CORE ANALYSIS REPORT

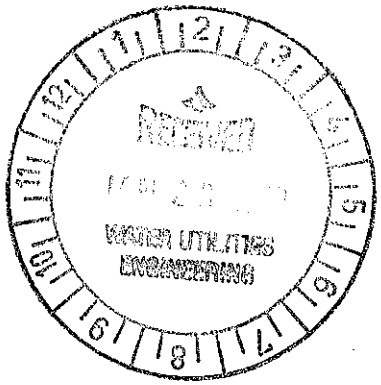
FOR

INTEGRITY WELL & PUMP

EASTERN HILLSBORO FAMW-1
EASTERN HILLSBORO FIELD
PALM BEACH COUNTY, FLORIDA

Core Lab
PETROLEUM SERVICES

CORE LABORATORIES



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PALM BEACH COUNTY, FLORIDA

Core Lab
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January 23, 2002

PALM BEACH COUNTY WATER UTILITIES DEPARTMENT
2065 Prairie Road
West Palm Beach, Florida 33406

File No.: 57181-18448
Subject: Core Analysis
Integrity Well & Pump
Eastern Hillsboro FAMW-1
Eastern Hillsboro Field
Palm Beach County, Florida

Gentlemen:

The subject well was cored using diamond coring equipment and drilling fluid to obtain 4 inch diameter cores from 981 to 1385 feet from the Floridian formation.

Core analysis data is presented in tabular and graphical form for your convenience. A porosity vs. permeability plot was prepared for statistical evaluation. Core analysis data is contained on a 3 1/2 inch computer diskette.

We trust these data will be useful in the evaluation of your property and thank you for the opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

John Sebian
Laboratory Supervisor

JS/ym

INTEGRITY WELL & PUMP
Eastern Hillsboro FAMW-1
File No. 57181-18448
Procedural Page

The cores were preserved at the wellsite and transported to Midland by Integrity Well & Pump personnel.

Core analysis was made on selected intervals requested on full diameter samples.

Fluid removal was achieved using a controlled convection oven drying.

Water moisture content percent of pore space was calculated using a gravimetric technique.

Full diameter porosity was determined by direct pore volume measurement using Boyle's law helium expansion. Bulk volume was measured by Archimedes Principle. Grain density was calculated from dry weight, bulk volume and pore volume measurements.

$$\text{Grain Density} = \frac{\text{Dry Weight}}{\text{Bulk Vol.} - \text{Pore Vol.}}$$

Steady State Air Permeability was measured in two horizontal directions and vertically while the core was confined in a Hassler rubber sleeve.

The core was boxed after analysis.

The core was shiped to Core Laboratories in Houston, Texas upon completion of analysis for further testing.

CORE LABORATORIES

Company : INTEGRITY WELL & PUMP
Well : EASTERN HILLSBORO FAMW-1
Location :
Co,State : PALM BEACH COUNTY, FLORIDA

Field : EASTERN HILLSBORO
Formation : FLORIDIAN
Coring Fluid :
Elevation :

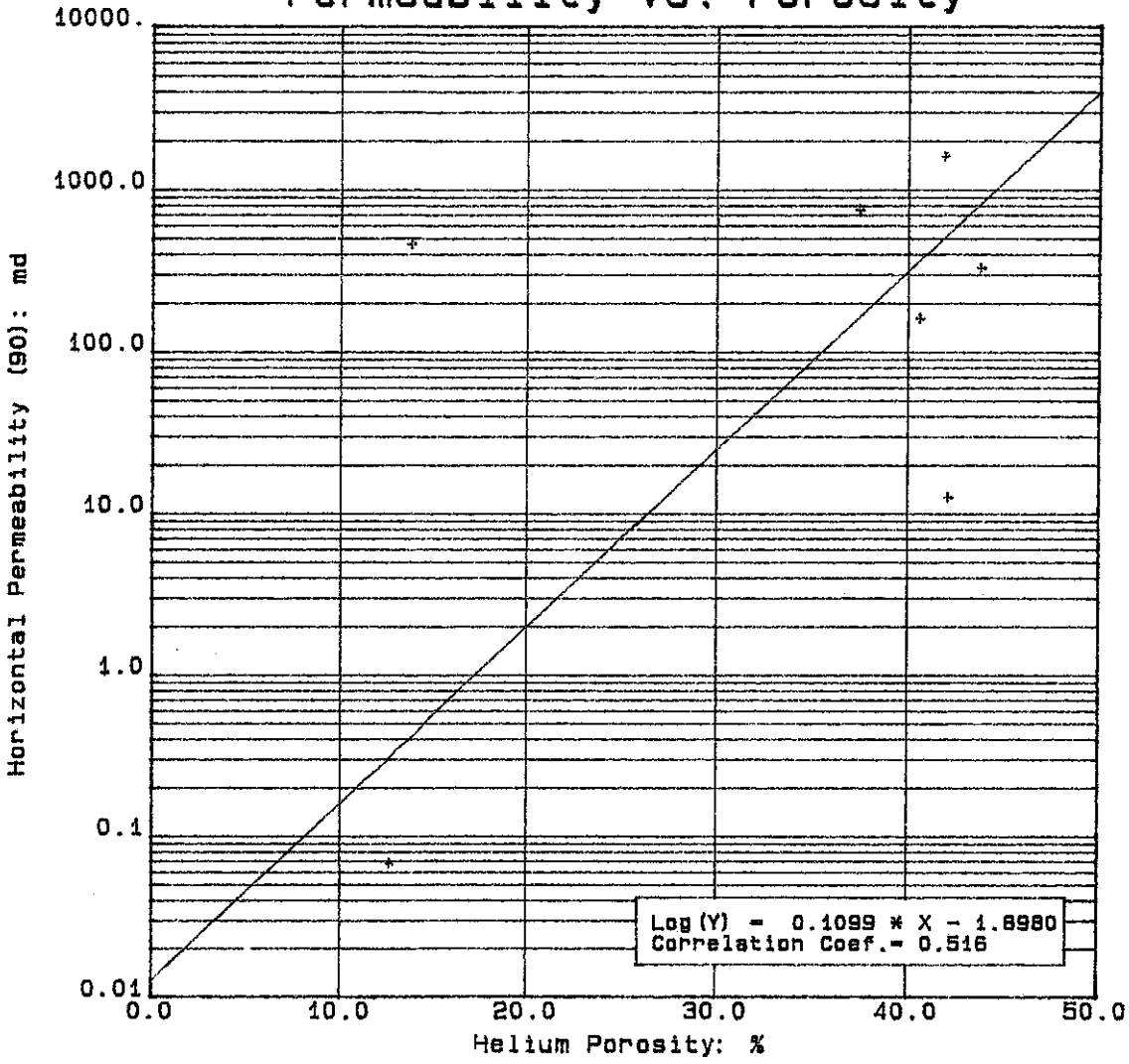
File No.: 57181-18448
Date : 1-10-02
API No. :
Analysts: SEBIAN

CORE ANALYSIS RESULTS

	SAMPLE NUMBER	DEPTH ft	PERMEABILITY (MAXIMUM) Kair md	PERMEABILITY (90 DEG) Kair md	PERMEABILITY (VERTICAL) Kair md	POROSITY (HELIUM) %	GRAIN DENSITY gm/cc	MOISTURE CONTENT %	DESCRIPTION
	1	1384.0- 85.0	1594.	1594.	1563.	41.9	2.72	4.1	Lim, tan, sli/vert frac, pp, foss
	2	1355.0- 55.8	337.	325.	280.	43.8	2.71	3.7	Lim, tan, pp, foss
	3	1304.3- 05.0	747.	747.	327.	37.4	2.73	3.7	Lim, tan, pp, foss
	4	1165.5- 66.2	12.6	12.4	7.89	42.1	2.74	7.7	Lim, tan, pp, foss
*	5	1143.0- 43.8				41.8	2.71	15.9	TBFA, Lim, white, chalky
*	6	1117.0- 17.5				41.8	2.71	16.1	TBFA, Lim, white, chalky
*	7	1093.0- 94.0	1545.		591.	42.7	2.71	14.4	TBFA, Lim, white, chalky
	8	1044.0- 45.0	0.08	0.07	0.09	12.6	2.71	16.9	Lim, gray, sli/sdy, vug, foss
	9	1008.0- 08.5	526.	458.	1598.	13.7	2.73	23.4	Lim, gray, sli/sdy, vug, foss
*	10	981.0- 82.0	1212.			31.7	2.76	16.8	TBFA, Lim, white-black, v/sdy, chalky
	11	1306.0- 07.0	168.	159.	135.	40.6	2.71	4.8	Lim, tan, pp, foss

* SAMPLE NUMBERS 5, 6, 7 & 10 WERE BROKEN DURING ANALYSIS

Permeability vs. Porosity



INTEGRITY WELL & PUMP
EASTERN HILLSBORO FAMW-1
EASTERN HILLSBORO FIELD

FLORIDIAN (981-1385 feet)

Core Laboratories 1-10-02

- LEGEND -
FLORIDIAN

CORE LABORATORIES

Company : INTEGRITY WELL & PUMP
Well : EASTERN HILLSBORO FAMW-1
Field : EASTERN HILLSBORO
Formation : FLORIDIAN
File No.: 57181-18448
Date : 1-10-02

TABLE I

SUMMARY OF CORE DATA

ZONE AND CUTOFF DATA

ZONE:	
Identification	FLORIDIAN
Top Depth	981.0 ft
Bottom Depth	1385.0 ft
Number of Samples	11
DATA TYPE:	
Porosity	(HELIUM)
Permeability	(90 DEG) Kair
CUTOFFS:	
Porosity (Minimum)	0.0 %
Porosity (Maximum)	100.0 %
Permeability (Minimum)	0.0100 md
Permeability (Maximum)	10000. md
Water Saturation (Maximum)	
Oil Saturation (Minimum)	
Grain Density (Minimum)	2.00 gm/cc
Grain Density (Maximum)	3.00 gm/cc
Lithology Excluded	NONE

CHARACTERISTICS REMAINING AFTER CUTOFFS

ZONE:	
Number of Samples	11
Thickness Represented	9.0 ft
POROSITY:	
Storage Capacity	321.4 ϕ-ft
Arithmetic Average	35.7 %
Minimum	12.6 %
Maximum	43.8 %
Median	41.8 %
Standard Deviation	±11.5 %
GRAIN DENSITY:	
Arithmetic Average	2.72 gm/cc
Minimum	2.71 gm/cc
Maximum	2.76 gm/cc
Median	2.71 gm/cc
Standard Deviation	±0.02 gm/cc

PERMEABILITY:	
Flow Capacity	2773.8 md-ft
Arithmetic Average	487. md
Geometric Average	65.4 md
Harmonic Average	0.38 md
Minimum	0.07 md
Maximum	1594. md
Median	325. md
Standard Dev. (Geom)	$K \cdot 10^{\pm 1.519}$ md
HETEROGENEITY (Permeability):	
Dykstra-Parsons Var.	0.896
Lorenz Coefficient	0.579
AVERAGE SATURATIONS (Pore Volume):	
Oil	
Water	

LITHOLOGICAL ABBREVIATIONS

Anhy, anhy	Anhydrite (-ic)
Ark, ark	arkos (-ic)
bnd	band (-ed)
brec	breccia
Calc, calc	calcite (-ic)
carb	carbonaceous
crs gr	course grained
Chk, chky	chalk (-y)
Cht, cht	chert (-y)
Cgl, cgl	conglomerate (-ic)
crs xln	coursely crystalline
dns	dense
Dol, dol	dolomite (-ic)
Frac	randomly oriented fractures
frac	slightly fractured
f gr	fine grained
foss	fossil (-iferous)
f xln	finely crystalline
Gil, gil	gilsonite
Glauc, clauc	glauconite (-itic)
Grt	granite
Gyp, gyp	gypsum (-iferous)
hor frac	perdominantly horizontally fractured
incl	inclusion (-ded)
intbd	interbedded
lam	lamina (-tions,-ated)
Lim, lim	limestone
med gr	medium grain
Mtrx	matrix
NA	interval not analyzed
Nod, nod	nodules (-ar)
Ool, ool	oolite (-itic)
Piso, piso	pisolite (-itic)
pp	pin-point (porosity)
Pyr, pyr	pyrite (-itized, itic)
Sd, sdy	sand (-y)
Shr	solid hydrocarbon residue
sli/	slightly
Sltstn, slty	siltstone, silty
styl	stylolite (-itic)
suc	sucrosic
Su, su	sulphur, sulphurous
TBFA	TOO BROKEN FOR ANALYSIS
Trip, trip	tripolitic
v/	very
vert frac	perdominantly vertically fractured
vug	vuggy
xbd	crossbedded
xln	medium crystalline
xtl	crystal

THE FIRST WORD IN THE DESCIPTION COLUMN OF THE CORE ANALYSIS REPORT DESCIBES THE ROCK TYPE. FOLLOWING ARE ROCK MODIFIERS IN DECREASING ABUNDANCE AND MISCELLANEOUS DESCRIPTIVE TERMS.

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