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# Precision Core Analysis, Inc.

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## *Ritchie Exploration, Inc.*

***Moore C-P #4***

***Sec. 30 T19S R21W***

***Ness County, Kansas***

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Ritchie Exploration, Inc.  
 Moore C-P # 4  
 Sec. 30 T19S R21W  
 Ness County , Kansas

Job: 9755  
 Date: 13-Oct-97

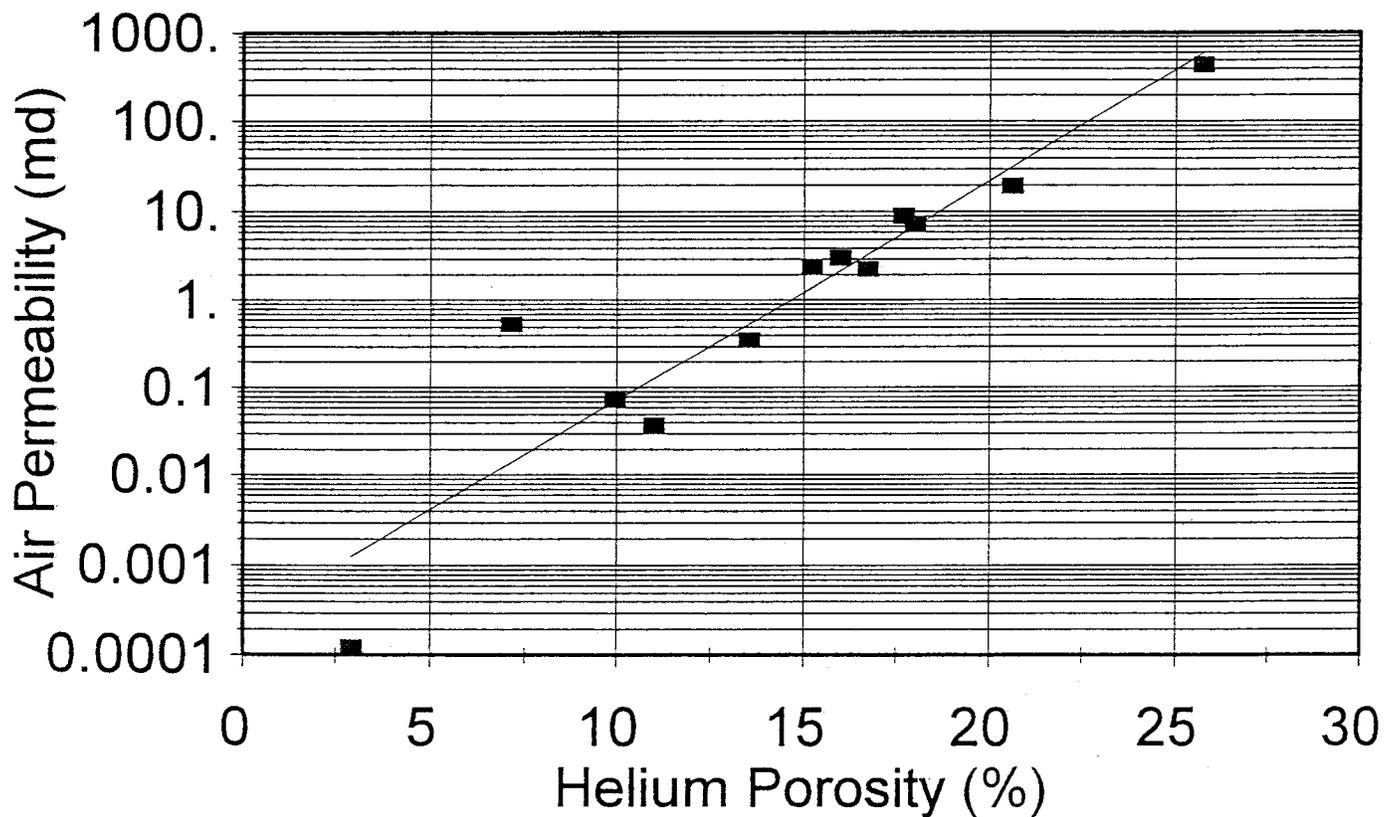
Reference Number	Depth (ft)	Permeability		Helium Porosity (%)	Saturations		Grain Density (g/cc)	Sample Description
		Air (md)	Klink (md)		Water (%)	Oil (%)		
<i>Core No. 1 Mississippian Frn. 4421.0'-4436.0' Rec. 15.0'/15.0'</i>								
1	4421.4	<0.001	<0.001	2.9	66.3	15.5	2.79	Ls Mdst m-fracs filled w anhy
2	4423.5	0.535	0.385	7.1	37.0	8.3	2.71	Dol sh cht nod
3	4426.2	19.4	15.9	20.6	50.1	15.9	2.61	Dol sh cht nod m-fracs vug
4	4427.6	3.08	2.40	16.0	39.4	20.3	2.84	Dol sl vug suc
5	4428.4	7.19	5.71	18.0	52.4	22.5	2.78	Dol sl vug suc cht nod
6	4429.8	0.075	0.040	10.0	47.0	19.4	2.83	Dol sl vug suc sl sh
7	4430.6	0.353	0.238	13.5	46.9	13.6	2.81	Dol sl sh vug cht nod suc
8	4431.7	0.038	0.018	11.0	43.7	12.7	2.84	Dol sl sh cmtd m-frac
9	4432.4	2.46	1.95	15.2	40.0	25.3	2.84	Dol pp vug phos m-fracs
10	4433.8	441.	406.	25.7	34.9	24.4	2.88	Dol v vug
11	4434.6	2.28	1.79	16.7	42.0	21.7	2.82	Dol tr cht lam
12	4435.3	8.96	7.15	17.7	34.9	21.6	2.75	Dol cht nod vug m-fracs

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## *Air Permeability vs Helium Porosity*



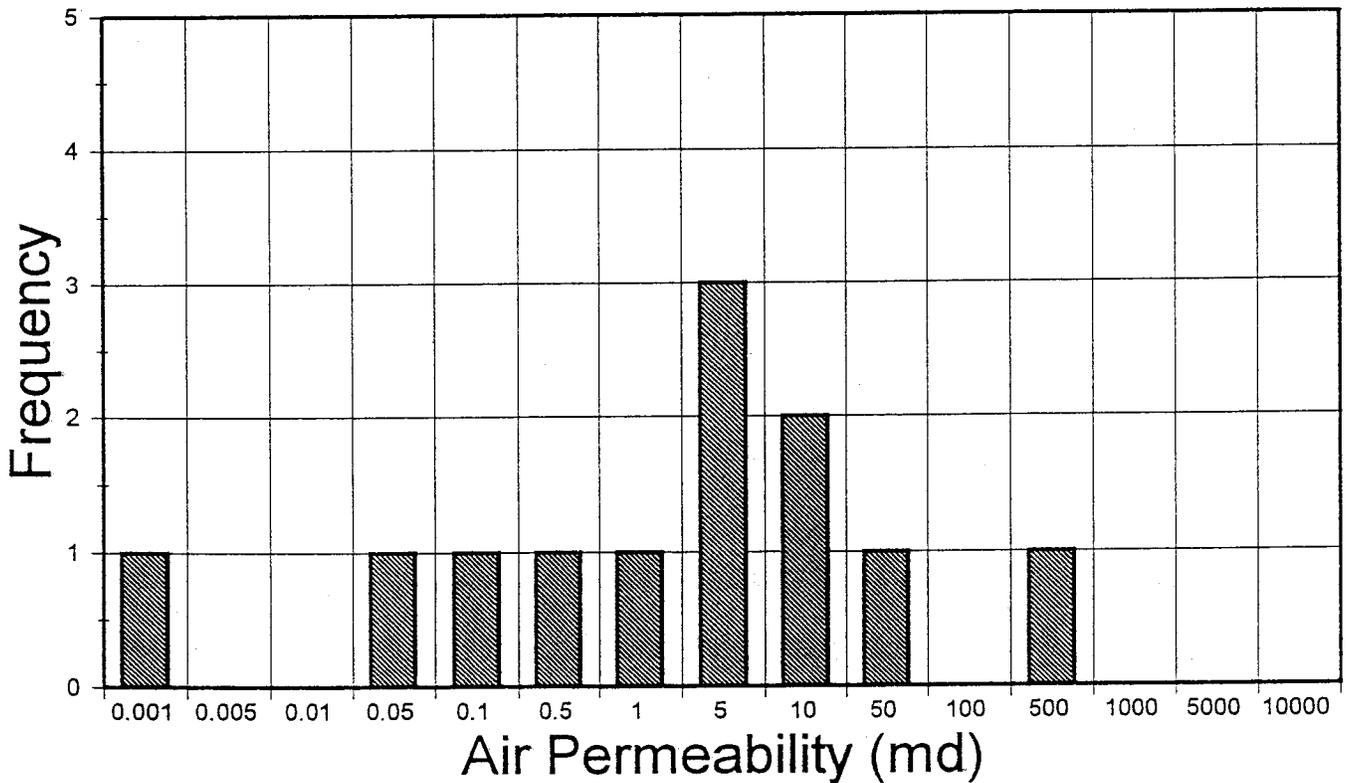
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## *Air Permeability Frequency Distribution*

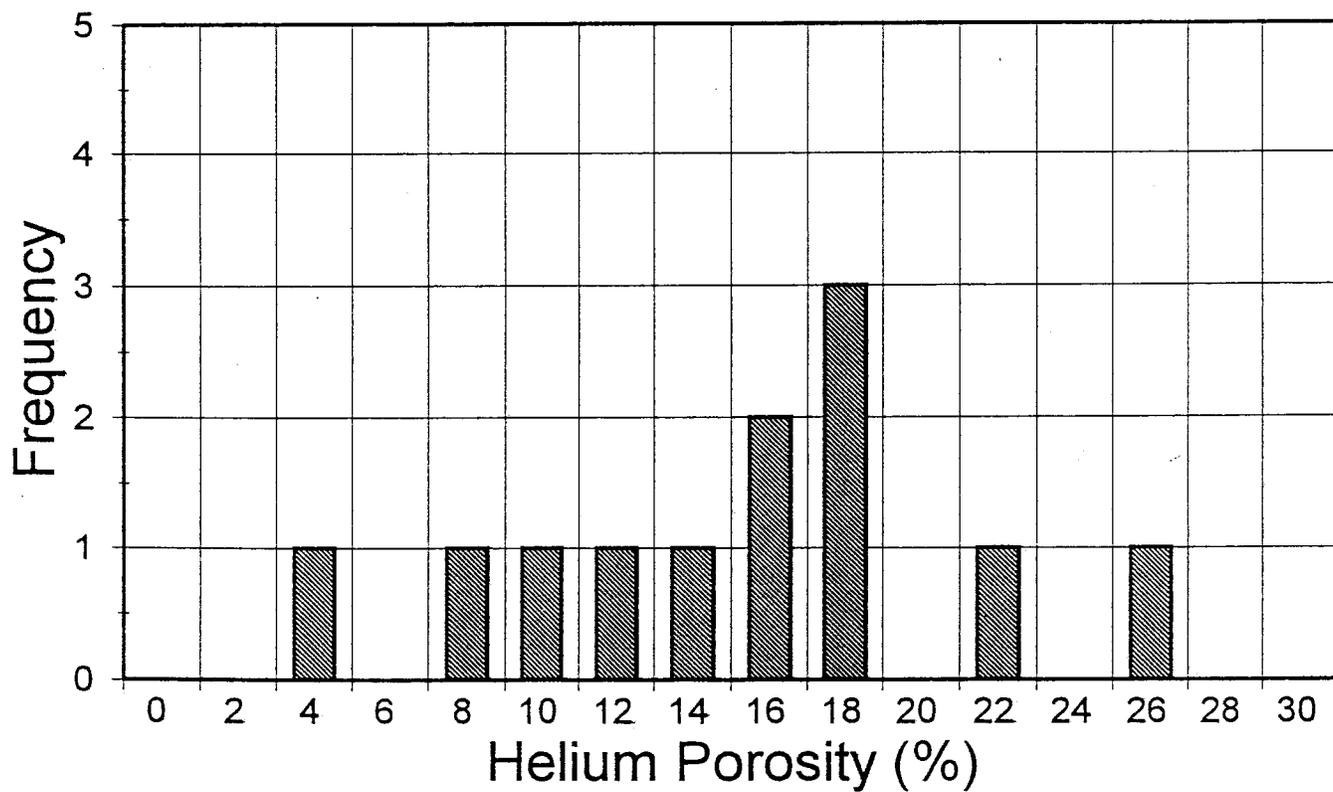


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## Helium Porosity Frequency Distribution



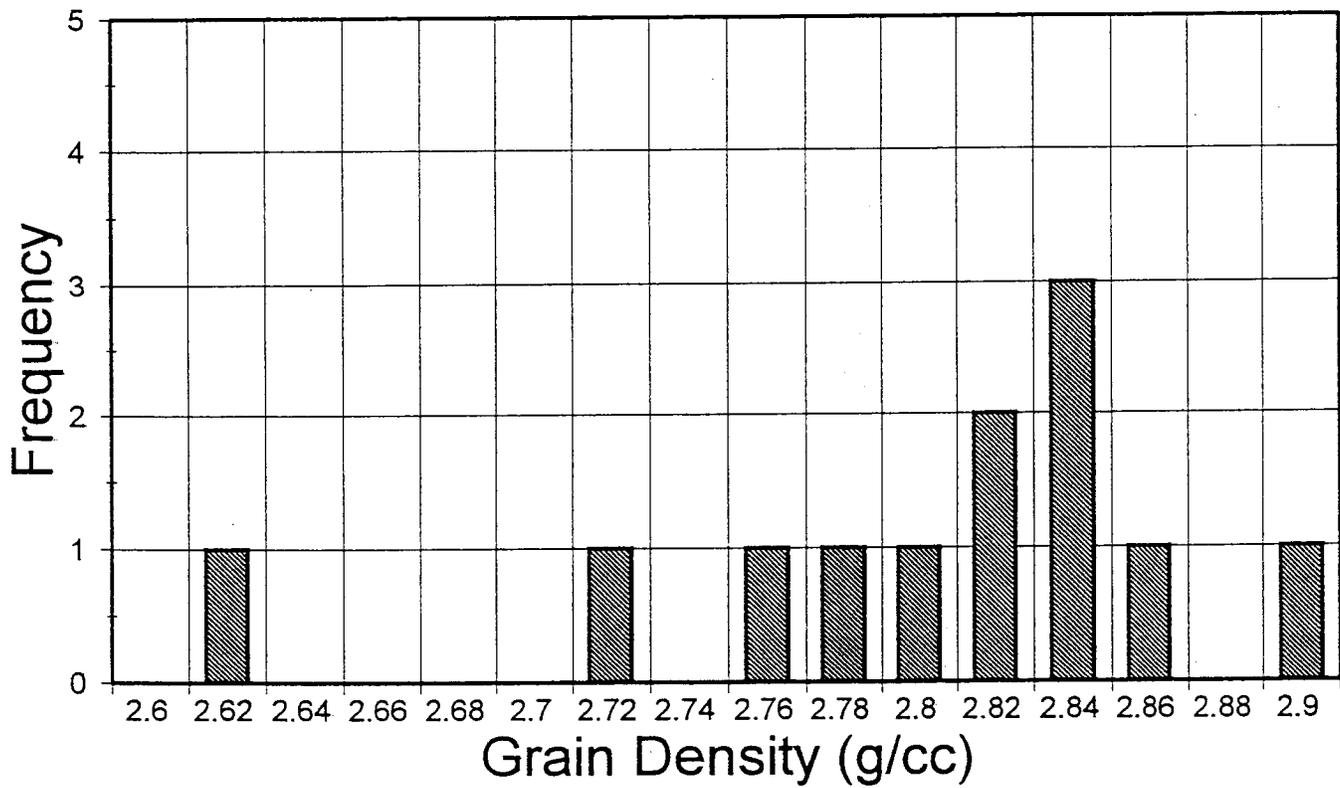
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## Grain Density Frequency Distribution



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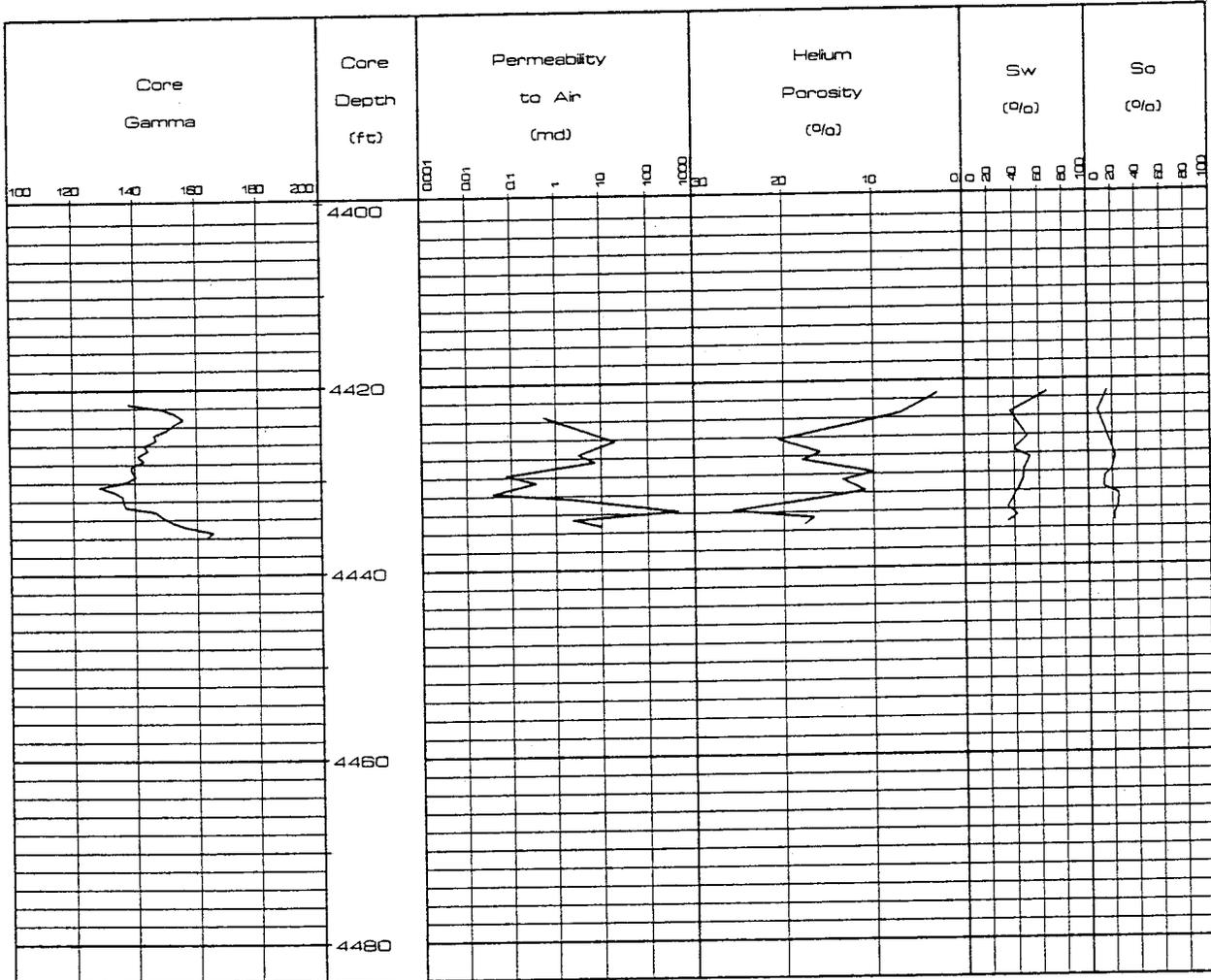
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## PETRO-LOG

Scale 1:240



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Zone	Permeability (md)*			Porosity (%)**		
	Median	Arith. Mean	Geom. Mean	Median	Arith. Mean	Geom. Mean
Zone1	2.373	40.426	0.961	15.591	14.542	12.901

\* Values above 0.00 md

\*\* Values above 0.00 %

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## Zone1 Air Permeability Regression

### Regression Output:

Constant	-3.629974
Std Err of Y Est	0.636221
R Squared	0.863699
No. of Observations	12.000000
Degrees of Freedom	10.000000
X Coefficient(s)	0.248424
Std Err of Coef.	0.031208

## Zone1 Klinkenberg Permeability Regression

### Regression Output:

Constant	-4.397805
Std Err of Y Est	0.828069
R Squared	0.831669
No. of Observations	12.000000
Degrees of Freedom	10.000000
X Coefficient(s)	0.285505
Std Err of Coef.	0.040618