

State Geological Survey
WICHITA BRANCH

CAPILLARY PRESSURE TEST

for

ANADOR RESOURCES

Schultz 1-34

Wildcat

34 - 19 - 19W

CORE LABORATORIES, INC.



Reply To:
10703 E. BETHANY DRIVE
AURORA, COLORADO 80014

June 26, 1981

Anador Resources
5700 South Quebec, Suite 320
Englewood, Colorado 80111

Attention: Mr. Dave Dudzik

Subject: Capillary Pressure Test
Schultz 1-34
Wildcat
Rush County, Kansas
Sec 34 T19S R19W
File Number: 10381028

Gentlemen:

At the request of Mr. Dave Dudzik, Core Laboratories performed multi-point mercury injection capillary pressure test on core plug samples from the subject well.

Core plugs, one inch in diameter, were obtained from well core material using a diamond core bit with tap water as a bit coolant and lubricant. Each core plug was extracted of hydrocarbons with toluene, leached of salt with methyl alcohol and dried. Air permeabilities, Boyle's law gas expansion porosities and grain densities were determined on the clean and dry core plugs. This routine data is presented on Page 1.

Multi-point mercury injection capillary pressure tests were performed on the cleaned and dried core plugs, using injection pressures ranging from 3 psia to 2000 psia. These results are presented in tabular form on Pages 2 through 5 and in graphical form on Pages 6 through 13.

It has been a pleasure working with Anador Resources on this study. Should you have any questions pertaining to these test results or if we can be of further assistance, please do not hesitate to contact us.

Very truly yours,

CORE LABORATORIES, Inc.

A handwritten signature in dark ink, appearing to read "Harold W. Hunt".
Harold W. Hunt
District Manager

HWH:EPT
6 cc addressee

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering
Aurora, Colorado 80014

COMPANY: Anador Resources LOCATION: Sec 34 T19S R19W PAGE 1 OF 13
WELL: Schultz 1-34 FORMATION: As Noted Below FILE: 10381028

ROUTINE DATA

<u>SAMPLE NUMBER</u>	<u>DEPTH FEET</u>	<u>PERMEABILITY Md., Air</u>	<u>POROSITY PERCENT</u>	<u>GRAIN DENSITY</u>	<u>LITHOLOGY</u>
Krider Formation					
12	2288-89	7.4	17.3	2.73	Dolo, lt gy v/fnly xln-gran
23	2299-00	2.3	17.4	2.77	Ls, gry gran-fnly xln dolo ool foss sl/slty
43	2319-20	8.2	24.5	2.83	Dolo, gry gran-fnly xln calc slty pp vug
Winfield Formation					
74	2353-54	0.13	30.7	2.72	Ls, buff gran-fnly xln v/ool sl/slty pp-1mm vt
Towanda Formation					
118	2400-01	70	23.4	2.87	Dolo, buff gran-fnly xln anhy calc pp vug
129	2411-12	12	24.6	2.80	Dolo, buff gran-fnly xln anhy calc pp-1mm vug
140	2425-26	0.89	16.2	2.72	Ls, buff gran-fnly xln
Fort Riley Formation					
151	2436-37	3.0	21.9	2.79	Ls, buff gran-fnly xln sl/ool pp-1mm vug

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Petroleum Reservoir Engineering
Aurora, Colorado 80014

COMPANY: Anador Resources LOCATION: Sec 34 T19S R19W PAGE 2 OF 13
WELL: Schultz 1-34 FORMATION: Krider FILE: 10381028

MERCURY INJECTION CAPILLARY PRESSURE DATA

SAMPLE NUMBER:	12	23	43
SAMPLE DEPTH, Feet:	2288-89	2299-00	2319-20
PERMEABILITY, Md., Air:	7.4	2.3	8.2
POROSITY, Percent:	17.3	17.4	24.5
GRAIN DENSITY, Gm/cc:	2.73	2.77	2.83

Injection Pressure
PSIA

Wetting Phase Saturation, Percent Pore Space

3	100	100	100
6	100	100	100
9	100	100	100
12	100	100	100
15	100	100	100
18	100	100	100
21	100	100	100
24	100	100	100
27	100	100	100
30	100	100	99.0
40	93.5	100	87.7
60	81.7	100	67.0
80	73.4	93.0	54.7
100	67.7	83.7	47.3
200	45.4	50.5	31.0
300	37.4	34.9	25.6
500	29.7	23.2	21.4
750	25.0	17.9	18.8
1000	22.3	14.6	16.7
1250	20.1	12.8	14.8
1500	18.9	11.5	13.5
1750	17.8	10.9	12.3
2000	16.7	10.4	11.2

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Petroleum Reservoir Engineering
Aurora, Colorado 80014

COMPANY: Anador Resources LOCATION: Sec 34 T19S R19W PAGE 3 OF 13
WELL: Schultz 1-34 FORMATION: Winfield FILE: 10381028

MERCURY INJECTION CAPILLARY PRESSURE DATA

SAMPLE NUMBER: 74
SAMPLE DEPTH, Feet: 2353-54
PERMEABILITY, Md., Air: 0.13
POROSITY, Percent: 30.7
GRAIN DENSITY, Gm/cc: 2.72

Injection Pressure
PSIA

Wetting Phase Saturation, Percent Pore Space

3	100
6	100
9	100
12	100
15	100
18	100
21	100
24	99.3
27	98.1
30	96.6
40	91.2
60	83.4
80	77.3
100	71.6
200	58.8
300	50.3
500	36.1
750	23.7
1000	16.7
1250	13.8
1500	11.7
1750	10.0
2000	8.8

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering
Aurora, Colorado 80014

COMPANY: Anador Resources LOCATION: Sec 34 T19S R19W PAGE 4 OF 13
WELL: Schultz 1-34 FORMATION: Towanda FILE: 10381028

MERCURY INJECTION CAPILLARY PRESSURE DATA

SAMPLE NUMBER:	118	129	140
SAMPLE DEPTH, Feet:	2400-01	2411-12	2425-26
PERMEABILITY, Md., Air:	70	12	0.89
POROSITY Percent:	23.4	24.6	16.2
GRAIN DENSITY, Gm/cc:	2.87	2.80	2.72

Injection Pressure
PSIA

Wetting Phase Saturation, Percent Pore Space

3	100	100	100
6	100	100	100
9	100	100	100
12	98.5	100	100
15	95.4	100	100
18	89.5	100	100
21	83.2	100	100
24	76.1	100	100
27	69.7	100	100
30	64.0	100	100
40	46.9	91.1	100
60	30.2	63.2	100
80	21.1	47.4	100
100	16.3	38.3	100
200	9.1	24.7	83.5
300	7.5	21.0	41.0
500	6.2	16.6	21.8
750	5.5	13.4	16.2
1000	5.2	11.8	14.0
1250	4.9	10.9	12.0
1500	4.7	10.2	11.1
1750	4.4	9.6	10.3
2000	4.2	9.2	9.5

CORE LABORATORIES, INC.

Petroleum Reservoir Engineering
Aurora, Colorado 80014

COMPANY: Anador Resources LOCATION: Sec 34 T19S R19W PAGE 5 OF 13
WELL: Schultz 1-34 FORMATION: Fort Riley FILE: 10381028

MERCURY INJECTION CAPILLARY PRESSURE DATA

SAMPLE NUMBER: 151
SAMPLE DEPTH, Feet: 2436-37
PERMEABILITY, Md., Air: 3.0
POROSITY, Percent: 21.9
GRAIN DENSITY, Gm/cc: 2.79

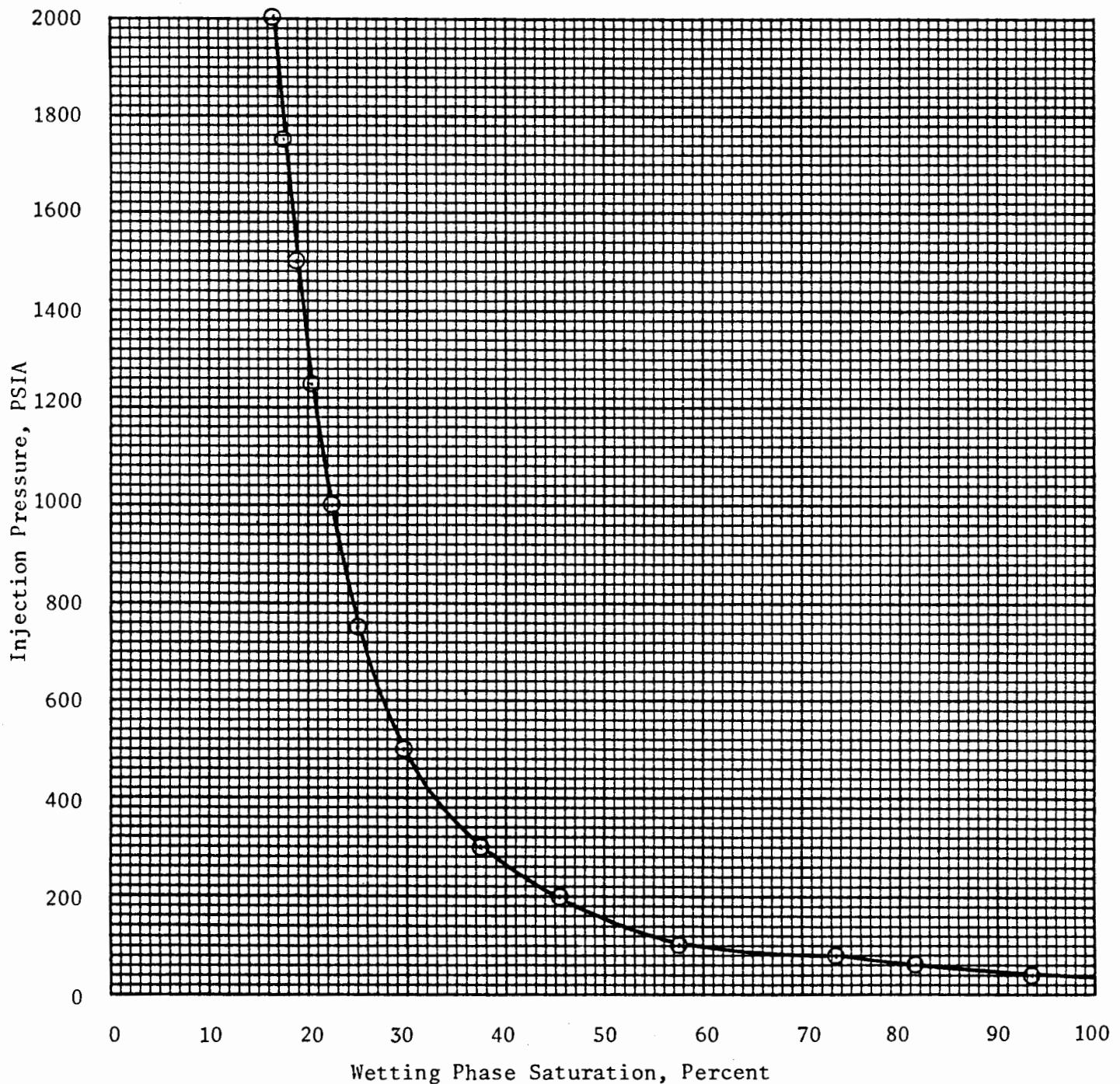
Injection Pressure
PSIA

Wetting Phase Saturation, Percent Pore Space

3	100
6	100
9	100
12	96.2
15	91.6
18	88.1
21	84.4
24	81.3
27	78.8
30	76.6
40	70.4
60	63.1
80	57.8
100	55.0
200	44.6
300	34.3
500	23.5
750	17.8
1000	15.3
1250	14.0
1500	13.5
1750	13.0
2000	12.7

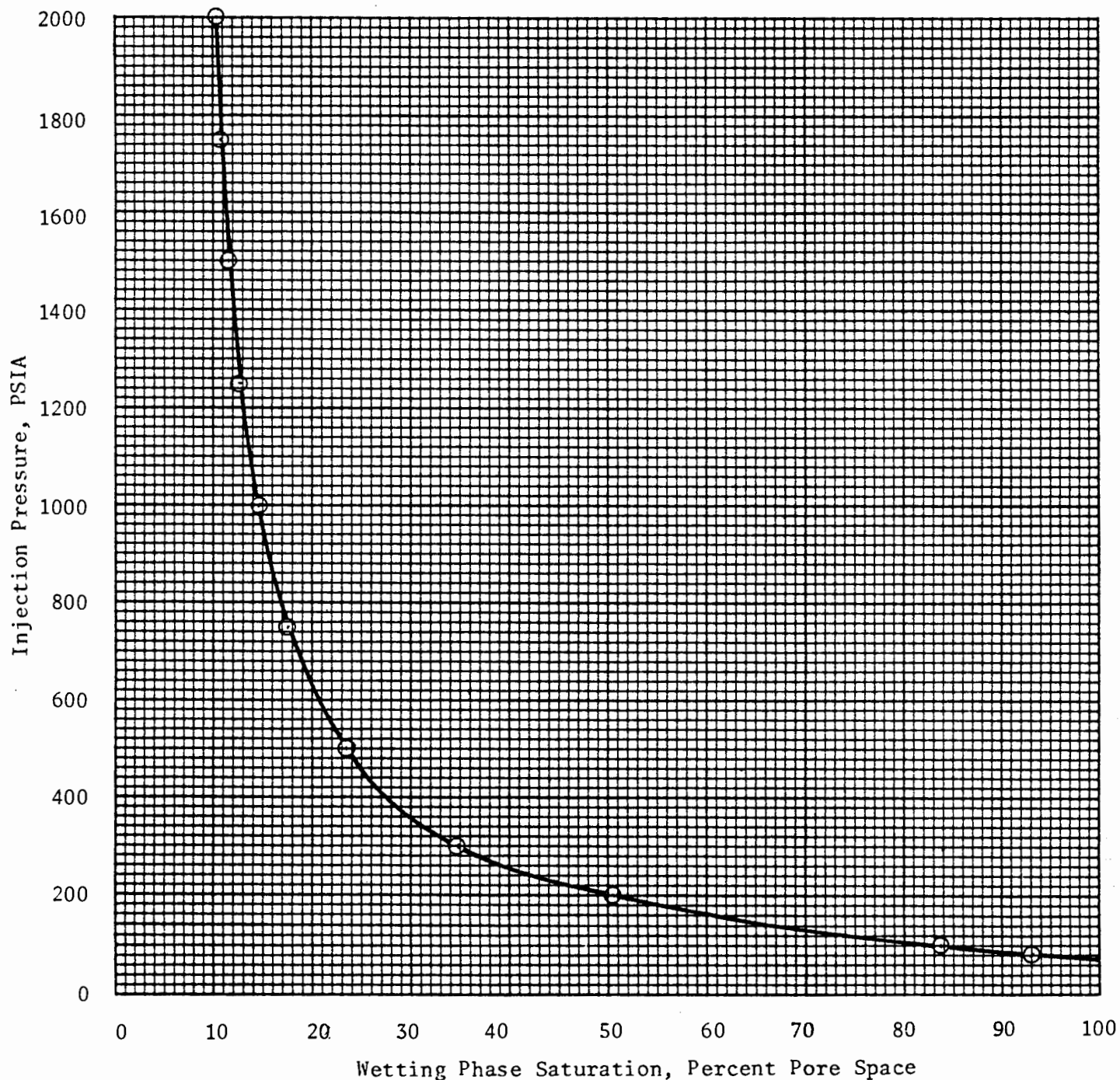
Company Anador Resources Formation Krider
Well Schultz 1-34 County Rush
Field Wildcat State Kansas

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 12



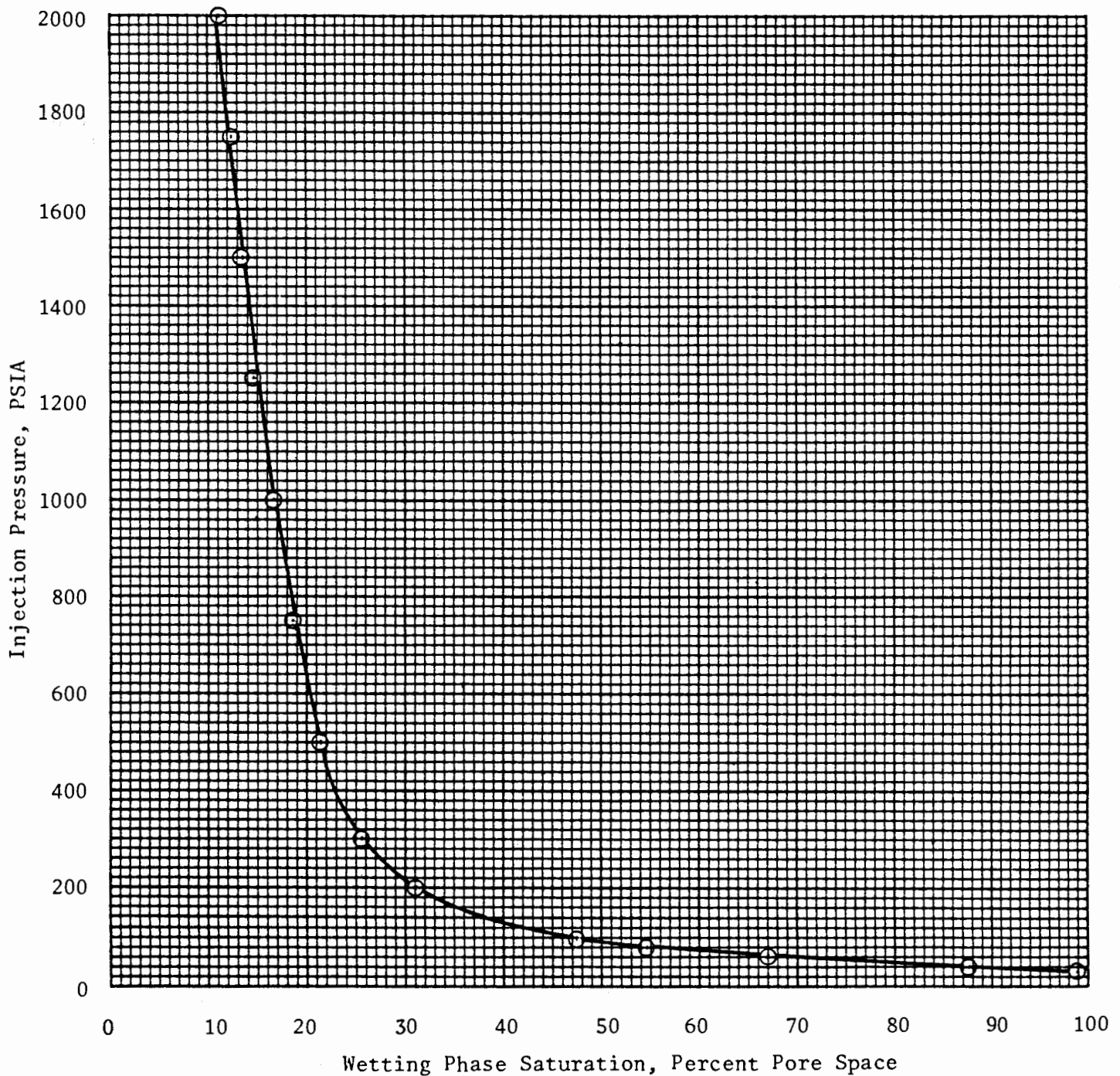
Company Anador Resources Formation Krider
Well Schultz 1-34 County Rush
Field Wildcat State Kansas

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 23



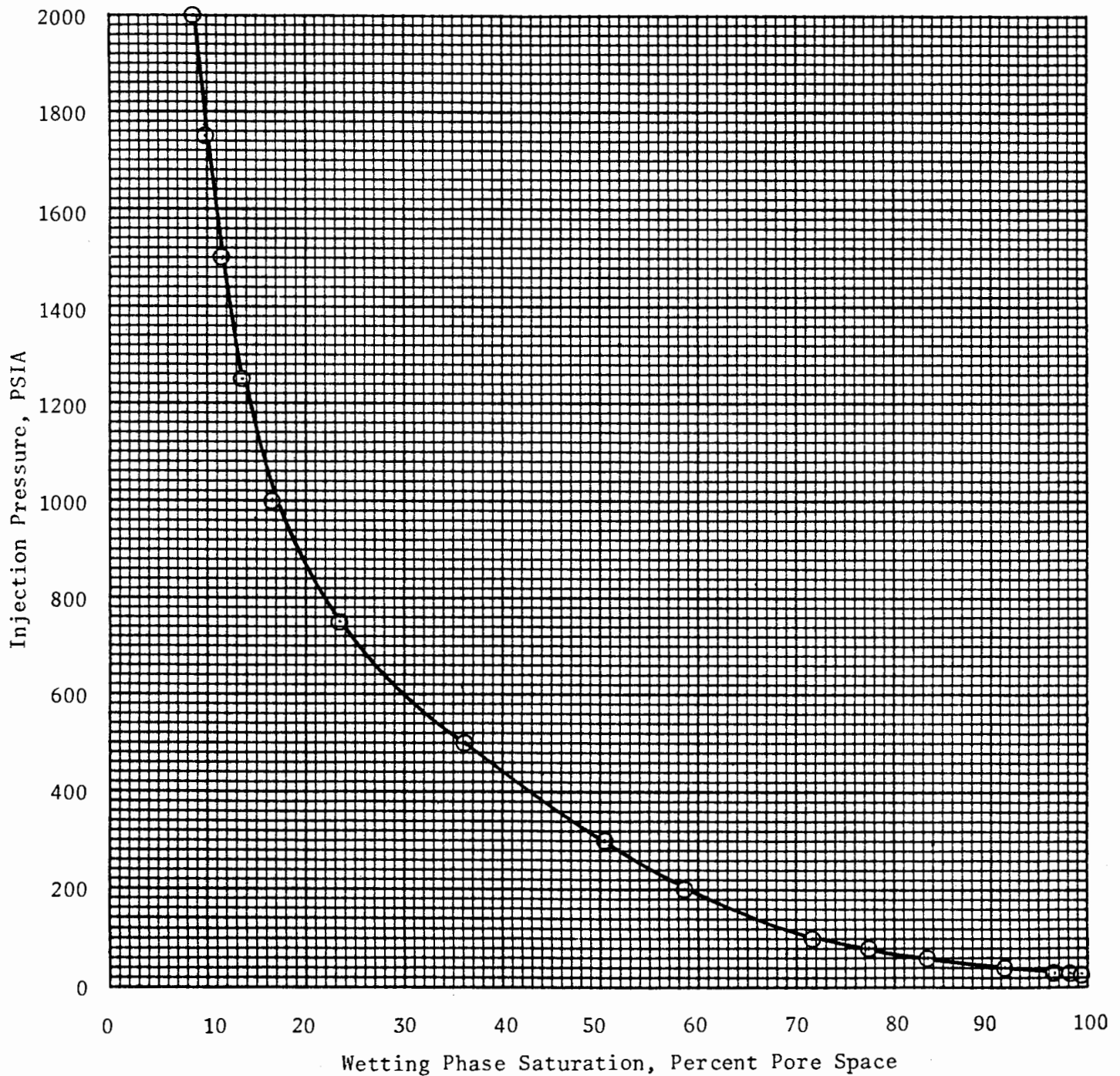
Company	<u>Anador Resources</u>	Formation	<u>Krider</u>
Well	<u>Schultz 1-34</u>	County	<u>Rush</u>
Field	<u>Wildcat</u>	State	<u>Kansas</u>

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 43



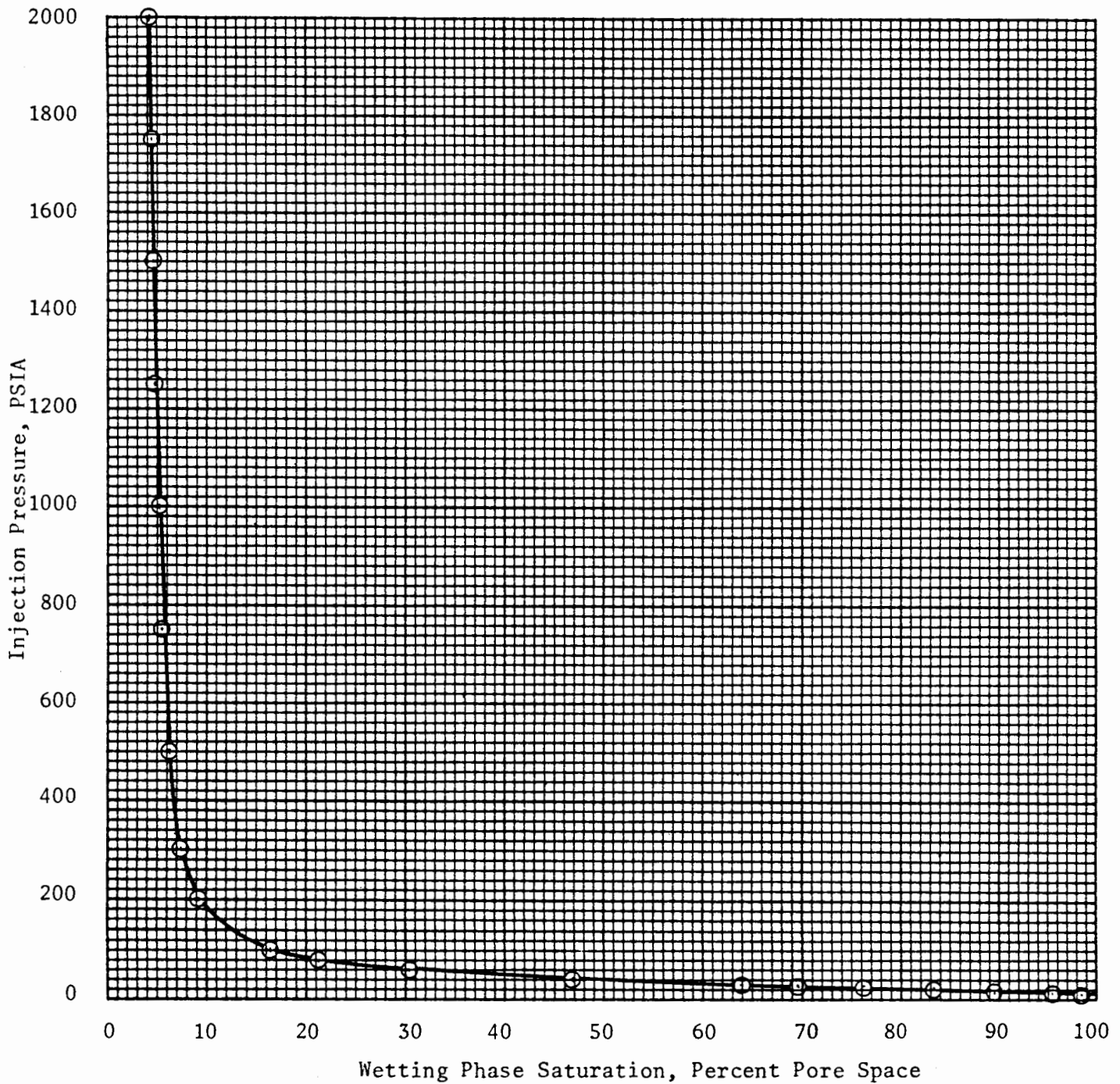
Company	Anador Resources	Formation	Winfield
Well	Schultz 1-34	County	Rush
Field	Wildcat	State	Kansas

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 74



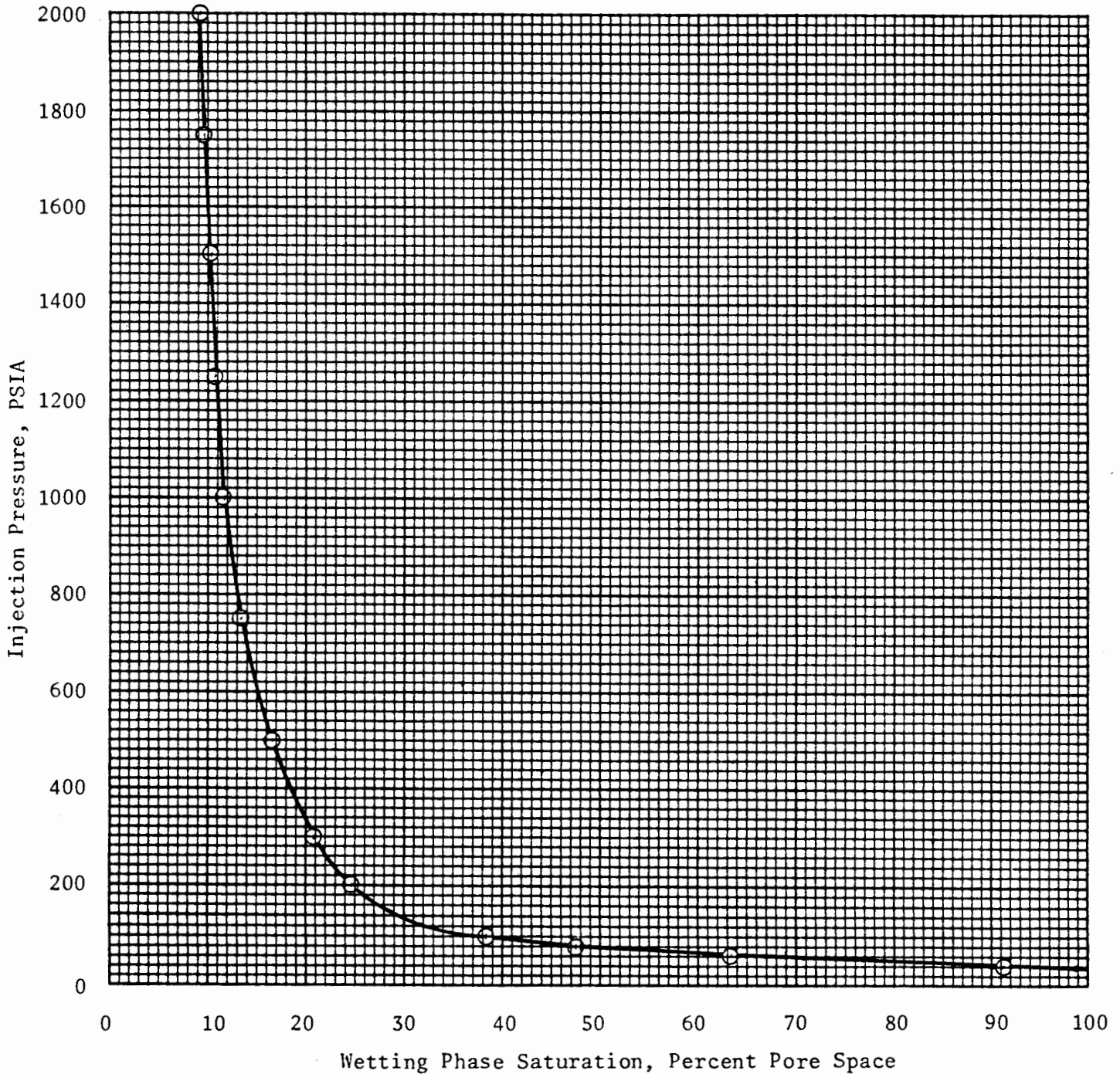
Company Anador Resources Formation Towanda
Well Schultz 1-34 County Rush
Field Wildcat State Kansas

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 118



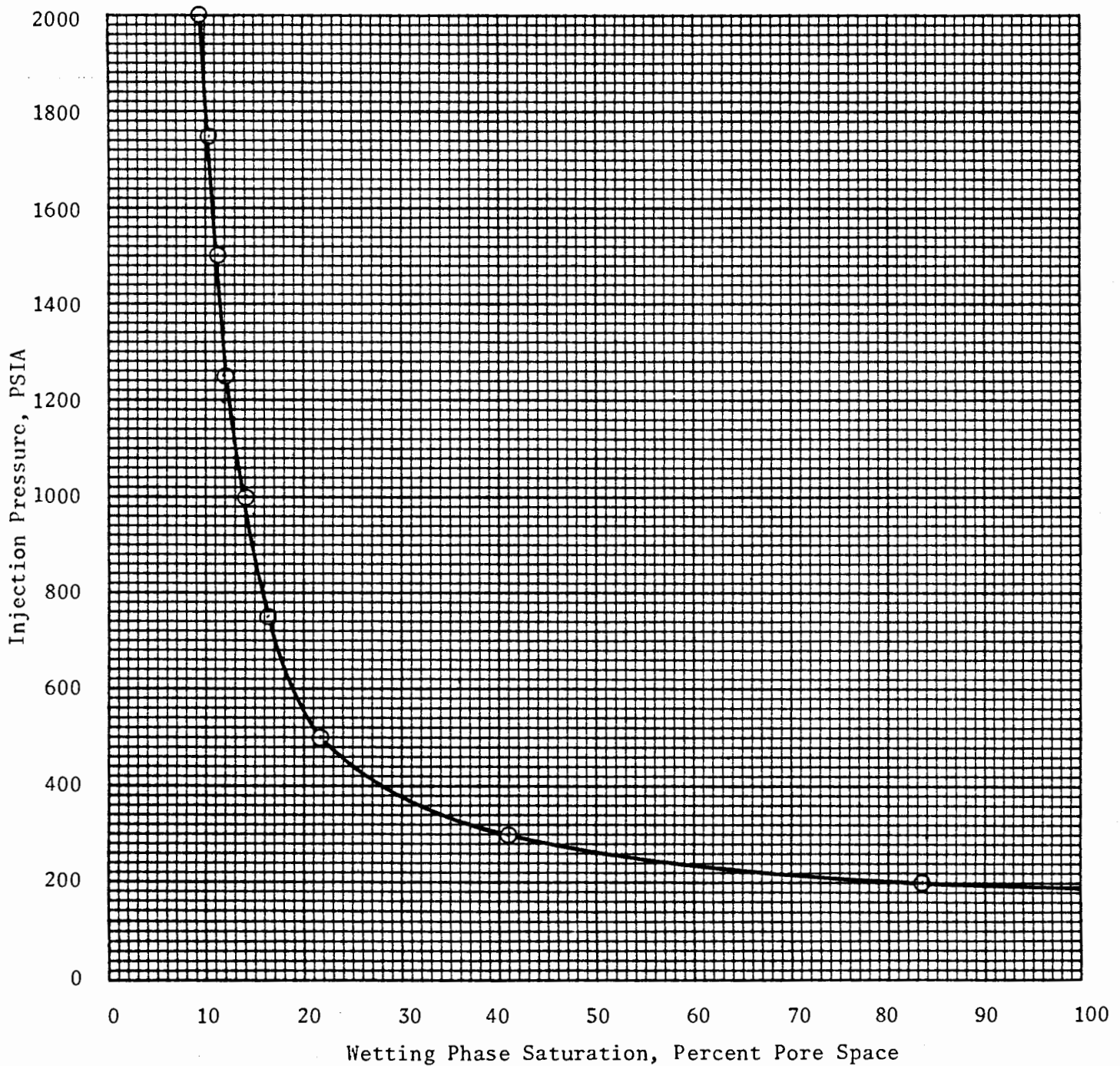
Company	Anador Resources	Formation	Towanda
Well	Schultz 1-34	County	Rush
Field	Wildcat	State	Kansas

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 127



Company	<u>Anador Resources</u>	Formation	<u>Towanda</u>
Well	<u>Schultz 1-34</u>	County	<u>Rush</u>
Field	<u>Wildcat</u>	State	<u>Kansas</u>

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 140



Company	Anador Resources	Formation	Fort Riley
Well	Schultz 1-34	County	Rush
Field	Wildcat	State	Kansas

MERCURY INJECTION CAPILLARY PRESSURE CURVE
Sample Number 151

