Phillips Petroleum Company
Exhibit 1
NMOCD Case No. 10,462
Vacuum Glorieta Pool
Lea County, NM

R 34 E

R 35 E

T 17 S

T 18 S

R 34 E

R 35 E

VACUUM GLORIETA EAST UNIT
VACUUM GLORIETA FIELD
LEA COUNTY, NEW MEXICO

- Current Glorieta Completions (100)
- P & A (5)
- Plugged Back or Recompleted (10)
- (3306) Tract Number
- 17 Well Number
- 1992 Conversion (31)
- 1992 Injector-Drill (7)
- 1993 Injector-Drill (8)
- 1993 Conversion (1)
- 1992 Producer-Drill (8)
- 1993 Producer-Drill (2)
- VGWU Injector

0 2,000 4,000
SCALE (FEET)

August 23, 1991

Phillips Exhibits 1 and 2

Phillips Petroleum Company
Exhibit 2
NMOCD Case No. 10,462
Vacuum Glorieta Pool
Lea County, NM

VACUUM GLORIETA PARTICIPATION PARAMETERS

- 1990 PRODUCTION
- VOLUMETRIC ORIGINAL OIL IN PLACE
- USEABLE WELLBORES
- ACREAGE
- 1/1/91 REMAINING PRIMARY

Mobil Exhibits 1 through 13

VACUUM GLORIETA UNIT - PROPOSED

LEA COUNTY, NEW MEXICO

ENGINEERING-GEOLOGICAL TECHNICAL COMMITTEE REPORT

NOVEMBER, 1990

INTRODUCTION

On February 12, 1991, the Working Interest Owners of the Vacuum Glorieta Field approved the Technical Committee Report dated November 1990. Also approved was the division of the field into two separate EOR study areas for the purpose of forming two units - the Vacuum Glorieta East Unit (VGEU) and the Vacuum Glorieta West Unit (VGWU). A map showing the boundary between the two proposed units is provided as **Figure 1.**

The proposed VGEU covers 4,240 surface acres located largely in T-17-S, R-35-E of Lea County, New Mexico. A base map of the proposed Unit is provided as **Figure 2.** The proposed VGEU contains 93 current Glorieta completions and as of January 1, 1991, has produced 42.6 MMSTBO with a 1990 average production of 61,320 BOPM or 2016 BOPD. A plot of historical oil, water and gas production is provided as **Figure 3.**

The proposed unitized interval is from the Glorieta formation top to the Blinebry top or approximately 5800 feet to 6200 feet log depth as shown in the type log (**Figure 4**). The Paddock formation is contained within this interval at approximately 100 feet below the top of the Glorieta and is the dominant producing interval in the Vacuum Glorieta Field. The average net pay within the Unit area is 58 feet with a range from 8 to 124 feet.

The below table lists the proposed VGEU reservoir and fluid characteristics as well as the actual and forecasted VGEU recoveries.

Properties:	
Depth, feet	5,800
Type Formation	Dolomite
Reservoir Temperature, °F	119
Original Reservoir Pressure, PSI	2,260
Bubble Point Pressure, PSI	1,331
Oil Formation Volume Factor at Bubble Point, RB/STB	1.306
Area, acres	4,240
Average Net Pay, feet	58
Average Porosity, %	10.1
Average Initial Water Saturation, %	27.3
Average Permeability, md	3.1
Original-Oil-in-Place, MSTBO	**107,296**

Recoveries:		% OOIP
Cumulative Production (1/1/91), MSTBO	42,646	39.8
Remaining Primary (1/1/91), MSTBO	6,895	6.4
Ultimate Primary, MSTBO	49,541	46.2
EOR Forecasts:		
Water Injection only, MSTBO	8,917	8.3
Water and CO2 (WAG) Injection, MSTBO.	22,443	20.9
Total Forecasted Recovery (Primary + EOR), MSTBO	71,984	67.1

DEPOSITIONAL ENVIRONMENTS AND FACIES DISTRIBUTION OF THE PERMIAN PADDOCK MEMBER OF THE YESO FORMATION, VACUUM (GLORIETA) FIELD, LEA COUNTY, NEW MEXICO

by

DAN E. BURNHAM. B.S.

THESIS

Presented to the Graduate Faculty of Geology

The University of Texas of the Permian Basin

in Partial Fulfillment

of Requirements

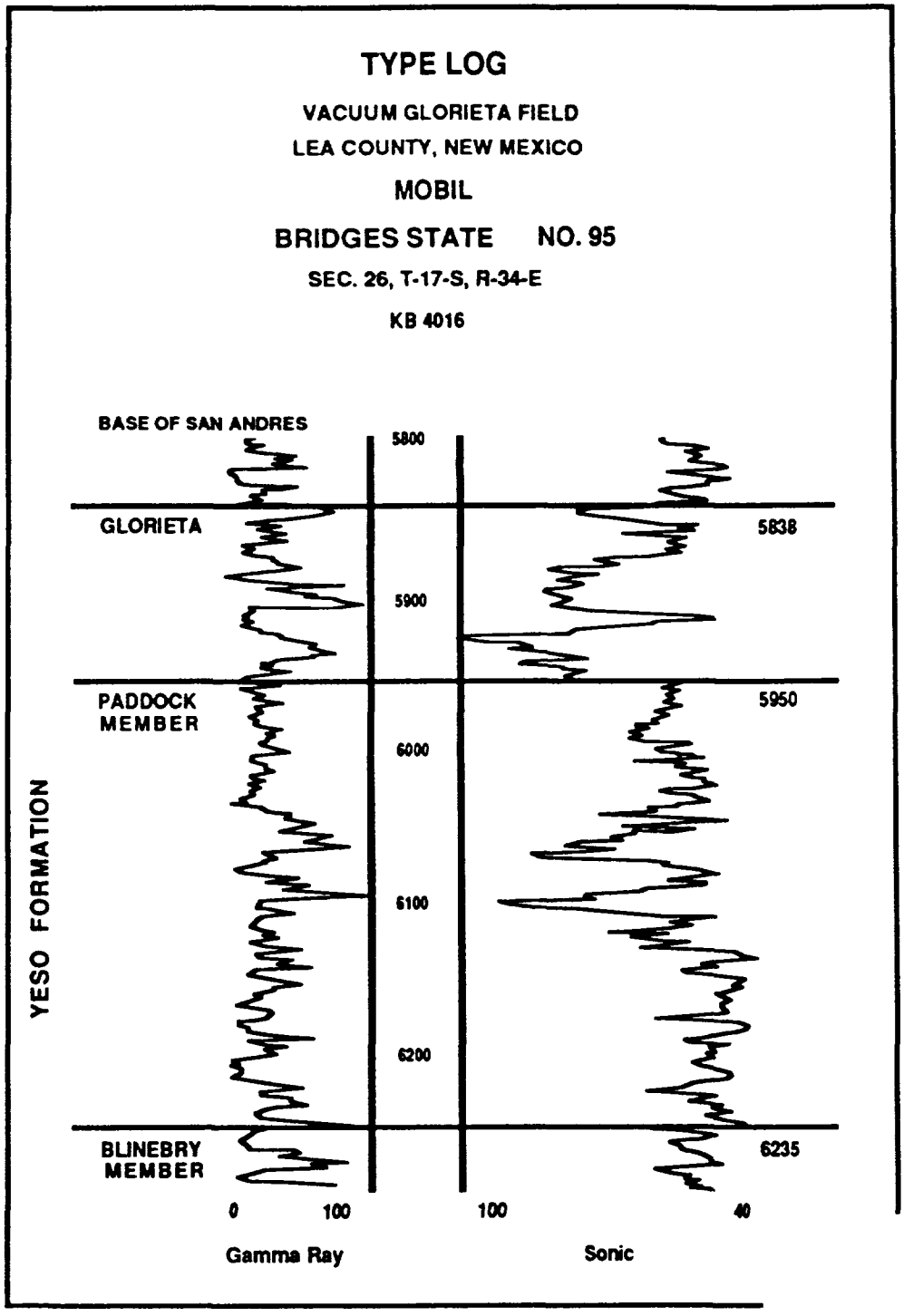
for the Degree of

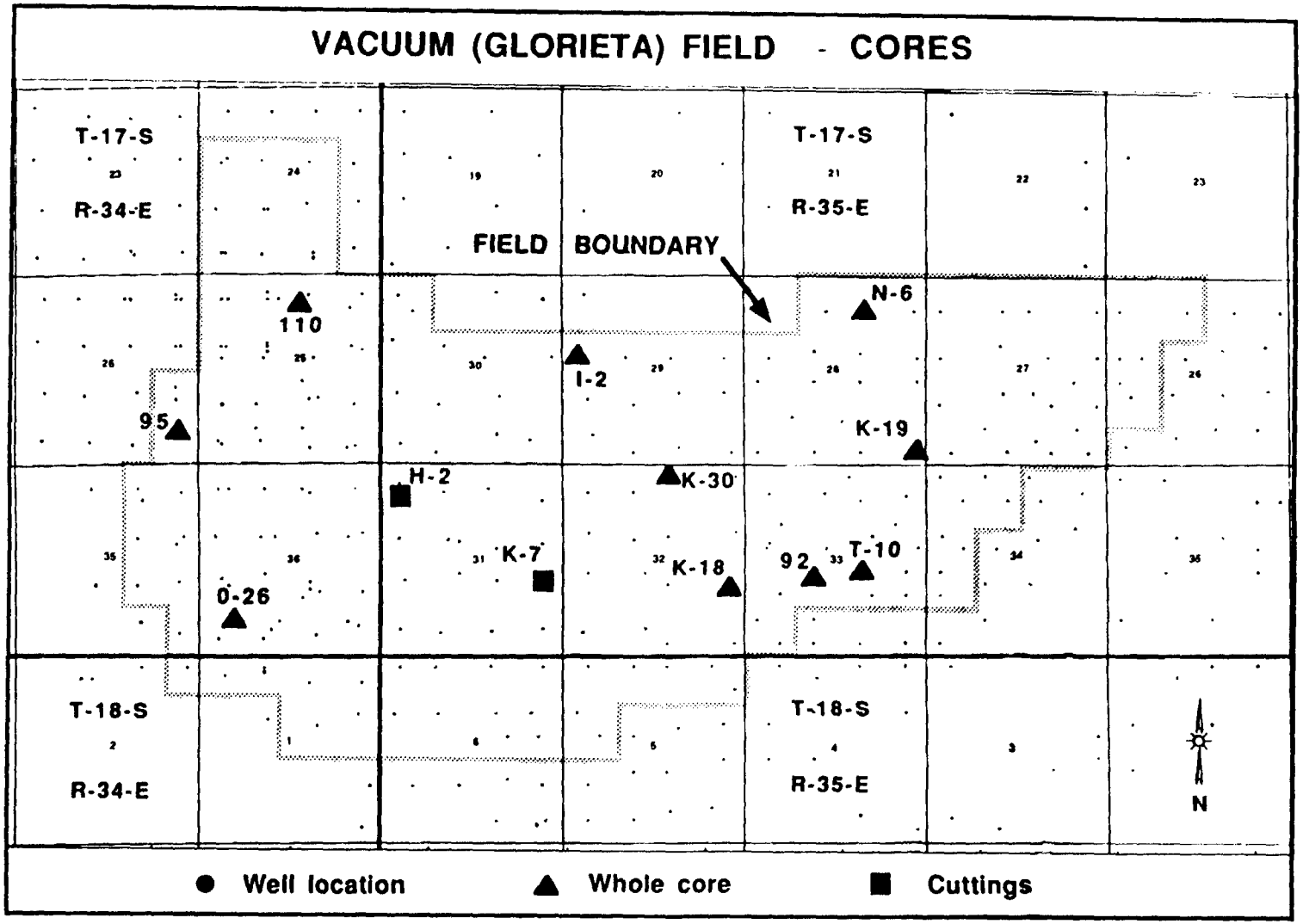
MASTER OF SCIENCE

THE UNIVERSITY OF TEXAS OF THE PERMIAN BASIN

August 17, 1991

SYSTEM	SERIES	CENTRAL NEW MEXICO [1]	SOUTHEAST NEW MEXICO [2]		WEST TEXAS [3]
PERMIAN	GUADALUPE	SAN ANDRES	SAN ANDRES		SAN ANDRES
	LEONARD	GLORIETA	GLORIETA		SAN ANGELO · GLORIETA
		YESO	YESO	PADDOCK	UPPER CLEARFORK
				BLINEBRY	MIDDLE CLEARFORK
				TUBB	TUBB
				DRINKARD	LOWER CLEARFORK
	WOLFCAMP	ABO	ABO		WICHITA


TYPE LOG
VACUUM GLORIETA FIELD
LEA COUNTY, NEW MEXICO
MOBIL
BRIDGES STATE NO. 95
SEC. 26, T-17-S, R-34-E
KB 4016
BASE OF SAN ANDRES
GLORIETA
PADDOCK MEMBER
BLINEBRY MEMBER
YESO FORMATION
5800
5838
5900
5950
6000
6100
6200
6235
0
100
100
40
Gamma Ray
Sonic


VACUUM (GLORIETA) FIELD - CORES
T-17-S
R-34-E
FIELD BOUNDARY
T-17-S
R-35-E
110
95
I-2
N-6
K-19
H-2
K-30
K-7
K-18
92
T-10
0-26
T-18-S
R-34-E
T-18-S
R-35-E
N
Well location
Whole core
Cuttings

CORES DESCRIBED FOR THIS STUDY

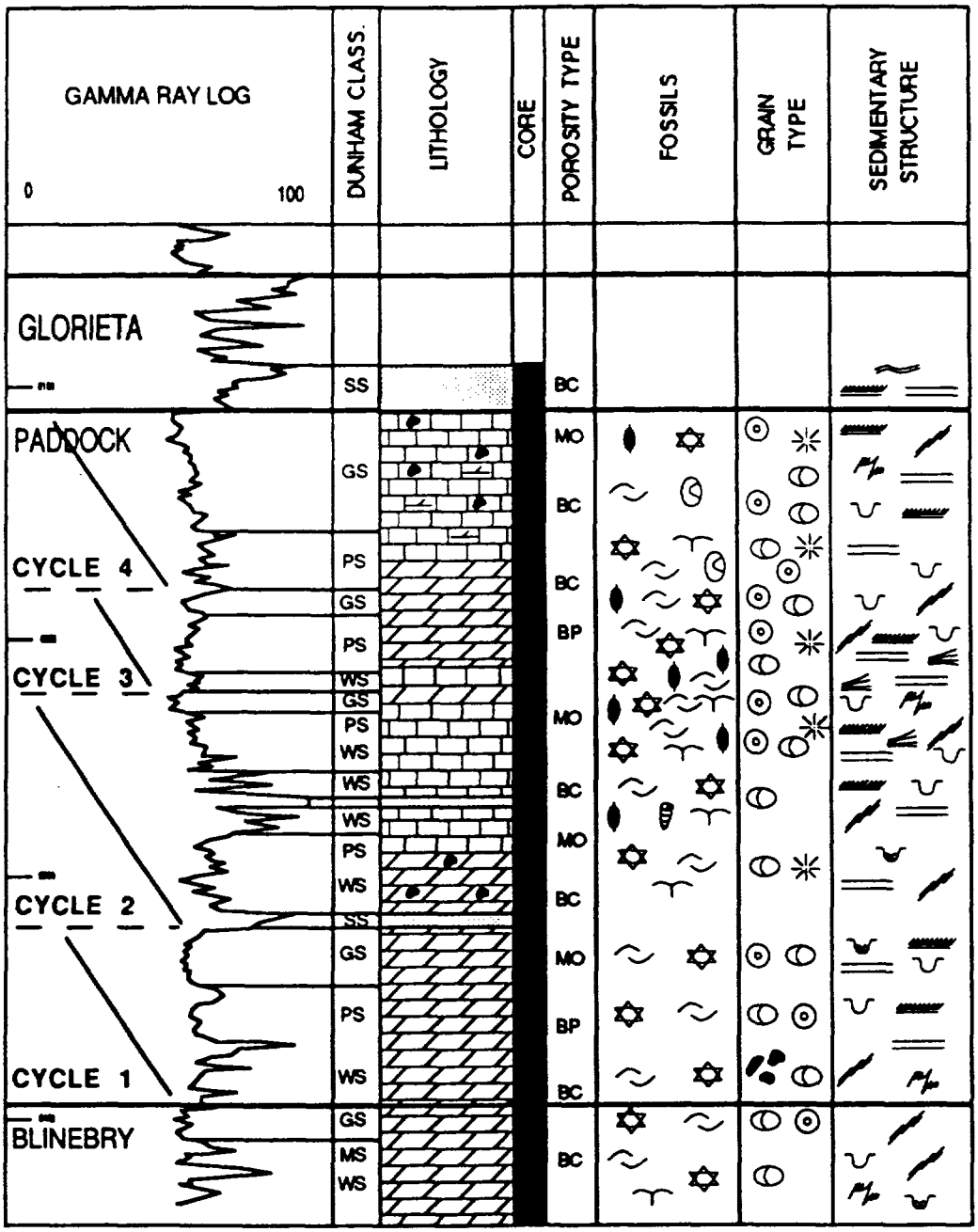
WHOLE CORES

	Core interval
HUMBLE STATE K-19	6002-6181
HUMBLE STATE K-18	6056-6435
HUMBLE STATE K-30	6049-6220
MOBIL BRIDGES STATE #110	6055-6097
MOBIL BRIDGES STATE #95	6215-6245
PHILLIPS SANTA FE #92	6081-6225
SHELL STATE I-2	6142-6237
SHELL STATE T-10	6050-6135
SHELL STATE N-6	6130-6297
TEXACO O-26	5880-6131

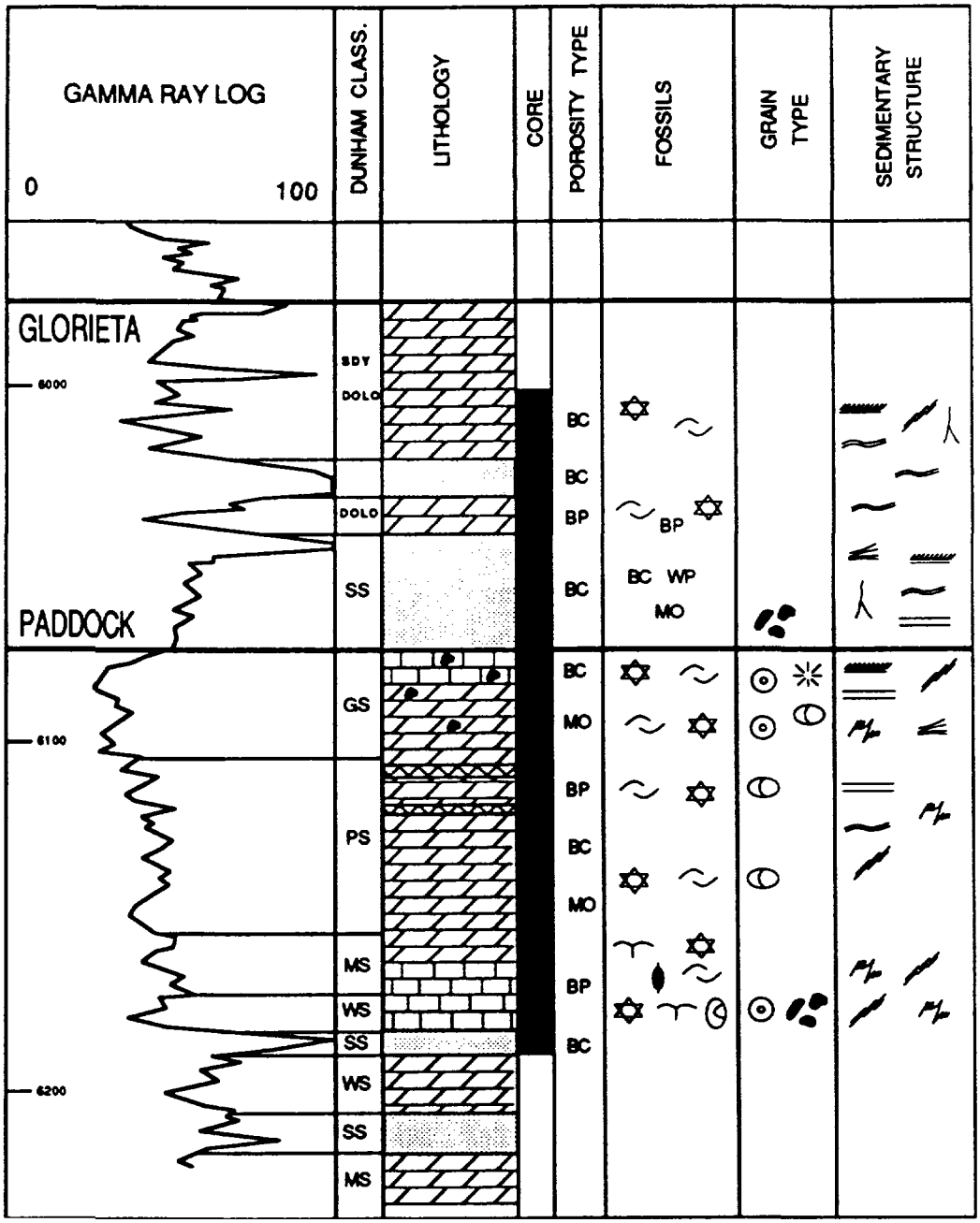
WELL CUTTINGS

	Cuttings interval
MOBIL STATE H-2	5930-6580
MOBIL STATE K-7	5960-6300

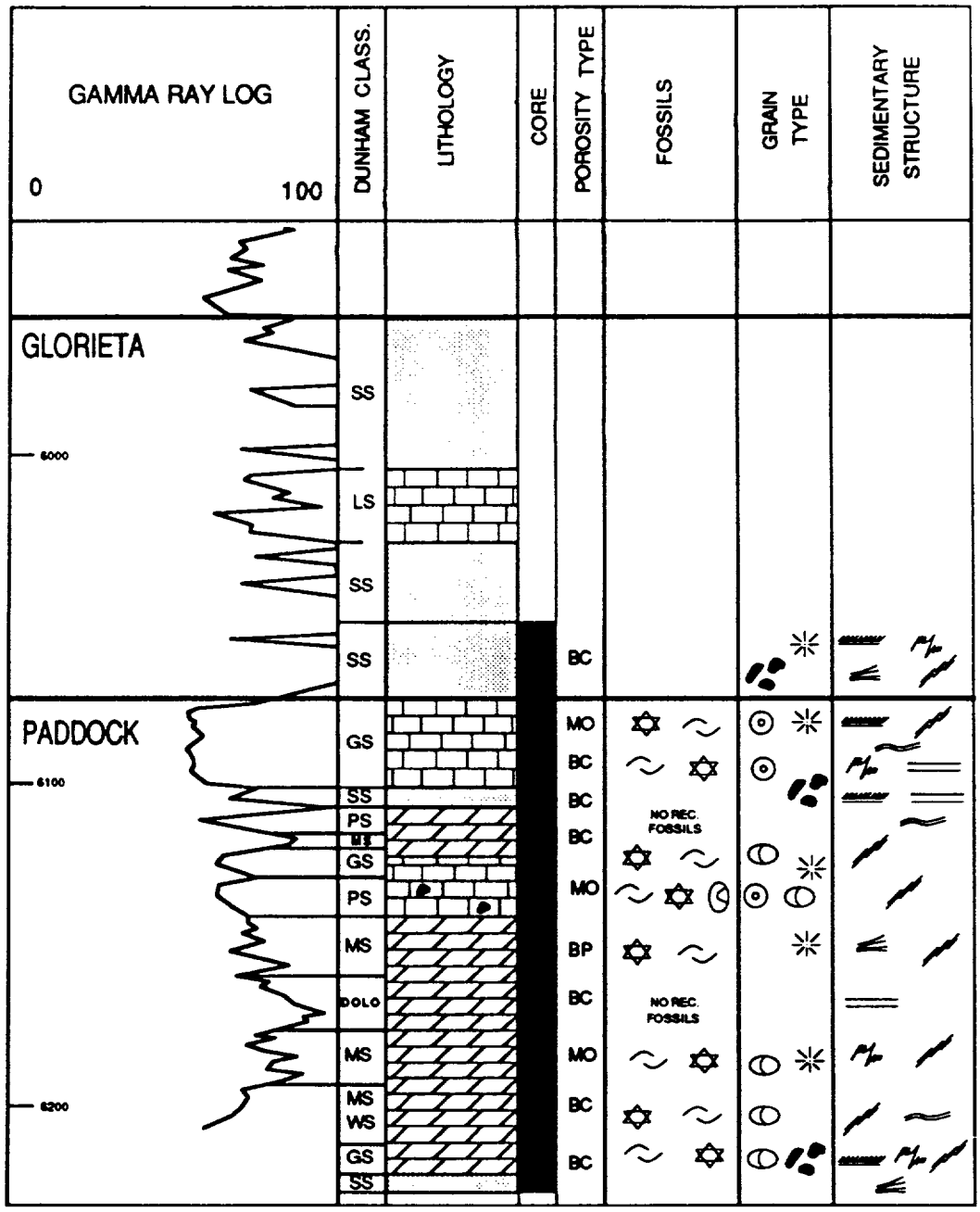
EXXON K-18


GAMMA RAY LOG
0
100
DUNHAM CLASS.
LITHOLOGY
CORE
POROSITY TYPE
FOSSILS
GRAIN TYPE
SEDIMENTARY STRUCTURE
GLORIETA
SS
BC
PADDOCK
CYCLE 4
CYCLE 3
CYCLE 2
CYCLE 1
BLINEBRY
GS
PS
WS
MS
MO
BP

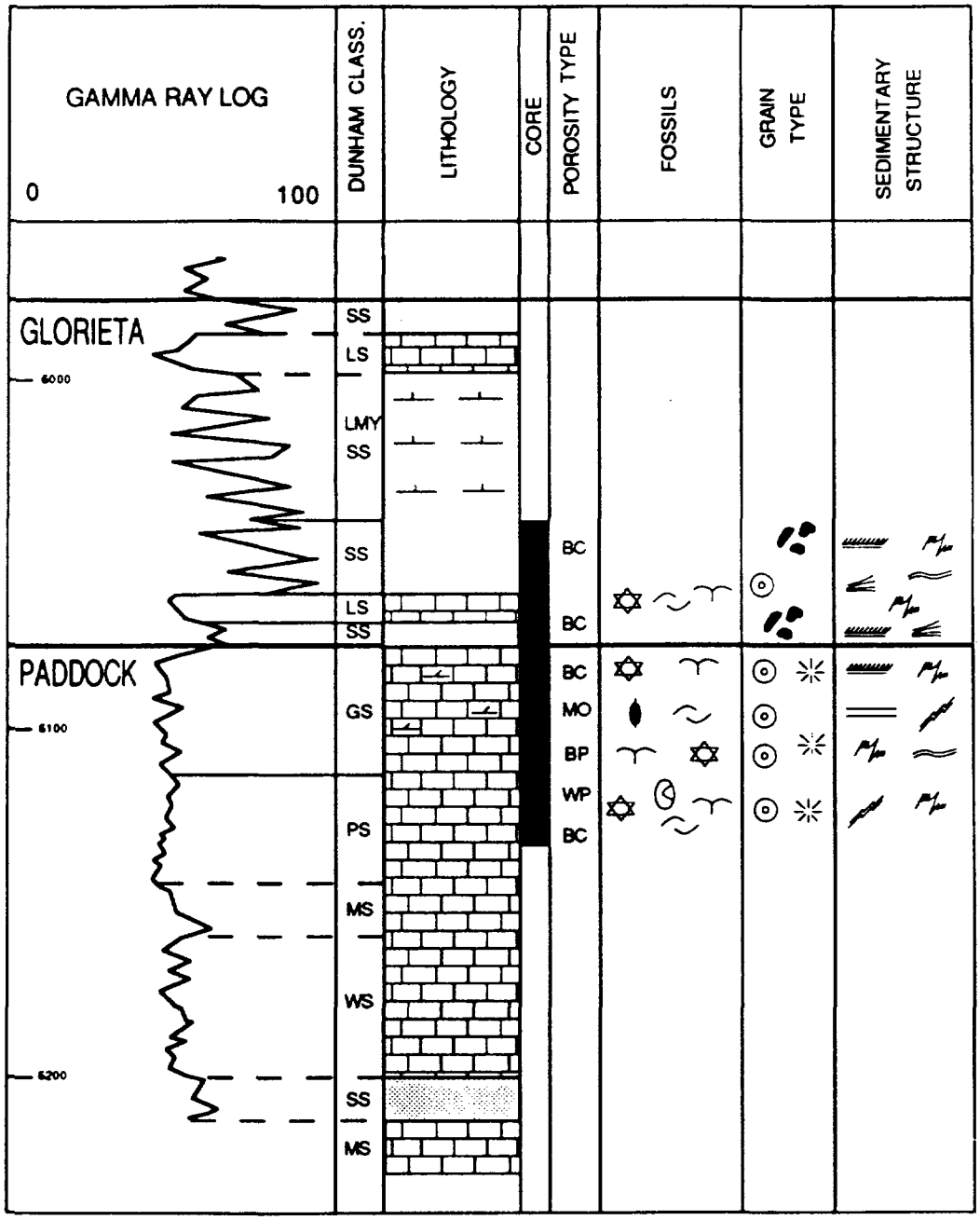
EXXON K-19

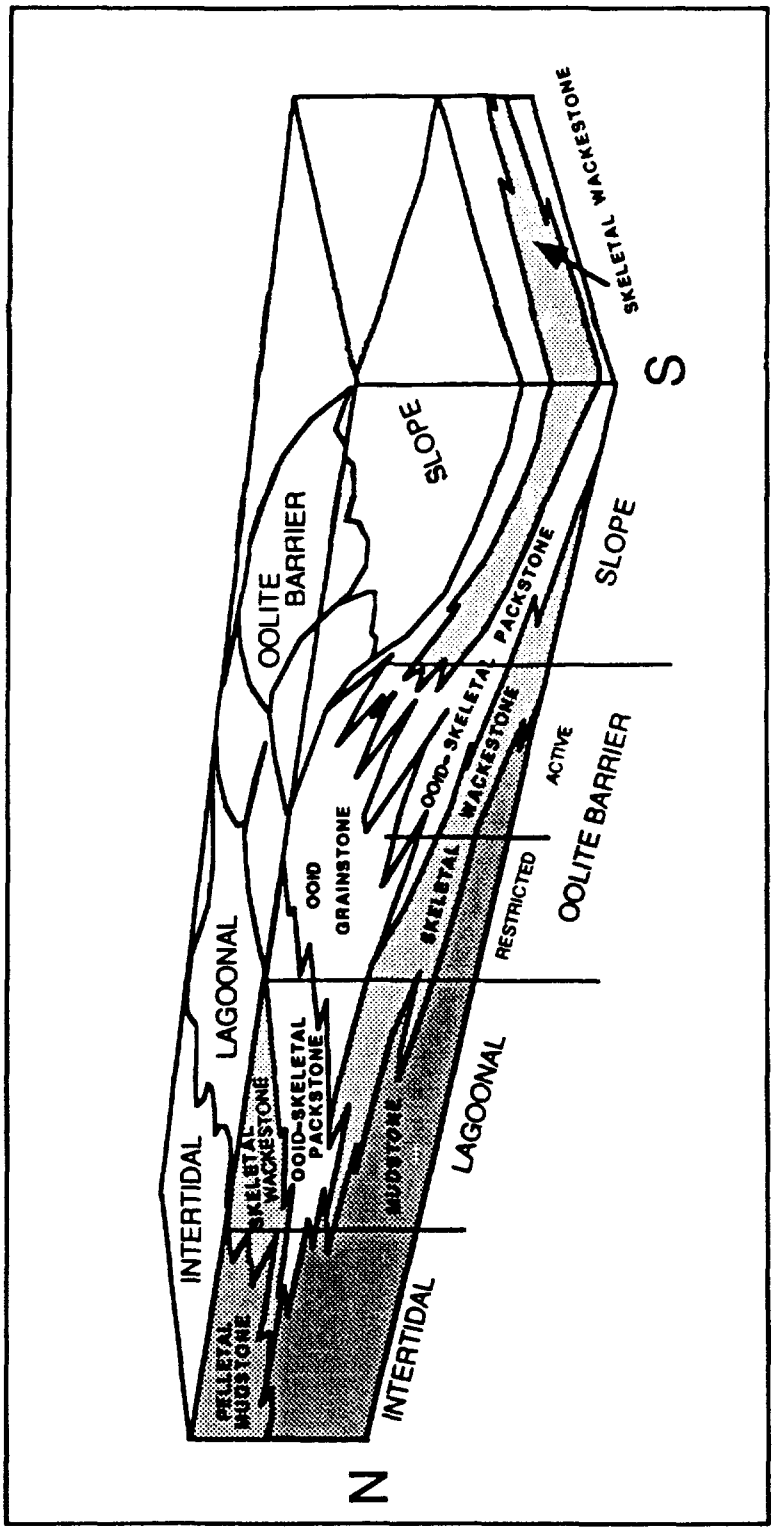

GAMMA RAY LOG
0
100
DUNHAM CLASS.
LITHOLOGY
CORE
POROSITY TYPE
FOSSILS
GRAIN TYPE
SEDIMENTARY STRUCTURE
GLORIETA
6000
SDY
DOLO
DOLO
SS
PADDOCK
BC
BC
BP
BC
BP
BC WP
MO
6100
GS
PS
MS
WS
SS
6200
WS
SS
MS
BC
MO
BP
BC
MO
BP
BC

EXXON K-30


GAMMA RAY LOG
0
100
DUNHAM CLASS.
LITHOLOGY
CORE
POROSITY TYPE
FOSSILS
GRAIN TYPE
SEDIMENTARY STRUCTURE
GLORIETA
6000
SS
LS
SS
SS
BC
PADDOCK
6100
GS
SS
PS
GS
PS
MS
DOLO
MS
MS
WS
GS
SS
6200
MO
BC
BC
BC
MO
BP
BC
MO
BC
BC
NO REC. FOSSILS
NO REC. FOSSILS

SHELL T-10


GAMMA RAY LOG
0
100
DUNHAM CLASS.
LITHOLOGY
CORE
POROSITY TYPE
FOSSILS
GRAIN TYPE
SEDIMENTARY STRUCTURE
GLORIETA
6000
PADDOCK
6100
6200
SS
LS
LMY
SS
SS
LS
SS
GS
PS
MS
WS
SS
MS
BC
BC
BC
MO
BP
WP
BC


N
S
INTERTIDAL
LAGOONAL
OOLITE BARRIER
SLOPE
PELLETAL MUDSTONE
SKELETAL WACKESTONE
OOID-SKELETAL PACKSTONE
MUDSTONE
OOID GRAINSTONE
SKELETAL WACKESTONE
OOID-SKELETAL PACKSTONE
SKELETAL WACKESTONE
RESTRICTED
ACTIVE
OOLITE BARRIER
LAGOONAL
INTERTIDAL
SLOPE