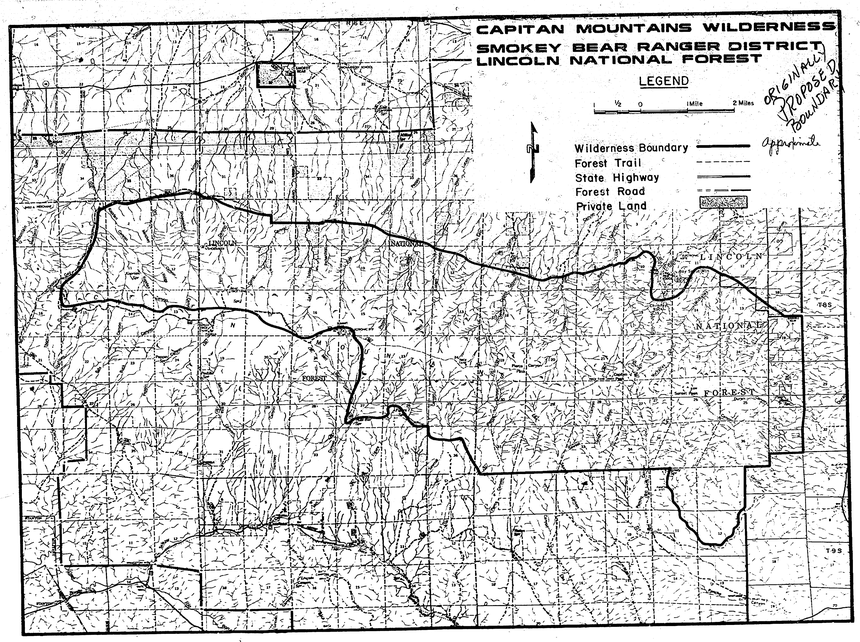
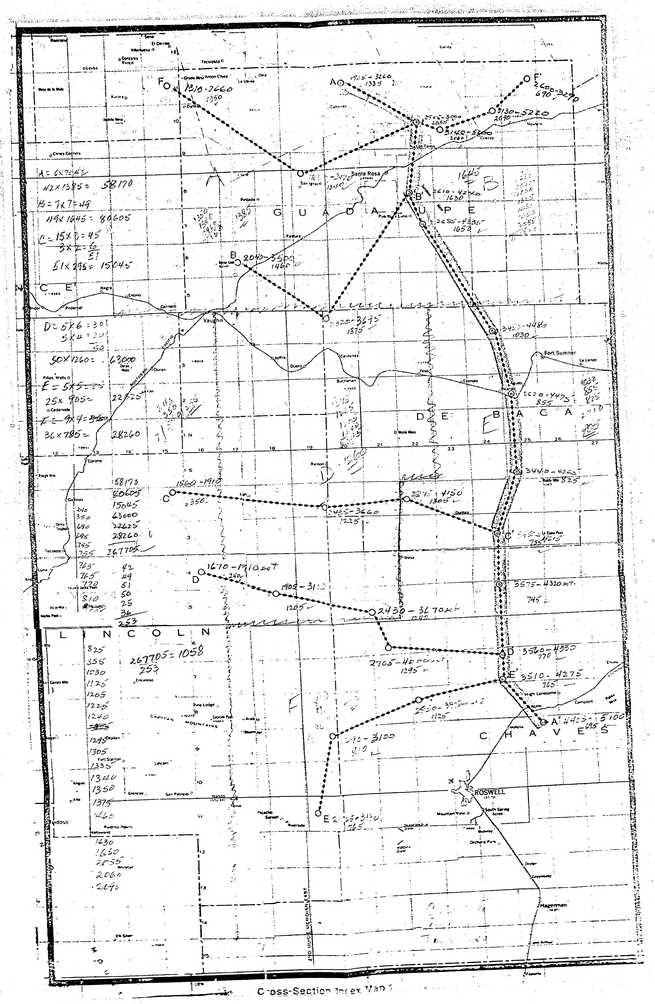
Case No.
7598

Large Exhibits


CAPITAN MOUNTAINS WILDERNESS
SMOKEY BEAR RANGER DISTRICT
LINCOLN NATIONAL FOREST
LEGEND
½ 0 1Mile 2 Miles
ORIGINALLY PROPOSED BOUNDARY
approximate
Wilderness Boundary
Forest Trail
State Highway
Forest Road
Private Land
LINCOLN
NATIONAL
FOREST
765
793


GUADALUPE
DE BACA
CHAVES
LINCOLN
ROSWELL
Fort Sumner
Santa Rosa
Puerto de Luna
Dexter
Hagerman
Lake Arthur
Artesia
Cross-Section Index Map

SAN MIGUEL

QUAY

GUADALUPE

DE BACA

LINCOLN

TORRANCE

A

A'

B

B'

C

C'

D

D'

TOP OF ABO FORMATION

-4000

-4500

-5000

-3500

-3000

-2500

-2000

-1500

-1000

-500

T 12 N

T 11 N

T 10 N

T 9 N

T 8 N

T 7 N

T 6 N

T 5 N

T 4 N

T 3 N

T 2 N

T 1 N

T 1 S

T 2 S

T 3 S

T 4 S

T 5 S

R 25 E

R 26 E

R 27 E

R 28 E

R 29 E

R 30 E

R 31 E

R 32 E

R 33 E

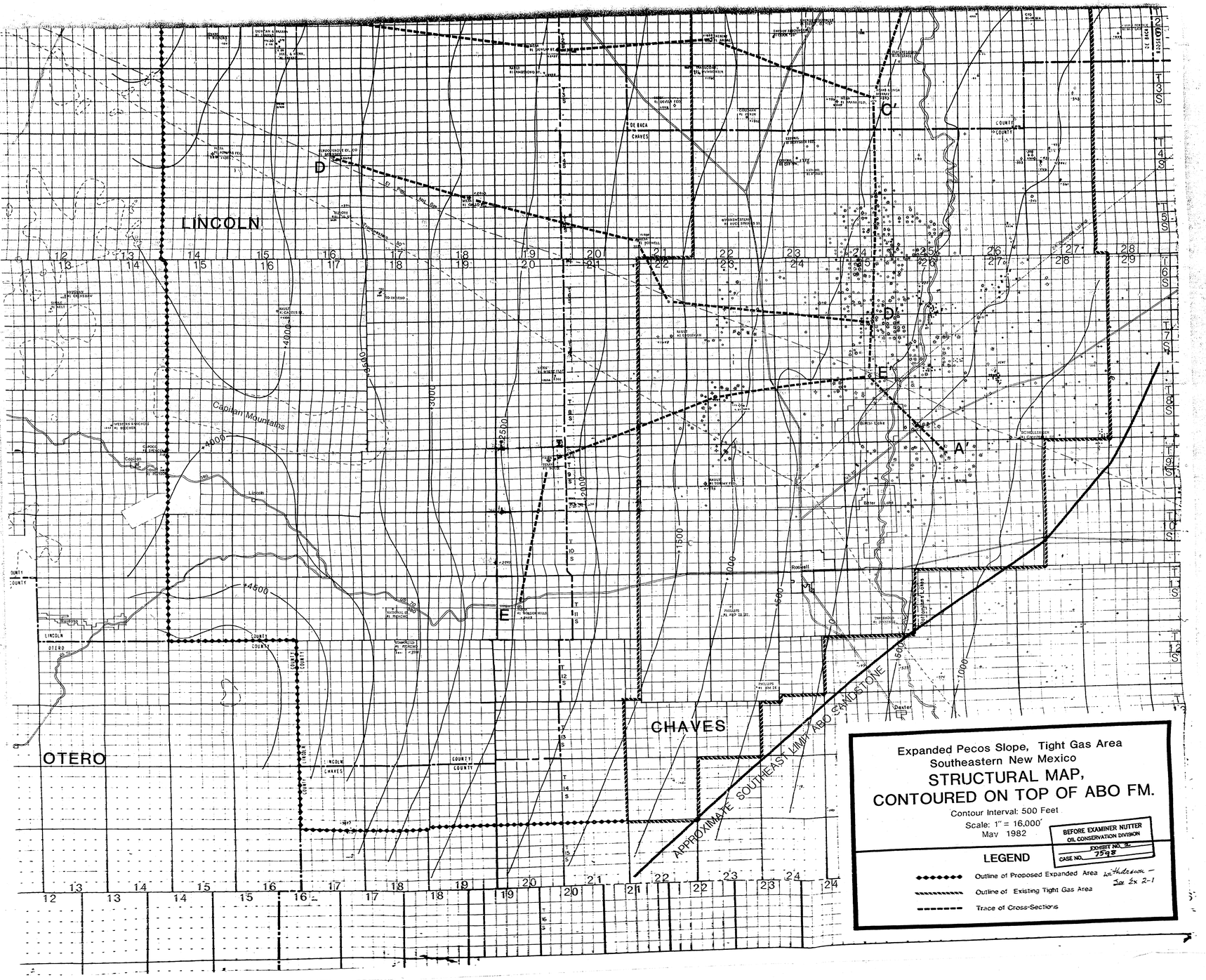
R 34 E

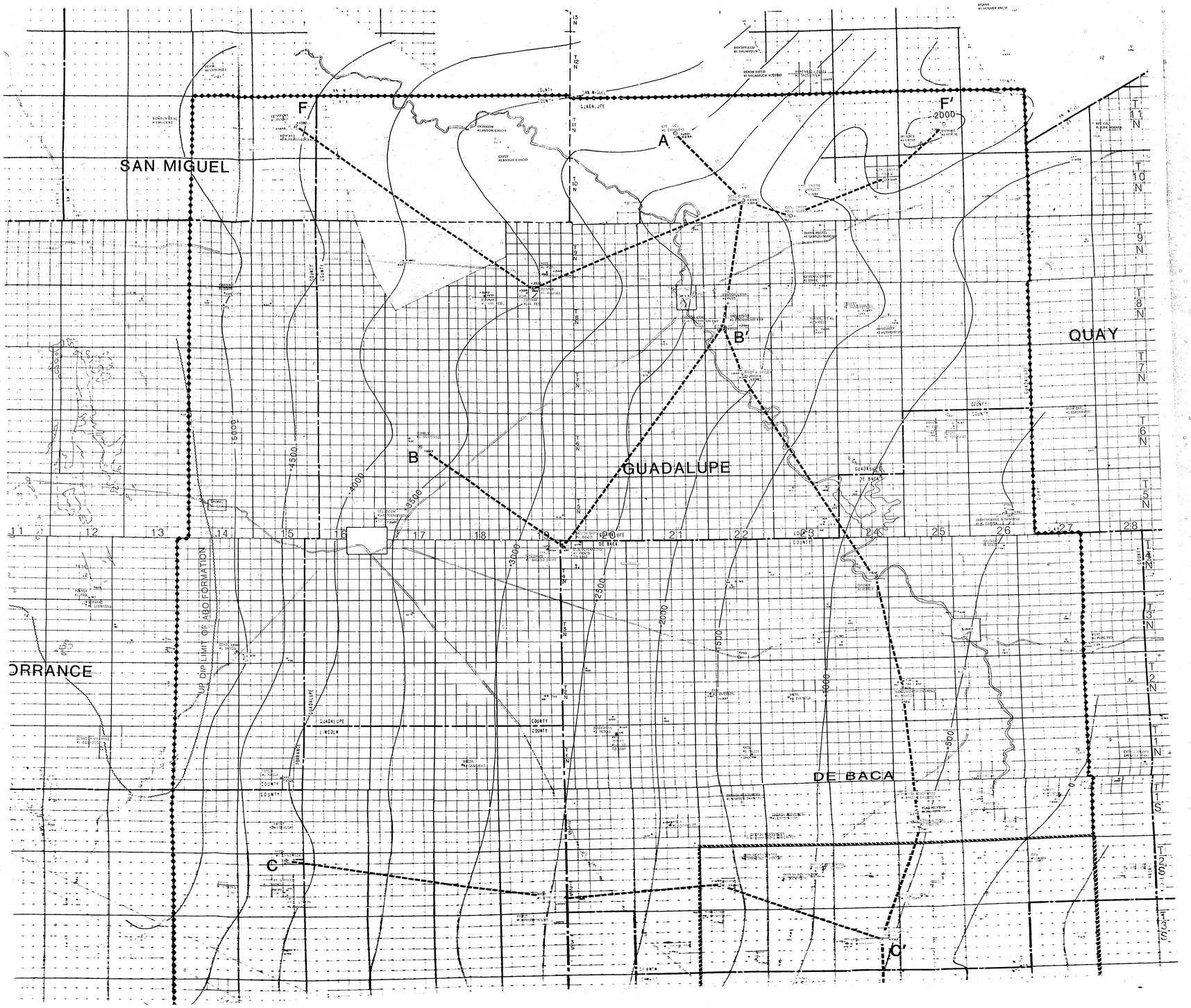
11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28

1 2 3 4 5 6 7 8 9 10 11 12

COUNTY

COUNTY


LINCOLN
CHAVES
OTERO
Capitan Mountains
Capitan
Lincoln
Roswell
Dexter
APPROXIMATE SOUTHEAST LIMIT ABO SANDSTONE
A
A'
C
C'
D
D'
E
E'
Expanded Pecos Slope, Tight Gas Area
Southeastern New Mexico
STRUCTURAL MAP,
CONTOURED ON TOP OF ABO FM.
Contour Interval: 500 Feet
Scale: 1" = 16,000'
May 1982
BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 2
CASE NO. 7598
LEGEND
Outline of Proposed Expanded Area
Outline of Existing Tight Gas Area
Trace of Cross-Sections
Hendrson — See Ex 2-1


SAN MIGUEL
GUADALUPE
QUAY
DE BACA
TORRANCE
F
F'
A
B
B'
C
C'
-2000
-1500
-1000
-500
0
500
1000
1500
2000
2500
3000
UP. DIP LIMIT OF ABO FORMATION
T 12 N
T 11 N
T 10 N
T 9 N
T 8 N
T 7 N
T 6 N
T 5 N
T 4 N
T 3 N
T 2 N
T 1 N
T 1 S
T 2 S
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28

DE BACA

LINCOLN

CHAVES

OTERO

Capitan Mountains

APPROXIMATE SOUTHEAST LIMIT ABO SANDSTONE

Expanded Pecos Slope, Tight Gas Area
Southeastern New Mexico

STRUCTURAL MAP, CONTOURED ON TOP OF ABO FM.

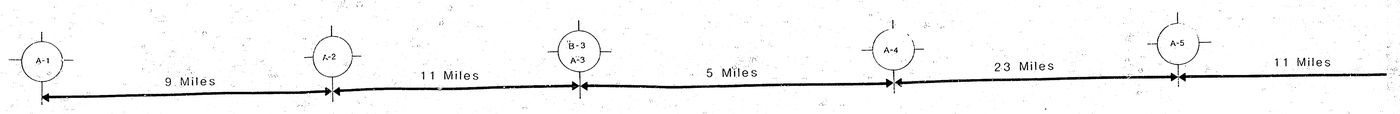
Contour Interval: 500 Feet
Scale: 1" = 16,000'
May 1982

NMOCD CASE 7598
Nov. 24, 1982
Exhibit 2-1

LEGEND

- Outline of Proposed Expanded Area
- Outline of Existing Tight Gas Area
- Trace of Cross-Sections

A



TUCUMCARI (CUERVO) BASIN

CITIES SERVICE
Driggers #1
Guadalupe County, N.M.

22 T11N R21E

GENERAL CRUDE OIL
R.L. Spires #1
Guadalupe County, N.M.

22 T10N R22E

BERT THOMPSON
Tucumcari First Nat.L. Bank #1
Guadalupe County, N.M.

20 T8N R22E

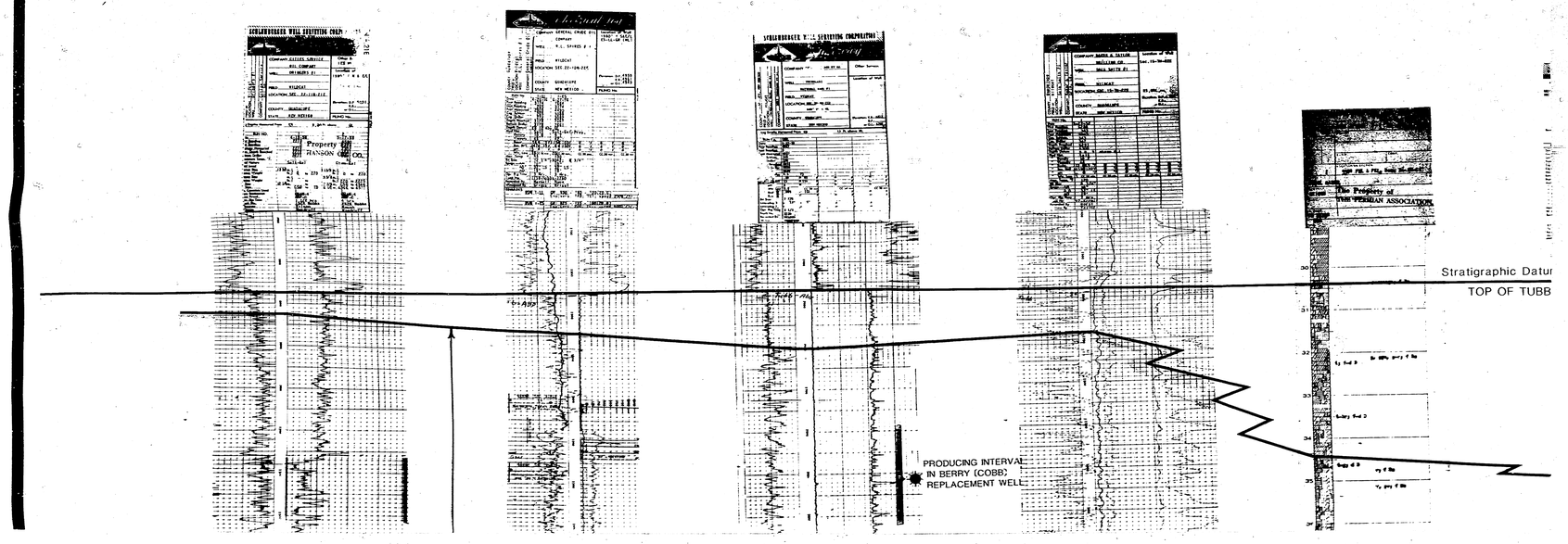
BAKER & TAYLOR
Dale Smith #1
Guadalupe County, N.M.

15 T7N R22E

GRIGGS
#1 Steel Ranch
De Baca County, N.M.

26 T4N R24E

De



iles

A-5 — 11 Miles — A-6 — 14 Miles — A-7 — 11 Miles — C-4 / A-8 — 9 Miles — A-9 — 12 Miles — D-5 / A-10 — 5 Miles

GRIGGS
#1 Steel Ranch
De Baca County, N.M.

26 T4N R24E

W. HAWKINS
Nyrick #1
De Baca County, N.M.

17 T2N R25E

NEARBURG & INGRAM
Milton #1
De Baca County,N.M.

28 T1S R25E

NEARBURG & INGRAM
Murray #1
De Baca County,N.M.

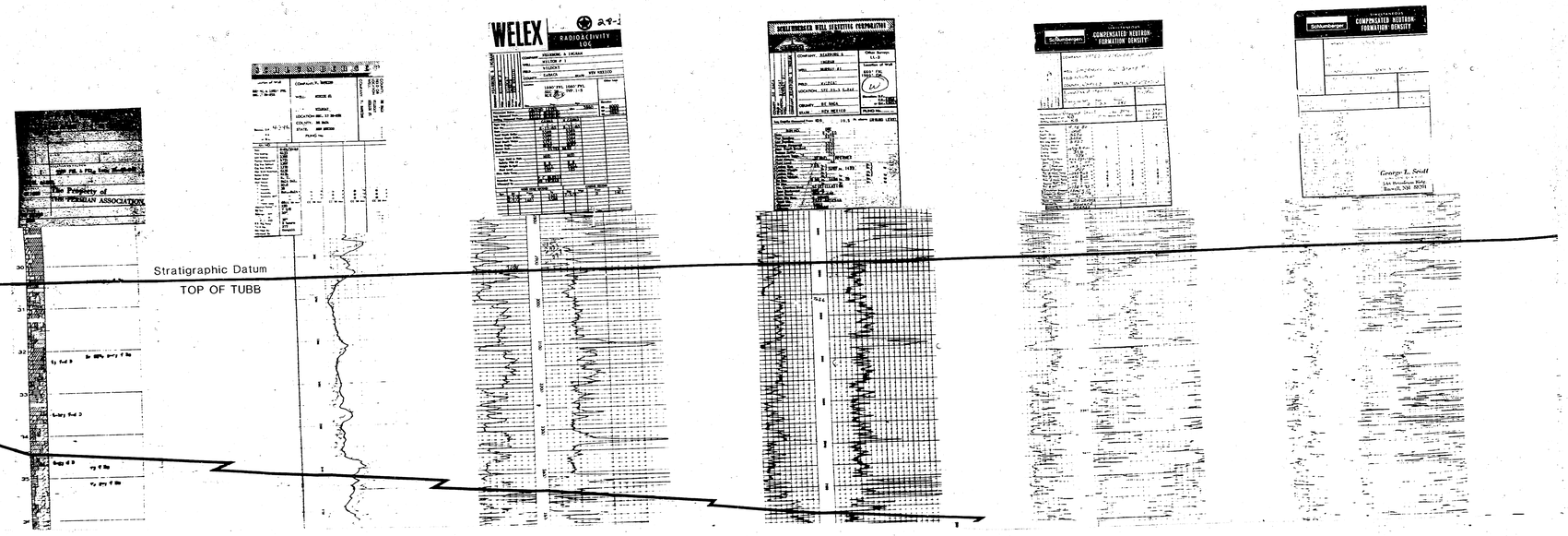
23 T3S R24E

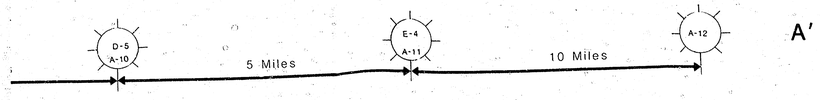
YATES PETROEUM
Smernoff "NL" ST #1
Chaves County, N.M.

2 T5S R24E

MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County, N.M.

4 T7S R25E





MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County, N.M.

4 T7S R25E

YATES PETROLEUM
Federal "HY" #2
Chaves County, N.M.

33 T7S R25E

YATES PETROLEUM CO.
McConkey #1
Chaves County, N.M.

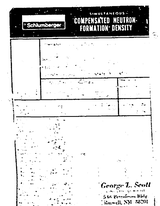
10 T9S R26E

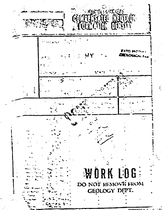
EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

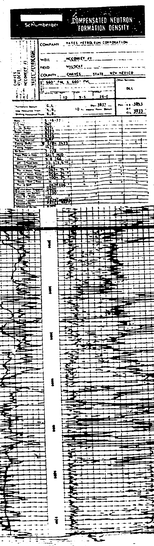
REGIONAL CROSS-SECTION

A – A'

5-82

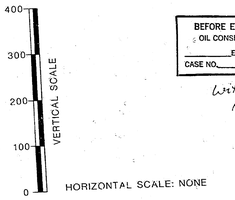






Stratigraphic Datum

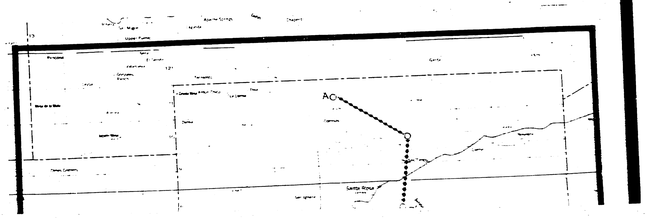
TOP OF TUBB

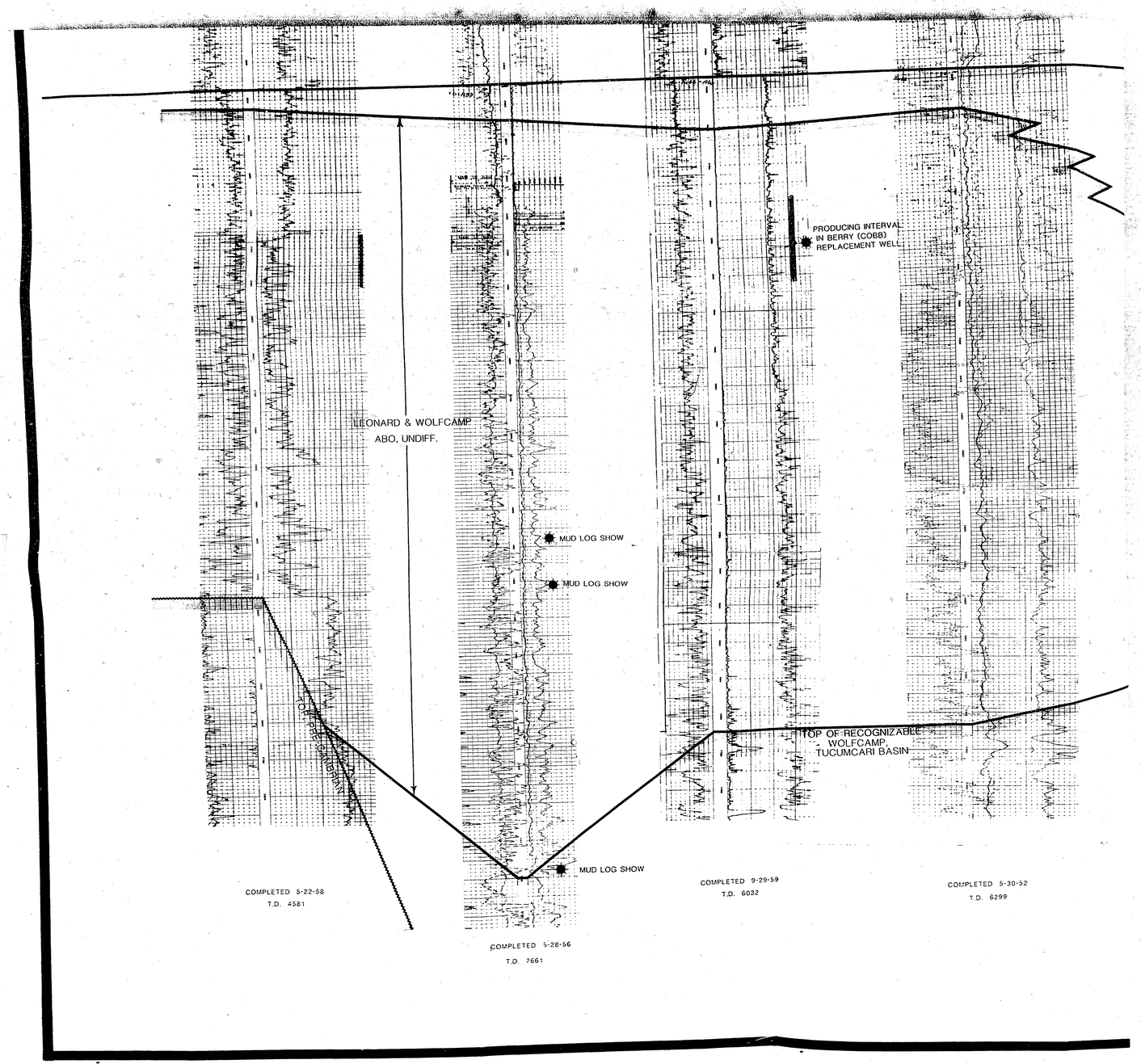


HORIZONTAL SCALE: NONE

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 7598

Withdrawn
Rec Ex 4-1




LEONARD & WOLFCAMP
ABO, UNDIFF.
PRODUCING INTERVAL
IN BERRY (COBB)
REPLACEMENT WELL
MUD LOG SHOW
MUD LOG SHOW
MUD LOG SHOW
TOP OF RECOGNIZABLE
WOLFCAMP,
TUCUMCARI BASIN
COMPLETED 5-22-58
T.D. 4581
COMPLETED 5-28-56
T.D. 7661
COMPLETED 9-29-59
T.D. 6032
COMPLETED 5-30-52
T.D. 6299

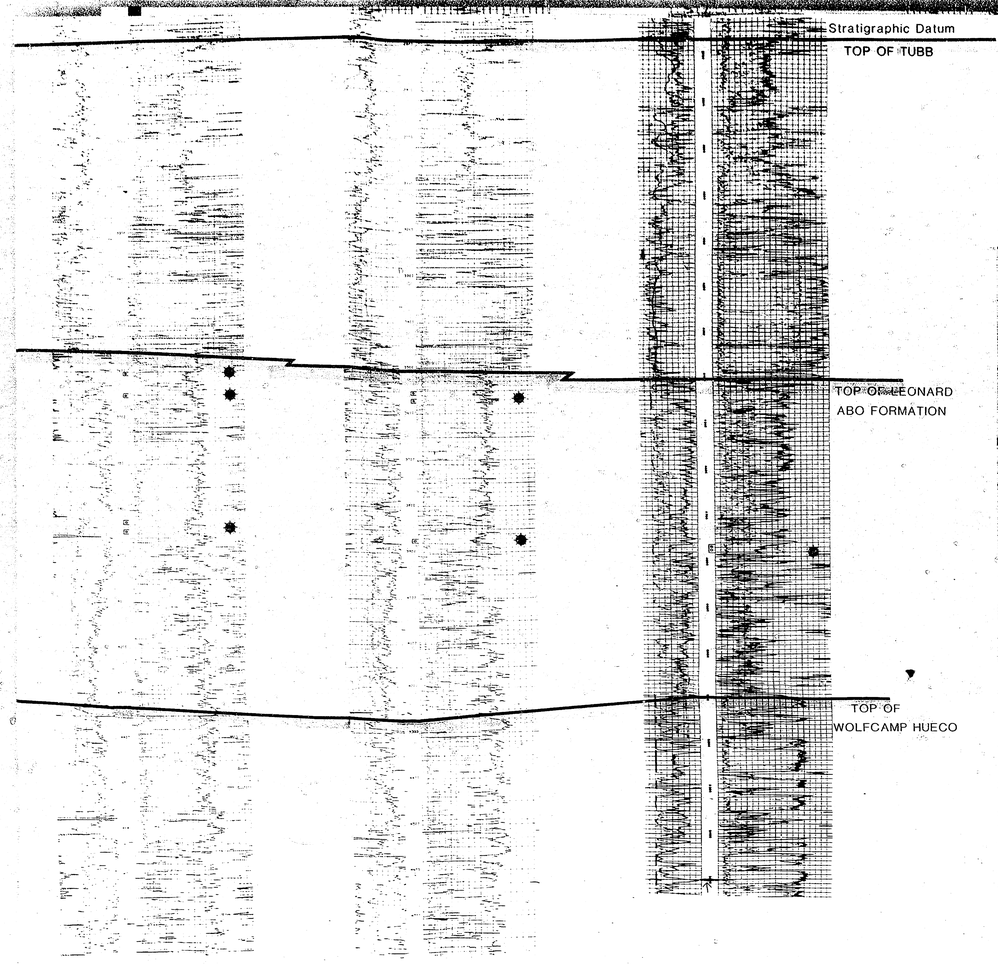
COMPLETED 9-25-44
T.D. 5553

COMPLETED 6-30-49
T.D. 5720

COMPLETED 8-15-60
T.D. 5589'

COMPLETED 6-8-60
T.D. 5372'

COMPLETED 4-25-80
TOTAL DEPTH 4276'
PERFORATE 3630-3662'
NO FLOW @ "0" psig
ACIDIZE WITH 3000 GALS.
FLOW 321 MCFGPD @ 80# psig
FRACTURE WITH 21,126 GALS.
FLOW 5800 MCFGPD @ 380# psig



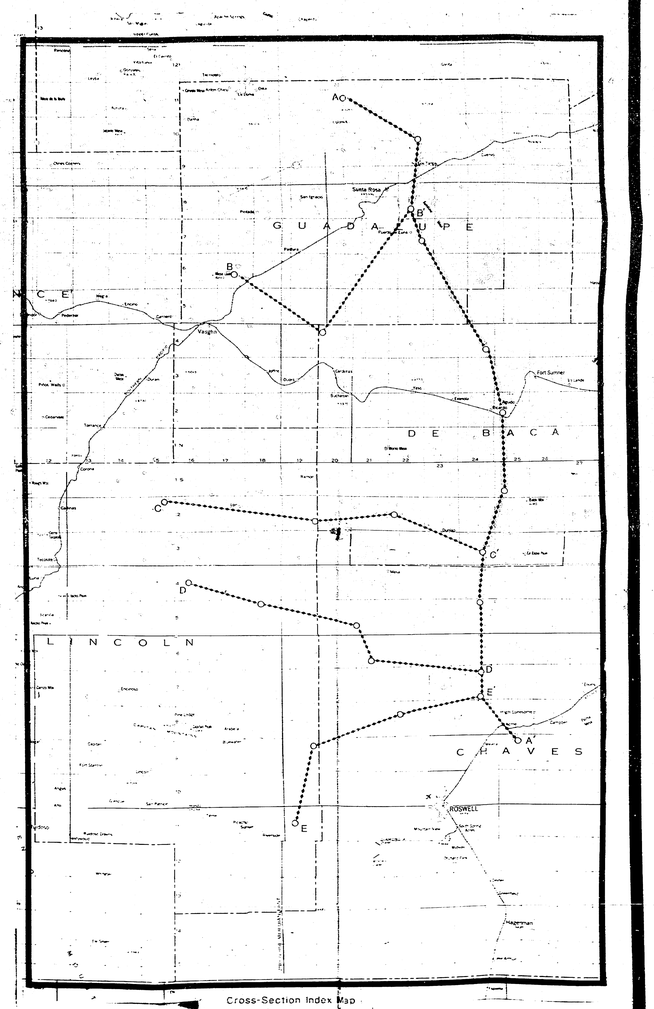
COMPLETED 7-28-80
TOTAL DEPTH 5102'
#1 PERFORATE 3916-3954'
SWB. WITH 2-3" FLARE
ACIDIZE WITH 4000 GALS.
FLOW 750 MCFGPD ± 120# psig
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD ± 625psig

#2 PERFORATE 3600-3656'
FLOW 250 MCFGPD ± 30# psig
ACIDIZE WITH 4000 GALS.
FLOW 700 MCFGPD ± 160# psig
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD ± 375# psig

COMPLETED 5-12-79
TOTAL DEPTH 4970'
#1 PERFORATE 3872-3880'
ACIDIZE WITH 1500 GALS.
FLOW 311 MCFGPD @ 200# psig
FRACTURE STIMULATE-VOLUMN UNKNOWN
FLOW 700 MCFGPD

#: PERFORATE 3548-3560'
ACIDIZE & FRACTURE STIMULATE
FLOW 2000 MCFGPD @ 313'# psig

COMPLETED 9-6-77 (RE-ENTRY)
TOTAL DEPTH 6371'
PERFORATE 4764-4782'
FLOW 521 MCFGPD @ 345# psig
ACIDIZE WITH 2500 GALS.
FRACTURE WITH 15,600 GALS.
FLOW 2840 MCFGPD @ 440# psig



Cross-Section Index Map

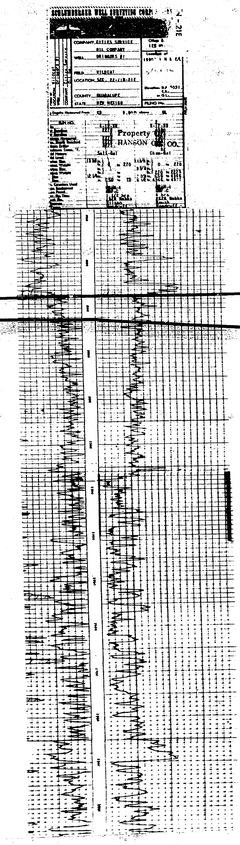
A

A-1 — 9 Miles — A-2 — 11 Miles — B-3 / A-3 — 5 Miles — A-4 — 23 Miles — A-5

TUCUMCARI (CUERVO) BASIN

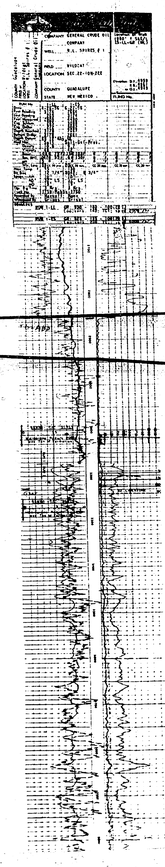
CITIES SERVICE
Driggers #1
Guadalupe County, N.M.

22 T11N R21E



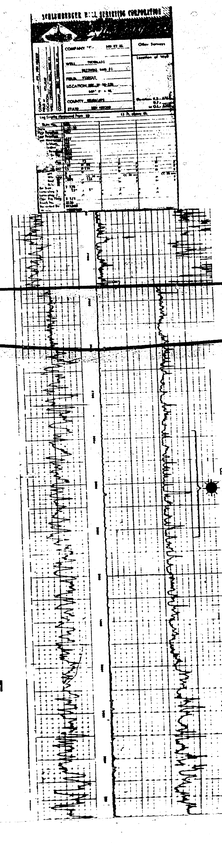
GENERAL CRUDE OIL
R.L. Spires #1
Guadalupe County, N.M.

22 T10N R22E



BERT THOMPSON
Tucumcari First Nat.L. Bank #1
Guadalupe County, N.M.

20 T8N R22E

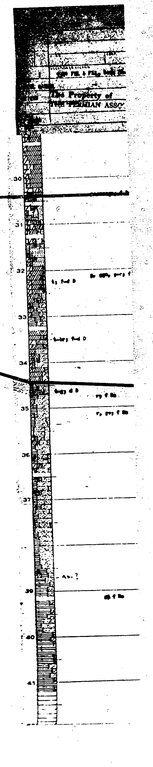


BAKER & TAYLOR
Dale Smith #1
Guadalupe County, N.M.

15 T7N R22E

GRIGGS
#1 Steel Ranch
De Baca County

26 T4N R2



ABO FM

PRODUCING INTERVAL IN BERRY (COBB) REPLACEMENT WELL

11 Miles | A-6 | 14 Miles | A-7 | 11 Miles | C-4 A-8 | 9 Miles | A-9 | 12 Miles | D-5 A-10 | 5 Miles | E-4 A-11

ch
N.M.

W. HAWKINS
Nyrick #1
De Baca County, N.M.

17 T2N R25E

NEARBURG & INGRAM
Milton #1
De Baca County,N.M.

28 T1S R25E

NEARBURG & INGRAM
Murray #1
De Baca County,N.M.

23 T3S R24E

YATES PETROEUM
Smernoff "NL" ST #1
Chaves County, N.M.

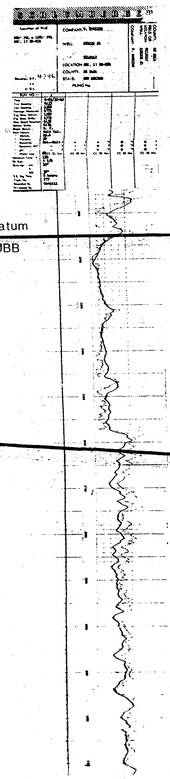
2 T5S R24E

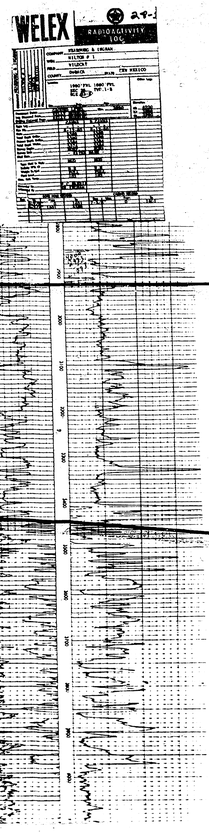
MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County, N.M.

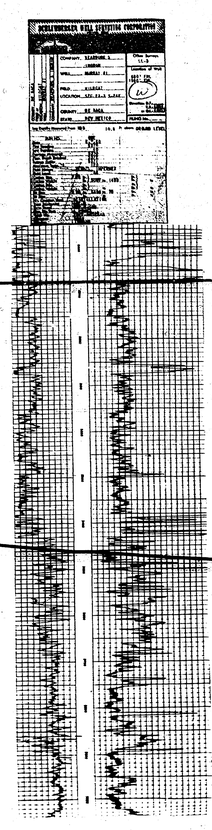
4 T7S R25E

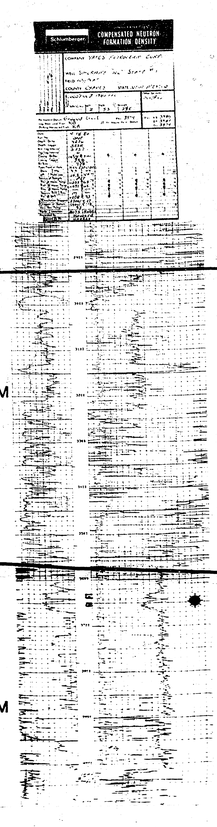
YATES PETI
Federal "HY
Chaves Cou

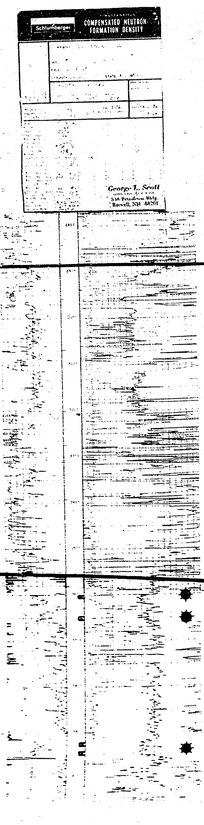
33 T7S I

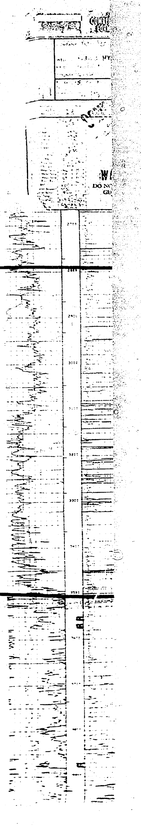












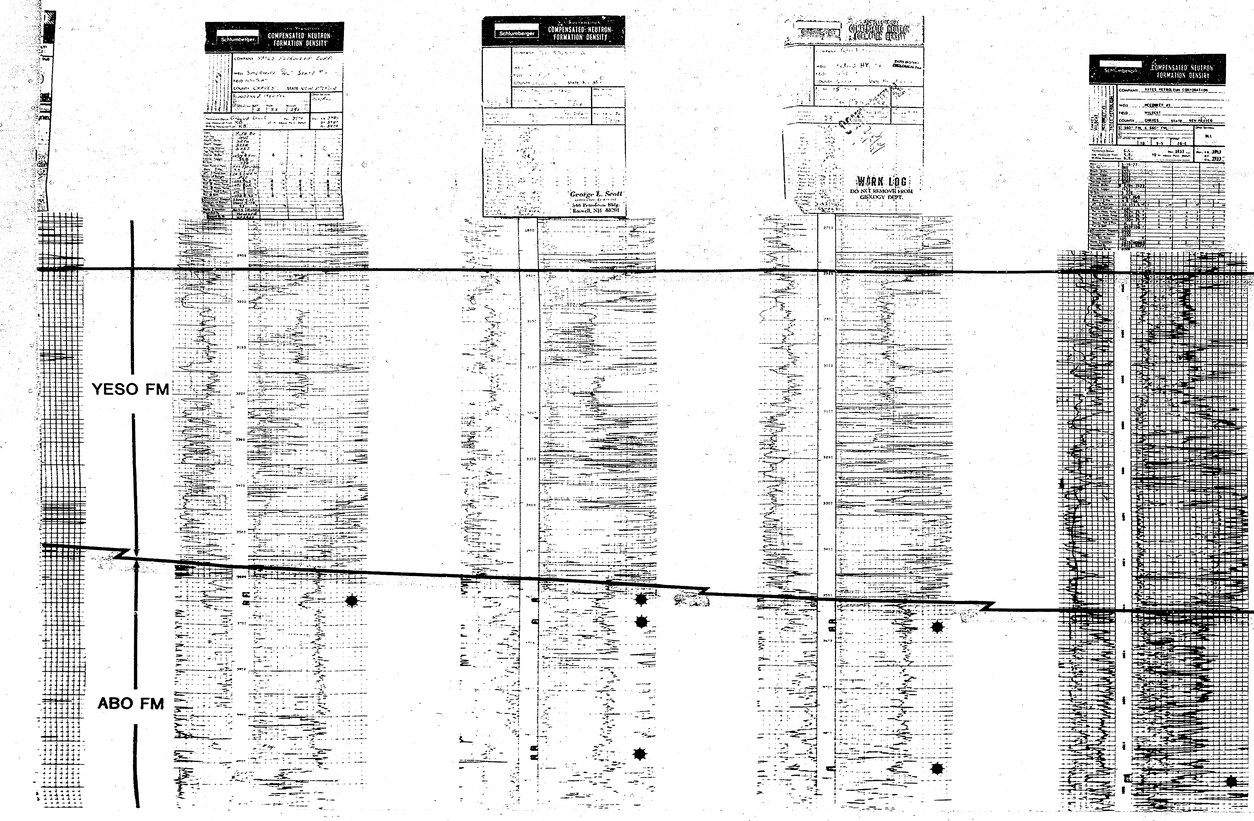
Stratigraphic Datum
TOP OF TUBB

YESO FM

ABO FM

A-9 — 9 Miles — D-5 A-10 — 12 Miles — E-4 A-11 — 5 Miles — A-12 — 10 Miles — A'

AM	YATES PETROEUM Smernoff "NL" ST #1 Chaves County, N.M.	MESA PETROLEUM CO. #1 Savage Fed. Chaves County, N.M.	YATES PETROLEUM Federal "HY" #2 Chaves County, N.M.	YATES PETROLEUM CO McConkey #1 Chaves County, N.M.
M.	2 T5S R24E	4 T7S R25E	33 T7S R25E	10 T9S R26E



EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

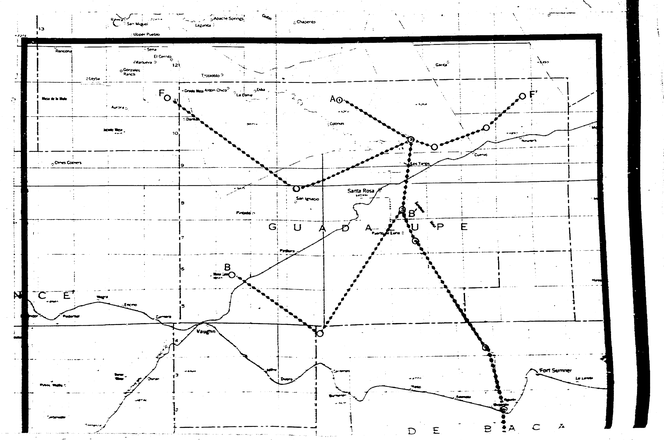
A - A'

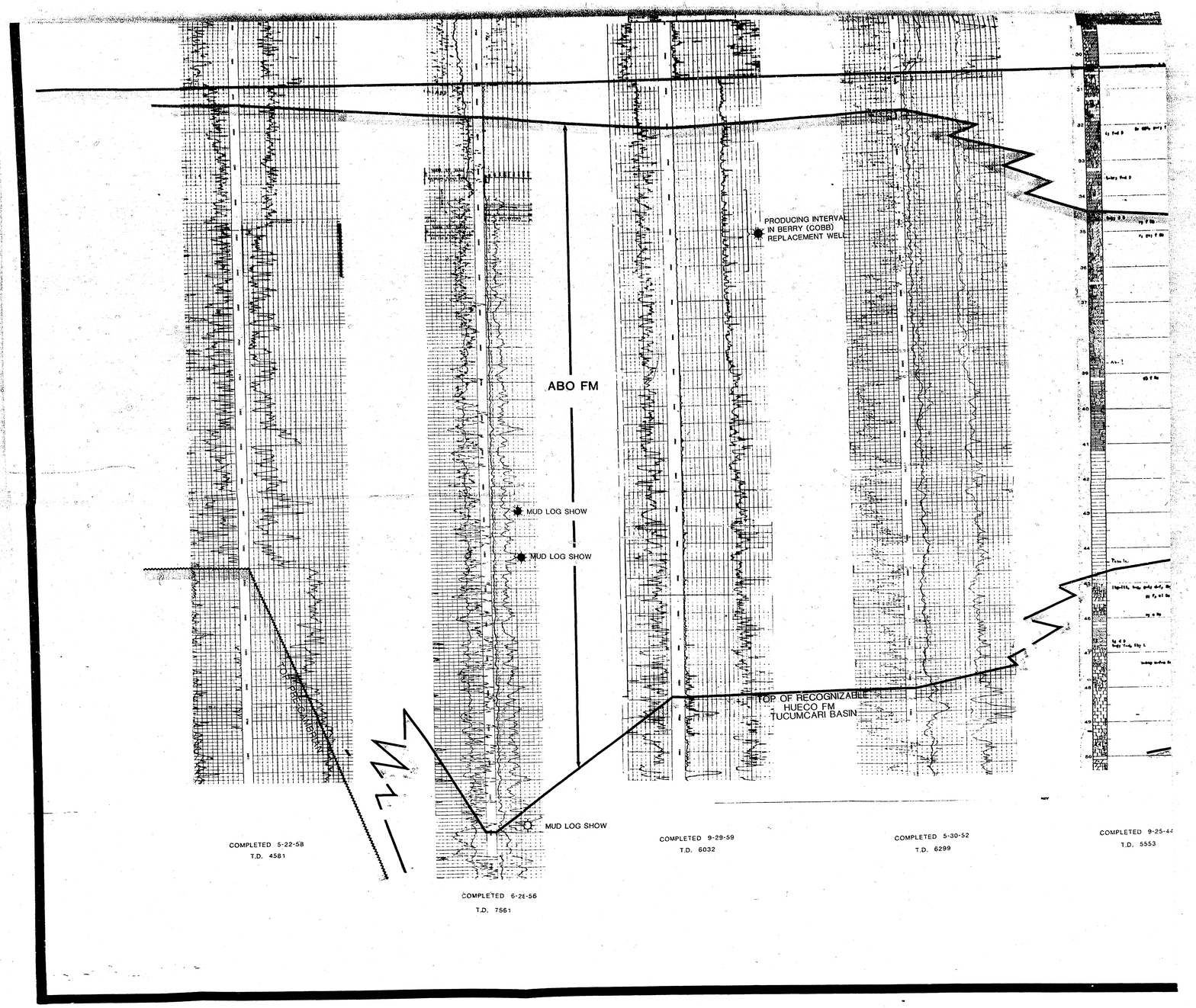
5-82

NMOCD CASE 7598
May 26, 1982
Exhibit 4-I

400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE




PRODUCING INTERVAL
IN BERRY (COBB)
REPLACEMENT WELL
ABO FM
MUD LOG SHOW
MUD LOG SHOW
TOP OF RECOGNIZABLE
HUECO FM
TUCUMCARI BASIN
MUD LOG SHOW
COMPLETED 5-22-58
T.D. 4581
COMPLETED 6-26-56
T.D. 7561
COMPLETED 9-29-59
T.D. 6032
COMPLETED 5-30-52
T.D. 6299
COMPLETED 9-25-44
T.D. 5553

Stratigraphic Datum

TOP OF TUBB

YESO FM

ABO FM

HUECO FM

PENNSYLVANIAN

COMPLETED 6-30-49
T.D. 5720

COMPLETED 8-15-60
T.D. 5589'

COMPLETED 6-8-60
T.D. 5372'

COMPLETED 4-25-80
TOTAL DEPTH 4276'
PERFORATE 3630-3662'
NO FLOW @ "0" psig
ACIDIZE WITH 3000 GALS.
FLOW 321 MCFGPD @ 80# psig
FRACTURE WITH 21,126 GALS.
FLOW 5800 MCFGPD @ 330# psig

COMPLETED 7-28-80
TOTAL DEPTH 5102'
#1 PERFORATE 3916-3954'
SWB. WITH 2-3 FLARE
ACIDIZE WITH 4000 GALS.
FLOW 750 MCFGPD @ 120# psig
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD @ 625psig

#2 PERFORATE 3600-3656'
FLOW 250 MCFGPD @ 30# psig
ACIDIZE WITH 4000 GALS.
FLOW 700 MCFGPD @ 100# psig
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD @ 375# psig

COMPLETED 5-12
TOTAL DEPTH 49
#1 PERFORATE 3872
ACIDIZE WITH 15
FLOW 311 MCFGP
FRACTURE STIMUL
FLOW 700 MCFGF

#2 PERFORATE 3548
ACIDIZE & FRA
FLOW 2000 MCF

W.O.U.S.F. WORKSHOPS

WEST VANCLEAVE DEPT

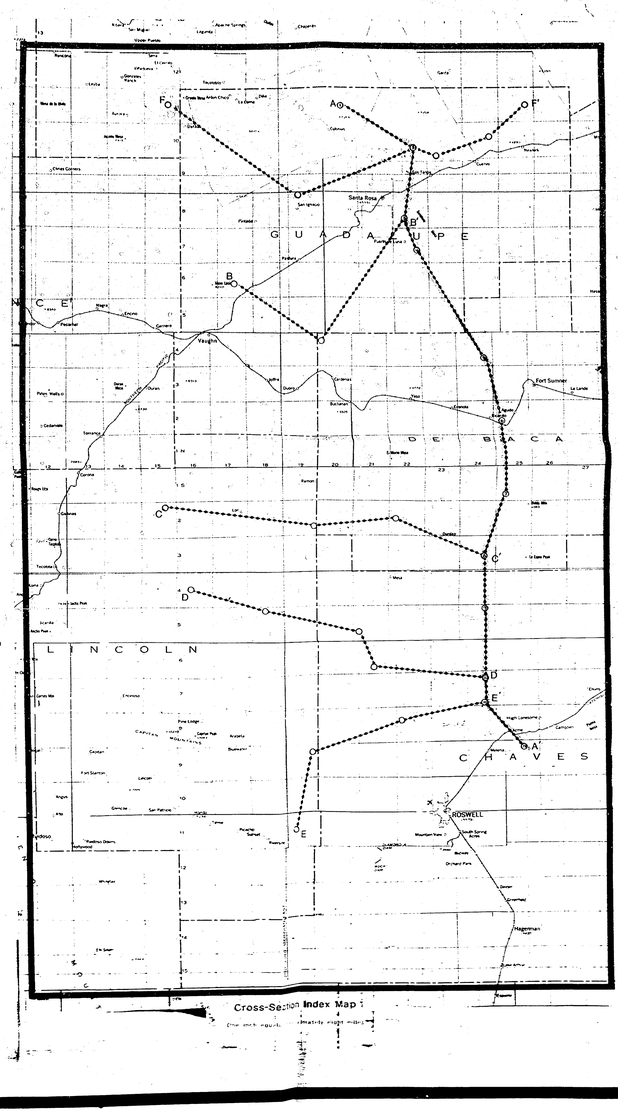
0 HORIZONTAL SCALE: NONE

PERMIAN
LEONARD

PERMIAN
WOLFCAMP

-79
70'
-3880'
00 GALS.
D @ 200# psig
LATE-VOLUMN UNKNOWN
D
-3560'
CTURE STIMULATE
SPD @ 313# psig

COMPLETED 9-6-77 (RE-ENTRY)
TOTAL DEPTH 6371'
PERFORATE 4764-4782'
FLOW 521 MCFGPD @ 345# psig
ACIDIZE WITH 2500 GALS.
FRACTURE WITH 15,600 GALS.
FLOW 2840 MCFGPD @ 440# psig



B-1 B-2 A-3 B-3

B — 16 Miles — 26 Miles — B'

CIBOLA ENERGY CORP.
Martinez #1
Guadalupe County N.M.

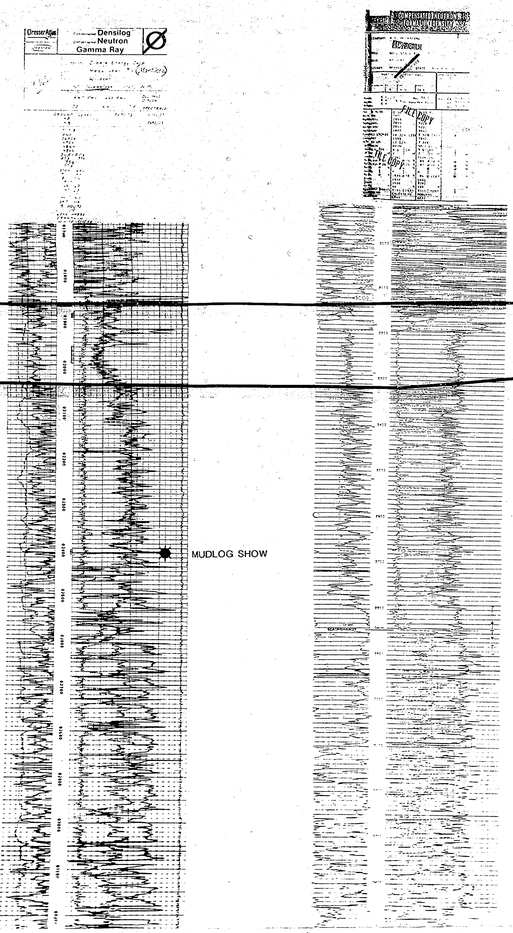
SEC.22 T6N R17E

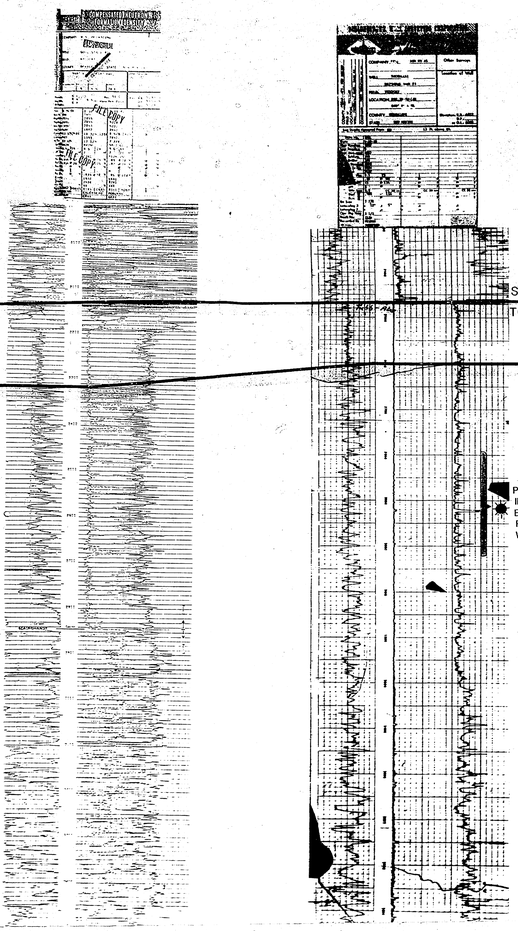
U.S. OPERATING
Good State #1
Debaca County N.M.

SEC.6 T4N R20E

BERT THOMPSON
Tucumcari First National Bank #1
Guadalupe County N.M.

SEC.20 T8N R22E





EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

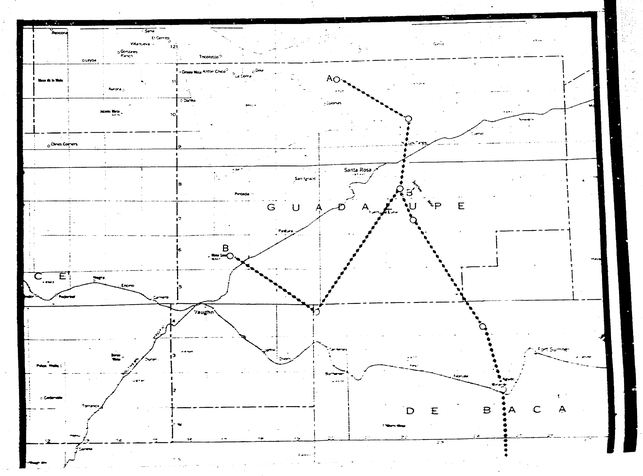
5-82

400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 5
CASE NO. 7598

Withdrawn - See Ex 5-1



Stratigraphic Datum
TOP OF LEONARD - TUBB

MUDLOG SHOW

PRODUCING INTERVAL IN BERRY (COBB) REPLACEMENT WELL

LEONARD & WOLFCAMP
ABO, UNDIFF.

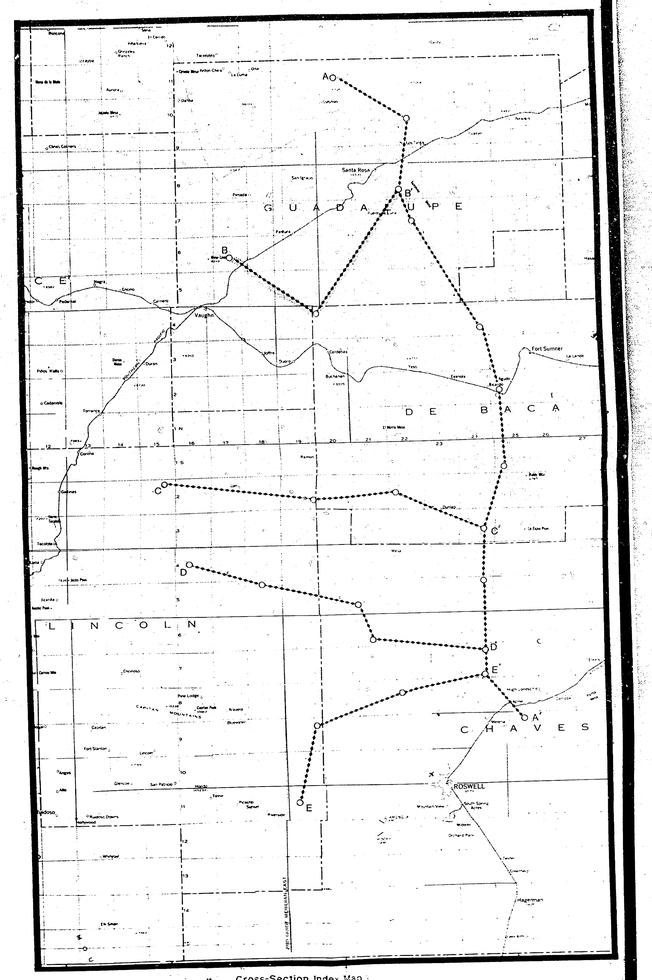
TOP, FIRST RECOGNIZABLE WOLFCAMP LIMESTONE

PERF. 2392-2402 IN DIESEL. SWB DRY, HAD 5 FT. FLARE FOR 5 SECONDS ON 2nd SWB RUN. Ac/35 BBLS SAND FRACD. SWB BACK W/NO SHOW.
PERF. 1960-96, SWB SAND & WTR.
PERF. 1886-92, Ac/12,000 GALS W/ N , SWB SAND & WTR.

COMPLETED 1-17-81 T.D. 4755

COMPLETED 9-29-59 T.D. 6032

0 HORIZONTAL SCALE: NONE



16 Cross-Section Index Map

B-1 B-2 A-3 B-3

B — 16 Miles — 26 Miles — B′

CIROLA ENERGY CORP.
Martinez #1
Guadalupe County N.M.

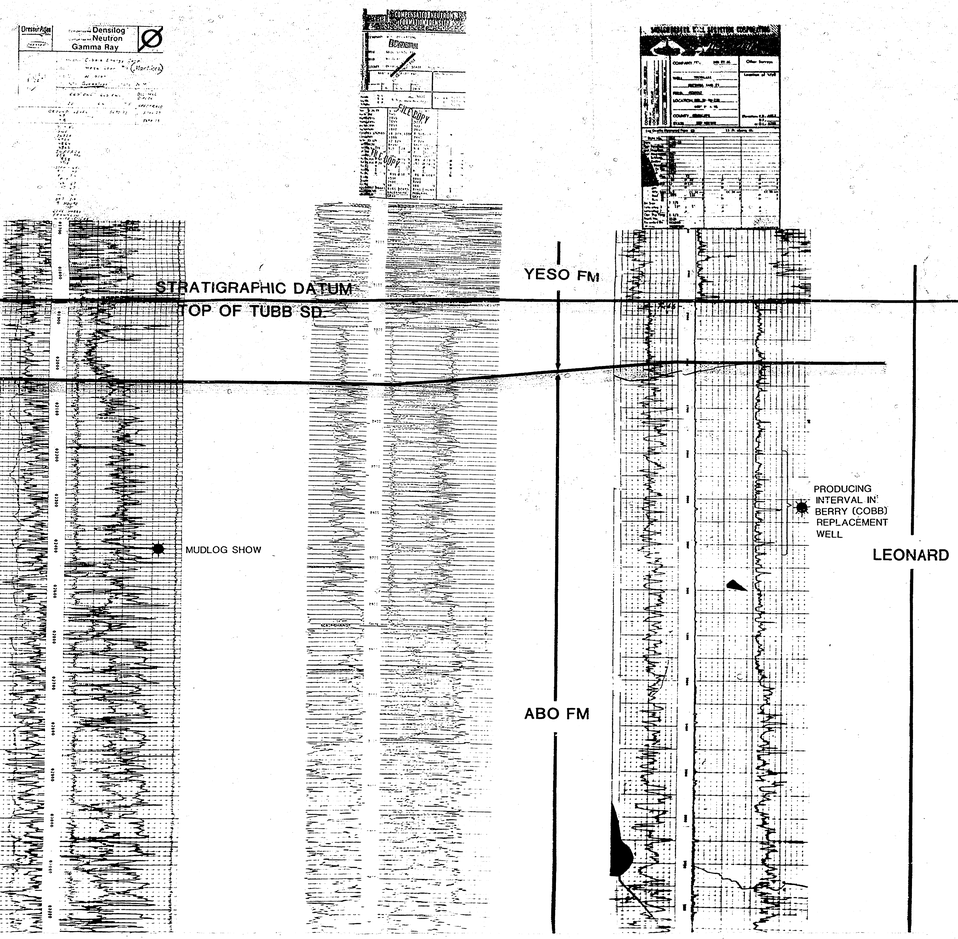
SEC.22 T6N R17E

U.S. OPERATING
Good State #1
Debaca County N.M.

SEC.6 T4N R20E

BERT THOMPSON
Tucumcari First National Bank #1
Guadalupe County N.M.

SEC.20 T8N R22E



EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

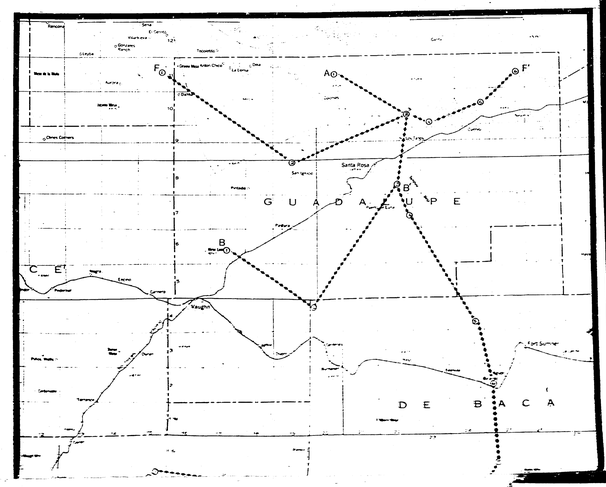
B – B′

5-82

NMOCD CASE 7598
May 26, 1982
Exhibit 5-I

400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE



STRATIGRAPHIC DATUM
TOP OF TUBB SD.

MUDLOG SHOW

PRODUCING INTERVAL IN BERRY (COBB) REPLACEMENT WELL

LEONARD

ABO FM

WOLFCAMP

HUECO FM

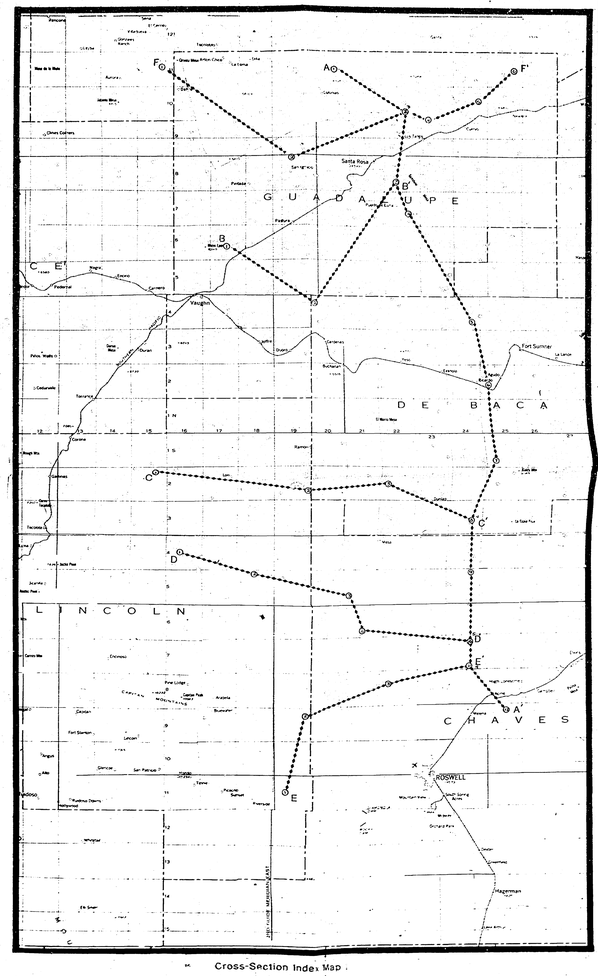
PENNSYLVANIAN

PERF. 2392-2402 IN DIESEL. SWB DRY, HAD 5 FT. FLARE FOR 5 SECONDS ON 2nd SWB RUN. Ac/35 BBLS SAND FRACD, SWB BACK W/NO SHOW.
PERF. 1960-96, SWB SAND & WTR.
PERF. 1886-92, Ac/12,000 GALS W/ N2, SWB SAND & WTR.

COMPLETED 1-17-81 T.D. 4755

COMPLETED 9-29-59 T.D. 6032

0 HORIZONTAL SCALE: NONE



Cross-Section Index Map

U.S.G.S. TOPOGRAPHIC
NEW MEXICO DEPT.

C — C-1 — 26 Miles — C-2 — 14 Miles — C-3 — 16 Miles — A-8 C-4 — C′

MESA PETROLEUM CO.
Chadwick State 1#
Lincoln County, NM

2 T2S R15E

MESA PETROLEUM CO.
Dunlap State #1
Lincoln County, NM

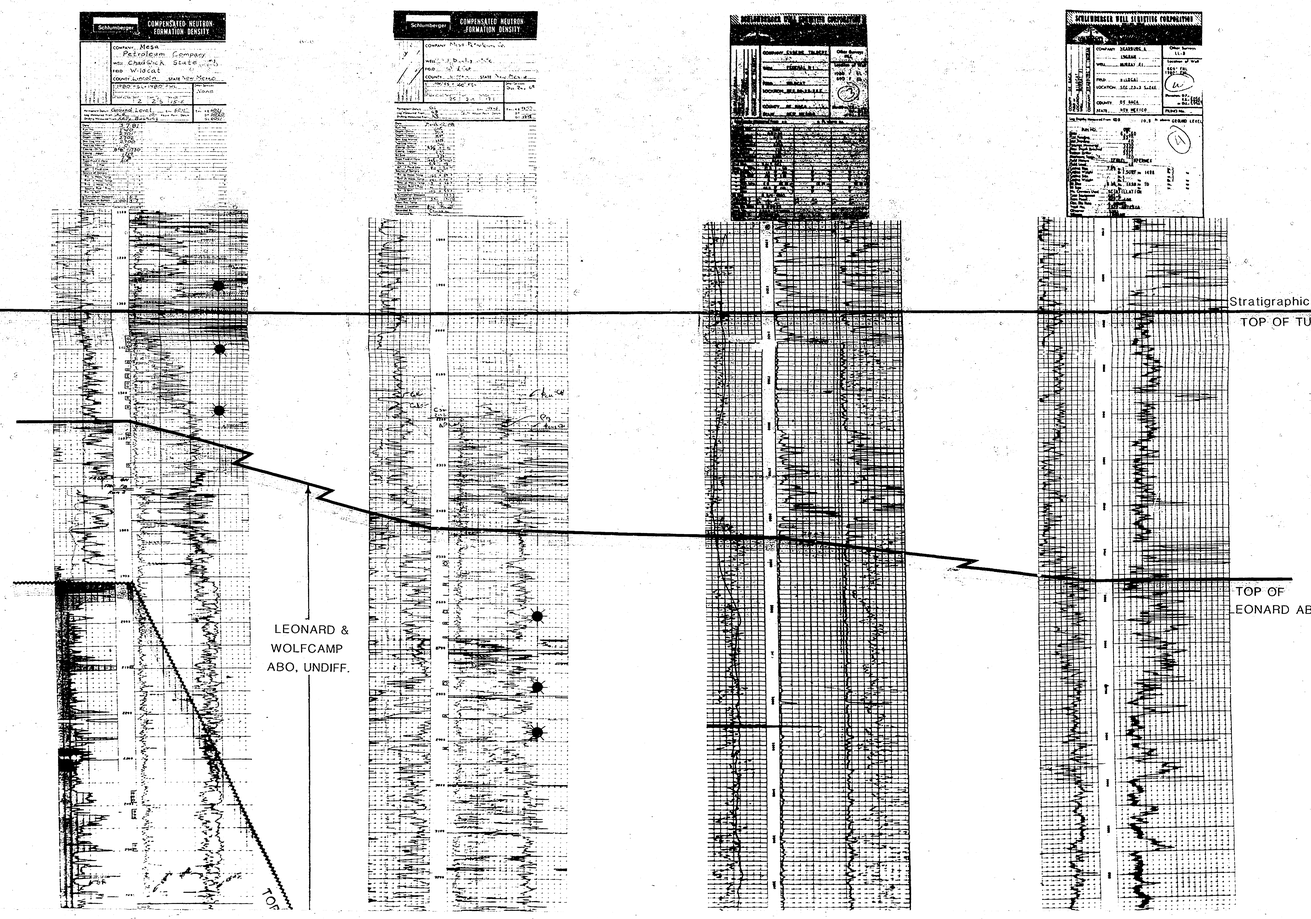
25 T2S R19E

EUGENE TALBRT
Federal #1
De Baca County, NM

20 T2S R22E

NEARBURG & INGRAM
Murray #1
De Baca County, NM

23 T3S R24E



EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

C – C′

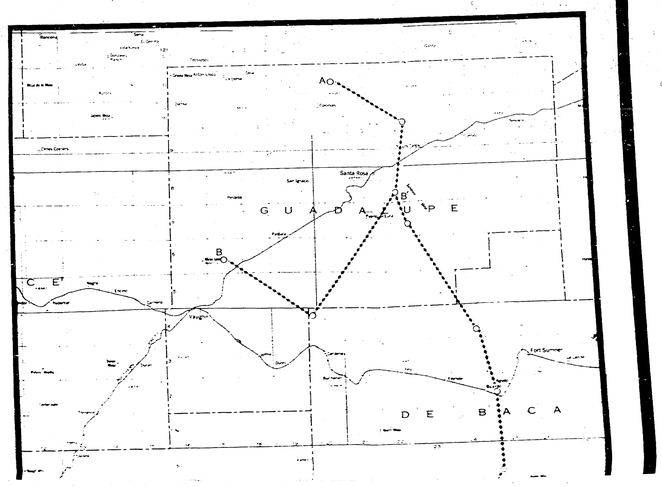
5-82

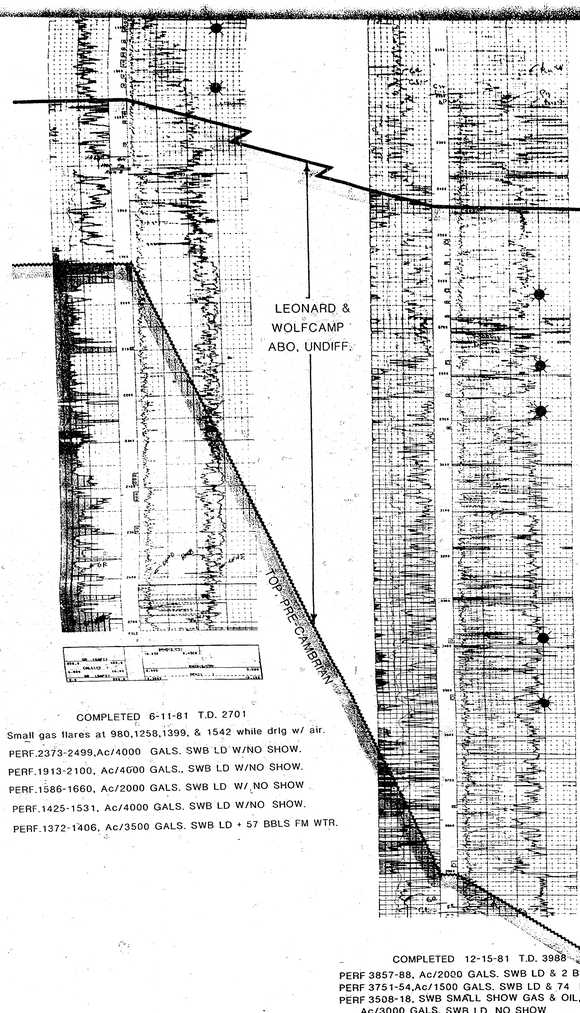
400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 6
CASE NO. 7598

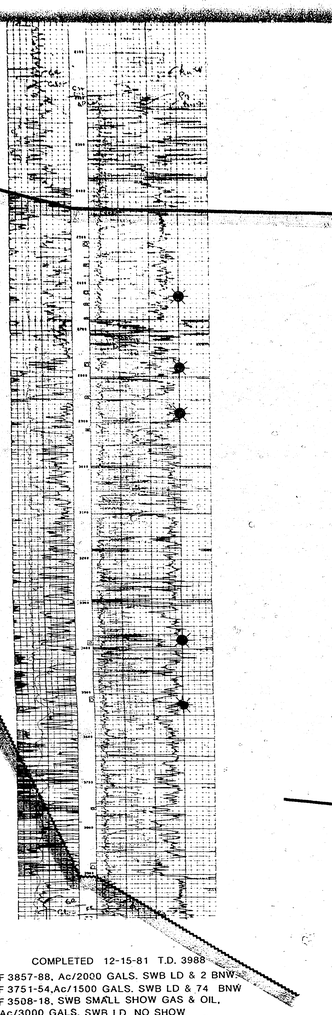
Withdrawn –
Re Ex 6-1





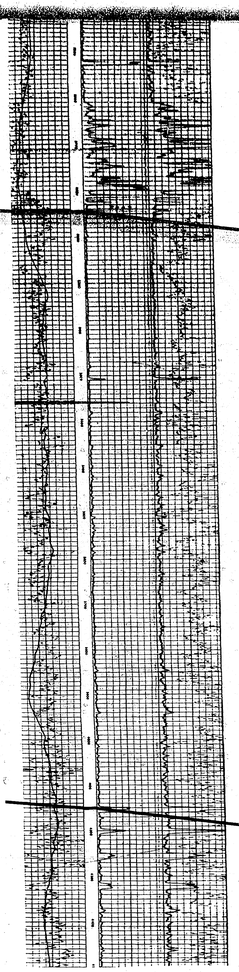
COMPLETED 6-11-81 T.D. 2701

Small gas flares at 980,1258,1399, & 1542 while drlg w/ air.
PERF.2373-2499,Ac/4000 GALS. SWB LD W/NO SHOW.
PERF.1913-2100, Ac/4000 GALS., SWB LD W/NO SHOW.
PERF.1586-1660, Ac/2000 GALS. SWB LD W/ NO SHOW
PERF.1425-1531, Ac/4000 GALS. SWB LD W/NO SHOW.
PERF.1372-1406, Ac/3500 GALS. SWB LD + 57 BBLS FM WTR.

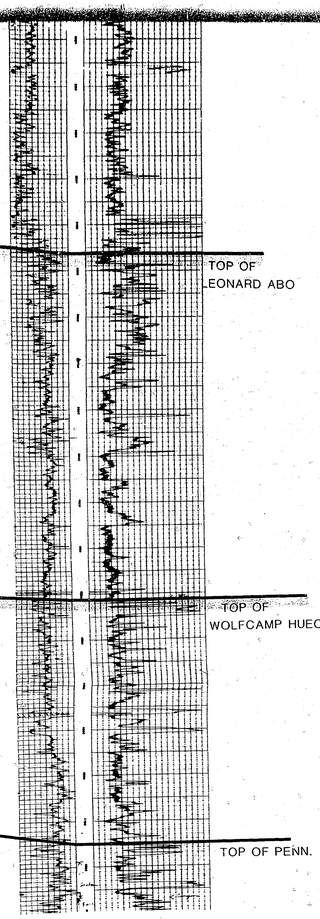


COMPLETED 12-15-81 T.D. 3988

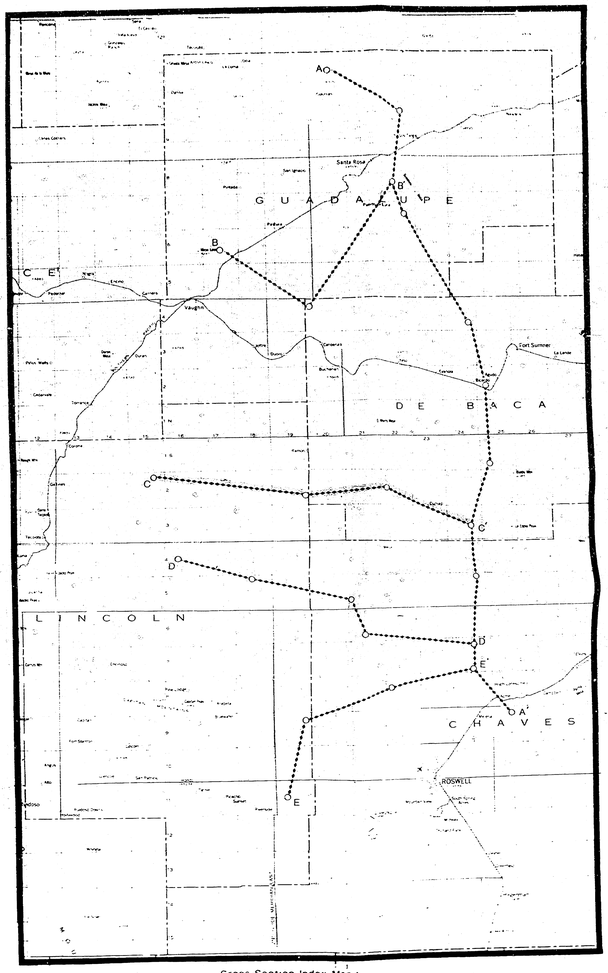
PERF 3857-88, Ac/2000 GALS. SWB LD & 2 BNW.
PERF 3751-54,Ac/1500 GALS. SWB LD & 74 BNW
PERF 3508-18, SWB SMALL SHOW GAS & OIL,
Ac/3000 GALS. SWB LD, NO SHOW
PERF 3384-92,SWB, HAD SMALL FLARE W/TRACE OIL
Ac/1500 GALS.,FRAC (3384-3518) W/36,000 GALS
75% FOAM & 30,000# SWB, RECOV 15 BFW.
PERF 2841-48, & 2913-18, SWB, SMALL GAS FLARE.
Ac /2000 GALS. SWB LD W/SMALL GAS FLARES.
PERF 2768-77, RAN TBG, BEGAN FLOWING GAS (SITP 550).
KILL WELL. Ac/1600 GALS. SWB LD, SWB OIL W/GAS FLARE.
FRAC/15,000 GAL YF CO_2 (50% CO_2) & 27,000# SD.
SWB LD W/SMALL AMTS OF OIL & GAS FLARES.
PERF 2508-17 Ac 1500 GALS. SWB LD. FRAC W/26,000 GALS
YF4PSD (3 (2/3) - CO_2 (1/3) - 43,900#. SWB & FLOW BACK.
W/SMALL FLARES.
PERF. 2542,2556-60,2581,2614-20,2640-2644, &2672-74.
Ac/3000. SWB MOST OF LD W/ SOME GAS FLARES.
FRAC (2508-2674) W/32,000 GALS YF4 (2/3) + CO_2 (1/3) +
75,000#. SWB & F LD & GAS (Would not light).



COMPLETED 3-2-58
T.D. 5354



COMPLETED 6-8-60
T.D. 5372



Cross-Section Index Map

C

C-1

26 Miles

C-2

14 Miles

C-3

16 Miles

A-8
C-4

C′

MESA PETROLEUM CO.
Chadwick State 1#
Lincoln County, NM

2 T2S R15E

MESA PETROLEUM CO.
Dunlap State #1
Lincoln County, NM

25 T2S R19E

EUGENE TALBRT
Federal #1
De Baca County, NM

20 T2S R22E

NEARBURG & INGRAM
Murray #1
De Baca County, NM

23 T3S R24E

STRATIGRAPHIC DATUM
TOP OF TUBB SD

YESO FM

ABO FM

LEONARD

TOP PRE-CAMBRIAN

EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

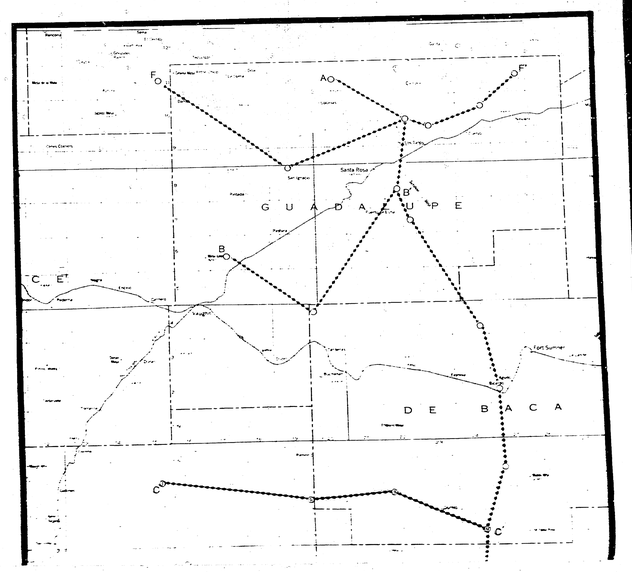
C – C′

5-82

NMOCD CASE 7598
May 26, 1982
Exhibit 6-I

400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE



YESO FM

ABO FM

TOP PRECAMBRIAN

LEONARD

HUECO FM

WOLFCAMP

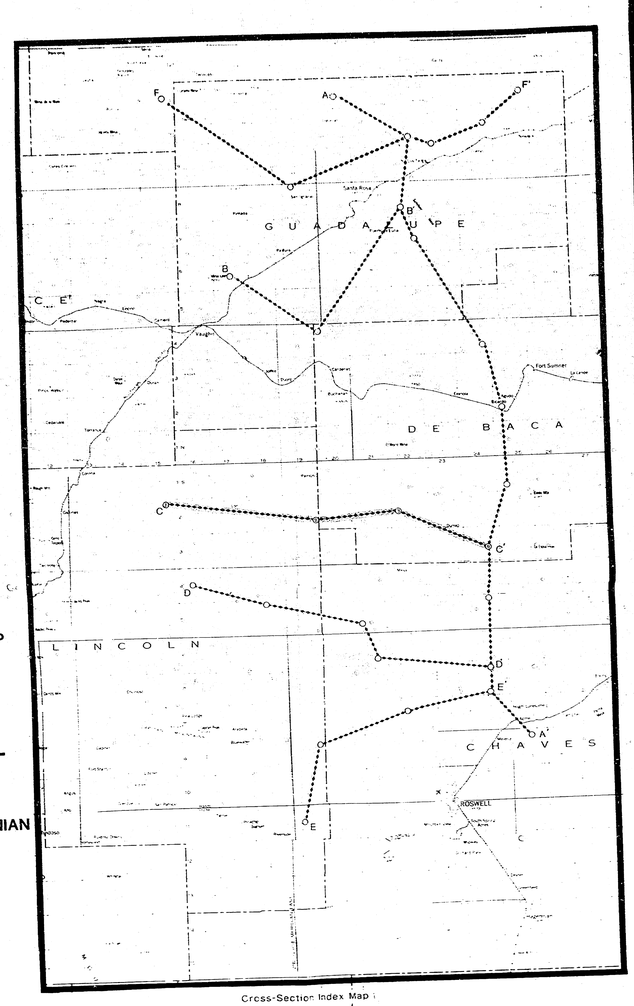
PENNSYLVANIAN

COMPLETED 6-11-81 T.D. 2701
Small gas flares at 980,1258,1399, & 1542 while drlg w/ air.
PERF.2373-2499,Ac/4000 GALS. SWE LD W/NO SHOW.
PERF.1913-2100, Ac/4000 GALS., SWB LD W/NO SHOW.
PERF.1586-1660, Ac/2000 GALS. SWB LD W/ NO SHOW
PERF.1425-1531, Ac/4000 GALS. SWB LD W/NO SHOW.
PERF.1372-1406, Ac/3500 GALS. SWB LD + 57 BBLS FM WTR.

COMPLETED 12-15-81 T.D. 3988
PERF 3857-88, Ac/2000 GALS. SWB LD & 2 BNW.
PERF 3751-54,Ac/1500 GALS. SWB LD & 74 BNW
PERF 3508-18, SWB SMALL SHOW GAS & OIL,
Ac/3000 GALS. SWB LD, NO SHOW
PERF 3384-92,SWB, HAD SMALL FLARE W/TRACE OIL
Ac/1500 GALS.,FRAC (3384-3518) W/36,000 GALS
75% FOAM & 30,000# SWB, RECOV 15 BFW.
PERF 2841-48, & 2913-18, SWB, SMALL GAS FLARE.
Ac /2000 GALS. SWB LD W/SMALL GAS FLARES.
PERF 2768-77, RAN TBG, BEGAN FLOWING GAS (SITP 550).
KILL WELL. Ac/1600 GALS. SWB LD. SWB OIL W/GAS FLARE.
FRAC/15,000 GAL YF CO_2 (50% CO_2) & 27,000# SD.
SWB LD W/SMALL AMTS OF OIL & GAS FLARES.
PERF 2508-17 Ac 1500 GALS. SWB LD. FRAC W/26,000 GALS
YF4PSD (3 (2/3) - CO_2 (1/3) - 43,900#. SWB & FLOW BACK.
W/SMALL FLARES.
PERF. 2542,2556-60,2581,2614-20,2640-2644, &2672-74.
Ac/3000. SWB MOST OF LD W/ SOME GAS FLARES.
FRAC (2508-2674) W/32,000 GALS YF4 (2/3) + CO_2 (1/3) +
75,000#. SWB & F LD & GAS (Would not light).

COMPLETED 3-2-58
T.D. 5354

COMPLETED 6-8-60
T.D. 5372



Cross-Section Index Map

D-1 D-2 D-3 D-4 A-10 D-5

D — 13 Miles — 16 Miles — 6 Miles — 19 Miles — D'

ALBUQUERQUE EXPL
#1 Basinski Fed.
Lincoln County, N.M.

15 T4S R16E

MESA PETROLEUM CO.
#1 Gallo ST
Lincoln County, N.M.

3 T5S R18E

MESA PETROLEUM CO.
Boswell ST
Chaves County, N.M.

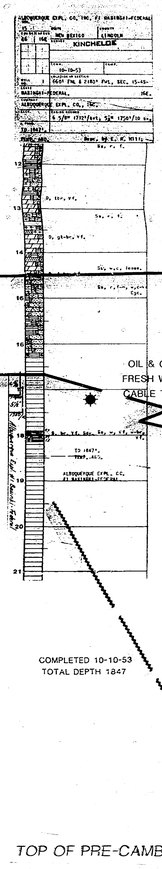
30 T5S R21E

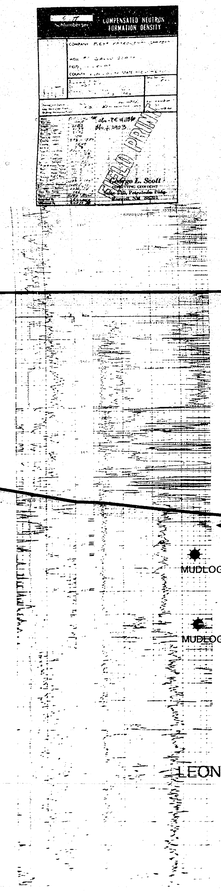
FRED POOL JR.
McKnight #2
Chaves County, N.M.

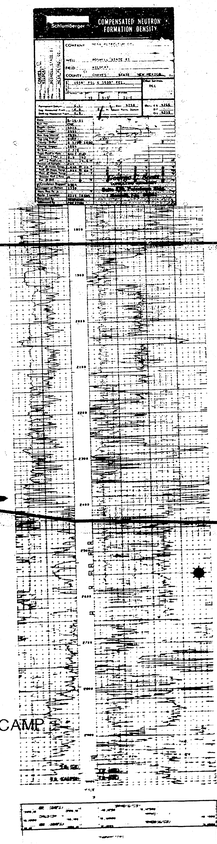
28 T6S R22E

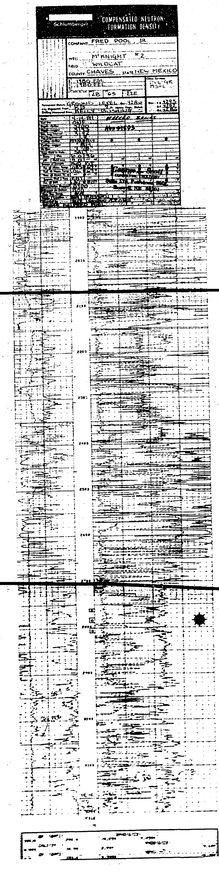
MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County N.M.

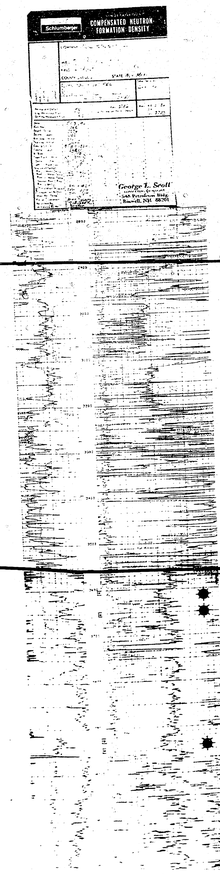
4 T7S R25E



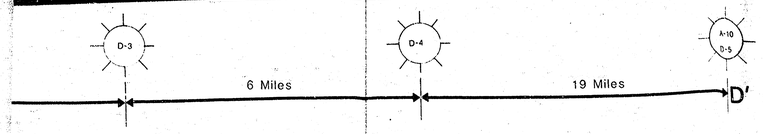








STRATIGRAPHIC DATUM
TOP OF TUBB



MESA PETROLEUM CO.
Boswell ST
Chaves County, N.M.

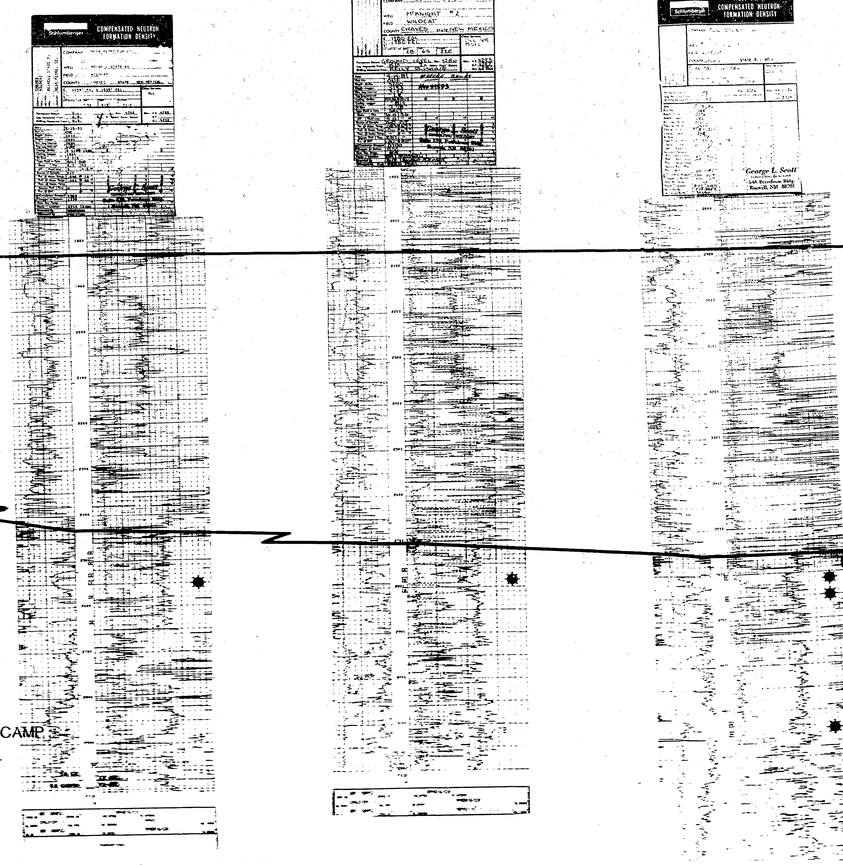
30 T5S R21E

FRED POOL JR.
McKnight #2
Chaves County, N.M.

28 T6S R22E

MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County N.M.

4 T7S R25E

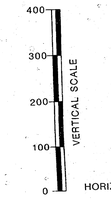


EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

D – D'

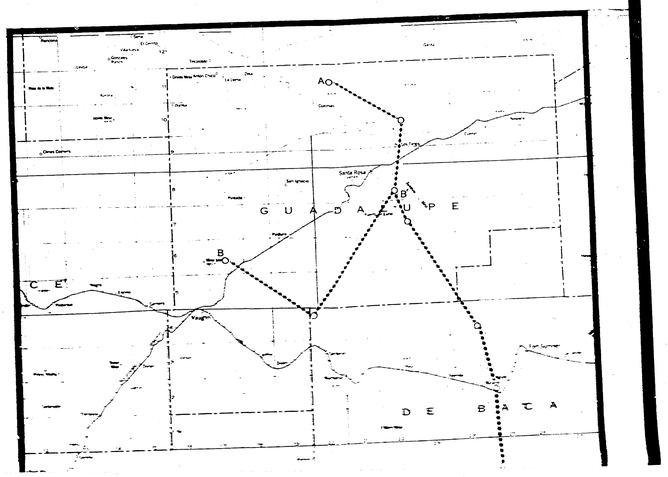
5-82

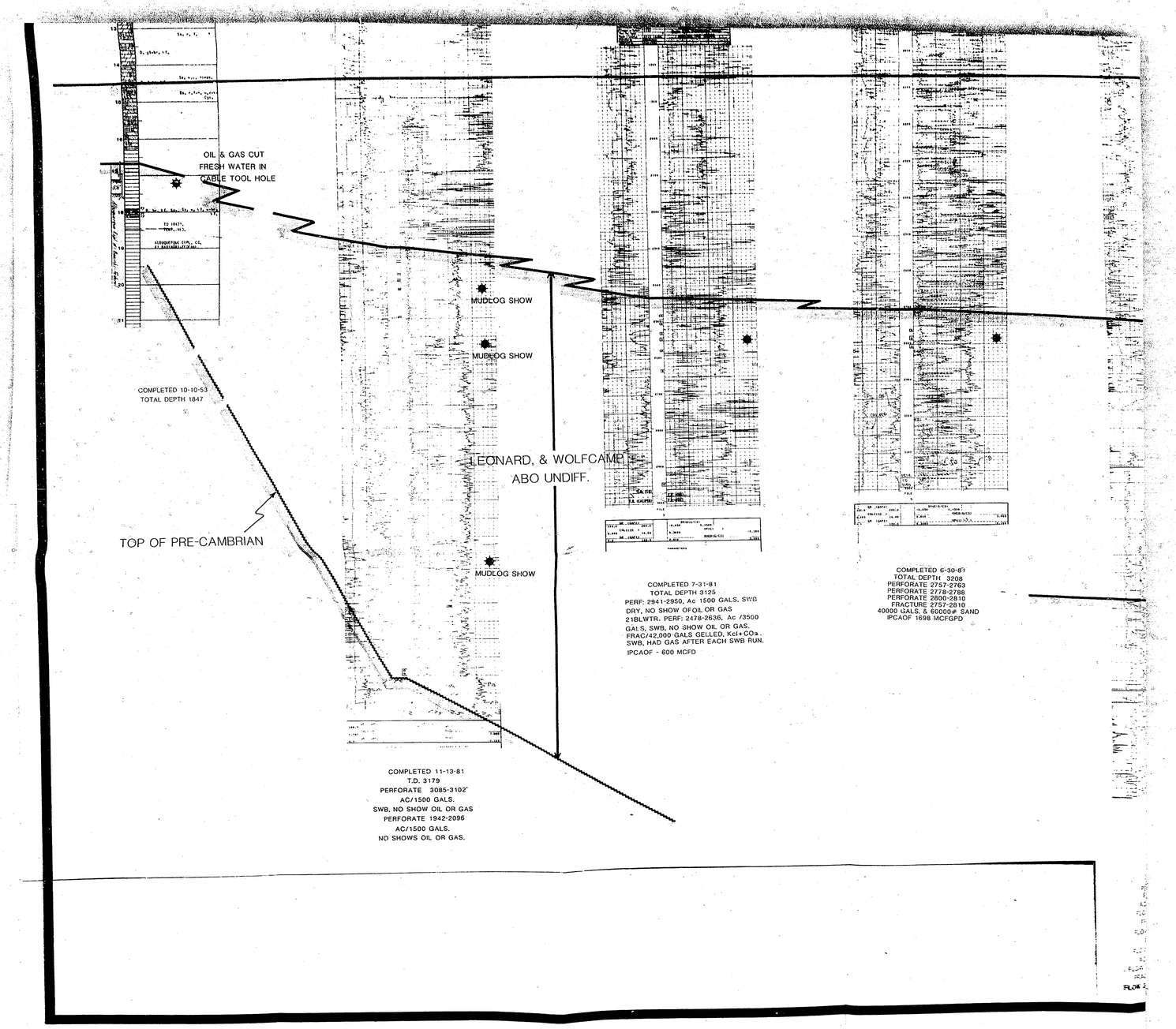


HORIZONTAL SCALE: NONE

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 7
CASE NO. 7592

Withdrawn – See Ex 7-1




OIL & GAS CUT
FRESH WATER IN
CABLE TOOL HOLE
MUDLOG SHOW
MUDLOG SHOW
COMPLETED 10-10-53
TOTAL DEPTH 1847
LEONARD, & WOLFCAMP
ABO UNDIFF.
TOP OF PRE-CAMBRIAN
MUDLOG SHOW
MUDLOG SHOW
COMPLETED 7-31-81
TOTAL DEPTH 3125
PERF: 2941-2950, Ac 1500 GALS, SWB
DRY, NO SHOW OFOIL OR GAS
21BLWTR. PERF: 2478-2636, Ac /3500
GALS, SWB, NO SHOW OIL OR GAS.
FRAC/42,000 GALS GELLED, Kcl+CO2.
SWB, HAD GAS AFTER EACH SWB RUN.
IPCAOF - 600 MCFD
COMPLETED 6-30-81
TOTAL DEPTH 3208
PERFORATE 2757-2763
PERFORATE 2778-2788
PERFORATE 2800-2810
FRACTURE 2757-2810
40000 GALS. & 60000# SAND
IPCAOF 1698 MCFGPD
COMPLETED 11-13-81
T.D. 3179
PERFORATE 3085-3102'
AC/1500 GALS.
SWB, NO SHOW OIL OR GAS
PERFORATE 1942-2096
AC/1500 GALS.
NO SHOWS OIL OR GAS.

STRATIGRAPHIC DATUM
TOP OF TUBB

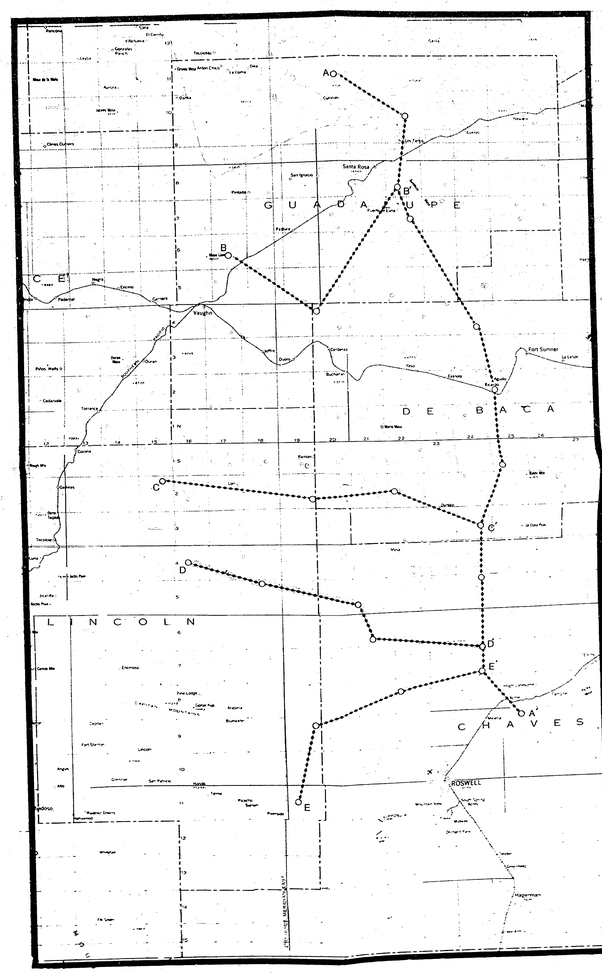
TOP OF LEONARD ABO

TOP OF WOLFCAMP HUECO

0 HORIZONTAL SCALE: NONE

COMPLETED 6-30-81
TOTAL DEPTH 3208
PERFORATE 2757-2763
PERFORATE 2778-2788
PERFORATE 2800-2810
FRACTURE 2757-2810
40000 GALS. & 60000# SAND
IPCAOF 1698 MCFGPD

COMPLETED 7-28-80
TOTAL DEPTH 5102
PERFORATE 3916-3954,
SWB WITH 2-3" FLARE
ACIDIZE WITH 4000 GALS.
FLOW 750 MCFGPD AT 120# PSIG
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD AT 625 PSIG
PERFORATE 3600-3656'
FLOW 250 MCFGPD AT 30 PSIG
ACIDIZE WITH 4000 GALS.
FLOW 700 MCFGPD AT 100# PSIG
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD AT 375# PSIG



Cross-Section Index Map

D-1 D-2 D-3 D-4 A-10 D-5

D — 13 Miles — 16 Miles — 6 Miles — 19 Miles — D'

ALBUQUERQUE EXPL
#1 Basinski Fed.
Lincoln County, N.M.
15 T4S R16E

MESA PETROLEUM CO.
#1 Gallo ST
Lincoln County, N.M.
3 T5S R18E

MESA PETROLEUM CO.
Boswell ST
Chaves County, N.M.
30 T5S R21E

FRED POOL JR.
McKnight #2
Chaves County, N.M.
28 T6S R22E

MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County N.M.
4 T7S R25E

EXPANDED
ABO LOW PERMEABIL
SOUTHEASTERN N

REGIONAL CROS
D – D

400
300
200
100
0
VERTICAL SCALE
HORIZONTA

STRATIGRAPHIC DATUM
TOP OF TUBB SD.

OIL & GAS CUT
FRESH WATER IN
CABLE TOOL HOLE

COMPLETED 10-10-53
TOTAL DEPTH 1847

TOP OF PRE-CAMBRIAN

MUDLOG SHOW

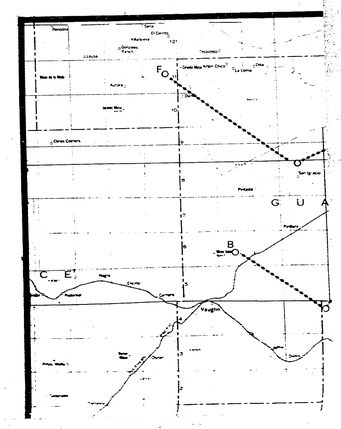
MUDLOG SHOW

ABO FM

YESO FM

ABO FM

LEONARD

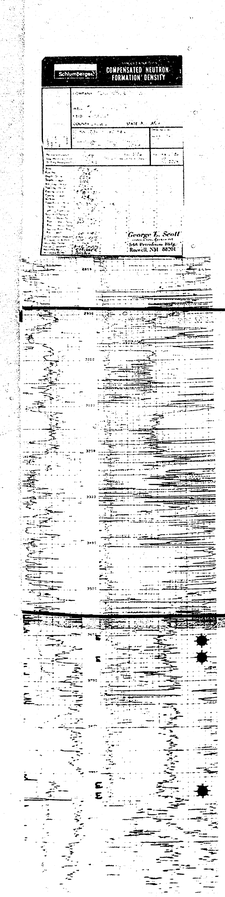


A-10
D-5

D'

MESA PETROLEUM CO.
#1 Savage Fed.
Chaves County N.M.

4 T7S R25E



LEONARD

EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

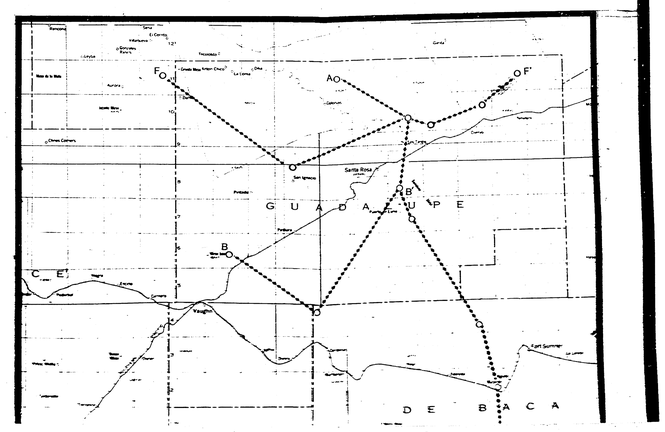
D – D'

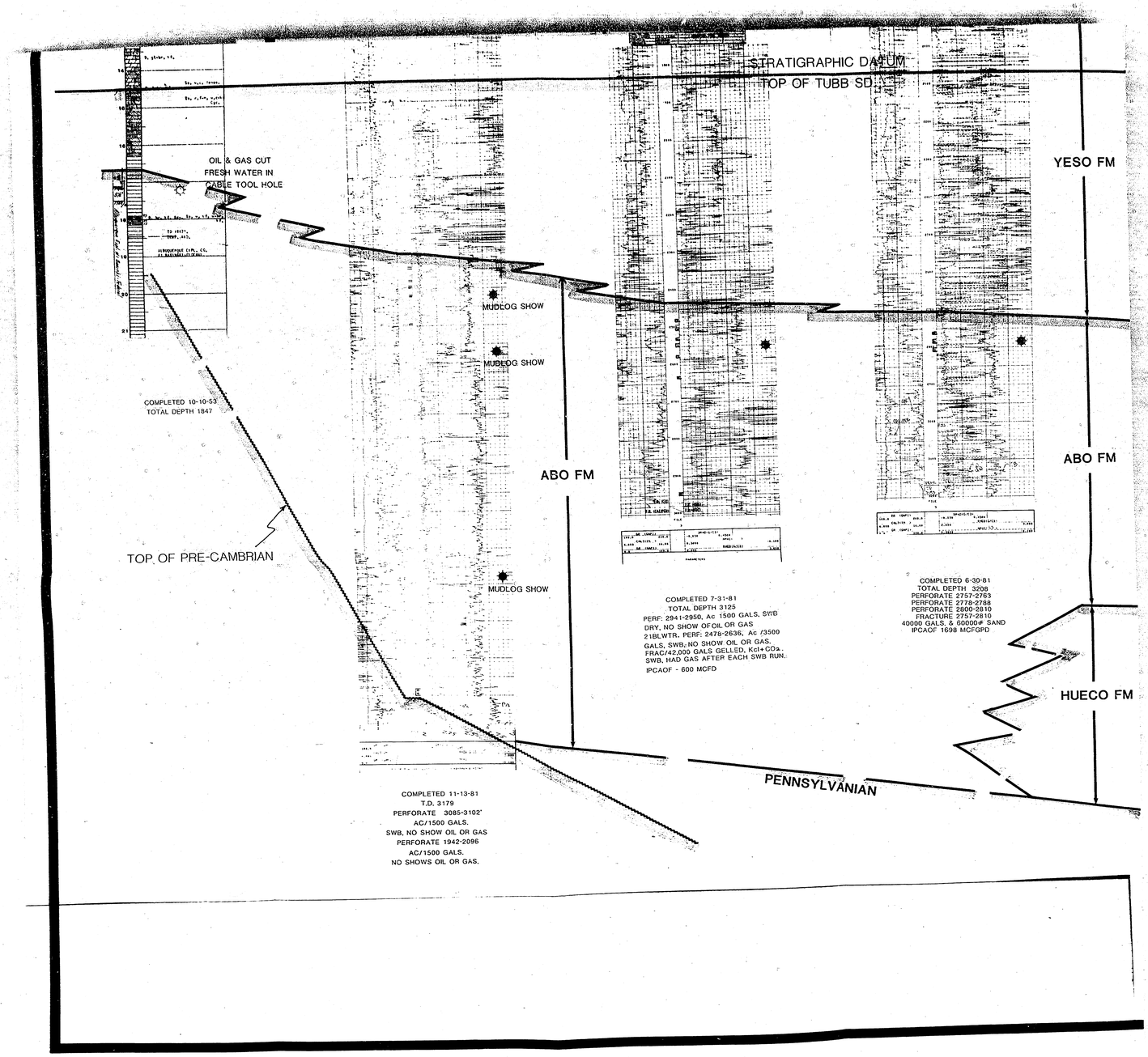
5-82

NMOCD CASE 7598
May 24, 1982
Exhibit 7-I

400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE




STRATIGRAPHIC DATUM
TOP OF TUBB SD
YESO FM
OIL & GAS CUT
FRESH WATER IN
CABLE TOOL HOLE
MUDLOG SHOW
MUDLOG SHOW
COMPLETED 10-10-53
TOTAL DEPTH 1847
ABO FM
TOP OF PRE-CAMBRIAN
MUDLOG SHOW
COMPLETED 7-31-81
TOTAL DEPTH 3125
PERF: 2941-2950, Ac 1500 GALS, SWB
DRY, NO SHOW OFOIL OR GAS
21BLWTR. PERF: 2476-2636, Ac /3500
GALS, SWB,NO SHOW OIL OR GAS.
FRAC/42,000 GALS GELLED, Kcl+CO2.
SWB, HAD GAS AFTER EACH SWB RUN.
IPCAOF - 600 MCFD
COMPLETED 6-30-81
TOTAL DEPTH 3208
PERFORATE 2757-2763
PERFORATE 2778-2788
PERFORATE 2800-2810
FRACTURE 2757-2810
40000 GALS. & 60000# SAND
IPCAOF 1698 MCFGPD
ABO FM
HUECO FM
PENNSYLVANIAN
COMPLETED 11-13-81
T.D. 3179
PERFORATE 3085-3102'
AC/1500 GALS.
SWB, NO SHOW OIL OR GAS
PERFORATE 1942-2096
AC/1500 GALS.
NO SHOWS OIL OR GAS.

HIC DATUM

BB SD.

YESO FM

ABO FM

HUECO FM

WOLFCAMP

LEONARD

VIAN

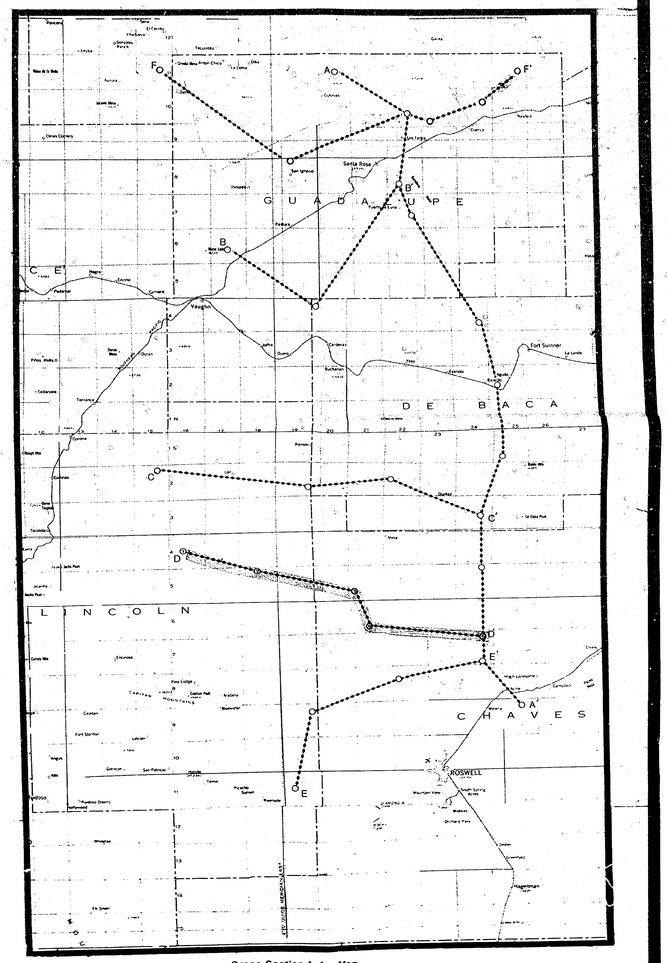
COMPLETED 6-30-81
TOTAL DEPTH 3208
PERFORATE 2757-2763
PERFORATE 2778-2788
PERFORATE 2800-2810
FRACTURE 2757-2810
40000 GALS. & 60000# SAND
IPCAOF 1698 MCFGPD

COMPLETED 7-28-80
TOTAL DEPTH 5102
PERFORATE 3916-3954.
SWB WITH 2-3" FLARE
ACIDIZE WITH 4000 GALS.
FLOW 750 MCFGPD /.T 120# PSIG
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD AT 625 PSIG
PERFORATE 3600-3656'
FLOW 250 MCFGPD AT 30 PSIG
ACIDIZE WITH 4000 GALS.
FLOW 700 MCFGPD AT 100# PSIG
FRACTURE WITH 40,000 GALS.
FLOW 2000 MCFGPD AT 375# PSIG

100 VEI

0

HORIZONTAL SCALE: NONE



Cross-Section Index Map

E

E-1 — 13.6 Miles — E-2 — 16.7 Miles — E-3 — 13.5 Miles — A-11 E-4

E'

TERRA OF NEW MEXICO
BORDER HILLS #1 LG-7565
Lincoln County, NM

17 T11S R20E

TEXAM OIL & GAS
Welsh Federal #1

Lincoln County N.M.

11 T9S R20E

MESA PETROLEUM
Rock Federal #1

Chaves County, NM

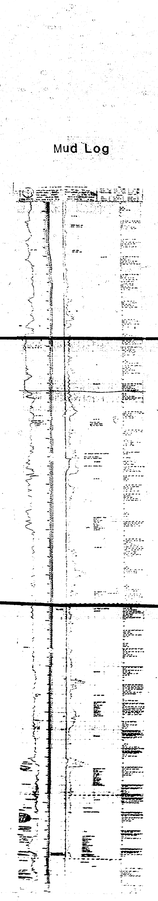
7 T8S R23E

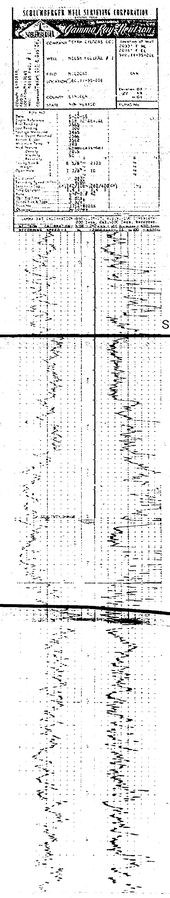
YATES PETROLEUM
Federal "HY" #2

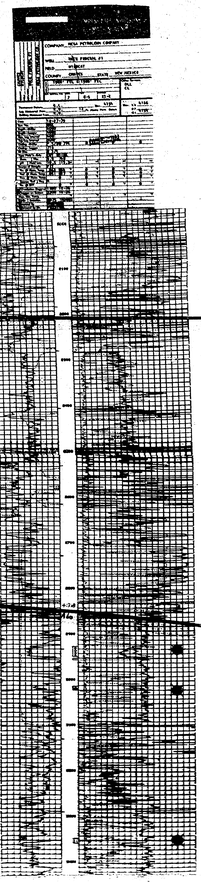
Chaves County, N.M.

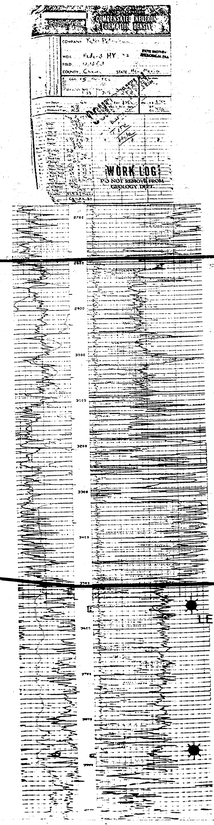
33 T7S R25E

Mud Log









Stratigraphic Datum

TOP OF TUBB

TOP OF LEONARD ABO

LEONARD & WOLFCAMP ABO, UNDIFF.

EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION
E - E'

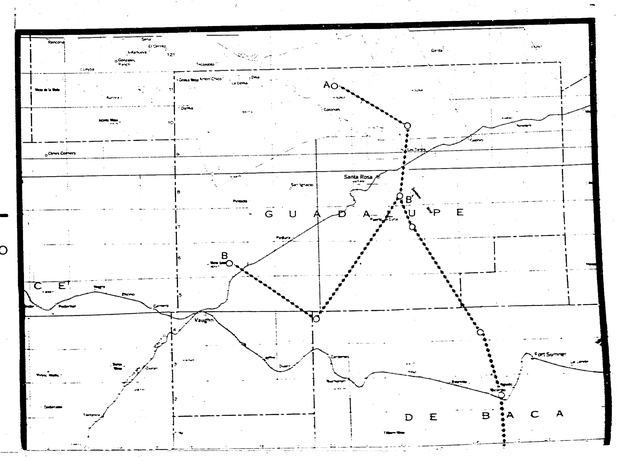
5-82

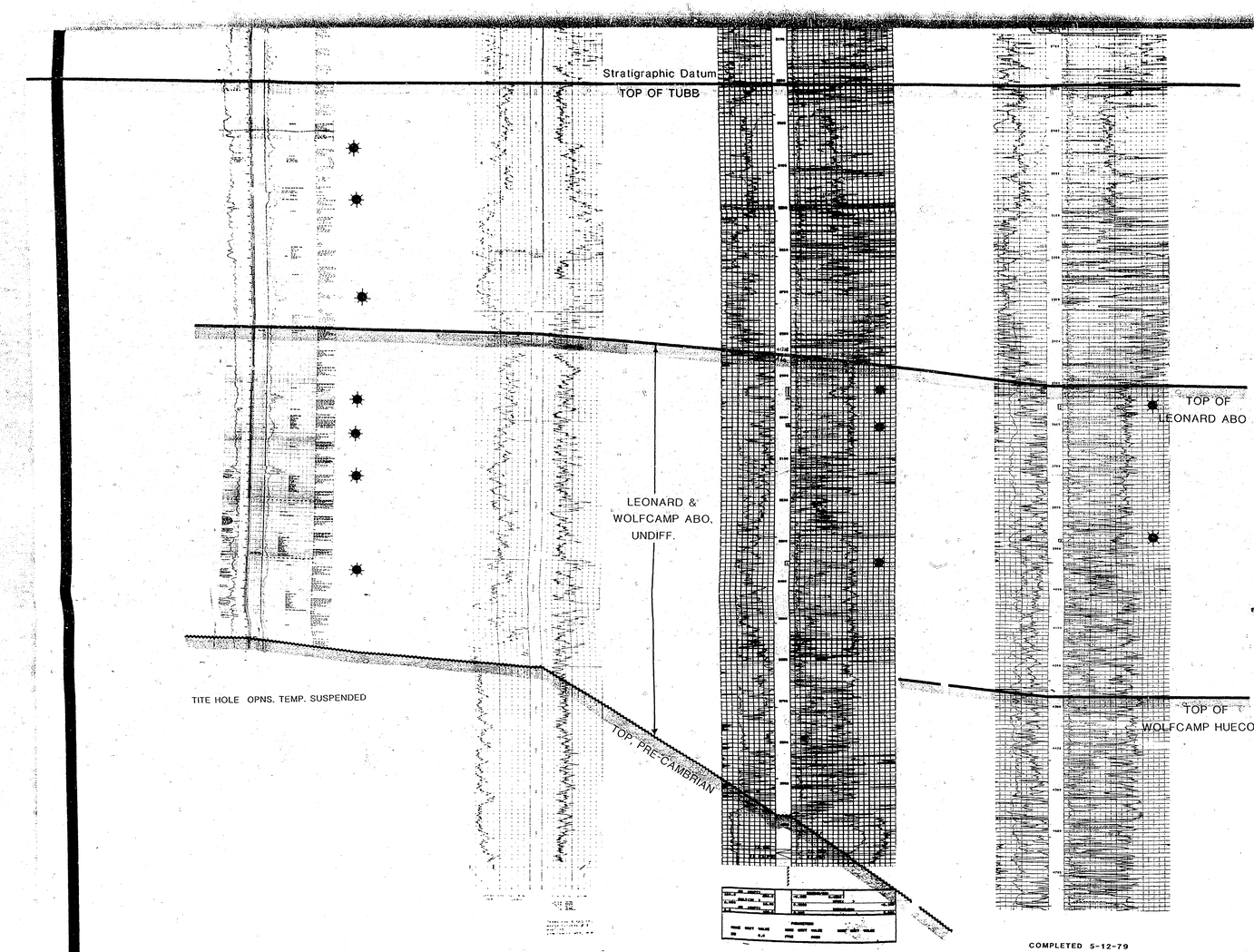
400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 8
CASE NO. 7598

Withdrawn - See Ex 8-1





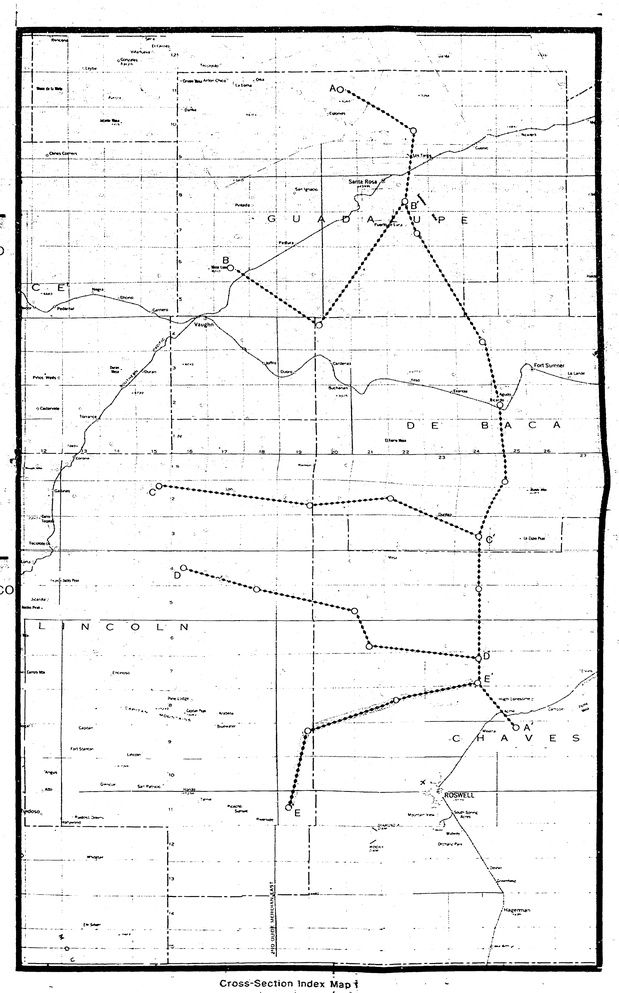
COMPLETED 5-21-55
T.D. 3562

COMPLETED 2-16-80
T.D. 4088
PERFORATE 3355-3363 ACIDIZED 1000 GALS. 15% DS 30 w/42 BS
PERFORATE 2923-3020 ACIDIZED WITH 3500 GALS. 15% NE-FE &N2
FRACTURE 54000 GALS. &41000#SAND
FLOW 3092 MCFGPD

COMPLETED 5-12-79
TOTAL DEPTH 4970'
#1 PERFORATE 3872-3880'
ACIDIZE WITH 1500 GALS.
FLOW 311 MCFGPD @ 200# psig
FRACTURE STIMULATE-VOLUMN UNKNOWN
FLOW 700 MCFGPD

#2 PERFORATE 3548-3560'
ACIDIZE & FRACTURE STIMULATE
FLOW 2000 MCFGPD @ 313'# psig

100
0
HORIZONTAL SCALE: NONE



Cross-Section Index Map
One inch equals approximately eight miles

E

E-1

E-2

E-3

A-11
E-4

E′

13.6 Miles

16.7 Miles

13.5 Miles

TERRA OF NEW MEXICO
BORDER HILLS #1 LG-7565
Lincoln County, NM

17 T11S R20E

TEXAM OIL & GAS
Welsh Federal #1

Lincoln County N.M.

11 T9S R20E

MESA PETROLEUM
Rock Federal #1

Chaves County, NM

7 T8S R23E

YATES PETROLEUM
Federal "HY" #2

Chaves County, N.M.

33 T7S R25E

Mud Log

STRATIGRAPHIC DATUM
TOP OF TUBB SD

YESO FM

ABO FM

LEONARD

EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND,
SOUTHEASTERN NEW MEXICO

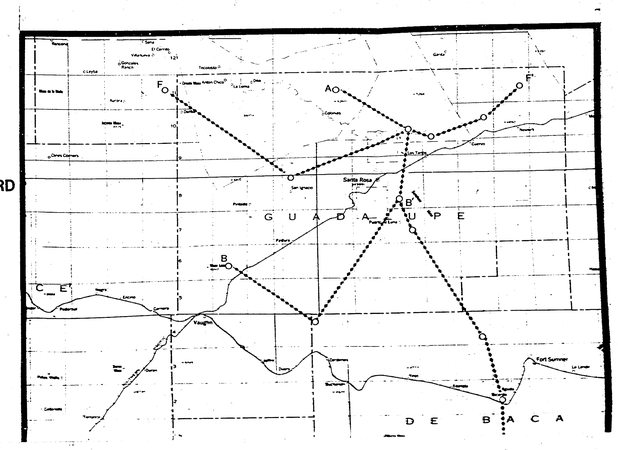
REGIONAL CROSS-SECTION
E – E′

5-82

NMOCD CASE 7598
May 26, 1982
Exhibit A-1

400
300
200
100
0
VERTICAL SCALE

HORIZONTAL SCALE: NONE



STRATIGRAPHIC DATUM
TOP OF TUBB SD

YESO FM

ABO FM

LEONARD

HUECO FM

WOLFCAMP

PENNSYLVANIAN

TOP PRE-CAMBRIAN

TITE HOLE OPNS. TEMP. SUSPENDED

2365 - 3130

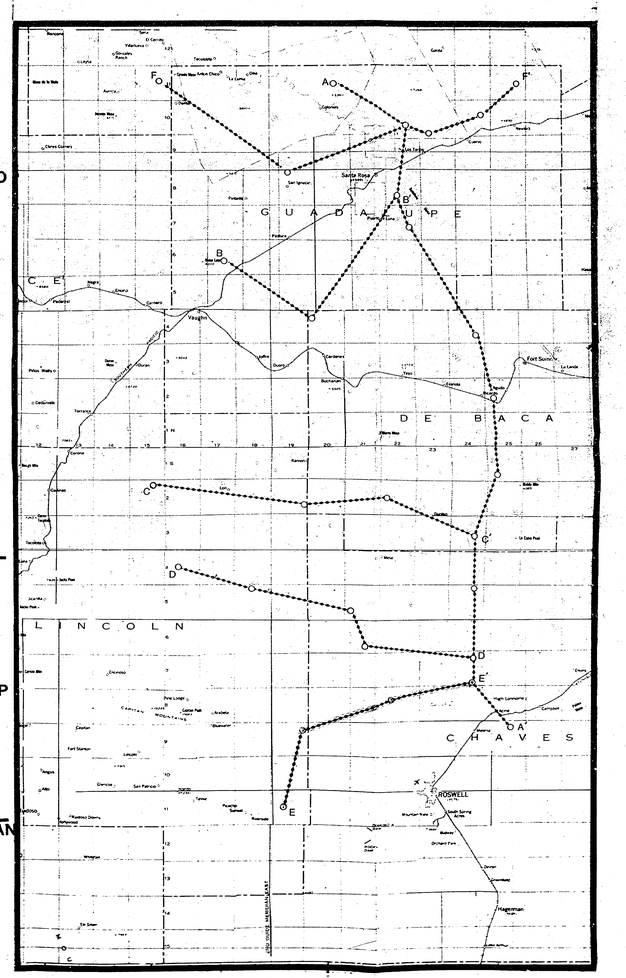
COMPLETED 5-21-55
T.D. 3562

COMPLETED 2-16-80
T.D. 4088
PERFORATE 3355-3363 ACIDIZED 1000 GALS. 15% DS 30 w/42 BS
PERFORATE 2923-3020 ACIDIZED WITH 3500 GALS. 15% NE-FE &N2
FRACTURE 54000 GALS. &41000#SAND
FLOW 3092 MCFGPD

COMPLETED 5-12-79
TOTAL DEPTH 4970'
#1 PERFORATE 3872-3880'
ACIDIZE WITH 1500 GALS.
FLOW 311 MCFGPD @ 200# psig
FRACTURE STIMULATE-VOLUMN UNKNOWN
FLOW 700 MCFGPD

#2 PERFORATE 3548-3560'
ACIDIZE & FRACTURE STIMULATE
FLOW 2000 MCFGPD @ 313'# psig

0 HORIZONTAL SCALE: NONE



Cross-Section Index Map
One inch equals approximately eight miles

TUCUMCARI (CUERVO) BASIN

F

F-1

26 Miles

F-2

21 Miles

A-2
F-3

4 Miles

F-4

9 Miles

F-5

7 Miles

F-6

F′

NEWTON ROBERTS
Lucero #1
San Miguel County, NM

14 T11N R15E

COMPANY SUNRAY - MID
1-R Padilla
Guadalupe County, NM

4 T8N R19E

GENERAL CRUDE
R.L. Spires #1
Guadalupe County, NM

22 T10N R22E

GENERAL CRUDE
Simpson #2-X
Guadalupe County, NM
32 T10N R23E

GENERAL CRUDE
Wilkie #14-1
Guadalupe County, NM

14 T10N R24E

HUMBLE OIL & REFINING CO.
W.R. Moore, JR #1
Guadalupe County, NM

23 T11N R25E

STRATIGRAPHIC DA

TOP OF TUBB

Top o
and
differ
Guad

DST

MUD LOG SHOW

MUD LOG SHOW

DST

DST

ABO
FORMATION

PRE CAMBRIA

F-5

F-6

F′

7 Miles

GENERAL CRUDE
Wilkie #14-1
Guadalupe County, NM

14 T10N R24E

HUMBLE OIL & REFINING CO.
W.R. Moore, JR #1
Guadalupe County, NM

23 T11N R25E

STRATIGRAPHIC DATUM

TOP OF TUBB

PRE CAMBRIAN

Top of Tubb Member of Yeso Formation and top of Abo Formation can not be differentiated over most of nothern Guadalupe County.

EXPANDED AREA
ABO LOW PERMEABILITY GAS SAND.
SOUTHEASTERN NEW MEXICO

REGIONAL CROSS-SECTION

F - F′

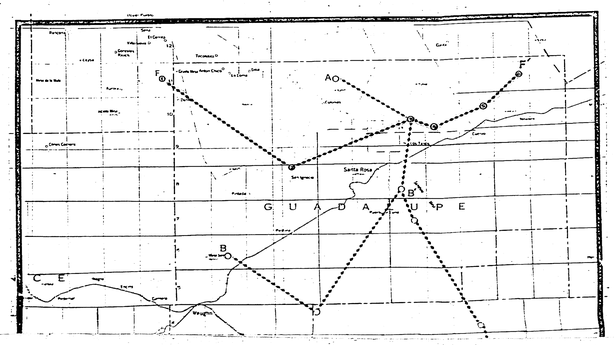
5-82

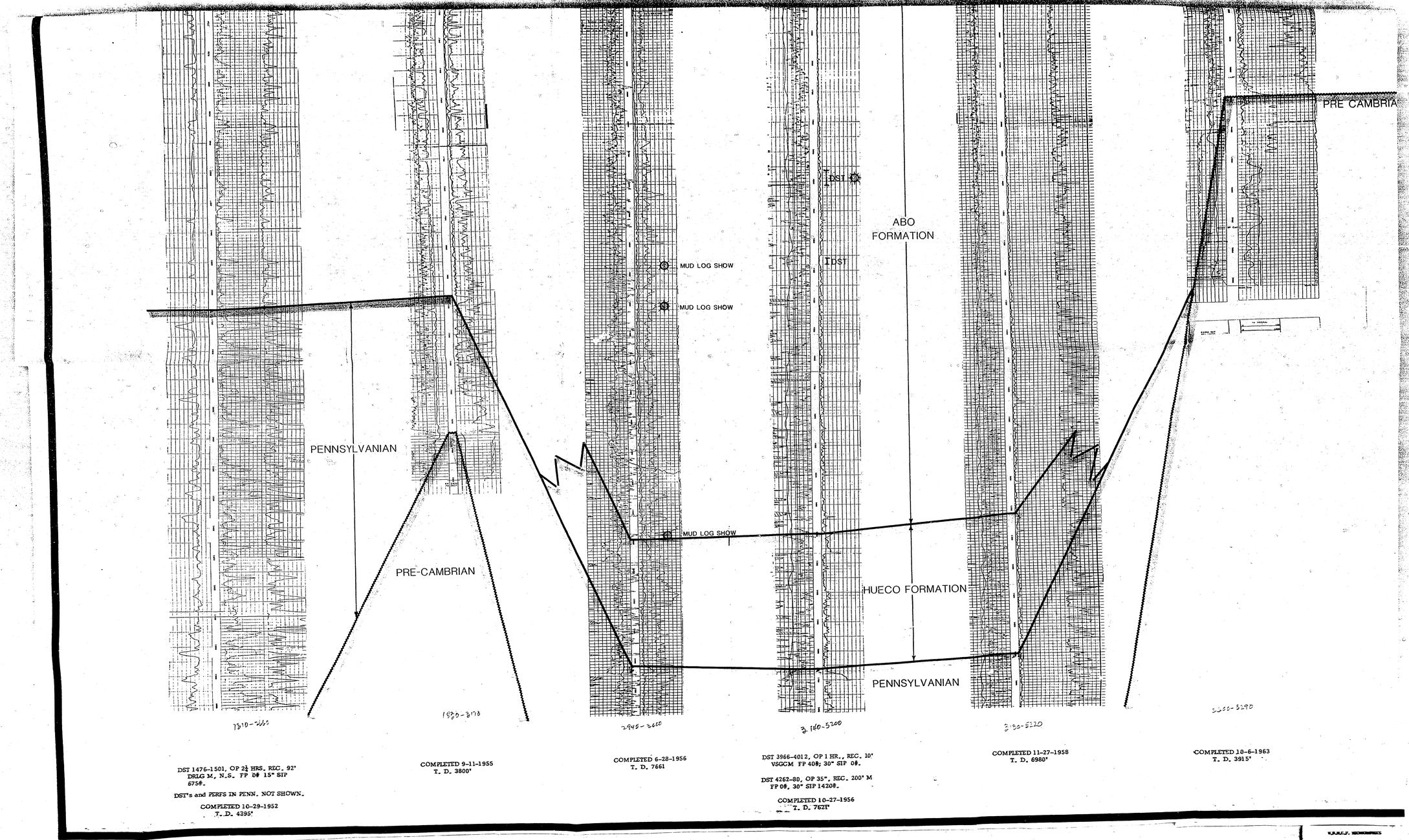
NMOCD CASE 7598
May 26, 1982
Exhibit B-C

400
300
200
100
0

VERTICAL SCALE

HORIZONTAL SCALE: NONE





DST 1476-1501, OP 2½ HRS. REC. 92' DRLG M, N.S. FP 0# 15" SIP 675#.

DST's and PERFS IN PENN. NOT SHOWN.

COMPLETED 10-29-1952
T. D. 4395'

COMPLETED 9-11-1955
T. D. 3800'

COMPLETED 6-28-1956
T. D. 7661

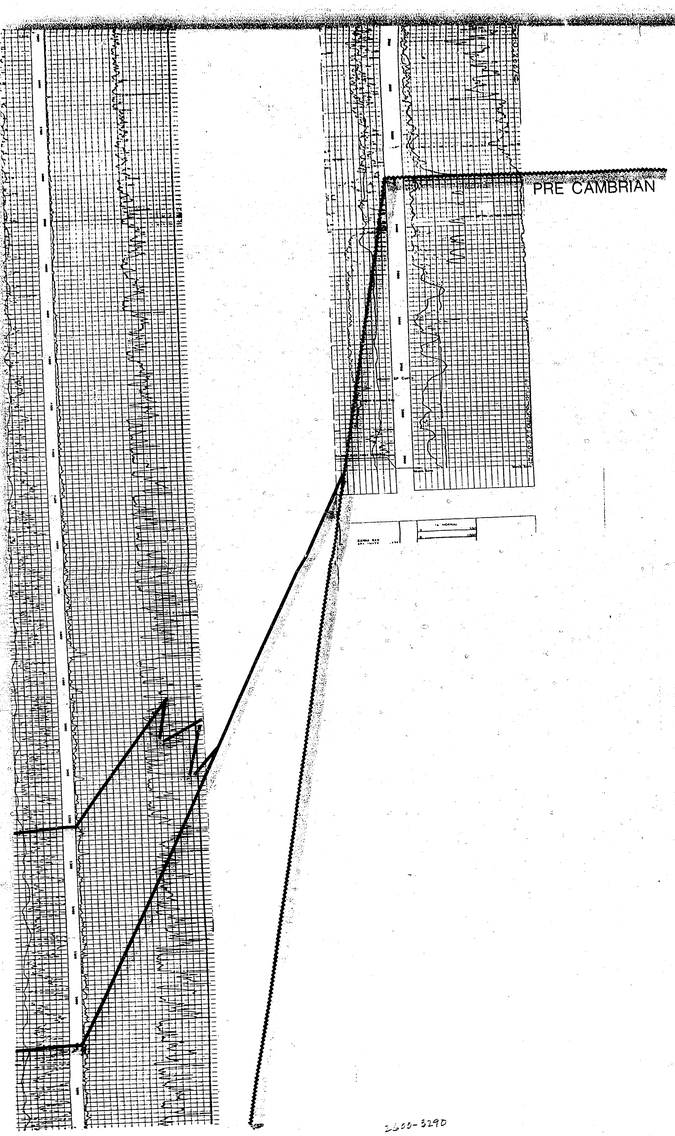
DST 3966-4012, OP 1 HR., REC. 10' VSGCM FP 40#; 30" SIP 0#.

DST 4262-80, OP 35", REC. 200' M FP 0#, 30" SIP 1420#.

COMPLETED 10-27-1956
T. D. 7621'

COMPLETED 11-27-1958
T. D. 6980'

COMPLETED 10-6-1963
T. D. 3915'

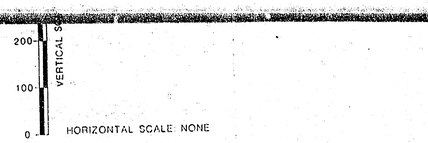


3130-5120

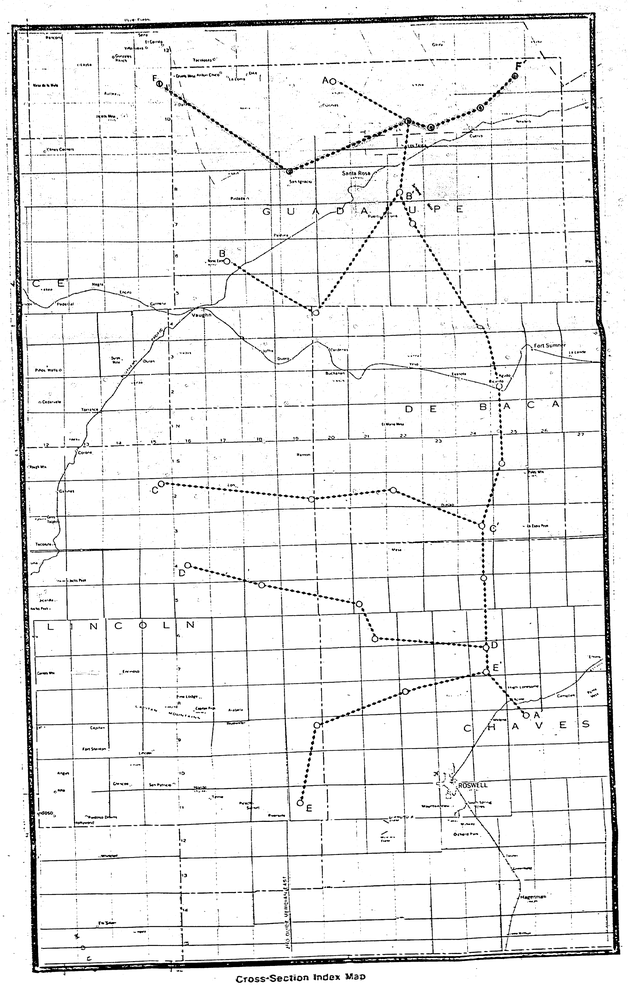
COMPLETED 11-27-1958
T. D. 6980'

2688-5190

COMPLETED 10-6-1963
T. D. 3915'



HORIZONTAL SCALE: NONE



Cross-Section Index Map

One inch equals approximately eight miles

SAN MIGUEL

GUADALUPE

QUAY

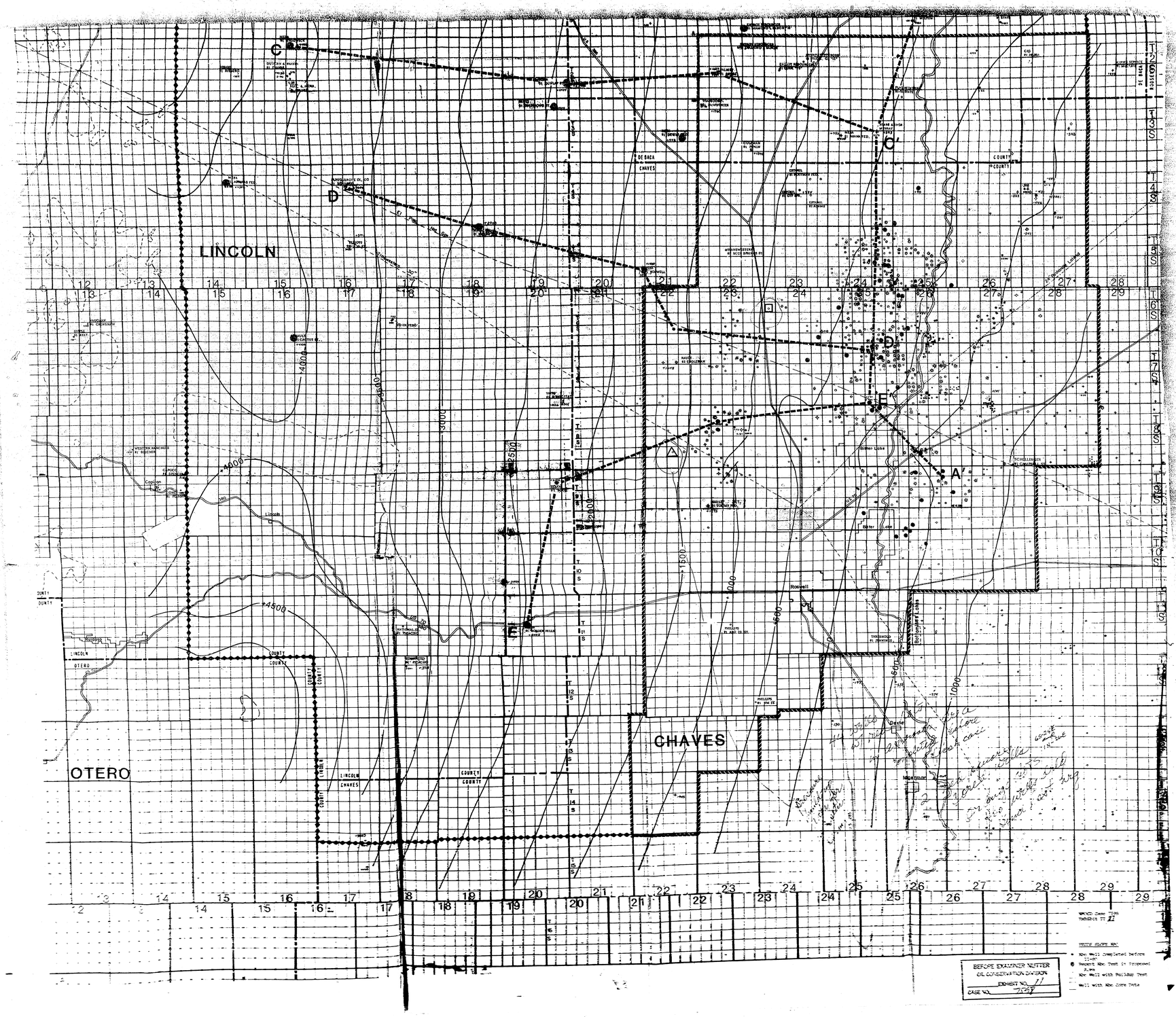
DE BACA

ORRANCE

A

B

C


LINCOLN
OTERO
CHAVES
C
C'
D
D'
E
E'
F
F'
A
A'
Roswell
Dexter
Hagerman
Capitan
Ruidoso
Hondo
Lincoln
Ancho
Picacho
Tom Mays Ranch
Bonita Lake
Green Lake
Berrendo Creek
Salt Creek
Rio Hondo
Rio Penasco
Rio Felix
Rio Peñasco
Rio Hondo
Rio Felix
Rio Penasco
Rio Hondo
Rio Felix
Rio Penasco
Rio Hondo
Rio Felix
Rio Pen