



CORE LABORATORIES

CORE ANALYSIS RESULTS

for

Mallon Oil Company

Jicarilla 459 No. 5 Well
Wildcat
Rio Arriba County, New Mexico
File Number: 57121-8279

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CORE LABORATORIES

Company : Mallon Oil Company
Well : Jicarilla 459 No. 5 Well
Location : SE SE Sec. 19 T30N R3W
Co, State : Rio Arriba, New Mexico

Field : Wildcat
Formation : As Noted
Coring Fluid : Water Base Mud
Elevation : 7274 KB

File No.: 57121-8279
Date : 27-Dec-1988
API No.:
Analysts: FD MW

CORE ANALYSIS RESULTS

SAMPLE NUMBER	DEPTH ft	PERMEABILITY		POROSITY (HELIUM) %	SATURATION		GRAIN DENSITY gm/cc	DESCRIPTION
		(MAXIMUM) Kair md	(90 DEG) Kair md		(PORE VOLUME) OIL %	WATER %		
Core No.1 Fruitland Formation 3803.0-3833.0 Cut 30.0' Rec. 30.0'								
	3803.0- 33.0							Coal -- No Analysis Requested
Core No.2 Fruitland Formation 3833.0-3842.0 Cut 9.0' Rec. 9.0'								
	3833.0- 42.0							No Analysis Requested
Core No.3 Fruitland Formation 3842.0-3872.0 Cut 30.0' Rec. 30.0'								
	3842.0- 49.0							No Analysis Requested
1	3849.0- 50.0	0.03		10.9	5.9	66.5	2.69	Sst gry f gr arg sli sh sli calc sli glauc
2	3850.0- 51.0	0.06		13.8	14.7	67.2	2.67	Sst gry f gr arg sli sh sli calc sli glauc
	3851.0- 57.0							No Analysis Requested
3	3857.0- 58.0	<.01		6.6	13.4	76.9	2.70	Sst gry f gr arg sli sh sli calc sli glauc
	3858.0- 61.0							No Analysis Requested
4	3861.0- 62.0	<.01		6.2	21.9	60.2	2.70	Sst gry f gr arg sli sh sli calc sli glauc
	3862.0- 65.0							No Analysis Requested
5	3865.0- 66.0	0.02		8.9	0.4	77.5	2.69	Sst gry f gr arg sli sh sli calc sli glauc
6	3866.0- 67.0	0.02		11.1	3.7	22.3	2.67	Sst gry f gr arg sli sh sli calc sli glauc
	3867.0- 69.0							No Analysis Requested
7	3869.0- 70.0	0.01		7.0	0.0	35.3	2.69	Sst gry f gr arg sli sh sli calc sli glauc
	3870.0- 71.0							No Analysis Requested
8	3871.0- 72.0	0.03		9.0	0.2	17.1	2.69	Sst gry f gr arg sh sli calc sli glauc

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		(MAXIMUM) Kair md	(90 DEG) Kair md		(PORE VOLUME) OIL %	WATER %		
Core No.4 Pictured Cliffs Formation 3872.0-3932.0 Cut 60.0' Rec. 60.0'								
9	3872.0- 74.0							No Analysis Requested
	3874.0- 75.0	0.02		8.7	0.2	28.9	2.70	Sst gry f gr arg sh sli calc sli glauc
	3875.0- 77.0							No Analysis Requested
10	3877.0- 78.0	0.08		13.3	0.0	18.7	2.68	Sst gry f gr arg sli calc sli glauc
11	3878.0- 79.0	0.09		13.1	0.0	17.6	2.68	Sst gry f gr arg sli calc sli glauc
+	3879.0- 80.0	0.11	0.10	12.9	0.0	25.0	2.69	Sst gry f gr arg sli calc sli glauc
	3880.0- 81.0							No Analysis Requested
13	3881.0- 82.0	0.12		13.7	0.0	16.9	2.69	Sst gry f gr arg sli calc sli glauc
	3882.0- 83.0							No Analysis Requested
14	3883.0- 84.0	0.03		11.0	0.0	34.2	2.69	Sst gry f gr arg sli sh sli calc sli glauc
	3884.0- 85.0							No Analysis Requested
+	3885.0- 86.0	0.12	0.12	13.2	0.0	21.5	2.67	Sst gry f gr arg sli calc sli glauc
	3886.0- 87.0							No Analysis Requested
16	3887.0- 88.0	0.04		12.4	0.0	41.0	2.70	Sst gry f gr arg sli calc sli glauc
	3888.0- 92.0							No Analysis Requested
17	3892.0- 93.0	0.04		10.7	0.0	40.5	2.72	Sst gry f gr arg sli calc sli glauc
	3893.0- 94.0							No Analysis Requested
18	3894.0- 95.0	0.04		12.8	0.0	26.6	2.70	Sst gry f gr arg sli calc sli glauc
	3895.0- 97.0							No Analysis Requested
19	3897.0- 98.0	0.03		11.1	0.0	49.1	2.71	Sst gry f gr arg sli calc sli glauc
	3898.0- 03.0							No Analysis Requested
20	3903.0- 04.0	0.03		11.2	0.0	54.2	2.72	Sst gry f gr arg sli calc sli glauc
	3904.0- 05.0							No Analysis Requested
21	3905.0- 06.0	0.03		9.1	0.0	57.7	2.72	Sst gry f gr arg sli calc sli glauc
	3906.0- 11.0							No Analysis Requested
22	3911.0- 12.0	0.04		10.9	0.0	37.6	2.72	Sst gry f gr arg sli calc sli glauc
	3912.0- 13.0							No Analysis Requested

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Formation : As Noted

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SAMPLE NUMBER	DEPTH ft	PERMEABILITY		POROSITY (HELIUM) %	SATURATION		GRAIN DENSITY gm/cc	DESCRIPTION
		(MAXIMUM) K _{air} md	(90 DEG) K _{air} md		(PORE VOLUME) OIL %	WATER %		
+ 23	3913.0- 14.0	0.08	0.08	10.9	0.0	33.3	2.70	Sst gry f gr arg sli calc sli glauc
	3914.0- 15.0							No Analysis Requested
24	3915.0- 16.0	0.06		12.4	0.0	18.4	2.71	Sst gry f gr arg sli calc sli glauc
	3916.0- 23.0							No Analysis Requested
25	3923.0- 24.0	0.03		10.1	0.0	42.7	2.72	Sst gry f gr arg sli sh sli calc sli glauc
	3924.0- 32.0							No Analysis Requested

+ Denotes Full Diameter Sample

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A N A L Y T I C A L P R O C E D U R E S A N D Q U A L I T Y A S S U R A N C E

HANDLING & CLEANING

Core Transportation : Core Samples Picked Up In Denver
Solvent : None used
Extraction Equipment : Centrifuge
Extraction Time : No Time
Drying Equipment : Conventional Low Temperature Oven
Drying Time : 72 Hours
Drying Temperature : 180 Degree Fahrenheit

ANALYSIS

Grain volume measured by Boyle's Law in a matrix cup using He
Bulk volume measured by caliper
Porosity determined by summation of fluids (retort)
Permeabilities measured on one in. diameter drilled plugs

CORE LABORATORIES

Company : Mallon Oil Company
Well : Jicarilla 459 No. 5 Well

Field : Wildcat
Formation : As Noted

File No.: 57121-8279
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TABLE I
SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA			CHARACTERISTICS REMAINING AFTER CUTOFFS		
ZONE:			PERMEABILITY:		
Identification -----	Fruitland		Number of Samples -----	8	
Top Depth -----	3849.0 ft		Thickness Represented -	8.0 ft	
Bottom Depth -----	3872.0 ft		POROSITY:		
Number of Samples -----	8		Storage Capacity -----	73.5 ϕ -ft	
DATA TYPE:			Arithmetic Average -----	9.2 %	
Porosity -----	(HELIUM)		Minimum -----	6.2 %	
Permeability -----	(MAXIMUM) Kair		Maximum -----	13.8 %	
CUTOFFS:			Median -----	8.9 %	
Porosity (Minimum) -----	0.0 %		Standard Deviation ----	± 2.6 %	
Porosity (Maximum) -----	100.0 %		GRAIN DENSITY:		
Permeability (Minimum) ---	0.0000 md		Arithmetic Average -----	2.69 gm/cc	
Permeability (Maximum) ---	100000. md		Minimum -----	2.67 gm/cc	
Water Saturation (Maximum)	100.0 %		Maximum -----	2.70 gm/cc	
Oil Saturation (Minimum) -	0.0 %		Median -----	2.69 gm/cc	
Grain Density (Minimum) --	2.00 gm/cc		Standard Deviation ----	± 0.01 gm/cc	
Grain Density (Maximum) --	3.00 gm/cc		AVERAGE SATURATIONS (Pore Volume):		
Lithology Excluded -----	NONE		Oil -----	7.3 %	
			Water -----	52.7 %	
			HETEROGENEITY (Permeability):		
			Dykstra-Parsons Var. --	0.296	
			Lorenz Coefficient ----	0.267	

CORE LABORATORIES

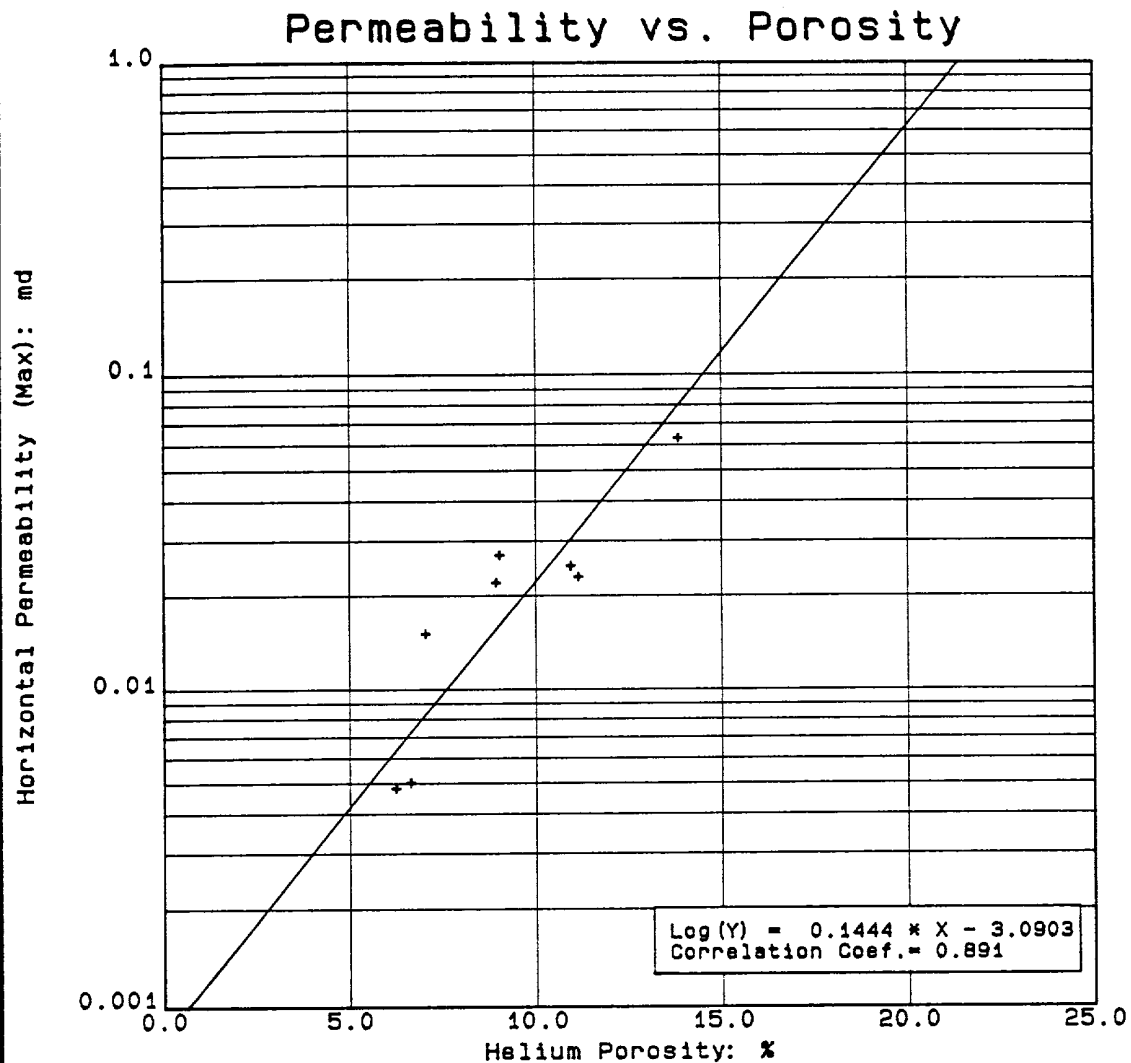
Company : Mallon Oil Company
Well : Jicarilla 459 No. 5 Well

Field : Wildcat
Formation : As Noted

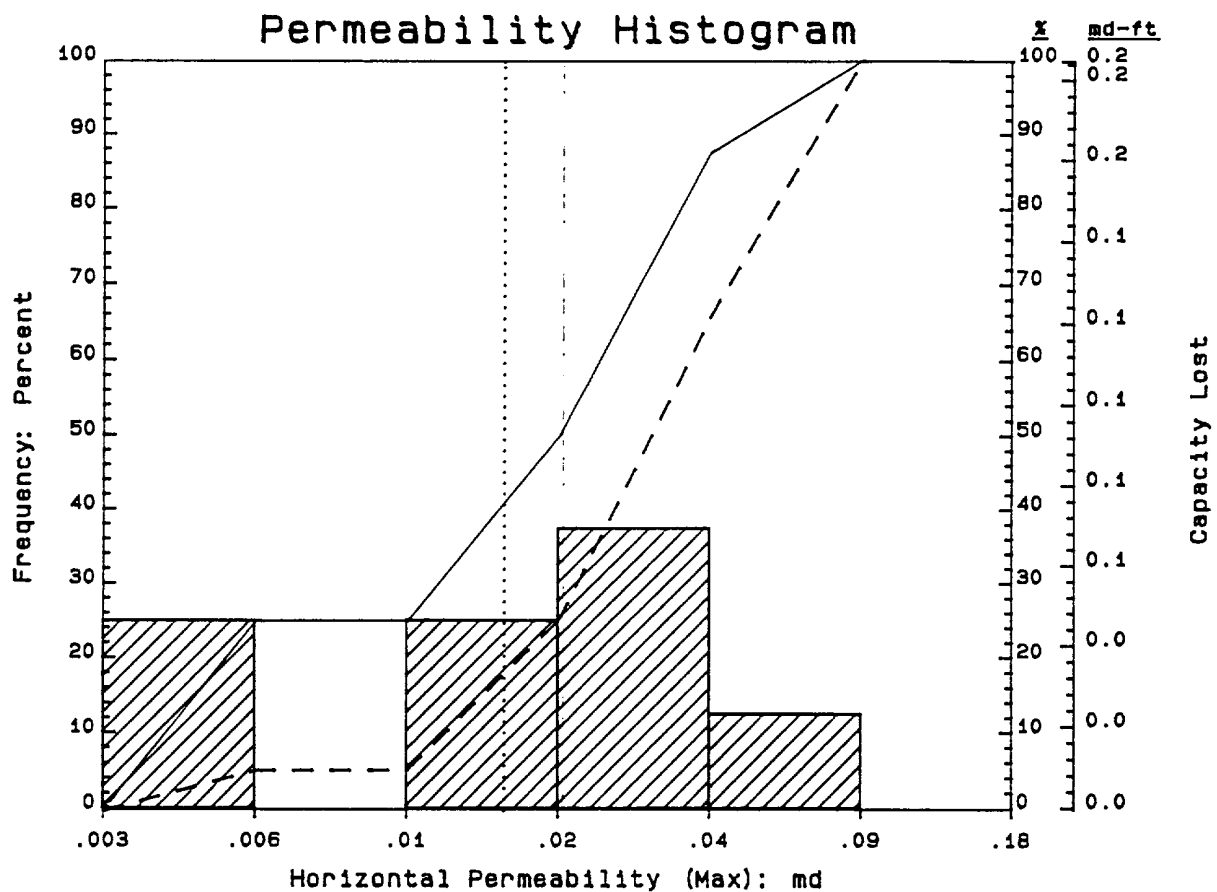
File No.: 57121-8279
Date : 27-Dec-1988

TABLE II
SUMMARY OF CORE DATA

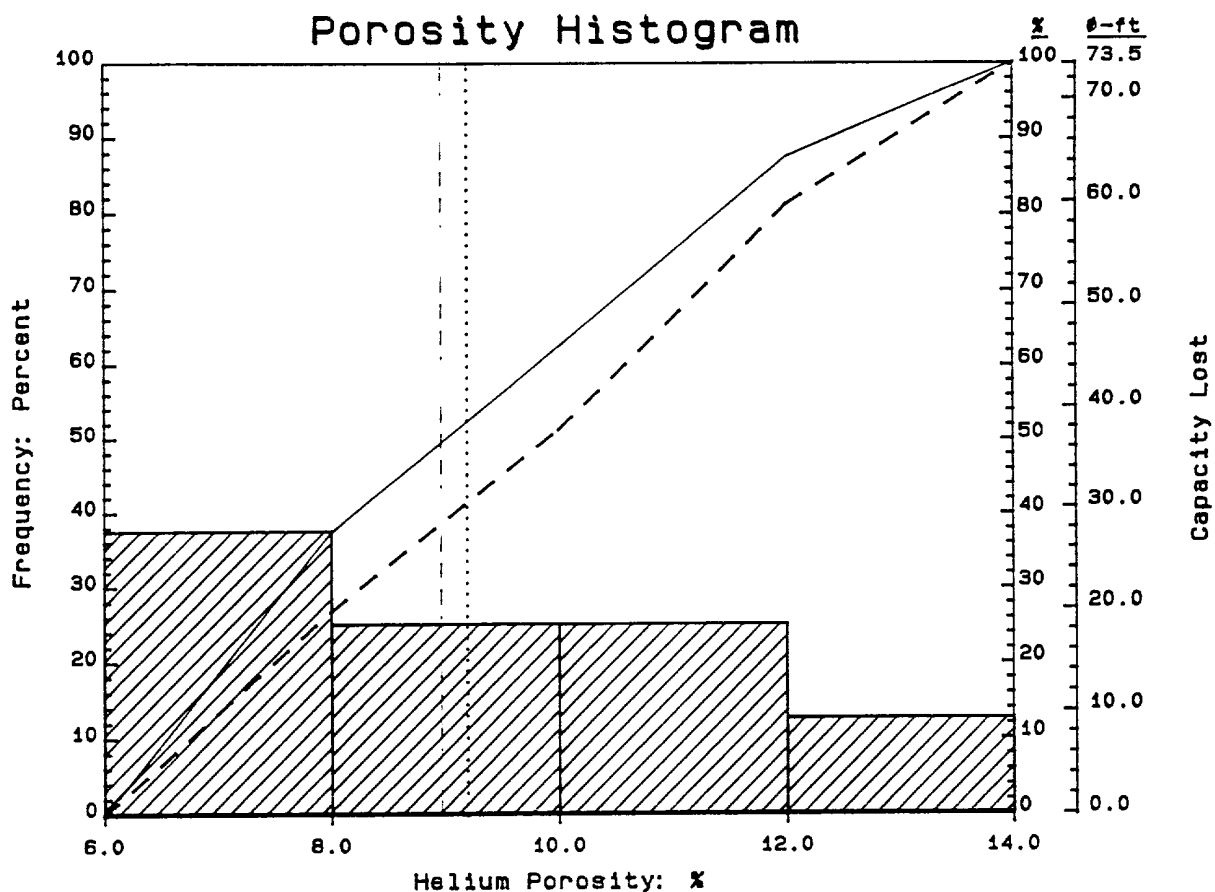
ZONE AND CUTOFF DATA		CHARACTERISTICS REMAINING AFTER CUTOFFS	
ZONE:		PERMEABILITY:	
Identification -----	Pictured Cliff	Flow Capacity -----	1.0 md-ft
Top Depth -----	3874.0 ft	Arithmetic Average -----	0.06 md
Bottom Depth -----	3924.0 ft	Geometric Average -----	0.05 md
Number of Samples -----	17	Harmonic Average -----	0.04 md
DATA TYPE:		Minimum -----	0.02 md
Porosity -----	(HELIUM)	Maximum -----	0.12 md
Permeability -----	(MAXIMUM) Kair	Median -----	0.04 md
CUTOFFS:		Standard Dev. (Geom) --	K-10±0.256 md
Porosity (Minimum) -----	0.0 %	HETEROGENEITY (Permeability):	
Porosity (Maximum) -----	100.0 %	Dykstra-Parsons Var. --	0.468
Permeability (Minimum) ---	0.0000 md	Lorenz Coefficient ----	0.270
Permeability (Maximum) ---	100000. md	AVERAGE SATURATIONS (Pore Volume):	
Water Saturation (Maximum)	100.0 %	Oil -----	0.0 %
Oil Saturation (Minimum) -	0.0 %	Water -----	32.1 %
Grain Density (Minimum) --	2.00 gm/cc		
Grain Density (Maximum) --	3.00 gm/cc		
Lithology Excluded -----	NONE		



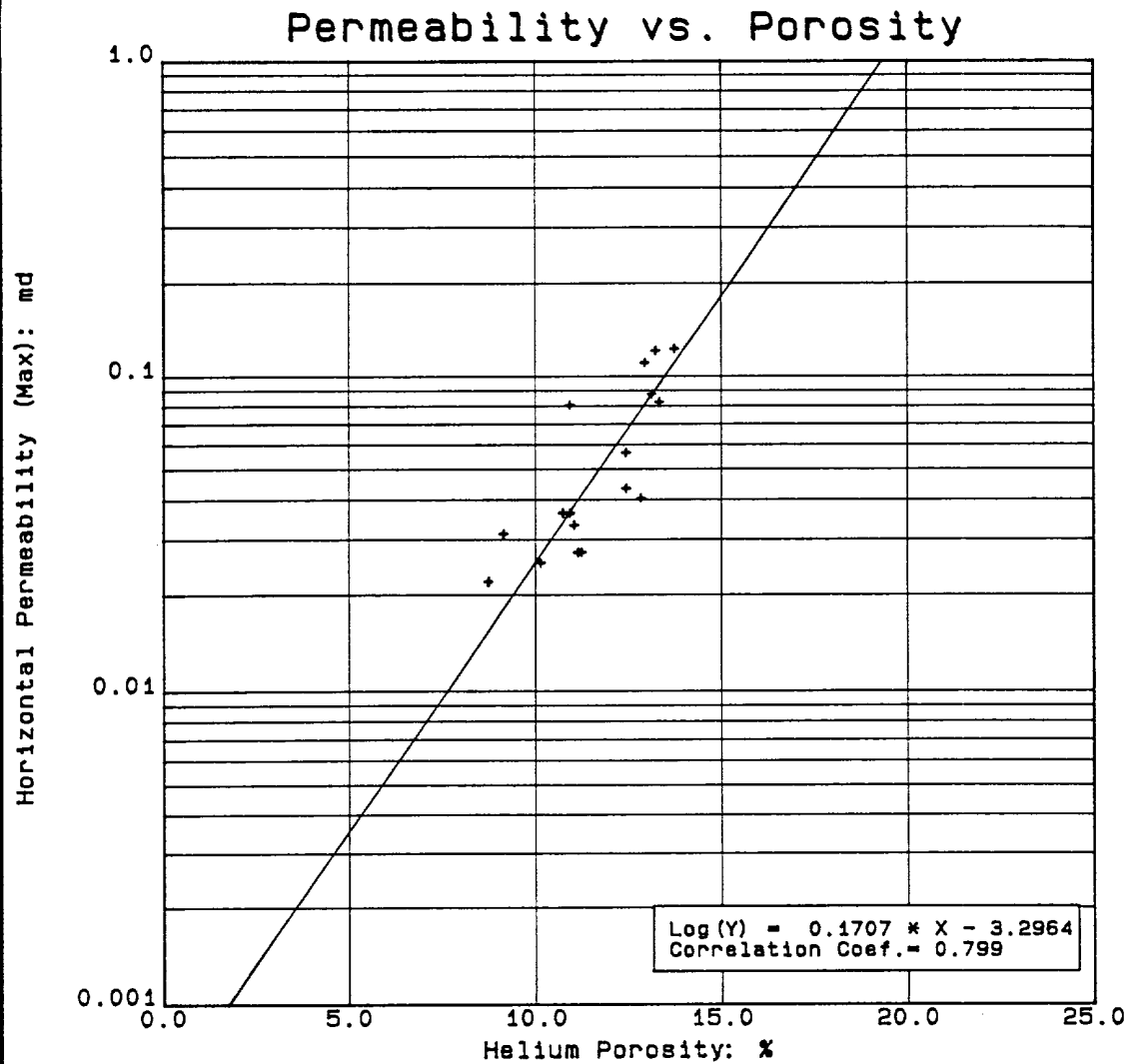
Mallon Oil Company Jicarilla 459 No. 5 Well Wildcat Rio Arriba County, New Mexico Fruitland Formation 3849.0-3872.0 feet Core Laboratories	- LEGEND - Fruitland
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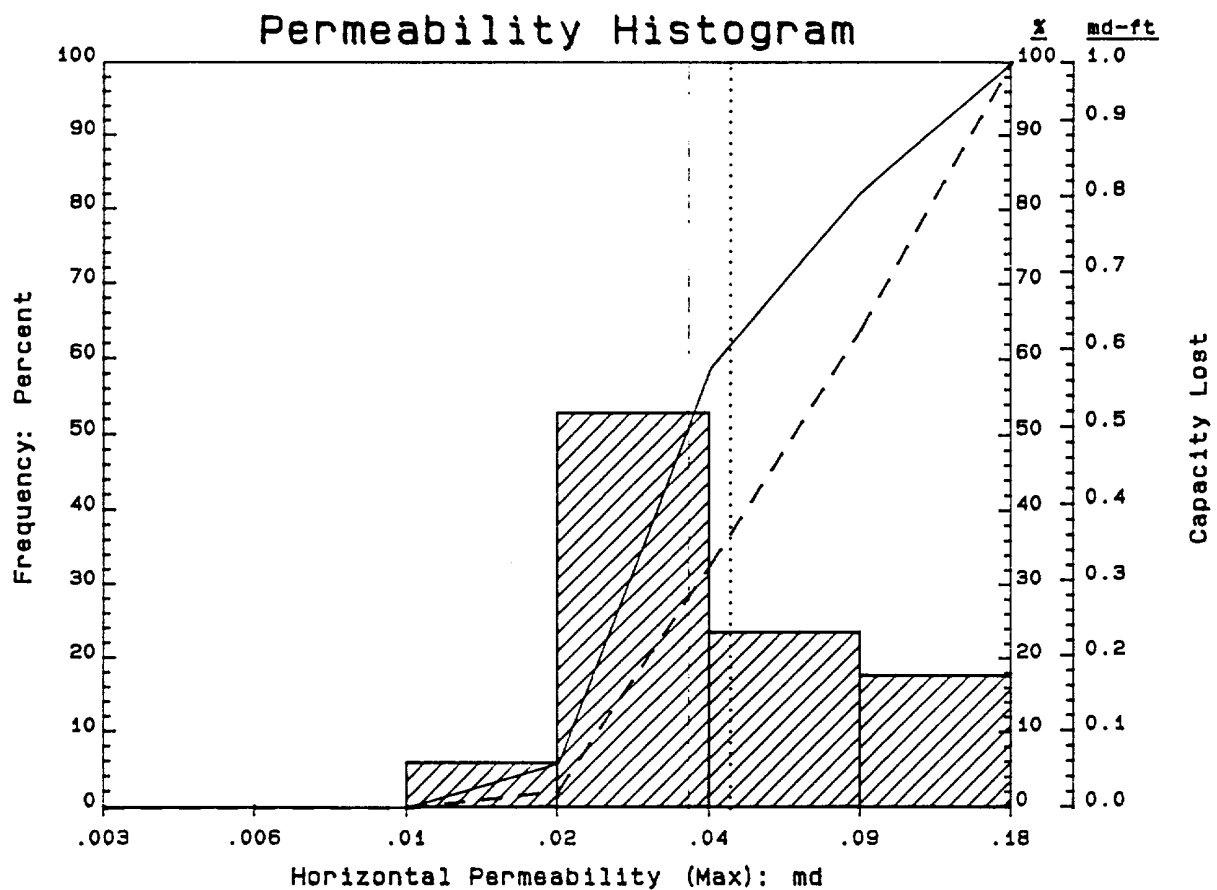
Mallon Oil Company Jicarilla 459 No. 5 Well Wildcat Rio Arriba County, New Mexico Fruitland Formation 3849.0-3872.0 feet Core Laboratories 27-Dec-1988	
- LEGEND - — Median Value (0.023) Geom. Average (0.017) —— Cumulative Frequency - - - Cumulative Capacity Lost 8 Samples	



Mallon Oil Company Jicarilla 459 No. 5 Well Wildcat Rio Arriba County, New Mexico Fruitland Formation 3849.0-3872.0 feet Core Laboratories 27-Dec-1988		- LEGEND - —— Median Value (8.9) Arith. Average (9.2) —— Cumulative Frequency --- Cumulative Capacity Lost 8 Samples	
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Mallon Oil Company Jicarilla 459 No. 5 Well Wildcat Rio Arriba County, New Mexico Pictured Cliff Formation 3874.0-3924.0 feet Core Laboratories	- LEGEND - Pictured Cliff
27-Dec-1988	



Mallon Oil Company

Jicarilla 459 No. 5 Well

Wildcat

Rio Arriba County, New Mexico

Pictured Cliff Formation

3874.0-3924.0 feet

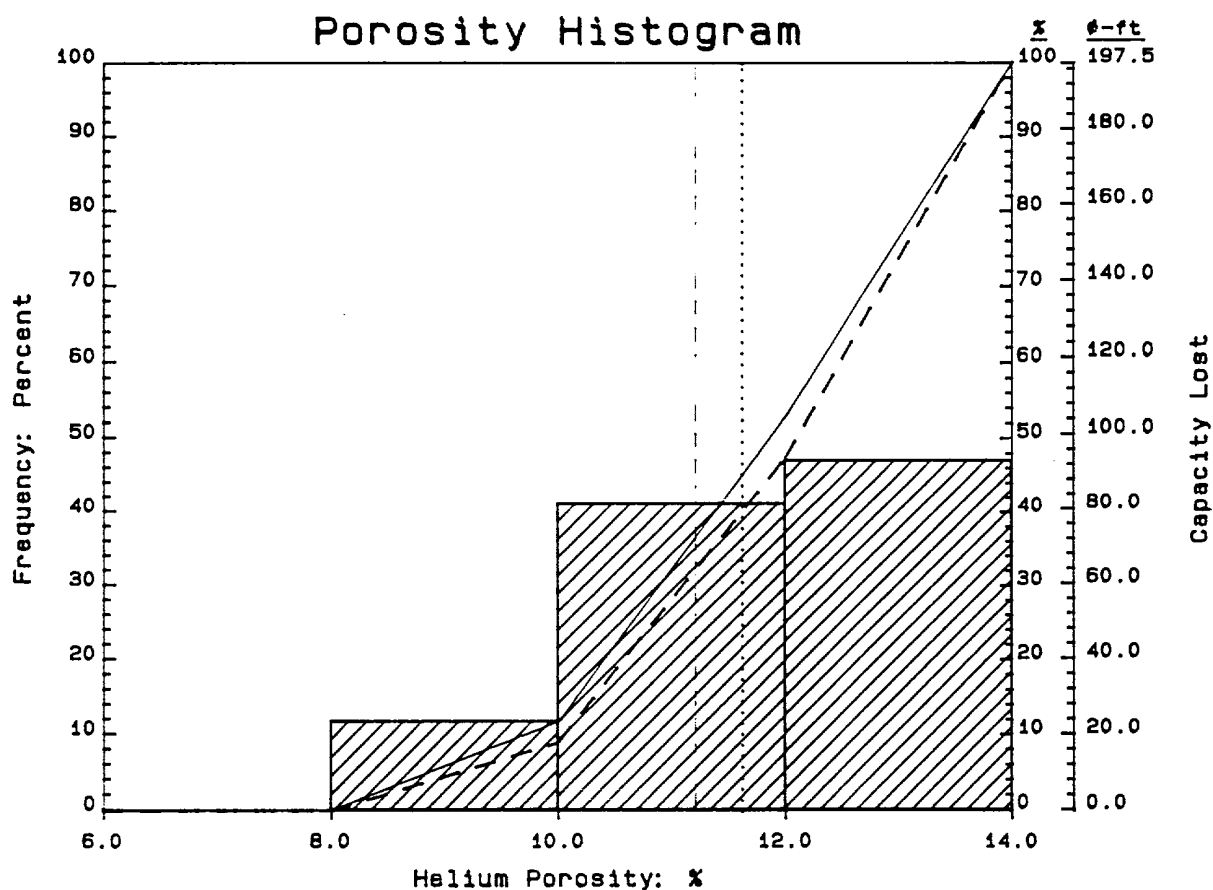
Core Laboratories

27-Dec-1988

- LEGEND -

- Median Value (0.040)
- Geom. Average (0.049)
- Cumulative Frequency
- - - Cumulative Capacity Lost

17 Samples



Mallon Oil Company Jicarilla 459 No. 5 Well Wildcat Rio Arriba County, New Mexico Pictured Cliff Formation 3874.0-3924.0 feet Core Laboratories 27-Dec-1988	
- LEGEND - — Median Value (11.2) Arith. Average (11.6) — Cumulative Frequency - - - Cumulative Capacity Lost 17 Samples	

Correlation Coregraph

Mallon Oil Company

Jicarilla 459 No. 5 Well

Wildcat

Rio Arriba County, New Mexico

Fruitland/Pictured Cliffs Formations

3849.0-3872.0; 3874.0-3924.0 feet

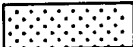
Core Laboratories

27-Dec-1988

Vertical Scale

5.00 in = 100.0 ft

- Lithology Legend -



Sandstone

