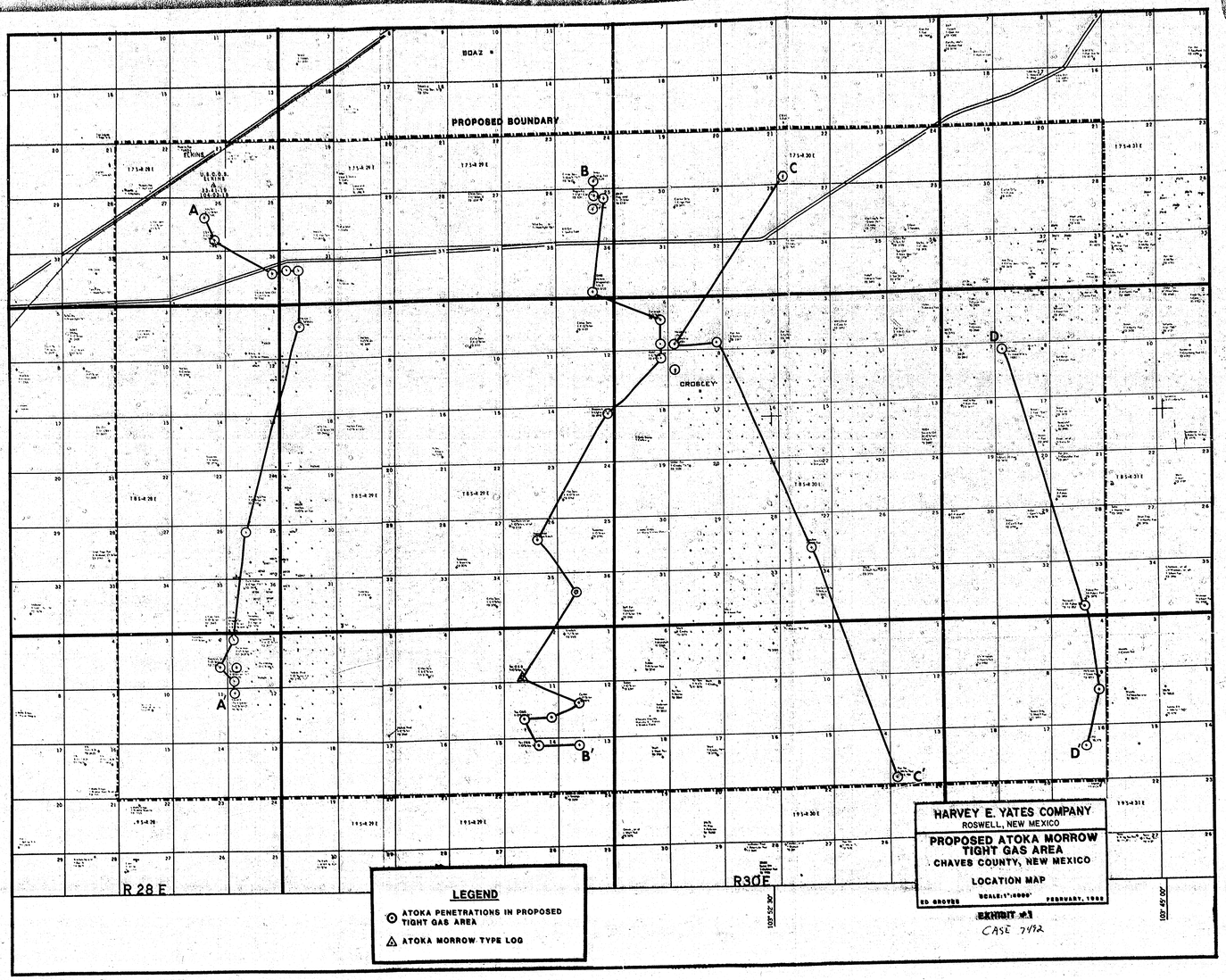
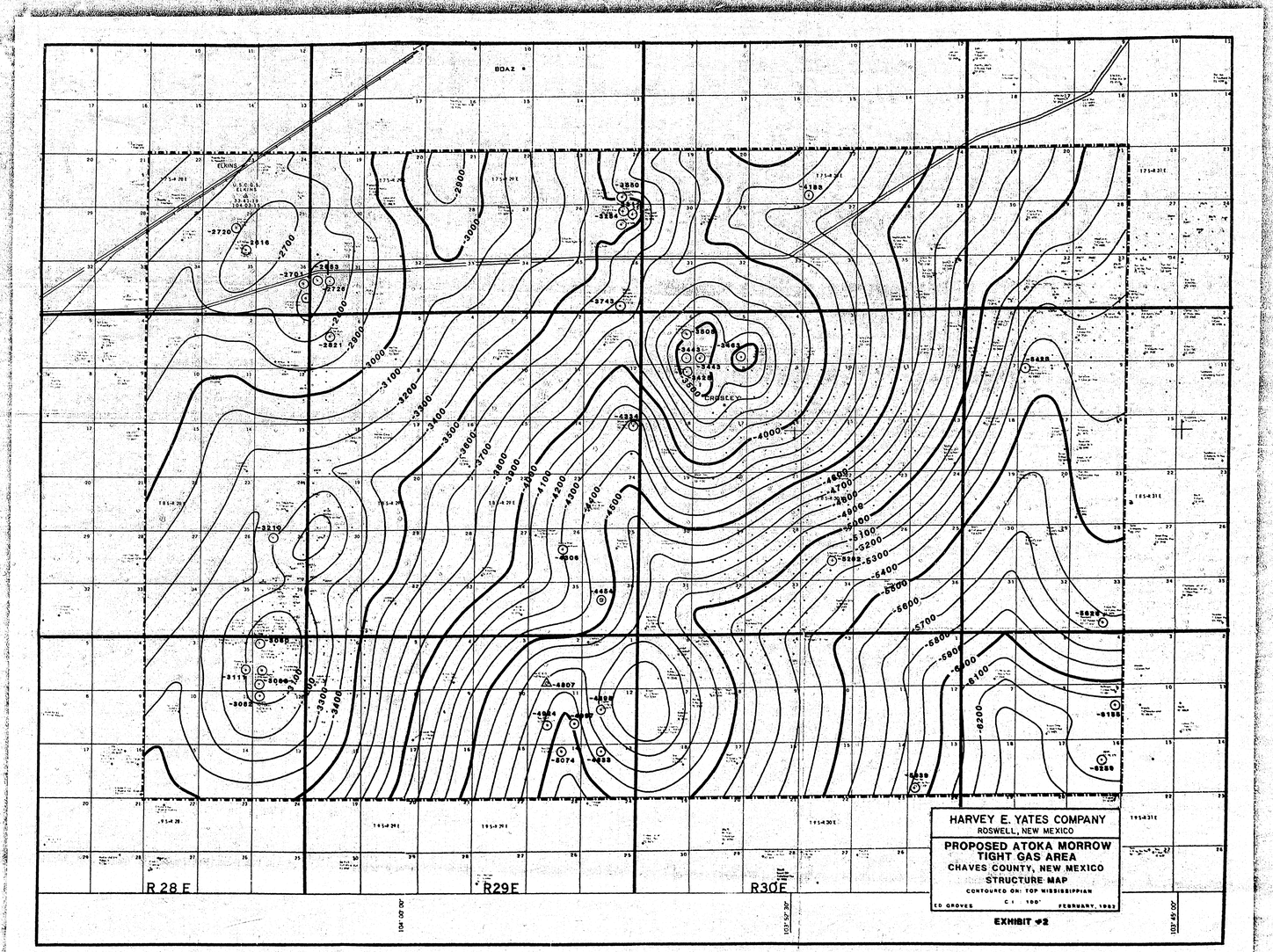
Case No
7492

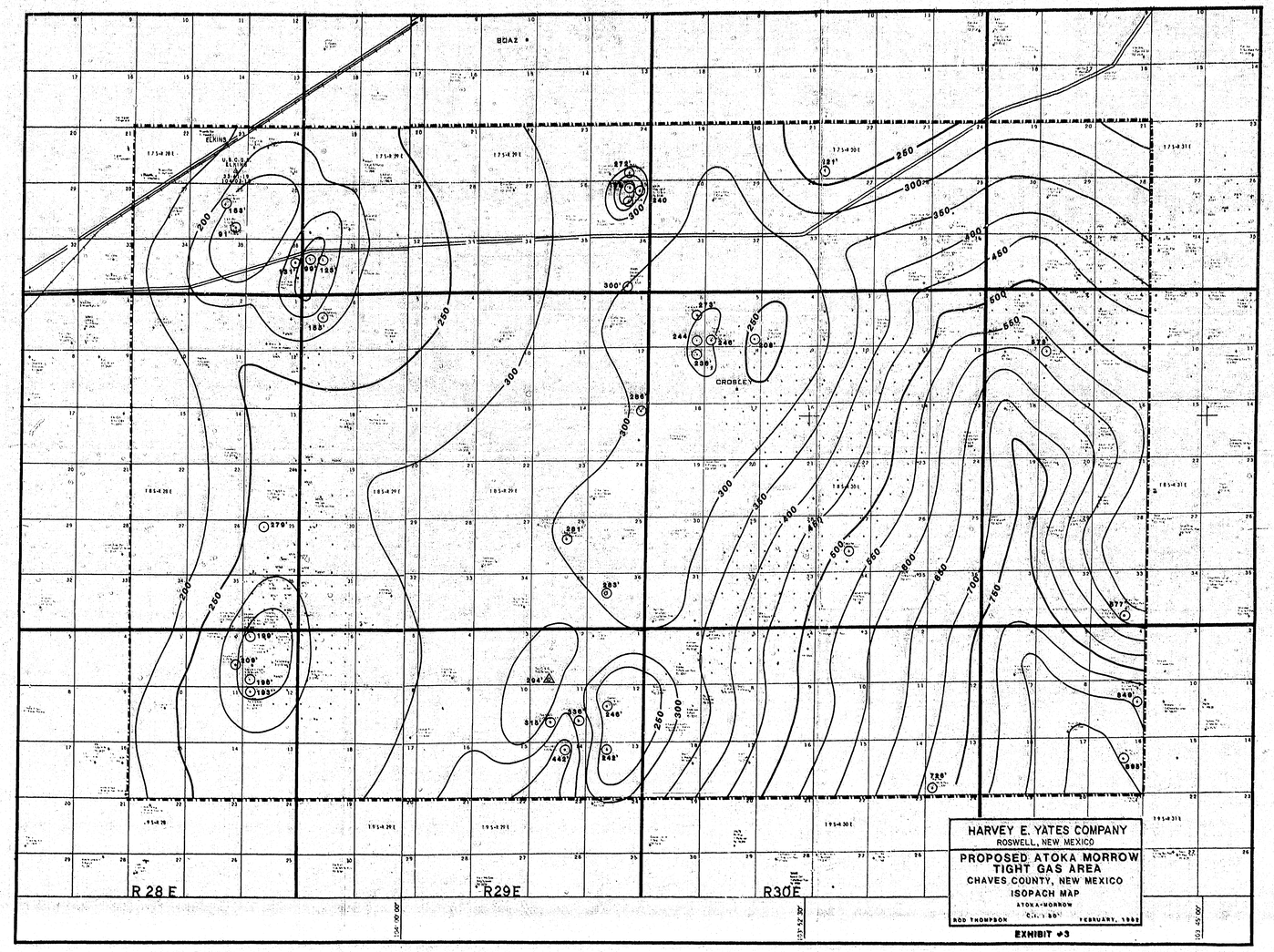
Large Exhibits

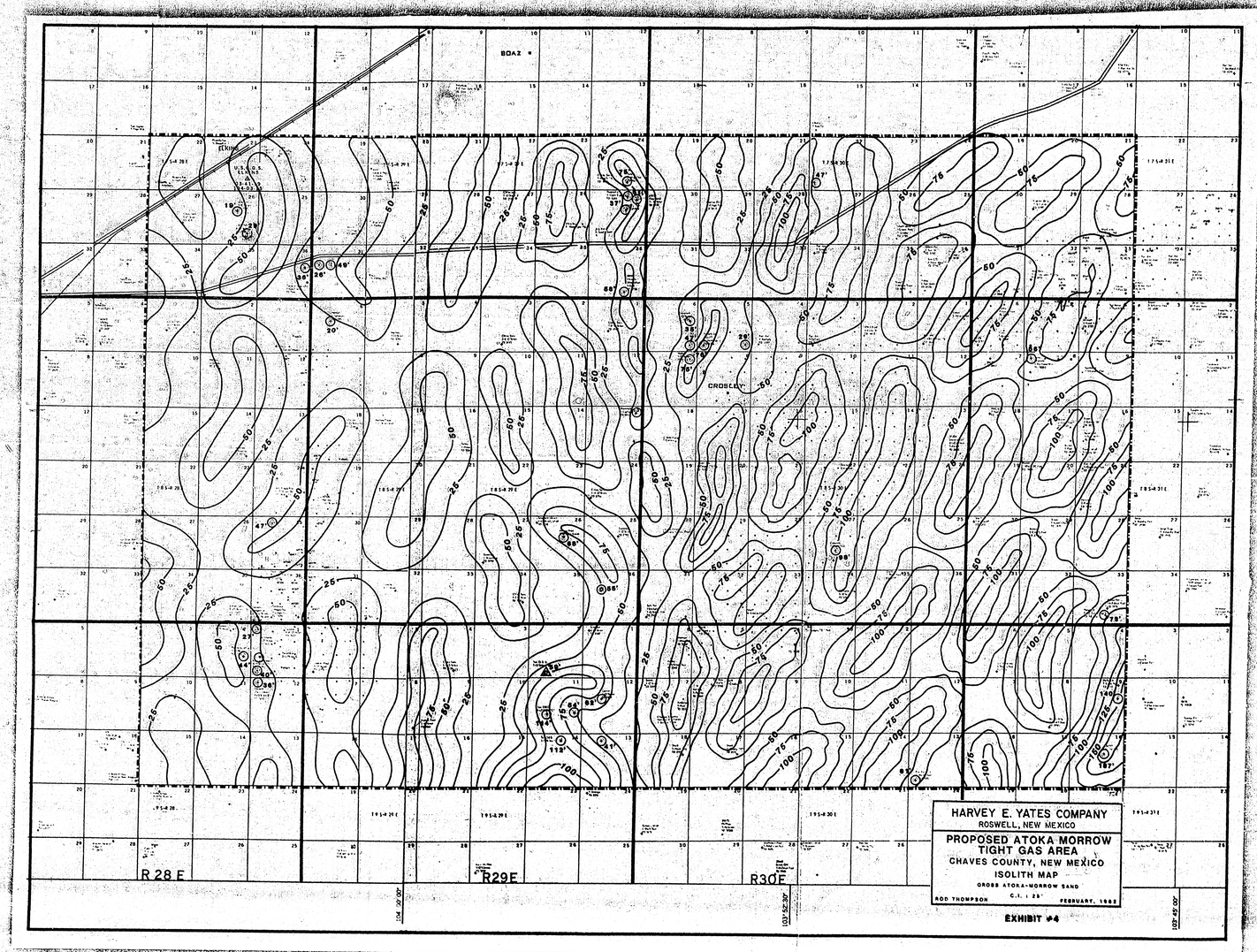



PROPOSED BOUNDARY
ROSWELL
HAGERMAN
ARTESIA
DUNCAN
CROSSLEY
A
B
C
D
A'
B'
C'
R 28 E
R 30 E
LEGEND
ATOKA PENETRATIONS IN PROPOSED TIGHT GAS AREA
ATOKA MORROW TYPE LOG
HARVEY E. YATES COMPANY
ROSWELL, NEW MEXICO
PROPOSED ATOKA MORROW TIGHT GAS AREA
CHAVES COUNTY, NEW MEXICO
LOCATION MAP
ED. GROVES
SCALE: 1" = 8000'
FEBRUARY, 1982
EXHIBIT #1
CASE 7492



U.S.G.S. RECORDS
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ELKINS
CROSBEE
R 28 E
R29E
R30E
T15-S
T16-S
HARVEY E. YATES COMPANY
ROSWELL, NEW MEXICO
PROPOSED ATOKA MORROW
TIGHT GAS AREA
CHAVES COUNTY, NEW MEXICO
ISOPACH MAP
ATOKA-MORROW
ROD THOMPSON
FEBRUARY, 1982
EXHIBIT #3



U.S.G.S. TOPOGRAPHIC
BEST AVAILABLE COPY

A

A'

SINCLAIR OAG CO.
#1 O'BRIEN
SEC. 26, T-7-S, R-28-E

OAK PETROLEUM
#1 O'BRIEN
SEC. 26, T-7-S, R-28-E

GENERAL AMERICAN OIL CO.
GAO STATE #1
SEC. 36, T-7-S, R-28-E

ENSERCH EXPLORATION CO. INC.
J. J. O'BRIEN
SEC. 31-7S-29E

ENSERCH EXPLORATION, INC.
J.J.O. O'BRIEN
SEC. 31-7S-29E

JAKE L. HAMON
#1 NORTH SALTSBURY
SEC. 6-8S-29E

STEVENS OIL CO.
#1 O'BRIEN "C"
SEC. 1, T-9-S, R-28-E

MAGNOLIA PET. CO.
#1 C.L. O'BRIEN "B"
SEC. 1-9S-28E

PEARSON & SIBERT
#1 O'BRIEN
SEC. 2-9S-28E

SOCONY MOBIL OIL CO., INC.
#1 C.L. O'BRIEN "C"
SEC. 1-9S-28E

TWINLAKES OIL
#1-D O'BRIEN
SEC. 12, T-9-S, R-28-E

DATUM - T/ABO

ABO

WOLFCAMP

PENNSYLVANIAN

ATOKA

MISSISSIPPIAN

PRE-MISS DOLOMITE

SINCLAIR OAG CO.
#1 O'BRIEN
SEC. 26, T-7-S, R-28-E
TD: 7100
SPUD: 1-20-63 COMP: 1-2-63

DST #1 7000-7100', OP 2 HRS; REC 370' GAS IN DP, 450' W.C. W/ SCH, 30' MUD & 120' WTR-CUT MUD. FP 225-361# SIP 2363#/2 HRS.

OAK PETROLEUM
#1 O'BRIEN
SEC. 26, T-7-S, R-28-E
TD: 7050
SPUD: 11-28-72 COMP: 1-2-73

DST #1 6798-6250', OP 95', 6IS 5" & 15,000 CFPD, INCR TO 12,000 CFPD, REC 180' GCM, 1810 2083#/45# FP 94-122#, FSIP 2196#/3HRS
DST #2 6788-6795', OP 100', 6IS/ 20" & 6IS 10,000 CFGPD, REC 150' GCM, 1810 2245#/40#, FP 58-118#, FSIP 2284#/3 HRS.

GENERAL AMERICAN OIL CO. OF TEXAS
GAO STATE #1
SEC. 36, T-7-S, R-28-E
TD: 7050'
SPUD: 8-21-80 COMP: 10-29-80

IP: 403,000 CFGPD
PAY ZONE: PERF. 6704-15'
DST #1 6666-6750', 25" FF, OP 1½", 6IS 30", MAX 835 MCF, 3/4" CHK, 1410 2456#, 47/96" GCHP, 90"/ 2683, FP 345-768#, 900"/2654, HP 3100-3452

ENSERCH EXPLORATION CO. INC.
J. J. O'BRIEN
SEC. 31-7S-29E
TD: 6791'
SPUD: 5-13-80 COMP: 6-11-80

PROD ZONE: PUSH.
IP: 356 BOPD
DST (PUSH) 6048-6730' OP 1 HR 10 MINS, NO GASSY BLOW & RECV 1410 2483#/20 MINS, FP 1616-2285#, FSIP 2483#/2 HRS 33 MINS

ENSERCH EXPLORATION, INC.
J.J.O. O'BRIEN
SEC. 31-7S-29E
TD: 6872' PUSH.
SPUD: 5-1-81 COMP: 7-23-81

PROD ZONE: PENNSYLVANIAN
PERFS 6704-37' IP: 153 BOPD + 3 BW
CHK (ACID) 6765-78', REC 15' LTL BW, CUT & GOLD

JAKE L. HAMON
#1 NORTH SALTSBURY
SEC. 6-8S-29E
TD: 7390'
SPUD: 10-3-59 COMP: 11-27-59

DST 7035-70, OP 2 HRS, REC 1080', GAS IN DP, 180' HCGM & 270' SLTY SWCW, FP 90-120#, SIP 2150#/30 MINS
DST 7300-25, OP 2 HRS, REC 60' HSWCM & 2400' SW, DST 2350-90, OP 30 MIN, REC 50 MUD, FP NSM, SIP 958/15 MIN.

STEVENS OIL CO.
#1 FRATES
SEC. 29, T-9-S, R-28-E
TD: 7570'
SPUD: 11-25-60 COMP: 1-14-61

DST 6840-82', OP 75", 6IS 8", 265 MCF, 8/150" GCM, 30" IFP 2585, FP 575-1255, 120" FSI 2685

MAGNOLIA PET. CO.
#1 C.L. O'BRIEN "B"
SEC. 1-9S-28E
TD: 7666
SPUD: 8-16-50 COMP: 12-10-50

IPP 270.00 BOPD
DST 6360-6378 OP 1 HR REC 20 M
DST 6629-6699 OP 1 HR REC 60 M
DST 6742-6785 OP 2 HRS REC 105 M
DST 6984-7001 OP 1 HR REC 45' SWCM
DST 7094-7163 OP 3 HRS REC 330 WCM
DST 7229-7249 OP 3 HR 9 MIN GTS 2 MIN & 2,140,000 CFPD OTS 17 MIN & 12% w/ 2 3/4 wtr in 60' oil
CORES 7249-51 REC 8' SHOW
CORES 7251-59 REC 8' SHOW GOOD SHOW OIL
DST 7248-7259 OP 3 HRS GTS 1 MIN TO 3 MIN REC 220 WCM
DST 7313-7327 OP 2 HRS REC 190 WCM + 30' MW
CORES 7328-43 REC 15' SHOW
DST 7358-7367 OP 2 HRS GTS 5 MIN & 180,000 CFPD IN REC
CORES 7367-7395 REC 9 SHOW
DST 7434-7454 OP 3 HRS 35 MIN REC 5300' SW, WTR
DST 7525-7548 OP 2½ HR REC 60'M
DST 7534-7554 OP 2½ HR REC 60' M
DST 7660-7625 OP 2½ MIN REC 40' M

PEARSON & SIBERT
#1 O'BRIEN
SEC. 2-9S-28E
TD: 7350
SPUD: 9-1-49 COMP: 9-29-49

DST 6736-6740 REC 20' M IN 1½ HR FP 47# FSI 62#

SOCONY MOBIL OIL CO., INC.
#1 C.L. O'BRIEN "C"
SEC. 1-9S-28E
TD: 7295'
SPUD: 9-13-63 COMP: 5-29-63

PROD ZONE: (ON) PERFS 7180-7205 IPF: 176 MCFD
CHK 6/64-64ths" REC 25' LT & MUD.
DST 6755-6815, OP 1 HR 1 MIN 15 MIN, REC 220' MUD, FP 0-35#, SIP 1458#/1 HR.
DST 7170-7295', OP 3 HRS & 20 MIN. GTS 3 MIN, GTS 13 MIN, TSTD 11# MCFD WEL, FP 750-1020#, SIP 2618#

TWINLAKES OIL
#1-D O'BRIEN
SEC. 12, T-9-S, R-28-E
TD: 7615'
SPUD: 12-17-70 COMP: 1-19-71

NO DST'S
NO CORES

HARVEY E. YATES COMPANY
ROSWELL, NEW MEXICO

PROPOSED ATOKA MORROW
TIGHT GAS AREA
CHAVES COUNTY, NEW MEXICO
STRATIGRAPHIC CROSS-SECTION A-A'

ED GROVES DATUM - TOP OF ABO FEBRUARY, 1982

EXHIBIT #5

U.S.G.S. DENVER
BEST AVAILABLE COPY

B

INTEX OIL CO.
#1-24 MAGNOLIA-FED.
SEC. 24, T-7-S, R-29-E

MAGNOLIA PET. CO.
#2 LIGHTCAP LAND CO.
SEC. 25, T-7-S, R-29-E

FLAG-REDFERN OIL CO.
1 O'BRIEN
SEC. 25-7S-29E

MAGNOLIA PET. CO.
#1 STATE Z
SEC. 36-7S-29E

TAMARACK PET. CO. INC.
1 O'BRIEN
SEC. 6-8S-30E

MAGNOLIA PET. CO.
#1 LIGHT CAP
SEC. 6, T-8-S, R-30-E

MAGNOLIA PETR. CO.
#1 O'BRIEN
SEC. 7-8s-30E

SHAMROCK O&G CO.
#1 LIGHTCAP
SEC. 13, T-8-S, R-29-E

AMOCO PRODUCTION CO.
1 O'BRIEN RANCH
SEC. 26,T-8-s, R-29-E

AMOCO PRODUCTION CO.
#1 STATE "JA"
SEC. 36,T-8-s, R-29-E

TEXAS O & G CORP.
1 O'BRIEN
SEC. 11-9S-29E

ABO

WOLFCAMP

PENNSYLVANIAN

ATOKA

MISSISSIPPIAN LIME

PRE-MISS DOLOMITE

INTEX OIL CO.
#1-24 MAGNOLIA-FED.
SEC. 24, T-7-S, R-29-E
TD: 8300'
SPUD: 10-9-59 COMP: 12-8-59

DST #1 7130-7175', op 30" BOC
180" blow, BOB w/in, rlv 45-2150
1519 2750/15"
DST #2 7590-7655', op 45", BOC
1007 mcfd rlv 1360, 1519 1950/
15 min
DST #3 8112-8140', op 30", BOC
270" mcfd rlv 1950, 1519 2750/15"
DST #4 8128-8224', op 90" BOC
430 mcfd, rlv 84-3550, 1519 3730/
30"

MAGNOLIA PET. CO.
#2 LIGHTCAP LAND CO.
SEC. 25, T-7-S, R-29-E
TD: 8295'
SPUD: 9-28-58 COMP: 12-28-58

DST #1 7502-7525', (Gry) op 2 hrs
REC 600' SALTY MUD, rlv 3750
1519 2730/30"
DST #2 7882-8022' (Cherries) op
w mds, REC 180' ALL BLACK & OILY SH
rlv 2100, 1519 2750/30"
DST #6 8182-8219' (Ellen) op
2 hrs, REC 120' SALTY SULF WTR,
rlv 2200, 1519 3100/30"
CORE #3 7726-7750', REC 2½' Lt. #1
CORE #4 7820-7875', REC 25' GRAY
LT SPARCE SS.
CORE #5 7939-7959', REC 9½' DOLO.
FOOD SHOW.
CORE #6 8090-8107', REC 16' DOLO
NO SHOW.

FLAG-REDFERN OIL CO.
1 O'BRIEN
SEC. 25-7S-29E
TD: 8150' DEVONIAN
SPUD: 12-12-79 COMP: 1-24-80

NO CORES OR TESTS REPORTED

MAGNOLIA PET. CO.
#1 STATE Z
SEC. 36-7S-29E
TD: 8731'
SPUD: 6-15-50 COMP: 11-20-50

DST 6689-6762 op 45 min REC 15' MUD
DST 7126-7125 op 1 HR REC 2550' MUD
DST 7115-7220 op 1 HR REC 35' MUD
CORES 7300-7305 REC 37' LIME
DST 7315-7395 op 1 3/4 HR REC 180'
SLIGHT OFFSAID
DST 7395-7366 op 1 HRS 615 PSI min
REC 195 min + 180' HOCM + 150
MW & MCW + 50 MW
DST 7615-7626 op 2 HRS REC 30' M
+ 360'
DST 7677-7791 op 90 min REC 90' M
DST 8368-98 op 1 HR REC 30' M
CORES 8391-98 REC 5' SOLO
DST 8388-8426 op 1 HR 20 min REC 45' M
DST 8465-8418 op 1 HR REC 330 MW, WTR CH
DST 8539-8559 op 2 HR REC 295' GIW, WTR
DST 8559-8588 op 2 HR REC 960' GIW, WTR
DST 8625-8645 op 2½ HR REC 300' M
DST 8623-8723 op 1 HR 50 min REC 130' M

TAMARACK PET. CO. INC.
1 O'BRIEN
SEC. 6-8S-30E
TD: 8125'
SPUD: 9-21-72 COMP: 10-25-72

DST #1 8004-8125', op 2 HRS, REC 3065'
SLY GCSW, 1519 3153/1 HR, rv 752-
1860, 1519 3139#/3 HRS

MAGNOLIA PET. CO.
#1 LIGHT CAP
SEC. 6, T-8-S, R-30-E
TD: 7970
SPUD: 1-12-50 COMP: 5-12-50

PROD ZONE: 1/Fair 7960', PROD THRU
PERFS 7960-7926'.
IPP: 950 BOPD 4" CK
DST #2 7094-7129', op 2 HRS, GAS
90", REC 360' SALT GAS-CUT MUD
DST #3 7137-7195', op 5 HRS, GAS
45", REC90', 90' GAS-CUT MUD & 5150'
GAS & SALT WTR & 570' SALT WTR.
DST #4 7340-69', op 7 HRS, GAS
15", MUD TO MW, & 90', SPOTTED
MUD, OIL, GAS AND SALT WTR FOR
90", REC 4200' GAS CUT SLY WTR
DST #5 7900-7934', op 90" REC 30'
MUD
DST #6 7290-7250', op 3 HRS, REC
60' SLI GAS CUT MUD
DST #7 7395-7307', op 60", REC
60' SMW, 30'
DST #8 7940-7972', op 60", REC
30' MUD
DST #9 7990-7979', op 2 HRS & 37
MIN, REC 5', MW 5', SLI OIL 10', FLUID
146.67 @6/75 API; non 3327-1, GRAV
52; GA 51; PV 3128
CORE #1 7175-7186'
CORE #2 7958-7979

MAGNOLIA PETR. CO.
#1 O'BRIEN
SEC. 7-8s-30e
TD: 8135'
SPUD: 7-25-50 COMP: 12-20-50

PAY ZONE: DEVONIAN PERF: 7963-73
DST 7111-61', op 3 HRS, GAS in 1 HR &
15 min, GTS in 35 min, REC 150' MCW
DST 7243-56', op 4 HRS, GAS in 6 min,
REC 90' HOCM+
DST 7353-63', op 5 HRS & 7 min, GAS in
5 min, GTS in 10 min, 1"/4 in 12 1/2 inCF
HRS, GTS 90.9, BOB 5299-1; rv 1500-
1/2" STONE.
DST 7458-66', op 4 HRS, GAS in 6 min,
GTS in 1,385,000 CFPD, FLMG & 1/4 inCF-1
HRS, GTS NG, BOB 12,815-1
DST 7743-73' op 2 HRS & 30 min, GAS
in 8 min, GTS 285,000 CFPD, REC 300'
HOCMW&GCM, rv 2050, 1519 3925/ 15 min.
DST 7310-35' op 3 HRS, REC 150' MUD,
DST 7739-50' op min, REC 5' MW
DST 7930-70', op 3½ HRS, GAS in 5 MIN,
GTS in 1 HR, 1,200 CFPD, FLMG 2½ inCF-1
635 min, REC 330' GIP, 1 BOT GSCM
DST 7930-70', op 4 HRS, GAS in 5 MIN,
1,162,000 CFPD, FLMG 2½ inH2O-1
BOB DIST in 3 HRS, REC 2000' DIST &
1700' GCM
DST 7930-40', op 4 HRS, GAS in 3 min,
REC 180' GIP, 1519 4372/ 60', & 360'
HOCMW
DST 7960-70', op 3 HRS, REC 350' MUD,
DST 7988-79', REC 30' MUD,
DST 8100-15', op 3 HRS, REC 2940'
SW, WTR

SHAMROCK O&G CO.
#1 LIGHTCAP
SEC. 13, T-8-S, R-29-E
TD: 8092'
SPUD: 11-12-50 COMP: 1-12-51

DST #1 7451-7468', op 25", REC
5900' SALT WTR
DST #2 8163-8174', op 60" REC
30' MUD
DST #3 8926-8966', op 90" REC
1617' mw+SW SALT WTR
CORE #3 8174-8194', REC 13'
CONGLOMERATE & SHALE BRK, MW SHOWS
CORE #2 8262-8288', REC 6' SH &
15' MW
CORE #3 8861-8875', REC 13½'
BLK PORS LS, NS.
CORE #4 8875-8895', REC 15'
BLK PORS LS; 9' SHALY SOLO &
OOLITIC LIME & 5' SHALY SOLO
OOLITIC SH.
CORE #5 8899-8922', REC 22½'
UPPER 20' SOLO & SHALE & 6½' SOLO.

AMOCO PRODUCTION CO.
1 O'BRIEN RANCH
SEC. 26, T-8-S, R-29-E
TD: 9134'
SPUD: 12-27-80 COMP: 6-11-81

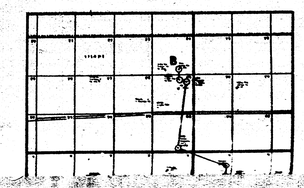
PAY ZONE: Mill 8798-8520
IP: F 245,000 CFGPD
NO TESTS OR CORES

AMOCO PRODUCTION CO.
#1 STATE "JA"
SEC. 36, T-8-S, R-29-E
TD: 9300'
SPUD: 10-17-80 COMP: 7-27-81

PAY ZONES: STR. 8927-76
IP: F 3,115,082 CFGPD
NO TESTS OR CORES

TEXAS O&G CORP
#1 O'BRIEN "B"
SEC. 11, T-9-S, R-29-E
TD: 9950'
SPUD: 9-30-77 COMP: 11-19-77

PROD ZONE: (Virtual) 1/Fair 8542',
PROD THRU PERFS 8542-8606'.
IP CORP: 482 MCFGPD, 600 BPD, GOR
Tstd1 689, Elev 2112', KIBM 40
DST #1 (Cisco) 8170-8201', op 90"
REC 120' GIP, 1519 FP 3683-95/1
HR; 1519 3013/60", rv 2960, 1519
4250/2 HRS
DST #2 (Virtual) 8665-8746', op 90"
REC 1,100' GIP, 1519 FP 3683-95/1
HR; 1519 3988#/90", rv 375-4020, 1519
5230#/2 HRS
SDI-DST #3 (Virtual) 8550-8611', op
90", Rec 987' Mud, 1519 3614/90", rv
43-530, 1519 1290/2 HR
PERF: 8542-8592', 8574-8606'



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RESTON, VIRGINIA
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WOLFCAMP

PENNSYLVANIAN

ATOKA

MISSISSIPPIAN LIME

PRE-MISS DOLOMITE

INTEX OIL CO.
#1-29 MAGNOLIA-FEE
SEC. 29, T-7-S, R-29-E
TD: 8350'
SPUD: 10-9-59 COMP: 12-8-59

DST #1 7130-7175', OP 30" REC 180' GCM, 300' GCW, FP 95-230# ISIP 3756#/15"

DST #2 7990-7055', OP 45", REC 100' MUD; FP 130#; ISIP 3704/ 15 MIN

DST #3 8112-8140', OP 30", REC 270' MUD; FP 195#; ISIP 3756#/15"

DST #4 8320-8354', OP 90" REC 630' MCW, FP 84-355#; ISIP 3756#/ 20"

PAGNOLIA PET. CO.
#1 LIGHTCAP LAND CO.
SEC. 25, T-7-S, R-29-E
TD: 8105'
SPUD: 9-28-58 COMP: 12-28-58

DST #1 7505-7595', (Cisco) OP 2 HRS REC 600' SALTY MUD WTR,,FP 175# ISIP 2734#/30"

DST #2 7980-8002', (MORROW) OP W HRS, REC 180' OIL SHOW & 450' SW FP 2120#, ISIP 3750#/30"

DST #6 8102-8215' (ELLEN) OP 2 HRS, REC 4730' SALTY GULF WTR, FP 2200#, ISIP 3740#/30"

CORE #3 7726-7750', REC 24' LS, AS

CORE #4 7850-7875', REC 25' GRAY LI W/SHELL, MI.

CORE #5 7919-7929', REC 9½' DOLS, POOR SHOW.

CORE #6 8090-8100', REC 10' DOLO NO SHOW.

FLAG-REDFERN OIL CO.
1 O'BRIEN
SEC. 25-7S-29E
TD: 8150' DEVONIAN
SPUD: 12-12-79 COMP: 1-24-80

NO CORES OR TESTS REPORTED

PAGNOLIA PET. CO.
#1 STATE Z
SEC. 36-7S-29E
TD: 8731
SPUD: 6-15-50 COMP: 11-22-50

DST 6609-6762 OP 45 MIN REC 10' MUD

DST 7109-7125 OP 1 HR REC 2500' MUD

DST 7116-7128 OP 1 HR REC 35' MUD

CORES 7302-7375 REC 73' LIME

DST 7515-7555 OP 1 3/4 HR REC 180 SLIGHT WTRSHO

DST 7945-7966 OP 3 HRS GTS 29 MIN REC 195 MCW + 180' WMCW + 15' MW & MCW + 90 SW

DST 7410-7426 OP 2 HRS REC 30' M + 360' SW

DST 7677-7741 OP 90 MIN REC 90' M

DST 8368-88 OP 1 HR REC 30' M

CORES 8391-96 REC 5' DOLO

DST 8388-8406 OP 1 HR 20 MIN REC 45' M

DST 8408-8488 OP 3 HR REC 300 SGA, WTR CH

DST 8539-8559 OP 2 HR REC 245' SGA, WTR

DST 8559-8586 OP 2 HR REC 6467 SGA, WTR

DST 8620-8645 OP 2½ HR REC 180' M

DST 8623-8723 OP 3 HR 50 MIN REC 1367' M

SAVANACK PET. CO. INC.
1 O'BRIEN
SEC. 6-8S-30E
TD: 8125'
SPUD: 5-21-72 COMP: 10-25-72

DST 8004-8125', OP 2 HRS, REC 2065' OIL, GCSW, ISIP 3137#/1 HR, FP 552-1801#, FSIP 3135#/3 HRS

PAGNOLIA PET. CO.
#1 LIGHT CAP
SEC. 6, T-8-S, R-30-E
TD: 7950'
SPUD: 1-2-50 COMP: 5-12-50

PROD ZONE: 1/FAY 7960', PROD THRU PERFS 7900-795'.
IPF: 992 MCFD 1/ 4"
DST #2 7096-7129', OP 2 HRS, GAS 90", REC 300' HALY GAS-CUT MUD
DST #3 7137-7185', OP 5 HRS, GAS 45" RECOV. 90' GAS-CUT MUD & 5190' GAS CUT SALT WTR & 570' ALT WTR.
DST #4 7340-69', OP 7 HRS, GAS 15", MUD 5 HRS, & 30', SPARSED MUD, OIL, GAS AND SALT WTR FOR 90", REC 40201' GAS CUT OIL 1 WTR
DST #5 7200-7238', OP 90" REC 30' MUD.
DST #6 7290-7295', OP 5 HRS, REC 60' ALI GAS CUT MUD
DST #7 7345-7387', OP 60", REC 60' MUD. HI
DST #8 7440-7472', OP 60", REC 30' MUD
DST #9 7960-7978', OP 2 HRS & 37 MIN, GAS 3", MUD 5', 2ND FLOW 1465.62 mcf/h HRS, GOR 1527-1, GRAY SD', 28 SGs IF 3185
CORE #1 7175-7186'
CORE #2 7956-7970'

PAGNOLIA PETR. CO.
#1 O'BRIEN
SEC. 8-8S-30W
TD: 8125'
SPUD: 7-25-50 COMP: 12-20-50

PAY ZONES: DEVONIAN: PERF: 7983-73
DST 7111-41', OP 5 HRS, FLO IN 1 HR & 25 MIN, REC 10,000 CFPD, REC 160' GCM; 15" MUD 5 HRS, & 30', SPARSED MUD, GAS AND SALT WTR FOR 90", REC 40201' GAS CUT OIL 1 WTR
DST 7153-68GCM
DST 7153-63' OP 5 HRS & 7 MIN, GAS IN 5 MIN, OIL IN 10 MIN, FLOW IP 1/2 BO? 5 MIN, REC 5', GAM 7070'FL, FP 55GC, 55GCM, ISIP 3135#
DST 7150-68', OP 5 HRS, GAS IN 4 MIN, EST 1,385,000 CFPD, FLMD 0 3/4 BO?1-5 MIN, WTR 90, GAM 12,835'FL
DST 7183-71' OP 2 HRS & 30 MIN, GAS IN 8 MIN, EST 285,000 CFPD, REC 300' MCW&SGCW; FP 200#, ISIP 2925' 15 MIN.
DST 7196,72' OP 3 HRS, REC 1967' MUD.
DST 7256-72', OP 50 MIN, REC 5' MUD
DST 7310-305', OP 3½ HRS; GAS IN 8 MIN, GAS IN 3 MIN, EST 1,396,000 CFPD, FLMD 3½ BO?1 HR
DST 7355-80', OP 5 HRS, GAS IN 3 MIN, 2,161,000 CFPD; OIL IN 1 HR, FLMD 5 BBLS DIST IN 3 HRS, REC 200' DIST & 15" MUD.
DST 7930-50', OP 5 HRS, GAS IN 3 MIN, REC 180' SLIGH OIL;45' GC, & 360' MCW
DST 7965-70', OP 3 HRS, REC 150' MUD,
DST 7969-79', REC 30' MUD;
DST 8130-35', OP 3 HRS, REC 2340' SGA WTR

SHAMROCK OAS CO.
#1 LIGHTCAP
SEC. 13, T-8-S, R-29-E
TD: 8950'
SPUD: 11-12-50 COMP: 3-12-51

DST #1 7451-7498', OP 25", REC 3900' SALT WTR.
DST #2 8103-8124', OP 60" REC 30' MUD.
DST #3 8926-8946', OP 90" REC 442', MARCUT SALT WTR
CORE #1 8124-8144', REC 18' CONGLOMERATE & WASH SD, NO SHOW
CORE #2 8282-8302', REC 6' LM & 18' SHD
CORE #3 8861-8875', REC 13½'
BLK FOSS LS., BI.
CORE #4 8875-8896', REC 15'
BLK FOSS LS., & GRAY DOLO S
OOLITIC LIME & 9' GRAY DOLO OOLITIC LIME
CORE #5 8899-8922', REC 22½'
UPPER 16' DOLO & BASLE & 6½' DOLO.

APOCO PRODUCTION CO.
1 O'BRIEN RANCH
SEC. 25, T-8-S, R-29-E
TD: 9174'
SPUD: 12-27-80 COMP: 6-11-81

PAY ZONES: MISS 8398-8520
IP: P 345,000 CFAPD
NO TESTS OR CORES

SHAMROCK OAS CO.
#1 LIGHTCAP
SEC. 13, T-8-S, R-29-E
TD: 8950'
SPUD: 11-12-50 COMP: 3-12-51

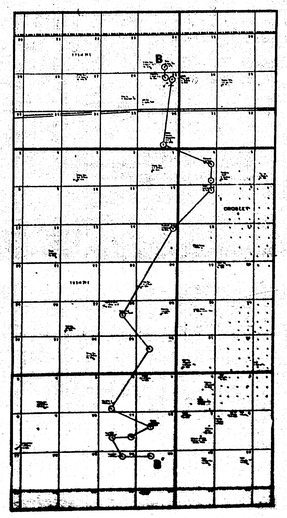
DST #1 7451-7498', OP 25", REC 3900' SALT WTR.
DST #2 8103-8124', OP 60" REC 30' MUD.
DST #3 8926-8946', OP 90" REC 442', MARCUT SALT WTR
CORE #1 8124-8144', REC 18' CONGLOMERATE & WASH SD, NO SHOW
CORE #2 8282-8302', REC 6' LM & 18' SHD
CORE #3 8861-8875', REC 13½'
BLK FOSS LS., BI.
CORE #4 8875-8896', REC 15'
BLK FOSS LS., & GRAY DOLO S
OOLITIC LIME & 9' GRAY DOLO OOLITIC LIME
CORE #5 8899-8922', REC 22½'
UPPER 16' DOLO & BASLE & 6½' DOLO.

APOCO PRODUCTION CO.
#1 STATE "AA"
SEC. 36, T-8-S, R-29-E
TD: 9300'
SPUD: 10-17-80 COMP: 7-27-81

PAY ZONES: STR, 8422-76
IP: P 3,339,000 CFAPD
NO TESTS OR CORES

TEXAS OAS CORP
#1 O'BRIEN "A"
SEC. 2, T-9-S, R-29-E
TD: 8950'
SPUD: 9-16-77 COMP: 11-19-77

PROD ZONE: (Atoka) 1/Fet 8542', PROD THRU PERFS 8542-8690'
IP: P 485 MCFPD, 40 BOPD, 800 BWPD
CASE: 5.5@8, 17#/FT, J-55 LT&C W/ DV TOOL @ 5000', CMTD W/ 1ST STAGE W/ 1000 SX, 2ND STAGE W/ 1000 SX, CIRCULATED REC 1600 CU'S
DST #1 (Atoka) 8530-8630', OP 90" REC 276' GM, (SAMPLER REC 1600 CC'S GAS) FP 2538/2587#, FP 2968, FSIP 3168/3168#
DST #2 (Atoka) 8665-8740', OP 90" REC 1,110' GCM, (SAMPLER REC 1800 CC'S GAS) FP 2986#/90", FP 275-482#, FSIP 3168/3168#
GR-NEUT #1 (Atoka) 8500-8611', OP 90", 1.5" MCF MWD, 1010 BBL/90", FP 43-53#, FSIP 1294/2 HR
PERF: 8542-8592', 8674-8690'



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B′

AMOCO PRODUCTION CO.
1 O'BRIEN RANCH
SEC. 26, T-8-S, R-29-E

AMOCO PRODUCTION CO.
#1 STATE "JA"
SEC. 36, T-8-S, R-29-E

TEXAS O & G CORP.
1 O'BRIEN
SEC. 11-9S-29E

ROGER E. CANTER
#1 O'BRIEN BROC.
SEC. 12, T-9-S, R-29-E

TEXAS O&G CORP.
#1 O'BRIEN
SEC. 11, T-9-S, R-29-E

TEXAS OIL & GAS CORP.
#1 O'BRIEN "C"
SEC. 11, T-9-S, R-29-E

TEXAS O & G CORP.
1 O'BRIEN "A"
SEC. 14-9S-29E

DEPCO, INC.
1 O'BRIEN
SEC. 13-9S-29E

ABO

WOLFCAMP

PENNSYLVANIAN

ATOKA

MISSISSIPPIAN LIME

AMOCO PRODUCTION CO.
1 O'BRIEN RANCH
SEC. 26, T-8-S, R-29-E
TD: 8174'
SPUD: 12-27-80 COMP: 9-11-81

PAY ZONE: MISS 8398-8520
IPF: F 745,000 CFGPD
NO TESTS OR CORES

AMOCO PRODUCTION CO.
#1 STATE "JA"
SEC. 36, T-8-S, R-29-E
TD: 9300'
SPUD: 10-17-80 COMP: 7-27-81

PAY ZONE: STR. 8422-76
IPF: F 2,175,000 CFGPD
NO TESTS OR CORES

TEXAS O&G CORP
#1 O'BRIEN "B"
SEC. 1, T-9-S, R-29-E
TD: 9150'
SPUD: 9-10-77 COMP: 11-19-77

PROD ZONE: (STRAWN) 1/PAY 8542',
PROD THRU PERFS 8542-8600'
IP CAOF: 423 MCFPD, 600 BPD, SALT
CAVITY 585, STRAW 2210, STRAW 40
DST #1 (CANY) 8230-8395', OP 90"
REC 570' GIP, 1540' GCM, 60' OCM (4%
GAS) 1110 SGCA/60", FP 2150, FSIP
4230/72 MIN.
DST #2 (STRAWN) 8665-8745', OP 90"
REC 180' GIP, 1080' GCM, 1440' OCM (4%
GAS) 1110 SGCA/60", FP 575-4829, FSIP
3180#/72 MIN.
DST #3 (STRAWN) 8500-8611', OP
90", REC 60' MUD, 1110 SGCA/60', FP
43-430, FSIP 1290/72 MIN
PERF: 8542-8588', 8674-8680'

ROGER E. CANTER
#1 O'BRIEN BROC.
SEC. 12, T-9-S, R-29-E
TD: 9050'
SPUD: 7-28-77 COMP: 9-19-77

TEXAS O&G CORP.
#1 O'BRIEN
SEC. 11, T-9-S, R-29-E
TD: 9100'
SPUD: 5-6-77 COMP: 6-9-77

PROD ZONE: (STRAWN) 1/PAY 8708'
PROD THRU PERFS: 8708-8730'
IP CAOF 5,266,000 CFGPD, 600 BPD,
GRAV (Gas) 585, STRAW NO, STRAW NO
DST #2 7672-7795', OP 90" REC 505'
GCM & 2025' MW, 1110 5262/60"; FP
2563-2897#, FSIP 5262#/2 HRS.
DST #3 (CANY) 8382-8420', OP 60"
REC 90' MW, 1110 2014/60"; FP 57-529
FSIP 864/60"
DST #4 (STRAWN) 8660-8730', OP 90"

TEXAS OIL & GAS CORP.
#1 O'BRIEN "C"
SEC. 11, T-9-S, R-29-E
TD: 9200'
SPUD: 6-13-77 COMP: 11-19-77

PROD ZONE: (STRAWN) 1/PAY 8632'
PROD THRU PERF 8655-8950'
IPF: 3Mo MCF 1/8" Ck, SALT WR.
CP PSI, TP 942,
DST #1 (STRAWN) 8570-8785', OP 105"
REC 942' SLI OCM, PRESS WR

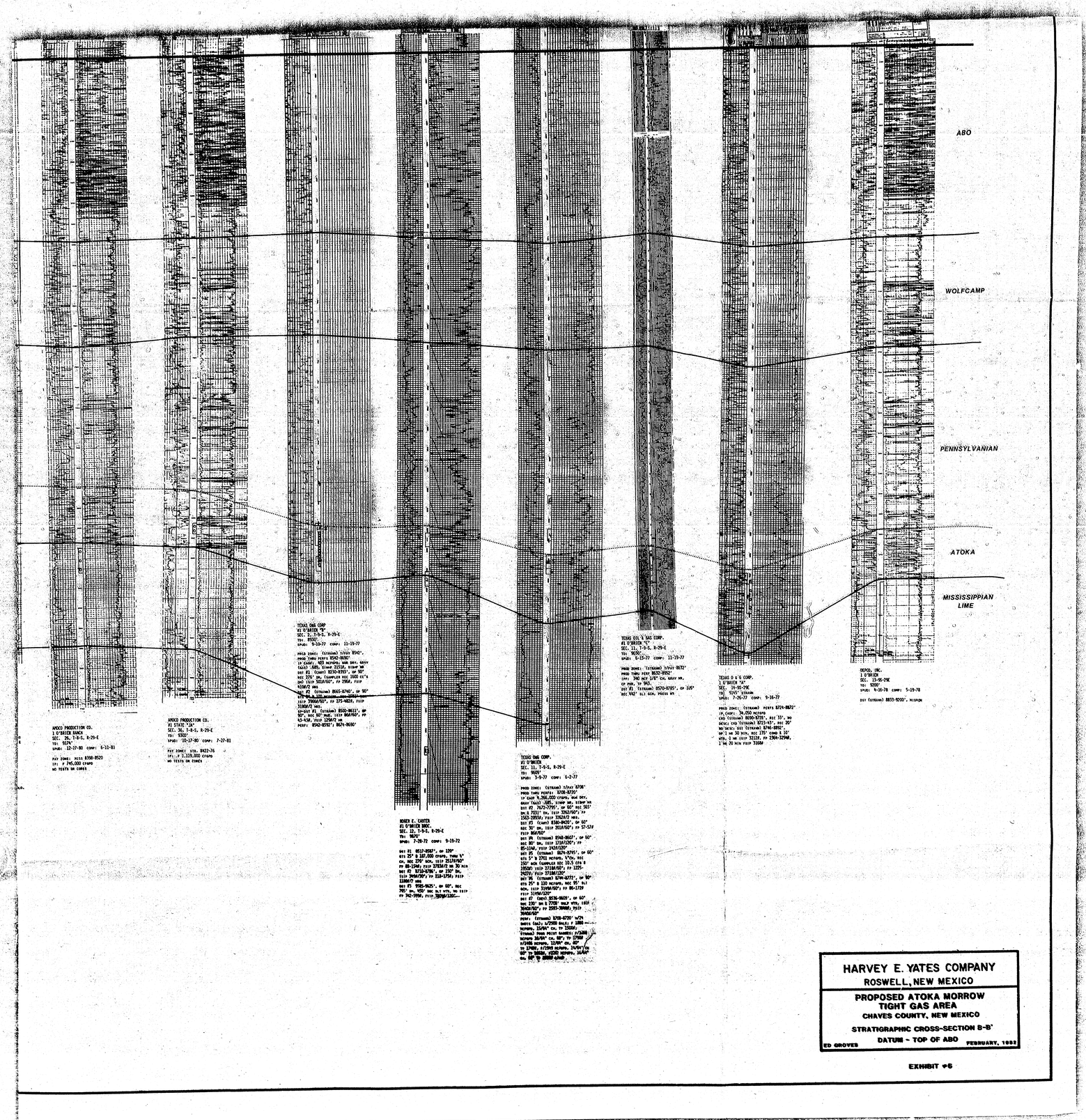
TEXAS O & G CORP.
1 O'BRIEN "A"
SEC. 14-9S-29E
TD: 9195' STRAWN
SPUD: 7-26-77 COMP: 9-16-77

PROD ZONE: (STRAWN) PERFS 8724-8872'
IP CAOF: 34,050 MCFGPD
CAB (STRAWN) 8690-8728'; SEC 33', NO
DENS; CNS (STRAWN) 8723-43', SEC 28'
NO DESC; DST (STRAWN) 8746-8892',
OP 1 HR 30 MIN, REC 175' CHWM & 16'
WTR, 1 HR FSIP 3112#, FP 2304-3296#,
2 HR 20 MIN FSIP 3168#

DEPCO, INC.
1 O'BRIEN
SEC. 13-9S-29E
TD: 9200'
SPUD: 9-16-78 COMP: 5-19-78

DST (STRAWN) 8833-9200', MINOR

V.P.A.C.F. MICROGRAPHICS
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HARVEY E. YATES COMPANY
ROSWELL, NEW MEXICO

PROPOSED ATOKA MORROW TIGHT GAS AREA
CHAVES COUNTY, NEW MEXICO

STRATIGRAPHIC CROSS-SECTION B-B'
DATUM - TOP OF ABO

ED GROVES — FEBRUARY, 1982

EXHIBIT #6

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C
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C′
S

CLEARY PET.
THELMA CROSBY "22"
SEC. 22, T-7-S, R-30-E

GULF OIL CORP.
#1 JENNINGS
SEC. 5, T-8-S, R-30-E

MAGNOLIA PET. CO.
#1 BURT-FEDERAL
SEC. 5, T-8-S, R-30-E

COQUINA OIL CORP.
#1 SHELL "A" FED.
SEC. 27, T-8-S, R-30-E

PAN AMERICAN PET.
#1 WHITE FEDERAL
SEC. 13, T-9-S, R-30-E

DATUM - T/ABO

DATUM -T/ABO

ABO

WOLFCAMP

PENNSYLVANIAN

MISSISSIPPIAN LIME

ATOKA

MISSISSIPPIAN LIME

ATOKA

CLEARY PET.
THELMA CROSBY "22"
SEC. 22, T-7-S, R-30-E
TD: 9000
SPUD: 12-16-77 COMP: 2-16-78

DST #3 8240-8346, op 60", s/270' ga, 30"/285, rw700-2000#, 120"/285 si/RWB-ONEDA, rec 2-16-78

GULF OIL CORP.
#1 JENNINGS
SEC. 5, T-8-S, R-30-E
TD: 8350'
SPUD: 8-19-50 COMP: 9-21-50

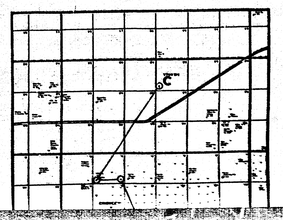
DST #2 7086-7120', op 2 hrs GAS in 30", rec 120' GCM, sip 3900# ff 300#, 15" sip 4000#
DST #3 7135-40', op 2 hrs, GAS in 23 min, rec 186' GCM & 300' OIL cut WTR, 186 OIL & 560' oil cut WTR, sip 4075#, ff 400#, 15 min sip 3900#
DST #4 7929-60', op 1 hr, SLI BLOW AIR THROUT, REC 90' MUD NO WATER, NO SHOW
DST #5 7994-97', op 1 hr, REC 7000' FLUID 8/7' WTR & mcfd 6176' GA, WTR, ip 3750# DST #6 8199-8230', op 1 hr, 5" MUD, NO
CORE #1 7120-40'
CORE #2 7937-95'
CORE #3 7995-60'
CORE #4 8061-76'
CORE #5 8111-26'

MAGNOLIA PET. CO.
#1 BURT-FEDERAL
SEC. 5, T-8-S, R-30-E
TD: 8055'
SPUD: 9-29-52 COMP: 8-11-52

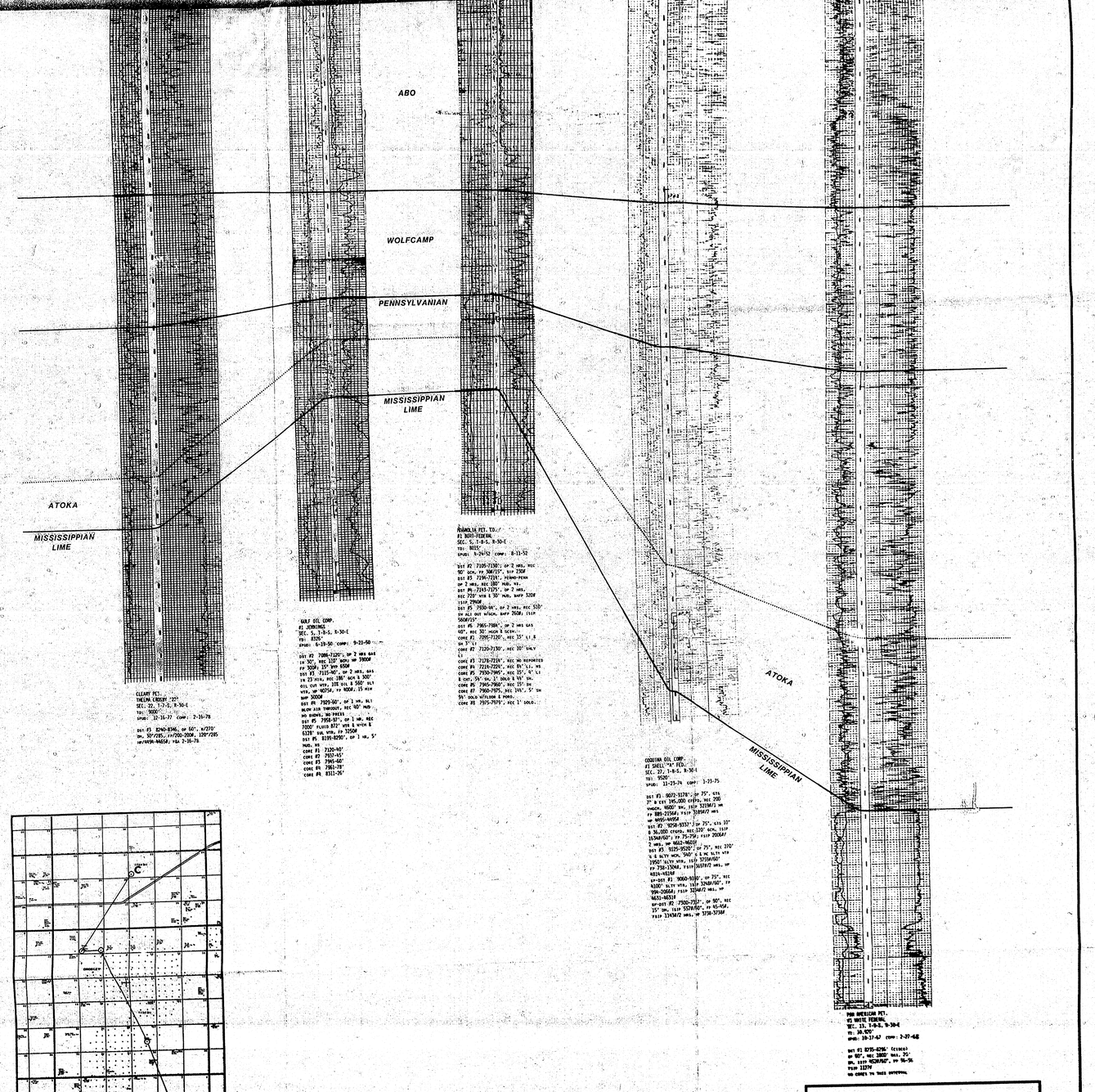
DST #2 7105-7150', op 2 hrs, REC 90' GCM, ip 300#/15", sip 2700
DST #3 7196-7214', RIBBO-FLOW OP 2 HRS, REC 180' MUD, SL. GAS
DST #4 7353-7375', op 2 HRS, REC 720' WTR & 30' MUD, SHUT 3200 sip 2700#
DST #5 7930-94', op 2 HRS, REC 510' SW ALL BUT WTRCH, SHUT 2500, sip 3600/15"
DST #6 7965-7984', op 2 HRS GAS 90", REC 30' MCGM & GCM.
CORE #1 7095-7120', REC 15' LI & SH S/ LI
CORE #2 7120-7150', REC 10' SH/L LI
CORE #3 7178-7214', REC NO RECOVERY
CORE #4 7218-7250', REC 8' LI/ SI
CORE #5 7930-7949', REC 15', 6' LI & CHT, 5' SH, 1' DOLO & 8" SH.
CORE #6 7965-7980', REC 15' SH
CORE #7 7980-7975, REC 195', 5' SH 5' DOLO W/VUGGY & POR.
CORE #8 7975-7975', REC 1' DOLO.

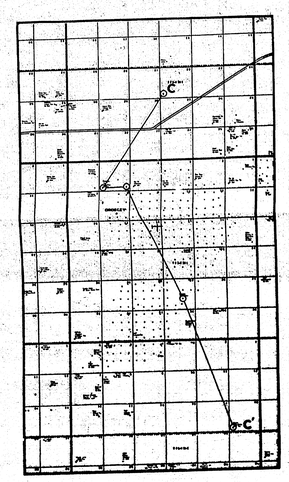
COQUINA OIL CORP.
#1 SHELL "A" FED.
SEC. 27, T-8-S, R-30-E
TD: 9520'
SPUD: 11-25-74 COMP: 1-31-75

DST #1 9007-9101', op 75', GTS 75" & GIS 105,000 cf/d, REC 200 mud+ 4680' SW, FSIP 3279#/1 HR FF 899-2156#; FSIP 3279#/7 HRS SW 9095-9052
DST #2 9258-9333', op 75', GTS 15" & 36,000 cf/d, REC 170' MCW, FSIP 3630#/60', ip 75-754; FSIP 3900#/ 2 HRS, SW 4663-4680
DST #3 9325-9520', op 75', REC 270' GIP & 5 BLTV MCW, 540' + 6 BL SLTY WTR 1950' SLTY WTR, FSIP 3750#/60" FF 738-1509#, FSIP 3657#/2 HRS, SW 4624-4623#
DST #3 9060-9100', op 75", REC 4200' SLTY WTR, FSIP 3240#/60", FF 709-2504#, FSIP 3254#/2 HRS, SW 4631-4632'
DST #4 9302 7380-7525', op 90", REC 35' SW, FSIP 3529/60", FF 99-459, FSIP 3243#/2 HRS, SW 5798-5798'



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D

D'

HUMBLE OIL & REFG. COMPANY
#1 RAILROAD MOUNTAIN UNIT
SEC. 8-8S-31E

PENZOIL UNITED
#1-33 PUBCO FED.
SEC. 33, T-8-S, R-31-E

NORTEX GAS & OIL CO.
1 BOUNTY "9" FEDERAL
SEC. 9-9S-31E

MARALO, INC.
#2 CHAVALEA-CARSON
SEC. 16, T-9-S, R-31-E

DATUM - T/ABO

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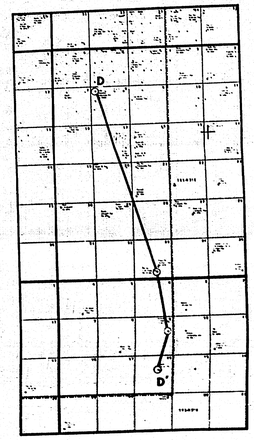
WOLFCAMP

PENNSYLVANIAN

ATOKA

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PRE-MISS DOLOMITE



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PRE-MISS DOLOMITE

HUMBLE OIL & REFG. COMPANY
#1 RAILROAD MOUNTAIN UNIT
SEC. 8-8S-31E
TD: 10,382'
SPUD: 3-7-57 COMP: 6-7-57

IP: None
DST 9230-64', OP 15 MIN. REC 30' SLI GCM, FP 85#, ISIP 850/30 MIN; DST 10,278-382', OP 45 MIN. REC 975' MUD & PARS' GC, FP 3650-4150#, ISIP 4360/30 Min.

PENCO OIL UNITED
#1-31 PUNCO FED.
SEC. 31, T-8-S, R-31-E
TD: 10,652'
SPUD: 7-19-68 COMP: 10-15-68

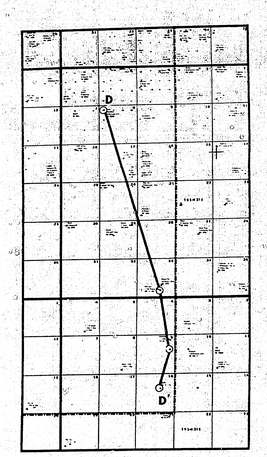
PROD. ZONE (Penn) 9764-9928'
PROD THRU PERFS 9526-36'.
IPCAOF: 7,065,000 CFGPD, MAX RR
RDB 97,426-1 IP 2605-1370#
DST #2 8510-8571' OP 3 HRS, SI1/ 5" & 1,700,000 CFGPD, REC 947' SOCM & 200' SLY HYD, ISIP 3411#/50" FP 346-495#/ FISIP 3273#/3 HRS
DST #3 8581-8665', OP 4 HRS SI1#/15", 15TM, REC 124' SOCM, ISIP 1258#/50", FP 73-71#, FISIP 2757#/3 HR
DST #4 8946-9746', OP 2 HRS, GOOD BLOW, NO RTS, REC 50' MUD, NO, ISIP 2756#/1 HR; FP 1E-46#, FISIP 4134#/3 HR
DST #5 9508-9595', OP 60", WK BLO B BLED, REC 5' MUD ISIP 924/60" FP 68-68#, FISIP 1577/3 HRS
DST #6 10,596-10,622', OP 4 HR & 5 MIN, REC 180' HO-HOCM W111, 80' OF & 1942' SOM W111 10500/90"; FP 425-462#, FISIP 4138-3 HR.
PBMD: 10,596', PET PBD 10,456', W/500 GALS: 5#/GE OF INH W/BLS IN 6HRS
PERF: Cisco 8508-8536', A/500 GALS W/ PKR 6277'; F/88 BF, 30E BJ111/25 HR 24/64" Ck, GP 1,111,000 CFPD, FP 1500, BH W/5000 GALS: F/25 BLW/ 2 HR. 38/64" Ck.

MORTEX GAS & OIL CO.
J BONNIE "S" FEDERAL
SEC. 9-9S-31E
TD: 10,539'
SPUD: 7-7-81 COMP: 8-15-81

NO TESTS OR CORES

MANLO, INC.
#2 CHAVALEA-CARSON
SEC. 16, T-9-S, R-31-E
TD: 10,570'
SPUD: 8-21-77 COMP: 11-20-77

DST #1 (Hermosa) 9950-10,118', OP 1 HR 45 MIN, REC 120' MUD, 1510 2234/50"; FP 253-335#; FISIP 3914# 1 HRS; HP 5977-5972#; BHT 160° DST #2 (Hermosa) 10,115-343', MIS-RUN REC'D Flow.



HARVEY E. YATES COMPANY
ROSWELL, NEW MEXICO

PROPOSED ATOKA MORROW
TIGHT GAS AREA
CHAVES COUNTY, NEW MEXICO
STRATIGRAPHIC CROSS-SECTION D-D'
DATUM - TOP OF ABO

ED GROVES FEBRUARY, 1982

EXHIBIT #8

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