**RS2 Plan for offset to Riley-Surrat Well Number One, (RS-1)**

Objective: Confirm or deny speculation on presence or absence of oil in the pre-Paleozoic formations in the lease area near Ellis Chapel east of Wynne Ar. The RS-1 well was spuded Thursday June 21, 1952 and logged Tuesday June 24, 1952. Since then, speculation exist about presence of small quantities of oil coming from the well after June 20, 1952. To this day. no commercial production is obtained in eastern Arkansas from post-Paleozoic formations. But nearly all lands surrounding this lease are under mineral lease for drilling of Fayetteville Shale Gas, a secondary target to the upper zones considered here-in.

Basis:

A) First & Second Hand Eye Witness Reports

1. The original land owner reports a blow-out, getting oil on her chickens and residence, with considerable problems containing the blow-out. Another home owner across the road was reported to have stated oil blew over to his house front.
2. A second eye witness recalled getting married at Ellis Chapel on Friday June 20, 1952, returning on Saturday June 21, 1952 to see oil on trees adjacent to the well.
3. Second hand reports from a retired driller, observing the well in drilling, stating “the well was as good an oil well” as any he had seen in Illinois.
4. Another second hand report was that the well would likely make 25BBL/DY but the well site geologist recommended against completion due to low oil price and excessive transportation distances. Another report was the well tested 5 bbl/dy.
5. Filing papers with the AR O&G Commission were that the well was “dry and abandoned, drilled without surface casing”.

B) Geological Reports, Detailed by Armstrong, O&G Potential of the ME of NEA; oiljetpump.com

- 93 miles Southeast from location a 6foot paraffin saturated core submitted to Miss. state Geological survey from Bardwell #1 taken at 2264 just below Arkadelphia
- 64 miles Southwest an 8” section of oil saturated core recovered from Nacatoch formation
- Driller logs from Cross and St. Francis Counties report oil shows in pre-Paleozoic formations from Wilcox and lower. Twenty-one miles southwest from RS-1 a cretaceous well burned out of control in the 50’s as reported by several eye witness to author.
- analysis of electrical survey log made with 16” and 64” normal, 18’-8” lateral, and SP Sondes indicate 3 perspective zones in upper cretaceous formations. Analysis of the most perspective zone at 2220 feet indicates 12 bpd production if oil or 200mscfd if gas.

C) other wells in vicinity: Cross County Oil company drilled a total of 6 wells in 52-53 (RS-1, Brown 2.6mi. west pipe stuck in Paleozoic formation, Rhoades 7.7 miles North, Newman, 5.9miles w-nw, Smith, 18.4miles NE, Whitby, 11.5miles NE-N. In 1953 Seaboard drilled two core holes nearby, D 2.2 miles NE, pipe stuck in cretaceous, C 15.6 miles North. In early 60’s independents drilled, Tucker, 11.4 miles SE and Armstrong 10.1 miles east, CNG-Cockrell Carter1 was drilled to 14775 ft in 1979 and is the closest SW well, some 15.1 miles, S-SE from RS1.

D) Recent activity by Maverick, Wheatly 18 miles SW, and McCrory 15m W-NW, from RS-1 reported good Fayetteville Shale gas shows, and a completion in the Wheatly well. A review of electric & driller log in the McCrory well also placed 10 feet of pay in the Cretaceous. A Hallwood well 31 miles south & 2 miles west reports 600 feet of Fayetteville shale and a completion in 100 feet of Fayetteville, with additional wells planned by Hallwood.

Target Zones:

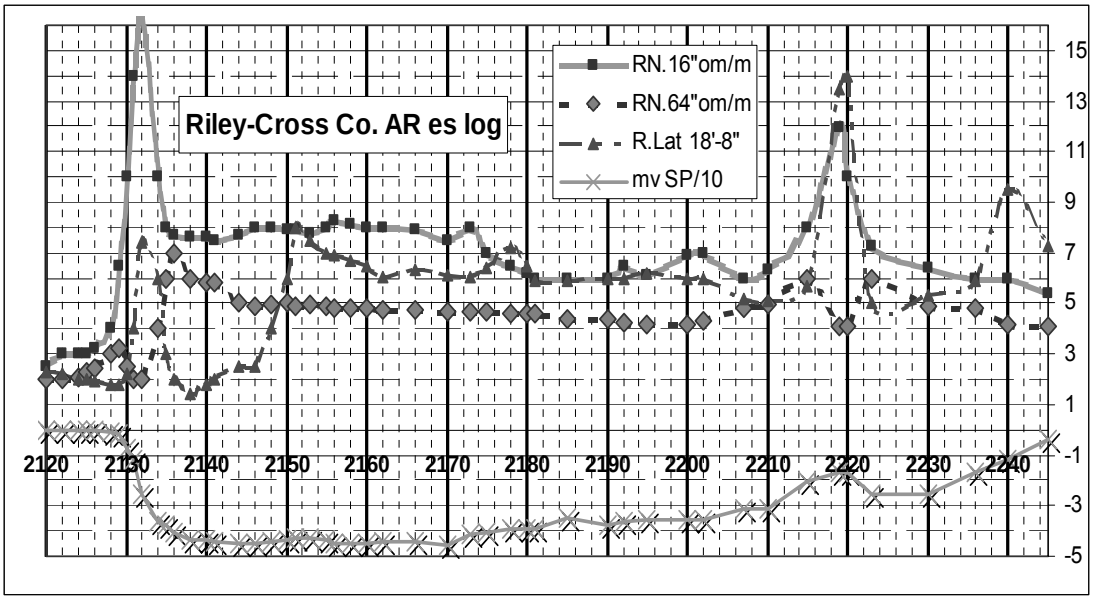
Based on drilling rate of 20ft/hour and time scale of witness report number 2, particular attention to cuttings between a depth of 500 and 1,500 feet for oil signs should be observed.

Based on analysis of ES tool data, formations below the limestone cap of the Nacatoch should have careful examination at depths of:

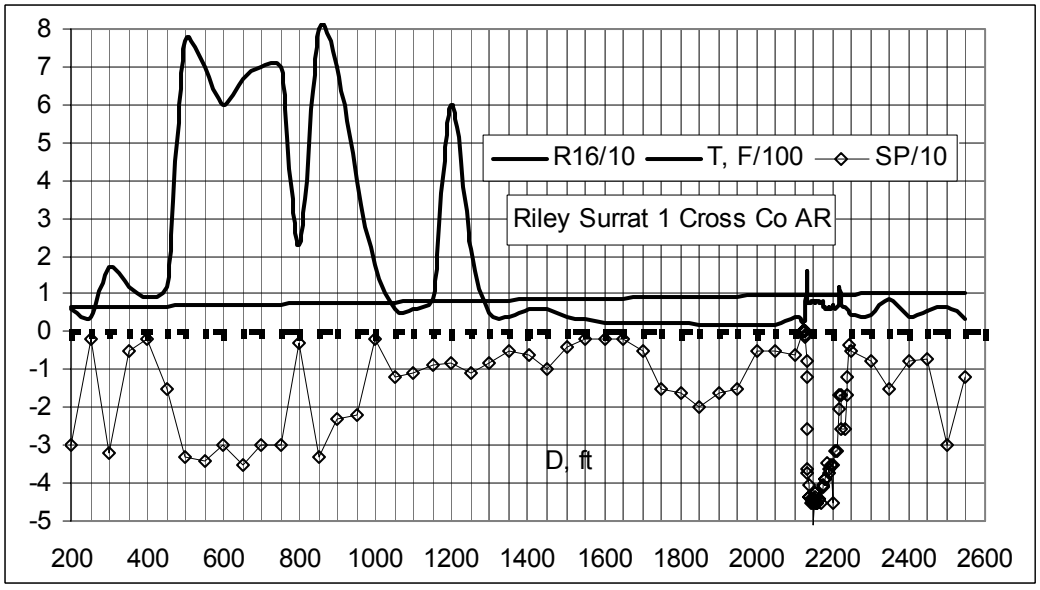
1. 2130 to 2140 feet, 2220-2230 ft, 2355-2365, 2465-2475, 2495-2505.

General Lithology & Implications for Electrical Survey Tools

The upper Cretaceous formations in the region are deposited below Midway Shales, lower Cenozoic era.. The Midway top, at base of Wilcox, for this well is estimated at 1590 feet and base at 2010. The Arkadelphia Marl top is called from ES log as the first separation between R16 and R64 with the top being 2010 feet of measured depth. The Nacatoch sand is taken to be just below a thin limestone cap at about 2130 feet. The SP curve of Nacatoch top is just slightly reduced (about +2.5MV suppression) between 2136 and 2142 feet. A possible result of either or both 1)shale; given reduced R16" values over the range or 2)hydrocarbon suppression.




The Nacatoch and other regional Mesozoic and Cenozoic sands typically occur as high porosity, modestly cemented sands, with porosity ranging from 20% to 40%, (25%-34% sidewall core porosity Engler1 18 miles S-SE of Riley) Such high porosity sands have *limited* invasion by mud filtrate. For this range of porosity, the invaded zone diameter to hole diameter ratio is about 2, 16 inches on a 8 inch hole. Thus resistivity of the short normal, R16, tool may approximate true formation value, investigation radius of 32 inches.




**Brief Review of ES tool Borehole Measurement Model**

The borehole model of ES tools uses the concept of flushed zone resistivity, invaded zone resistivity and true resistivity such that

F= $(Sw^2)Rt/Rw = (Si^2)Ri/Rz = (Sxo^2)Rxo/Rmf$. The basis for interpretation charts is a mixed zone salinity defined as 1/Rz= z/Rw+(1-z)/Rmf & z=por/2-.01 with an imaginary water wet mixed zone so at Sw=1 Rt/Rw=F=Ri/Rz or Ri=(Rt/Rw)Rz and Rxo=RiRmf/Rz. In the case of shale free HC zones, the accepted postulates are: $Sxi=(Sw)^{0.2}$ and $Swxo =(Sw)^{0.2}$. These models give water saturation by ratio as $Sw=[(Rxo/Rt)(Rw/Rmf)]^{0.625}$ and $Sw=[(Ri/Rt)(Rw/Rz)]^{0.625}$. The value of Rxo is typically measured using either a micro normal or MFL in fresh mud systems. Neither are available for RS1 well, but the invasion method can be applied, given a general knowledge of porosity. A detailed review of invaded zone ratio method is given by Armstrong, and can be downloaded from www.oiljetpump.com .

**Determination of Formation Factor**

Formation factor is inversely related to porosity. Two methods for calculation of F in unconsolidated sands are: Humble formula: $F=0.62/por^{2.15}$ (8.3 at 30% porosity) or Archie: $F=1/por^m$, m varies with cementation, 1.7 to 1.8 for moderately to slight cemented sands, (F =7.7 at 30% porosity m=1.7) use average of F=8 and for Rw=0.75 Ro for clean sand is 6. In this brackish water sand, a corrected log resistivity greater than 6, merit additional investigation for possible hydrocarbon accumulations.

**Tixler method for Sw with invaded zone resistivity**

For low to moderate porosity rocks, Tixler uses the following relationship:
Sw = (Ri/Rt)/(alog[$SP^2$*(-2/100000)-0.0108*SP-0.0118], with Ri/Rt determined from invasion charts for either normal combination of R16 and R64 or Short Normal, R16, and Lateral, R18.8". Invasion correction charts were regressed for values of R/Rmud <3 & >1, as follows:
Ri/Rm = 0.63+(R64/Rm)(0.57R64/Rm-6.7)-R16/Rm(0.49R16/Rm-7.08) & Rt/Rm =1.1R64/Rm-0.1
Ri/Rm=3.1+R18/Rm(0.51R18/Rm-5.95)+R16/Rm(4.26-0.1R16/Rm) & Rt/Rm =R18-8/Rm

**Nacatoch Formation Water Salinity in Cross County**

At the latitude of the Riley Surrat well, there is considerable variation of water salinity. For example, to the east of Crowley's ridge borings into the Nacatoch indicate a lower salinity. Water salinity by maps of the McNary-Nacatoch sand indicates a TDS between 3000 and 10,000 ppm or about 5000 ppm with resistivity on the order of one o-m/m. Water resistivity by SP curve indicates resistivity of about 1om/m at Nacatoch depth, or brackish water.

**Thickness of limestone cap: at 2130ft**

- Distance between Lateral peak at 2132 and "reflection peak" at 2151, AO is 18.7ft, t = [(2152-2132)-18.7] = 20-18.7=1.30ft.
- slope of reflection peak of Lateral at bottom = (2151-2148) =3ft.
- distance between LN "crater rims" at 2129 and 2136 for AM of 5.3ft is (2136-2129)-5.3 = 7.0-5.3 = 1.7ft.
- SN: top at 2 times Rs =2*3=6o-m/m which happens at 2129. Peak is approximately bottom of LS or 2132 and t= 2132-2129 =3ft.
- Average thickness by is (3+1.3+1.7+3)/4=2.2ft.

The most likely thickness of hard Lime cap is 2 feet, with a top at 2131 and base at 2133.

Indication of hydrocarbon below limestone cap are:

- high readings on 64" normal between 2136 and 2142;
- the resistivity trailer on Lateral between 2152 and 2162 with constant SP and 16" normal
- the rounded SP between 2132 and 2140;
- increase in SP between2138 and 2145,
- decrease in LN between2144 and 2166 in presence of constant SP and SN.

**Calculation Rw from SSP**

SSP is about -50, BHT is about 100F, or K=75, Rmf/Rwe = alog(-50/-75) = 4.7, estimate Rmf=0.67Rm = 4.5*.67= 3.0, Rwe=3/4.7= 0.64 & Rw=1.0 Fig 6-8 Pirson.

**Porosity and Sw**

Looking at the thin Limestone cap, depth of 2132ft: First correct the Short Normal for bed thickness, Rsn/Rs=16,5/2=8.3 (e+am)/am=40/16=2.5 cf=2.5 R16t= 2.5*16.5=41.3 (Fig 10-6 Guyod).
Next correct the lateral tool for bed thickness(Fig 6-19 Guyod) t/ao= 2/18.7=0.12, Ra/Rs= 7.5/2=3.75, cf=2.3 Rlt=2.3*7.5=17
Estimate porosity without invasion correction to see what the invasion effect may be. Ram/Rm = 41.3/4.5 = 9.2, and F=13, fig 7-13 Pirson. This indicates a high porosity and shallow invasion.

Use R16 and Lateral medium invasion chart (Fig 8.13 Pirson). R16c/Rm =41/4.5=9.2 and R18'c/Rm = 17/4.5=3.8, Ri/Rm=12 Rt/Rm=3.8 Ri/Rt= 12/3,8=3.2, F=17

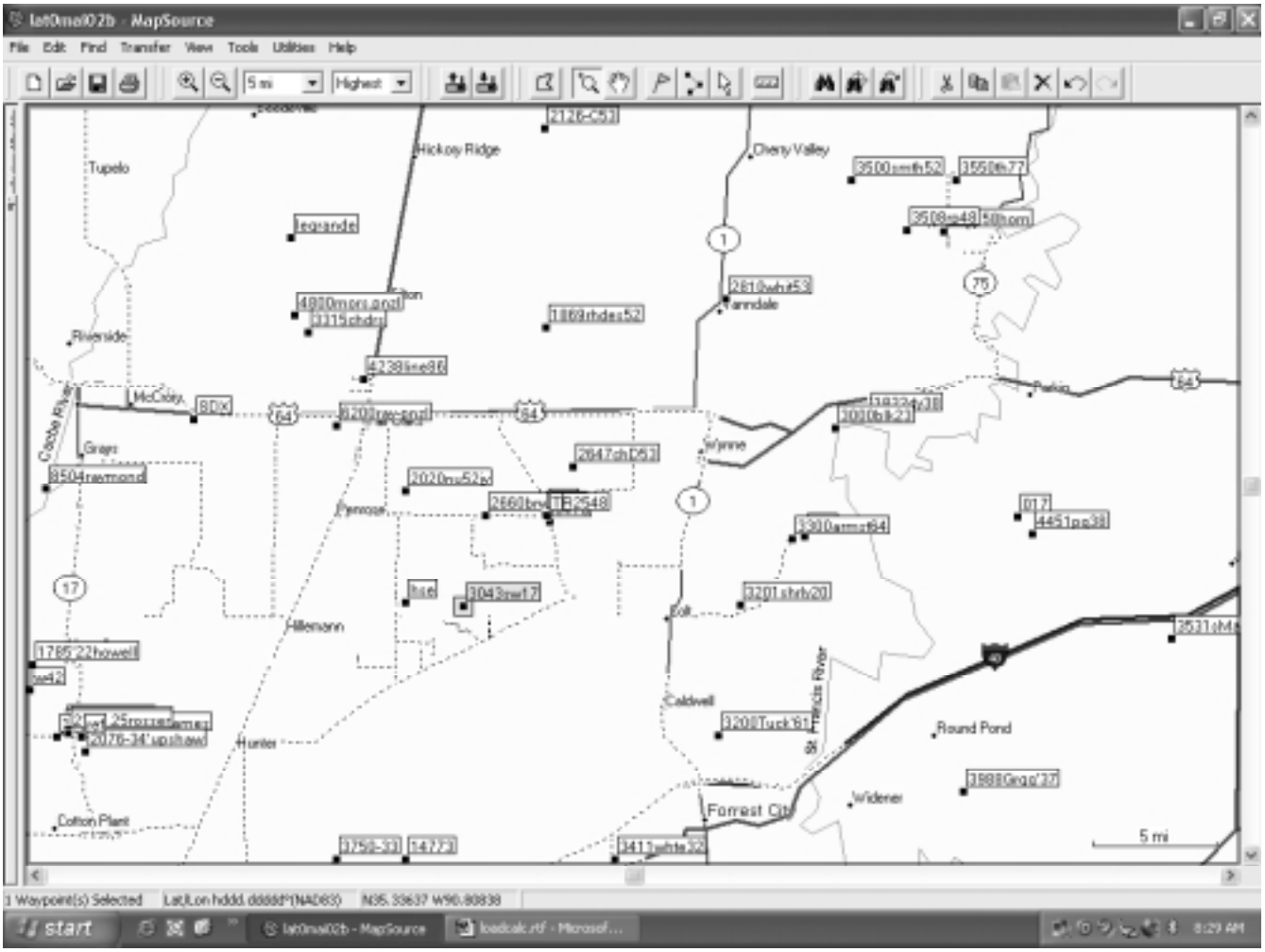
2140ft Rsn/Rm=7.9/4.5=1.8, SP=-45, Rln/Rm= 6/4.5=1.33, Ri/Rm=4, Rt/Rm=1.4, Ri/Rt=4/1.4=2.9

F=8*4.5/1.5 =24 (approximately 20% porosity)

2142 no correction for bed thickness, shallow invasion or high porosity
R64=5.7 R16=7.5 R64/Rm=1.3 R16/Rm=1.7 Ri/Rm=3.5 Rt/Rm=1.3 Ri/Rt=2.7 Sw=2.7/3=0.90

On this basis, the Limestone cap, depth of 2132ft does not have good possibilities of acting as a seal for hydrocarbon accumulations immediately below the limestone. This is indicated by the 90% water saturation at 2132feet depth, although quantitative analysis of curve shapes between 2136 and 2166 would indicate to the contrary.

Other Drillings in the Area are detailed in the below map.




The above map shows drillings in this area of Riley Surrat well 1, RS2548. Typically, well depth is given first, followed by abbreviated name and last is year of well drilling. This map does not show wells recently permitted and or drilled in this area for Fayetteville Shale Gas. The pace of permitting such wells would quickly out date any published map. FSG well information can be obtained of the AO&G records for Cross, Lee, St.Francis, and Woodruff counties. Not less than 12 wells were permitted in 2006.

Below is drillers log of the Engler 1 well, located 20.5 miles Southwest of RS-2. This drillers log should give some indication of formations to be encountered in drilling of RS-2. However, formation tops are likely to be encountered some 100 feet higher in RS-2.

**Engler 1 St Fran Co. driller log**

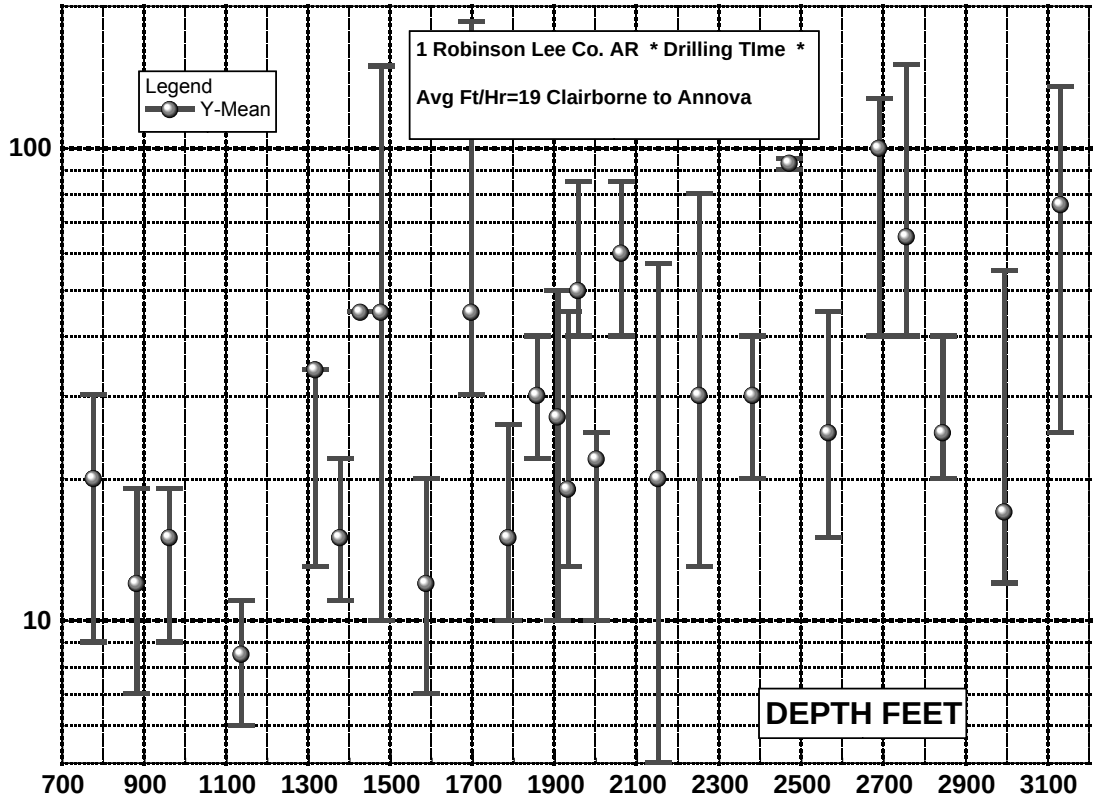
| | d, ft | description |
|---|---|---|
| Claiborne | 135 | ? Claiborne Top |
| | 260 | cement drilling plug |
| | 270 | gry flaky clay lignite trace |
| | 300 | gray grity fissle shale |
| | 330 | sandy cly |
| | 350 | fissle ligntic shle |
| | 360 | poorly fissle shale |
| | 370 | fg p/sort shly tight snd |
| | 395 | poorly fissile shle |
| | 440 | loose sand trace chert |
| | 460 | sandy clay |
| | 495 | loose sand trace lignite |
| | 510 | gritty brown clay. possible dead stain |
| | 555 | shly ss |
| | 565 | fissle ligntic shale |
| | 590 | siderite ss w/shly matrix |
| | 610 | plastic cly few sandy spots |
| | 650 | silt clay trace lignite |
| | 680 | poorly fissle shale |
| | 700 | shaly ss |
| | 705 | plastic clay |
| | 740 | shly ss |
| | 750 | poorly fissle shale |
| | 800 | vfg ss w/shly mtrx |
| | 810 | poorly fissle shle |
| | 925 | fg ss shly matrix |
| | 930 | plastic shle |
| | 1070 | fine2crse ss in shly mtrx |
| *Claiborne* | 1088 | CANE RIVER Frmn top |
| | 1100 | sandy shle w/gravel Top SW |
| | 1110 | plastic shale |
| | 1120 | gravelly snd |
| | 1143 | vfg ss w/shly mtrx |
| *Wilcox* | 1155 | formation top |
| | 1160 | med ss trc por |
| *Wilcox* | 1170 | med ss trc por dead stain |
| | 1300 | layered slty ss & shle |
| | 1385 | faint stain tight laminar ss |
| | 1405 | as 1385 w/thk lign at base |
| | 1435 | slty ss |
| | 1445 | thk lignite |
| | 1530 | angular ss trace por |
| | 1540 | slty ss |
| | 1590 | sandy shle w/ trc lign |
| *Midway* | 1645 | PORTERS CREEK fmnTop |
| | 1655 | sandy shle |
| | 1670 | slty ss |
| | 1700 | gritty shle |
| *Midway* | 2100 | fissle shle CLAYTON top |
| *Arkadelphia* | 2180 | calcrcs shle |
| | 2212 | calcrcs shle |
| | 2236 | shale |
| *Nacatoch* | 2240 | frmn top |
| | 2243 | drk gry sd |
| | 2246 | drk gry limy sd |
| | 2248 | drk gry limy sd |
| | 2250 | drk gry limy sd por=25% |
| | 2252 | drk gry limy sd 245 md |
| | 2256 | shaly sd 219md |
| | 2268 | drk gry limy sd 47md |
| | 2294 | gry sd 34%p 504md |
| 2347--55 | | gry shly med grnd ss |
| 2367-87 | | crse grained ss |
| 2387-2407 | | 2/2/2 gy.sh.ss/clc.ss/shly ss |
| | 2400 | ss w/layers dense l/s |
| Saratoga | 2510 | calc shale |
| | 2600 | calc shale |
| Marlbrook | 2690 | calc shale |
| | 2698 | calc snd pyrite |
| basal s/s | 2690 | ss w/quartz basal ss |
| Atoka | 2705 | Atoka |
| | 2725 | TD |

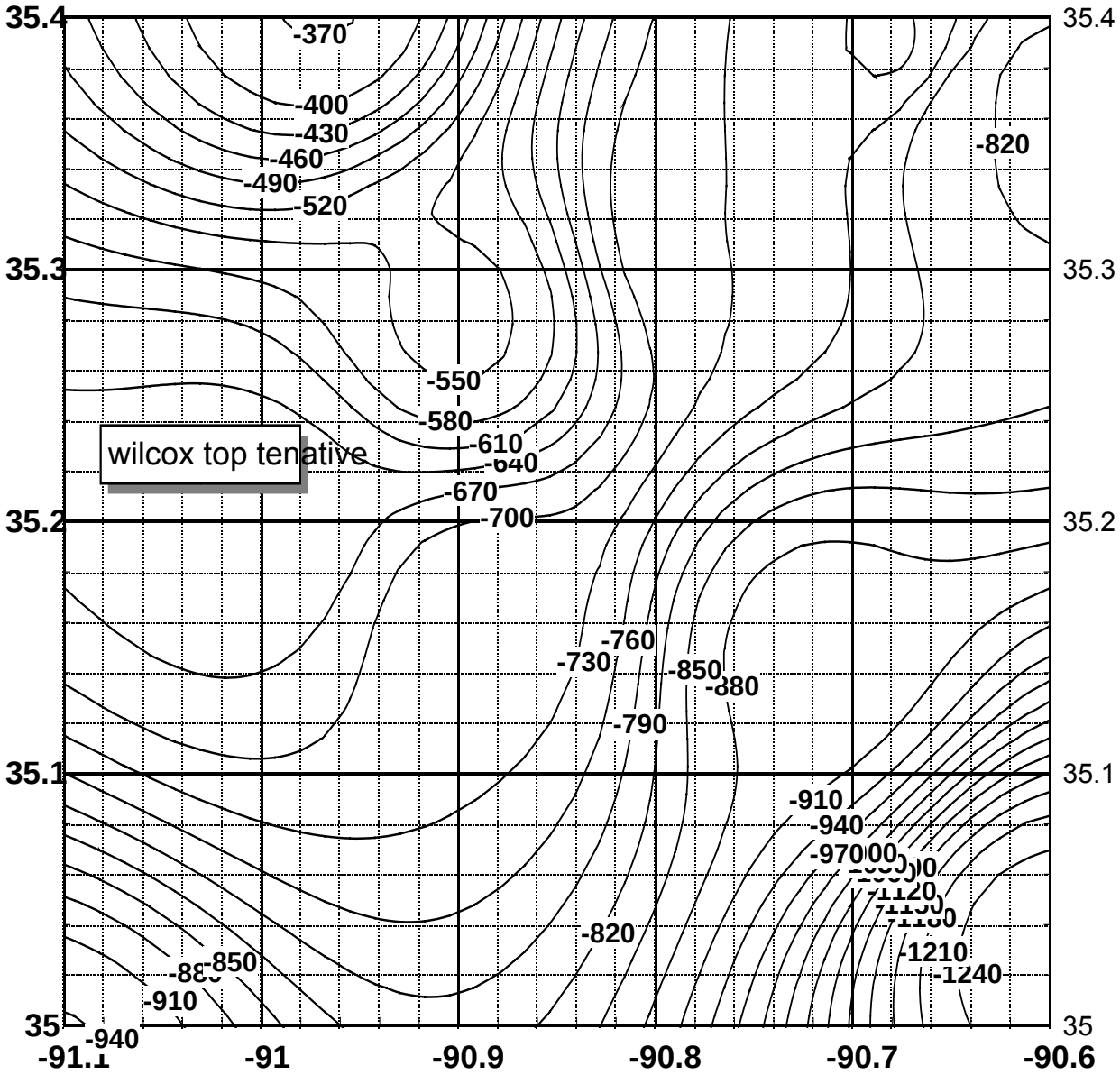
Start June 1947, complete Aug24 1947, 209Ft El datum, .Rmud 3.1/ 77F 127F bht

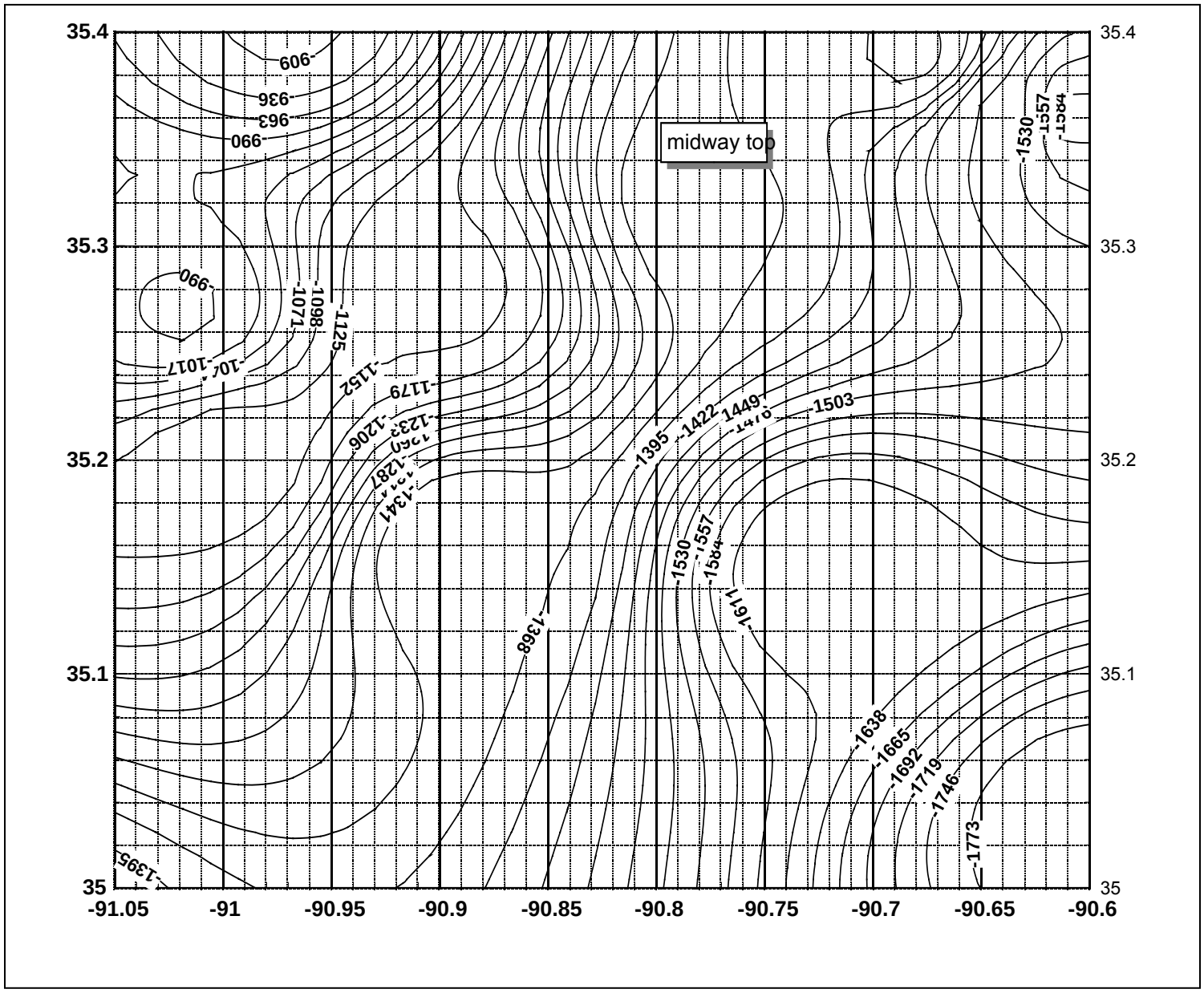
**No.1 LW Robinson Lee Co. AR**

Drilling time in feet/hr for the No.1 LW Robinson drilled 1948, in Lee Co. AR. Is provided below. The average drill time was 19 feet/hour. The median variance range was max time of 45f/h and minimum of 13f/h.

The called tops follow as: Unspecified alluvial at less than 250ft., Jackson 250 ft, Claiborne 740ft. Cain River member of Claiborne 1220ft, Wilcox 1430, Midway top Porter Creek member 2205, top Clayton member and base Porter creek Arkadelphia top 2725, Nacatoch top 2785, Saratoga Top 3075, Annova Marlbrook top 3175, Ozan top 3448 Atoka top 3545ft measured from elevation of 203ft. The well start was May10 and completed June 14 in Pennsylvanian Atoka at TD of 3643.




35.4
35.3
35.2
35.1
35
-91.1
-91
-90.9
-90.8
-90.7
-90.6
-370
-400
-430
-460
-490
-520
-550
-580
-610
-640
-670
-700
-730
-760
-790
-820
-850
-880
-910
-940
-970
-1120
-1210
-1240
-820
wilcox top tentative


midway top
35.4
35.3
35.2
35.1
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-91.05
-91
-90.95
-90.9
-90.85
-90.8
-90.75
-90.7
-90.65
-90.6
909
936
963
990
1017
1071
1098
1125
1152
1179
1206
1233
1260
1287
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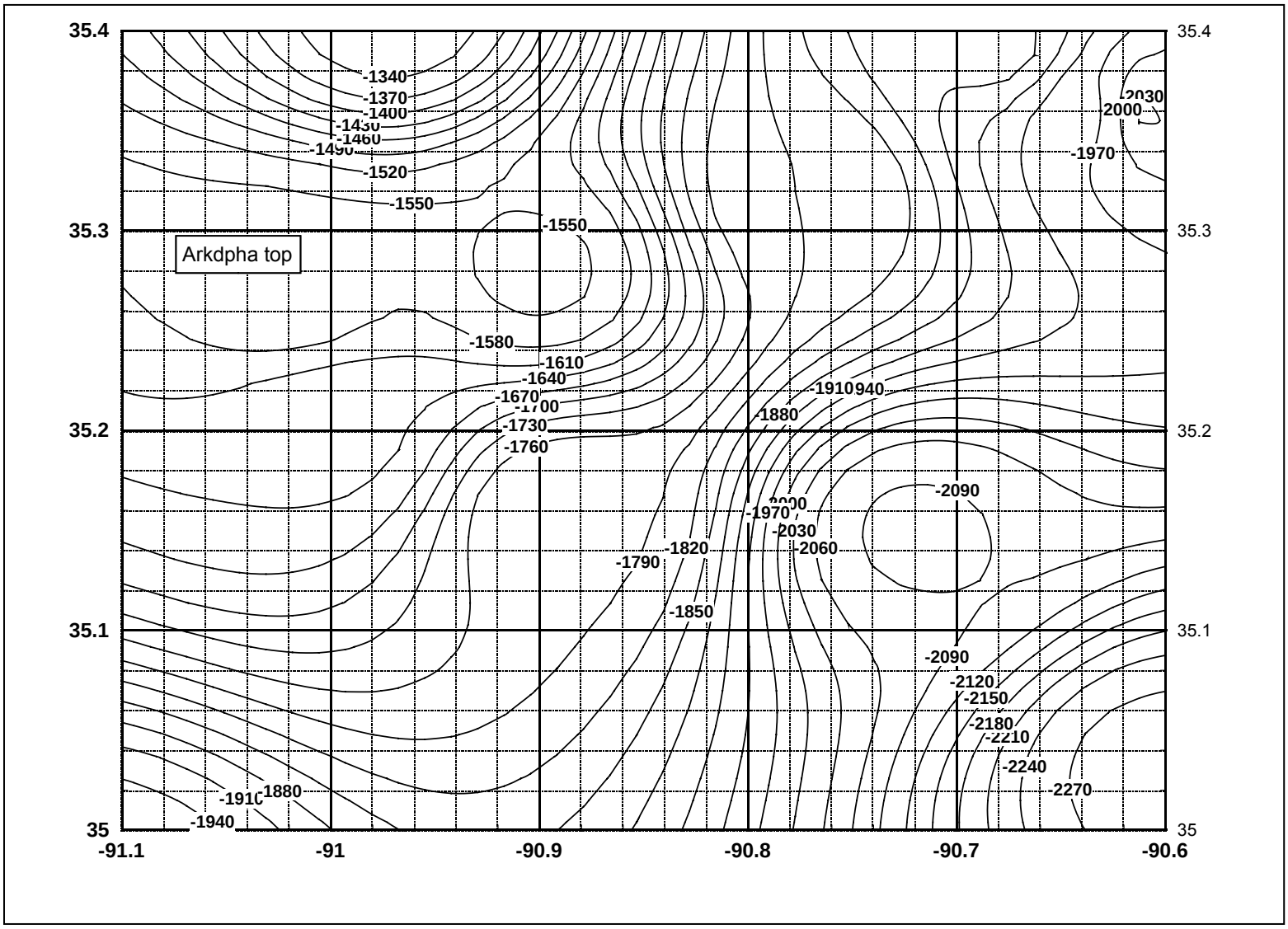
35.4
35.3
35.2
35.1
35
-91.1
-91
-90.9
-90.8
-90.7
-90.6
Arkdpha top
-1340
-1370
-1400
-1430
-1460
-1490
-1520
-1550
-1550
-1580
-1610
-1640
-1670
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-1880
-1910
-1940
-1970
-2000
-2030
-2060
-2090
-2090
-2120
-2150
-2180
-2210
-2240
-2270

Analysis by R64 Shallow Invasion Chart

| depth | 2138 | 2140 | 2142 | 2150 | 2160 | 2170 | 2184 |
|---|---|---|---|---|---|---|---|
| SP | -45 | -45 | -45 | -50 | -50 | -50 | -50 |
| Rm | 4.5 | 4.5 | 4.50 | 4.50 | 4.50 | 4.50 | 4.50 |
| R16 | 7.75 | 7.75 | 7.50 | 8.00 | 8.00 | 7.30 | 6.00 |
| R64 | 6.00 | 5.90 | 5.75 | 5.00 | 5.00 | 4.90 | 4.75 |
| R16/Rm | 1.72 | 1.72 | 1.67 | 1.78 | 1.78 | 1.62 | 1.33 |
| R64/Rm | 1.33 | 1.31 | 1.28 | 1.11 | 1.11 | 1.09 | 1.06 |
| Ri/Rm | 3.43 | 3.54 | 3.42 | 4.91 | 4.91 | 4.19 | 2.75 |
| Rt/Rm | 1.37 | 1.34 | 1.31 | 1.12 | 1.12 | 1.10 | 1.06 |
| Ri/Rt | 2.51 | 2.64 | 2.62 | 4.38 | 4.38 | 3.82 | 2.59 |
| Sw(SP) | 0.96 | 0.97 | 0.96 | 1.00 | 1.00 | 0.90 | 1.00 |

2150ft no correction for bed thickness, shallow invasion or high porosity
R64=5 R16=8 R64/Rm=1.1 R16/Rm=1.8 Ri/Rm=5 Rt/Rm=1.1 Ri/Rt=4.5 Sw>1

2160 ft no correction for bed thickness, shallow invasion or high porosity
R64=4.9 R16=8, divided by Rm=4.5 R64/Rm=1.1 R16/Rm=1.8 Ri/Rm=5 Rt/Rm=1.1 Ri/Rt=5/1.1=4.5 Sw>1

2170 no correction for bed thickness
R64=5 R16=7 R64/Rm=1.1 R16/Rm=1.6 Ri/Rm=4 Rt/Rm=1.1 Ri/Rt=3.6 Sw=3.6/3= 1.2

2184 use Lateral
R188=6 R16=6 R/Rm=1.7 Ri/Rm=1.7 Rt/Rm=1.7 Ri/Rt=1 Sw=1/1.7=0.59

Analysis by R18-8 Shallow Invasion

| Depth | 2132 | 2152 | 2155 | 2158 | 2165 | 2220 | 2502 |
|---|---|---|---|---|---|---|---|
| SP | -49 | -49 | -49 | -49 | -49 | -49 | -49 |
| Rs | 2.00 | | 7.75 | 8.00 | 7.00 | 5.00 | 4.30 |
| e | 4.00 | | 20.00 | 20.00 | 20.00 | 4.00 | 5.00 |
| e+am/am | 4 | | 16 | 16 | 16 | 4 | 4.75 |
| R16 | 16.50 | 8.00 | 8.00 | 8.10 | 8.00 | 12.00 | 6.70 |
| R16/Rs | 8.25 | | 1.0323 | 1.0125 | 1.143 | 2.4 | 1.56 |
| CF16 | 1.70 | 1.00 | 1.00 | 1.25 | 1.25 | 1.25 | 1.03 |
| R16c | 28.05 | 8 | 8 | 10.125 | 10 | 15 | 6.87 |
| R18.8 | 7.5 | 8 | 6.25 | 7 | 6.5 | 14 | 9.00 |
| R18/Rs | 3.75 | | 0.81 | 0.88 | 0.93 | 2.80 | 2.09 |
| e/AO | 0.21 | | 1.07 | 1.07 | 1.07 | 0.21 | 0.27 |
| CF18.8 | 2.6 | 1 | 1 | 1 | 1 | 1.75 | 1.25 |
| R18.8t | 19.5 | 8 | 6.25 | 7 | 6.5 | 24.5 | 11.25 |
| Rmud | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.5 | 4.50 |
| R16c/Rm | 6.23 | 1.78 | 1.78 | 2.25 | 2.22 | 3.33 | 1.53 |
| R188c/Rm | 4.33 | 1.78 | 1.39 | 1.56 | 1.44 | 5.44 | 2.50 |
| Ri/Rm | 12.00 | 1.39 | 3.08 | 4.16 | 4.54 | 12.00 | 2.91 |
| Rt/Rm | 4.33 | 1.78 | 1.39 | 1.56 | 1.44 | 3.40 | 2.40 |
| Ri/Rt | 2.77 | 0.78 | 2.22 | 2.67 | 3.14 | 3.53 | 1.21 |
| Sw(SP) | 0.94 | 0.27 | 0.75 | 0.91 | 1.07 | 1.20 | 0.41 |
| F | 20.84 | 4.69 | 6.72 | 8.25 | 9.08 | 20.61 | 4.54 |
| Rt | 19.5 | 8 | 6.25 | 7 | 6.5 | 15.3 | 10.80 |
| Sw | 1.03 | 0.77 | 1.04 | 1.09 | 1.18 | 1.16 | 0.65 |
| Sw(R16) | 0.64 | 1.11 | 2.50 | 1.85 | 1.69 | 0.64 | 2.64 |
| Rz | 2.38 | 1.92 | 2.08 | 2.15 | 2.19 | 2.38 | 1.91 |
| F(Rz) | 22.7 | 3.3 | 6.7 | 8.7 | 9.3 | 22.7 | 6.87 |
| Rxo | 58.1 | 8.3 | 17.1 | 22.3 | 24.0 | 58.1 | 17.6 |
| bbl/acft | -127 | 1557 | -97 | -299 | -506 | -354 | 600 |
| Rw | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| PSP | -49 | -49 | -49 | -49 | -49 | -22 | -22 |
| alpha | 1 | 1 | 1 | 1 | 1 | 0.449 | 0.449 |
| Swshale | 0.65 | 0.75 | 0.89 | 0.87 | 0.88 | 0.29 | 0.54 |

Another method of analysis is by Archie's' similar rock method, which stated in math terms is by ratio:

$S^2$ =FRw/Rt if F & Rz are identical between two sections and section a is at unity water saturation gives: $(1*Rt)_a = (S^2*Rt)_b$ => $S_b = \sqrt{(R_a/R_b)}$, another guideline when using Lateral curve is to choose a section where the correction for bed shoulder effects and invasion are similar. For this reason the section at 2132 is selected, where R18-8 is 7.75.

For section 2220 then $S \leq \sqrt{(7.75/14)} \leq 0.744$

At depths 2355 2502, $S \leq \sqrt{(7.75/9)} \leq 0.93$

When Formation factors are not identical the ratio of F may be considered as simply $Si^2$ =FRz/Ri => $(RiSi^2/F)a = Rz = (RiSi^2/F)b$

Which gives $(Ri1^2/F)a = Rz = (Ri0.7^2/F)b$ Fa/Fb = 2Ria/Rib and using section at 2132 as the "a" section then 2*16.5/Rib =Fa/Fb and

$(1*Rt/F)_a = S^2*Rt/F)_b$=> $S_b = \sqrt{(R_a/R_b)(Fb/Fa)} = \sqrt{(R_a/R_b)(Rib/33)}$

At 2220 then $S \leq \sqrt{(7.75/14)(11.75/33)} \leq 0.44$

At depth 2355, then $S \leq \sqrt{(7.75/9)(9.25/33)} \leq 0.49$

At depth 2502,then $S \leq \sqrt{(7.75/9)(6.75/33)} \leq 0.42$

| Analysis by | Pirson | Method |
|---|---|---|
| MD | 2220 | 2502 |
| SSP | -49 | -49 |
| ASP | -22 | -22 |
| Rm | 4.9 | 4.9 |
| R16 | 12 | 6.7 |
| R18 | 14 | 9 |
| e | 4 | 5 |
| CF-R18 | 1.75 | 1.25 |
| CF-R16 | 1.25 | 1.03 |
| Ro=R18t | 24.5 | 11.3 |
| Rxo=R16t | 15 | 6.9 |
| Rw | 1 | 1 |
| alpha | 0.45 | 0.45 |
| Rmf/Rwa | 1.96 | 1.96 |
| Rwa | 1.42 | 1.42 |
| Fa | 5.38 | 2.47 |
| Rmf/Rw | 4.50 | 4.50 |
| Fa/Ft | 0.44 | 0.44 |
| Ft | 12.31 | 5.66 |
| Sw | 0.71 | 0.71 |
| Sh | 0.37 | 0.37 |
| Swm | 0.34 | 0.34 |
| Soil | 0.29 | 0.29 |

Analysis by R64 Shallow Invasion Chart

| depth | 2137 | 2138 | 2140 | 2142 | 2150 | 2160 | 2170 | 2180 | 2184 |
|---|---|---|---|---|---|---|---|---|---|
| SSP | -50 | -50 | -50 | -50 | -50 | -50 | -50 | -50 | -50 |
| Rm | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 | 4.90 |
| R16 | 7.80 | 7.75 | 7.75 | 7.50 | 8.00 | 8.00 | 7.30 | 6.00 | 6.00 |
| R64 | 7.00 | 6.00 | 5.90 | 5.75 | 6.00 | 5.00 | 4.90 | 4.60 | 4.75 |
| R16/Rm | 1.59 | 1.58 | 1.58 | 1.53 | 1.63 | 1.63 | 1.49 | 1.22 | 1.22 |
| R64/Rm | 1.43 | 1.22 | 1.20 | 1.17 | 1.22 | 1.02 | 1.00 | 0.94 | 0.97 |
| Ri/Rm | 2.22 | 3.23 | 3.34 | 3.22 | 3.51 | 4.63 | 3.95 | 2.77 | 2.59 |
| Rt/Rm | 1.47 | 1.25 | 1.22 | 1.19 | 1.25 | 1.02 | 1.00 | 0.93 | 0.97 |
| Ri/Rt | 1.51 | 2.59 | 2.73 | 2.71 | 2.82 | 4.52 | 3.95 | 2.97 | 2.68 |
| Rt | 7.21 | 6.11 | 6.00 | 5.84 | 6.11 | 5.01 | 4.90 | 4.57 | 4.74 |
| Ri | 10.90 | 15.84 | 16.38 | 15.80 | 17.22 | 22.67 | 19.34 | 13.55 | 12.71 |
| Rxo | 13.63 | 20.54 | 21.32 | 20.69 | 22.32 | 30.85 | 26.48 | 18.91 | 17.56 |
| Rw | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 |
| Rz | 2.23 | 2.15 | 2.14 | 2.13 | 2.15 | 2.05 | 2.04 | 2.00 | 2.02 |
| Rmf | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 | 2.79 |
| Sw(SP) | 0.50 | 0.86 | 0.91 | 0.90 | 0.94 | 1.50 | 1.31 | 0.99 | 0.89 |
| Sw(A) | 0.99 | 0.99 | 0.99 | 0.99 | 0.99 | 1.00 | | | |