Case No.

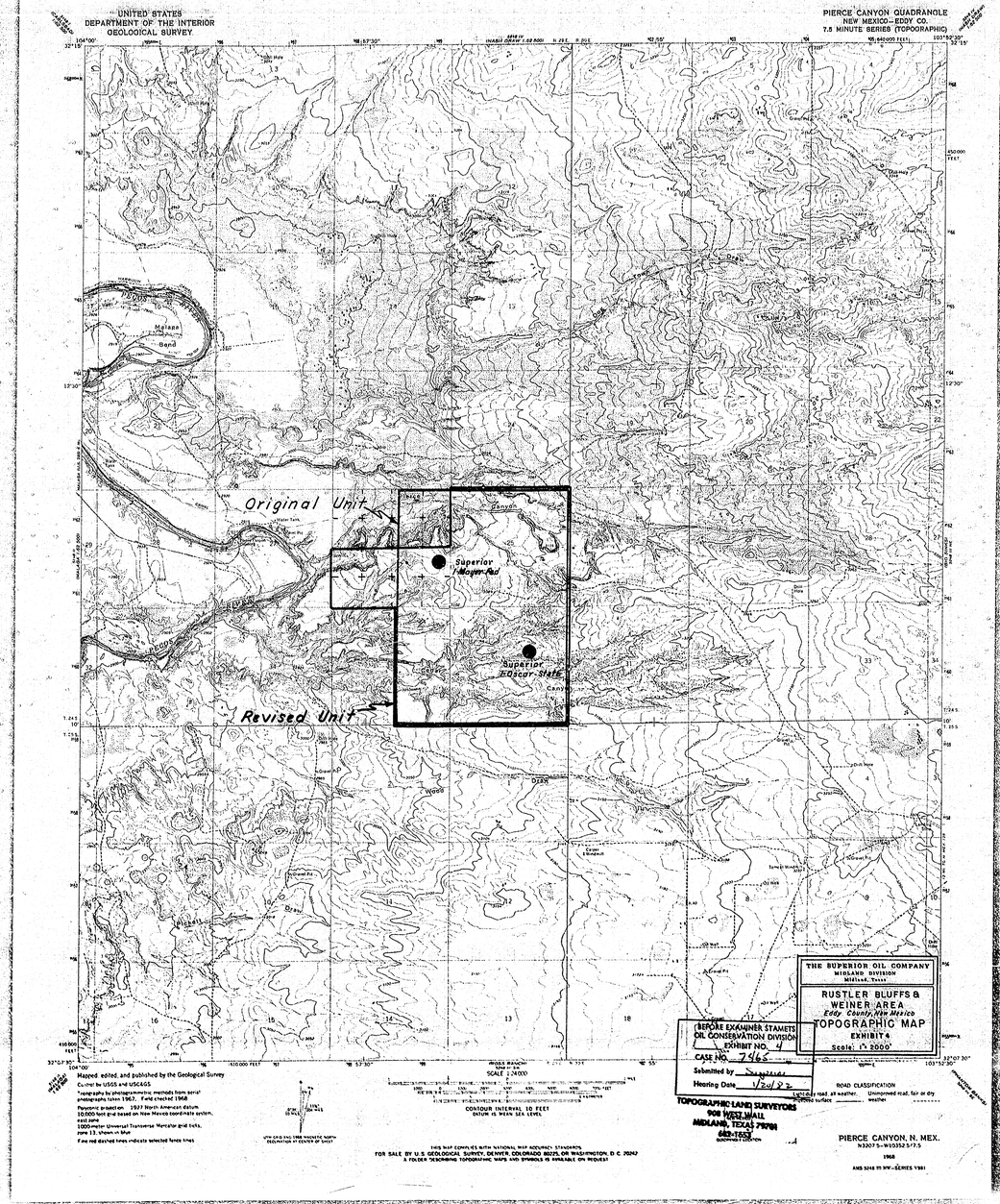
7465

Large Exhibits



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PIERCE CANYON QUADRANGLE
NEW MEXICO—EDDY CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



Mapped, edited, and published by the Geological Survey

Control by USGS and USC&GS

Topography by photogrammetric methods from aerial photographs taken 1967. Field checked 1968

Polyconic projection. 1927 North American datum

10,000-foot grid based on New Mexico coordinate system, east zone

1000-meter Universal Transverse Mercator grid ticks, zone 13, shown in blue

Fine red dashed lines indicate selected fence lines

SCALE 1:24000

CONTOUR INTERVAL 10 FEET
DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U.S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR WASHINGTON, D. C. 20242
A FOLDER "READING TOPOGRAPHIC MAPS" AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
Light-duty road, all weather ——— Unimproved road, fair or dry weather - - - -
Hard surface

PIERCE CANYON, N. MEX.
N3207.5—W10352.5/7.5
1968
AMS 5248 IV NW—SERIES V881

THE SUPERIOR OIL COMPANY
MIDLAND DIVISION
Midland, Texas

RUSTLER BLUFFS & WEINER AREA
Eddy County, New Mexico
TOPOGRAPHIC MAP
EXHIBIT 4
Scale: 1" = 2000'

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 4
CASE NO. 7465
Submitted by Superior
Hearing Date 1/20/93

TOPOGRAPHIC LAND SURVEYORS
908 WEST WALL
MIDLAND, TEXAS 79701
682-1551



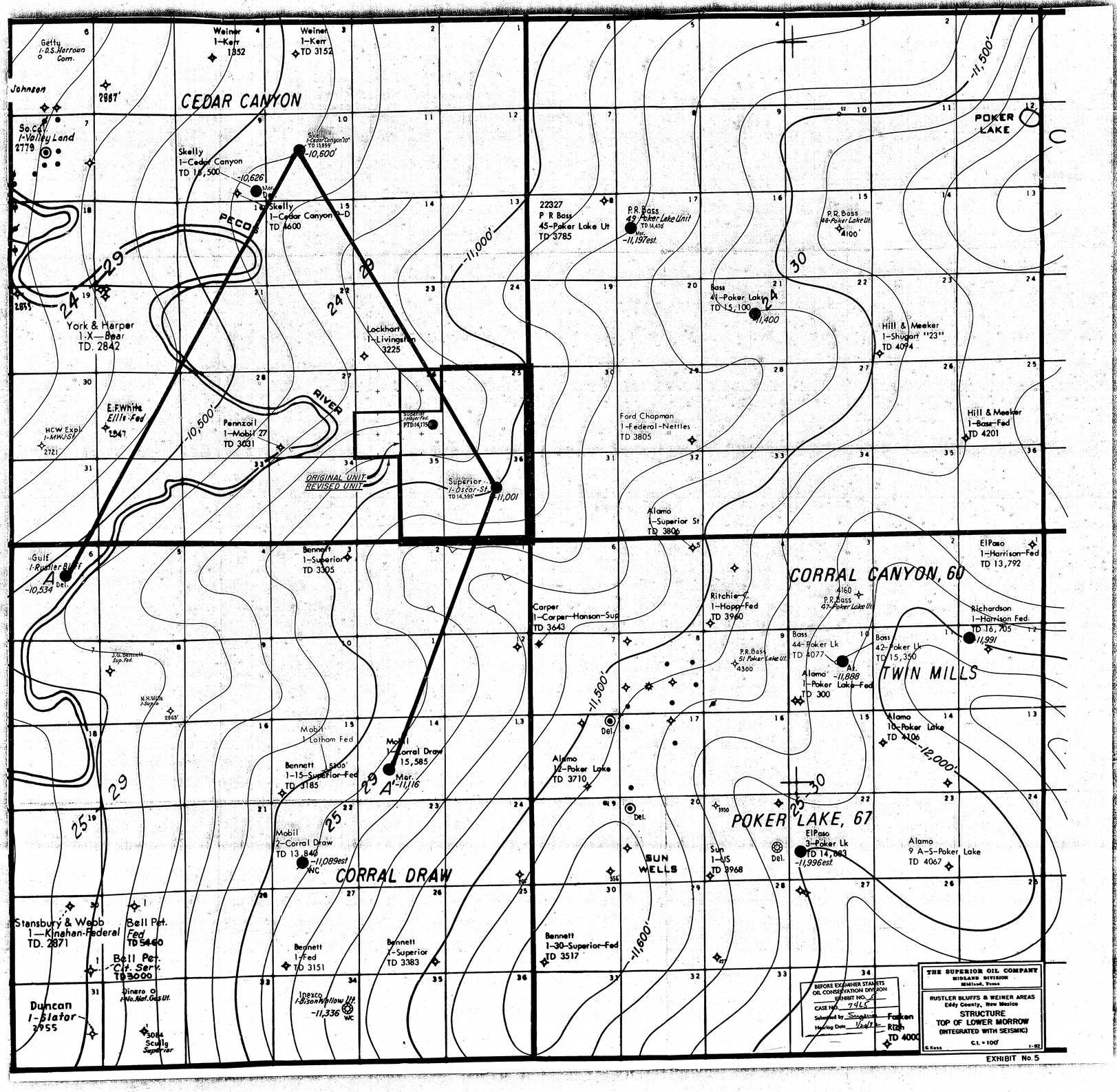


EXHIBIT No. 5

U.S.G.S. PHOTOGRAPHICS
BEST AVAILABLE COPY

A

GULF OIL EXPLORATION & PRODUCTION
Rustler Bluff Unit #1
Sec. 6, T25S, R29E
Eddy County, NM

KB 2926'
TD 13,800'
(FDC-CNL)

29,900'

SKELLY OIL COMPANY
Cedar Canyon "10" #1
Sec. 10, T24S, R29E
Eddy County, NM

KB 3008'
TD 13,869'
(FDC-CNL)

24,300'

SUPERIOR
MAYER FE

Datum: TOP UPPER MORROW

Datum: TOP UPPER MORROW

12800

12900

13000

13100

13200

13300

SHALE MARKER

SHALE MARKER

PROJECTE
INTO LINE OF S

Pfd 12,838-843'
S/6 BW in 4:30,
A/2000, S/42 BW
in 6 hrs.

Pfd 13,594-598'
A/3000, IPF 1.
MMCFPD + 487
on 20/64". FP

Pfd 12,980-13,013'
S/40 BW/5 hrs.
GAS ???

13000

13100

"K"
Sandstone

"K"
Sandstone

13,074-13,366'

CFGPD	Time	Chokes	FTP	BW
6,431,000	2'	22/64"	2126#	3
6,040,000	2'	20/64"	2340#	1
5,430,000	2'	18/64"	2632#	2-1/2
4,829,000	2'	16/64"	2900#	1

Pfd 13,672-6
A/500, S/1/4
no show

MARKER

MARKER

Pfd 13,074-285', A/
2250, F 8 MCFPD, AF
30,000 + 13,000 + 4,400
glass beads, FI 15.9
MMCFPD, FTP 1100#.

Pfd 13,116-150'
S/7 BW in 4', A/
5000, FARO 150-
200 MCFPD thru
14/64"

TOP MIDDLE MORROW

TOP MIDDLE MORROW

UPPER MIDDLE MORROW
(ZONE OF INTEREST)

UPPER MIDDLE MORROW
(ZONE OF INTEREST)

13200

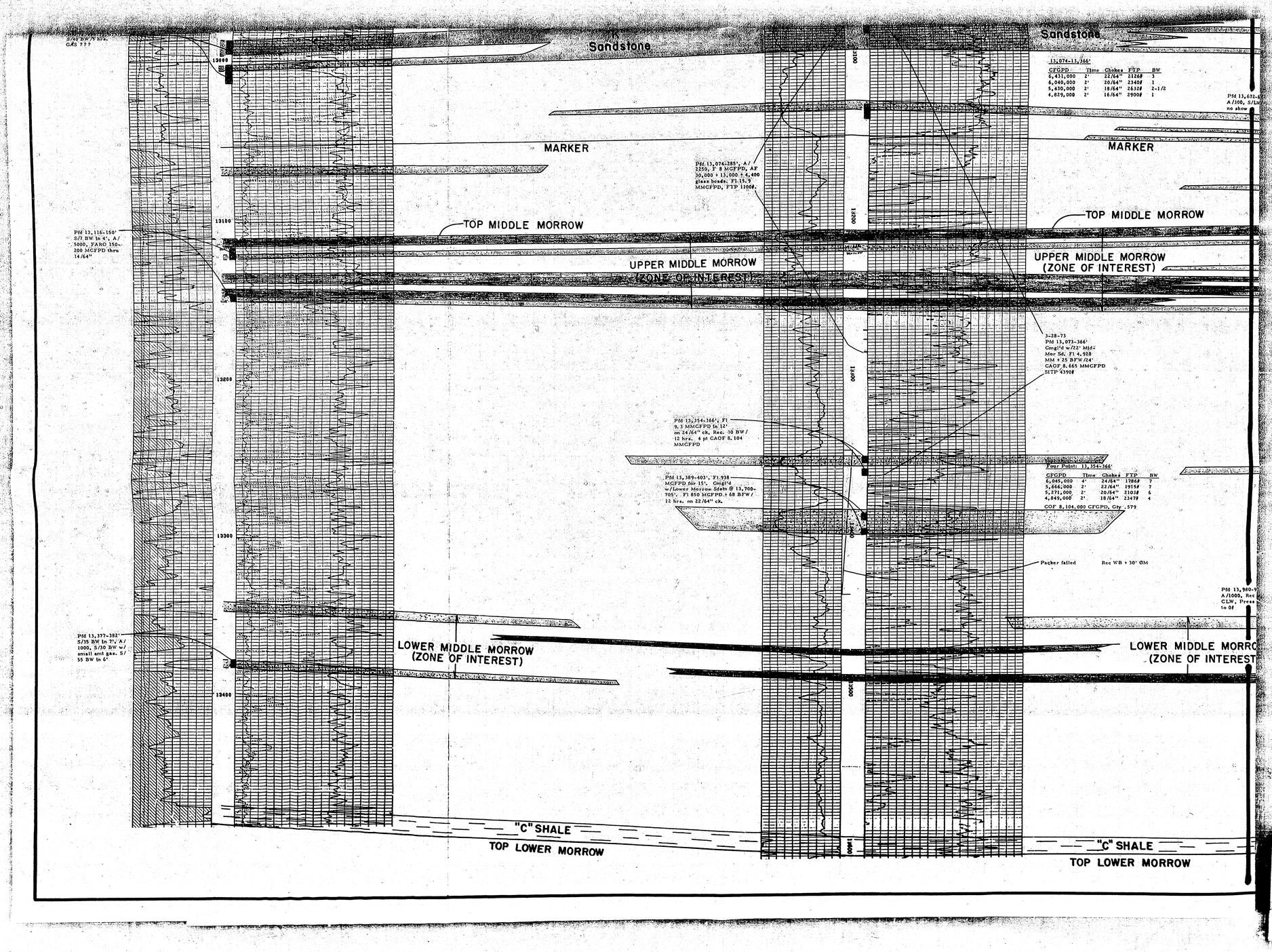
13300

13400

3-28-73
Pfd 13,073-366'
Gmgld w/22' Mid-
Mor Sd, FI 4,928
MM + 25 BFW/24'
CAOF 8.665 MMCFPD
SITP 4390#

Pfd 13,354-366', FI
9.3 MMCFPD in 12'
on 24/64" ch, Res. 30 BW/
12 hrs. 4 pt CAOF 8.104
MMCFPD

Four Project 13,354-366'


Sandstone
MARKER
TOP MIDDLE MORROW
UPPER MIDDLE MORROW
(ZONE OF INTEREST)
LOWER MIDDLE MORROW
(ZONE OF INTEREST)
"C" SHALE
TOP LOWER MORROW
13000
13100
13200
13300
13400
S/40 BW in 5', GAS ???
Pfd 13,116-150' S/7 BW in 4', A/ 5000, FARO 150-200 MCFPD thru 14/64"
Pfd 13,074-285', A/ 2250, F 8 MGFPD, AF 30,000 + 13,000 + 4,400 gaso.heads. FI 15.9 MMCFPD, FTP 11000.
Pfd 13,354-366', FI 9.3 MMCFPD in 12' on 24/64" ck, Rec. 10 BW/ 12 hrs. 4 pt CAOF 8.104 MMCFPD
Pfd 13,389-403', FI 938 MCFPD for 15', Cmgl'd w/Lower Morrow Sdstn @ 13,700-705', FI 850 MCFPD + 68 BFW/ 12 hrs. on 22/64" ck.
Pfd 13,377-382' S/35 BW in 7', A/ 1000, S/30 BW w/ small amt gas, S/ 55 BW in 6'
13,074-13,366'
CFGPD Time Chkes FTP BW
6,431,000 2' 22/64" 2126# 3
6,040,000 2' 20/64" 2340# 1
5,630,000 2' 18/64" 2632# 2-1/2
4,829,000 2' 16/64" 2900# 1
3-28-73
Pfd 13,073-366' Cmgl'd w/32' Mid-Mor Sd. FI 4,928 MM + 25 BFW/24' CAOF 8.665 MMCFPD SITP 4390#
Four Point: 13,354-366'
GFGPD Time Choke# FTP BW
6,045,000 4' 24/64" 1786# 7
5,666,000 2' 22/64" 1915# 7
5,271,000 2' 20/64" 2103# 6
4,849,000 2' 18/64" 2347# 4
GOF 8,104,000 CFGPD, Gty .579
Packer failed Rec WB + 30' ⊘M
Pfd 13,672-68 A/300, S/Lig no show
Pfd 13,980-9 A/1000, Rec CLW, Press to 0f

SUPERIOR OIL
MAYER FED. #1

THE SUPERIOR OIL CO.
Oscar State #1
Sec. 35, T24S, R29E
Eddy County, NM
KB 3123'
TD 11,042'
(FDC-CNL)

MOBIL OIL CORP.
Corral Draw Unit #1
Sec. 14, T25S, R29E
Eddy County, NM
KB 3114'
TD 15,585'
(BHC-Sonic)

A'

24,300'

18,600'

Datum: TOP UPPER MORROW

SHALE MARKER

PROJECTED
INTO LINE OF SECTION

"K"
Sandstone

MARKER

TOP MIDDLE MORROW

UPPER MIDDLE MORROW
(ZONE OF INTEREST)

13500

13600

13700

13800

13900

13000

PM 13,594-598'
A/15000, IPP 1.10
MMCFPD + 487 BW
on 20/64", TP 1500#.

PM 13,672-681'
A/300, S/LW w/
no show

PM 13,621-702' Natural
COF 19,517 MMCFPD dry
SITP 5980#

A/2000
S/120
BFW/
8'

13,074-13,366'

GFCPD	Time	Chokes	FTP	BW
6,431,000	2'	22/64"	2126#	3
6,040,000	2'	20/64"	2340#	1
5,430,000	2'	18/64"	2632#	2-1/2
4,829,000	2'	16/64"	2900#	1

3-28-73
PM 13,073-366'
Cmgl'd w/22' Mid-
Mor Sd. PI 4.928
MM + 25 BFW/24'
CAOF 8.665 MMGFPD
SITP 4390#

Four Point: 13,354-366

Four Point Test (Morrow 13,621-702')

GFCPD	Time	Chokes	TP
F/1,251,000	1'	6/64"	5207#
F/5,280,000	1'	12/64"	4803#
F/6,544,000	1'	16/64"	4555#
F/9,399,000	1'	22/64"	3858#

Sandstone

13,074-13,366'

GFGPD	Time	Choke	FTP	BW
6,431,000	2'	22/64"	2126#	3
6,040,000	2'	20/64"	2340#	1
5,430,000	2'	18/64"	2632#	2-1/2
4,829,000	2'	16/64"	2900#	1

Pfd 13,672-681'
A/300, S/LW w/
no show

MARKER

TOP MIDDLE MORROW

UPPER MIDDLE MORROW
(ZONE OF INTEREST)

3-28-73
Pfd 13,073-366'
Cmgl'd w/22' Mid-
Mor Sd, Fl 4,928
MM + 25 BFW/24'
CAOF 8.665 MMCFPD
SITP 4300#

Four Point: 13,354-366'

GFGPD	Time	Choke	FTP	BW
6,045,000	4'	24/64"	1786#	7
5,666,000	2'	22/64"	1915#	7
5,271,000	2'	20/64"	2103#	6
4,849,000	2'	18/64"	2347#	4

GOF 8,104,000 GFGPD, Gty .579

Packer failed — Rec WB + 30' ⊘M

Pfd 13,980-983'
A/1000, Rec 8 BG
CLW, Press bled
to 0#

LOWER MIDDLE MORROW
(ZONE OF INTEREST)

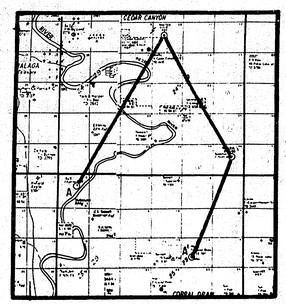
"C" SHALE

TOP LOWER MORROW

13700
13800
13900
14000
14100

A/2000
S/120
BFW/
8'

13800
14000
14200



THE SUPERIOR OIL COMPANY
MIDLAND DIVISION
Midland, Texas

RUSTLER BLUFFS AND WEINER AREAS
STRATIGRAPHIC CROSS SECTION
thru Cedar Canyon Field and Corral Draw Field
Eddy County, New Mexico

SCALE

Horizontal-1" =1500' Vertical-1" = 20'

Illustrates the distribution of sandstones and limestones in Middle and Upper Morrow Formation

G. M. Kass

Cross Section # 485 Dr # 5

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 6
CASE NO. 7545
Submitted by Superior
Hearing Date 7/26/82

EXHIBIT No. 6

V.S.M.C.F. MICROGRAPHICS
BEST AVAILABLE COPY

CEDAR CANYON

CORRAL CANYON, 60

POKER LAKE, 67

TWIN MILLS

CORRAL DRAW

SUN WELLS

Getty
1-D.S.Harroun Com.

Weiner
1-Kerr
1352

Weiner
1-Kerr
TD 3952

Sa.Cal.
1-Valley Land
2779

Skelly
1-Cedar Canyon
TD 15,500

Skelly
1-Cedar Canyon "D"
TD 4600

22327
P R Bass
45-Poker Lake Lt
TD 3785

P.R.Bass
45-Poker Lake Unit
TD 14,410

P.R.Bass
46-Poker Lake Ut.
4100'

Bass
41-Poker Lake
TD 15,100

York & Harper
1-X—Bear
TD. 2842

Lockhart
1-Livingston
3225

Hill & Meeker
1-Shugart "23"
TD 4094

E.F.White
Ellis-Fed
2947

HCW Expl.
1-MWJSK
2721

Pennzoil
1-Mobil 27
TD 3031

Superior
1-Oscar-St.
TD 14,395

ORIGINAL UNIT
REVISED UNIT

Ford Chapman
1-Federal-Nettles
TD 3805

Hill & Meeker
1-Base-Fed
TD 4201

Gulf
1-Rustler Bluff
Del.

Bennett
1-Superior
TD 3305

Alamo
1-Superior St
TD 3806

ElPaso
1-Harrison-Fed
TD 13,792

Carper
1-Carper-Hanson-Sup
TD 3643

Ritchie-C
1-Hopp-Fed
TD 3960

Richardson
1-Harrison Fed
TD 16,705

Bass
44-Poker Lk
TD 4077

Bass
42-Poker Lk
TD 15,350

Alamo
1-Poker Lake-Fed
TD 300

Mobil
1 Latham Fed

Mobil
1-Corral Draw
15,585

Bennett
1-15-Superior-Fed
TD 3185

10-Poker Lake
TD 4106

Mobil
2-Corral Draw
TD 13,840

Alamo
12-Poker Lake
TD 3710

Sun
1-US
TD 3968

ElPaso
3-Poker Lk
TD 14,883

Alamo
9 A-S-Poker Lake
TD 4067

Stansbury & Webb
1—Kinehan-Federal
TD. 2871

Bell Pet.
Fed
TD 5460

Bell Pet.
Cit. Serv.
TD 3000

Bennett
1-Fed
TD 3151

Bennett
1-Superior
TD 3383

Bennett
1-30-Superior-Fed
TD 3517

Duncan
1-Slator
2955

Dinero O
1-No.Nat.Gas Ut.
3084

Inexco
1-Bison Wallow Ut.

Faken
Rich-Sa
TD 4000

J.G.Bennett
Sup.Fed.

M.M.Mills
1-Supco
2963'

Scully
Superior

Del.

Sun

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 7
CASE NO. 7465
Submitted by Superior
Hearing Date 1/30/82

THE SUPERIOR OIL COMPANY
MIDLAND DIVISION
Midland, Texas

RUSTLER BLUFFS & WEINER AREAS
Eddy County, New Mexico

ISOPACH
UPPER MORROW "K" SANDSTONE

C.I. = 10'

G. Koss 1-82

EXHIBIT No. 7

EXHIBIT 8

Schlumberger

COMPENSATED NEUTRON FORMATION DENSITY

COMPANY THE SUPERIOR OIL COMPANY

WELL OSCAR STATE #1 (WELL FILE CENTRAL FILES)

FIELD WILDCAT

COUNTY EDDY STATE NEW MEXICO

1980' FNL & 1980' FEL

Other Services: DLL BHC

API SERIAL NO. SEC. 36 TWP. 24-S RANGE 29-E

Permanent Datum G.L. Elev. 3101.6

Log Measured From K.B. 21.4 Ft. Above Perm. Datum

Drilling Measured From K.B.

Elev.: K.B. 3123 D.F. 3122 G.L. 3101.6

Date	12-6-79	1-14-80
Run No.	ONE	TWO
Depth-Driller	11042	14400
Depth-Logger	11048	14400
Btm. Log Interval	11047	14399
Top Log Interval	SURF	11008
Casing-Driller	10 3/4@ 3252	7 5/8@ 11140 @
Casing-Logger	3282	11140
Bit Size	9 1/2	6 1/2
Type Fluid in Hole	SALT WTR GEL	BRINE/SEAWID
Dens. / Visc.	9 / 28	13.5 / 52
pH / Fluid Loss	8.5 / ml	11 / 8 ml
Source of Sample	MEAS	MUDPIT
Rm @ Meas. Temp.	.15 @ 68 °F	.1101 @ 85 °F @ °F
Rmf @ Meas. Temp.	.15 @ 68 °F	.061 @ 85 °F @ °F
Rmc @ Meas. Temp.	@ °F	.096 @ 85 °F @ °F
Source: Rmf / Rmc	M / M	MC / MC
Rm @ BHT	@ °F	.061 @ 212 °F
Circulation Stopped	2100	12-5 2000 1-13
Logger on Bottom	0800	12-6 0410 1-14
Max. Rec. Temp.		212
Equip. / Location	8067 HOBBS	8067 HOBBS
Recorded by	WILSON	SERVOS/IAN/ZUMWALT
Witnessed by Mr.	HUTCHISON	KOSTY/GILMORE

RUN NO. ONE TWO

Density Type Sonde No. SGS01 SGS01

Density Type Gen. No. 60000 60000

CASING DATA

Depth	3282	11140		
Size	10 3/4	7 5/8		
Wgt.	40.5	29.7		
Grade	K-55	S-95		
Type Joint	ST&C	LT&C		
Bit Size	9 1/2	6 1/2		

CASING FLUID DATA

Type Fluid in Hole	SALT WTR GEL	BRINE/SEAWID
Density	9	13.5
Viscosity	28	52
Chlorides	150000	190000
Ph	8.5	11
Fluid Loss		8

RECORDED DATA

Max. Rec. Temp.	1057	1057
Equip. Location	1278	1278
Recorded By	1278	1278
Witnessed By	1278	1278
Run No.	1278	1278
Depth-Driller	1278	1278
Depth-Logger	1278	1278
Bottom Log Interval	1278	1278
Top Log Interval	1278	1278
Casing-Driller	1278	1278
Casing-Logger	1278	1278
Bit Size	1278	1278
Type Fluid in Hole	1278	1278
Dens. / Visc.	1278	1278
pH / Fluid Loss	1278	1278
Source of Sample	1278	1278
Rm @ Meas. Temp.	1278	1278
Rmf @ Meas. Temp.	1278	1278
Rmc @ Meas. Temp.	1278	1278
Source: Rmf / Rmc	1278	1278
Rm @ BHT	1278	1278

CALIBRATION DATA

Density Calibrator No.	CS	
Density Calibrator Value		
Density Shop Cal.		
Density Log Before		
Density Log After		
Neutron Calibrator No.		
Neutron Shop Cal.		
Neutron Log Before		
Neutron Log After		

Depth Scale: 1" = 100' / 1" = 5"

Type Log: DENSITY

Depth

Gamma Ray (API) 0 100

Caliper (Inches) 6 16

Density Correction (g/cc) -.15 .15

Porosity (%) 30 -10

Neutron Porosity (%) 45 -15

Liquid Density (g/cc) 2.71

Porosity Matrix SANDSTONE

Porosity Fluid FRESH

Neutron Matrix SANDSTONE

Neutron Fluid FRESH

Hole Corr. for Density NONE

Hole Corr. for Neutron NONE

Mud Resistivity (Rm) @ Meas. Temp. .061 @ 85

Mud Filtrate Resistivity (Rmf) @ Meas. Temp. .048 @ 85

Mud Cake Resistivity (Rmc) @ Meas. Temp. .096 @ 85

Mud Density 13.5

Mud Viscosity 52

Fluid Loss 8

Source of Rmf and Rmc MEAS

Rm @ Meas. Temp. .061 @ 85

Rmf @ Meas. Temp. .048 @ 85

Rmc @ Meas. Temp. .096 @ 85

Source of Rmf / Rmc MC

Rm @ BHT .061 @ 212

Time Since Circ. 1-13 1-14

Max. Rec. Temp. 212

Equip. Location 8067 HOBBS

Recorded By SERVOS/IAN/ZUMWALT

Witnessed By KOSTY/GILMORE

DEPTH		Density Porosity	Neutron Porosity	Hole Corr. for Density	Hole Corr. for Neutron	Caliper (Inches)	Gamma Ray (API)
Top	Bottom						
11150	13000	30 -10	45 -15	NONE	NONE	6.71	0 100
13000	11150	30 -10	45 -15	NONE	NONE	6.71	0 100

Upper Morrow 13,332 (-10,232)

Lower Morrow 13,432 (-10,332)

Strawn

Atoka

Morrow Clastics

Base Morrow Clastics

Chester

Ste. Genevieve

Mississippian Limestone

Woodford

Devonian

Siluro-Devonian

Fusselman

Montoya

Simpson

Ellenburger

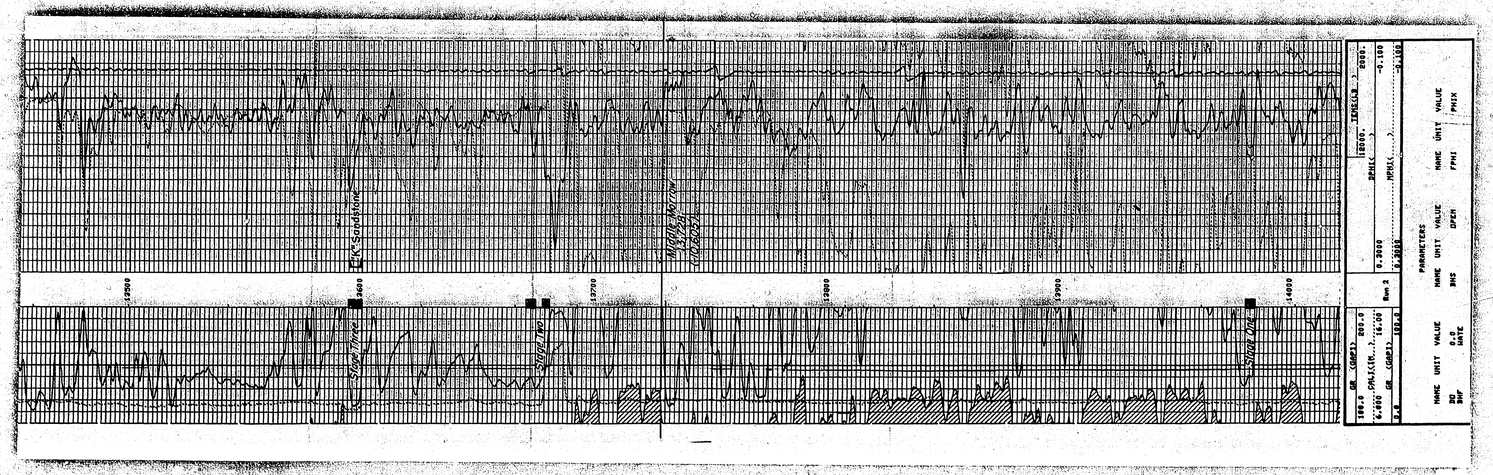
Pre-Cambrian

Cisco

Canyon

Strawn

Atoka


EKG Sensitive
Start Time
Start Dur
Start Dur
Start Dur
PARAMETERS
NAME UNIT VALUE
NAME UNIT VALUE
NAME UNIT VALUE