Case No
6357

Large Exhibits

SILURIAN

FUSS

COMPENSATED NEUTRON-FORMATION DENSITY

COMPANY ENSERCH EXPLORATION INCORPORATED

WELL LAMBIRTH #7

FIELD SOUTH PETERSON

COUNTY ROOSEVELT STATE NEW MEXICO

660' FSL & 510' FEL

SEC 35 T-3-S R-33-E

Permanent Datum: G.L.

Log Measured From: K.B. 15 Ft. Above Perm. Datum

Drilling Measured From: K.B.

Elev.: K.B. 4391 D.F. 4376.5 G.L. 4376.5

Date 10-28-79

Run No. ONE

Depth-Driller 7863

Depth-Logger 7860

Btm. Log Interval 7860

Top Log Interval 1100

Casing-Driller 8 5/8@2000

Casing-Logger 2000

Bit Size 7 7/8

Type Fluid in Hole SALT GEL

Dens. Visc. 10.1 35

pH Fluid Loss 10.5 13.8cc

Source of Sample FLOWLINE

Rm @ Meas. Temp. .10 @ 78 °F

Rmf @ Meas. Temp. .08 @ 78 °F

Rmc @ Meas. Temp. @ °F

Source: Rmf Rmc CALC

Rm @ BHT .062 @ 148 °F

Time Since Circ. 3 HRS

Max. Rec. Temp. 148 °F

Equip. Location 6530

Recorded By 1330, LOVO

Witnessed By JILLSONS, MUNK

Run No. ONE

Type Log DLL

Bottom Interval 7863

Top Interval 1100

Casing Driller 8 5/8@2000

Casing Logger 2000

Bit Size 7 7/8

Type Fluid in Hole SALT GEL

Dens. Visc. 10.1 35

pH Fluid Loss 10.5 13.8cc

Source of Sample FLOWLINE

Rm @ Meas. Temp. .10 @ 78 °F

Rmf @ Meas. Temp. .08 @ 78 °F

Rmc @ Meas. Temp. @ °F

Source: Rmf Rmc CALC

Rm @ BHT .062 @ 148 °F

Time Since Circ. 3 HRS

Max. Rec. Temp. 148 °F

Equip. Location 6530

Recorded By 1330, LOVO

Witnessed By JILLSONS, MUNK

1100

1600

DLL

ML

SP

CAL

GR

ML (MCFL)

DLL (MSFL)

SP

CAL (CALIPER)

GR

PRE CAMBRIAN

PRE PENN UNCONFORMITY

SILURIAN

TOP PRE CAMBRIAN

COMPENSATED NEUTRON-FORMATION DENSITY

COMPANY ENSERCH EXPLORATION, INC

WELL LAMBIRTH JR

FIELD SOUTH PETERSON

COUNTY ROOSEVELT STATE NEW MEXICO

1980' FSL & 810' FWL

SEC 30 T-3-S R-33-E

Permanent Datum: G.L.

Log Measured From: K.B. 15 Ft. Above Perm. Datum

Drilling Measured From: K.B.

Elev.: K.B. 4382 D.F. ea.4397 G.L. 4367

Date 10-12-79

Run No. ONE

Depth-Driller 7950

Depth-Logger 7950

Btm. Log Interval 7950

Top Log Interval 1100

Casing-Driller 8 5/8@1998

Casing-Logger 1998

Bit Size 7 7/8

Type Fluid in Hole SALT GEL

Dens. Visc. 10.1 35

pH Fluid Loss 10.5 13.4cc

Source of Sample FLOWLINE

Rm @ Meas. Temp. .10 @ 78 °F

Rmf @ Meas. Temp. .08 @ 78 °F

Rmc @ Meas. Temp. @ °F

Source: Rmf Rmc CALC

Rm @ BHT .062 @ 148 °F

Time Since Circ. 3 HRS

Max. Rec. Temp. 148 °F

Equip. Location 6530

Recorded By 1330, LOVO

Witnessed By JILLSONS, MUNK

Run No. ONE

Type Log DLL

Bottom Interval 7950

Top Interval 1100

Casing Driller 8 5/8@1998

Casing Logger 1998

Bit Size 7 7/8

Type Fluid in Hole SALT GEL

Dens. Visc. 10.1 35

pH Fluid Loss 10.5 13.4cc

Source of Sample FLOWLINE

Rm @ Meas. Temp. .10 @ 78 °F

Rmf @ Meas. Temp. .08 @ 78 °F

Rmc @ Meas. Temp. @ °F

Source: Rmf Rmc CALC

Rm @ BHT .062 @ 148 °F

Time Since Circ. 3 HRS

Max. Rec. Temp. 148 °F

Equip. Location 6530

Recorded By 1330, LOVO

Witnessed By JILLSONS, MUNK

7700

7800

7900

DLL

ML

SP

CAL

GR

ML (MCFL)

DLL (MSFL)

SP

CAL (CALIPER)

GR

PRE CAMBRIAN

PRE PENN UNCONFORMITY

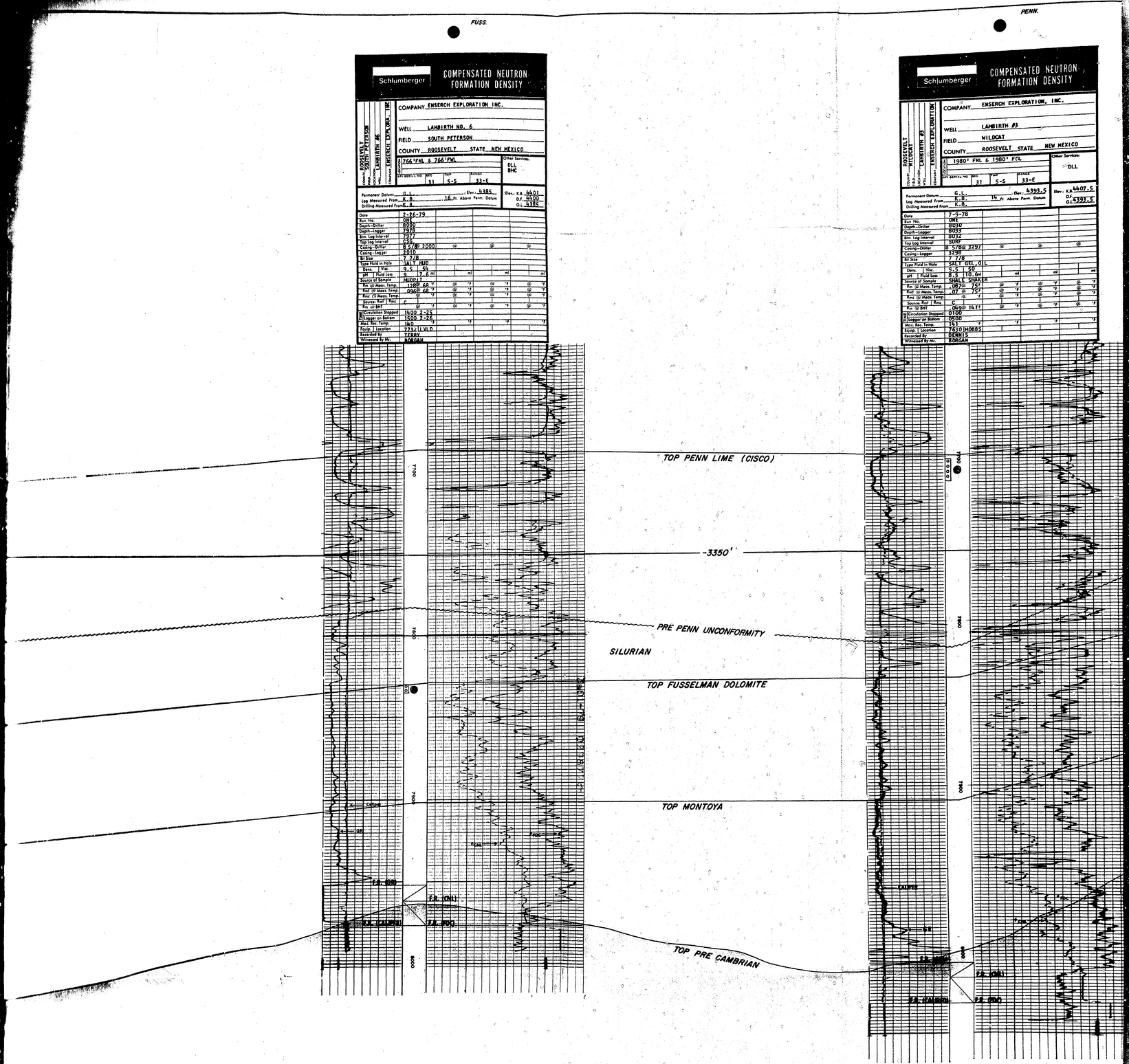
SILURIAN

U.S.G.S. TOPOGRAPHIC

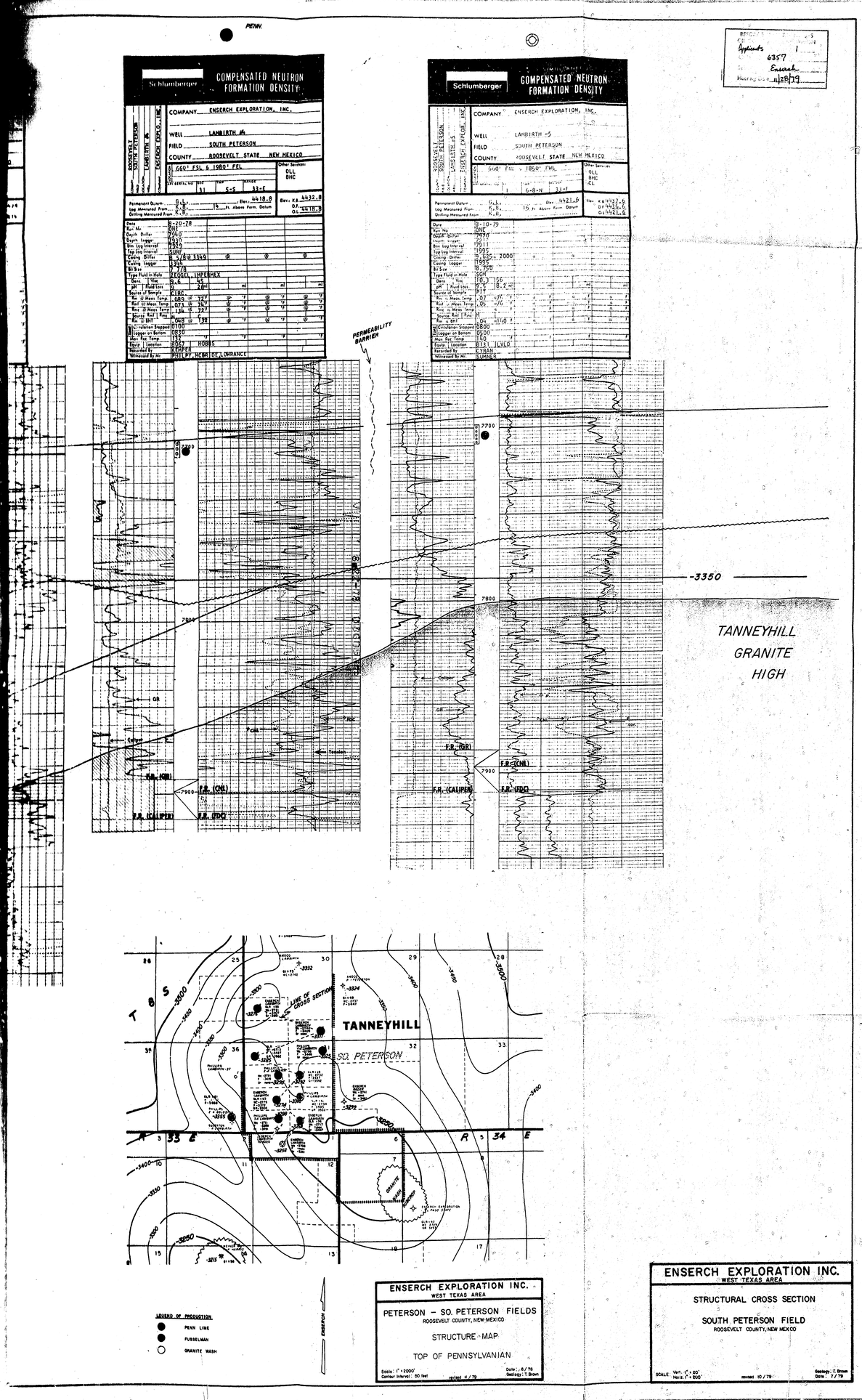
WEST ROSWELL, N.M.

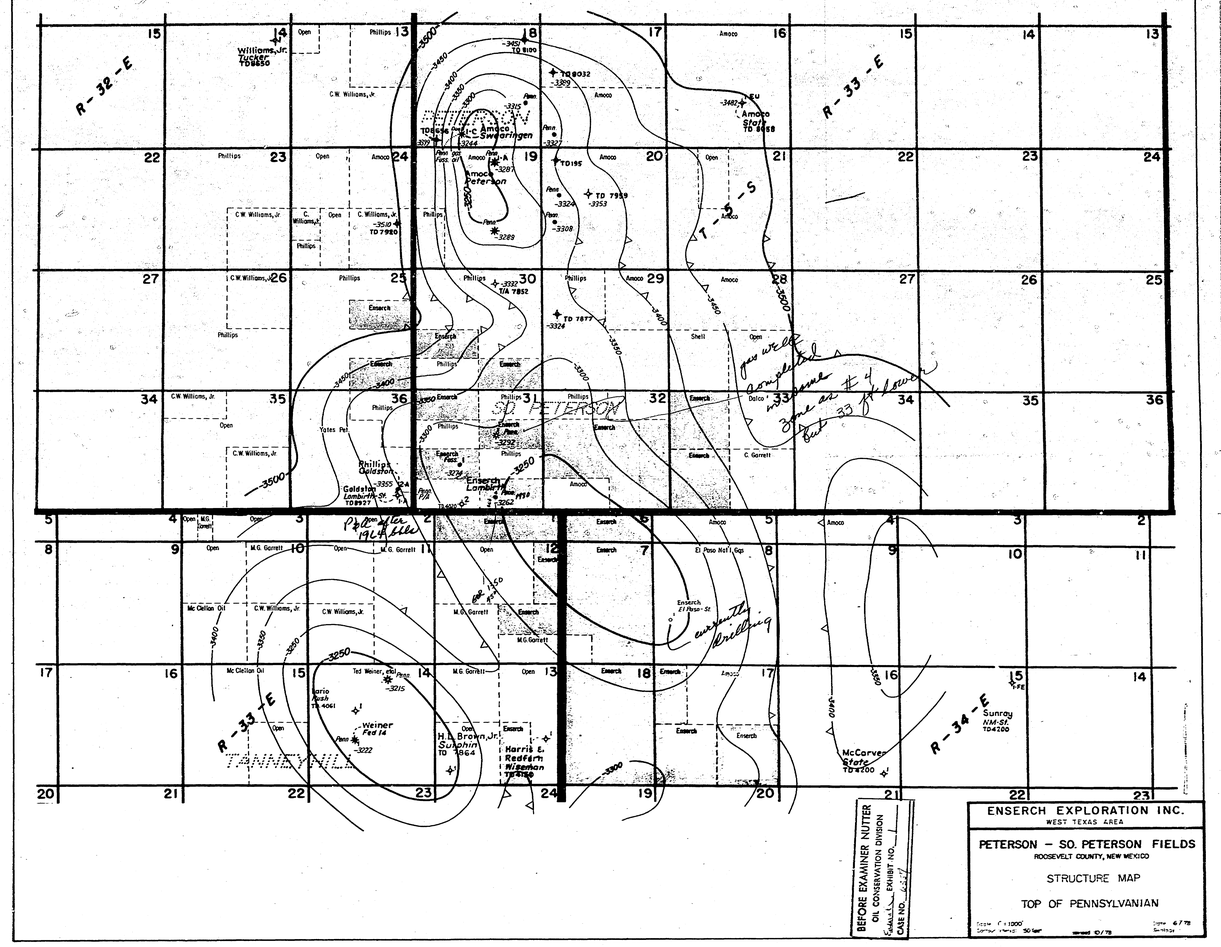
FUSS.

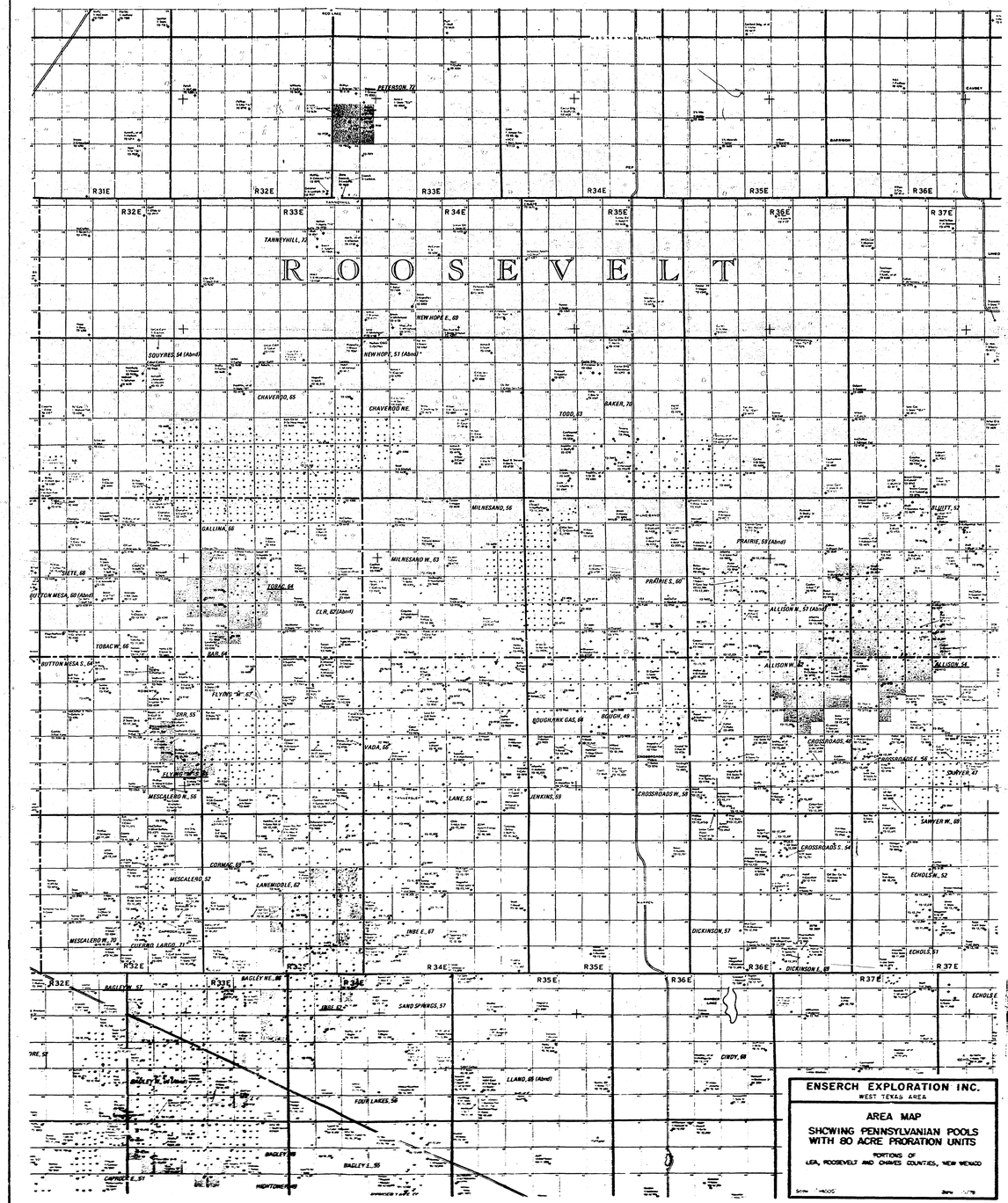
PENN.


Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY
COMPANY ENSERCH EXPLORATION INC.
WELL LAMBIRTH NO. 6
FIELD SOUTH PETERSON
COUNTY ROOSEVELT STATE NEW MEXICO
1766' FNL & 766' FWL
Other Services DLL BHC
SEC 31 TWP 5-S RGE 33-E
Permanent Datum G.L. Elev. 4385
Log Measured From K.B. 16 Ft. Above Perm. Datum
Drilling Measured From K.B.
Elev. K.B. 4401 D.F. 4400 G.L. 4385
Date 2-26-79
Run No. ONE
Depth-Driller 8000
Depth-Logger 7978
Bot. Log Interval 7977
Top Log Interval 2350
Casing-Driller 8 5/8@ 2000
Casing-Logger 2010
Bit Size 7 7/8
Type Fluid in Hole SALT MUD
Dens. Visc. 9.4 54
pH Fluid Loss 9 7.6 cc
Source of Sample HEADPIT
Rm @ Meas. Temp. .1980 @ 68 °F
Rmf @ Meas. Temp. .0960 @ 68 °F
Rmc @ Meas. Temp. @ °F
Source Rmf Rmc
Rm @ BHT @ °F
Circulation Stopped 15:00 2-25
Logger on Bottom 15:00 2-26
Max. Rec. Temp. 160 °F
Equip. Location 7731 (LVLD
Recorded By TERRY
Witnessed By Mr. MORGAN
TOP PENN LIME (CISCO)
-3350'
PRE PENN UNCONFORMITY
SILURIAN
TOP FUSSELMAN DOLOMITE
TOP MONTOYA
TOP PRE CAMBRIAN
Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY
COMPANY ENSERCH EXPLORATION, INC.
WELL LAMBIRTH #3
FIELD WILDCAT
COUNTY ROOSEVELT STATE NEW MEXICO
1980' FNL & 1980' FEL
Other Services DLL
SEC 31 TWP 5-S RGE 33-E
Permanent Datum G.L. Elev. 4393.5
Log Measured From K.B. 15 Ft. Above Perm. Datum
Drilling Measured From K.B.
Elev. K.B. 4407.5 D.F. G.L. 4393.5
Date 7-9-78
Run No. ONE
Depth-Driller 8050
Depth-Logger 8033
Bot. Log Interval 8032
Top Log Interval 3090
Casing-Driller @ 5786 3597
Casing-Logger 3298
Bit Size 7 7/8
Type Fluid in Hole SALT GEL-OIL
Dens. Visc. 9.2 50
pH Fluid Loss 8.5 110 cc
Source of Sample SIMLE SHAKER
Rm @ Meas. Temp. .0870 @ 75°F
Rmf @ Meas. Temp. .07 @ 75°F
Rmc @ Meas. Temp.
Source Rmf Rmc
Rm @ BHT .0690 @ 141°F
Circulation Stopped 0100
Logger on Bottom 0200
Max. Rec. Temp. 150 °F
Equip. Location 7850 HOBBS
Recorded By BERRIS
Witnessed By Mr. BORGAN
EXLOG
F.A. (ONE)
F.A. (TWO)
F.A. (CALIPER)

COMPENSATED NEUTRON FORMATION DENSITY
Schlumberger
COMPANY ENSERCH EXPLORATION, INC.
WELL LAMBIRTH #5
FIELD SOUTH PETERSON
COUNTY ROOSEVELT STATE NEW MEXICO
1980' FNL & 1980' FEL
Other Services
DLL
Elev.: K.B. 4432.8
D.F. 4417.8
G.L. 4403.8
Permanent Datum: G.L.
Log Measured From: K.B. 14.8 Ft. Above Perm. Datum
Drilling Measured From: K.B.
Date 8-20-78
Run No. ONE
Depth-Driller 7991
Depth-Logger 7994
Btm. Log Interval 7994
Top Log Interval 3350
Casing-Driller 8 5/8 @ 3357
Casing-Logger 3357
Bit Size 7 7/8
Type Fluid in Hole SALT GEL
Dens. Visc. 10.1 55
pH Fluid Loss 9.5 16 cc
Source of Sample FLOWLINE
Rm @ Meas. Temp. .351 @ 90°F
Rmf @ Meas. Temp. .261 @ 90°F
Rmc @ Meas. Temp. @
Source: Rmf/Rmc
Rm @ BHT .158 @ 135°F
Time Since Circ. 1200
Time on Bottom 1800
Max. Rec. Temp. 135°F
Equip. Location 1605 HOBBS
Recorded By WILLEY
Witnessed By CLARK
PERMEABILITY BARRIER
8-20-78 0834-9978
R.M. @ 75°F
R.M.F. @ 75°F
R.M.C. @ 75°F
R.M. @ BHT
7700
7800
7900
8000
FT. WORTH
HOUSTON
DENVER
LAFAYETTE
BAKERSFIELD
TAMNEYHILL
SO. PETERSON
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
PETERSON – SO. PETERSON FIELDS
ROOSEVELT COUNTY, NEW MEXICO
STRUCTURE MAP
TOP OF PENNSYLVANIAN
Scale 1" = 2000'
Contour Interval 50 feet
DATUM: SEA LEVEL
Date: 8-28-78
AXIS OF PRODUCTION
PENN LIME
FUSSELMAN
GRANITE WASH
PENN.
FUSS.


PENN.
Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY
COMPANY ENSERCH EXPLORATION, INC.
WELL LAMBIRTH #5
FIELD SOUTH PETERSON
COUNTY ROOSEVELT STATE NEW MEXICO
660' FSL & 1980' FEL
DLL BHC
Schlumberger
COMPENSATED NEUTRON FORMATION DENSITY
COMPANY ENSERCH EXPLORATION, INC.
WELL LAMBIRTH #5
FIELD SOUTH PETERSON
COUNTY ROOSEVELT STATE NEW MEXICO
660' FNL & 1850' FWL
DLL BHC CL
PERMEABILITY BARRIER
-3350
TANNEYHILL GRANITE HIGH
F.R. (GR)
F.R. (CN)
F.R. (CALIPER)
F.R. (DC)
TANNEYHILL
SO. PETERSON
T 8 S
R 33 E
R 34 E
LEGEND OF PRODUCTION
PENN LIME
FUSSELMAN
GRANITE WASH
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
PETERSON – SO. PETERSON FIELDS
ROOSEVELT COUNTY, NEW MEXICO
STRUCTURE MAP
TOP OF PENNSYLVANIAN
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
STRUCTURAL CROSS SECTION
SOUTH PETERSON FIELD
ROOSEVELT COUNTY, NEW MEXICO


R-32-E
R-33-E
R-34-E
T-5-S
SO. PETERSON
Williams, Jr. Tucker TD 6850
C.W. Williams, Jr
Amoco Sweetingen
Amoco Peterson
Amoco State TD 6458
TD 6032
TD 6190
TD 7959
TD 7877
TD 7852
TD 7920
TD 6064
TD 4061
TD 4200
Sunray NM-ST TD 4200
McCarver State TD 4200
Galdeton Lambert-St TD 9927
Enserch Lambert
Weiner Fed 14
H. L. Brown, Jr. Sulphin
Harris & Redfarm Nisenbaum
Ted Weiner, et al
Mario Peab
Phillips Galdeton
Yates Pet
Dalco
El Paso Nat'l Gas
Shell
Ensearch
Amoco
Phillips
Open
TANNEY HILL
new well completed in same zone as #4 but 33 ft lower
currently drilling
BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO.
CASE NO.
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
PETERSON – SO. PETERSON FIELDS
ROOSEVELT COUNTY, NEW MEXICO
STRUCTURE MAP
TOP OF PENNSYLVANIAN
Scale 1" = 1000'
Contour Interval 50 feet
Date 4/78


R O O S E V E L T
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R35E
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CLR, 67 (Abnd)
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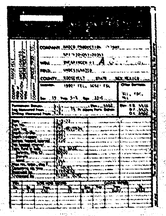
CAPROCK E., 57
HIGHTOWER
ENSERCH EXPLORATION INC.
WEST TEXAS AREA
AREA MAP
SHOWING PENNSYLVANIAN POOLS
WITH 80 ACRE PRORATION UNITS
PORTIONS OF
LEA, ROOSEVELT AND CHAVES COUNTIES, NEW MEXICO

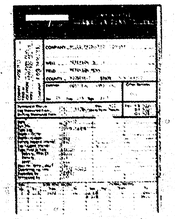
N

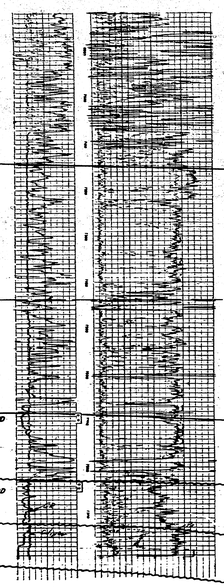
PETERSON FIELD

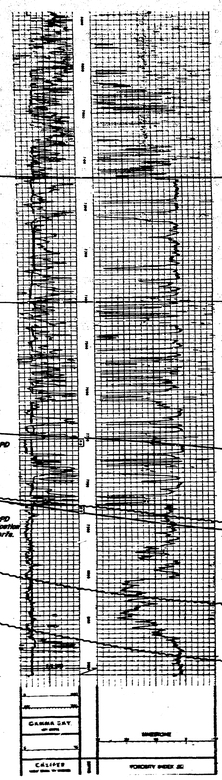
Dual — FUSSELMAN – OIL
PENNSYLVANIAN – GAS

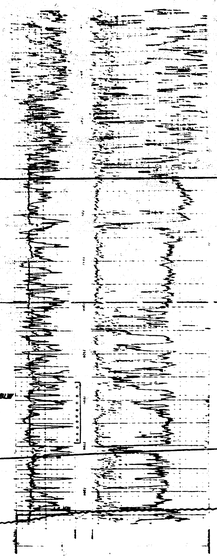
PENNSYLVANIAN – GAS











Wolfcamp

Datum
Sea Level -3000'

Flowed 150 MCFGPD
30/64" ck. - shut in

Swb. 1/2 BO + 3 BLW
1 hr. - shut in

CAOF 125.8 MMCFGPD

Pennsylvanian (Cis

IPF 271 BOPD

Perf. 7967' - 7977', A/500
swb. 2 BO & 44 B. Wtr.
A/2500 - Flwd 2,400,000 CFGPD
+ 2 BC, 15/64" ck. - In communication
W/ Penn. Gas Zone, squeezed perfs,
plugged back to Penn.

Upper
Silurian

Fusselman

Montoya

GAMMA RAY

CALIPER

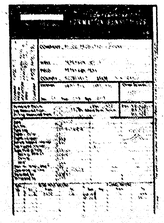
SHERBURNE

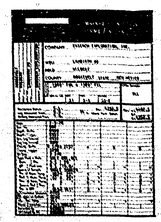
FORCENTY INDEX SEC

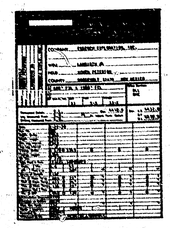
SO. PETERSON FIELD

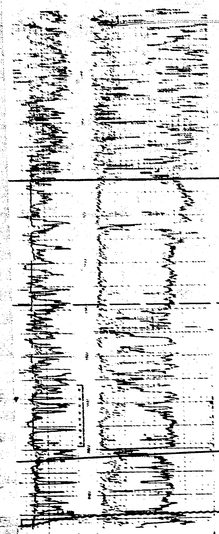
PENNSYLVANIAN - GAS

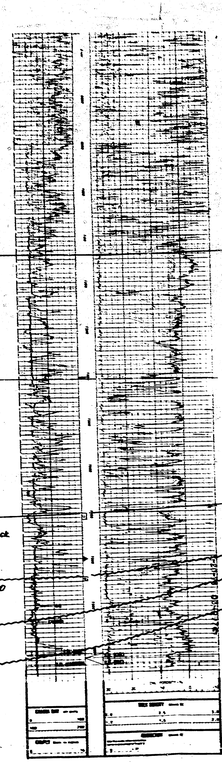
PENNSYLVANIAN - OIL

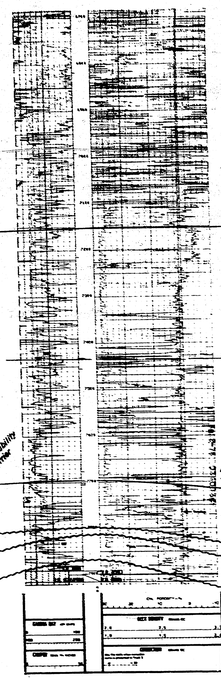












Pennsylvanian (Cisco)

F 5.35 MMCFD
TP 1495, 24/64" ck.
GR°
BP @ 7800'

IPP 25 BO + 12 BWPD

Possible Pennsylvanian Pay Zone

IPF 204 BO + 58 BW + 349 MCFGPD

Note: Originally completed as Pennsylvanian oil producer.

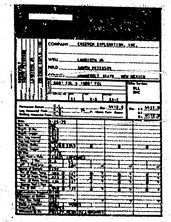
O. PETERSON FIELD

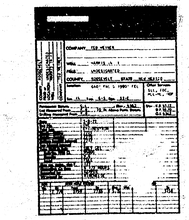
PENNSYLVANIAN - GAS

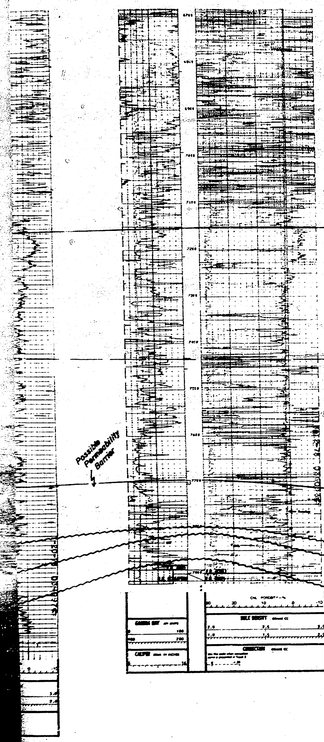
PENNSYLVANIAN - OIL

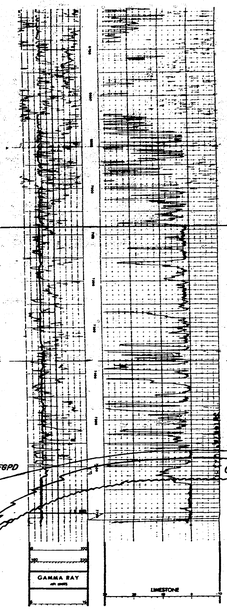
TANNEYHILL

PENNSYLVANIAN - GAS
(GRANITE WASH - GAS)









Wolfcamp

Granite W

Possible Permeability Barrier

IPF 204 BO + 58 BW + 349 MCFGPD

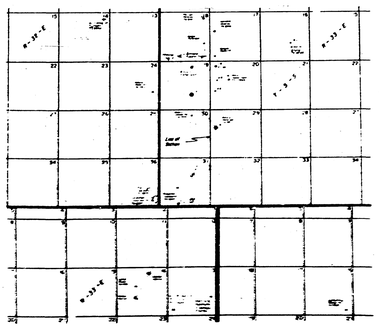
CAOF 1993 MCFGPD

Pennsylvanian (Cisco)

Fusselman

Montoya

Precambrian Basement



INDEX MAP
Scale 1" = 3000'

S

SO. PETERSON FIELD

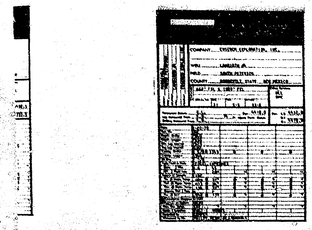
PENNSYLVANIAN - GAS

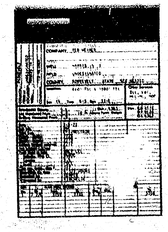
PENNSYLVANIAN - OIL

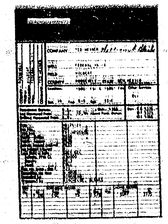
TANNEYHILL FIELD

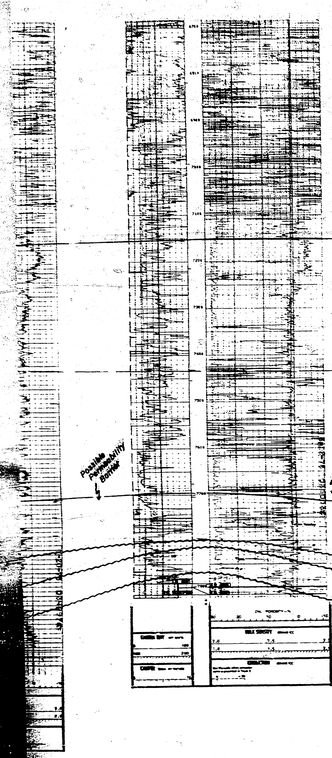
PENNSYLVANIAN - GAS (GRANITE WASH - GAS)

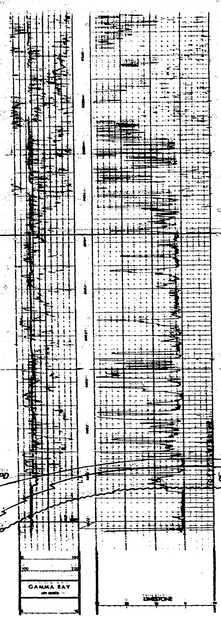
PENNSYLVANIAN - GAS

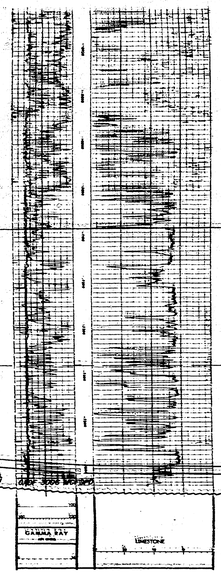












Wolfcamp

Granite Wash

Pennsylvanian (Cisco)

Fusselman

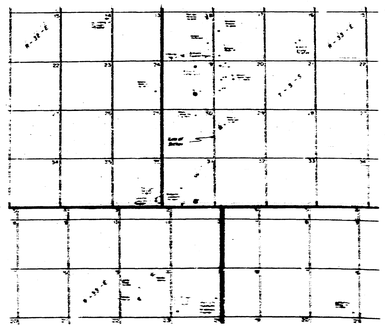
Montoya

Precambrian Basement

IPF 204 BO + 58 BW + 349 MCFPD

CAOF 1993 MCFPD

CAOF 3208 MCFPD



KEY MAP
Scale 1" = 2000'

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO.

ENSERCH EXPLORATION INC.
WEST TEXAS AREA

PETERSON - SO. PETERSON FIELDS
ROOSEVELT COUNTY, NEW MEXICO

N - S STRUCTURAL CROSS SECTION