,412	5,004,403

2011 Oil Production Ranking by Field

Sonris: Lafayette District, Onshore, 2011

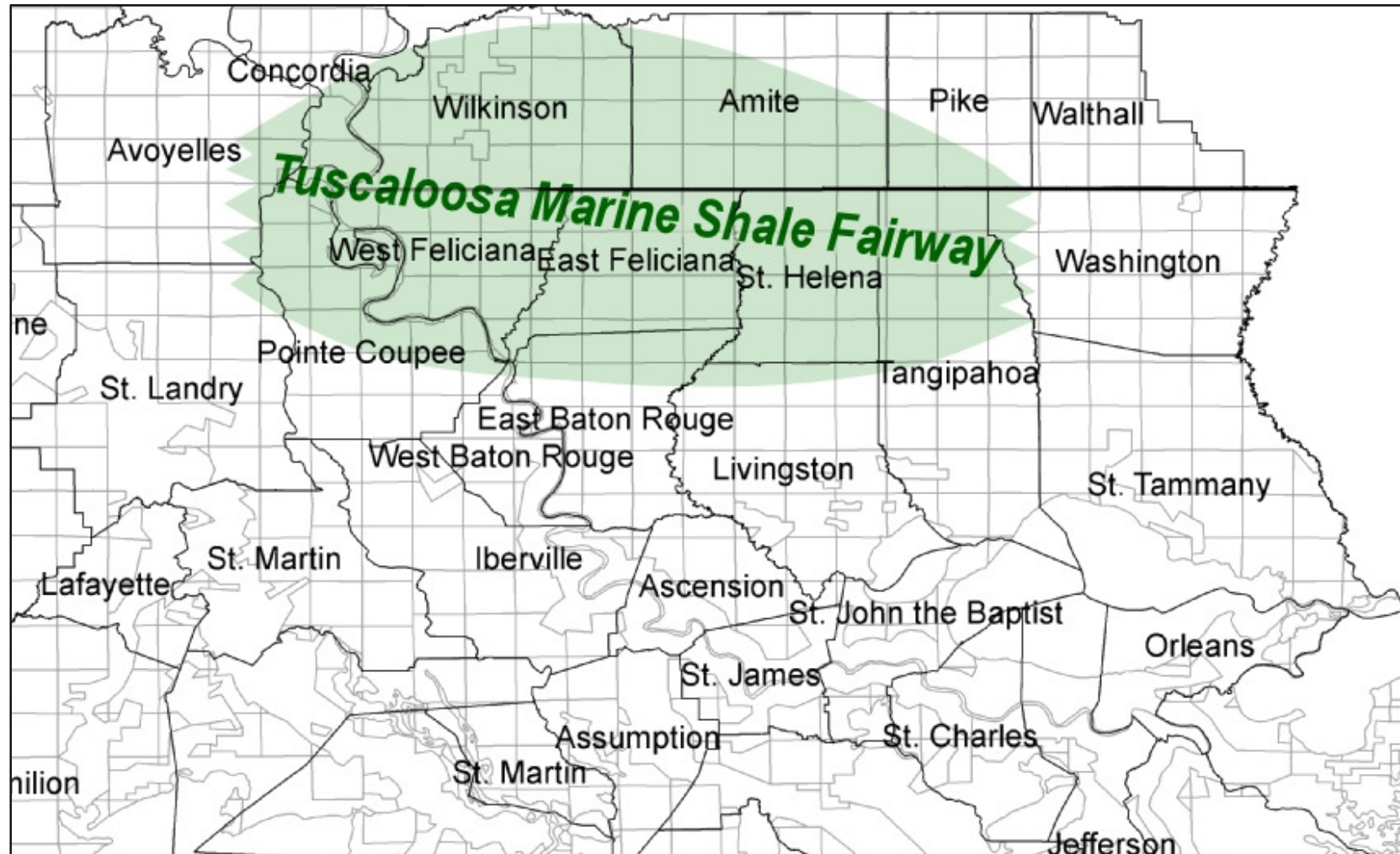
Rank	Field Id	Field Name	Crude Oil	Condensate	Oil Total
1	5759	LAKE WASHINGTON	3,905,438	104,328	4,009,766
2	2912	COTE BLANCHE BAY, WEST	1,564,516	5,750	1,570,266
3	8453	SOUTH PASS BLOCK 24	1,465,020	100,031	1,565,051
4	7381	PINE PRAIRIE	1,300,923	10,673	1,311,596
5	2184	CAILLOU ISLAND	1,108,186	374,455	1,482,641
6	9291	WEEKS ISLAND	1,029,439	5,279	1,034,718
7	6135	LOCKHART CROSSING	930,193	18,736	948,929
8	9309	WEST BAY	868,802	91,761	960,563
9	1336	BEAR HEAD CREEK, SOUTH	807,152	419,942	1,227,094
10	8966	TIMBALIER BAY ONSHORE	795,207	255,351	1,050,558
11	4373	HACKBERRY, EAST	782,171	0	782,171
12	1888	BRETON SOUND BLOCK 20	725,091	2,635	727,726
13	4082	GOLDEN MEADOW	666,870	244,529	911,399
14	1600	BLACK BAY, NORTH	536,236	0	536,236
15	5083	LAKE BARRE	484,453	105,742	590,195

Stratigraphic Column

Zones of Production

AGE	PALEO HORIZON
Upper Miocene	<i>Robulus E</i> <i>Bigenerina A</i> <i>Cristellaria K</i> <i>Discorbis 12-Bigenerina B</i> <i>Textularia L</i>
Middle Miocene	<i>Bigenerina 2-Cibicides carstensi</i> <i>Textularia stapperi (W)</i> <i>Bigenerina humblei</i> <i>Cristellaria I</i> <i>Cibicides opima</i> <i>Amphistegina B</i> <i>Robulus L (43)</i>
Lower Miocene	<i>Discorbis bolivarensis</i> <i>Marginulina ascensionensis</i> <i>Siphonina davis</i> <i>Planulina palmerae</i>
Oligocene Anahuac	<i>Discorbis restricted</i> <i>Heterostegina sp.</i> <i>Marginulina sp.</i>
Oligocene Frio	<i>Camerina A</i> <i>Cibicides hazzardi</i> <i>Marginulina texana</i> <i>Hackberry</i> <i>Nonion struma</i> <i>Nodosaria blanpiedi</i>
Oligocene	<i>Vicksburg</i>
Eocene	<i>Jackson</i> <i>Cockfield</i> <i>Sparta</i> <i>Upper Wilcox</i>
Paleocene	<i>Lower Wilcox</i>
Upper Cretaceous	<i>Tuscaloosa</i>

Tuscaloosa Marine Shale

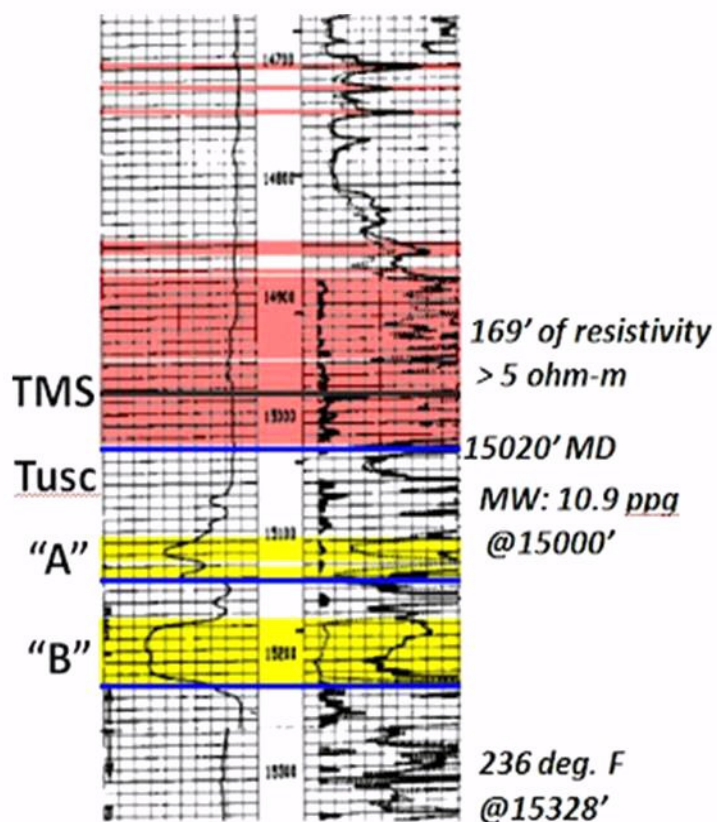


Tuscaloosa Marine Shale Type Log

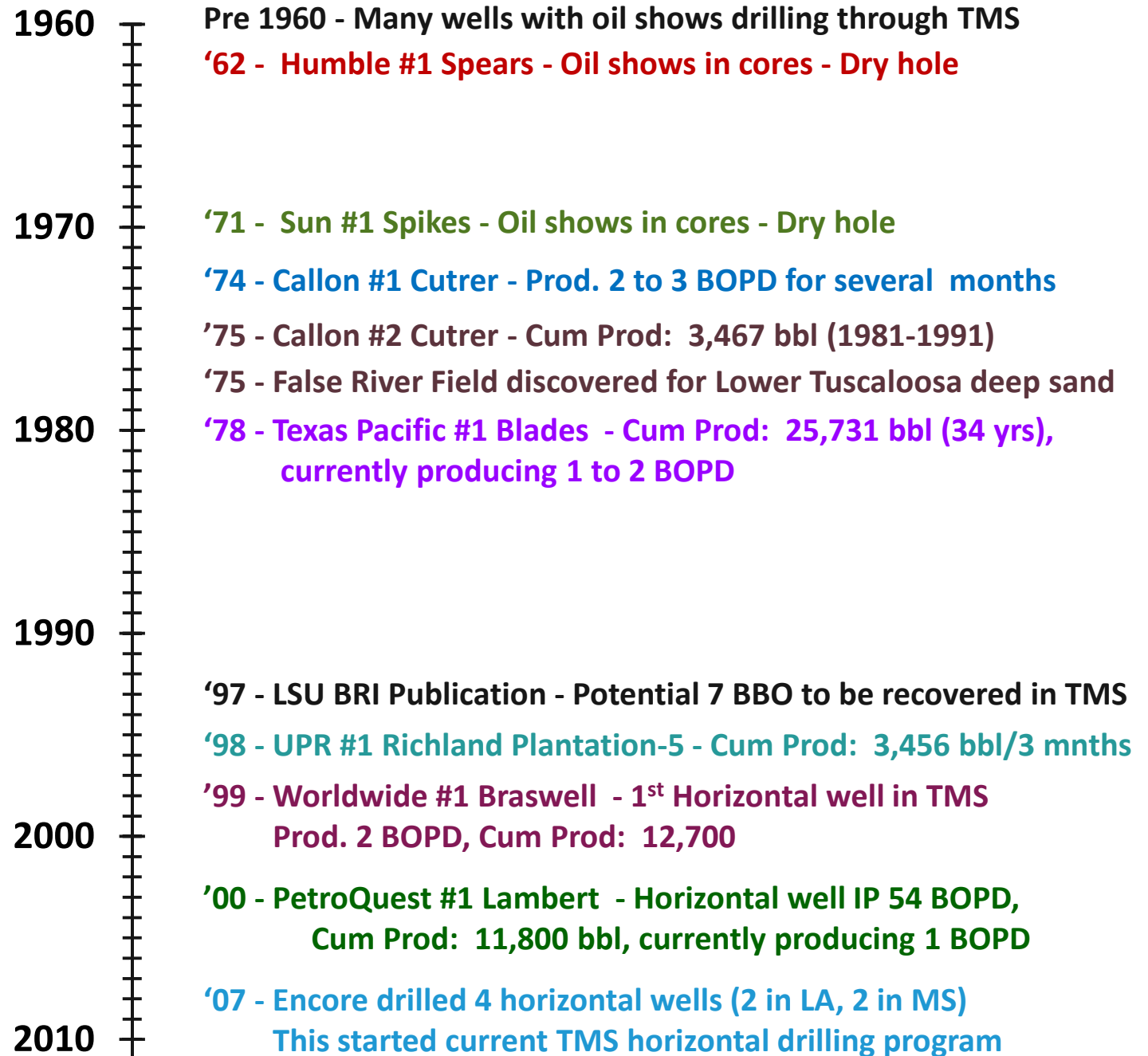


Tuscaloosa Marine Shale

Exchange O&G Price #1
63-3s-1e

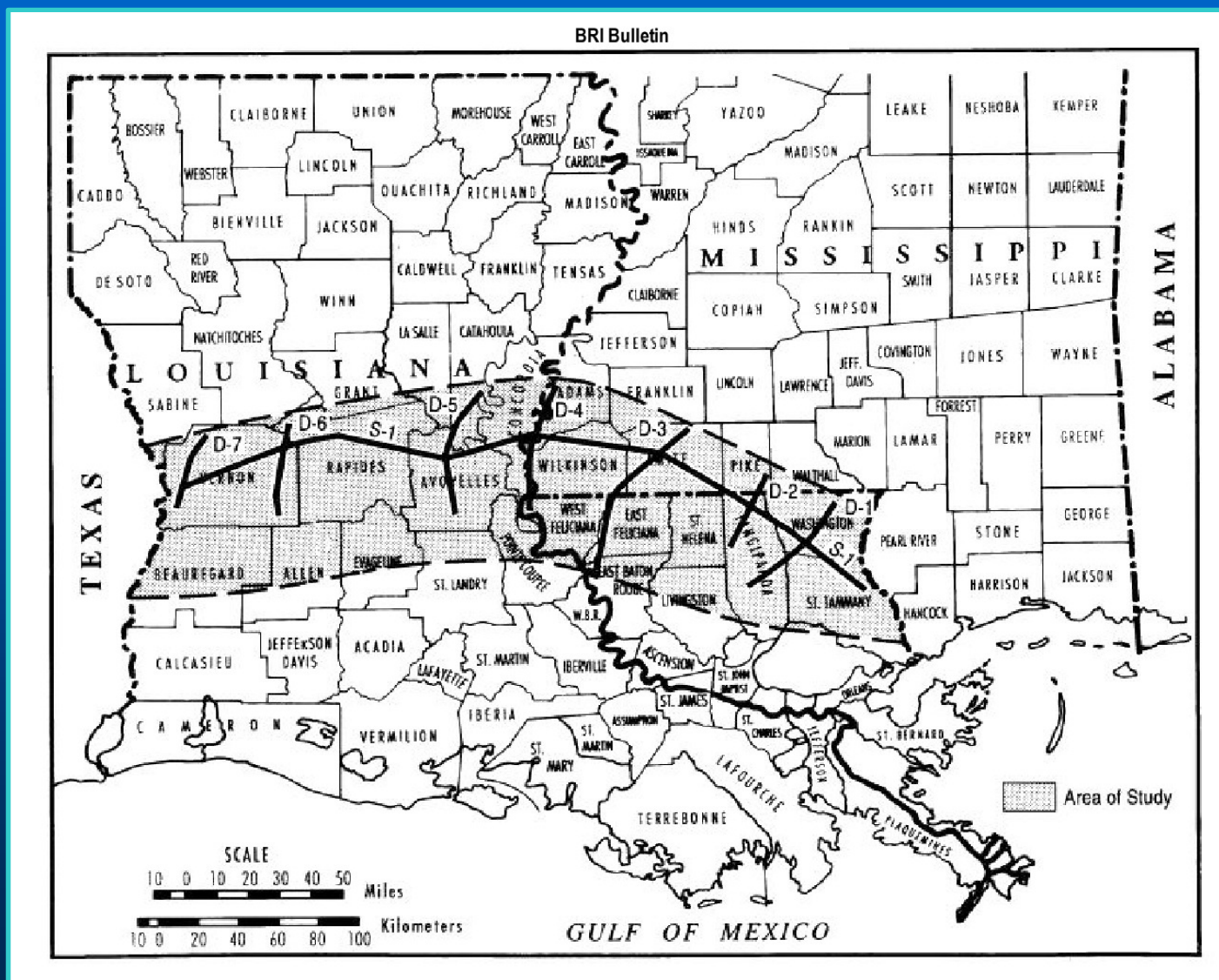


Tuscaloosa Marine Shale Timeline



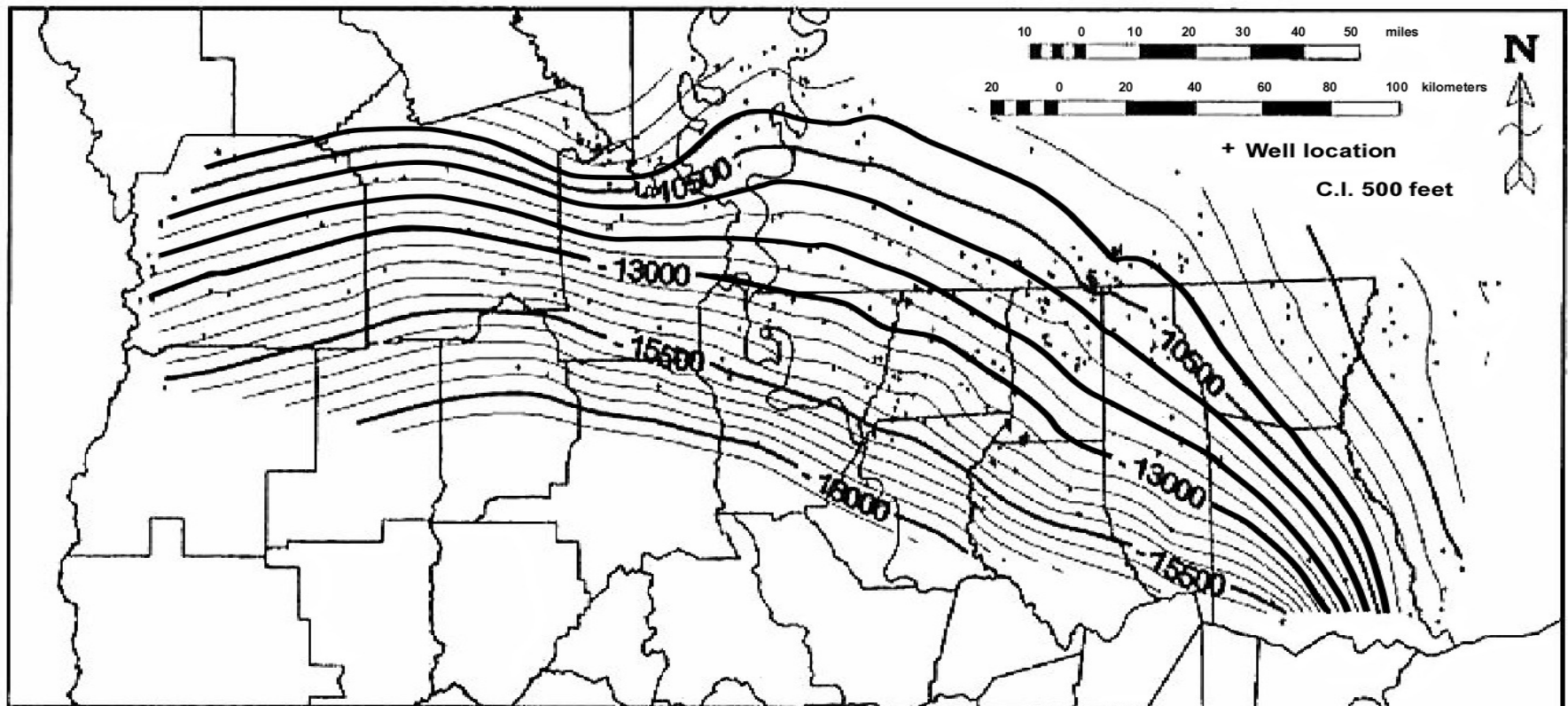
Tuscaloosa Marine Shale

LSU Basin Research Institute: Tuscaloosa Marine Shale Study Area

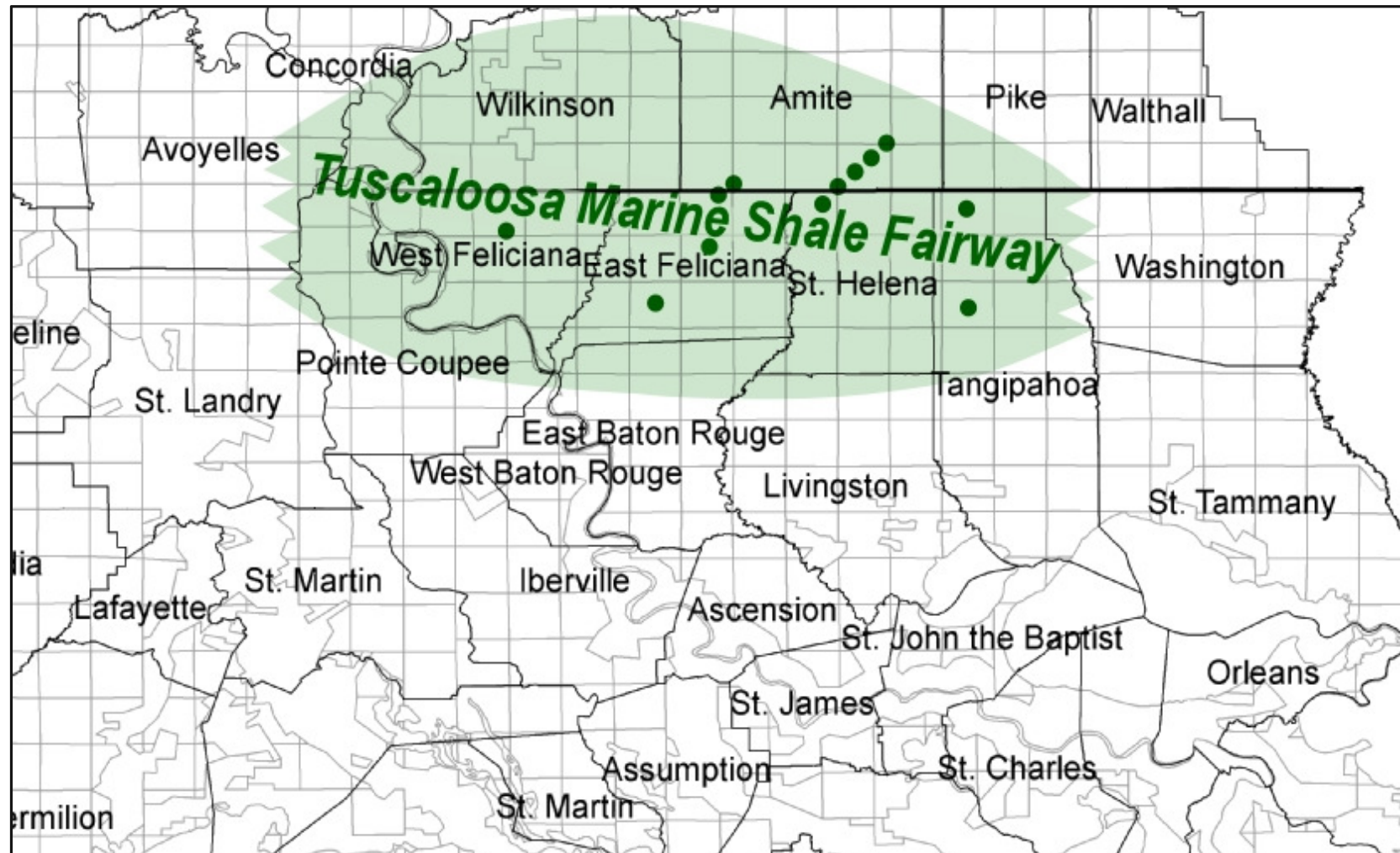


Tuscaloosa Marine Shale

LSU Basin Research Institute: Structure Map Top of TMS

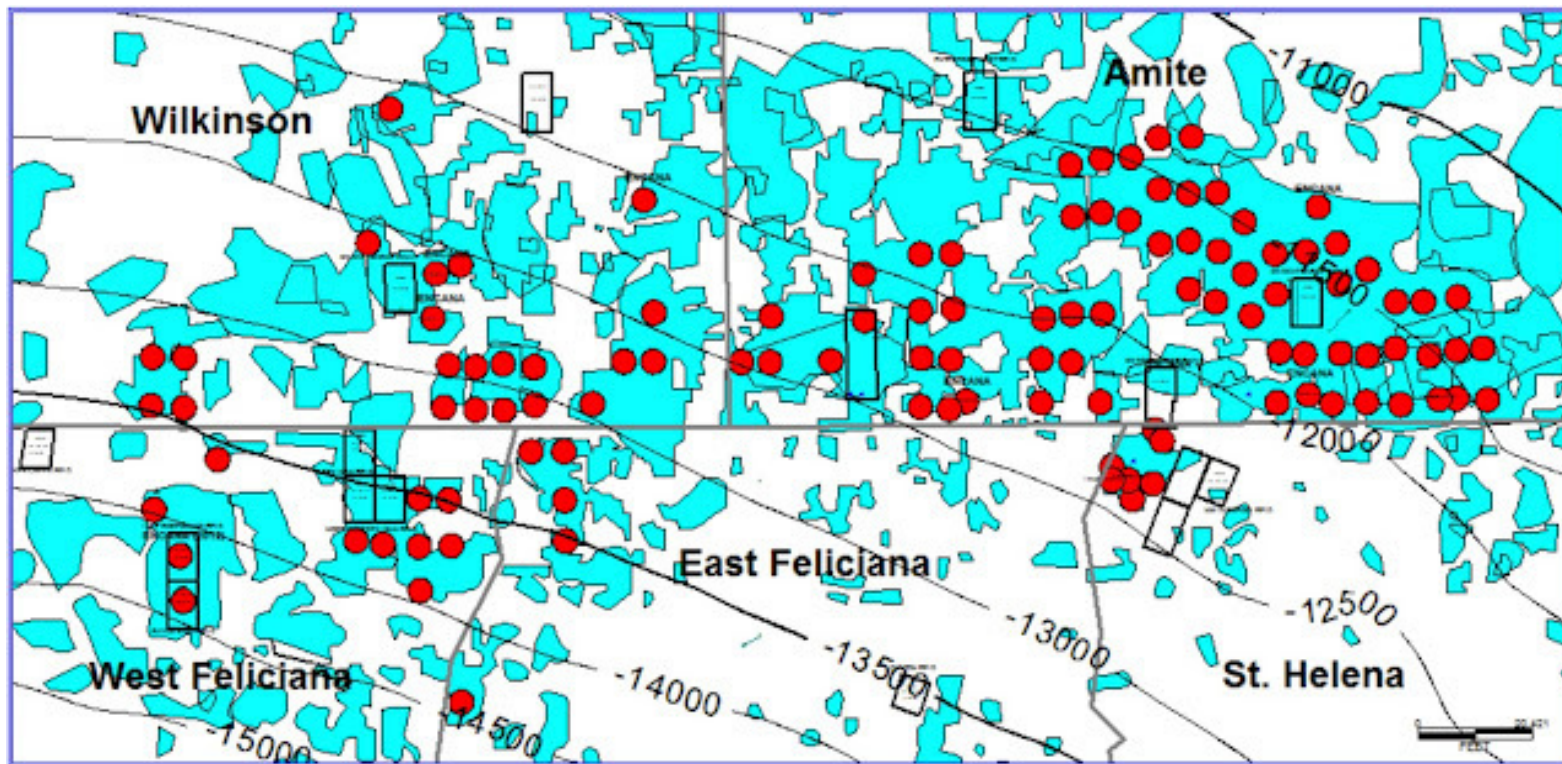


Tuscaloosa Marine Shale



Tuscaloosa Marine Shale

Encana Oil & Gas Acreage and Potential Wells



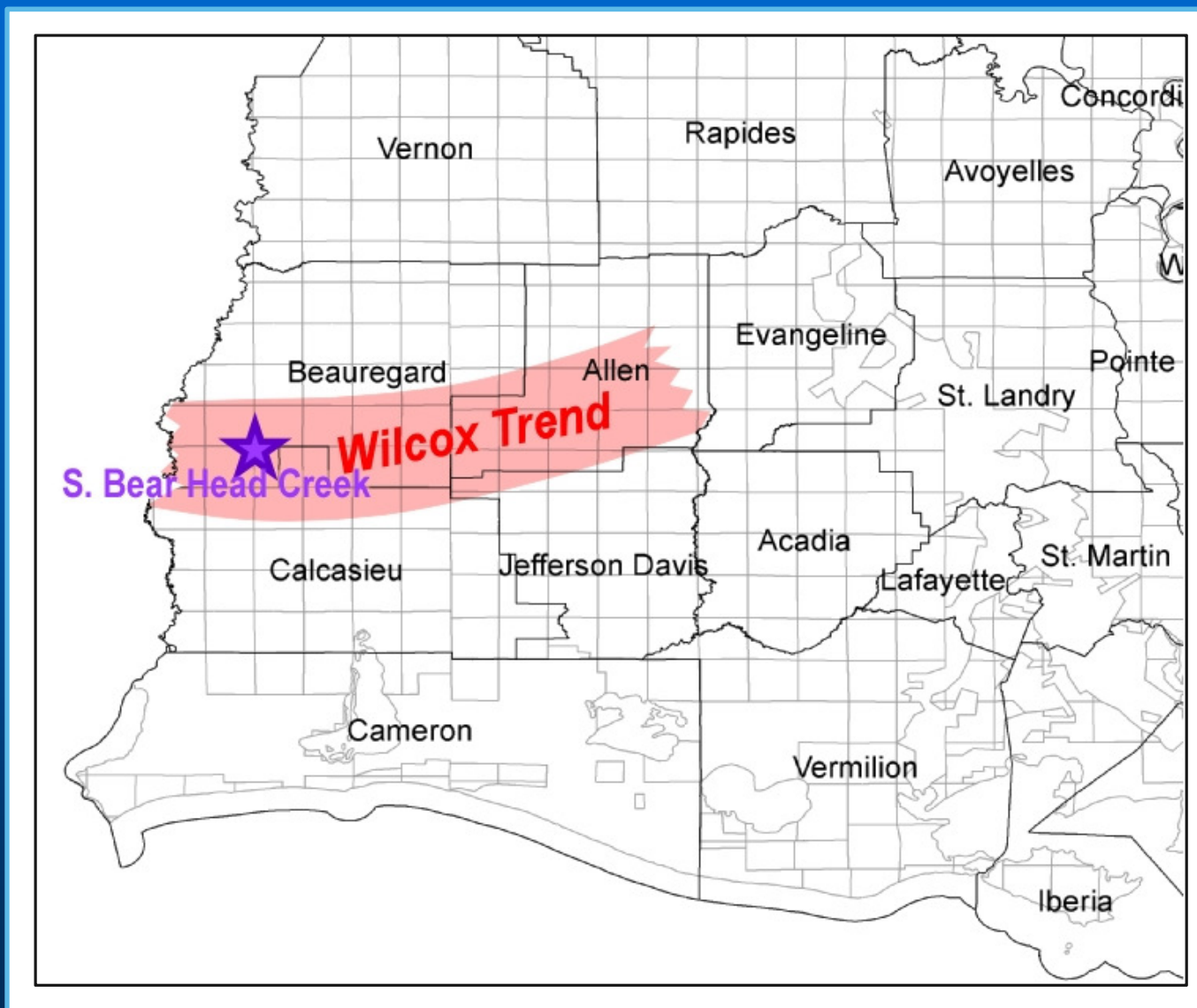
Tuscaloosa Marine Shale

Initial Potential Summary



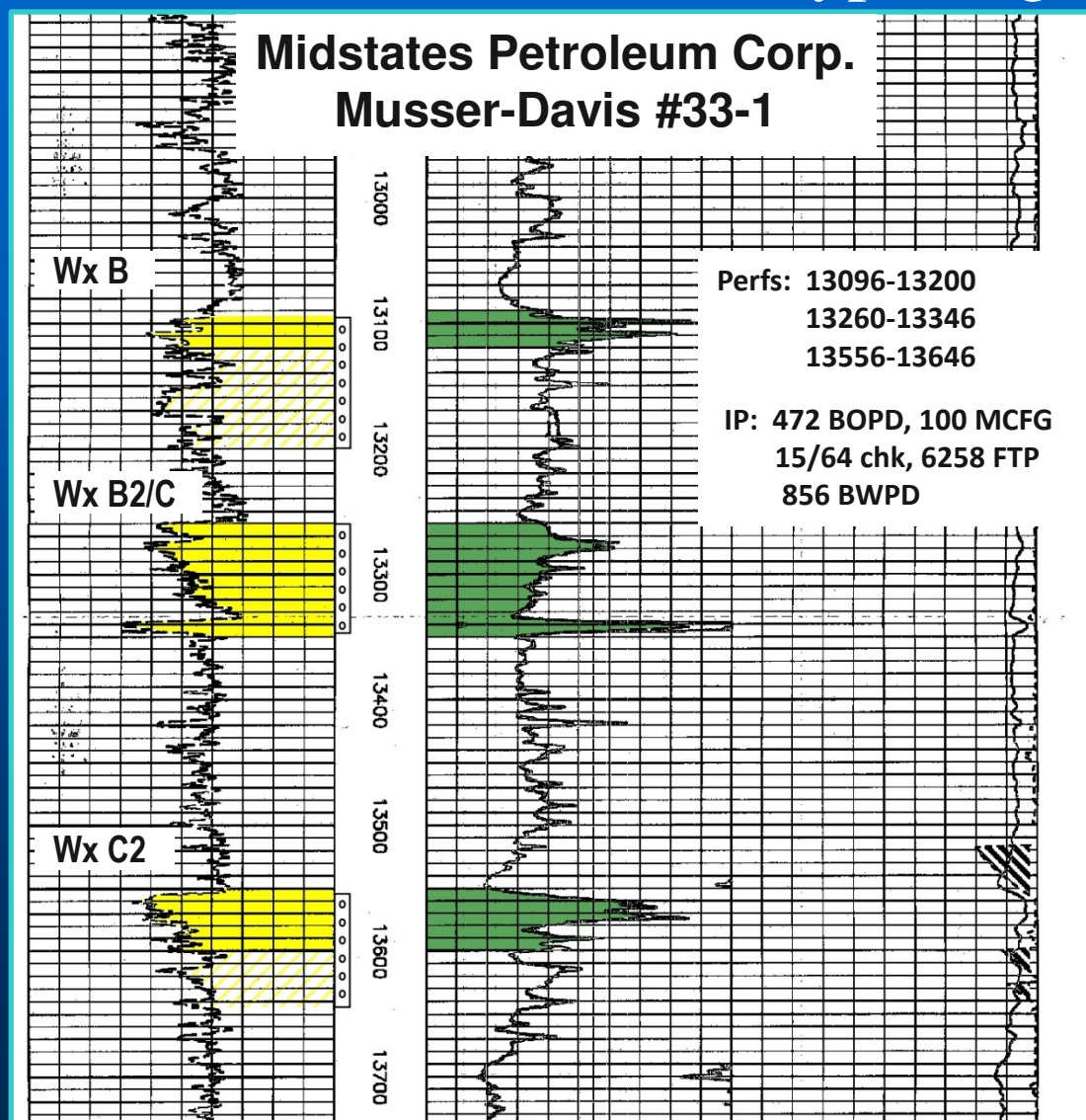
Operator	Well Name / Number	BO/Mo	MCF/Mo
Encana Oil & Gas	Board of Education #1 H		
Devon Energy	Beech Grove Land Co 68H #1	7,680	6,561
Encana Oil & Gas	Weyerhaeuser 73H #1	62,465	24,105
Devon Energy	Soterra 6H #1	14,043	5,248
Encana Oil & Gas	Horseshoe Hill 10H #1	50,831	24,868
Encana Oil & Gas	Anderson 17H #1	56,530	16,923
Devon Energy	Richland Farms Inc. 74H #1	24,408	19,041
Encana Oil & Gas	Anderson 18H #1	64,935	18,759
Devon Energy	Weyerhaeuser 14H #1	31,575	9,892
Devon Energy	Murphy 63H #1		

Wilcox Trend



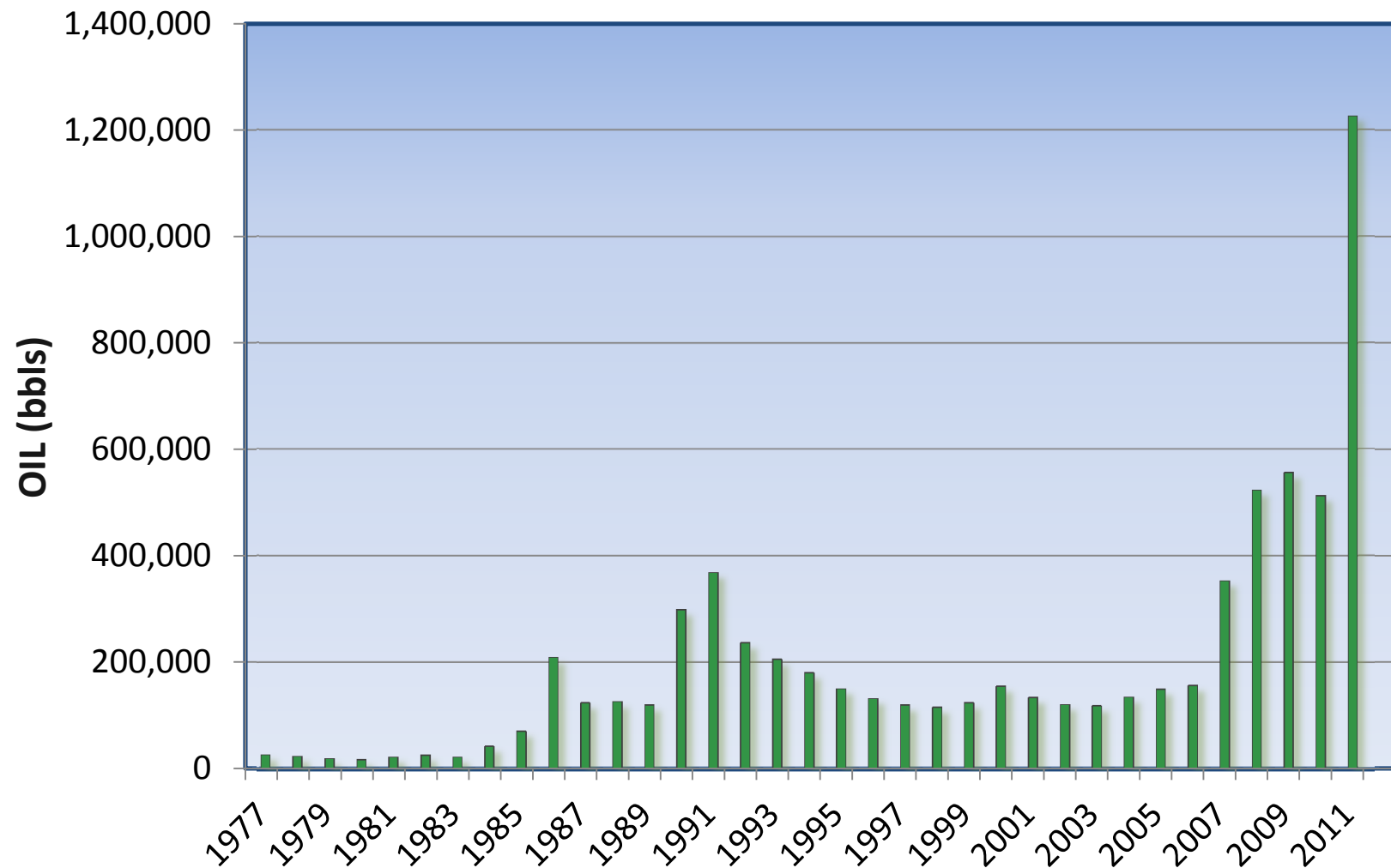
Wilcox

South Bear Head Creek Type Log

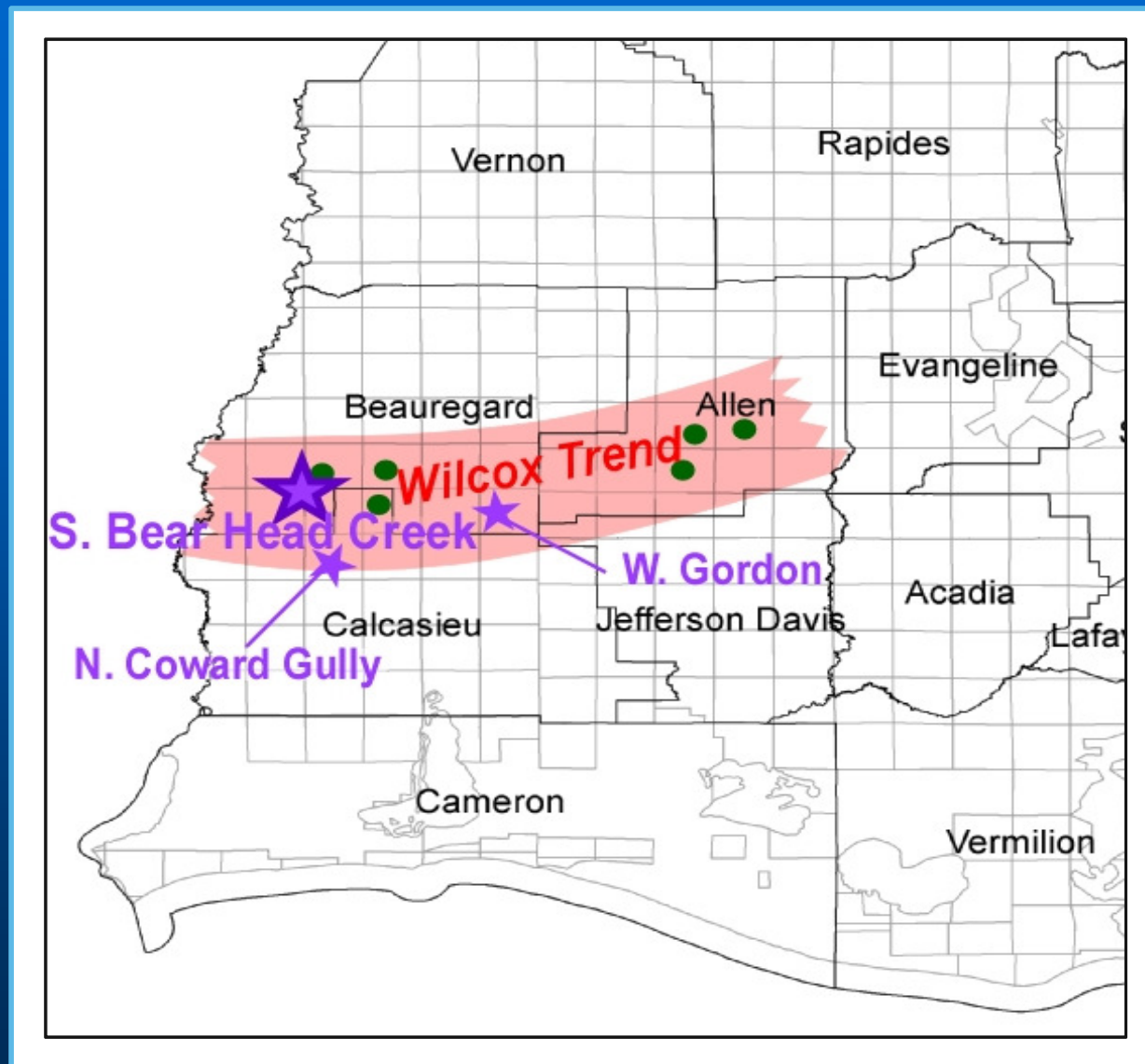


Wilcox

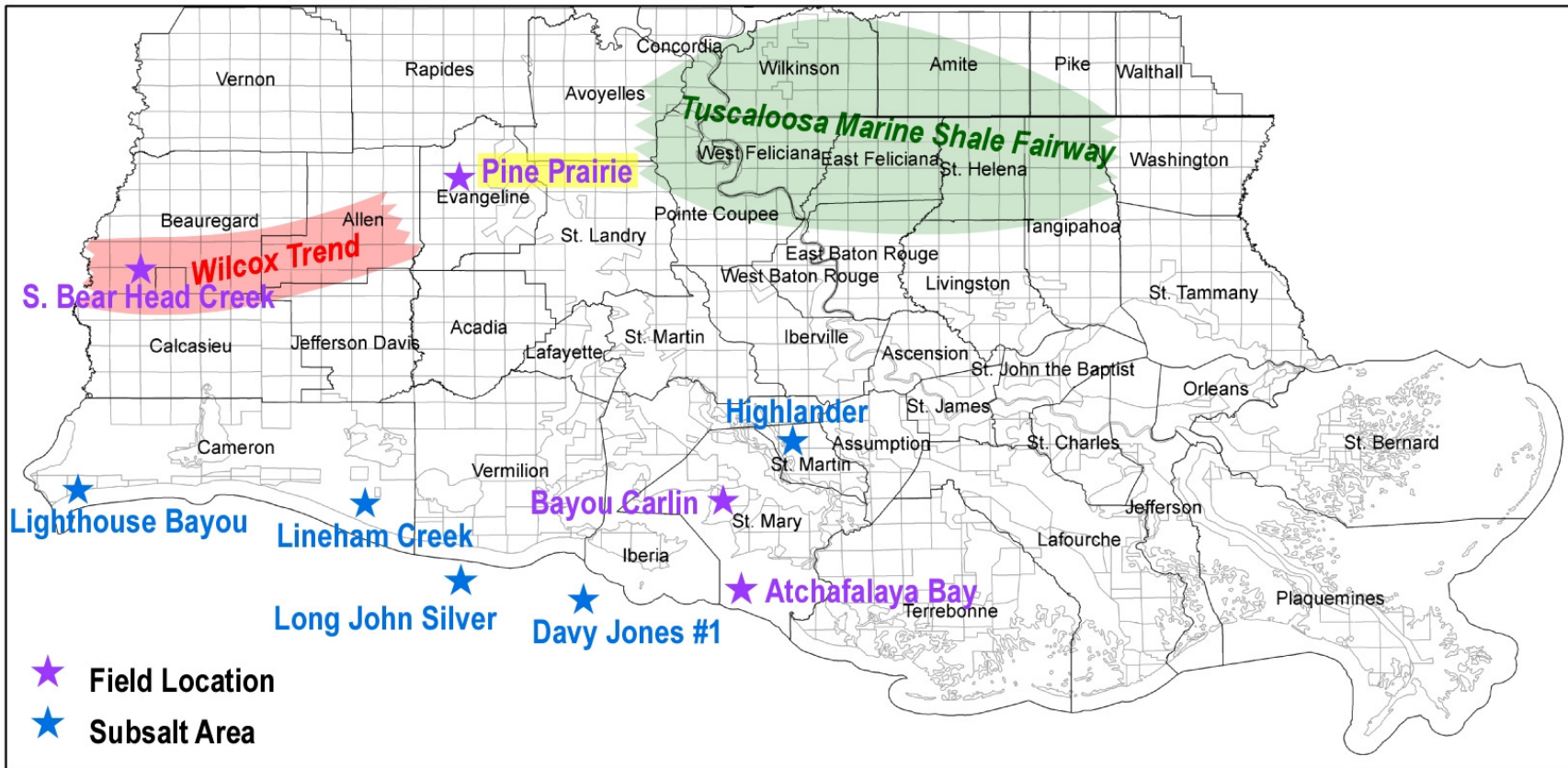
South Bear Head Creek Oil Production 1977-2011



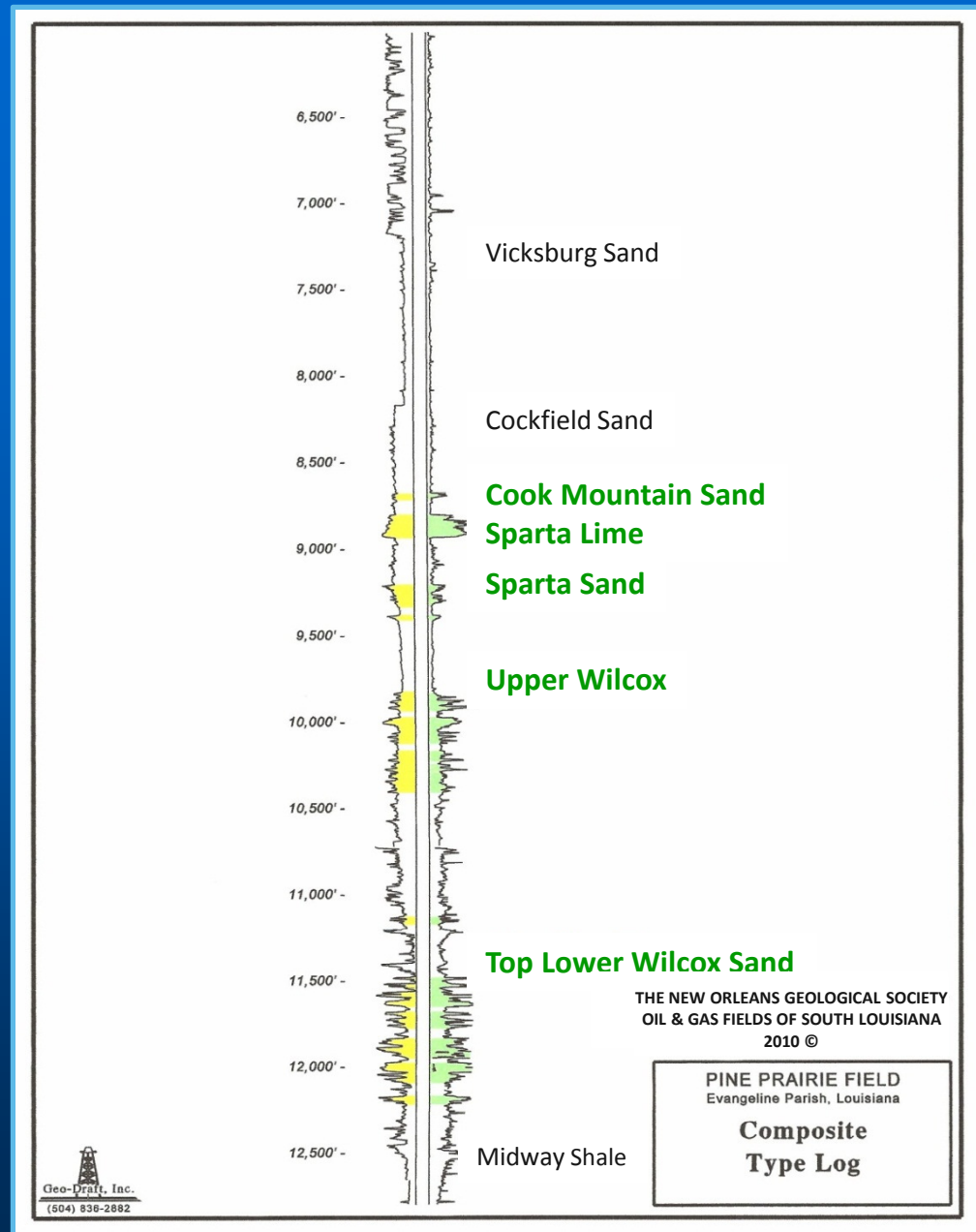
Wilcox



Pine Prairie

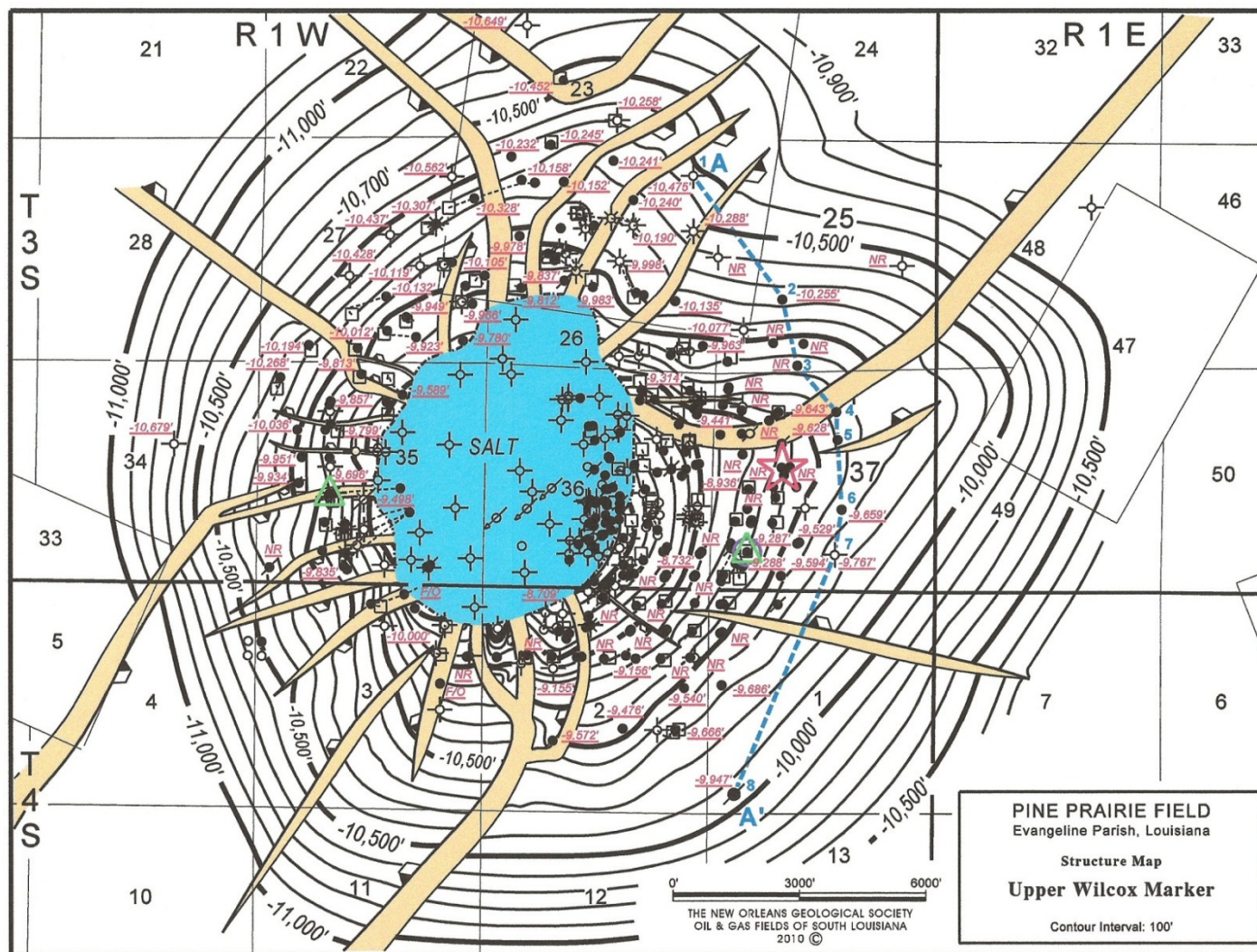


Pine Prairie Type Log



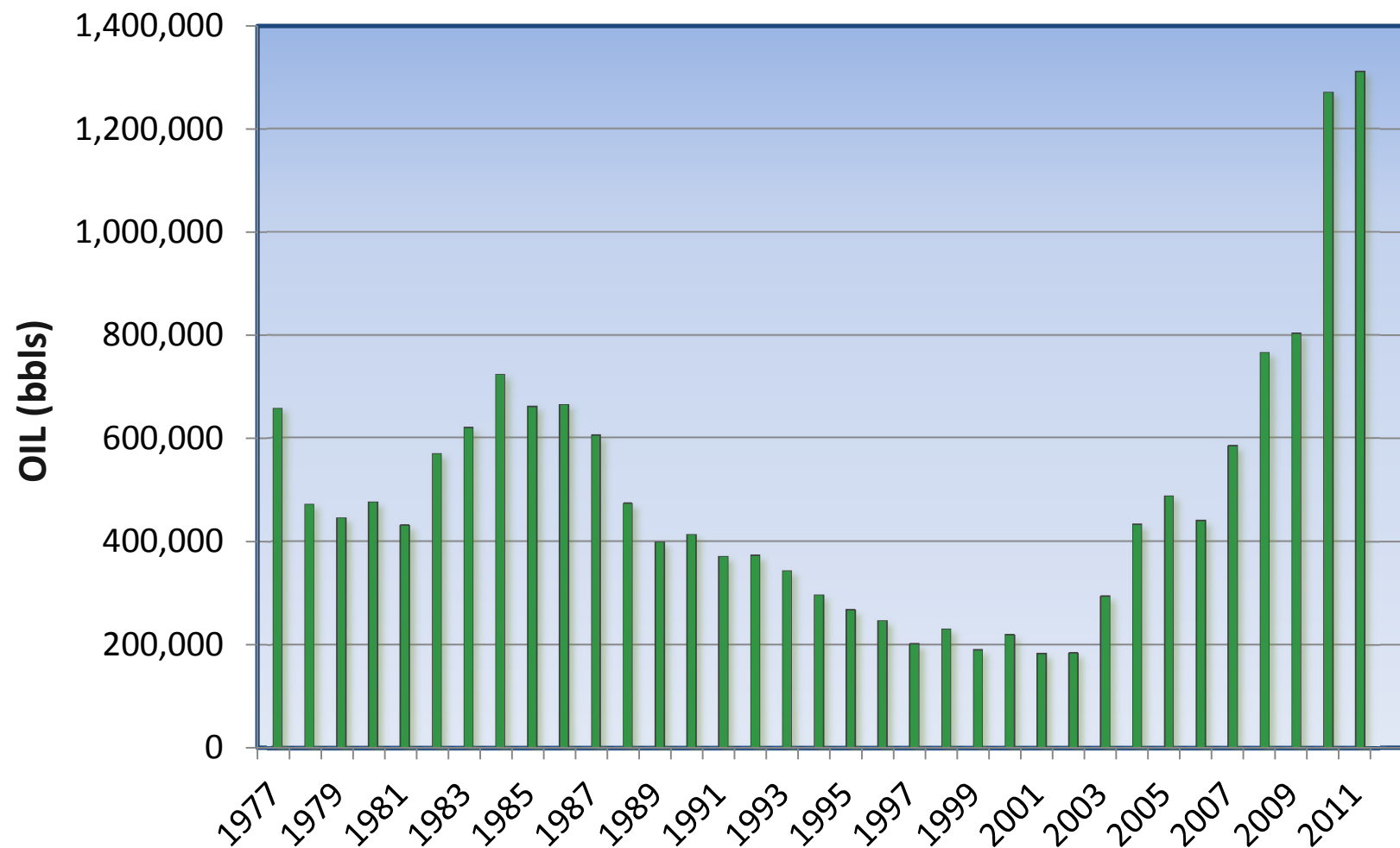
Pine Prairie

Upper Wilcox Structure Map

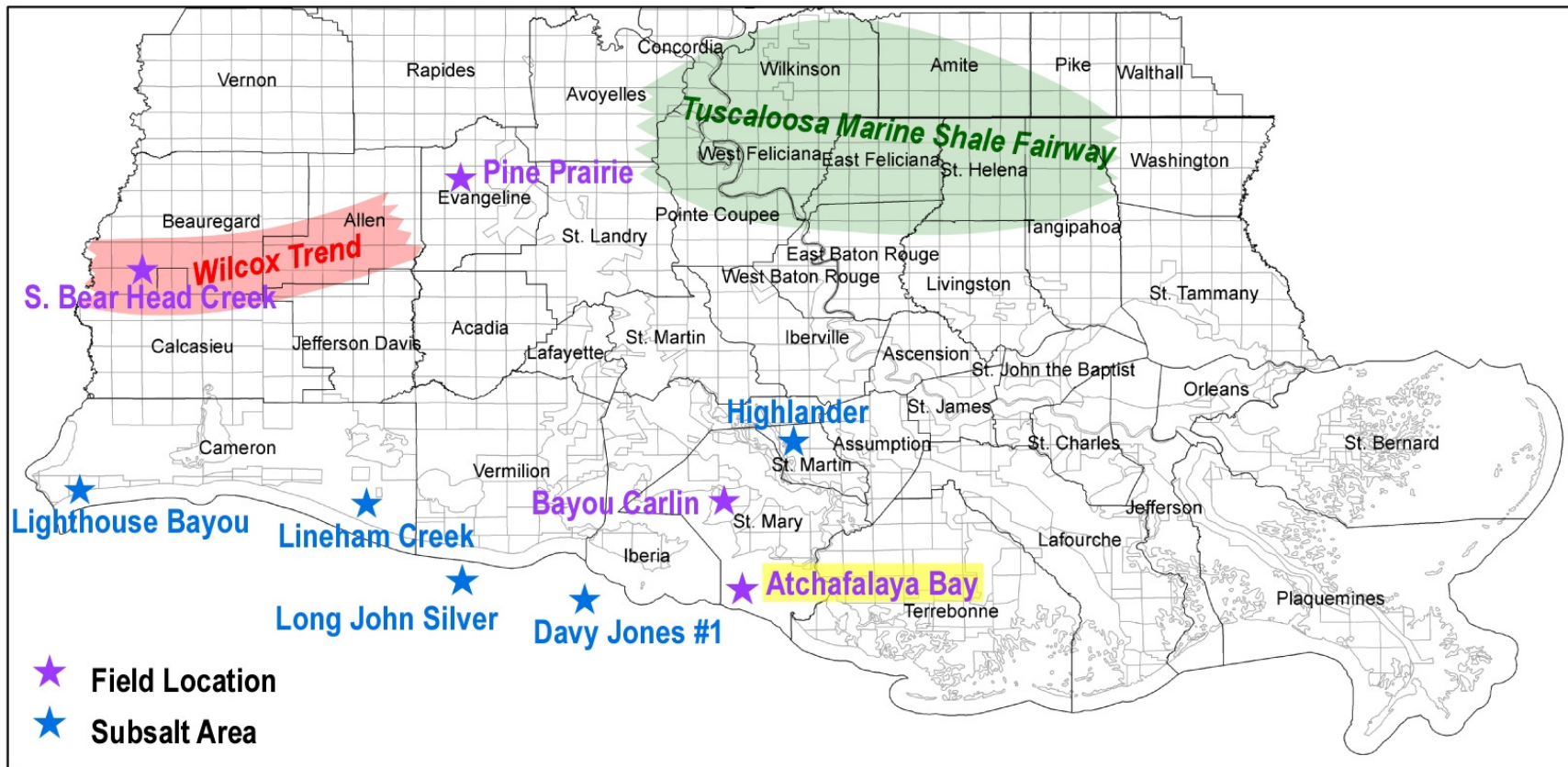


Pine Prairie

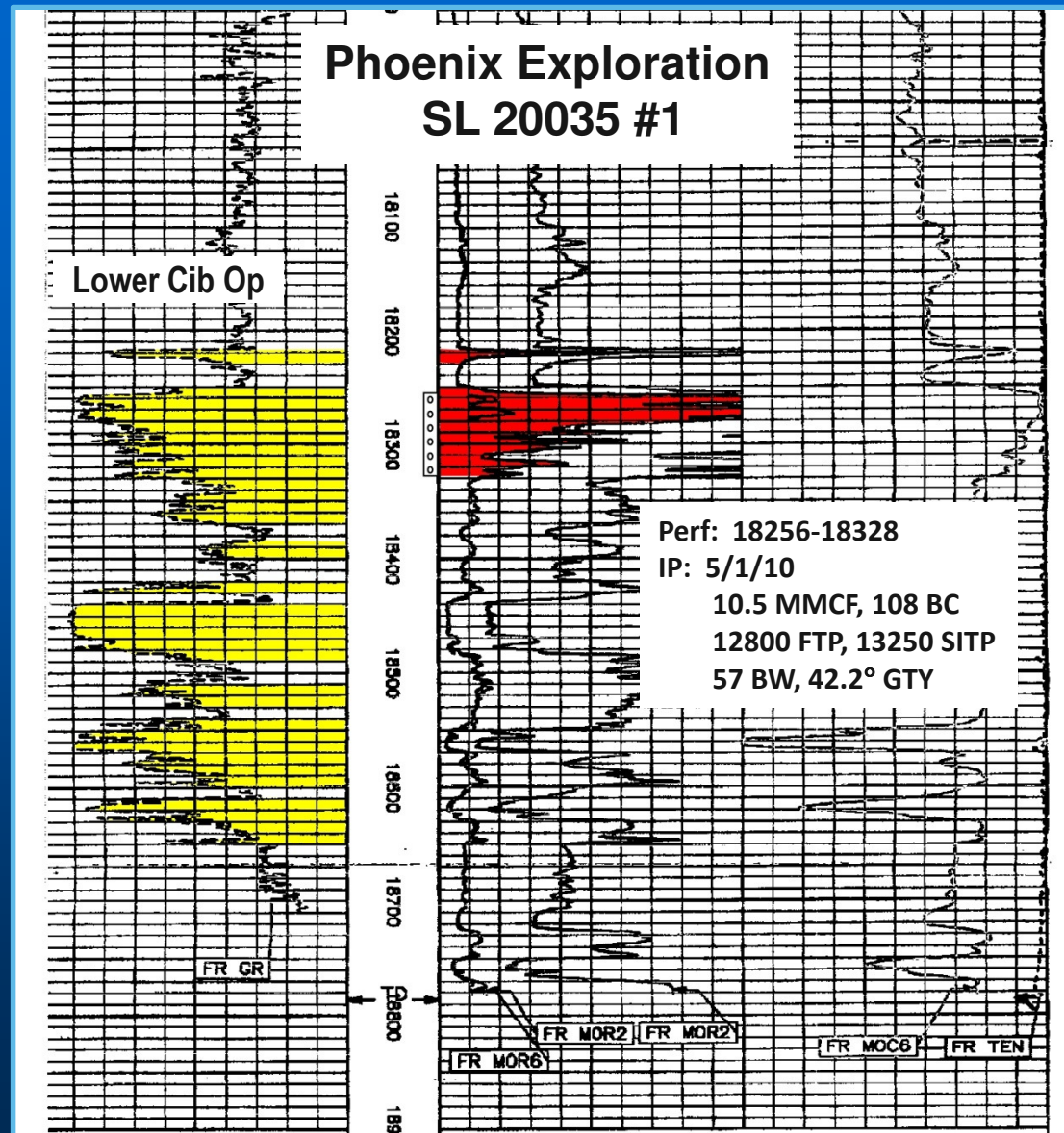
Oil Production 1977-2011



Atchafalaya Bay



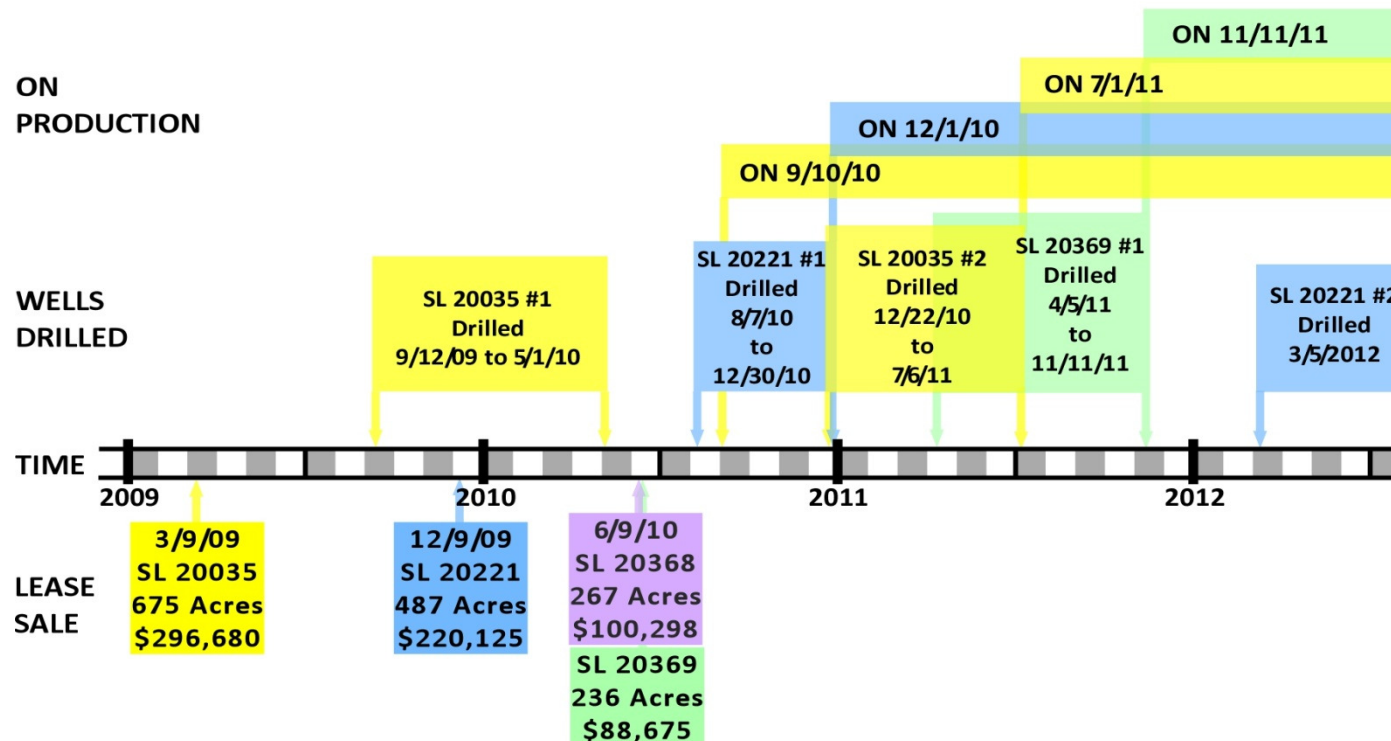
Atchafalaya Bay Type Log



Atchafalaya Bay Time Line

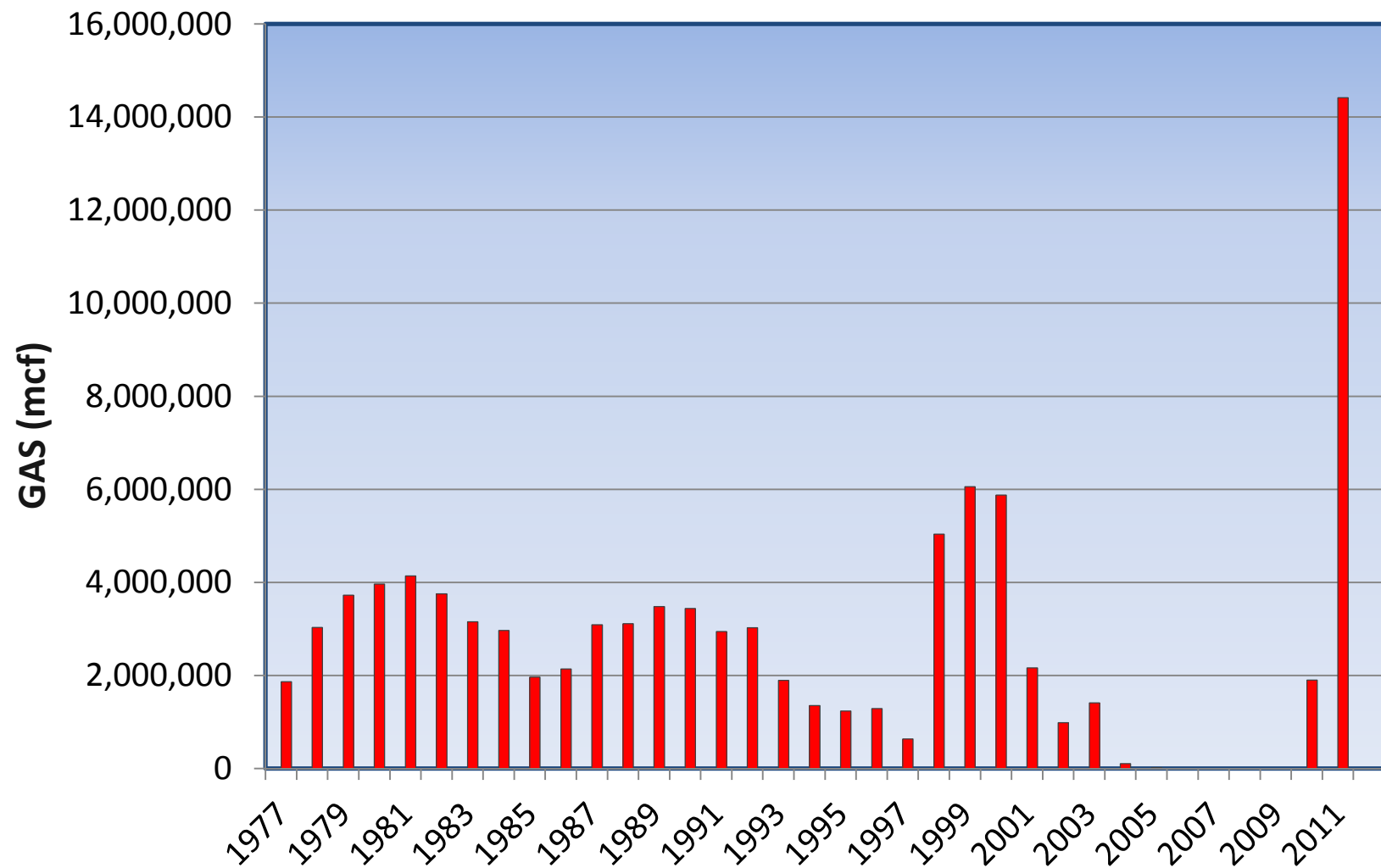
LEASE	SALE DATE	ACRES	BONUS
SL 20035	3/9/09	675	\$296,680
SL 20221	12/9/09	487	\$220,124
SL 20368	6/9/10	266	\$100,298
SL 20369	6/9/10	235	\$88,672
TOTAL		1,663	\$705,777

WELLS
SL 20035 #1
SL 20221 #1
SL 20035 #2
SL 20369 #1
SL 20221 #2

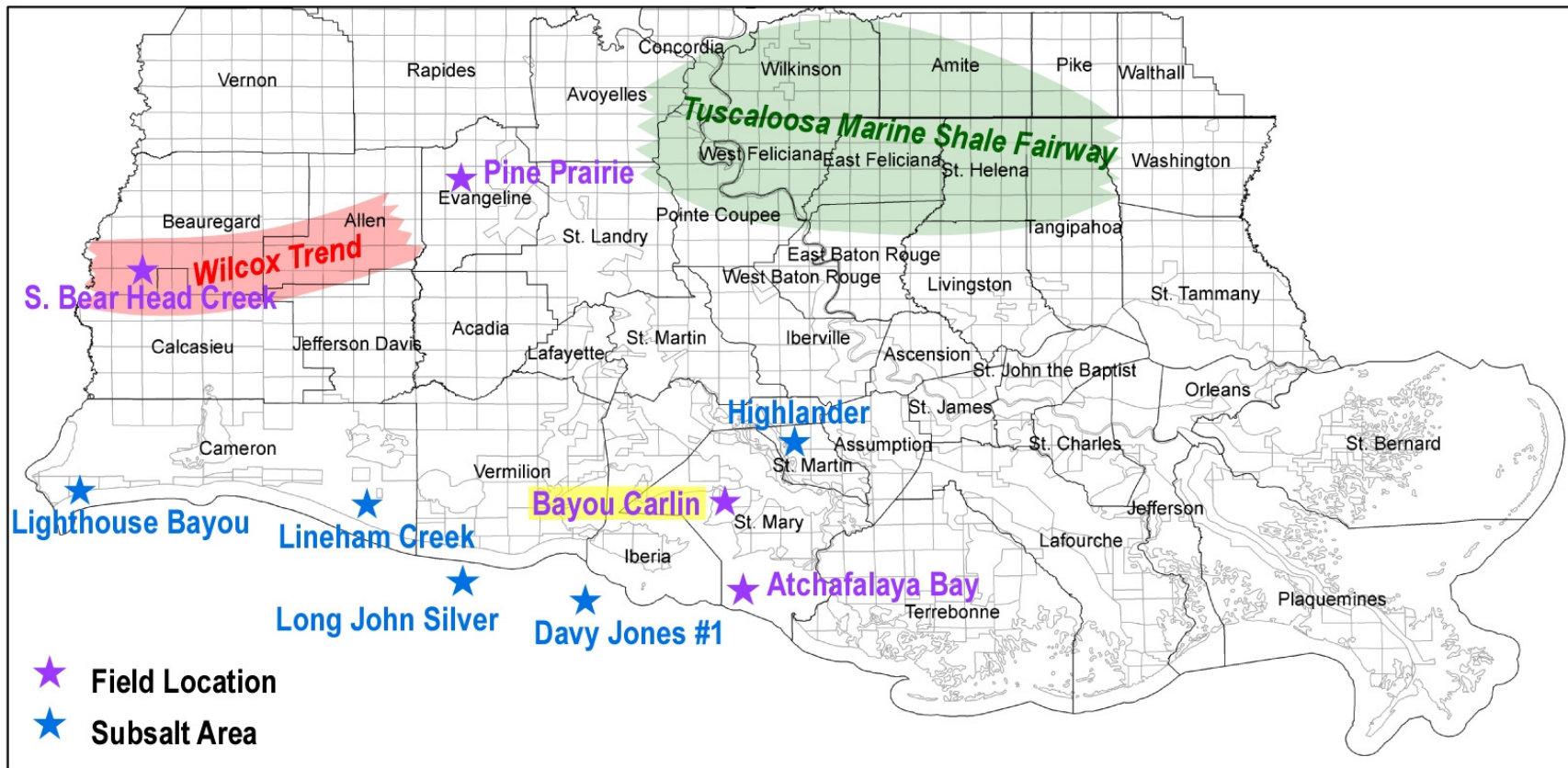


Atchafalaya Bay

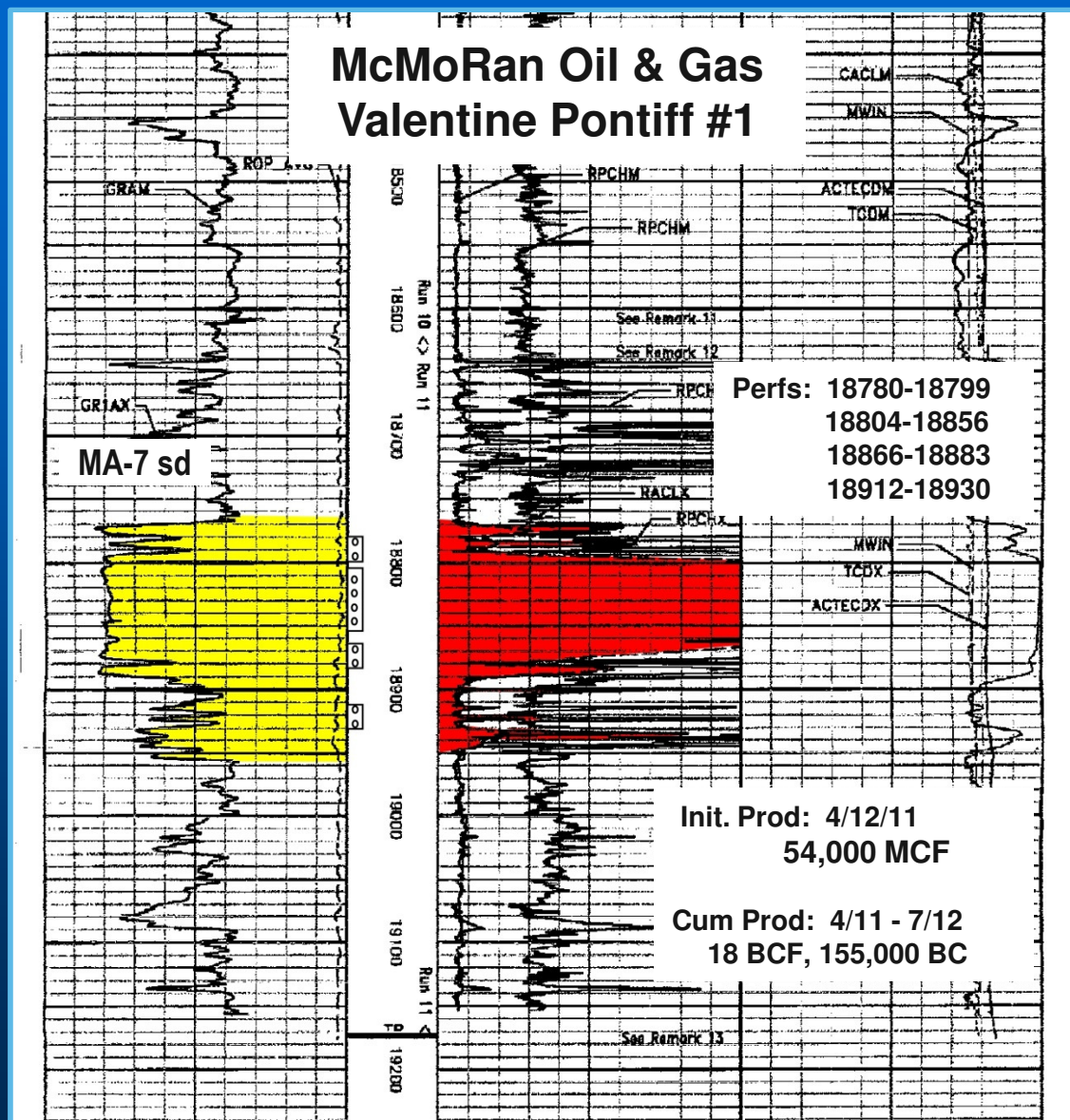
Gas Production 1977-2011



Bayou Carlin

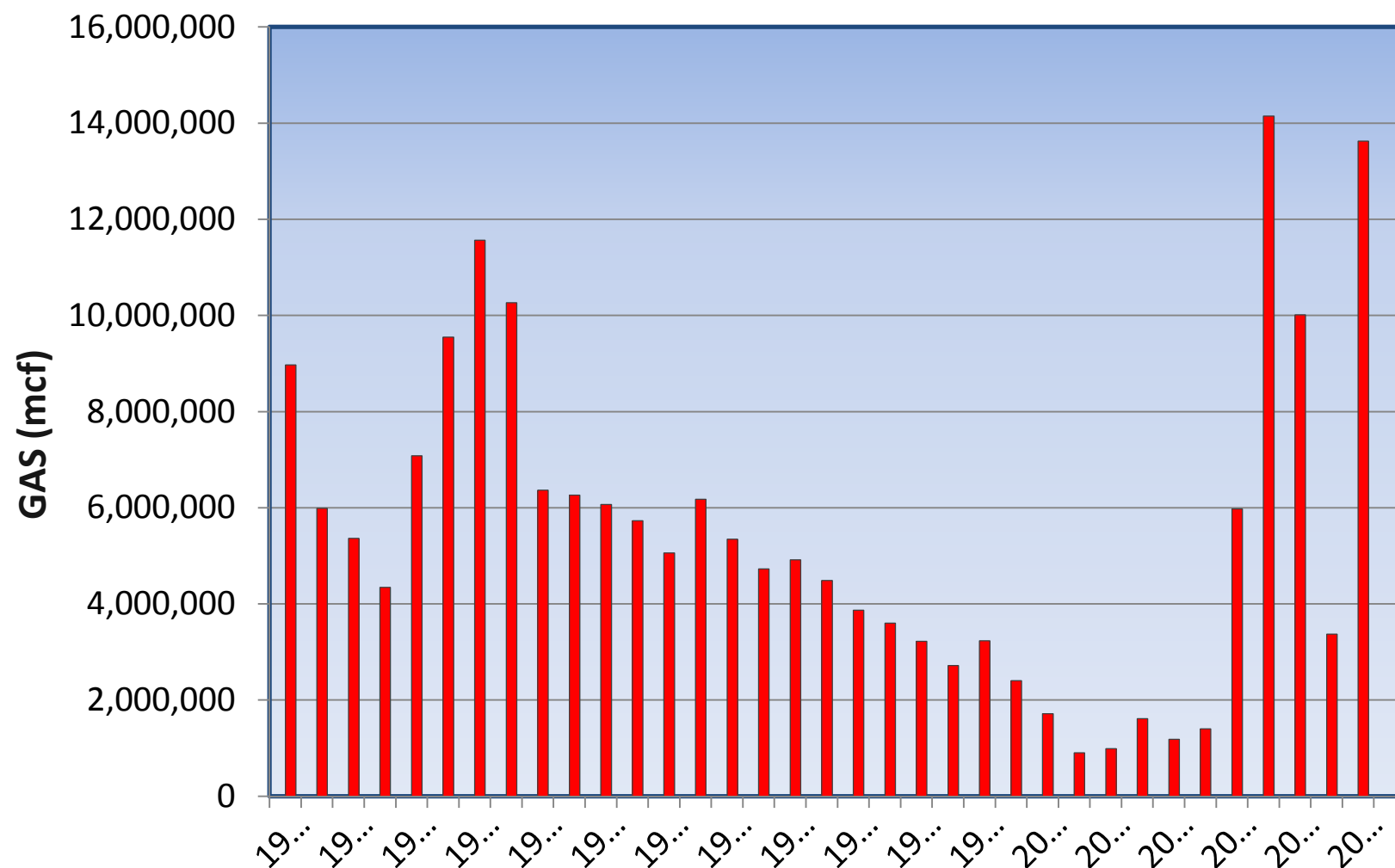


Bayou Carlin Type Log

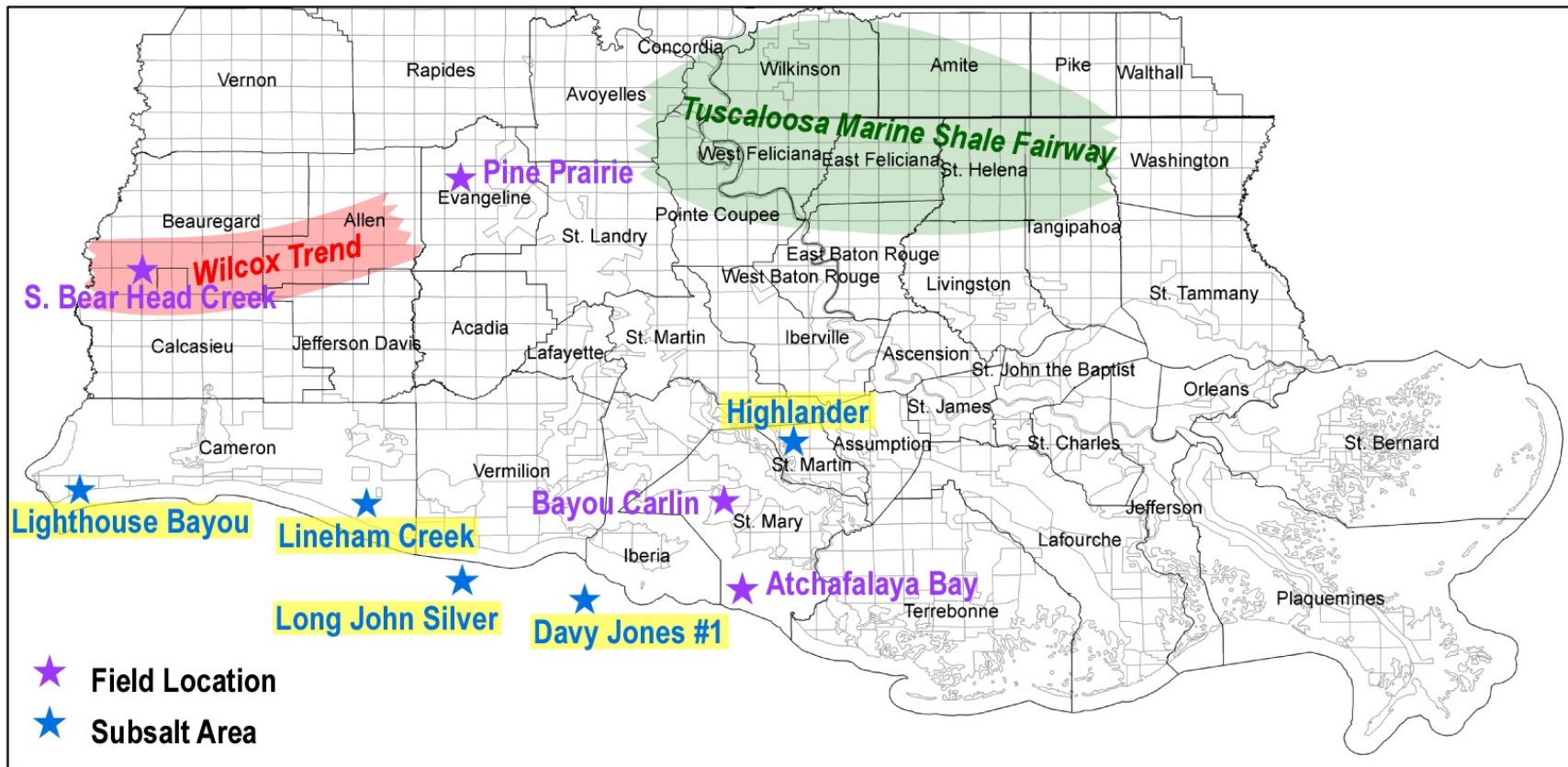


Bayou Carlin

Gas Production 1977-2011



Subsalt Trend



Subsalt – Conceptual Model

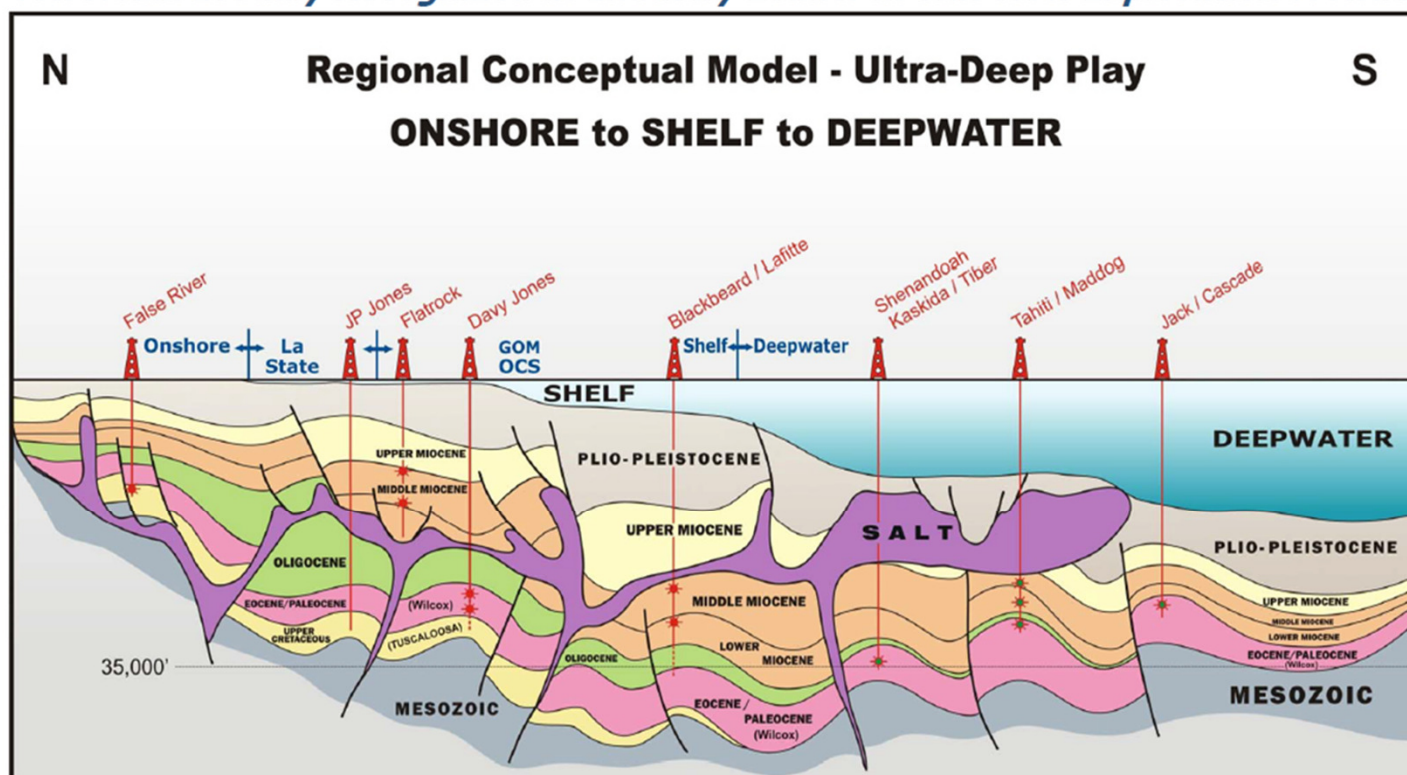


MCMORAN EXPLORATION CO.

Conceptual Model - Ultra-Deep Play



McMoRan Broadly Recognized as Industry Leader in This New Exploration Frontier



Data received to date from Davy Jones/Blackbeard West confirm McMoRan's original geologic modeling, which correlates the objective sections on the Shelf below the salt weld in the Miocene and older age sections to those productive sections seen in deepwater discoveries by other industry participants.

Subsalt – Davy Jones Type Log



Davy Jones

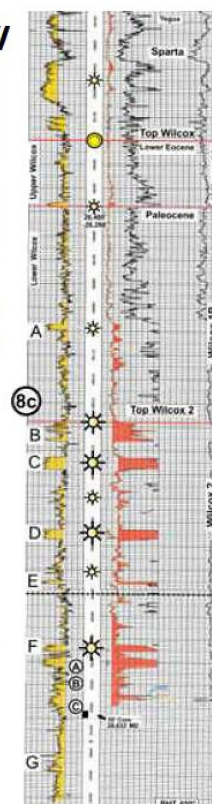
Buried Treasures on the Shelf

Recent Data Expands Resource Potential of Davy Jones

Discovery Well

#1

*Wilcox Sands
with 13-15%
Porosity*

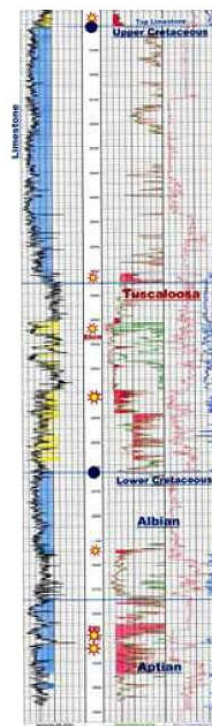
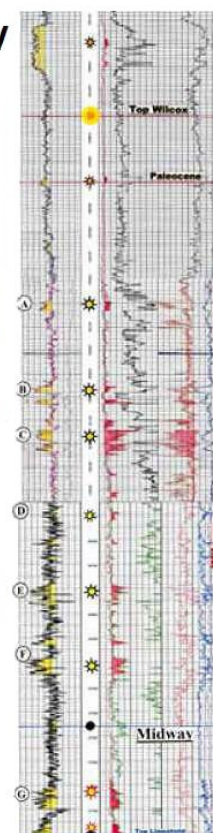


TD 29,122'

Offset Well

#2

*Wilcox Sands
with 13-20%
Porosity*

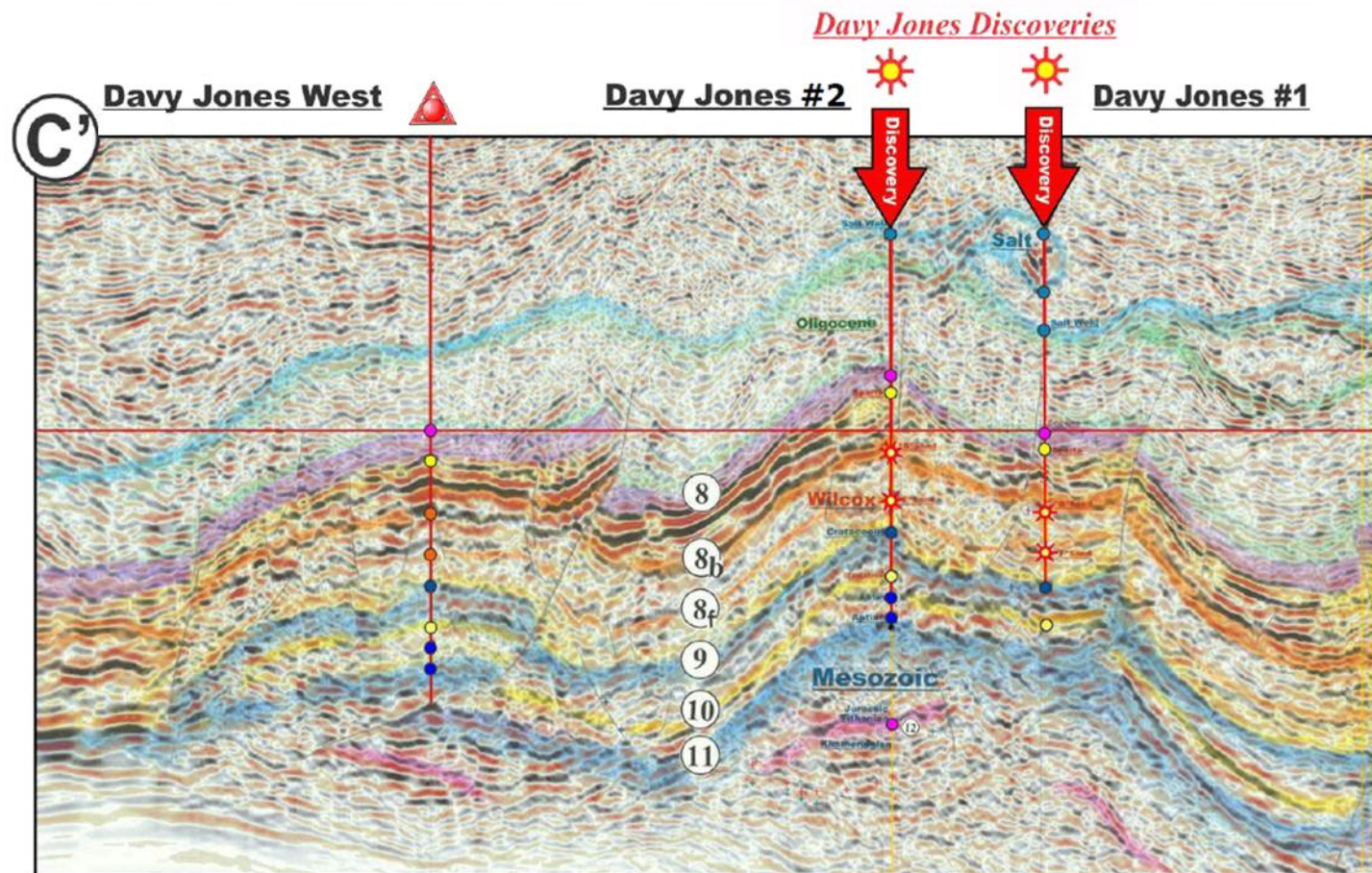


*29,000'
Tuscaloosa Sand
with Mid-20%
Porosity*

*Lower
Cretaceous
Carbonates*

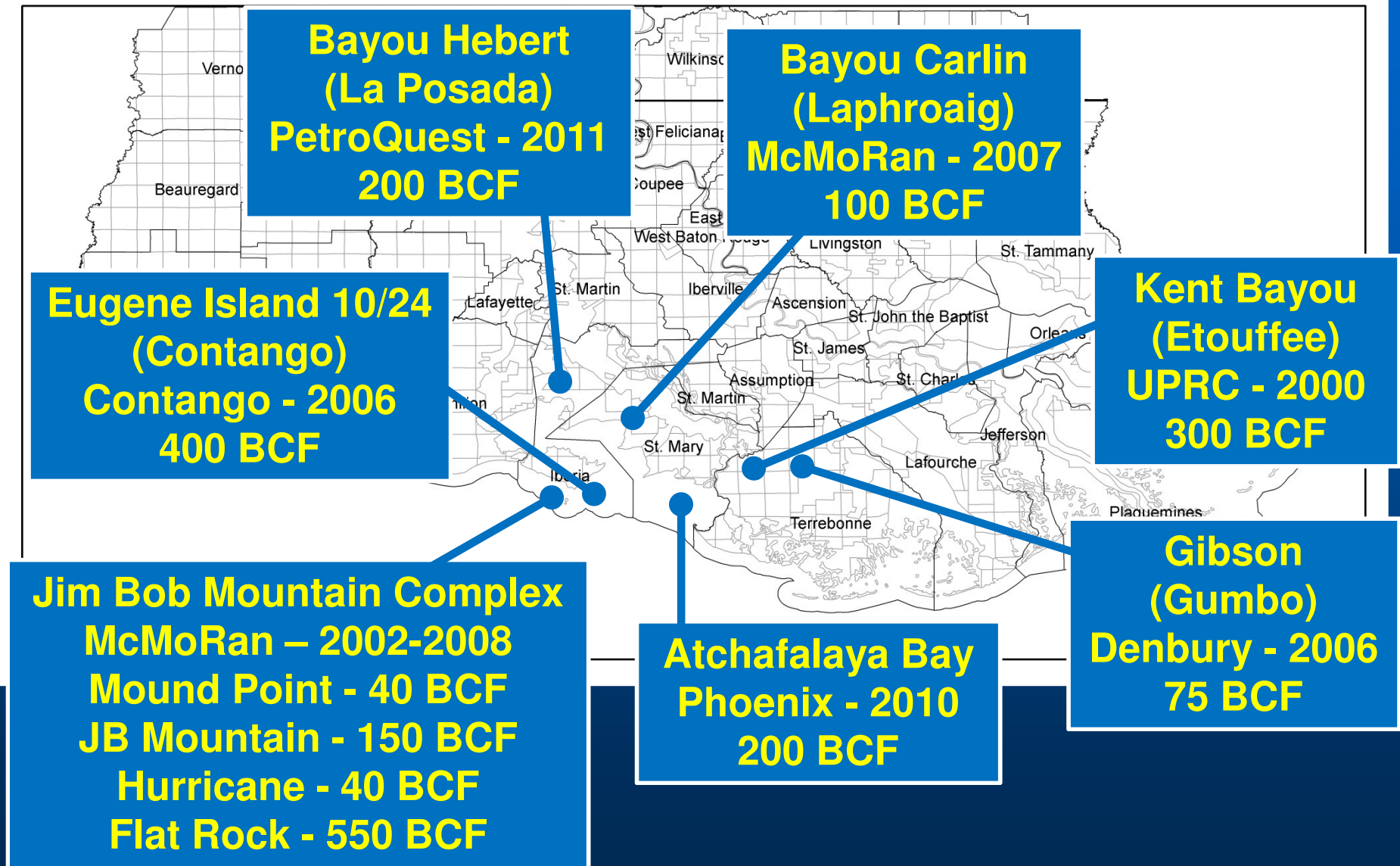
TD 30,617'

Subsalt - Davy Jones Seismic Tie



Provided Courtesy of FairfieldNodal

Significant LA Onshore Discoveries Since 2000



Closing Thoughts

Technological Advances in 3D Seismic,
Drilling, Completion, Fracking and
Geological Concepts

New Developing Opportunities
in South Louisiana

Acknowledgements & Sources

Amelia Resources (Kirk Barrell)

Kevin Trosclair (UNO Graduate Student – Geology)

LaBay Exploration Co., L.L.C.

LSU Basin Research Institute

McMoRan Exploration Co.

NOGS Publication: “Oil & Gas Fields of South Louisiana 2010”

Sheri Richardson

SONRIS

Oil & Gas Fields of South Louisiana 2010

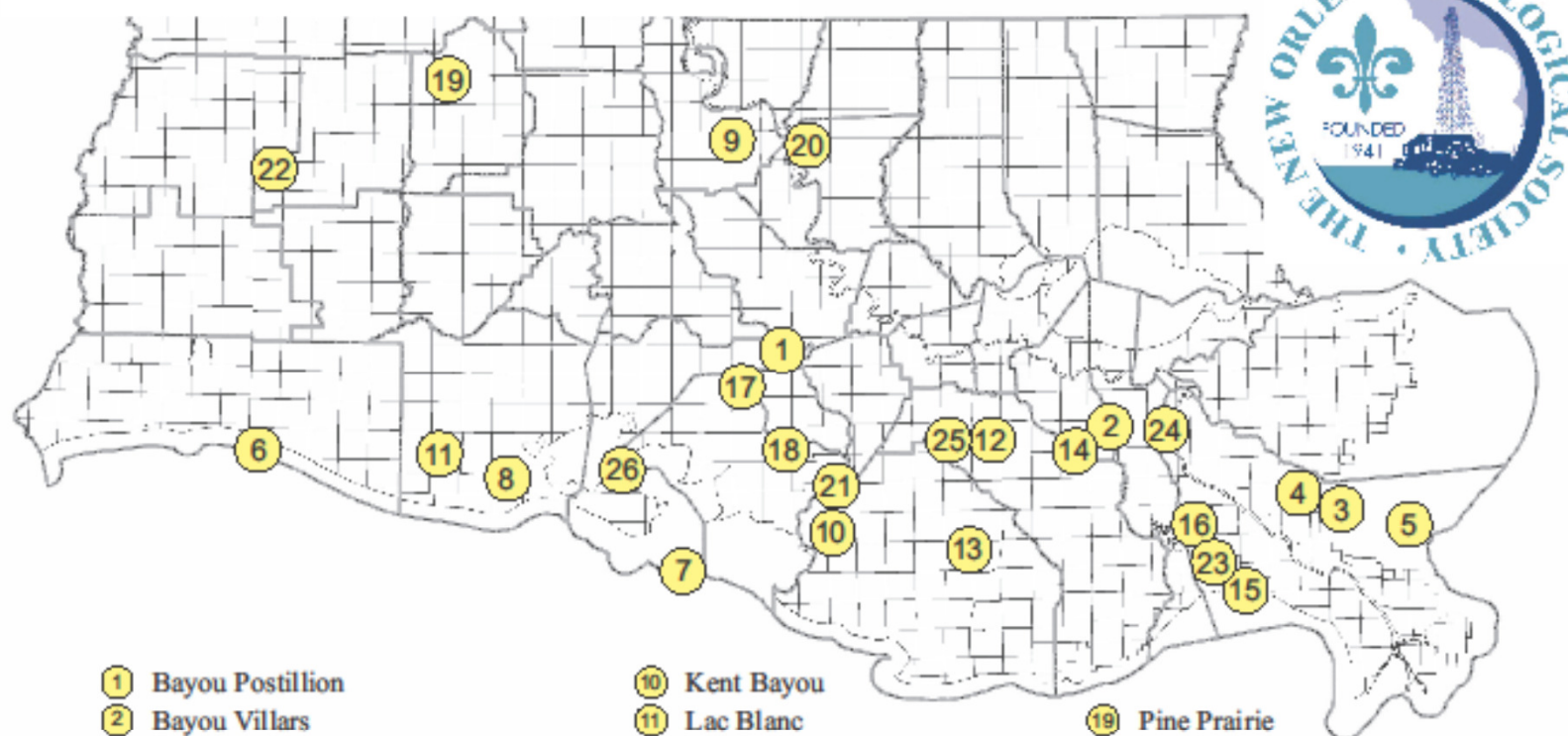


Recent Discoveries in
South Louisiana Fields
Rejuvenate Production

The New Orleans Geological Society

Oil & Gas Fields of South Louisiana

2010



- | | | |
|-------------------------------|--------------------------|-----------------------------|
| ① Bayou Postillion | ⑩ Kent Bayou | ⑲ Pine Prairie |
| ② Bayou Villars | ⑪ Lac Blanc | ⑳ Port Hudson |
| ③ Black Bay East | ⑫ Lake Boeuf Southwest | ㉑ Ramos (Lily Boom) |
| ④ Black Bay North | ⑬ Lake Boudreaux | ㉒ Righthand Creek |
| ⑤ Breton Sound 53 | ⑭ Lake Salvador | ㉓ Saturday Island Southeast |
| ⑥ Creole West Cameron Block 2 | ⑮ Lake Washington | ㉔ Stella |
| ⑦ Eugene Island Blocks 10/24 | ⑯ Manila Village | ㉕ Thibodaux and Rousseau |
| ⑧ Freshwater Bayou | ⑰ Myette Point Northwest | ㉖ West Cote Blanche Bay |
| ⑨ Judge Digby | ⑱ Patterson | |

The Key points:

A lot of opportunity remains in South Louisiana.

The new NOGS oil and gas volume will be an important tool for any company exploring in South Louisiana

Oil & Gas Fields of South Louisiana 2010

Containing 26 Fields
And a review of Prices, Trends, and Activities

Published December 2010

Available at NOGS.org

Tuscaloosa Marine Shale

Initial Potential Summary



Operator	Well Name / Number	IP – BOEPD	IP 30 - BOEPD
Encana Oil & Gas	Board of Education #1 H	340	340
Devon Energy	Beech Grove Land Co 68H #1	137	85
Encana Oil & Gas	Weyerhaeuser 73H #1	297	770
Devon Energy	Soterra 6H #1	35	136
Encana Oil & Gas	Horseshoe Hill 10H #1	815	695
Encana Oil & Gas	Anderson 17H #1	928	933
Devon Energy	Richland Farms Inc. 74H #1	285	320
Encana Oil & Gas	Anderson 18H #1	1178	1072
Devon Energy	Weyerhaeuser 14H #1	390	670
Devon Energy	Murphy 63H #1	460	