Box 11106
dup

K & A
LABORATORIES

Jones GUB # 3H1
KN Endowment #1
Montgomery BHI

September 24, 1993

Amoco Production Company
P. O. Box 3385
Tulsa, Oklahoma 74102

Attention: Mr. Dick Larese

Re: Final Report
Standard Core Analysis Test Results
Amoco Production Company
Multiple Wells
Hugoton Embayment
Multiple Formations
Amoco Charge No. 4L1293
K&A Job No. 93-5129-03

Gentlemen:

This report presents the final results of the standard core analysis tests performed on 58 one-inch-diameter samples supplied from the referenced core material. The results presented within this report include air permeabilities, helium porosities, grain densities, and crossplots of air permeabilities versus porosities for each well. Test results are presented in tabular and graphical form on pages 3 through 10. The procedures used for these tests are provided below. Note that, as discussed with Amoco Production Company, the mercury injection capillary pressure tests can commence following sample selection and approval from Amoco Production Company.

The procedures used for these tests are as follows: Upon sample arrival, each one-inch-diameter sample was labeled and placed into an oven for 24 hours at a temperature of 220° Fahrenheit. Then, after allowing the samples to cool in desiccators, an air permeability and helium porosity were measured for each sample.

Air permeabilities were measured using steady-state flow techniques at a confining pressure of 400 psi. Helium porosities were measured at room conditions using a Boyles' Law doubled-celled helium porosimeter. Bulk volumes were measured using an Archimedes mercury immersion technique. Test results are presented in tabular and graphical form.

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CONDITIONS AND QUALIFICATIONS

K&A Laboratories will endeavor to provide accurate and reliable laboratory measurements of the cores provided by the client. The results of any core analysis are necessarily affected by the condition in which the core is received and the selection of the samples to be analyzed. In the absence of direction by the client, K&A Laboratories will utilize its best geological and engineering judgment in selecting the samples to be analyzed. It should be recognized that most cores do not have uniform properties and that selection of truly representative samples is rarely possible. Unless otherwise directed, the samples will normally be selected from the highest quality segments. Thus, use of the properties measured in this report in reservoir calculations could result in an overestimation in reservoir volume and/or deliverability. K&A Laboratories assumes no responsibility nor offers any guarantee of the productivity or performance of any oil or gas well or hydrocarbon recovery process based upon the data presented in this report.

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30 - 29 - 39W

File 93-5129-03
15-187-20672

STANDARD CORE ANALYSIS SUMMARY

AMOCO PRODUCTION COMPANY
WELL AMOCO JONES GUB#3HI
HUGOTON EMBAYMENT
HERINGTON FORMATION

Sample Number	Depth, feet	Air Permeability, md	Porosity, percent	Grain Density, gm/cc
J-1	2,288.4	0.0898	13.3	2.72
J-2	2,289.8	0.00195	10.4	2.73
J-3	2,292.	3.90	12.9	2.78
J-4	2,293.	5.97	13.2	2.76
J-5	2,294.9	10.1	17.7	2.76
J-6	2,296.	1.15	15.4	2.75
J-7	2,297.4	0.700	15.2	2.73
J-8	2,299.	0.129	6.6	2.75
J-9	2,301.	0.947	11.9	2.73
J-10	2,302.	3.03	19.3	2.73
J-11	2,303.	17.5	18.6	2.73
J-12	2,304.	2.22	17.5	2.73
J-13	2,306.	8.51	14.7	2.73
J-14	2,307.	2.85	17.4	2.74
J-15	2,308.	0.113	17.7	2.79
J-16	2,308.75	0.0612	18.1	2.80
J-17	2,311.	2.86	25.6	2.82
J-18	2,312.	9.39	25.6	2.82

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5-31-39W

File 93-5129-03

5-31-39W 15-129-20844 (has core)
15-187-20518 (?)
& same well name
(BLS-KGS 7/2022)

STANDARD CORE ANALYSIS SUMMARY

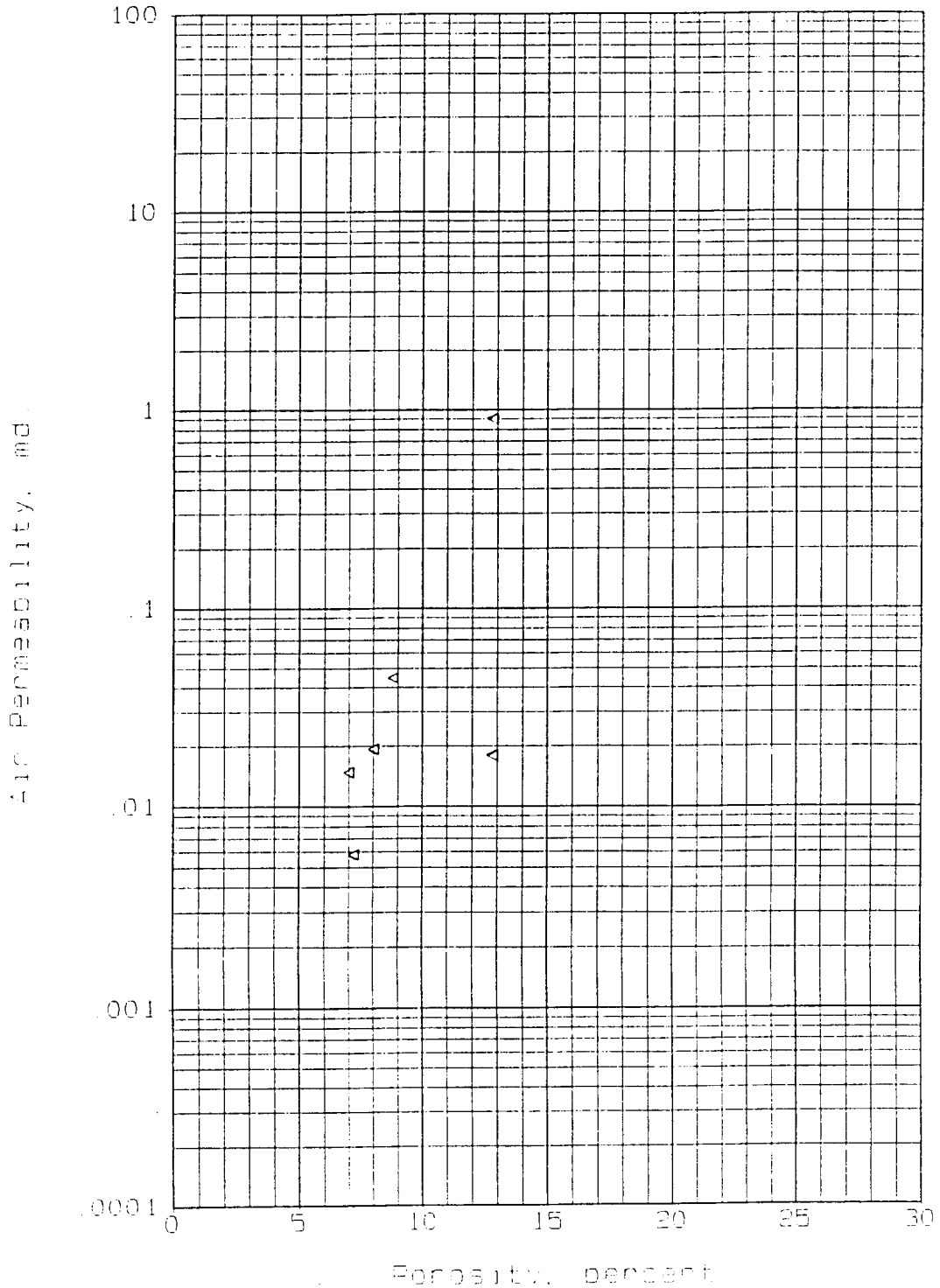
AMOCO PRODUCTION COMPANY
WELL AMOCO MONTGOMERY B-HI
HUGOTON EMBAYMENT
PERMIAN B-SILT FORMATION

Sample Number	Depth, feet	Air Permeability, md	Porosity, percent	Grain Density, gm/cc
M-1	2,751.0	0.0192	8.0	2.76
M-2	2,753.0	0.00576	7.2	2.82
M-3	2,754.8	0.902	12.8	2.75
M-4	2,756.8	0.0445	8.8	2.71
M-5	2,764.0	0.0148	7.0	2.69
M-6	2,765.4	0.0179	12.8	2.72

15-129-20844

AIR PERMEABILITY VS. POROSITY CROSSPLOT

AMOCO PRODUCTION COMPANY
WELL AMOCO MONTGOMERY B-HI
HUGOTON EMBAYMENT
PERMIAN B-SILT FORMATION



STANDARD CORE ANALYSIS SUMMARY

AMOCO PRODUCTION COMPANY
WELL AMOCO KU ENDOWMENT SSS #1
HUGOTON EMBAYMENT
HERINGTON FORMATION

Sample Number	Depth, feet	Air Permeability, md	Porosity, percent	Grain Density, gm/cc
K-1	2,235.3	5.61	16.5	2.73
K-2	2,236.0	3.73	13.9	2.74
K-3	2,237.0	5.49	14.0	2.74
K-4	2,238.0	1.79	14.0	2.74
K-5	2,239.0	0.0418	10.4	2.73
K-6	2,240.0	0.786	15.3	2.72
K-7	2,241.0	0.0163	9.1	2.73
K-8	2,242.0	0.0224	10.0	2.74
K-9	2,243.0	0.0369	13.2	2.76
K-10	2,244.0	0.0206	13.0	2.75
K-11	2,245.0	0.00827	12.8	2.83
K-12	2,246.0	0.00336	7.8	2.72
K-13	2,247.0	0.00326	9.1	2.73
K-14	2,248.0	0.00175	9.7	2.76
K-15	2,249.0	0.222	11.1	2.77
K-16	2,250.0	0.00138	6.4	2.76

15-187-20338

AIR PERMEABILITY VS. POROSITY CROSSPLOT

AMOCO PRODUCTION COMPANY
WELL AMOCO KU ENDOWMENT SSS #1
HUGOTON EMBAYMENT
HERINGTON FORMATION