

CONVENTIONAL CORE ANALYSIS

**Anadarko Petroleum Corporation
Ratcliff B-2 Well
Lower Morrow Formation
Gensler Field
Stevens County, Kansas
SRS 1839/RSR 2968**

**Natural Core Gamma Radiation
Specific Permeability To Gas (Steady-State Method)
Porosity and Grain Density (Boyle's Law Method)
Fluid Saturations (Dean-Stark Method)
Lithological Description**

18-33-3fw



RESERVOIRS, INC.

1151 BRITTMORE ROAD

HOUSTON, TEXAS 77043

GEOLOGICAL ANALYSIS • CLASTICS/CARBONATES

SINGLE WELL/FIELD/REGIONAL STUDIES

WELL COMPLETION/STIMULATION STUDIES

ROUTINE AND SPECIAL CORE ANALYSIS

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April 28, 1994

Mr. Mark J. Pinel
Anadarko Petroleum Corporation
17001 Northchase Drive
Houston, Texas 77060

Dear Mr. Pinel:

On February 22, 1994, Reservoirs, Inc. provided Anadarko Petroleum Corporation with a proposal for wellsite, conventional core analysis, special core analysis and geological services for well core material anticipated to be recovered from the following well:

Anadarko Petroleum Corporation
Ratcliff B-2 Well
Lower Morrow Formation
Gensler Field
Stevens County, Kansas

Approximately one hundred nineteen (119) feet of full diameter core material was recovered from the well in fiberglass liners. On March 31, 1994, the core material was retrieved and packaged by personnel from Reservoirs, Inc. on location at the wellsite in Kansas and transported to Houston, Texas for analysis. The core material was obtained from the following two (2) cored intervals representing the following depths:

Core 1 6010.0 - 6071.3 ft.
Core 2 6071.3 - 6128.9 ft.

The cores were received in the fiberglass inner-liner of the core barrel which had been cut into three (3) feet long segments. Each segment was removed from the inner-liner, oriented, marked with respect to depth and the natural core gamma radiation measured. Conventional core analysis was then immediately initiated by obtaining one inch (1") diameter core plug samples on the basis of one horizontally oriented core plug sample per foot of core. A total of one hundred four (104) core plug samples were obtained.

Mr. Mark J. Pinel
Anadarko Petroleum Corporation
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Preliminary test results were electronically transmitted to Mr. Mark Pinel of Anadarko Petroleum Corporation in Houston on April 4, 5 and 6, 1994 by Mr. Paul Delacoe of Reservoirs, Inc. via facsimile.

This report presents the conventional core analysis in both tabular and graphical formats together with the core gamma log. A section entitled "Laboratory Procedures", which describes the methods used to obtain the test results is also included in the report. The core gamma log which includes the conventional core analysis and the natural gamma radiation of the core is presented at the back of this report. A geological interpretive report will be issued under a separate cover.

The conventional core analysis is presented in Tables 1 and 2, for Cores 1 and 2, respectively. Figures (1 and 2) which present the relationships of specific permeability to gas-porosity follow each table. All of the test results (composite) are graphically presented in Figure 3 which presents the relationship of specific permeability to gas-porosity for all of the core plug samples analyzed. Examination of the test results indicates the specific permeabilities to gas ranged from <0.001 md to 169 md and the porosities ranged from <0.1 to 18.0 percent of the bulk volume. The saturation data indicates the water saturations ranged from 28.5 to 95.5 percent of the pore volume. No fluid saturation data was evident for Sample B 851 (6123.7 ft.); however, due to the extremely low permeability (<0.001 md) and porosity (<0.1 %BV), this sample was omitted from the previous range. The oil saturation data indicated that oil saturations ranged from 0.0 to 62.2 percent of the pore volume. Table A summarizes the test results obtained for each of the well cores.

The full diameter well core has subsequently been cut longitudinally into a one-third (1/3) portion and a two-thirds (2/3) portion. The two-thirds portion has been packaged in standard size, three feet (3') long cardboard core boxes. The one-third portion has been placed in cardboard slab boxes for the purpose of photography and geological description, a report of which will be presented under a separate cover.

Mr. Mark J. Pinel
Anadarko Petroleum Corporation
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It has been a pleasure to be of service to you and the Anadarko Petroleum Corporation, and Reservoirs, Inc. looks forward to working together with you on future projects. If you should have any questions pertaining to the test results, the procedures used to obtain the test results or if I can be of any further service, please do not hesitate to contact me at (713) 932-9670. Mr. Craig Hall of the geological department of Reservoirs, Inc. can be contacted at (713) 935-4222, should you require any additional copies of the geological report or any additional geological analyses.

Sincerely,

Paul Delacoe

Paul Delacoe
Manager
Special Core Analysis
RESERVOIRS, INC.

LABORATORY PROCEDURES

Natural Core Gamma Radiation Log

The full-diameter well core was passed over a gamma radiation detection unit which was shielded from the natural background radiation. The relative magnitude of the radiation was recorded as a function of depth for comparison with the downhole logs. Five (5) inches of recorded log is equivalent to one hundred (100) feet of measured gamma response.

Sample Preparation

Sample locations were selected on the basis of one (1) horizontally oriented core plug sample from each one foot (1') increment of well core. A total of one hundred four (104), one inch in diameter, horizontally oriented core plug samples were drilled from the well core. Each core plug sample was obtained using a diamond core drill and water as the coolant and lubricant. The core plug samples were trimmed to form right cylinders using a diamond rimmed sawblade and water. Each core plug sample was marked with an identification number, weighed and immediately placed in a Dean-Stark distillation extraction apparatus to determine the fluid saturations, present.

Dean-Stark Distillation/Extraction

Each core plug sample was weighed and placed in an individual Dean-Stark apparatus after the toluene had been pre-boiled to remove any absorbed water. The temperature in the boiling flask was increased to begin the distillation process. The vapors flow upward around the core plug sample and into the condenser. The condensed liquid flows over the core plug sample and returns to the boiling flask. Toluene boils at a temperature higher than water. Thus, the water in the core plug sample was distilled and the vapors flow upward into the condenser. The condensed water was trapped in a graduated receiving tube and the water volumes were read to the nearest 0.01 ml. In

addition to distilling the water from the pore spaces, the toluene is a solvent and removes any hydrocarbons present from the pore spaces. When no further production of water was evident, the toluene was replaced with methanol to remove any residual salts present in the core plug sample.

The core plug sample was subsequently removed from the Dean-Stark apparatus and placed in a conventional chamber and dried. The core plug sample was allowed to cool to room temperature in a desiccator containing silica-gel and weighed, prior to determination of the basic rock properties of the sample. The fluid saturations were determined from the gravimetric measurements obtained before and after cleaning of the samples and the volumes of water produced during the Dean-Stark distillation/extractions.

Basic Rock Properties

The **bulk volume** of each core plug sample was determined by mercury immersion (Archimedes' principle) and confirmed by measuring the length and diameter of each core plug sample with calipers and calculating the bulk volume.

The **porosity** and grain density of each core plug sample was determined using the Boyle's law method and helium as the gaseous phase. The core plug sample was placed in a matrix cup (sealed chamber) of known volume. Another chamber of known volume containing helium at a preselected pressure was connected to the matrix cup. The helium expanded into the matrix cup, and an equilibrium pressure was recorded. Using Boyle's law, the grain volume of the core plug sample being tested can be determined. The grain volume subtracted from the bulk volume of the core plug sample results in the pore volume of the core plug sample. Porosity is the pore volume expressed as a percent of the bulk volume.

The **grain density** is the weight of the core material per unit volume of the core material (grain volume). The weight of the core material is determined by weighing the clean and dry core plug sample on a pan-balance at ambient conditions. The grain volume is obtained from the Boyle's law calculation.

The **specific permeability to gas** was determined by placing each core plug sample in a Hassler-type core holder. A confining pressure of 400 psig was applied to the system to prevent bypassing of the gas around the core plug sample. Nitrogen gas was injected into each core plug sample at a constant pressure until a constant flow rate of gas through the core plug sample was attained (steady-state conditions). The specific permeability to gas was calculated using the Darcy equation.

Table A

CONVENTIONAL CORE ANALYSIS SUMMARY

Anadarko Petroleum Corporation
 Ratcliff B-2 Well
 Gensler Field
 Stevens County, Kansas
 SRS 1839/RSH 2968

Core No.	Depth Interval (ft)	Permeability To Gas		Porosity		Water Saturation		Oil Saturation	
		Range (md)	Average (md)	Range (%BV)	Average (%BV)	Range (%PV)	Average (%PV)	Range (%PV)	Average (%PV)
1	6010.0 - 6071.3	0.010-22.9	1.12	1.4-17.7	7.7	28.5-95.5	63.1	0.0-62.2	14.6
2	6071.3 - 6128.9	<0.001-169	7.28	<0.1-18.0	9.6	47.1-88.0	73.2	0.0-33.3	7.7

Table 1

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation
 Ratcliff B-2 Well
 Gensler Field
 Stevens County, Kansas
 SRS 1839/RSH 2968

Core No. 1
 Depth Interval: 6010.0 - 6071.3 ft.

Sample	Depth (ft)	Perm. to Gas (md)	Porosity (%BV)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
B 748	6014.3	0.010	1.4	2.73	31.9	40.3	27.8	LS DK GRY M-CRS XLN VSNDY FOS CL INCLU TR PYR
B 749	6015.7	0.041	3.3	2.72	59.9	10.4	29.7	LS GRY M-CRS XLN VSNDY FOS
B 750	6016.6	0.047	5.4	2.75	58.8	4.9	36.3	LS GRY M-CRS XLN VSNDY VFOS
B 751	6017.4	0.054	6.2	2.72	52.3	9.2	38.5	LS GRY M-CRS XLN VSNDY FOS
B 752	6018.7	0.093	7.5	2.74	64.8	5.5	29.7	LS GRY M-CRS XLN VSNDY FOS
B 753	6019.3	0.050	6.2	2.73	57.8	8.7	33.5	LS GRY M-CRS XLN VSNDY FOS
B 754	6020.4	0.073	7.0	2.72	60.6	6.0	33.4	LS GRY M-CRS XLN VSNDY FOS
B 755	6021.4	0.099	7.0	2.72	61.8	3.2	35.0	LS GRY M-CRS XLN VSNDY FOS
B 756	6022.3	0.104	6.4	2.72	61.9	1.1	37.0	LS GRY M-CRS XLN VSNDY FOS
B 757	6023.4	0.076	6.9	2.72	61.6	0.0	38.4	LS GRY M-CRS XLN VSNDY FOS
B 758	6024.4	0.085	6.8	2.71	64.0	1.5	34.5	LS GRY M-CRS XLN VSNDY FOS
B 759	6025.6	1.03	11.7	2.72	61.4	5.9	32.7	LS DK GRY M-CRS XLN VSNDY CL INCLU
B 760	6026.5	0.082	7.0	2.71	59.1	0.0	40.9	LS GRY M-CRS XLN VSNDY CL INCLU
B 761	6027.6	0.071	6.1	2.72	60.7	0.0	39.3	LS GRY M-CRS XLN VSNDY CL INCLU
B 762	6028.6	0.075	5.5	2.72	70.0	0.0	30.0	LS GRY M-CRS XLN VSNDY CL INCLU
B 763	6029.3	0.138*	4.8	2.71	71.6	3.2	25.2	LS GRY M-CRS XLN VSNDY CL INCLU
B 764	6030.4	0.022	4.3	2.71	51.8	16.5	31.7	LS GRY M-CRS XLN VSNDY CL INCLU
B 765	6031.4	0.085	6.5	2.73	63.5	16.3	20.2	LS GRY M-CRS XLN VSNDY CL INCLU CL LAM
B 766	6032.4	0.102	6.1	2.73	73.8	0.0	26.2	LS GRY M-CRS XLN VSNDY CL INCLU CL LAM
B 767	6033.4	1.67	7.3	2.74	79.3	0.0	20.7	LS GRY M-CRS XLN VSNDY/PBLY ABD CL LAM

* Denotes sample contains fracture. Permeability to gas may be anomalously high.

Table 1 (Continued)

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation
Ratcliff B-2 Well
Gensler Field
Stevens County, Kansas
SRS 1839/RSH 2968

Core No. 1
Depth Interval: 6010.0 - 6071.3 ft.

Sample	Depth (ft)	Perm. to Gas (md)	Porosity (%BV)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
B 768	6034.7	1.37	4.7	2.73	70.9	8.1	21.0	LS GRY M-CRS XLN VSNDY/PBLY ABD CL LAM
B 769	6035.3	0.041	4.5	2.71	55.8	22.7	21.5	LS GRY M-CRS XLN VSNDY CL INCLU FOS
B 770	6036.1	**	3.5	2.72	87.3	0.0	12.7	LS GRY M-CRS XLN VSNDY/PBLY CL STRK
B 771	6037.5	1.71	10.0	2.69	82.0	7.9	10.1	SS GRY-DK GRY VF-F GR VWL CONSOL SHLY SH LAM
B 772	6038.5	0.302	11.7	2.71	70.8	12.6	16.6	SS GRY-DK GRY VF-F GR VWL CONSOL SHLY SH LAM
B 773	6039.7	0.196	10.2	2.70	74.5	10.6	14.9	SS DK GRY-BLK VF-F GR VWL CONSOL CALC SHLY SH LAM
B 774	6040.7	0.077	8.7	2.73	90.9	0.0	9.1	SS DK GRY-BLK VF-F GR VWL CONSOL CALC SHLY SH LAM
B 775	6041.6	3.98*	8.6	2.71	79.0	5.9	15.1	SS DK GRY-BLK VF-F GR VWL CONSOL CALC SHLY SH LAM
B 776	6042.8	0.012	4.8	2.71	67.3	0.0	32.7	SS DK GRY VF GR VWL CONSOL VCALC CALC INCLU VSHLY
B 777	6043.2	0.089	4.8	2.70	95.5	0.0	4.5	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 778	6045.7	0.014	2.3	2.70	85.3	0.0	14.7	LS GRY M-CRS XLN VSNDY CL INCLU FOS
B 779	6046.6	0.044	6.0	2.69	76.6	2.8	20.6	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 780	6047.6	1.12	13.5	2.69	78.8	3.2	18.0	SS DK GRY M-VCRS GR VWL CONSOL CALC VSHLY SH STRKS
B 781	6048.6	0.069	4.1	2.70	60.1	15.0	24.9	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 782	6049.6	0.037	6.7	2.69	49.3	29.0	21.7	SS GRY F-CRS GR VWL CONSOL VCALC
B 783	6050.5	0.886	12.5	2.71	61.5	19.4	19.1	SS DK GRY M-CRS GR VWL CONSOL VSHLY CALC CALC INCLU
B 784	6051.4	0.100	6.7	2.71	57.7	31.4	10.9	SS DK GRY M-VCRS GR VWL CONSOL PBLY I.P. CALC FOS
B 785	6052.6	19.0	17.7	2.67	61.9	4.6	33.5	SS DK GRY VF-F GR WL CONSOL CALC SILTY
B 786	6053.3	0.034	5.0	2.70	30.3	57.3	12.4	SS GRY F-M GR VWL CONSOL VCALC CL INCLU
B 787	6054.4	0.024	5.4	2.70	48.9	22.3	28.8	SS GRY F-M GR VWL CONSOL VCALC CL INCLU CL LAM

*Denotes sample contains fracture. Permeability to gas may be anomalously high.

**Denotes broken and/or non-cylindrical sample. Permeability to gas indeterminable.

Table 1 (Continued)

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation
 Ratcliff B-2 Well
 Gensler Field
 Stevens County, Kansas
 SRS 1839/RSH 2968

Core No. 1

Depth Interval: 6010.0 - 6071.3 ft.

Sample	Depth (ft)	Perm. to Gas (md)	Porosity (%BV)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
B 788	6055.4	22.9	17.2	2.67	59.4	3.2	37.4	SS DK GRY VF-M GR WL CONSOL VSLTY/SHLY SLI CALC
B 789	6056.5	2.89	13.5	2.69	36.9	40.3	22.8	SS DK GRY VF-M GR WL CONSOL VSLTY/SHLY SLI CALC
B 790	6057.6	0.030	6.7	2.69	39.6	36.7	23.7	SS DK GRY F-M GR VWL CONSOL VCALC
B 791	6058.6	1.39	12.8	2.69	73.0	1.5	25.5	SS DK GRY F-M GR VWL CONSOL VCALC SHLY CL INCLU
B 792	6059.7	0.075	7.5	2.70	46.8	37.2	16.0	SS DK GRY F-M GR VWL CONSOL VCALC SHLY CL INCLU
B 793	6060.6	0.063	7.5	2.70	48.4	37.2	14.4	SS DK GRY F-M GR VWL CONSOL VCALC VSLTY/SHLY SH LAM
B 794	6061.6	1.48	11.2	2.68	72.7	5.4	21.9	SS DK GRY M-VCRS GR VWL CONSOL VCALC VSHLY CL INCLU
B 795	6062.5	0.715	10.9	2.71	70.9	3.6	25.5	SS DK GRY M-VCRS GR VWL CONSOL VSHLY ABD CALC INCLU
B 796	6063.4	0.022	7.0	2.70	28.5	62.2	9.3	SS GRY F-M GR VWL CONSOL VCALC SH LAM CALC INCLU
B 797	6064.4	0.030	8.1	2.70	30.5	59.0	10.5	SS GRY F-M GR VWL CONSOL VCALC SH LAM CALC INCLU
B 798	6065.5	0.053	8.2	2.70	44.9	51.5	3.6	SS GRY F-M GR VWL CONSOL VCALC CALC INCLU
B 799	6066.5	0.090	7.6	2.70	82.6	9.1	8.3	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU
B 800	6067.4	0.862	12.6	2.70	78.2	5.5	16.3	SS GRY F-M GR VWL CONSOL CALC CALC INCLU
B 801	6068.5	0.054	7.8	2.70	47.0	47.4	5.6	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 802	6069.4	0.128	7.9	2.70	70.4	23.5	6.1	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 803	6070.5	0.272	9.6	2.72	77.5	9.4	13.1	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 804	6071.2	0.182	8.9	2.71	76.8	11.9	11.3	LS GRY M-VCRS XLN VSNDY CL INCLU FOS

Figure 1
SPECIFIC PERMEABILITY TO GAS - POROSITY RELATIONSHIP

Anadarko Petroleum Corporation
Ratcliff B-2 Well
Gensler Field
Stevens County, Kansas
SRS 1839/RSH 2968

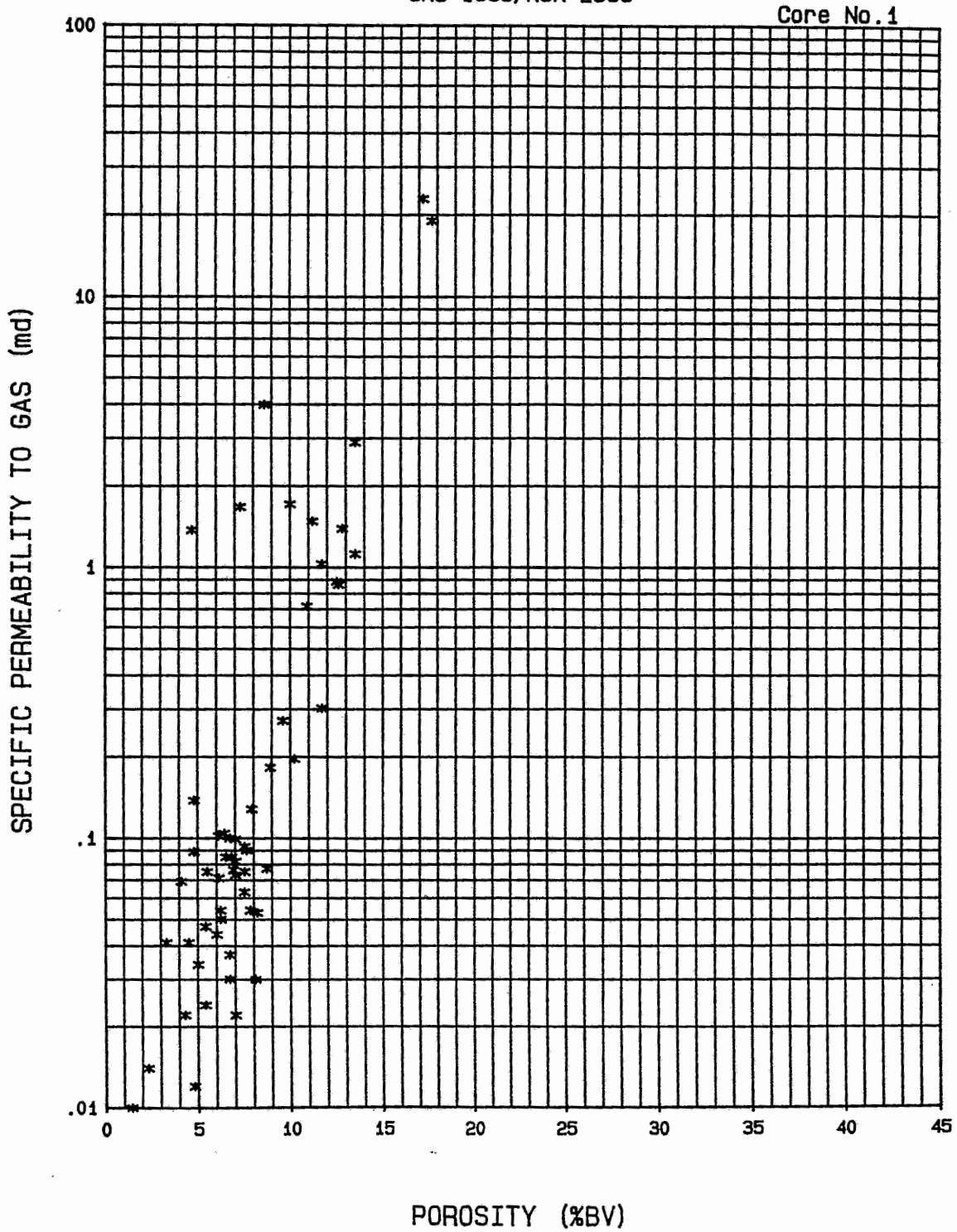


Table 2

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation
Ratcliff B-2 Well
Gensler Field
Stevens County, Kansas
SRS 1839/RSR 2968

Core No. 2

Depth Interval: 6071.3 - 6128.9 ft.

Sample	Depth (ft)	Perm. to Gas (md)	Porosity (%BV)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
B 805	6072.6	0.081	7.6	2.71	79.2	6.1	14.7	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU FOS
B 806	6073.5	0.093	7.1	2.71	82.4	3.2	14.4	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU FOS
B 807	6074.6	0.228	10.7	2.72	80.3	5.8	13.9	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU FOS
B 808	6075.7	0.855	10.5	2.69	74.4	8.8	16.8	SS GRY F-M GR VWL CONSOL SLI SLTY VCALC FOS
B 809	6076.6	4.07	15.9	2.67	69.3	5.7	25.0	SS DK GRY F-M GR VWL CONSOL CALC FOS SLI SLY
B 810	6077.6	0.028	6.6	2.70	61.5	22.9	15.6	LS GRY F-VCRS XLN VSNDY CL INCLU FOS
B 811	6078.6	0.030	6.6	2.70	62.9	25.4	11.7	LS GRY F-VCRS XLN VSNDY CL INCLU FOS
B 812	6079.7	0.933	13.4	2.69	75.1	5.1	19.8	SS GRY F-VCRS GR VWL CONSOL VCALC FOS CL INCLU
B 813	6080.6	0.636	18.0	2.67	71.9	6.3	21.8	SS GRY FGR VWL CONSOL CALC SH LAM
B 814	6081.7	0.024	7.7	2.70	69.9	16.4	13.7	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 815	6082.6	0.039	8.0	2.70	72.1	13.7	14.2	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU FOS
B 816	6083.6	0.046	8.5	2.69	76.6	9.2	14.2	SS GRY F-CRS GR VWL CONSOL VCALC FOS
B 817	6084.7	0.112	5.9	2.72	79.6	5.9	14.5	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU FOS VUG
B 818	6085.5	0.113	7.3	2.70	78.5	4.2	17.3	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 819	6086.5	0.137	7.7	2.71	78.9	2.5	18.6	LS GRY M-VCRS XLN VSNDY CL INCLU FOS
B 820	6087.4	0.113	5.6	2.71	79.0	2.8	18.2	LS GRY M-VCRS XLN VSNDY/PBLY CL INCLU FOS
B 821	6088.3	0.478	10.3	2.70	75.2	4.9	19.9	SS GRY F-VCRS GR VWL CONSOL VCALC PBLY I.P. FOS
B 822	6089.5	0.035	5.8	2.69	80.3	4.7	15.0	SS GRY F-VCRS GR VWL CONSOL VCALC PBLY I.P. FOS
B 823	6090.6	0.005	4.5	2.63	62.6	5.8	31.6	SS GRY VF-F GR VWL CONSOL VCALC PBLY I.P. FOS
B 824	6094.9	0.015	2.9	2.71	70.1	22.6	7.3	SS GRY F-CRS GR VWL CONSOL VCALC CL INCLU FOS

Table 2 (Continued)

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation
 Ratcliff B-2 Well
 Gensler Field
 Stevens County, Kansas
 SRS 1839/RSH 2968

Core No. 2
 Depth Interval: 6071.3 - 6128.9 ft.

Sample	Depth (ft)	Perm. to Gas (md)	Porosity (%BV)	Grain Density (g/cc)	Saturation (%PV)			Lithological Description
					Water	Oil	Gas	
B 825	6095.3	0.014	4.1	2.68	47.1	32.8	20.1	SS GRY F-M GR VWL CONSOL CL INCLU VCALC
B 826	6096.5	0.069	10.2	2.69	75.8	6.1	18.1	SS GRY F-M GR VWL CONSOL CL INCLU VCALC
B 827	6097.8	169	15.6	2.66	57.5	7.5	35.0	SS GRY F-M GR WL CONSOL SLI CALC CL INCLU
B 828	6098.6	8.32	11.2	2.69	69.3	5.5	25.2	SS GRY F-M GR VWL CONSOL SLI VCALC
B 829	6099.6	8.12	12.0	2.68	68.1	6.5	25.4	SS GRY F-M GR VWL CONSOL CALC SH LAM
B 830	6100.3	0.085	6.9	2.67	67.5	14.1	18.4	SS GRY F-M GR VWL CONSOL CALC CL INCLU
B 831	6101.6	66.2	12.6	2.67	52.7	10.6	36.7	SS GRY F-M GR WL CONSOL SLI CALC
B 832	6102.4	0.114	7.4	2.67	79.8	1.1	19.1	SS GRY F-M GR VWL CONSOL CALC CL INCLU
B 833	6103.4	55.5	12.6	2.67	65.1	5.6	29.3	SS GRY F-M GR WL CONSOL CALC CL INCLU
B 834	6104.3	1.80	10.9	2.68	70.6	1.8	27.6	SS GRY F-M GR VWL CONSOL CALC CL INCLU
B 835	6105.4	0.238	10.6	2.71	85.9	1.4	12.7	SS GRY F-M GR VWL CONSOL SLI CALC VSHLY SH LAM
B 836	6106.2	0.074	10.0	2.70	82.0	8.2	9.8	SS GRY VF-F GR VWL CONSOL VCALC
B 837	6107.7	0.203	11.7	2.69	79.3	4.0	16.7	SS GRY VF-F GR VWL CONSOL VCALC CL INCLU
B 838	6108.5	0.586	11.9	2.68	81.1	0.0	18.9	SS GRY F-M GR VWL CONSOL VCALC CL INCLU
B 839	6109.4	0.409	13.6	2.70	85.0	0.0	15.0	SS GRY F-M GR VWL CONSOL VCALC SHLY CL INCLU
B 840	6110.6	1.58	10.7	2.69	74.6	1.0	24.4	SS GRY F-CRS GR PBLY VCALC CL INCLU
B 841	6111.2	4.07	11.8	2.70	73.4	2.3	24.3	SS GRY F-CRS GR VWL CONSOL VCALC CL INCLU
B 842	6112.4	0.248	11.2	2.69	80.7	7.9	11.4	SS GRY F-CRS GR VWL CONSOL VCALC CL INCLU
B 843	6113.5	6.67	12.0	2.69	80.8	1.9	17.3	SS GRY F-CRS GR VWL CONSOL VCALC CL INCLU
B 844	6114.5	0.351	11.7	2.71	74.5	9.1	16.4	SS GRY F-CRS GR VWL CONSOL VCALC CL INCLU

Table 2 (Continued)

CONVENTIONAL CORE ANALYSIS

Anadarko Petroleum Corporation
 Ratcliff B-2 Well
 Gensler Field
 Stevens County, Kansas
 SRS 1839/RSR 2968

Core No. 2

Depth Interval: 6071.3 - 6128.9 ft.

<u>Sample</u>	<u>Depth (ft)</u>	<u>Perm. to Gas (md)</u>	<u>Porosity (%BV)</u>	<u>Grain Density (g/cc)</u>	<u>Saturation (%PV)</u>			<u>Lithological Description</u>
					<u>Water</u>	<u>Oil</u>	<u>Gas</u>	
B 845	6115.6	1.11	15.0	2.68	79.7	5.1	15.2	SS GRY F GR VWL CONSOL V CALC SLI SLTY SHLY
B 846	6116.3	4.70	14.7	2.68	88.0	0.0	12.0	SS GRY F-M GR VWL CONSOL V CALC SLI SLTY SHLY
B 847	6117.8	4.14	11.0	2.70	74.8	1.0	24.2	SS GRY F-M GR PBLY VWL CONSOL CALC CL INCLU FOS
B 848	6118.4	0.046	6.8	2.68	53.3	33.3	13.4	SS GRY F GR VWL CONSOL CALC CL INCLU FOS
B 849	6119.4	0.209	12.7	2.70	73.8	6.6	19.6	SS GRY F-M GR VWL CONSOL CALC CL INCLU SH LAM
B 850	6122.9	0.080	0.6	2.73	66.4	6.6	27.0	LS DK GRY MICROXLN DNS SLI SLTY ABD FOS
B 851	6123.7	<0.001	<0.1	2.71	0.0	0.0	100.0	LS DK GRY MICROXLN DNS SLI SLTY ABD FOS

Figure 2
SPECIFIC PERMEABILITY TO GAS - POROSITY RELATIONSHIP

Anadarko Petroleum Corporation
Ratcliff B-2 Well
Gensler Field
Stevens County, Kansas
SRS 1839/RSH 2968

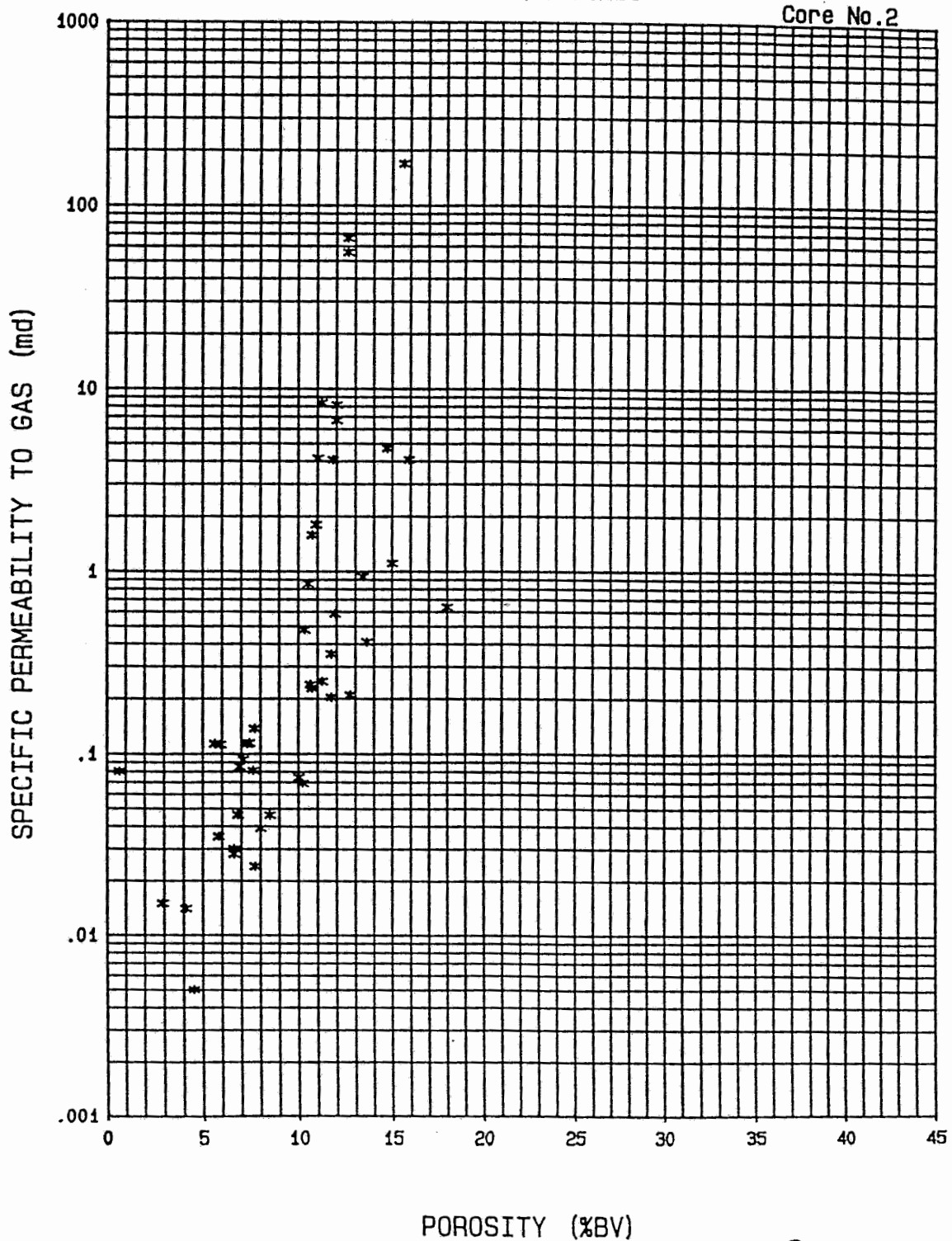
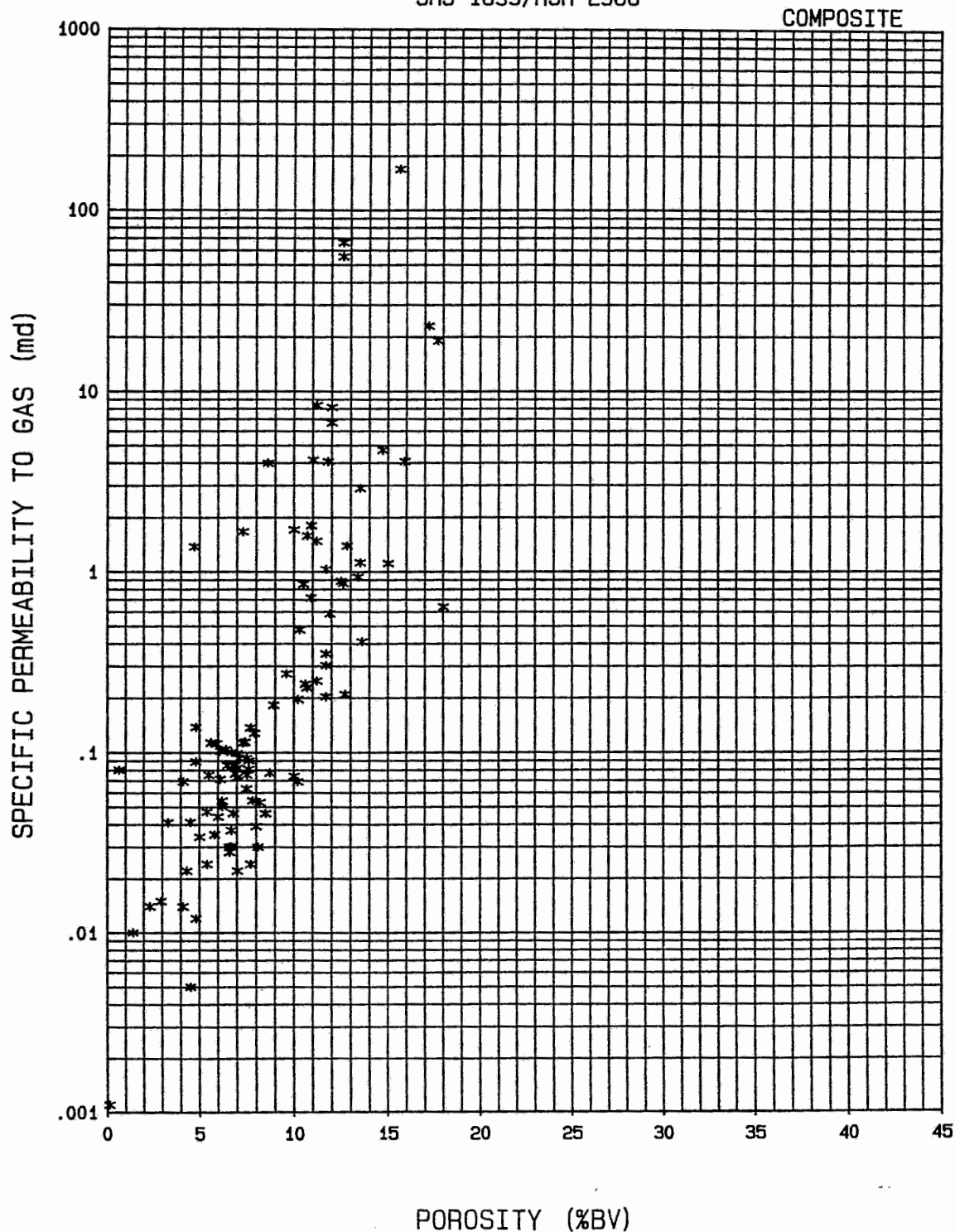


Figure 3

SPECIFIC PERMEABILITY TO GAS - POROSITY RELATIONSHIP

Anadarko Petroleum Corporation
Ratcliff B-2 Well
Gensler Field
Stevens County, Kansas
SRS 1839/RSH 2968



COMPANY ANADARKO PETROLEUM CORPORATION FIELD GENSLER FIELD

FILE SRS 1839

WELL RATCLIFF B-2 WELL COUNTY STEVENS

RSH 2968

FORMATION LOWER MORROW FORMATION STATE KANSAS

DATE _____

RESERVOIRS

Inc.

CORE-GAMMA LOG

VERTICAL SCALE: 5" = 100'

GAMMA RAY
RADIATION INCREASE
→

PERMEABILITY
MILLIDARCIES

POROSITY
PERCENT

TOTAL WATER
PERCENT TOTAL WATER
(———)

100 80 60 40 20 0

OIL SATURATION
PERCENT PORE SPACE
(-----)

0 20 40 60 80 100

6000

6050

6100

6150

