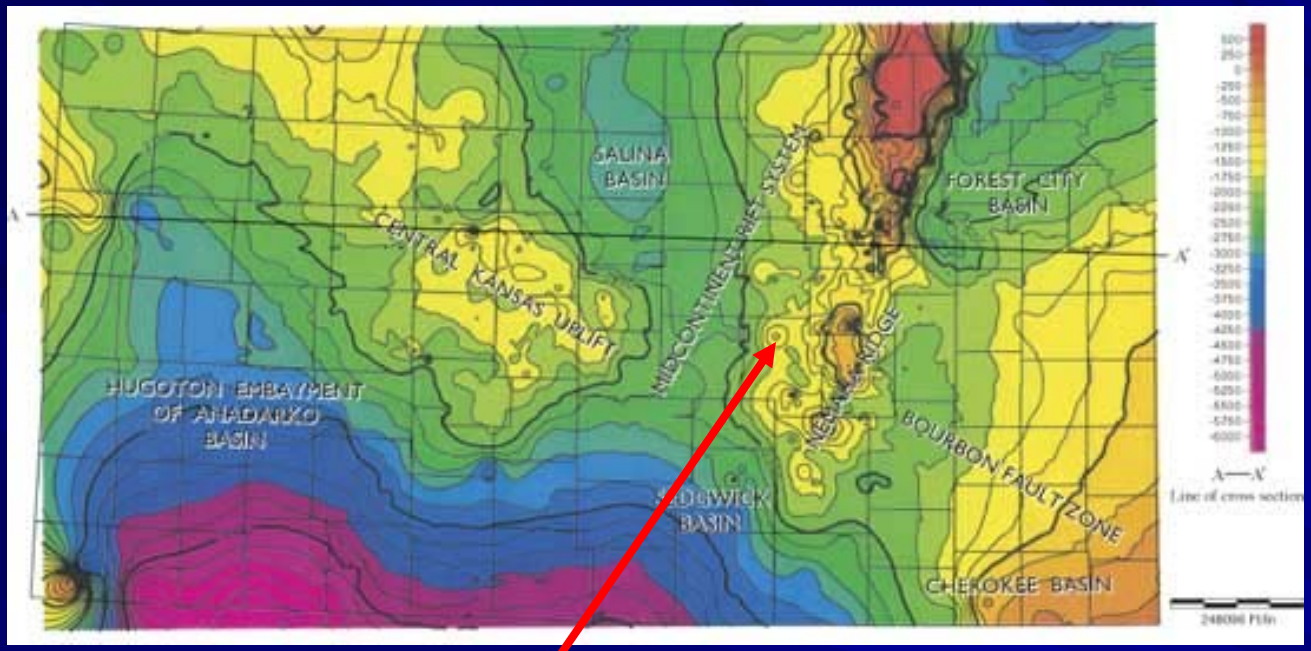
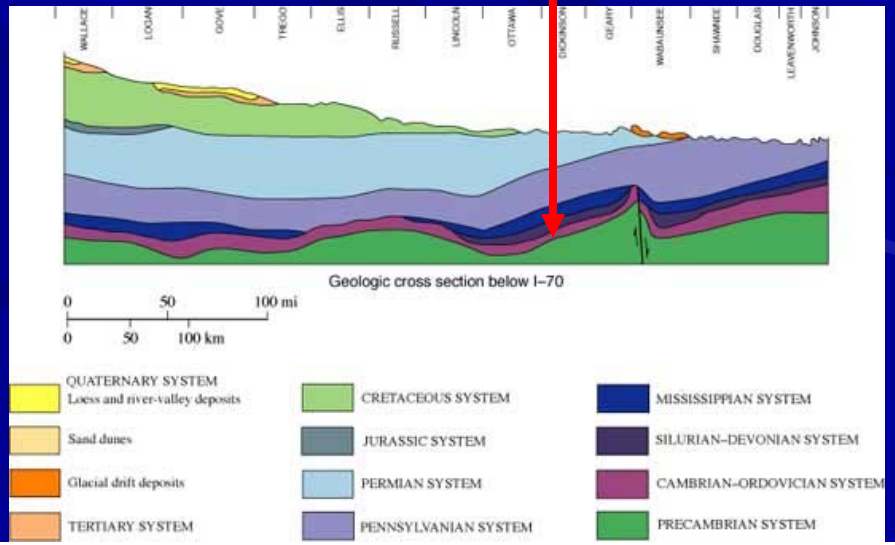
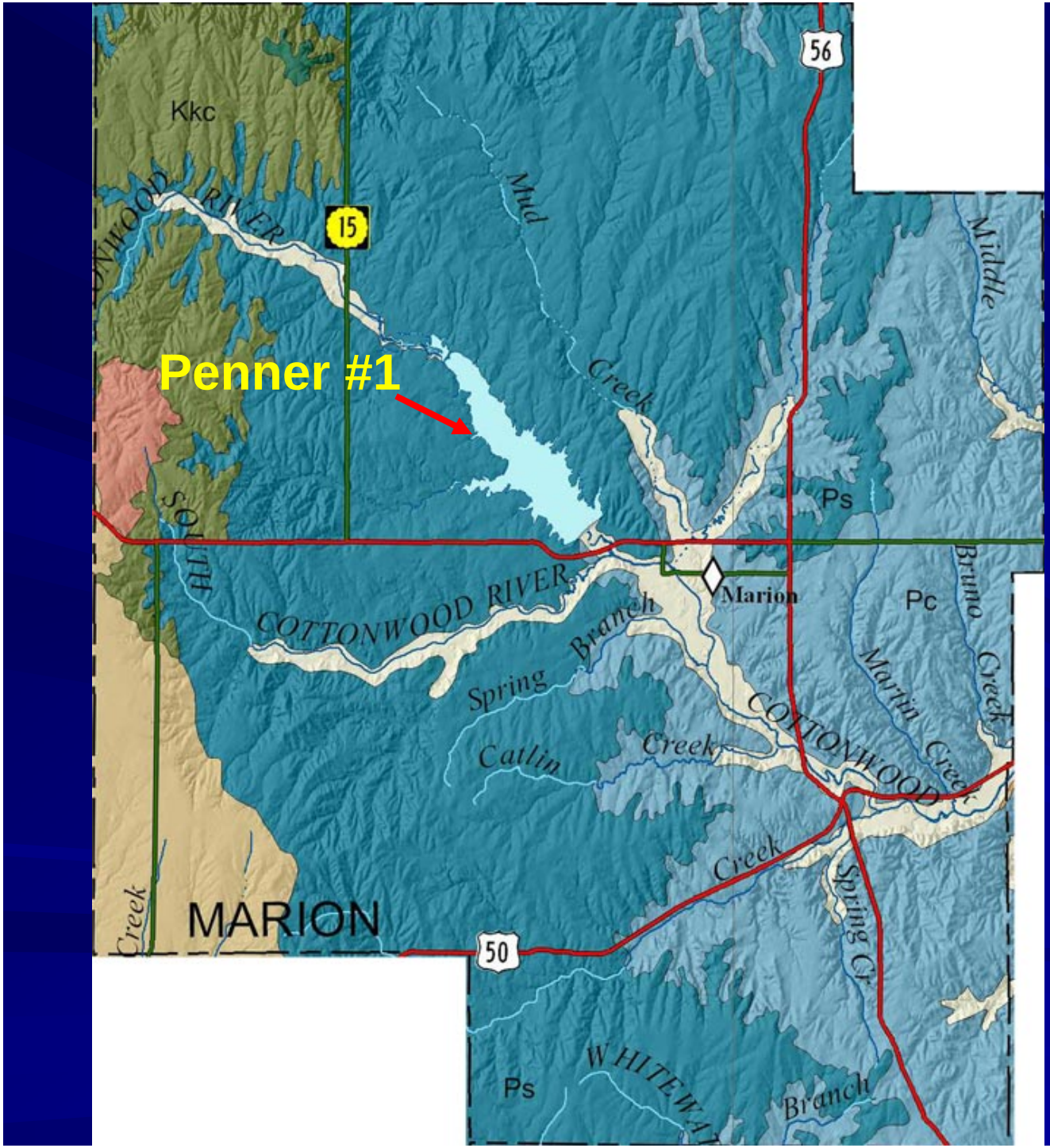
Configuration of Kansas Basement & Subsurface Cross Section



Hillsboro Field



Location of Marion County and Hillsboro Field

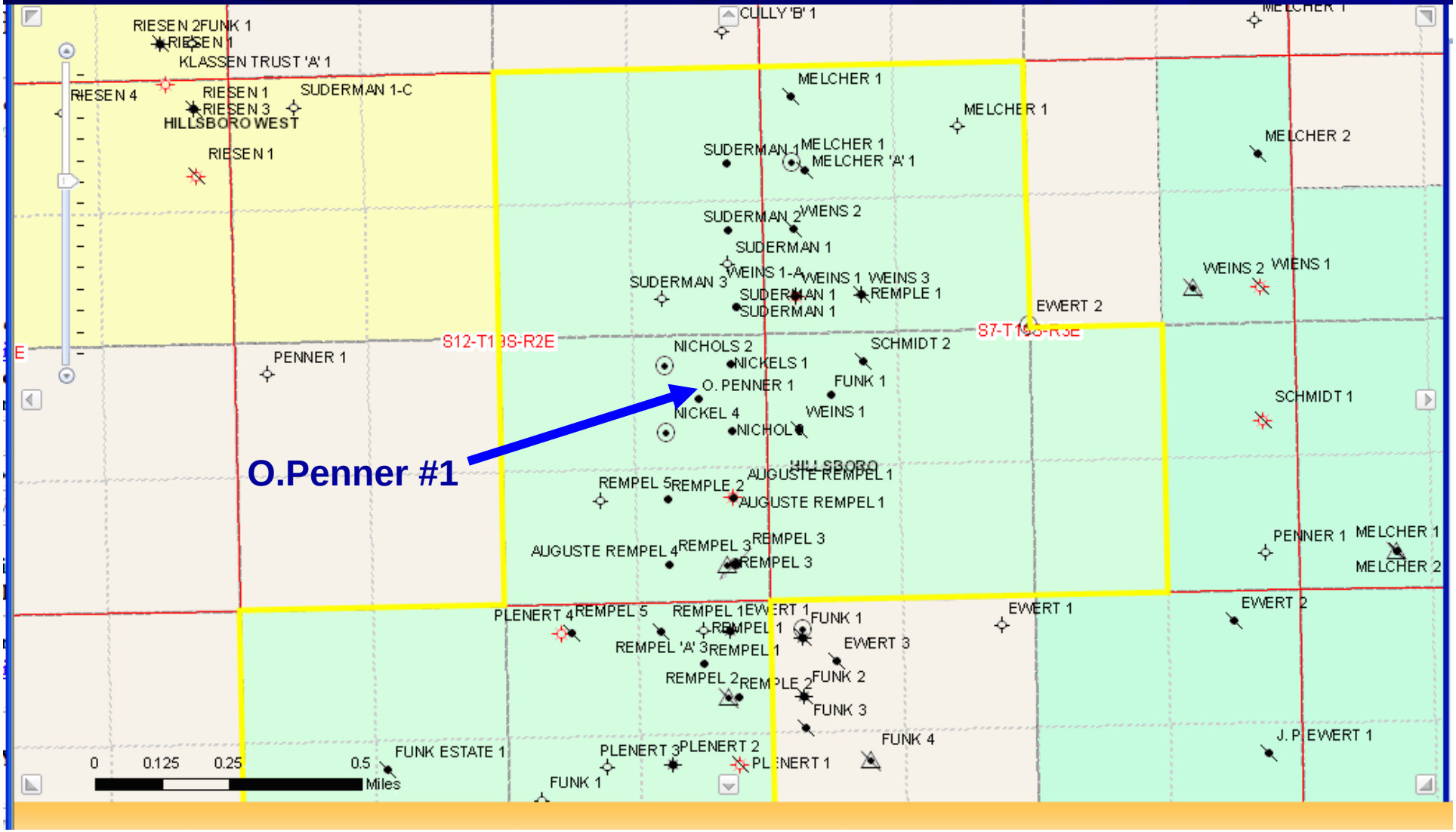


Marion County

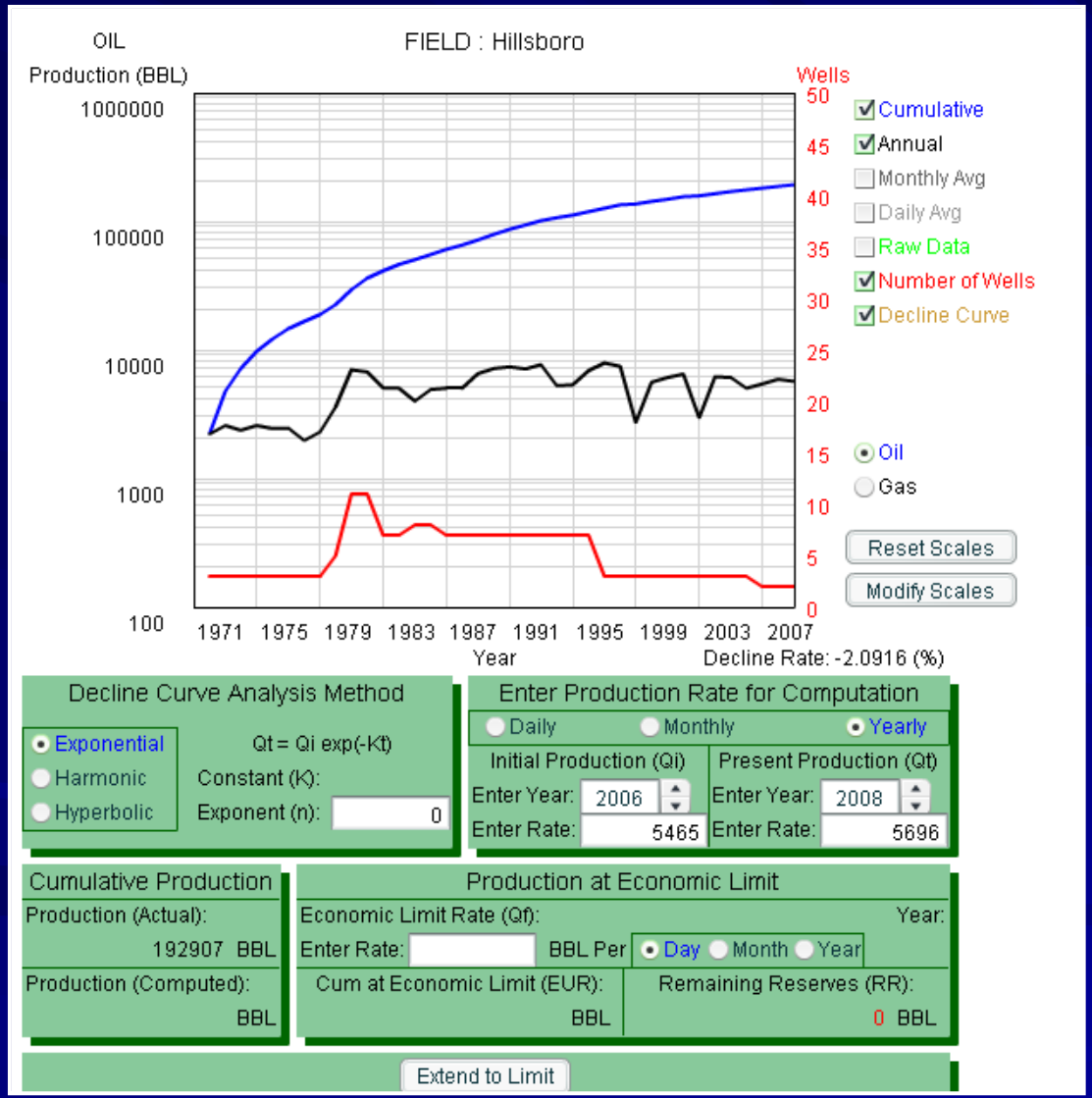
Surface Geologic Map

Location of Penner #1 well in Hillsboro Field

Section 7 and 12 with O. Penner #1 in Hillsboro Field, Marion County

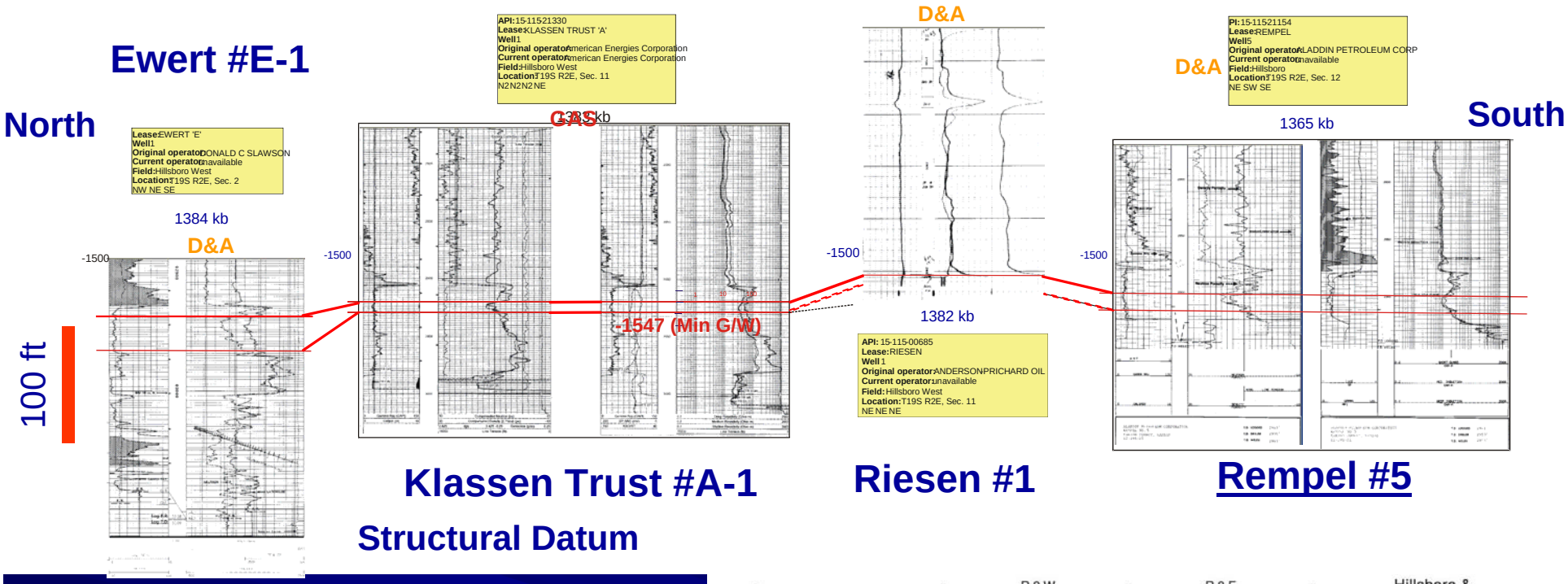


Hillsboro Field



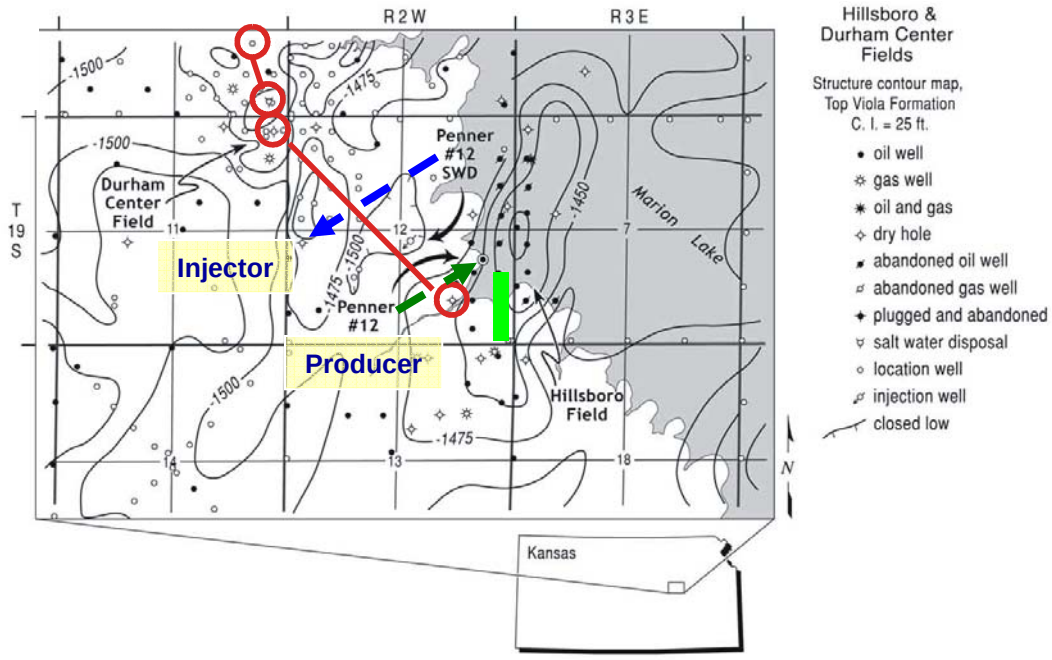
Year	Annual	# wells	Cum.
2004	6,105	3	538,363
2005	5,042	3	543,405
2006	5,465	2	548,870
2007	5,923	2	554,793
2008*	5,696	2	560,489

- Hillsboro Field discovered in 1928 with production from Mississippian chert (oil & gas) and **Viola Ls.**
- 22 original producing wells, cumulative 560,489 BO
- Currently:
  - Ave. 16 BOPD, 2 remaining wells
  - ~97% water cut
  - Increase total fluid result increase oil production

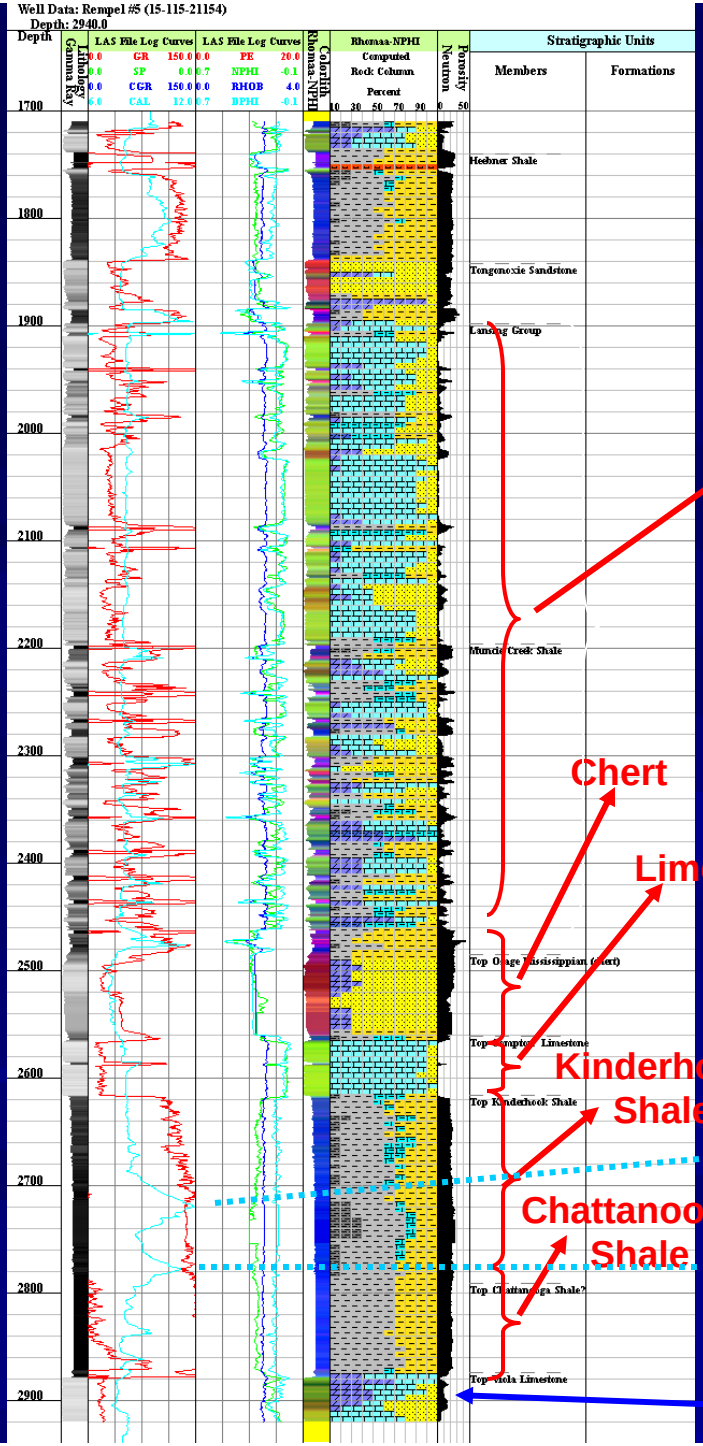


North-South Structural Cross Section in Vicinity of the Penner Lease in Hillsboro Field, Marion County, Kansas.

Structure Map to Viola Limestone Pay
Cross section index



Rempel #5 with modern log suite located 1/4 mile southwest of Penner #1 producing well



600-foot interval of predominately limestone and thin shales

Legend

Gamma Ray 0 to 150 API

Mineral	Formula	Rhomaa	Umaa	Color Scale - Gamma Ray 0 to 150 API
Kaolinite	$Al_4Si_4O_{10}(OH)_8$	3.02 gm/cc	6.2 barns/cc	
Dolomite	$CaCO_3MgCO_3$	2.9 gm/cc	9.0 barns/cc	
Quartz	SiO_2	2.65 gm/cc	4.79 barns/cc	
Calcite	$CaCO_3$	2.71 gm/cc	13.77 barns/cc	
Anhydrite	$CaSO_4$	2.98 gm/cc	14.6 barns/cc	
Halite	NaCl	2.04 gm/cc	13.09 barns/cc	

Chert

Limestone

Kinderhook Shale

Chattanooga Shale

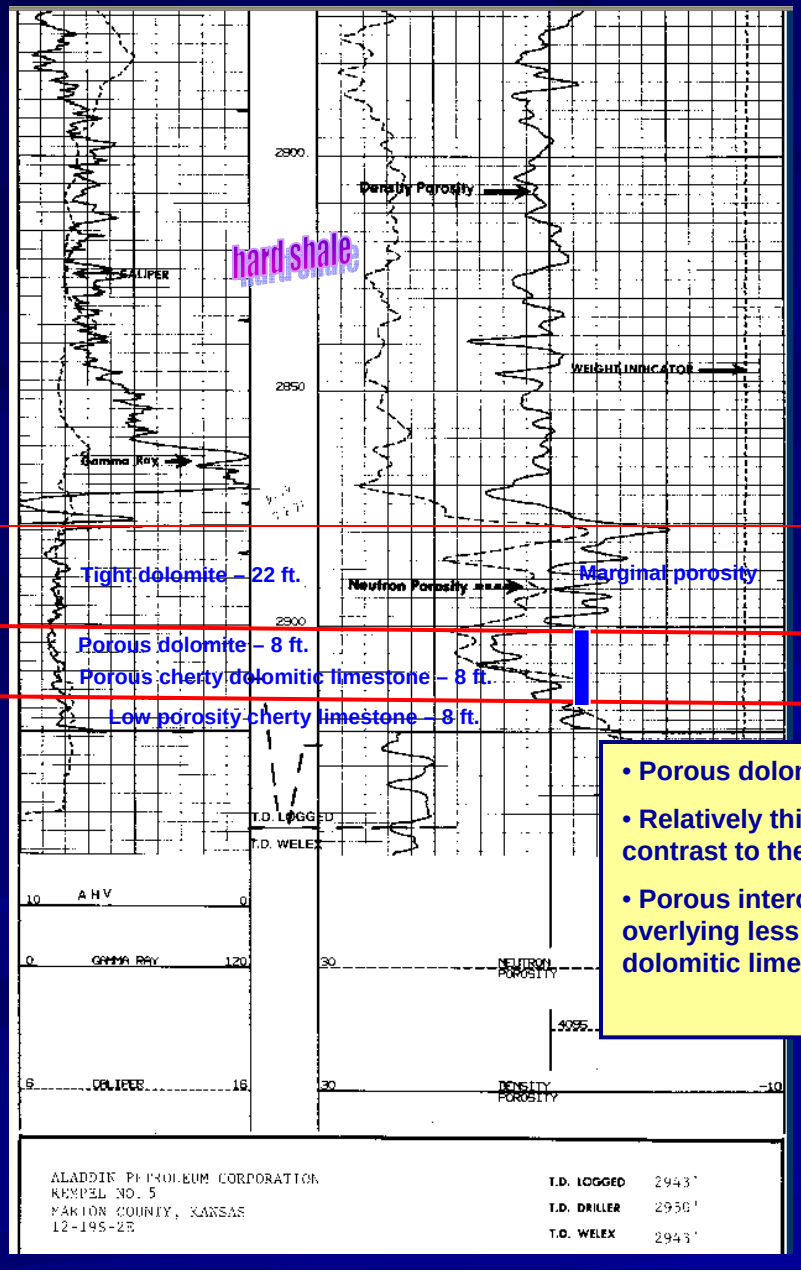
Mississippian Limestone is ~80 ft of hard microporous chert "chat" underlain by ~60 ft of tight limestone (Compton Limestone)

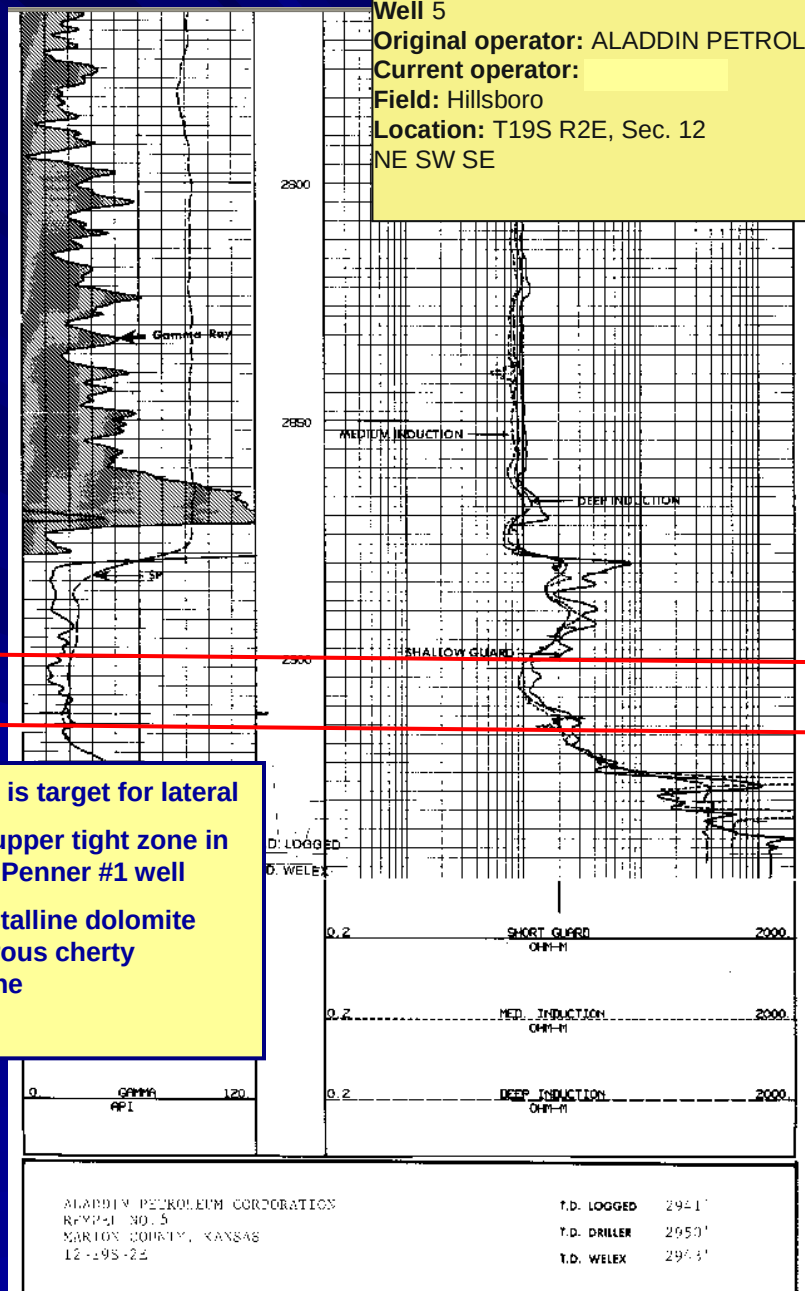
Kinderhook-Chattanooga shale interval -- caliper log, light turquoise line in left track, indicates two softer shale intervals; Chattanooga shale is generally hard and organic-rich

Target - porosity zone in upper Viola Ls.

Chattanooga Shale and Viola Limestone (target zone) in Rempel #5 located southwest of O. Penner #1

PI: 15-115-21154
Lease: REMPEL
Well 5
Original operator: ALADDIN PETROLEUM CORP
Current operator:
Field: Hillsboro
Location: T19S R2E, Sec. 12
NE SW SE





- **Porous dolomite is target for lateral**
- **Relatively thick upper tight zone in contrast to the O. Penner #1 well**
- **Porous intercrystalline dolomite overlying less porous cherty dolomitic limestone**

Drillers Log on O. Penner #1

STATE: KS
COUNTY: MARION
BLOCK:
SEC.: 12
T.: 19
R.: 2E
ALTITUDE: 1358 GL
PRODUCTION: 1366 KB

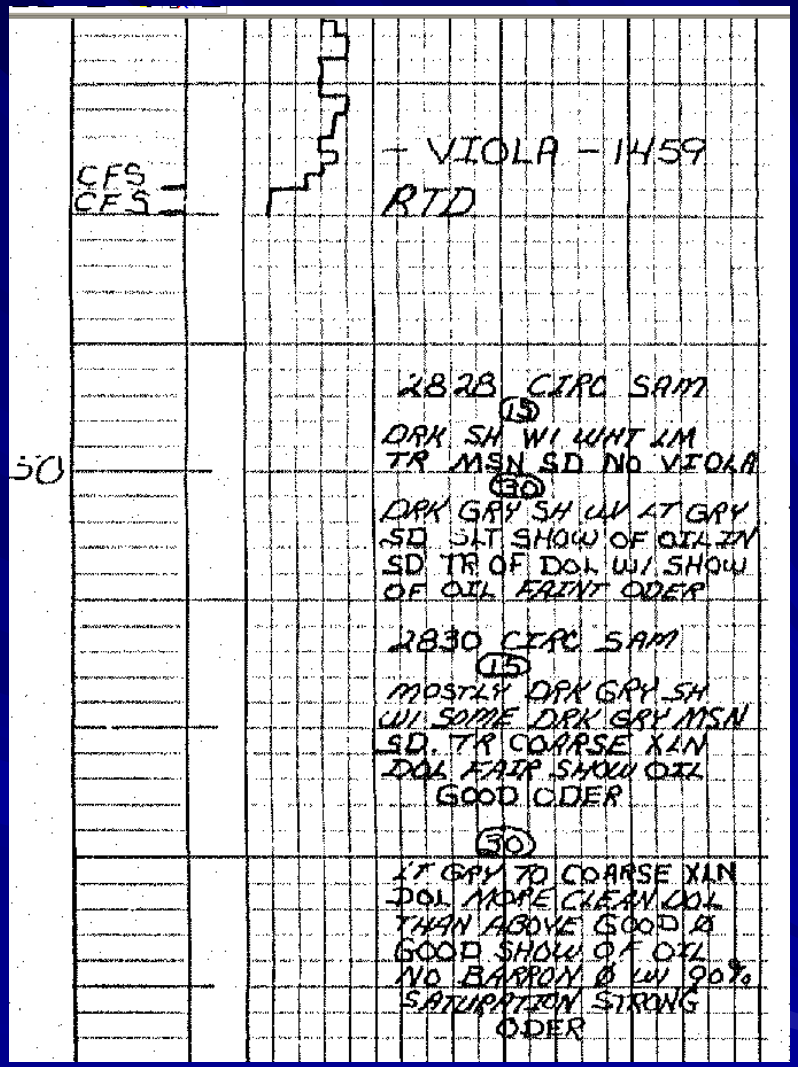
COMPANY: WILDCAT RES. INC
FARM: O. PENNER
WELL NO.: 1
SURVEY: CNE SE 1980'N & 5E 660'W & SE
API# 115-21,133
TOTAL DEPTH: 2830'
CONTRACTOR: KANSAS DRILLING
COMMENCED: 8-20-84
COMPLETED: 8-25-84
REMARKS: BIT TRIP 2620'

CASING RECORD

211' 8⅝ GL. CEMENTED W/ 150 SAX CLASS A COMMON W/ 5 LBS GIL PER SACK 3% CC & CIRCULATED

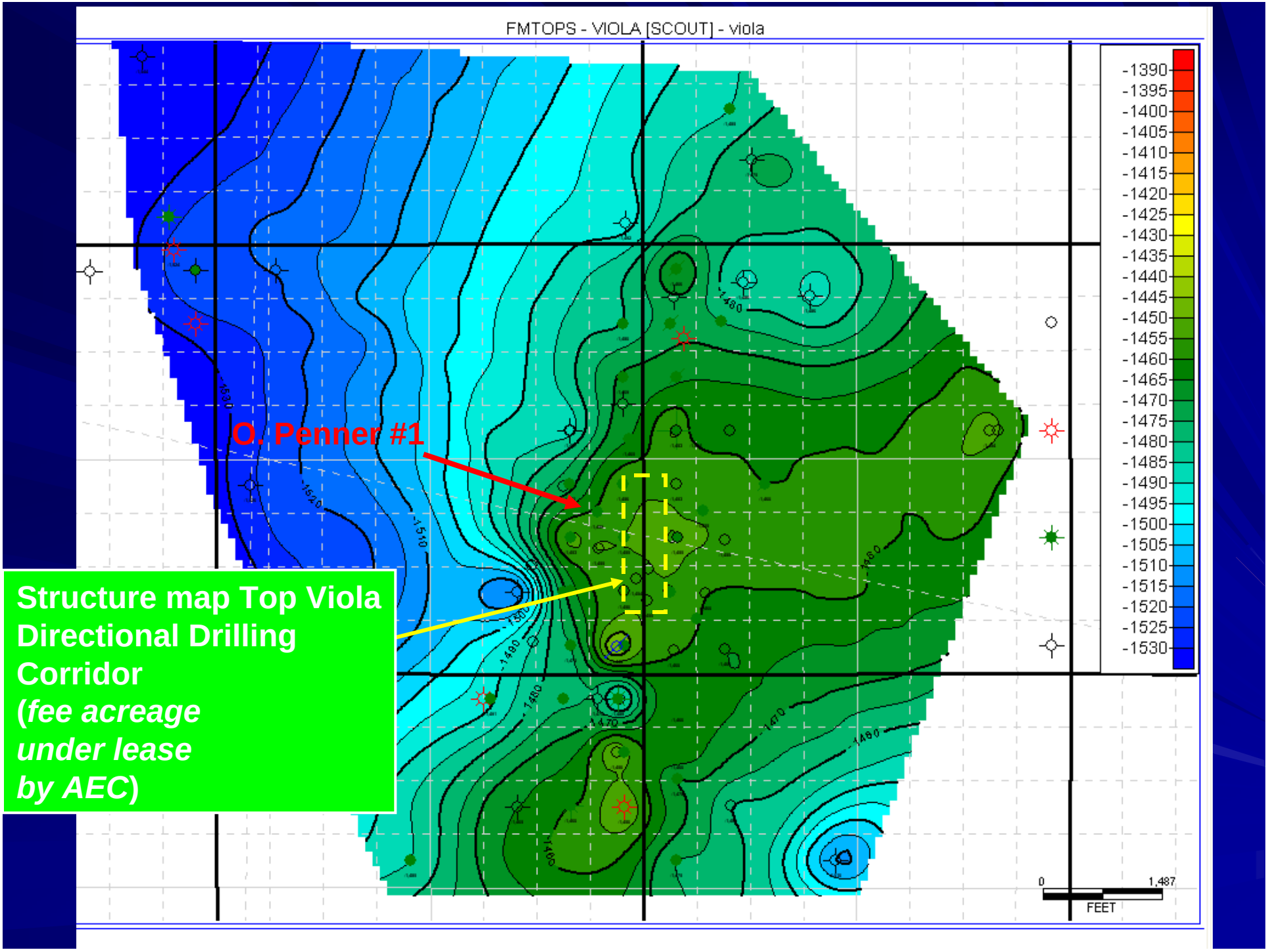
2827' OF 5½" 15.5# K.B. 100 SAX 60-40 POZ W/ ⅛ LB FLOW SEAL ½ OF 1% CR-2

SHOT QUARTS BETWEEN

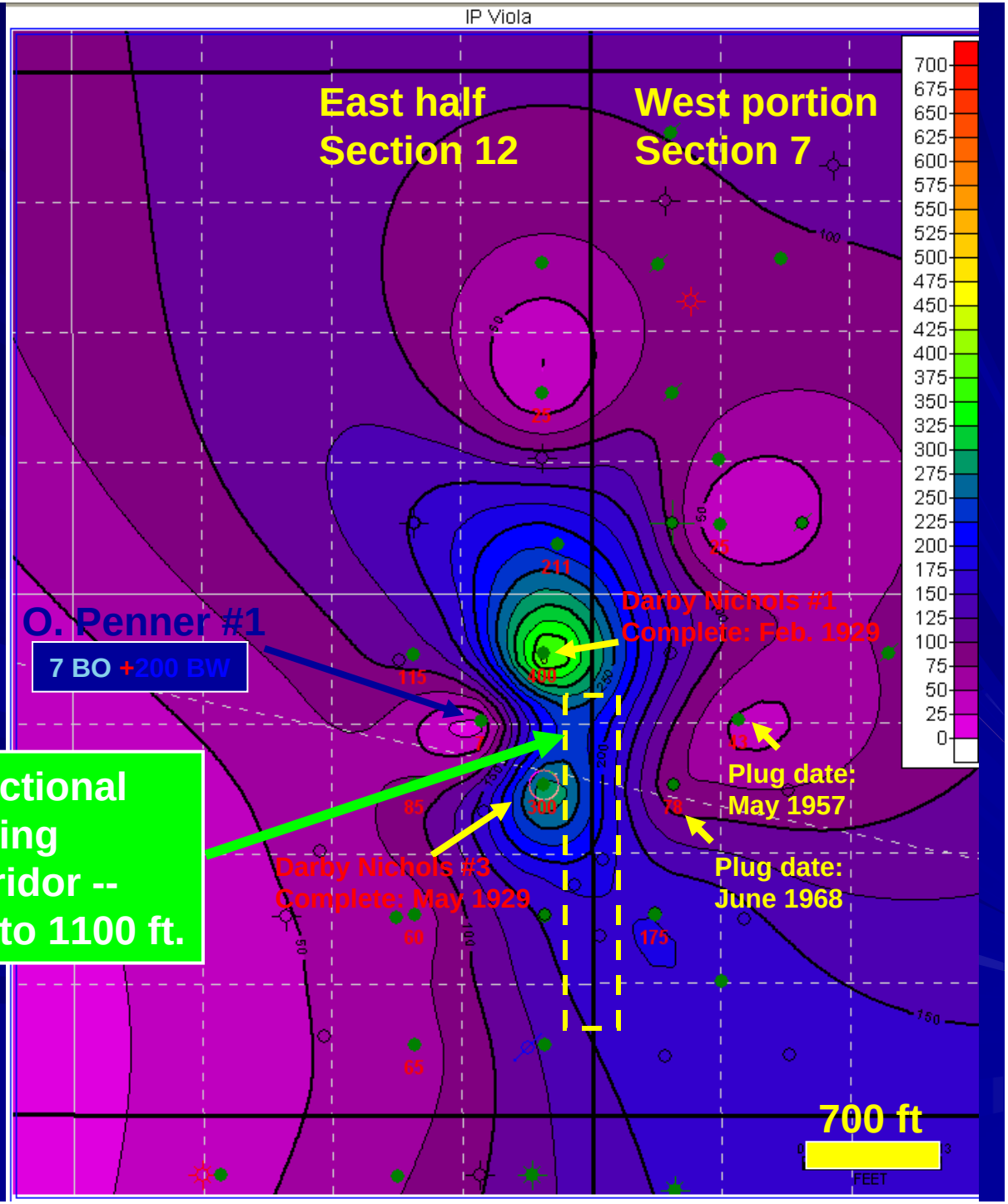


Top Viola: 2825 ft. (-1459 subsea)
TD: 2830 ft (5 ft below top of Viola Ls.)
Casing shoe: 2827 ft.

Circulate at 2828: trace dolomite
Circulate at 2830: coarsely crystalline Dolomite good porosity and even Oil show (est. 90% saturation)


FMTOPS - VIOLA [SCOUT] - viola
O. Penner #1
Structure map Top Viola
Directional Drilling
Corridor
(*fee acreage*
under lease
by AEC)
-1390
-1395
-1400
-1405
-1410
-1415
-1420
-1425
-1430
-1435
-1440
-1445
-1450
-1455
-1460
-1465
-1470
-1475
-1480
-1485
-1490
-1495
-1500
-1505
-1510
-1515
-1520
-1525
-1530
0
1,487
FEET

Initial Well Potentials for Viola Limestone as reported on scout tickets



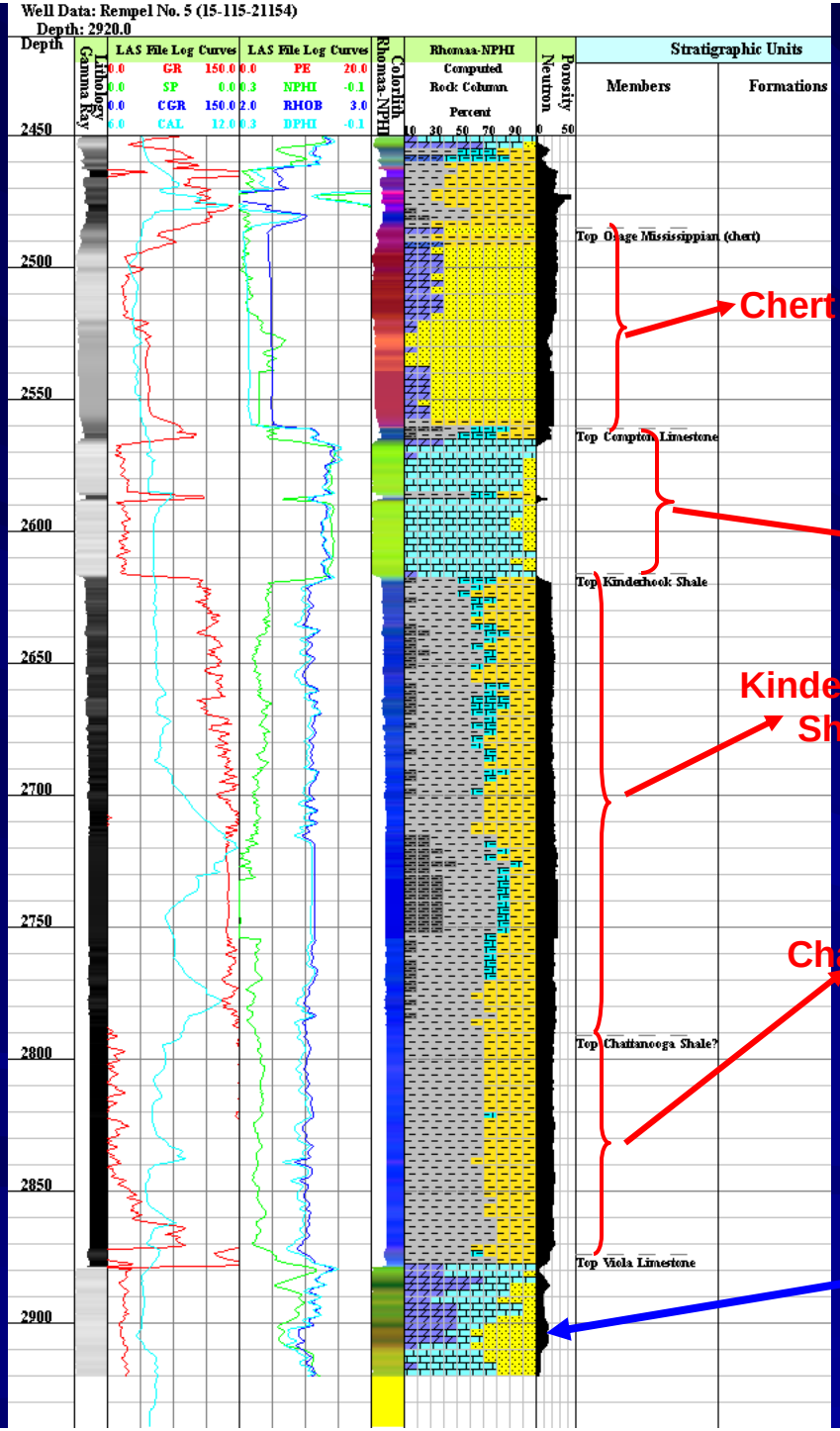
Vitals for Directional Drilling

- Optimal to drill new well with hybrid coiled tubing rig using latest directional drilling technology
  - More cost effective that re-entry of old well – fast drilling, precise
  - Avoid mechanical problems and possible fluid leaks in old casing which could junk new well or water-out lateral
  - Cost effective, short down hole assembly, LWD suite, near real-time data for logging and steering
  - Drill on existing well site right of way with low environmental impact, portable self contained system with small footprint and no or limited in ground pit construction
- Depth for target horizon: ~2900 ft.
- Kickoff point to begin lateral: ~2600 ft. in dense Mississippian Compton Ls., avoiding overlying water and gas in Mississippian 'chat'
- Build interval for lateral: estimate 200 to 250 ft vertical depth to achieve flat entry into pay
- Length of lateral: 600 to 1100 ft.
- Pay: Sucrosic dolomite with scattered dense chert nodules
- Porous interval: 10-25 ft.
- Overlying formation: hard Chattanooga shale

Viola Petrophysics

Petrophysical Properties (from Dave Newell)

- **Permeability**
  - **Normally between 15 to 55 md**
  - **Average 25 md**
  - **May be as 80 md (due to fractures)**
- **Porosity**
  - **Normally between 12 to 14%**



Detail log of the Rempel #5

- **Extending from top of the Missisippian chert to the Viola Limestone**

Chert

Compton Limestone (casing point for vertical Portion of well and depth for start build for lateral)

Kinderhook Shale

Build rate 20-40 degrees/100 ft
Vertical to horizontal in 200-250 ft (within hard shale)

Chattanooga Shale

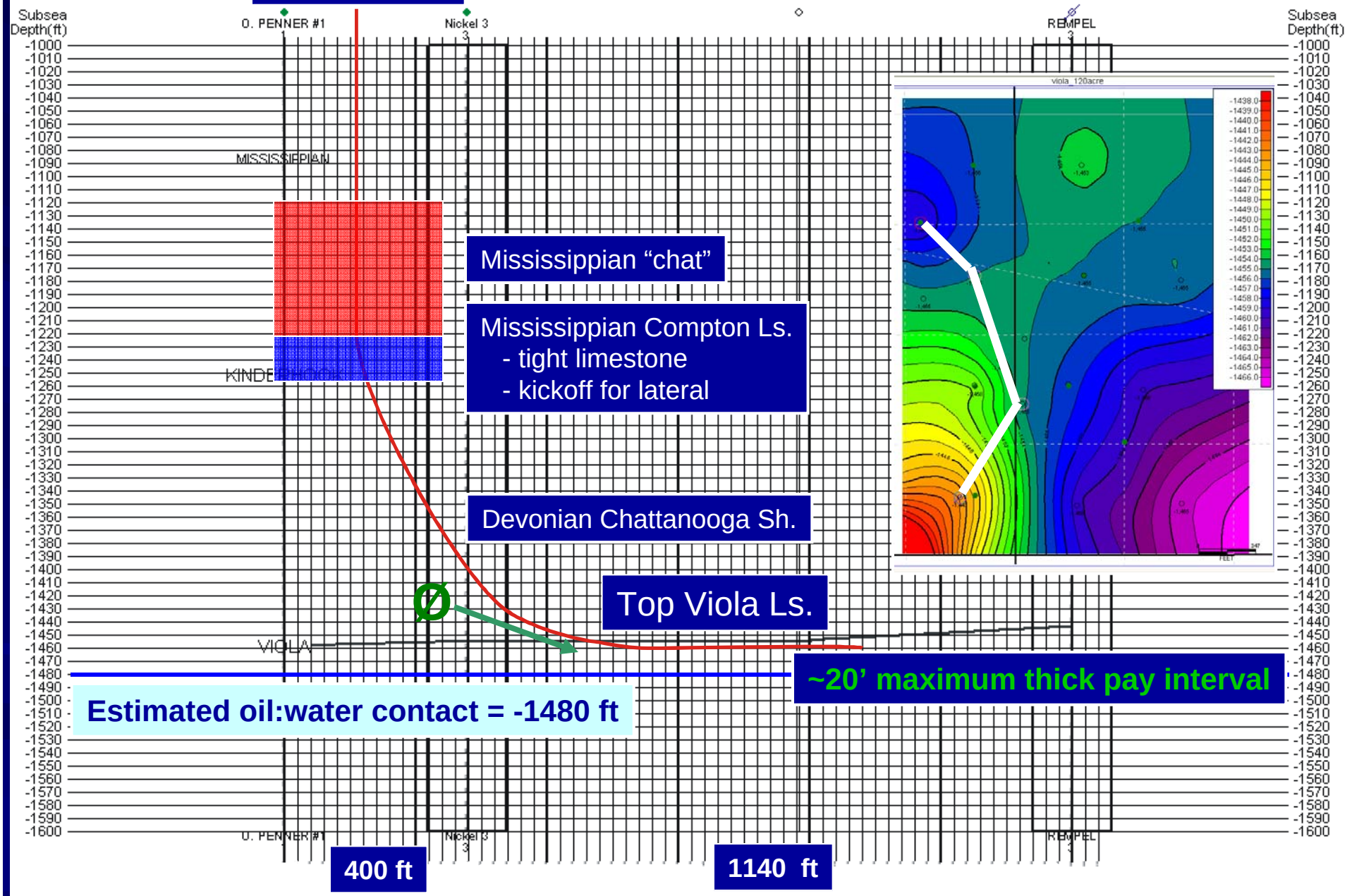
: Porous zone in the Viola Limestone

North

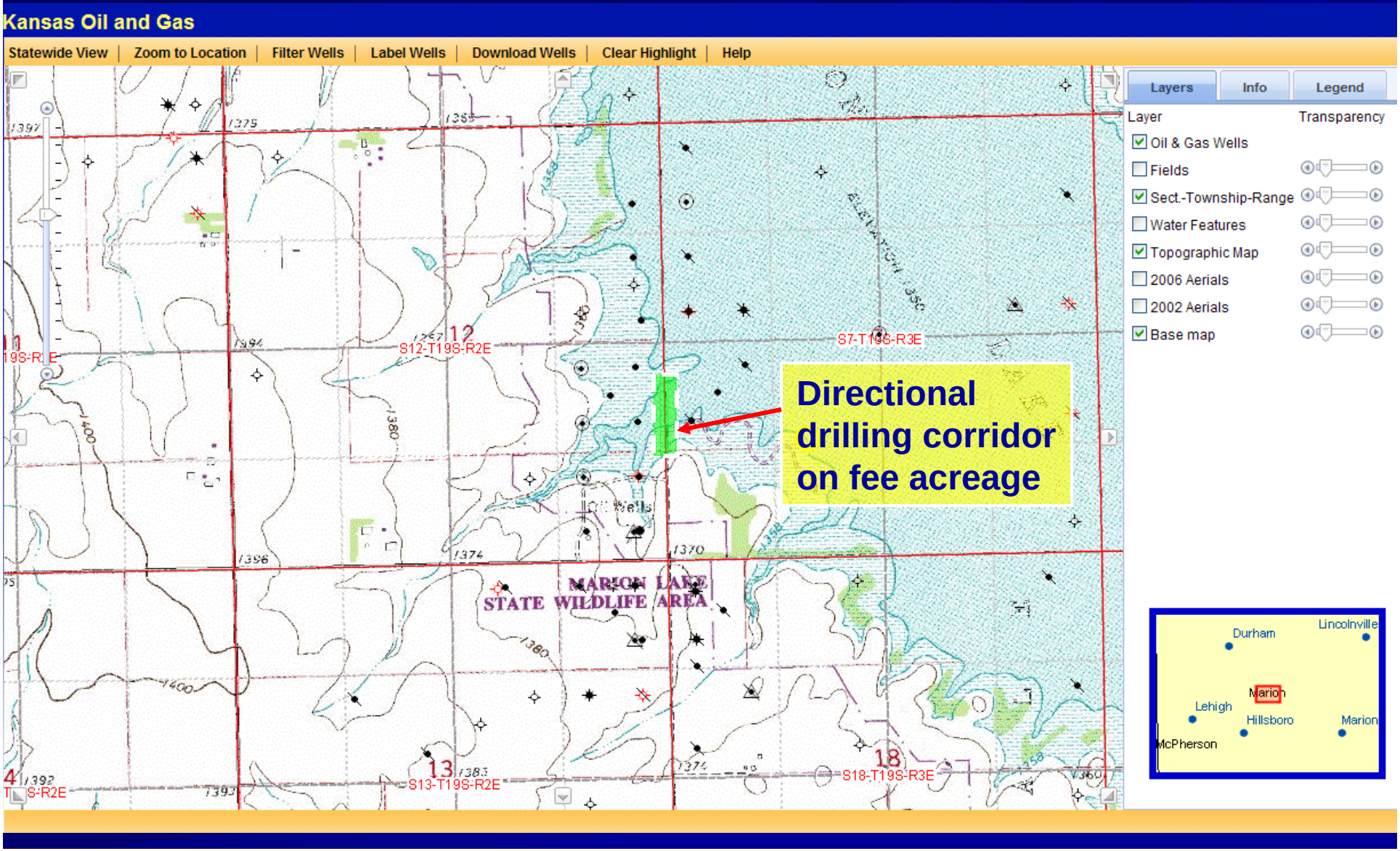
South

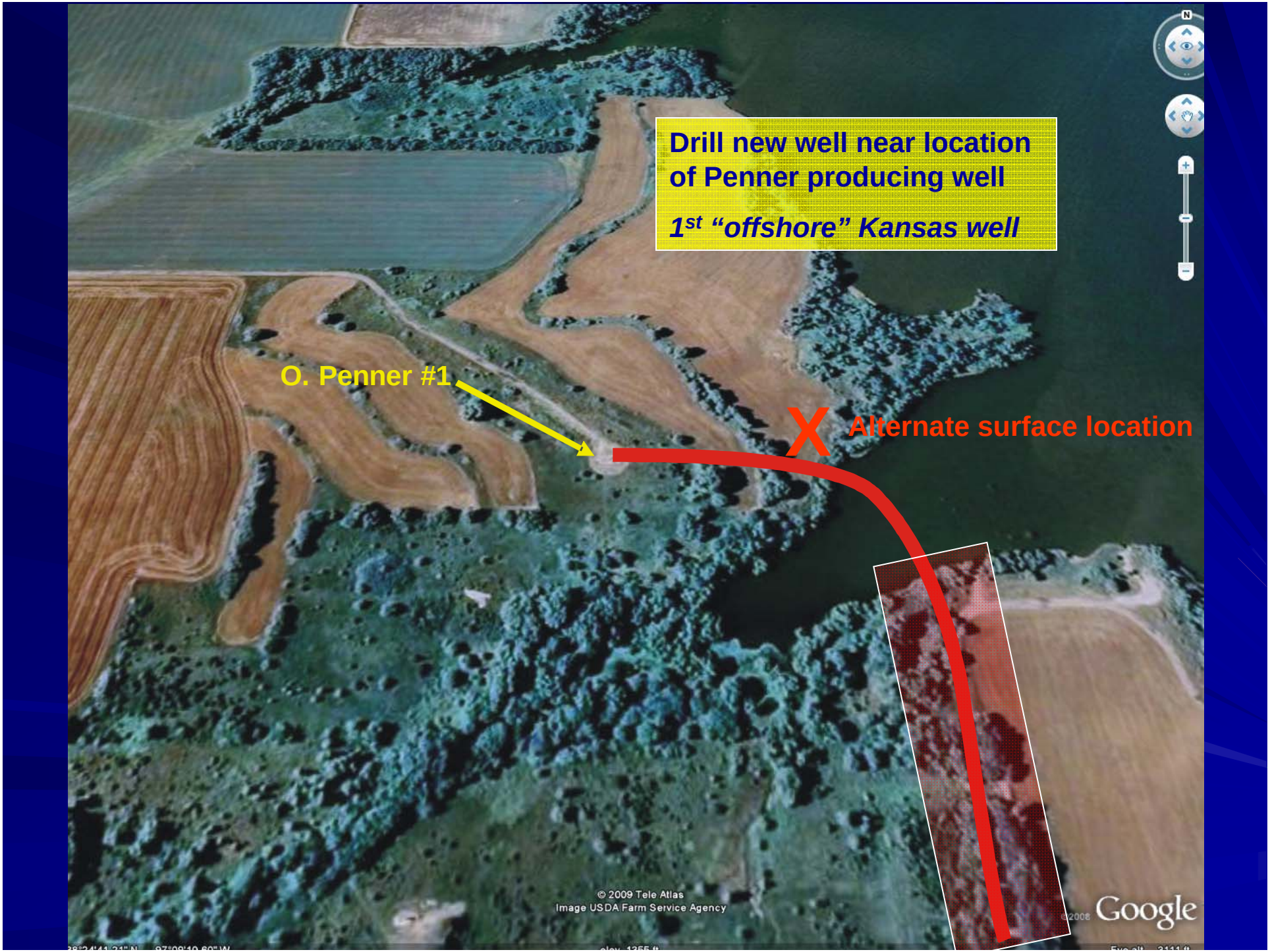
O. Penner #1

RPSEA-American Energies funded project.

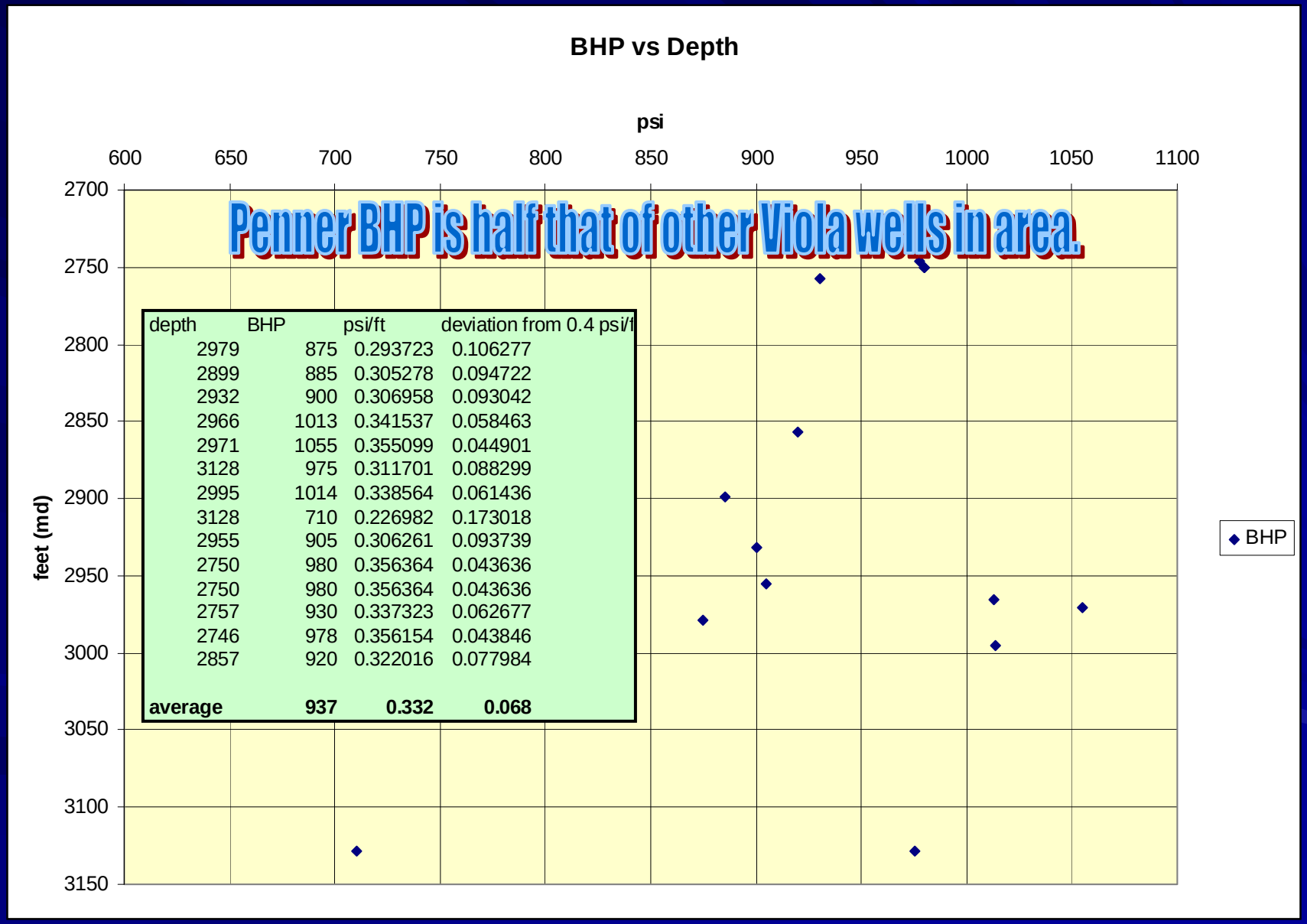


Hillsboro Field and surface topography with location of O. Penner and directional drilling corridor



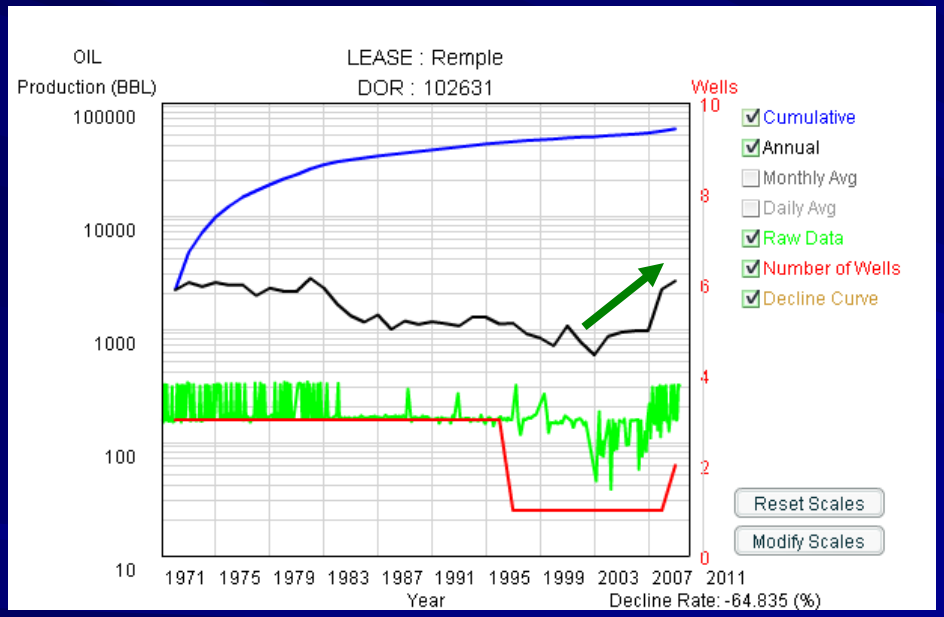

Drill new well near location of Penner producing well
1st "offshore" Kansas well
O. Penner #1
X
Alternate surface location
© 2009 Tele Atlas
Image USDA Farm Service Agency
Google

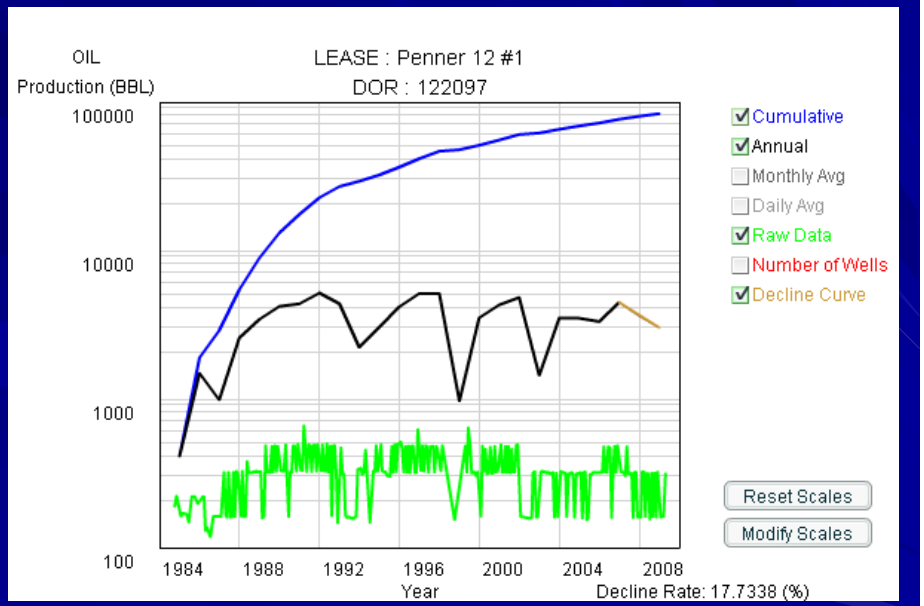
Bottom hole pressure from nearby wells



depth	BHP	psi/ft	deviation from 0.4 psi/ft
2979	875	0.293723	0.106277
2899	885	0.305278	0.094722
2932	900	0.306958	0.093042
2966	1013	0.341537	0.058463
2971	1055	0.355099	0.044901
3128	975	0.311701	0.088299
2995	1014	0.338564	0.061436
3128	710	0.226982	0.173018
2955	905	0.306261	0.093739
2750	980	0.356364	0.043636
2750	980	0.356364	0.043636
2757	930	0.337323	0.062677
2746	978	0.356154	0.043846
2857	920	0.322016	0.077984
average	**937**	**0.332**	**0.068**

Remple lease, adjacent to Penner on south
Increase in production in 2008 to 2660 bbls.
Similar elevation as Penner, off structure





Viola -1443
Remple #3 in se se se
Shut-in BHP: _____
Cumulative production: 59,000 bbls

Viola -1459
Penner #12-1 in c ne se
Shut-in BHP: ~ 400 psi??
Cumulative production: 84,000 bbls

Conclusions

- Low pressure encountered in Penner well suggest limited reservoir without a strong water drive
- Locations updip from Penner on crest of anticline may be drained by Penner well
- Gravity drainage of oil downdip from crest of structure may account for increase in oil production in Penner well and nearby lease to south
- Drilling lateral on crest of anticline east of the Penner well deemed unnecessary since oil is probably being drained by downdip wells.
- Moved on to study Unger Field