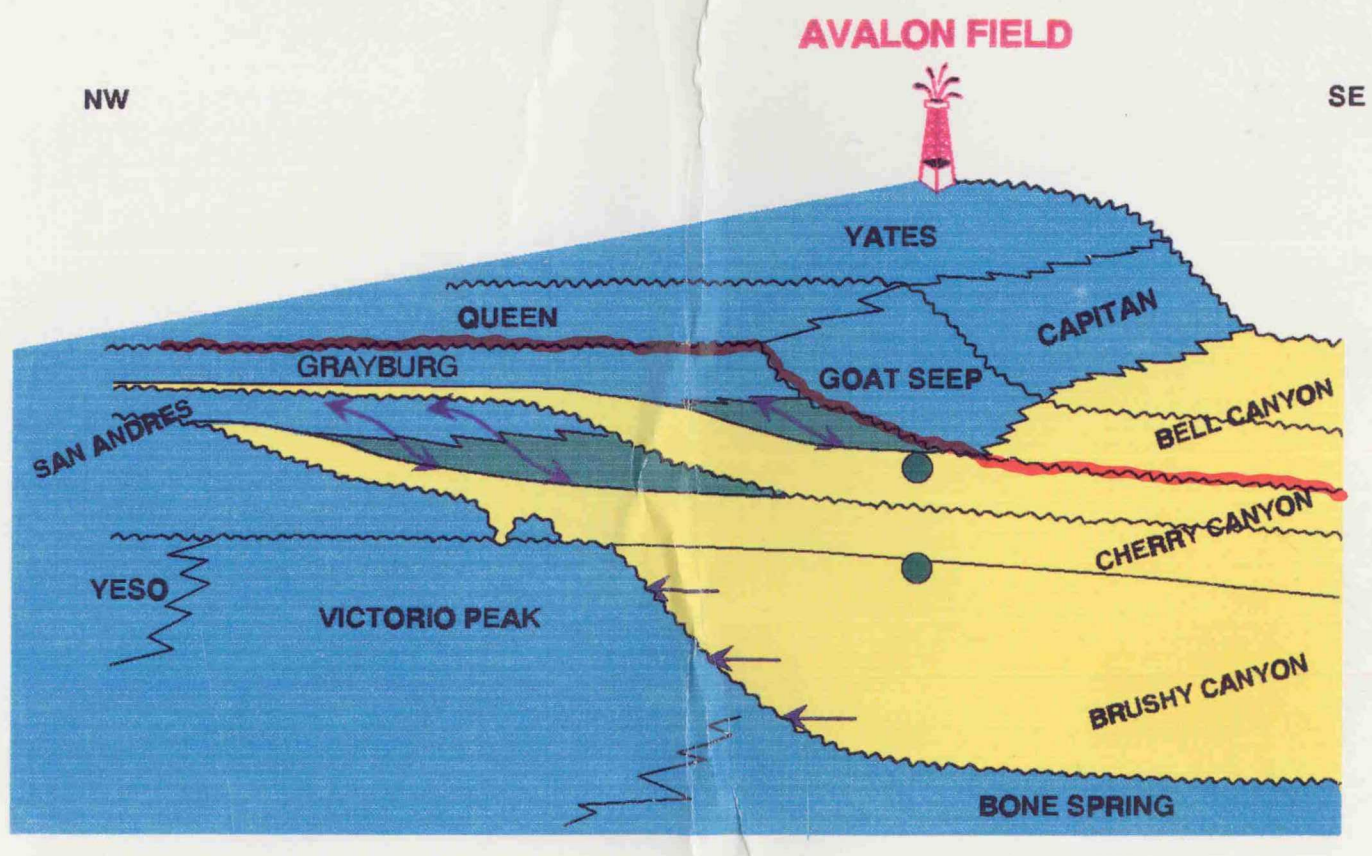
AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

REPORT OF THE TECHNICAL COMMITTEE FOR THE WORKING INTEREST OWNERS

VOLUME II - MAPS AND CROSS SECTIONS



EXXON COMPANY, USA

SOUTHWESTERN PRODUCTION DIVISION
RESERVOIR TECHNOLOGY GROUP

AUGUST, 1992

Exhibit No. 10
Exxon Corporation
NMOCD Cases 11297 & 1129
Hearing Date: June 29, 1995
Volume II

AVALON (DELAWARE) FIELD

Eddy County, New Mexico

REPORT OF THE TECHNICAL COMMITTEE FOR THE WORKING INTEREST OWNERS

VOLUME II - TEXT AND EXHIBITS

With Contributions By:

G. G. Beuhler
T. W. Brannon
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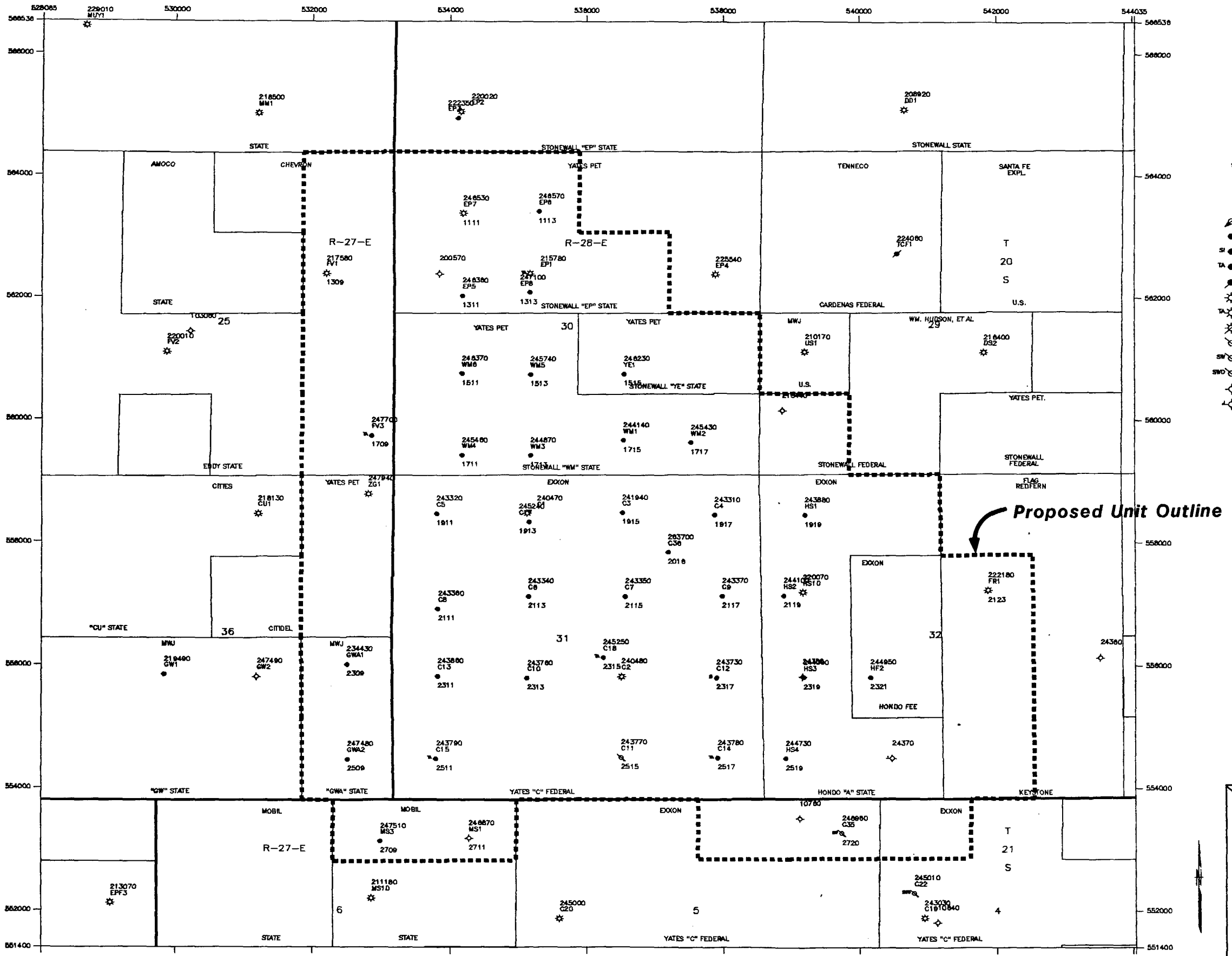
F. M. Haynes
T. V. Kane
R. M. Stuart

August 1992

VOLUME II - MAPS ANDS CROSS SECTIONS

AVALON (DELAWARE) FIELD BASEMAP



WELL STATUS SYMBOL LEGEND

- UNDEFINED
- PRODUCING OIL WELL
- SI SHUT IN OIL WELL
- TA TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TA TEMPORARILY ABANDONED GAS WELL
- ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SW SALT WATER INJECTION WELL
- SWD SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

Map 1

EXXON COMPANY USA

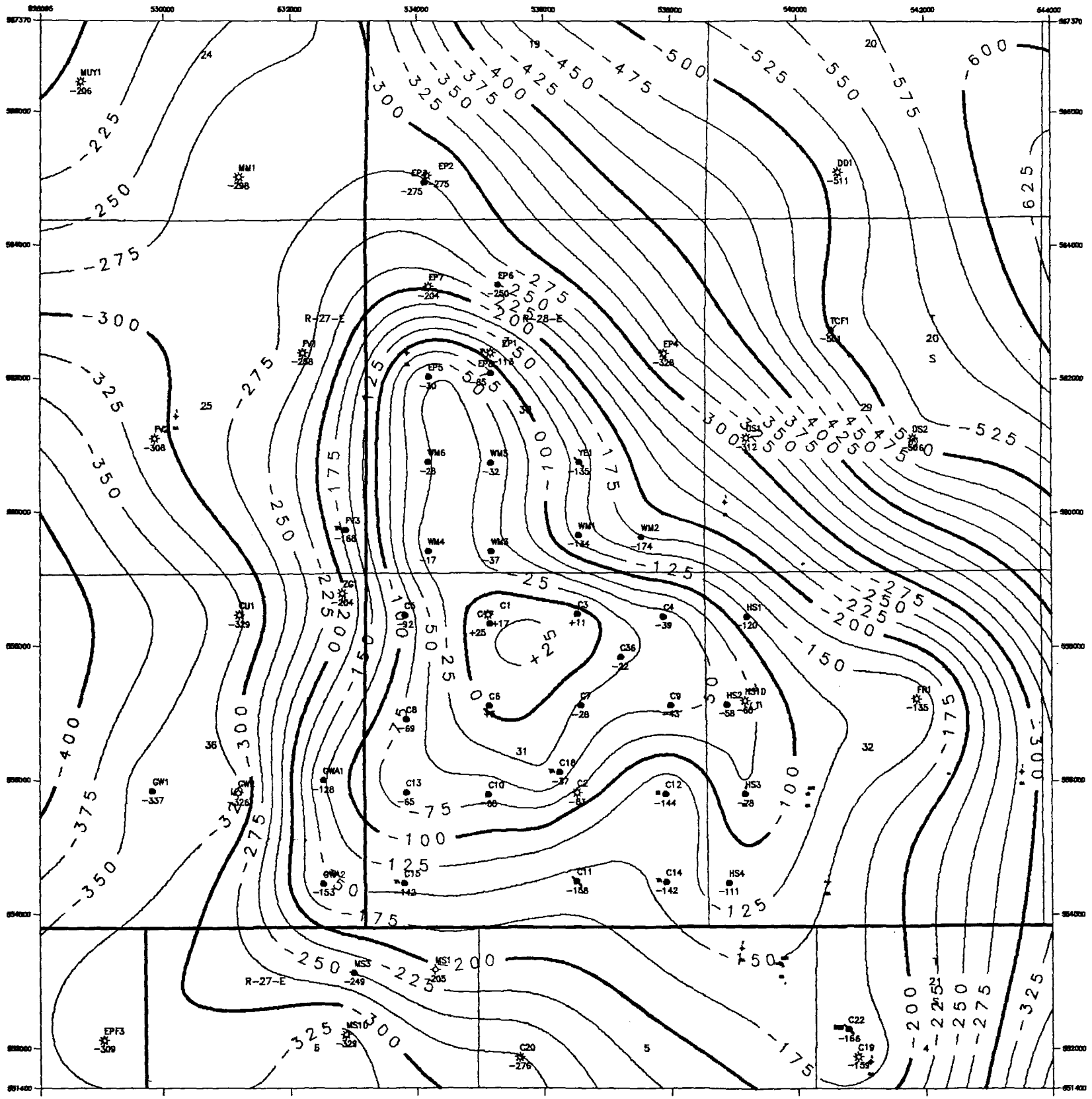
PRODUCTION DEPARTMENT - SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP

BASE MAP
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
API REFNOS, WELLIDS AND NEW WELL NUMBERS
ARE ANNOTATED AT EACH WELL SPOT

0 1000 2000 FEET SCALE=1000 FEET/INCH

D.L. CANTRELL AUGUST 18, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Top Reservoir (LCHT)



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

COMMENT CODE LEGEND

NA : PICK NOT AVAILABLE

Map 2

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

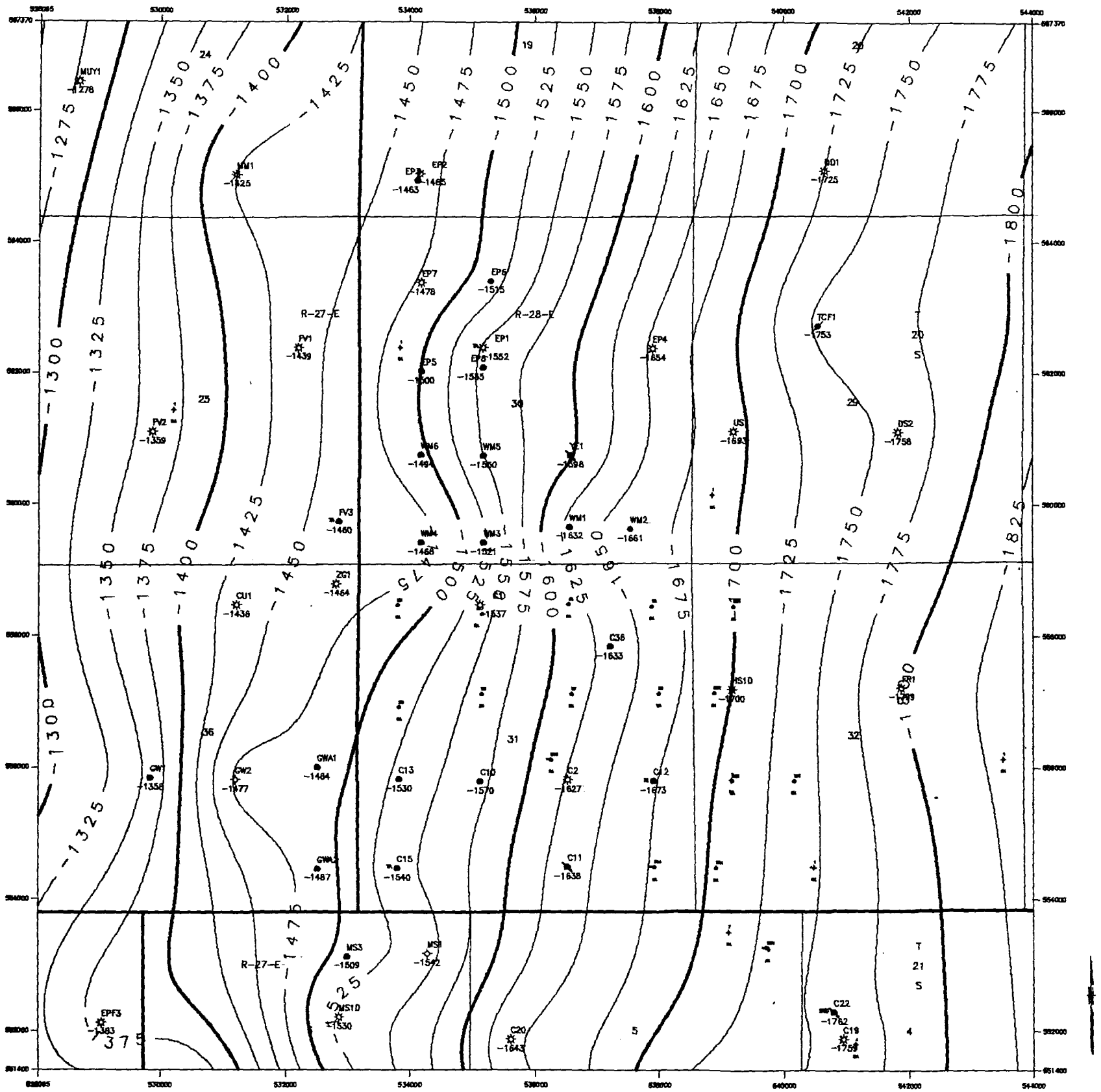
STRUCTURE (FT) MAP, DATUM = MSL

LOWER CHERRY CANYON TOP
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CINT=25 GMT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL DWYRELL, TV HAWE | JULY 30, 1992

TOP BONE SPRING - Base Delaware (BSPG)



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

COMMENT CODE LEGEND

NA : PICK NOT AVAILABLE

Map 3

EXXON COMPANY USA

PRODUCTION DEPARTMENT - SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP - GEOLOGY

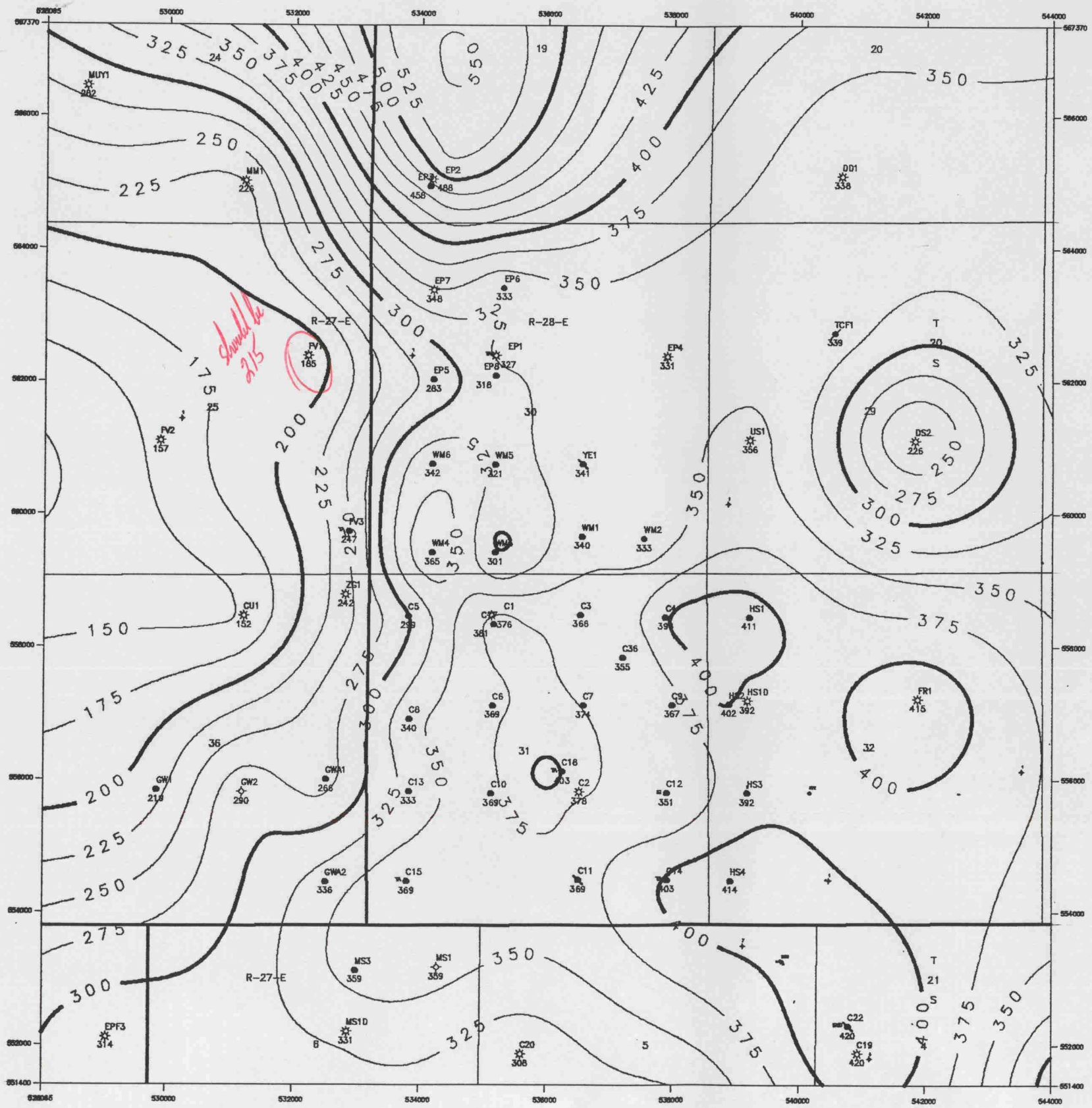
STRUCTURE (FT) MAP, DATUM = MSL

BONE SPRINGS TOP
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

0 1000 2000 FEET CINT=25 CINT=400 SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV WAKE JULY 29, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Gross Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 4

EXXON COMPANY USA

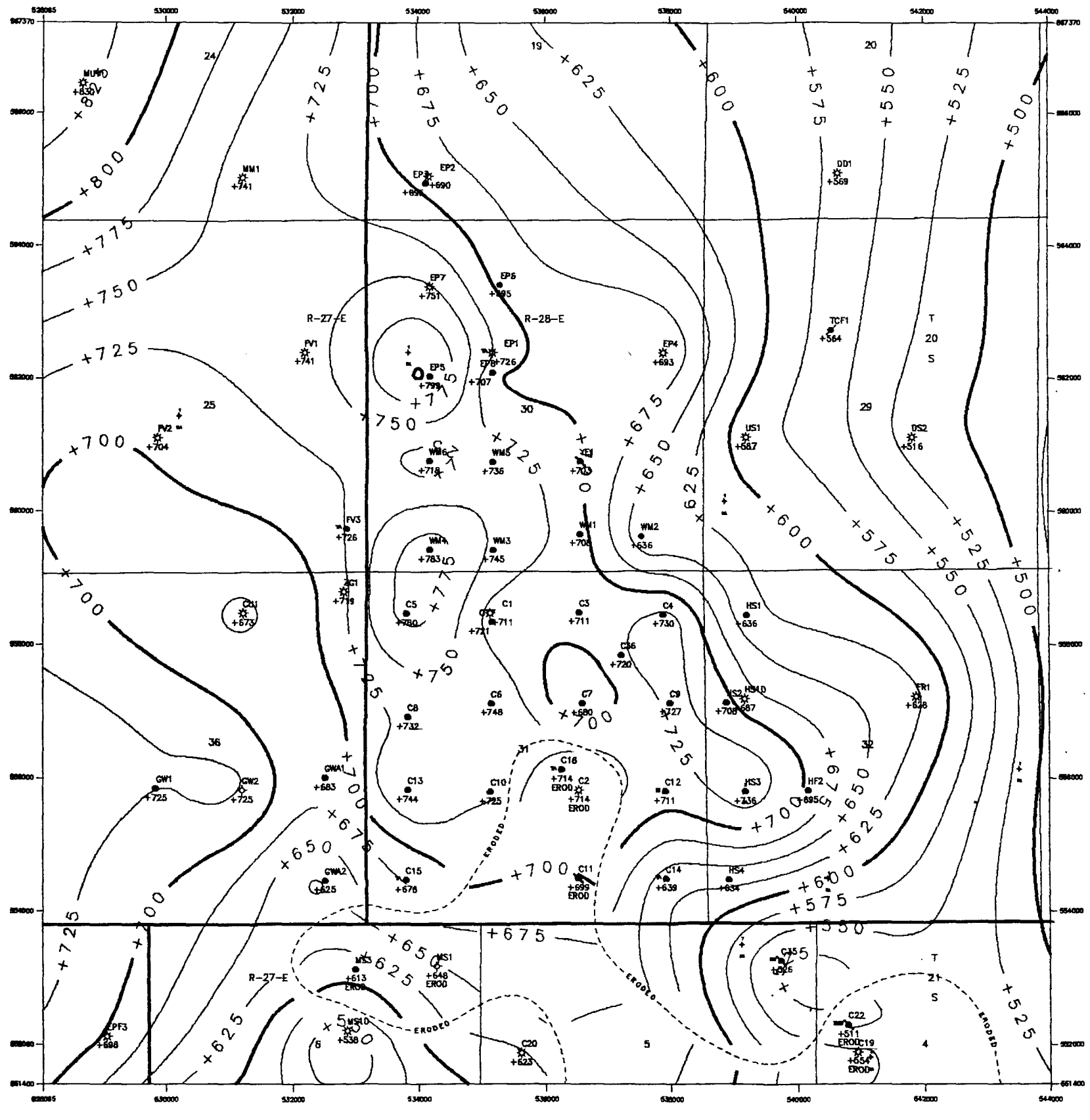
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL GROSS THICKNESS MAP
AMALGAMATION OF ZONES LCBT BTBM BMBB
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLID, THICKNESS (FT)

0 1000 2000 FEET — CINT=25 GINT=400 SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE — JULY 30, 1982

UPPER CHERRY CANYON - Top Reservoir (UCH-DLS)



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

COMMENT CODE LEGEND

EROD : PICK MISSING DUE TO EROSION, DEPTH OF UNCONFORMITY POSTED
NA : PICK NOT AVAILABLE

Map 5

EXXON COMPANY USA

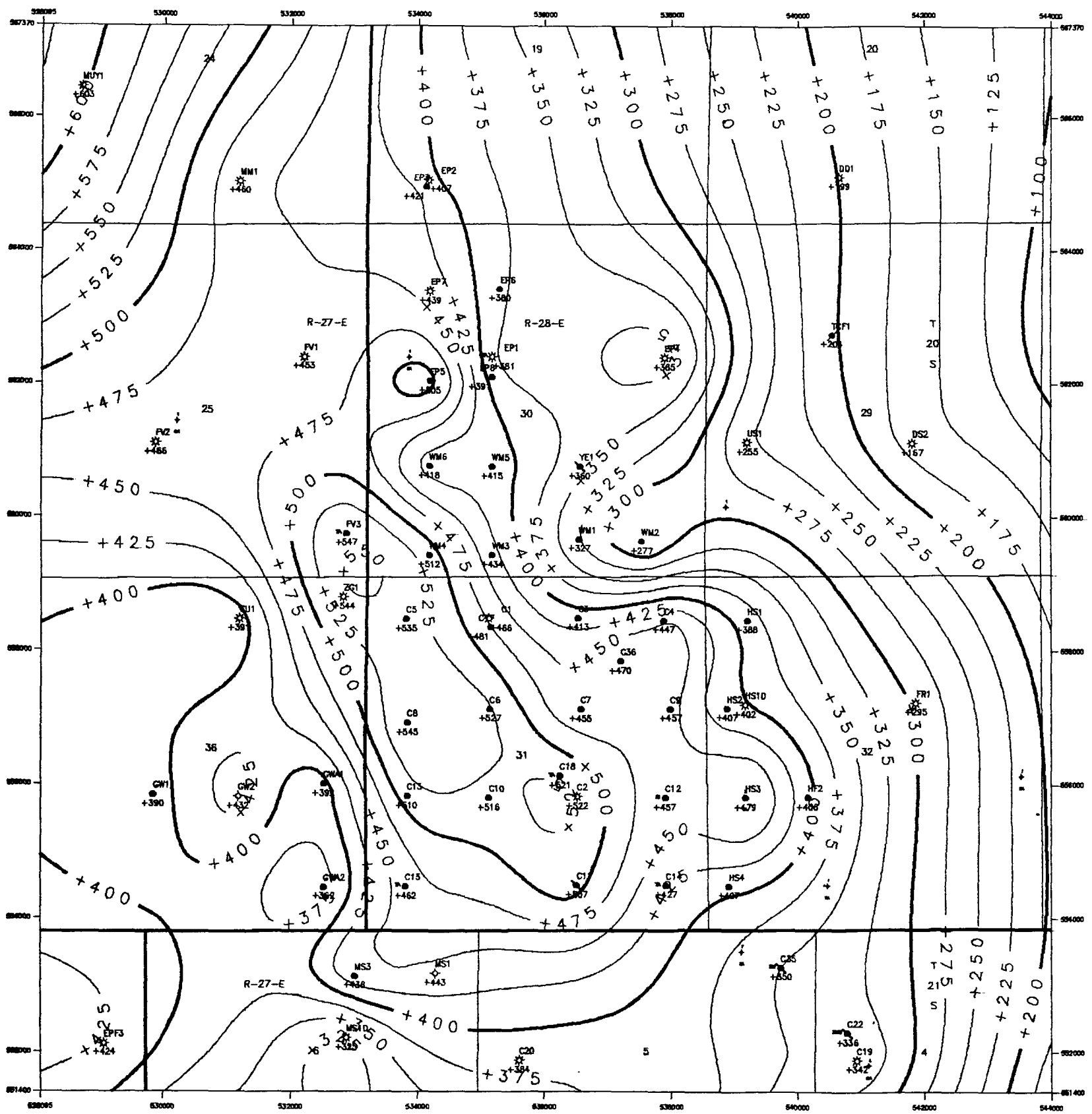
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURE (FT) MAP, DATUM = MSL
UPPER CHERRY CANYON DOWNLAP SURFACE
CONTOURS INSIDE ERODED AREAS ARE BASE OF GOAT SEEP REEF
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

0 1000 2000 FEET CINT=25 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE — JULY 29, 1992

UPPER CHERRY CANYON - Base Reservoir (UCHB)



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

COMMENT CODE LEGEND

NA : PICK NOT AVAILABLE

Map 6

EXXON COMPANY USA

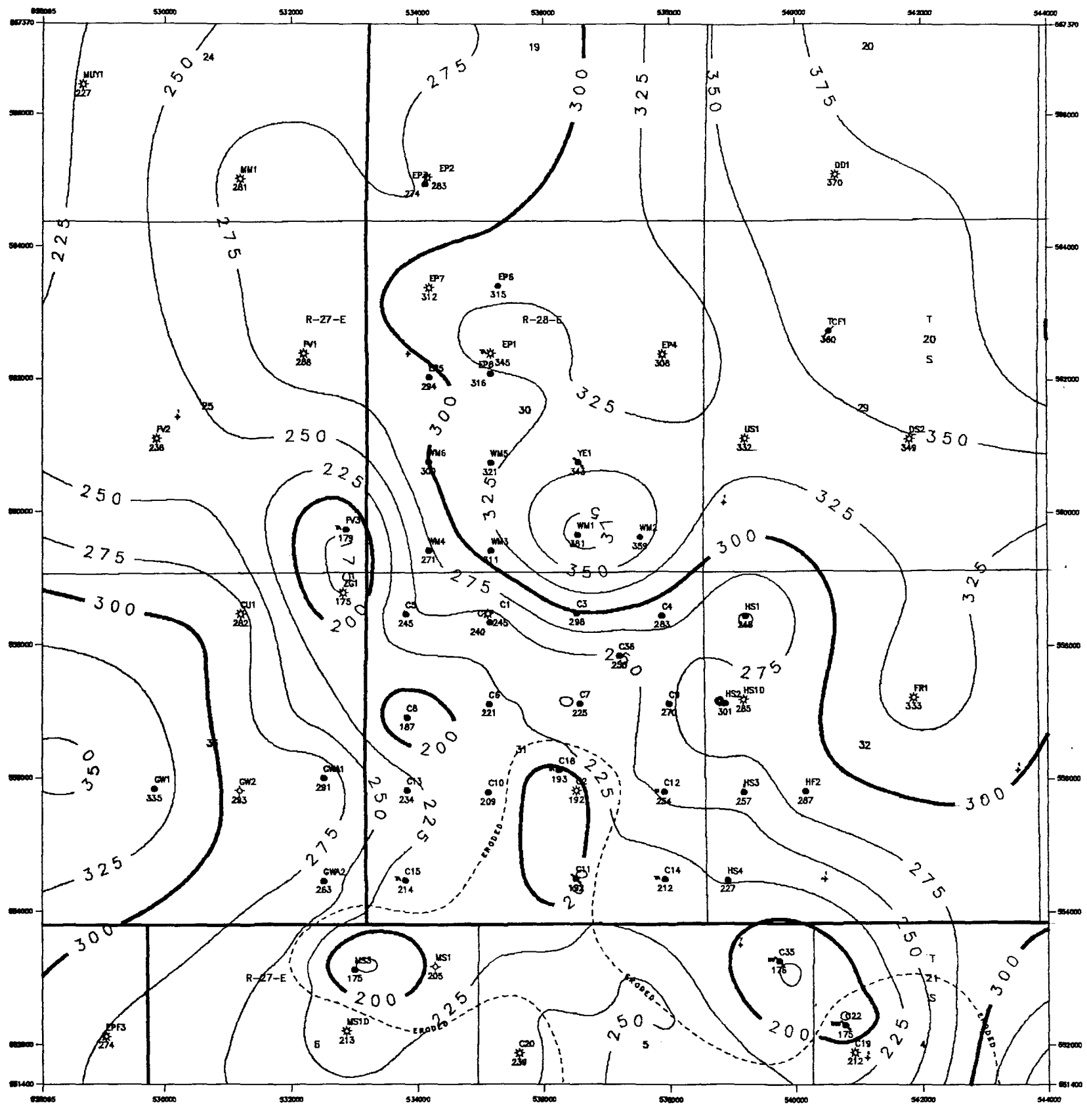
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURE (FT) MAP, DATUM = MSL
UPPER CHERRY CANYON BASE
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CINT=25 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV HANE — JULY 29, 1982

UPPER CHERRY CANYON - Gross Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 7

EXXON COMPANY USA

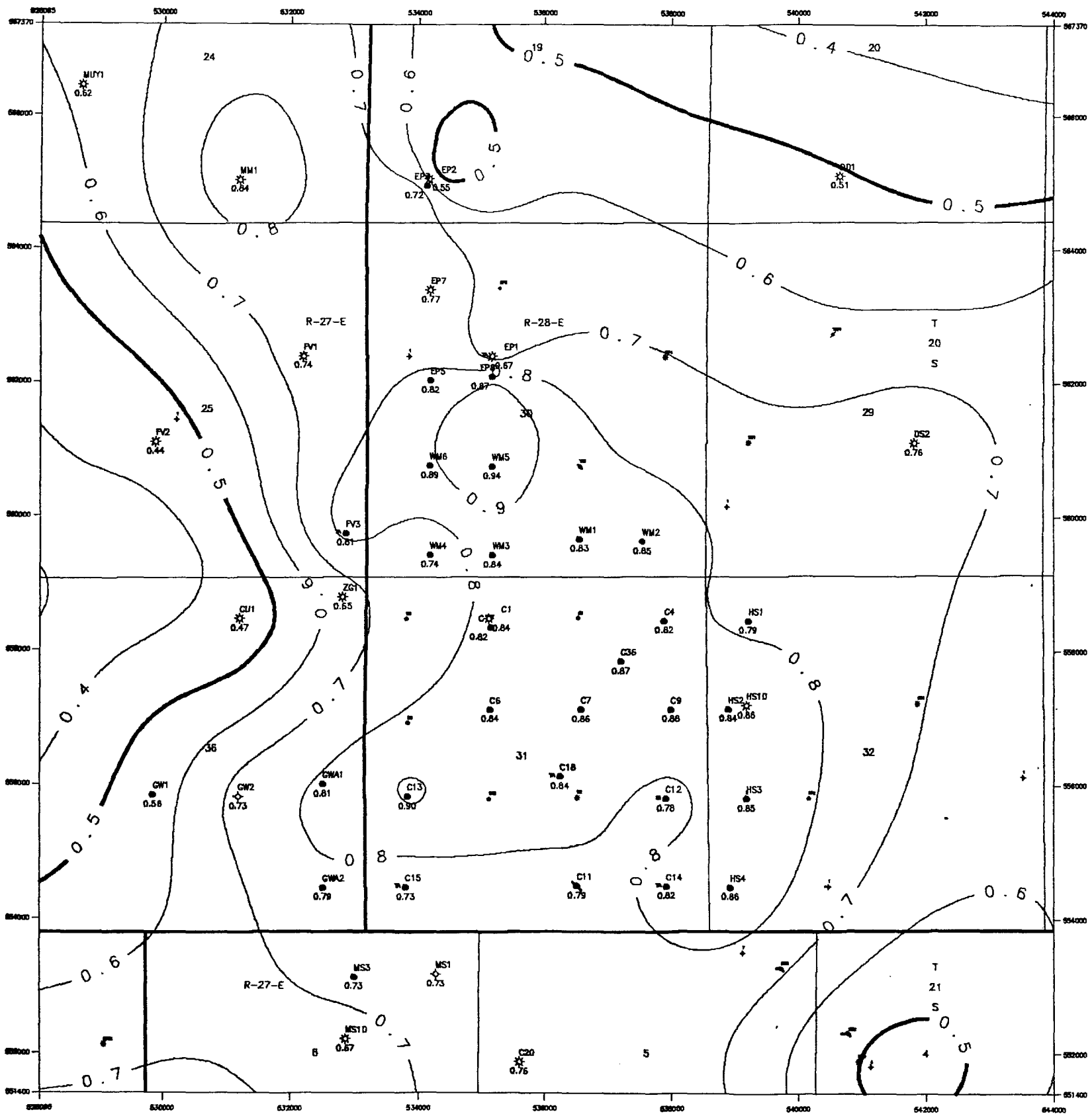
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL GROSS THICKNESS MAP
AMALGAMATION OF ZONES CCCM CMCB
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLID, THICKNESS (FT)

0 1000 2000 FEET
CINT=25 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL DANTRELL, TV KANE | JULY 29, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Net To Gross Ratio



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 8

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

AVERAGE NET TO GROSS RATIO MAP

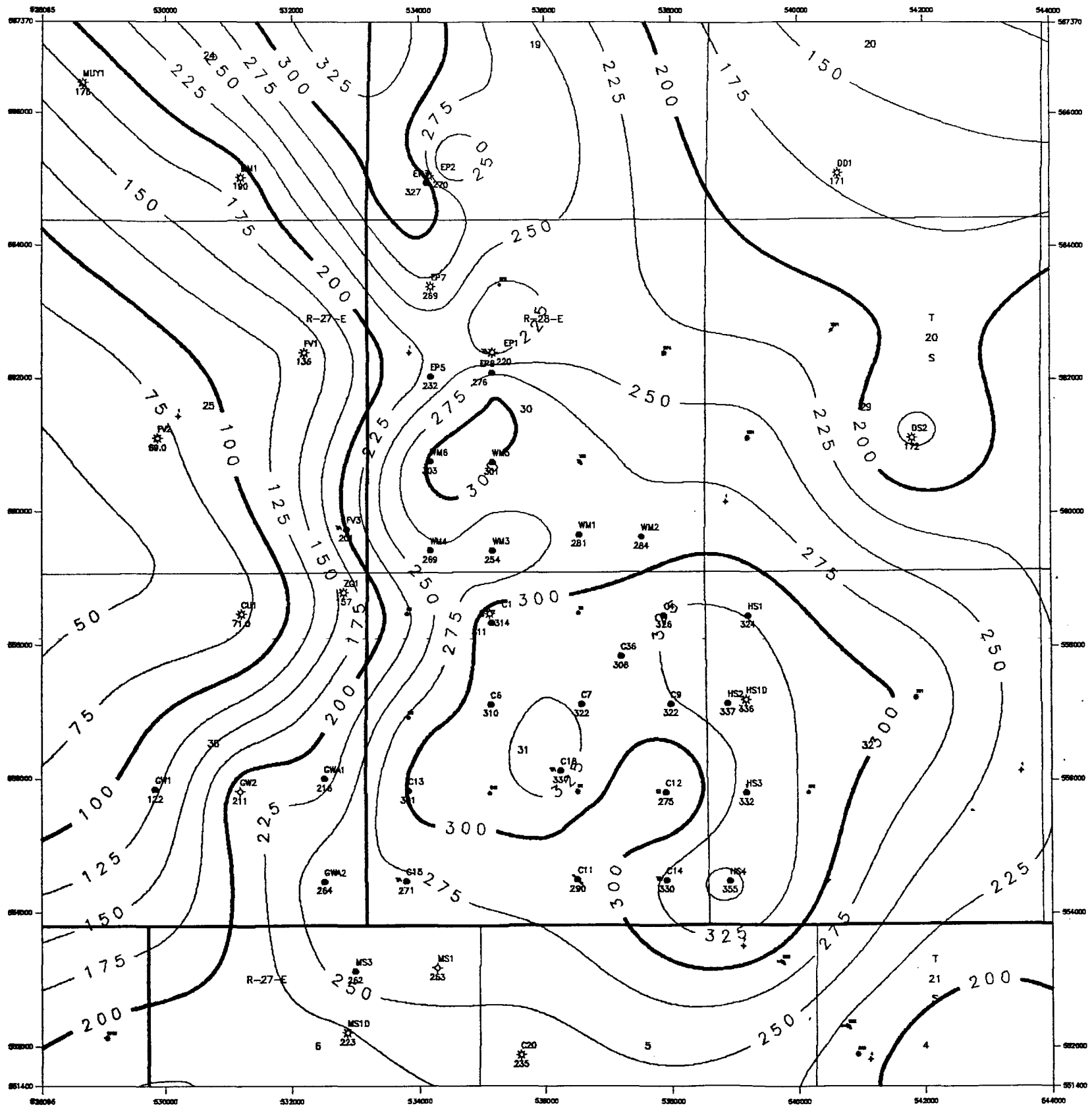
[illegible]

AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
[illegible] WELLS, [illegible]

0 1000 FEET — CINT=0.100000000 CINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE — AUGUST 4, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Net Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 9

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

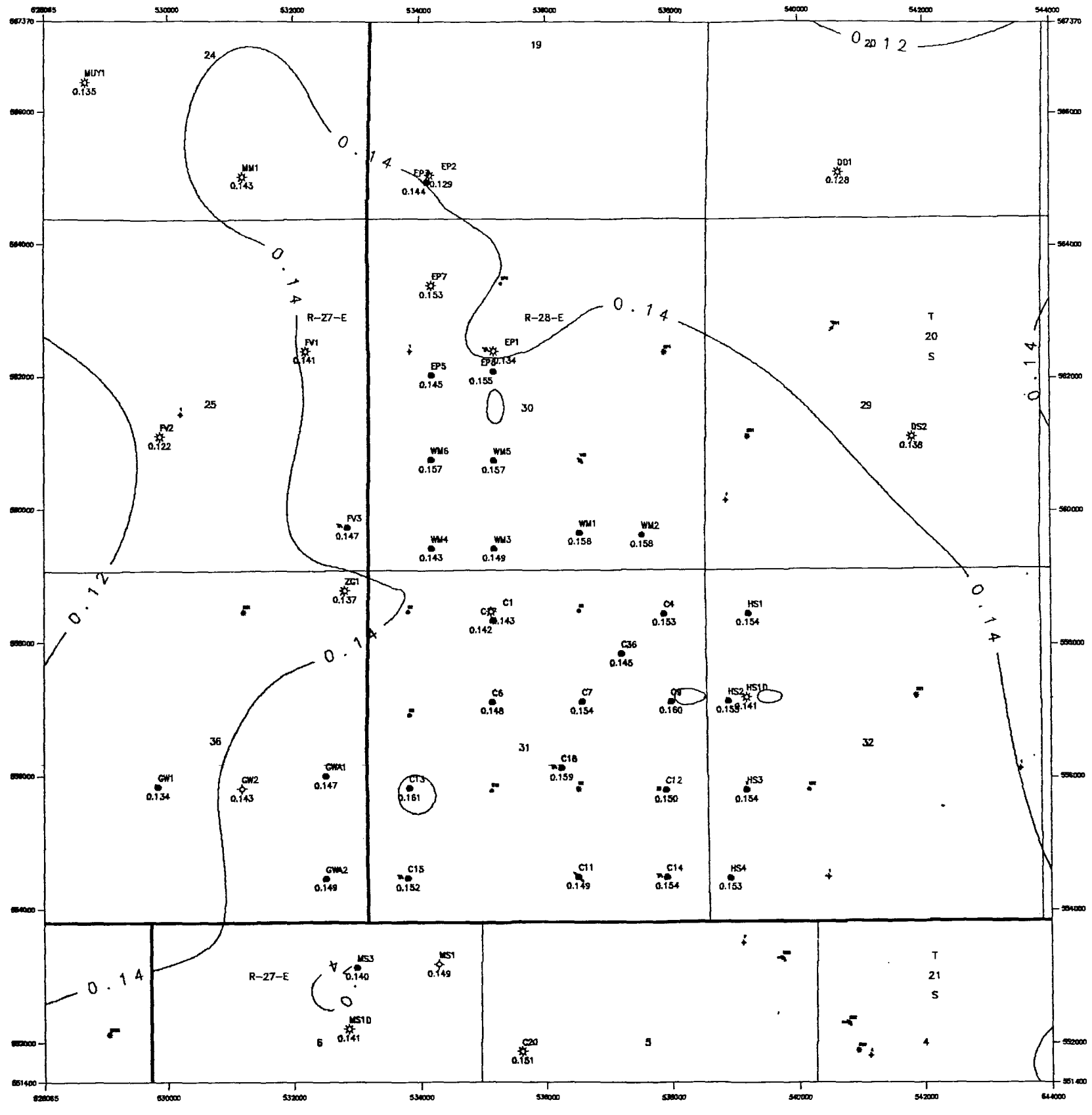
TOTAL NET THICKNESS MAP

UPPER CHERRY: PHI = .10 AND OR = 75, SWIRR = .229
UPPER BRUSHY: PHI = .11 AND OR = 75, SWIRR = .200
AMALGAMATION OF ZONES LOST BRUSHY
AVALON DELAWARE FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLS, THICKNESS (FT)

0 1000 2000 FEET CINT=25 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 4, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Average Porosity



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 10

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

AVERAGE NET AVERAGE POROSITY MAP

ONE – METR.

UPPER CHERRY: PH = .10 AND SR = .75, SWRR = .219

UPPER BRUSHY: PH = .11 AND SR = .75, SWRR = .204

ANALAMARCH OF 1 DEG LOST TRIM BASIS

AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

ANNOTATING BELUS, DECIMAL POROSITY

CINT=0.020000000 GINT=400

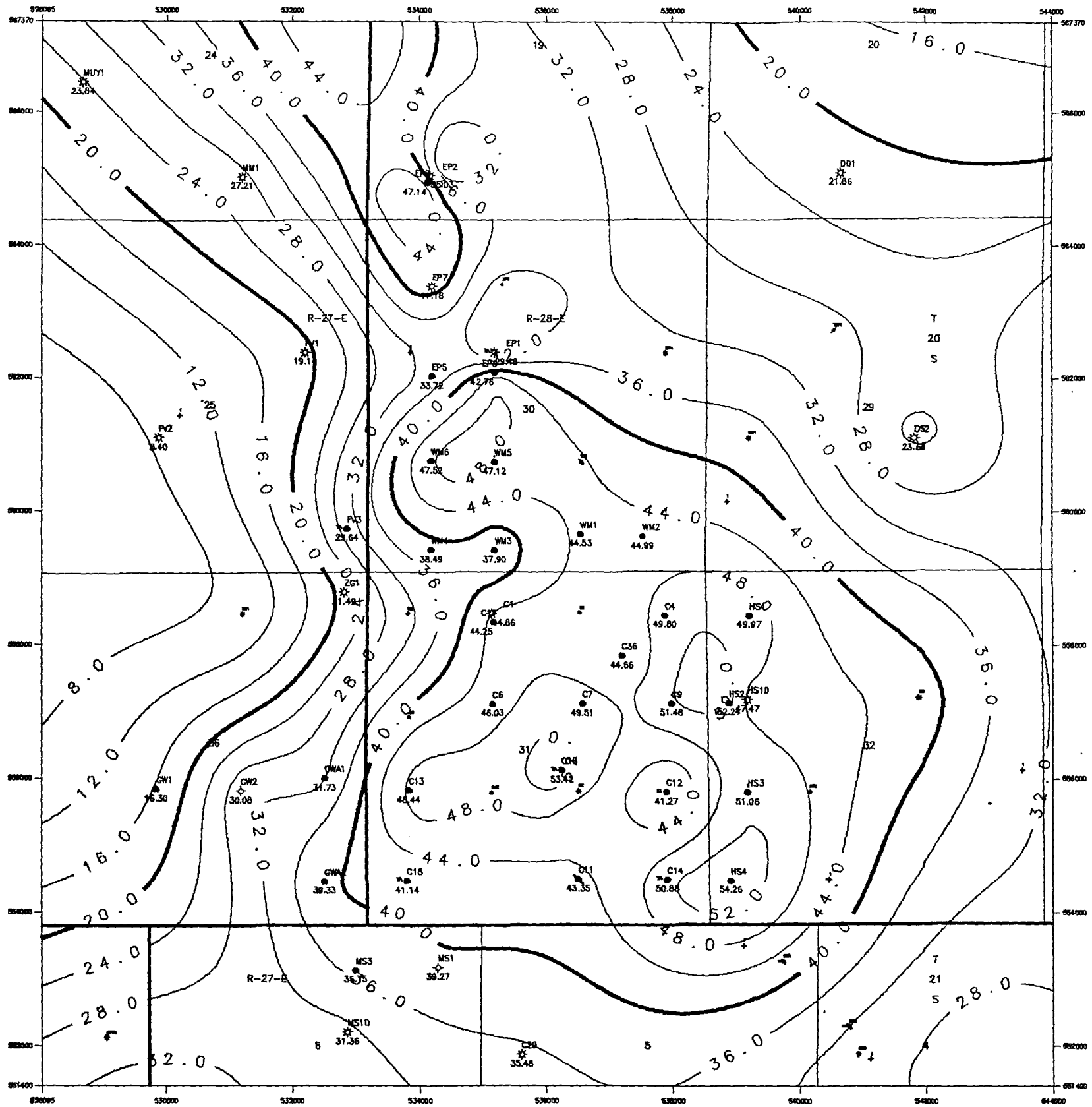
0 1000 FEET

SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE

AUGUST 4, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Porosity Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 11

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

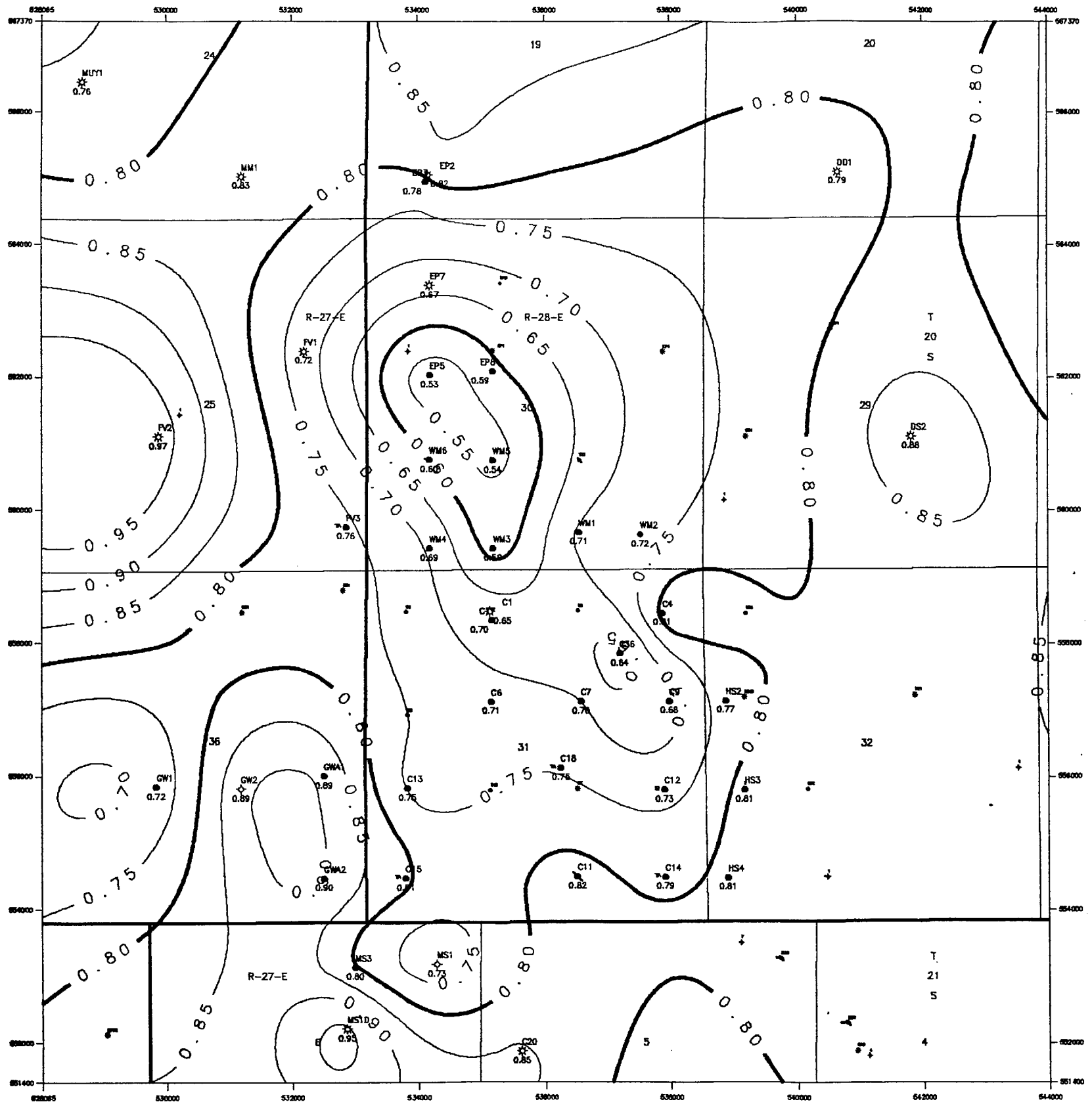
TOTAL NET POROSITY THICKNESS MAP

UPPER CHERRY: PHI >= .10 AND GR <= 75, SWIRR = .25B
UPPER BRUSHY: PHI >= .11 AND GR <= 75, SWIRR = .30B
EXPLORATION OF ZONES LOST BRIM (B)
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
AVALON WELLS, FEET

0 1000 2000 FEET CINT=4 CINT=400 SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 4, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Average Water Saturation



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 12

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

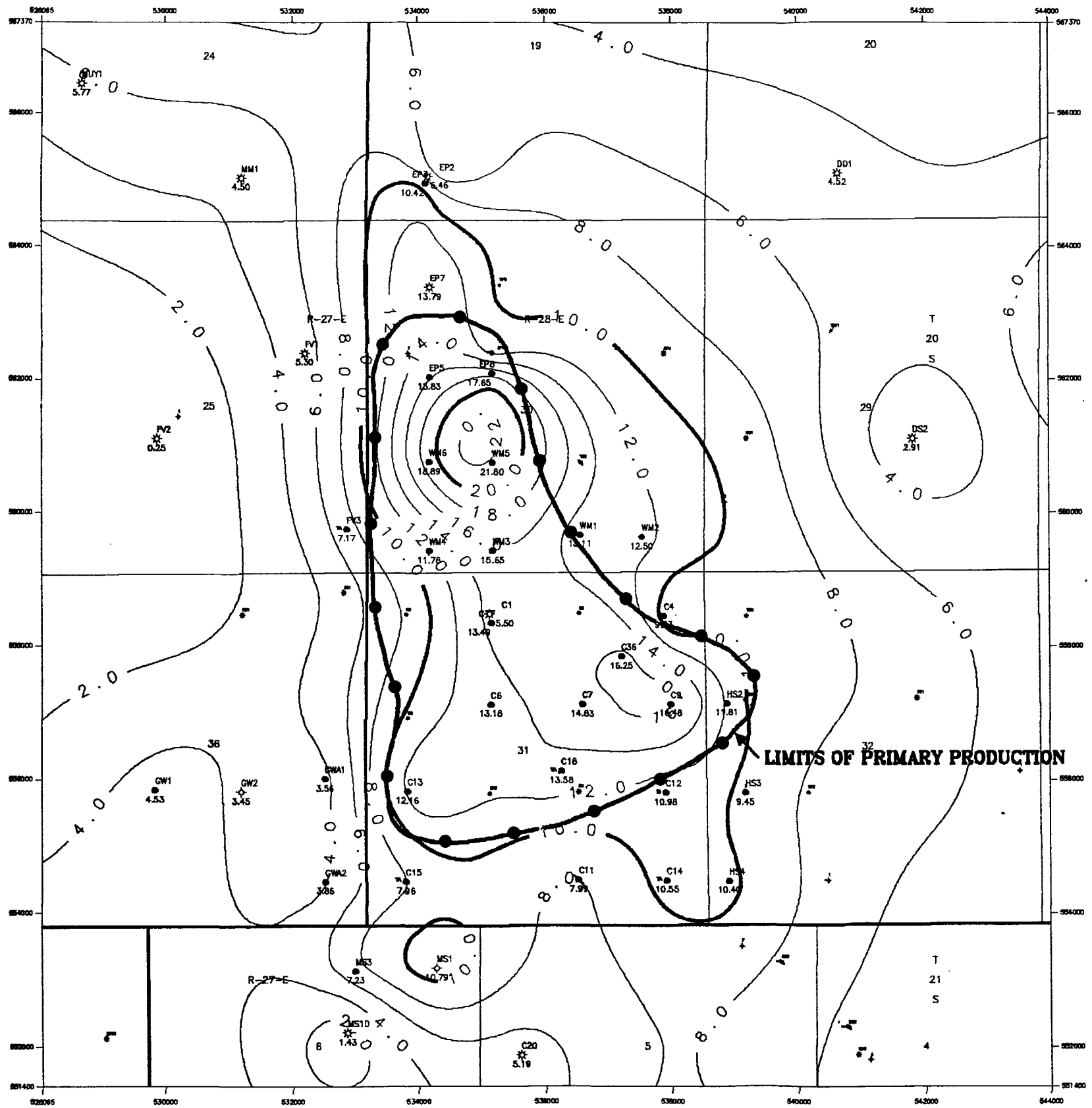
AVERAGE NET AVERAGE WATER SATURATION MAP

CINT=0.030000000 GINT=400

0 1000 FEET SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 4, 1992

LOWER CHERRY/UPPER BRUSHY CANYON
Hydrocarbon Porosity Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 13

EXXON COMPANY USA

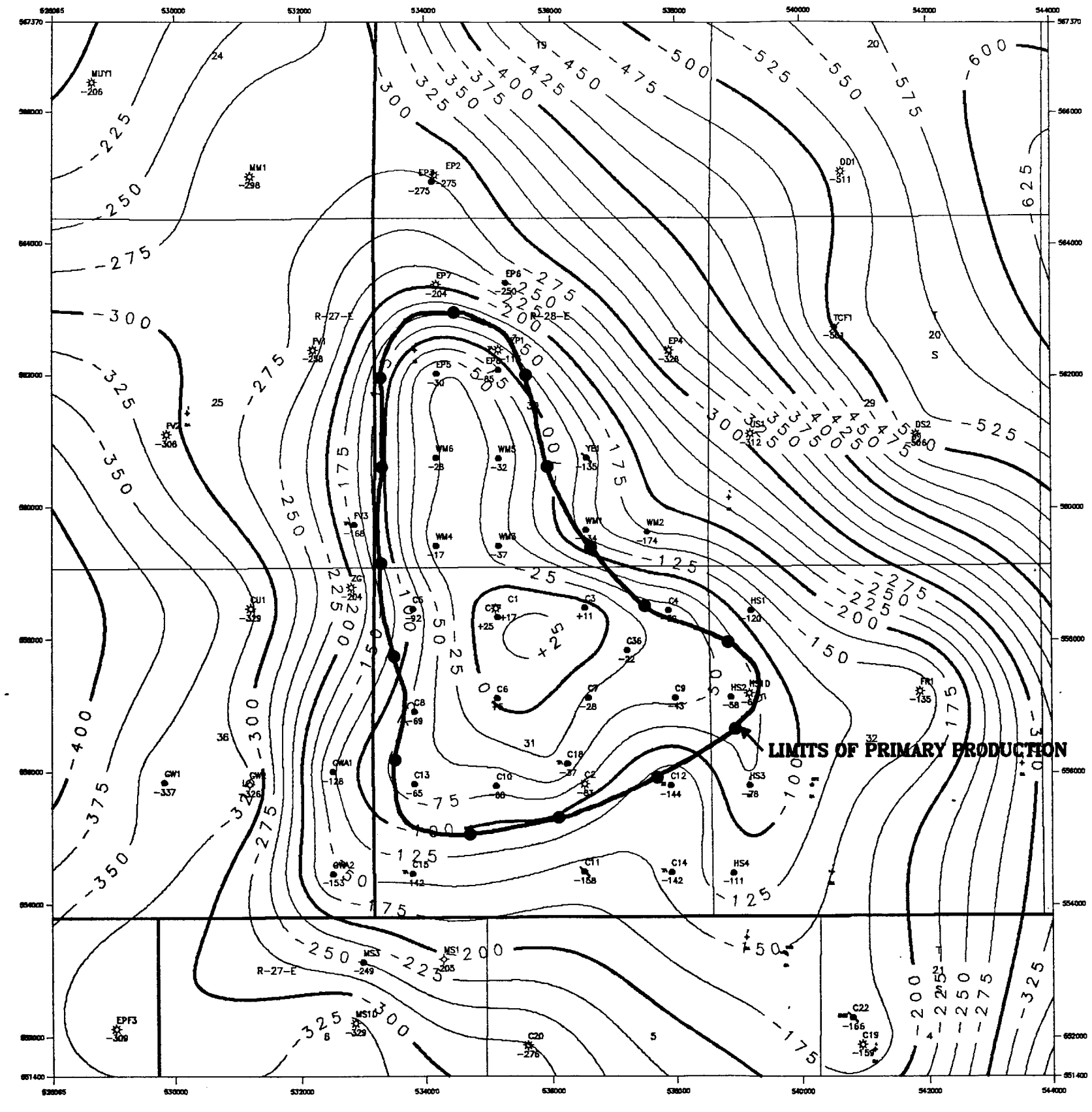
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL NET RESERVOIR HYDROCARBON POROSITY THICKNESS AT RESV COND MAP

0 1000 2000 FEET — CINT=2 CINT=400 — SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE — AUGUST 4, 1982

LOWER CHERRY/UPPER BRUSHY CANYON
Top Reservoir (LCHT)



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

COMMENT CODE LEGEND

NA : PICK NOT AVAILABLE

Map 14

EXXON COMPANY USA

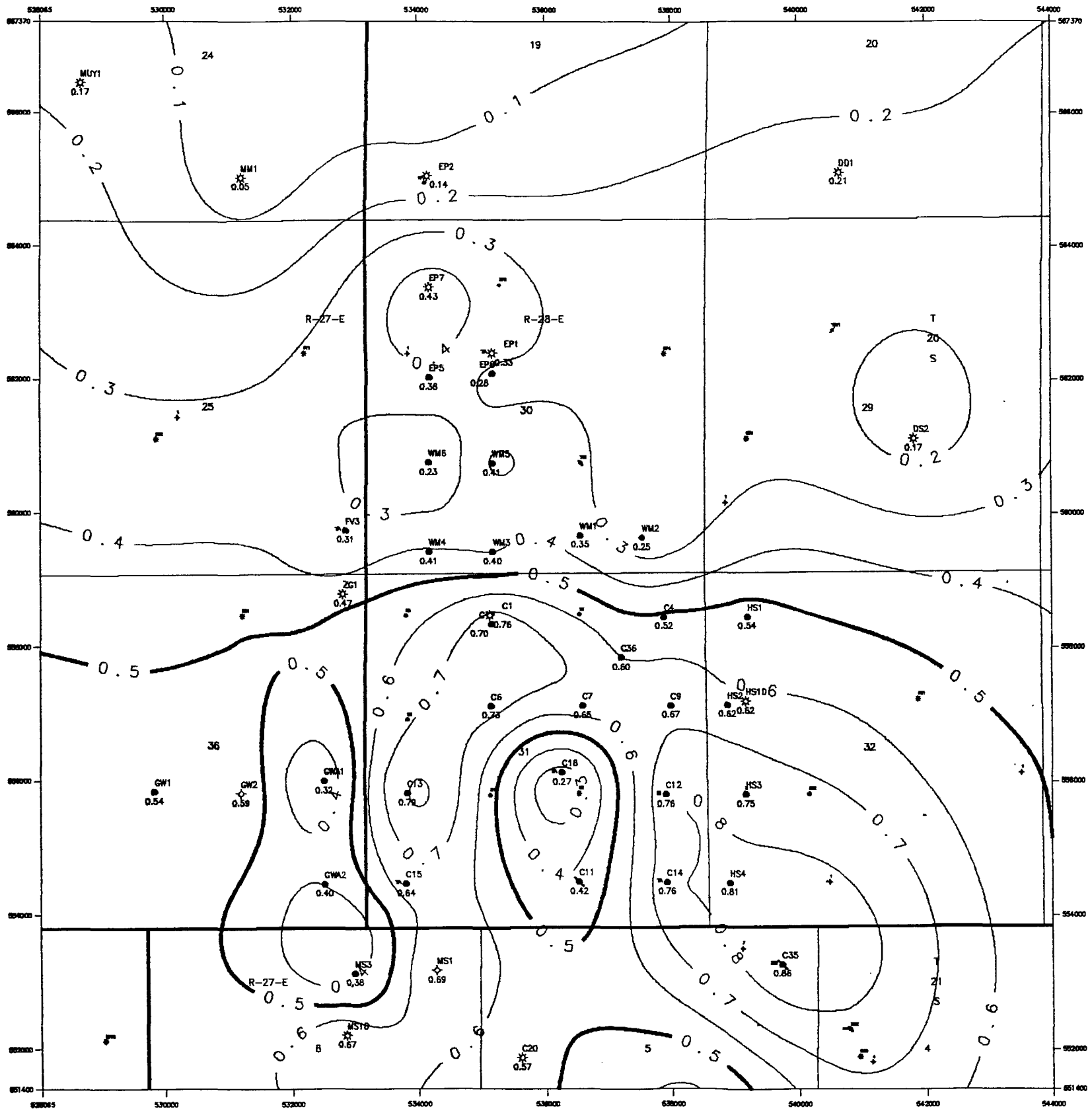
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURE (FT) MAP, DATUM = MSL
LOWER CHERRY CANYON TOP
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CINT=25 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 4, 1992

UPPER CHERRY CANYON - Net To Gross Ratio



WELL STATUS SYMBOL LEGEND

- UNDEFINED
- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 15

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

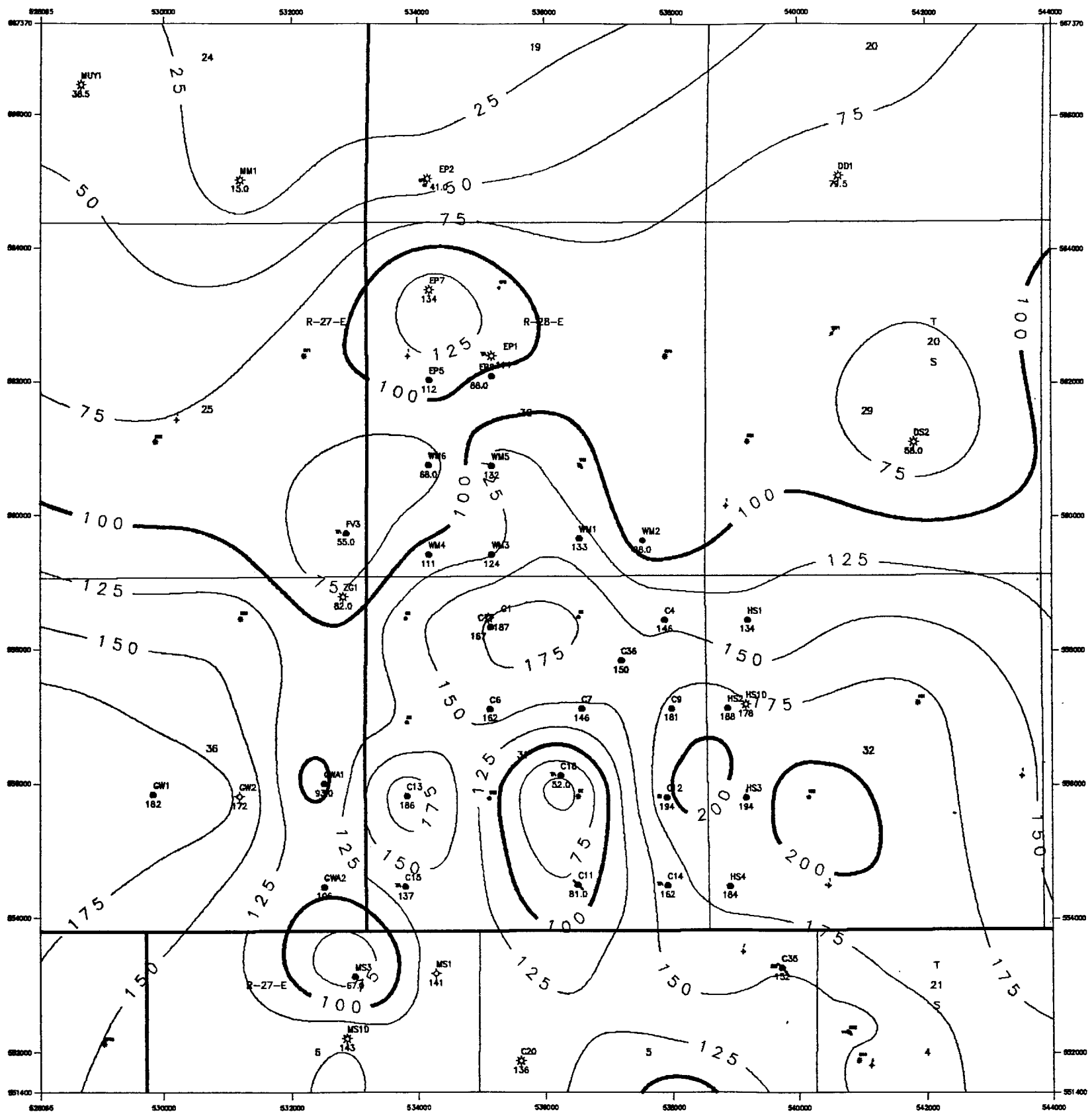
AVERAGE NET TO GROSS RATIO MAP

UNIT – INTVL
UPPER CHERRY: PH = .16 AND SH = .75, SWHR = .2[illegible]
UPPER BRUSHY: PH = .11 AND SH = .78, SWHR = .[illegible]
AMALGAMATION OF ZONES CDCH CMCB
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLS, WRN
[illegible]

0 1000 FEET — CINT=0.100000000 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE — JUNE 25, 1992

UPPER CHERRY CANYON - Net Thickness



WELL STATUS SYMBOL LEGEND

- UNDEFINED
- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 16

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

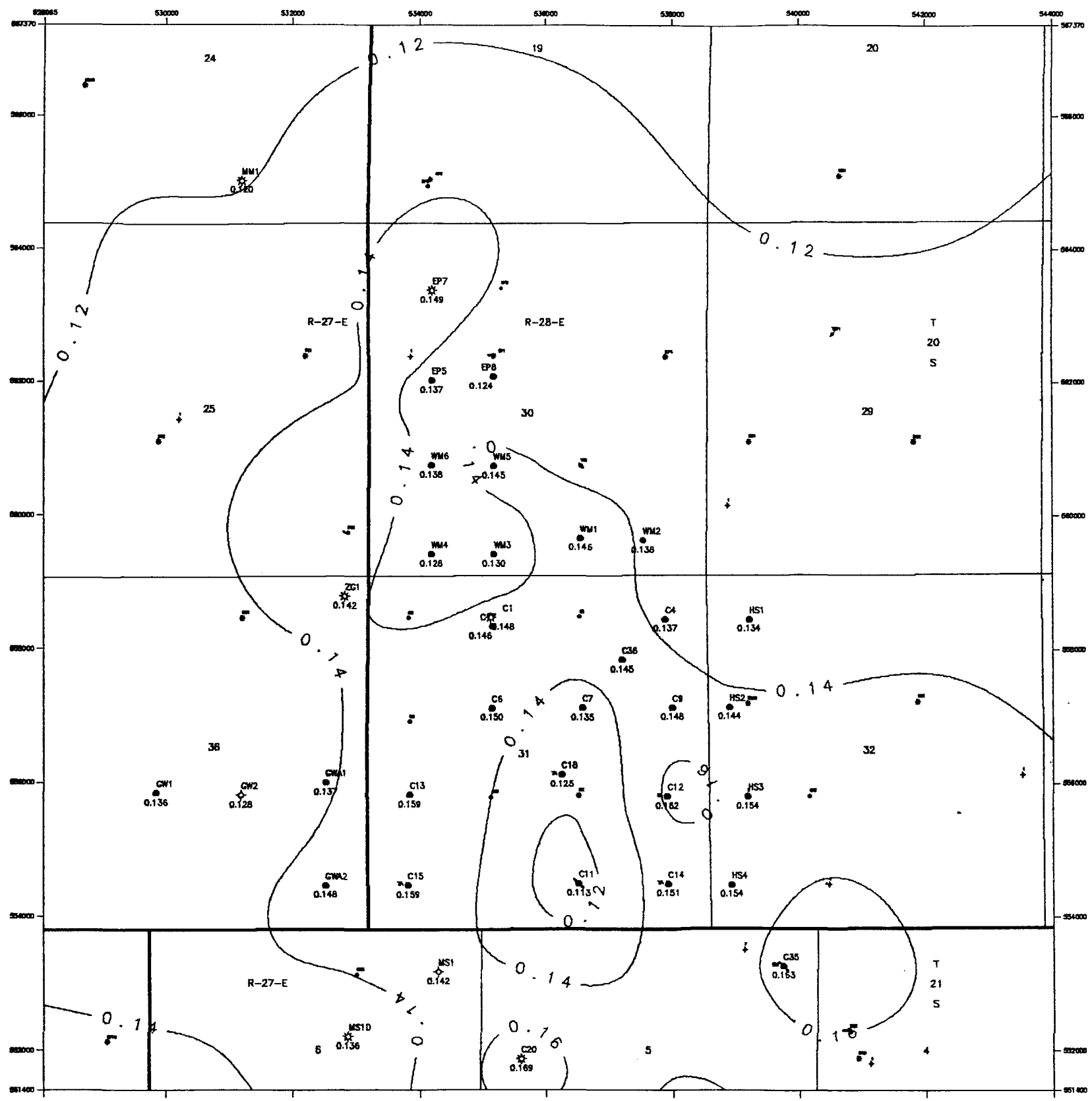
TOTAL NET THICKNESS MAP

UPPER CHERRY: PHI >= .10 AND OR <= 75, [illegible] = .229
UPPER BRUSHY: PHI >= .11 AND OR <= 75, [illegible] = .280
AMALGAMATION OF JONES COOK CAVE
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLS, THICKNESS (FT)

0 1000 2000 FEET CINT=25 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KINNE | JUNE 25, 1992

UPPER CHERRY CANYON - Average Porosity



WELL STATUS SYMBOL LEGEND

- UNDEFINED
- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 17

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

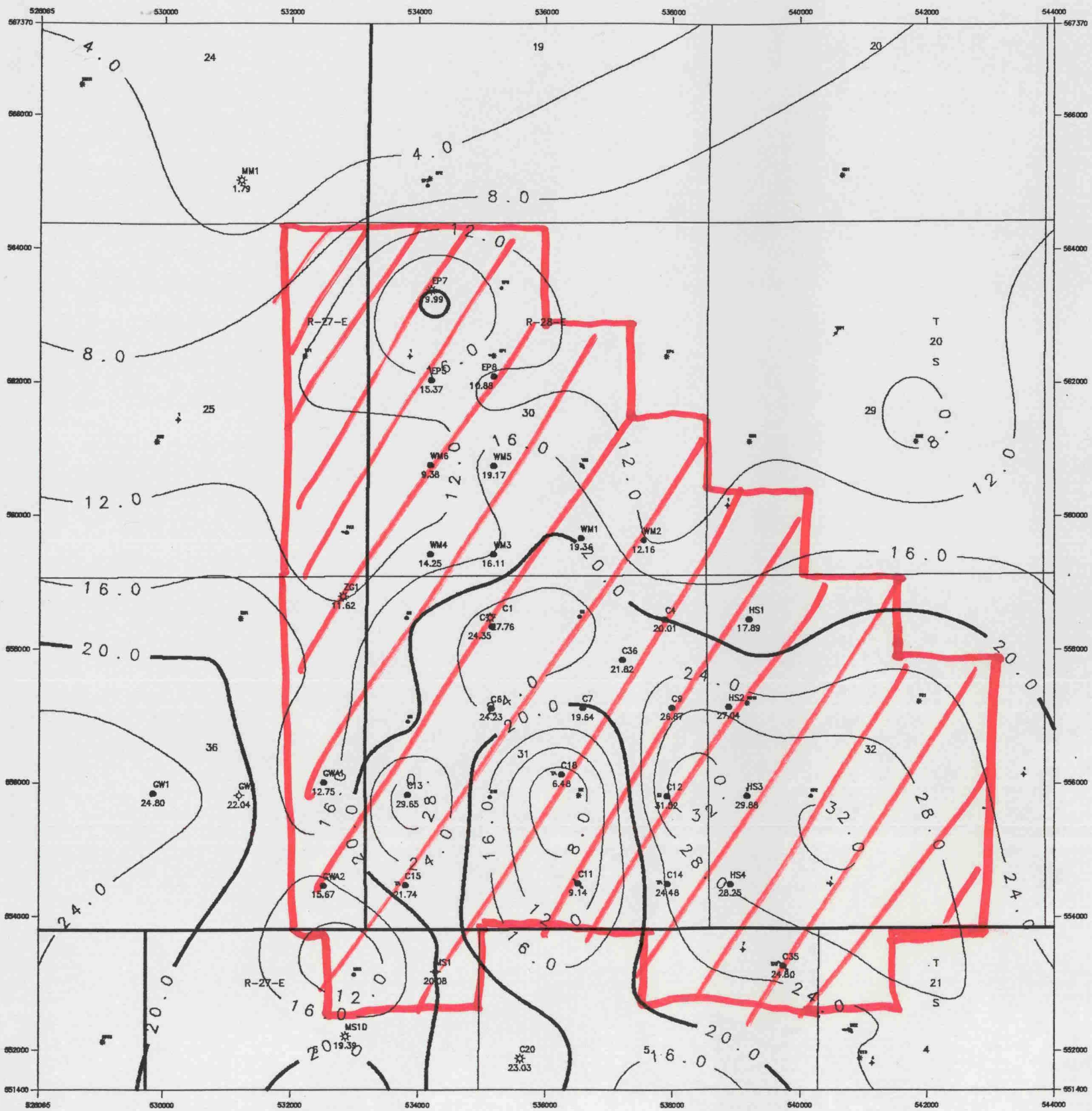
AVERAGE NET AVERAGE POROSITY MAP

0 1000 FEET
CINT=0.020000000 CINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | JUNE 25, 1992

UPPER CHERRY CANYON - Porosity Thickness

Top of Upper Cherry Canyon Res. to the top of the Lower Cherry Canyon Res.



WELL STATUS SYMBOL LEGEND

- UNDEFINED
- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 18

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

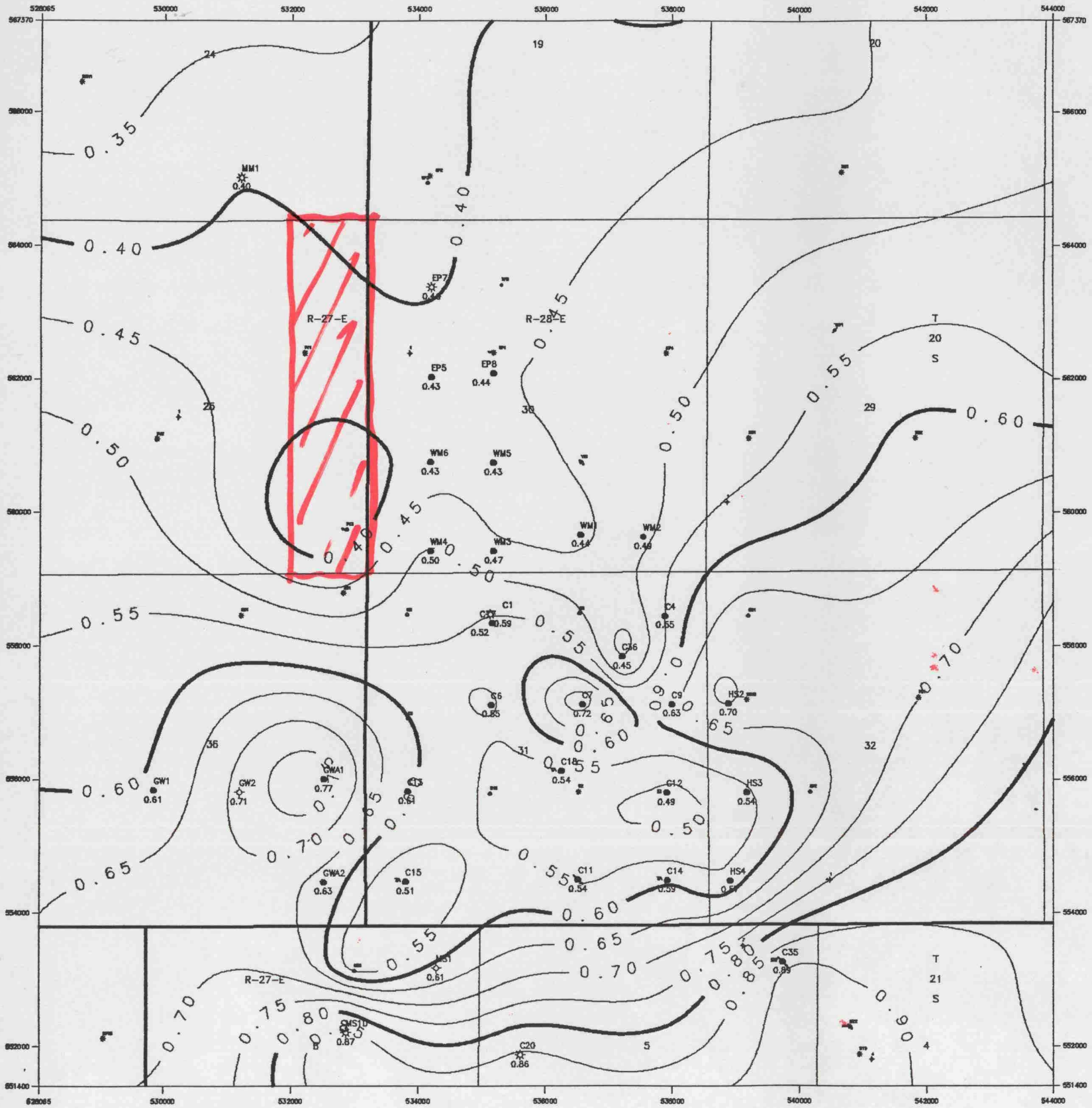
TOTAL NET POROSITY THICKNESS MAP

UPPER CHERRY: PHI >= .10 AND GR <= 75, SWIRR = .229
UPPER BRUSHY: PHI >= .11 AND GR <= 75, SWIRR = .286
AMALGAMATION OF ZONES COOM CHCB
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLID, FEET

0 1000 2000 FEET
CINT=4 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE
JUNE 25, 1992

UPPER CHERRY CANYON - Average Water Saturation



WELL STATUS SYMBOL LEGEND

- UNDEFINED
- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 19

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

AVERAGE NET AVERAGE WATER SATURATION MAP

CASE = BSTNL

UPPER CHERRY: PH >= .10 AND SR <= 75, SWWR = .229

UPPER BRUSHY: PH >= .11 AND SR <= 75, SWWR = .398

AMALGAMATION OF ZONES CDCM CMCB

AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

ANNOTATIONS: WELLS, FRACTION

0 1000 FEET

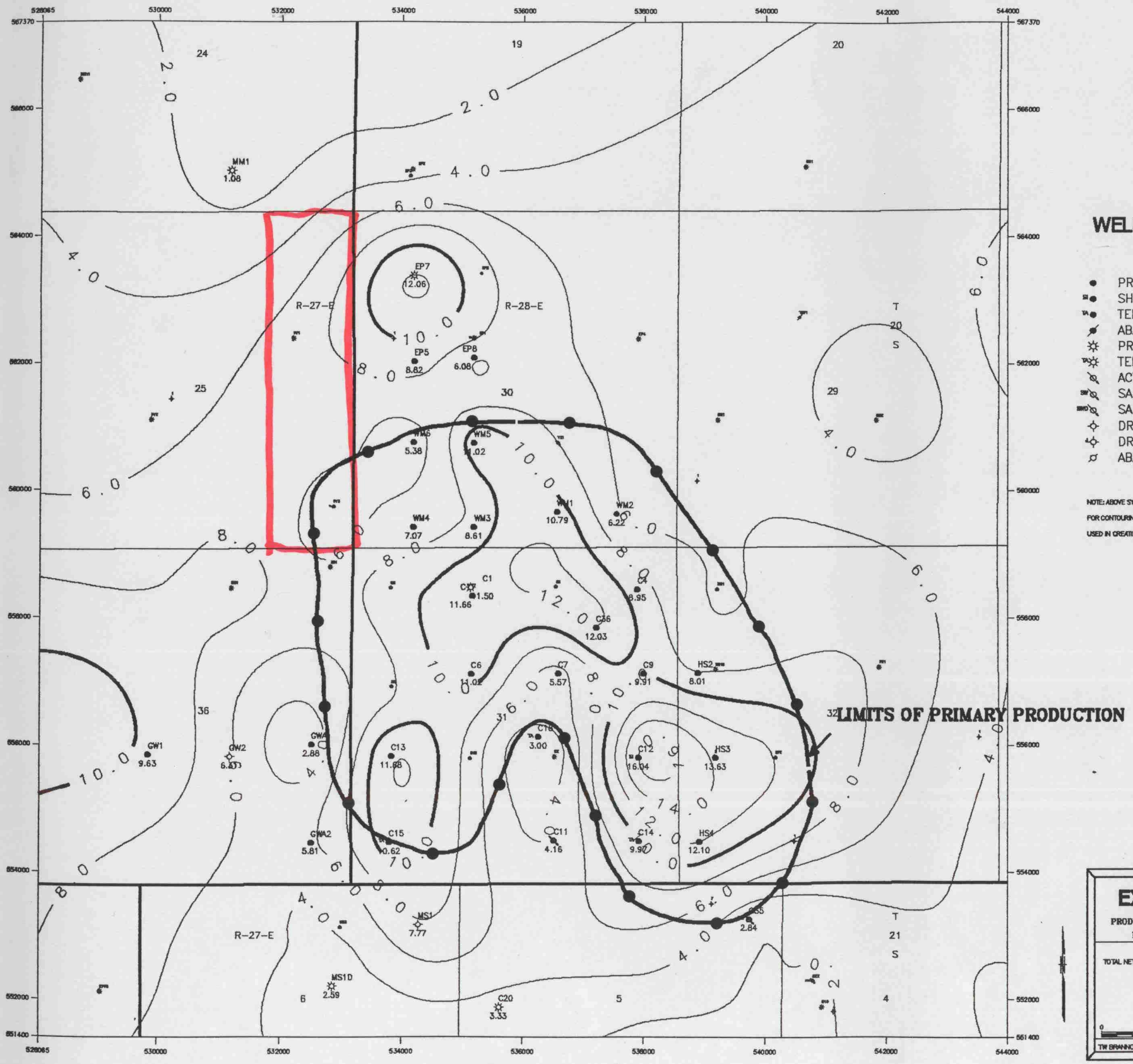
CINT=0.050000000 GINT=400

SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE

JUNE 25, 1992

UPPER CHERRY CANYON - Hydrocarbon Porosity Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 20

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL NET RESERVOIR HYDROCARBON POROSITY THICKNESS AT RESV COND MAP

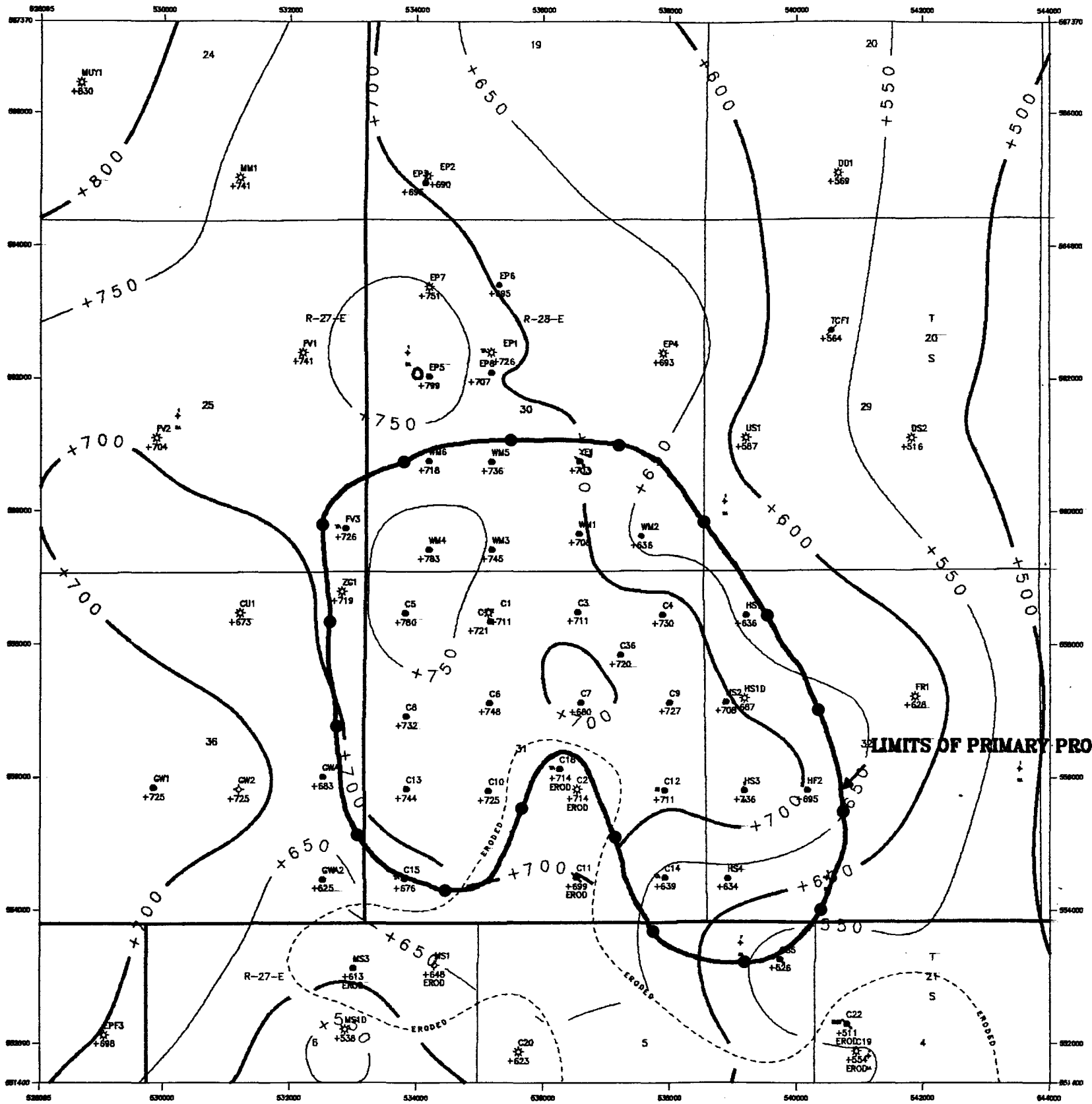
0 1000 2000 FEET

CINT=2 CINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE

JULY 28, 1992

UPPER CHERRY CANYON - Top Reservoir (UCH-DLS)



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

COMMENT CODE LEGEND

EROD : PICK MISSING DUE TO EROSION, DEPTH OF UNCONFORMITY POSTED
NA : PICK NOT AVAILABLE

Map 21

EXXON COMPANY USA

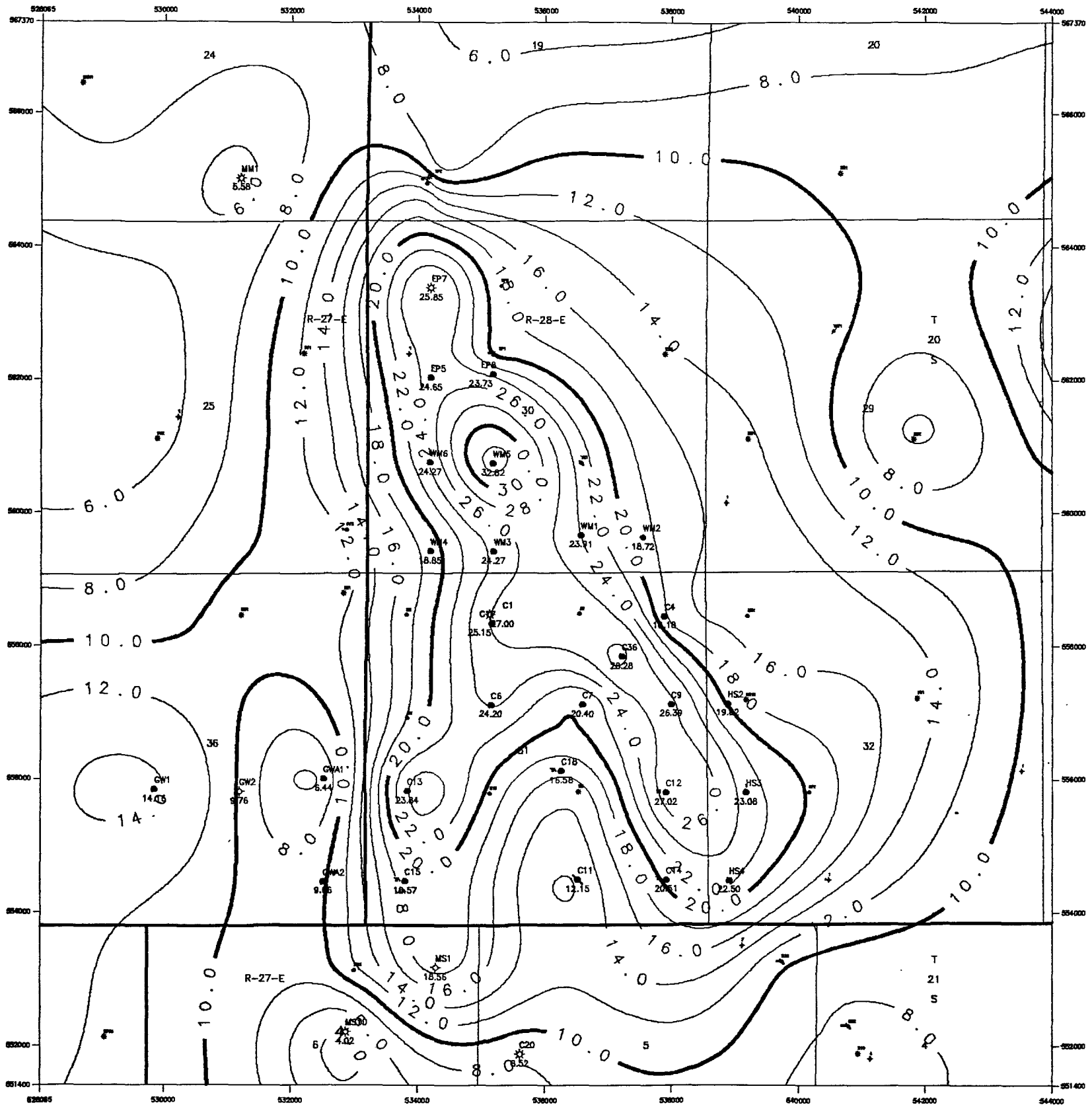
PRODUCTION DEPARTMENT - SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP - GEOLOGY

STRUCTURE (FT) MAP, DATUM = MSL
UPPER CHERRY CANYON DOWNLAP SURFACE
CONTOURS INSIDE ERODED AREAS ARE BASE OF GOAT SEEP REEF
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

0 1000 2000 FEET CINT=50 GINT=400 SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE — JUNE 23, 1992

TOTAL RESERVOIR - Hydrocarbon Porosity Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 22

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL NET RESERVOIR HYDROCARBON POROSITY THICKNESS AT RESV COND MAP

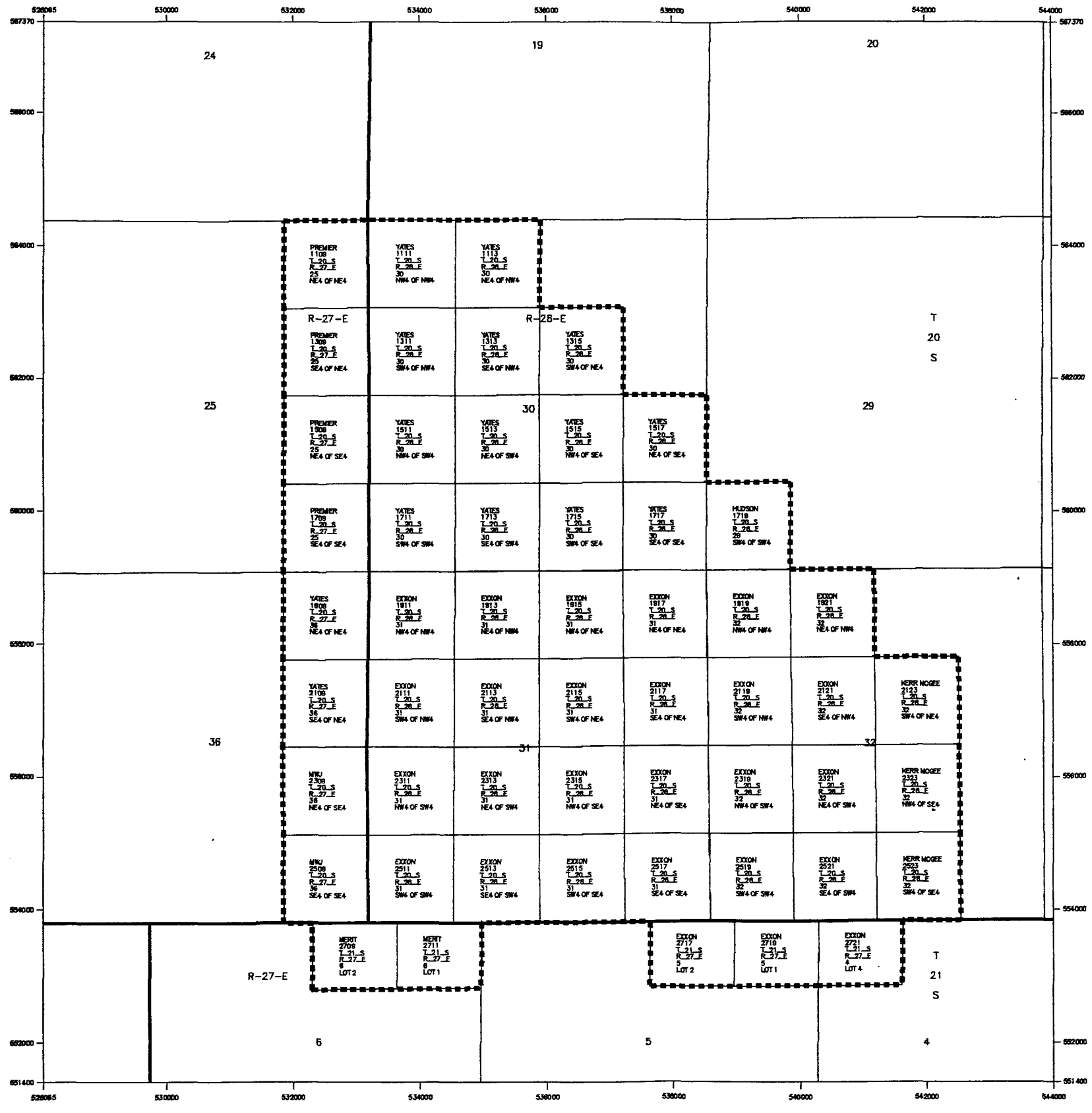
0 1000 2000 FEET

CINT=2 GINT=400
SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE

AUGUST 5, 1992

AVALON FIELD WELL-TRACTS



LEGEND

TOP LINE = OPERATOR
SECOND LINE = WELL TRACT NUMBER
THIRD LINE = TOWNSHIP
FOURTH LINE = RANGE
FIFTH LINE = SECTION NUMBER
SIXTH LINE = QUARTER-QUARTER OR LOT NUMBER

Map 23

EXXON COMPANY USA

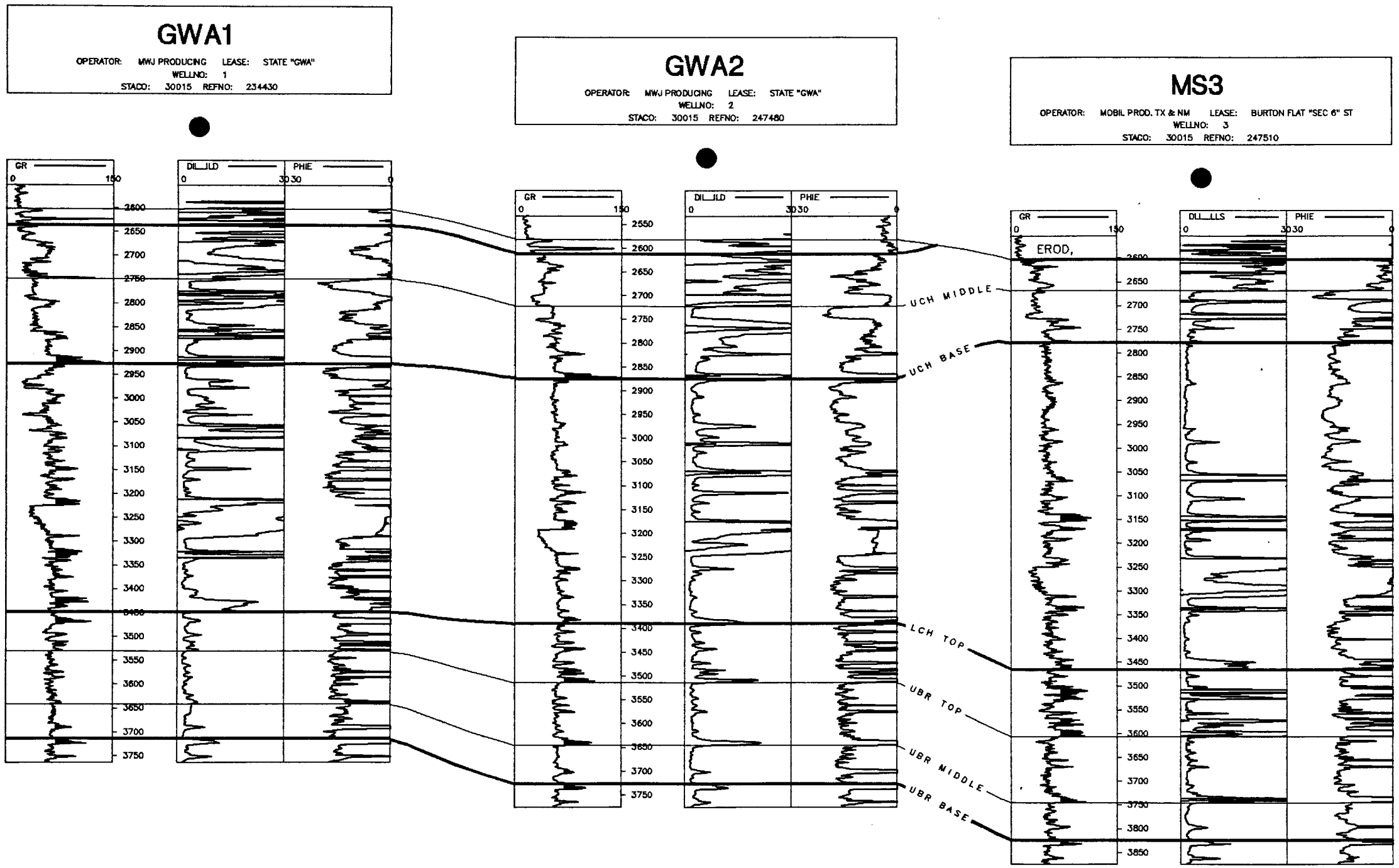
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

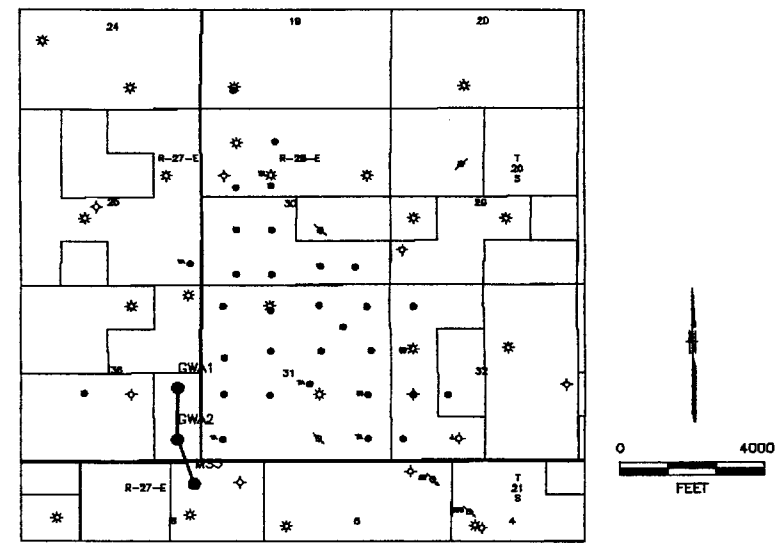
PROPOSED UNIT AREA
SHOWING '40-ACRE' WELL-TRACTS
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

0 1000 2000 FEET SCALE=1000 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTH AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION B1 SOUTH





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

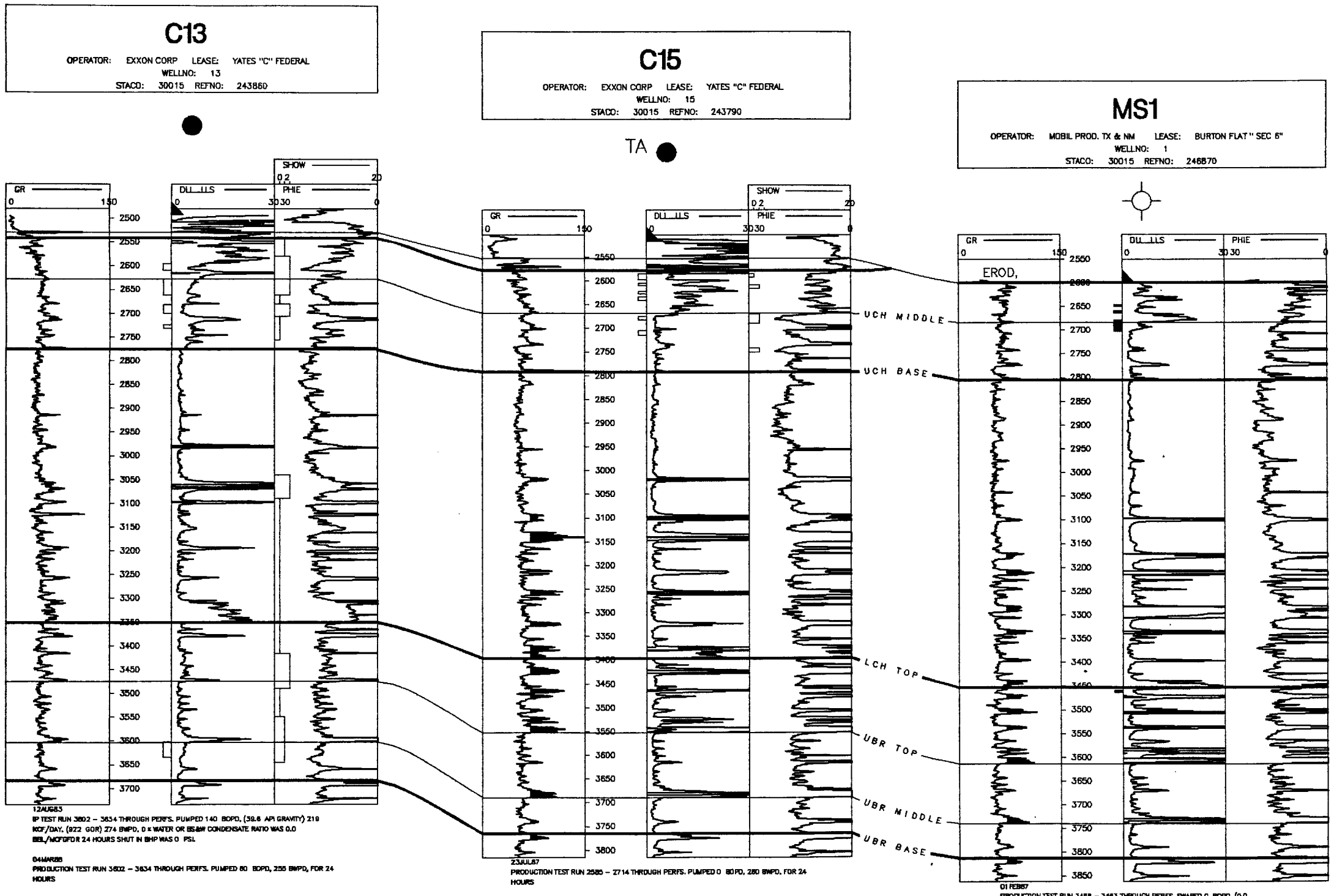
STRUCTURAL CROSS SECTION B1
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
GAMMA RAY SHADED ABOVE 75 API UNITS

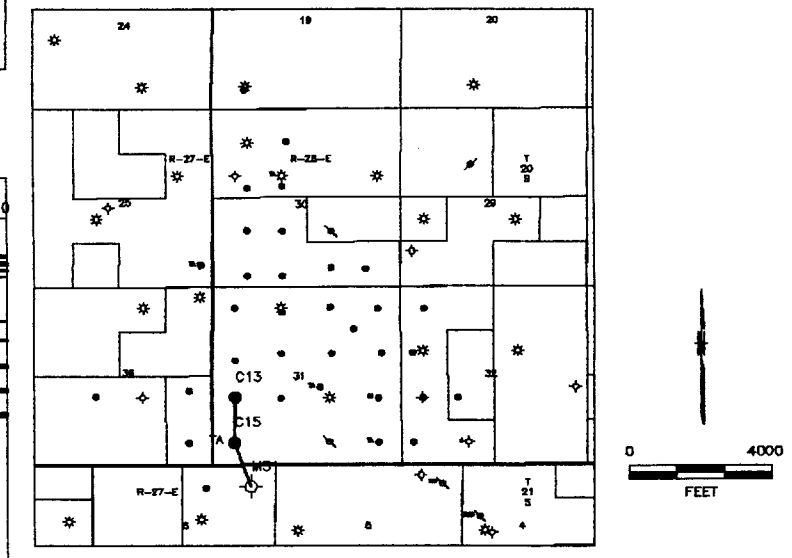
PICK COMMENT LEGEND
EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN
ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN
GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

PROD.MID.MODEL.AVALON.DEVELOP.APLO(XSECT2) 17:05
VERTICAL SCALE = 250 FEET/INCH
HORIZONTAL SCALE = 1500 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTH AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION 1 SOUTH





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION 1

AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

GAMMA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND

EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN

ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN

GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

PROD.MID.MODEL_AVALON.DEVELOP.APL(XSECT2) 17:10

VERTICAL SCALE = 250 FEET/INCH

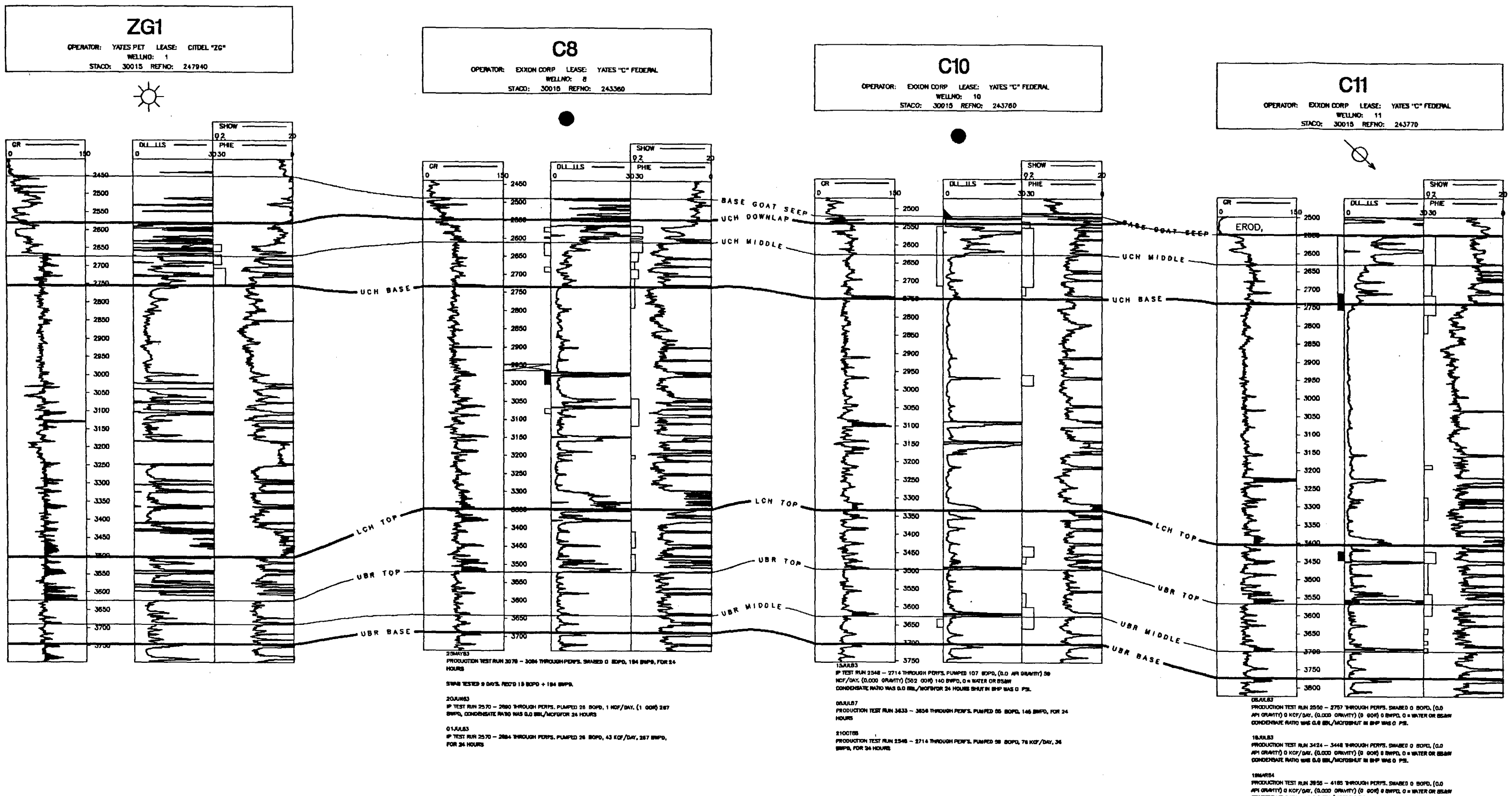
HORIZONTAL SCALE = 1500 FEET/INCH

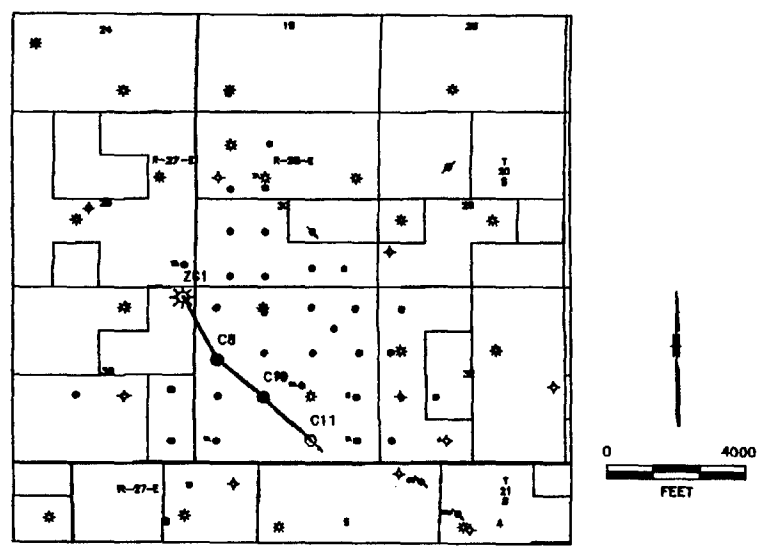
TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTHWEST

AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION A2

SOUTHEAST





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION A2

AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

GAMMA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND

EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN

ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN

GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

PROD.MID.MODEL/AVALON.DEVELOP.APLCO(SECT2) 17:00

VERTICAL SCALE = 250 FEET/INCH

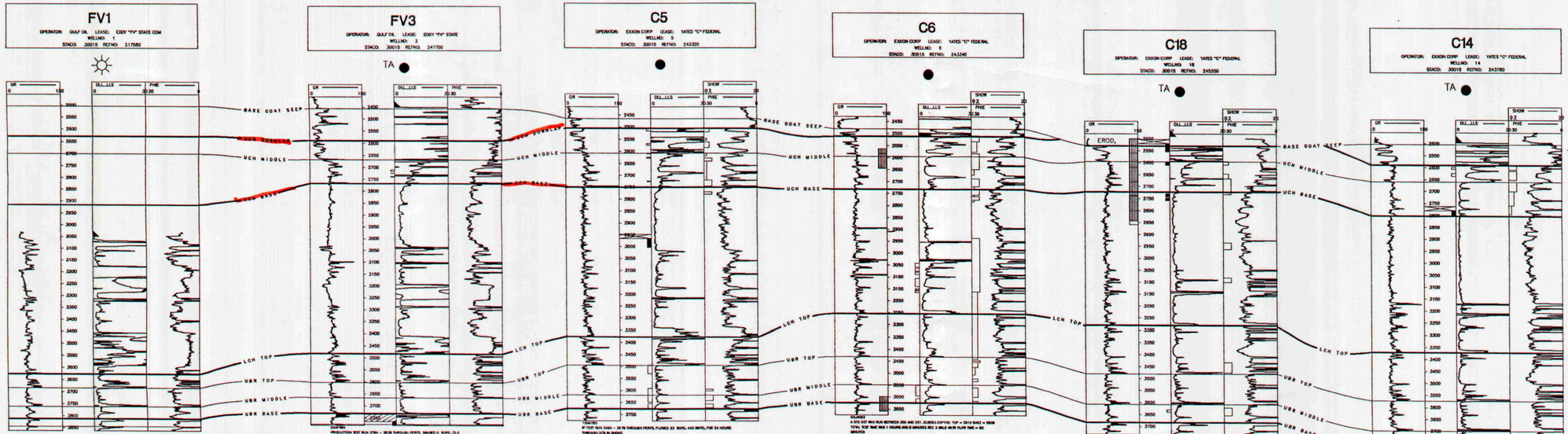
HORIZONTAL SCALE = 1500 FEET/INCH

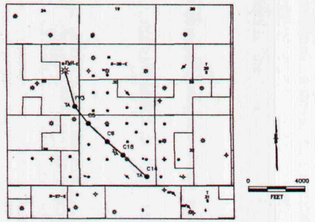
TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTHWEST

AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION 2

SOUTHEAST





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION 2
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
GAMMA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND

EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN
ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN
GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

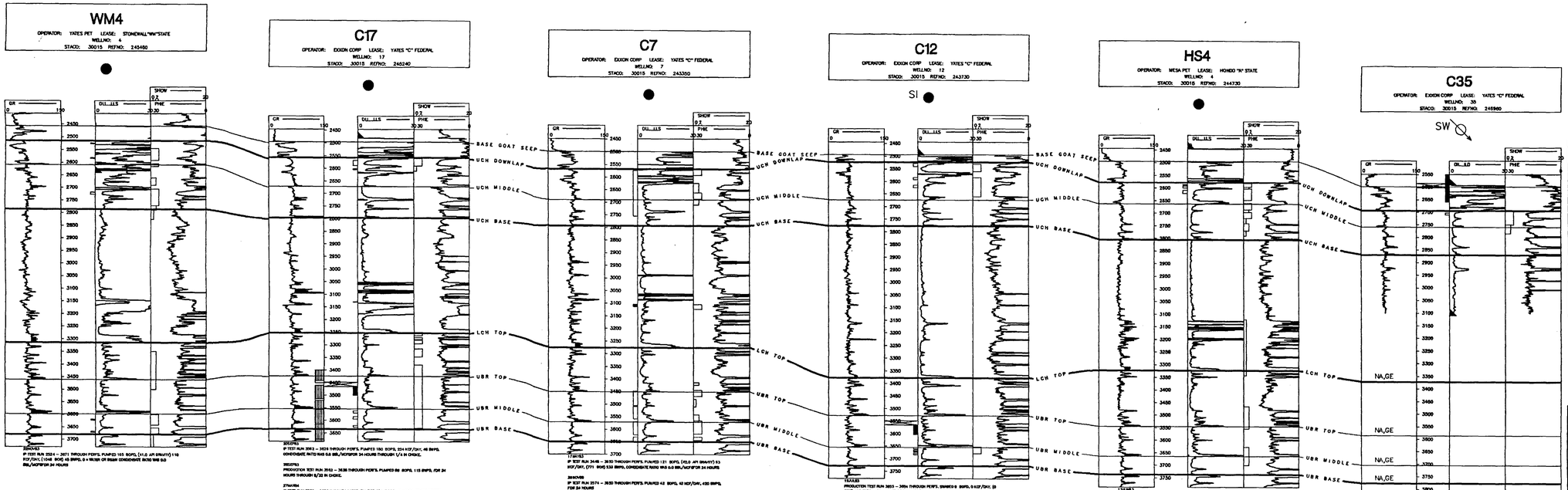
PROGRAM:XSECT_AVALON.EXMS.STAT.API.(CREATED 1994)
VERTICAL SCALE = 250 FEET/INCH
HORIZONTAL SCALE = 1500 FEET/INCH

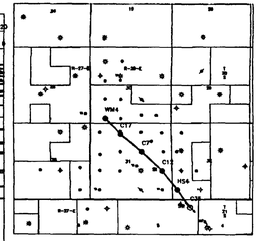
TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTHWEST

AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION 3

SOUTHEAST





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION 3
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
GAMMA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND
EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN
ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN
GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

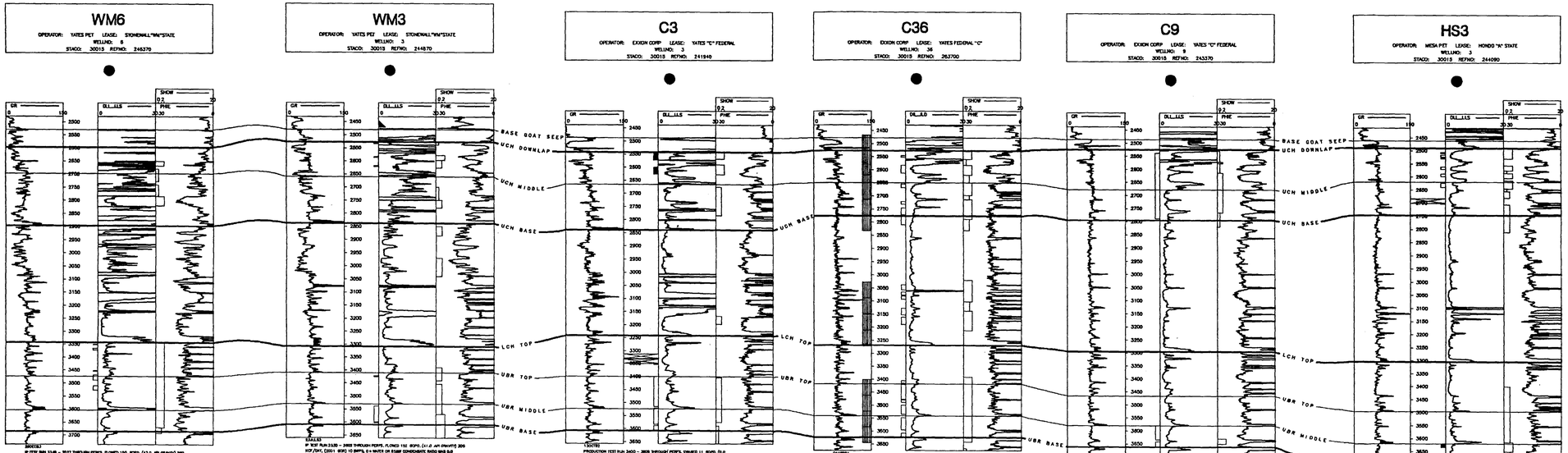
PROGRAM: MODEL:AVALON.EXPLORE APL:(QDEBUG) 18443
VERTICAL SCALE = 250 FEET/INCH
HORIZONTAL SCALE = 1500 FEET/INCH

TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTHWEST

AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION A3

SOUTHEAST



EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION A3
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
GAMMA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND
EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN
ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN
GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

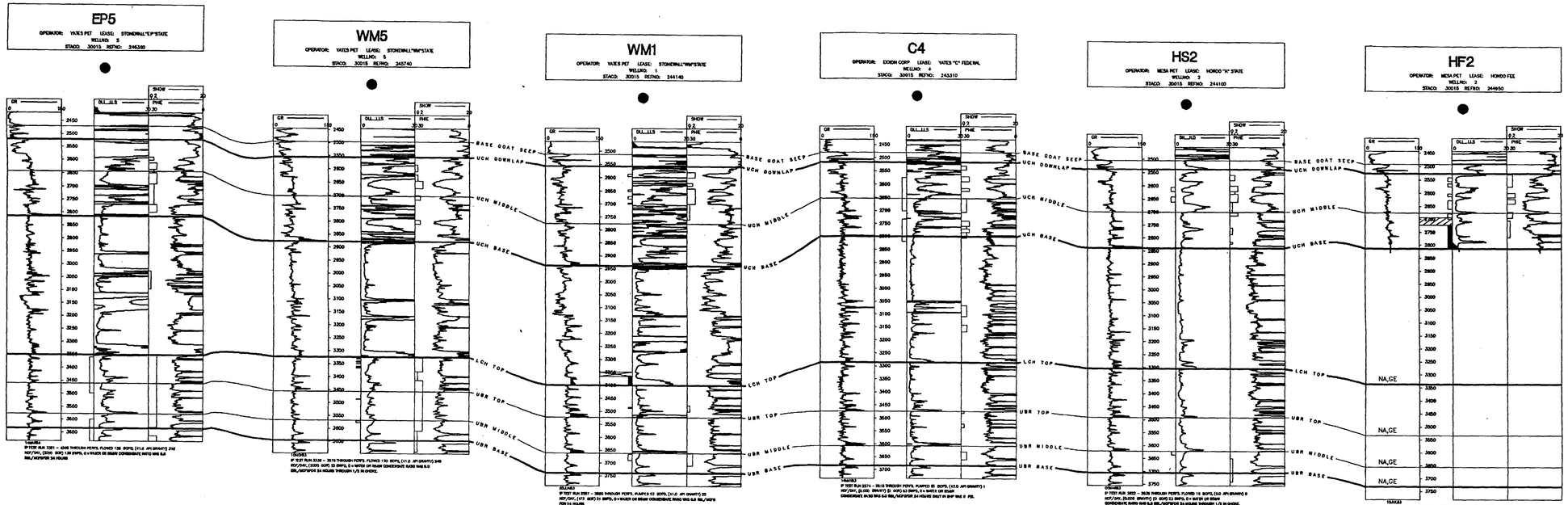
PROD:MID.MORR_ANALYS:DEVLP APJC(DECTC) 18-NB
VERTICAL SCALE = 250 FEET/INCH
HORIZONTAL SCALE = 1500 FEET/INCH

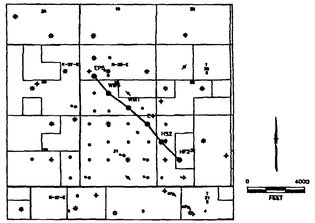
TW BRANNON, DL CANTRELL, TV KANE | AUGUST 18, 1992

NORTHWEST

AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION B3

SOUTHEAST





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION B3

AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

CHAMNA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND

EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN

ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN

GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

PROD:WELMODEL,AMLDN:BDAS,AMLPLOS:DEE TO 1.8K04

VERTICAL SCALE = 250 FEET/INCH

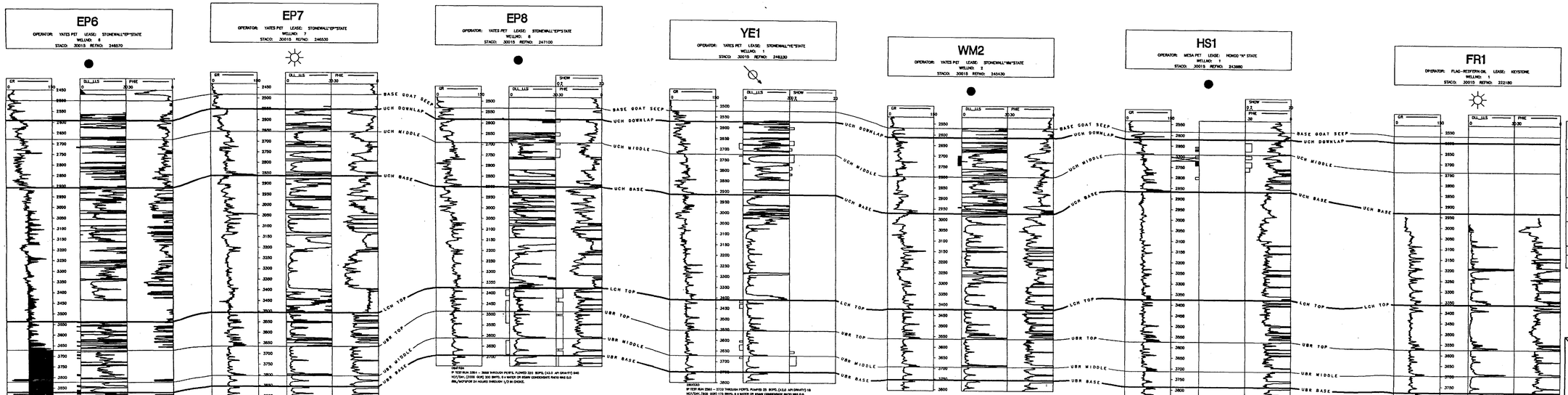
HORIZONTAL SCALE = 1500 FEET/INCH

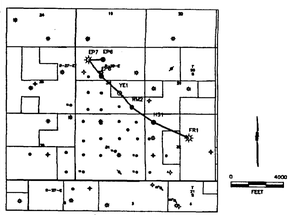
TW BRANNON, DL CANTRELL, TV KANE AUGUST 18, 1992

NORTHWEST

AVALON (DELAWARE) FIELD STRUCTURAL CROSS SECTION 4

SOUTHEAST





EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

STRUCTURAL CROSS SECTION 4
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
GAMMA RAY SHADED ABOVE 75 API UNITS

PICK COMMENT LEGEND

EROD : PICK MISSING DUE TO EROSION, ONLY ERODED SURFACE SHOWN
ONLAP: PICK MISSING DUE TO ONLAP, ONLY ONLAPPED SURFACE SHOWN
GENZ : PICK ESTIMATED FROM GRID MODEL BECAUSE NOT ORIGINALLY PICKED

PRESENTATION: AVALON(DELAWARE)FIELD
VERTICAL SCALE = 250 FEET/INCH
HORIZONTAL SCALE = 1500 FEET/INCH

TM BRANNON, DL CANTRELL, TV KANE	AUGUST 19, 1992

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Revised 1-1-65

5A. Indicate Type of Lease: STATE [X] FEE [ ]

5. State Oil & Gas Lease No.: K-5115

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [ ] GAS WELL [X] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. Unit Agreement Name:

8. Farm or Lease Name: Stonewall "EP" S

2. Name of Operator: Yates Petroleum Corporation ✓

9. Well No.: 2

3. Address of Operator: 207 South Fourth Street - Artesia, NM 88210

10. Field and Pool, or Wildcat: Undesignated

4. Location of Well: UNIT LETTER N LOCATED 660 FEET FROM THE South LINE AND 1980 FEET FROM THE West LINE OF SEC. 19 TWP. 20S RGE. 28E NMPM

12. County: Eddy

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 5
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
11500'	Morrow	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3300' GR	Blanket	Moran Drilling Co.	December 26, 19

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17½"	13-3/8"	48#	600'	400	circulate
12¼ & 11"	8-5/8"	24#	2900'	1000	circulate
7-7/8"	5½ or 4½"	17.20# or 11.6-13.5#	11500'	300	*

Propose to drill an 11500' well and test the Morrow & intermediate horizons. Approx. 600' of surface casing will be set & cemented to surface. Approx. 2900' of intermediate casing will be set & cemented to surface. Production casing will be 5½" or 4½", and will be cemented with some 600' of cement covering the pay.

Mud Program: FW Gel & LCM to 600', fresh water & LCM to 8500'. Brine to 10700'. Flosal-drispak-Brine mud to TD.

BOP Program: BOP's and hydril will be installed on 8-5/8" casing & tested daily.
Gas not committed.

APPROVAL VALID FOR 90 DAYS UNLESS DRILLING COMMENCED
EXPIRES 3-23-77

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Edward L. Westbrook Title Engineer Date 12-21-76

(This space for State Use)

APPROVED BY W. A. Gressett TITLE SUPERVISOR, DISTRICT II DATE DEC 23 1976

CONDITIONS OF APPROVAL, IF ANY:

* Copy of Watercomp

W MEXICO OIL CONSERVATION COMMI ON

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-1
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
YATES PETROLEUM Corporation	STONEWALL "E.P." STATE	#2

Unit Letter	Section	Township	Range	County
N	19	20 S.	28 E.	Eddy

Actual Footage Location of Well: 660 feet from the South line and 1980 feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage
3300	Morrow	Undesignated	~~320~~ 324.= Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

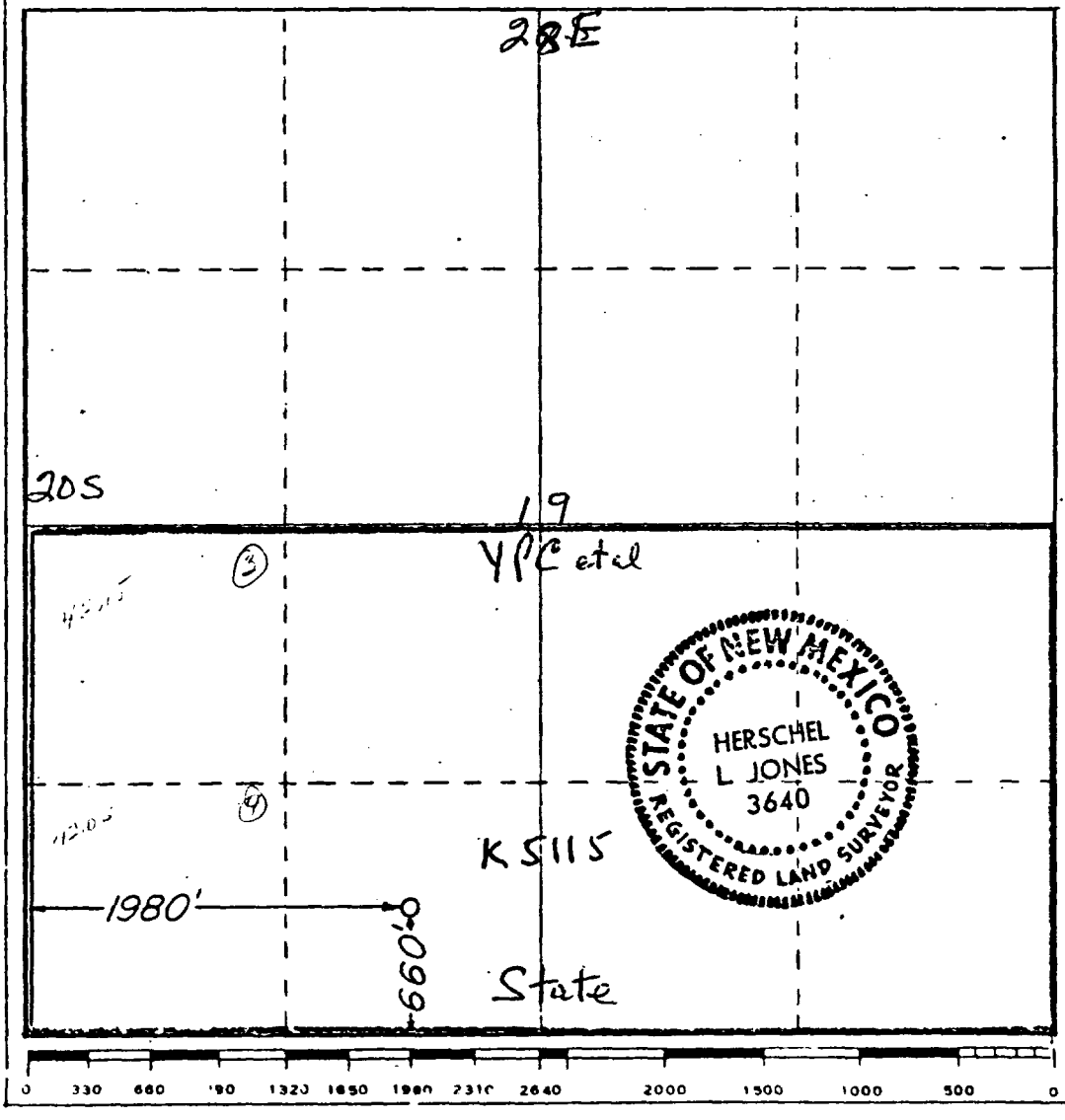
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Eddie M. Mahfood

Name: Eddie M. Mahfood

Position: Engineer

Company: Yates Petroleum Corp.

Date: 12-21-76

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief

Date Surveyed: Aug. 28, 1976

Registered Professional Engineer and/or Land Surveyor

Herschel Jones

Certificate No. 3640

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

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LAND OFFICE	1	
OPERATOR	1	

RECEIVED
NEW MEXICO OIL CONSERVATION COMMISSION

DEC 22 1976

O. C. C.
ARTESIA, OFFICE

30-015-220

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease: STATE [X] FEE [ ]

5. State Oil & Gas Lease No.: K-5115

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [ ] GAS WELL [X] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. Unit Agreement Name:

8. Farm or Lease Name: Stonewall "EP"

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12. County: Eddy

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 5
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
11500'	Morrow	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3300' GR	Blanket	Moran Drilling Co.	December 26, 1

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I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed: Eddie L. Mathews Title: Engineer Date: 12-21-76

(This space for State Use)

APPROVED BY: W. A. Gressett TITLE: SUPERVISOR, DISTRICT II DATE: DEC 23 1976

CONDITIONS OF APPROVAL, IF ANY:

* Approval to exceed

WELL LOCATION AND ACREAGE DEDICATION PLAT

Supersedes
Effective 1

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
YATES PETROLEUM Corporation	STONEWALL "E.P." STATE	#2

Unit Letter	Section	Township	Range	County
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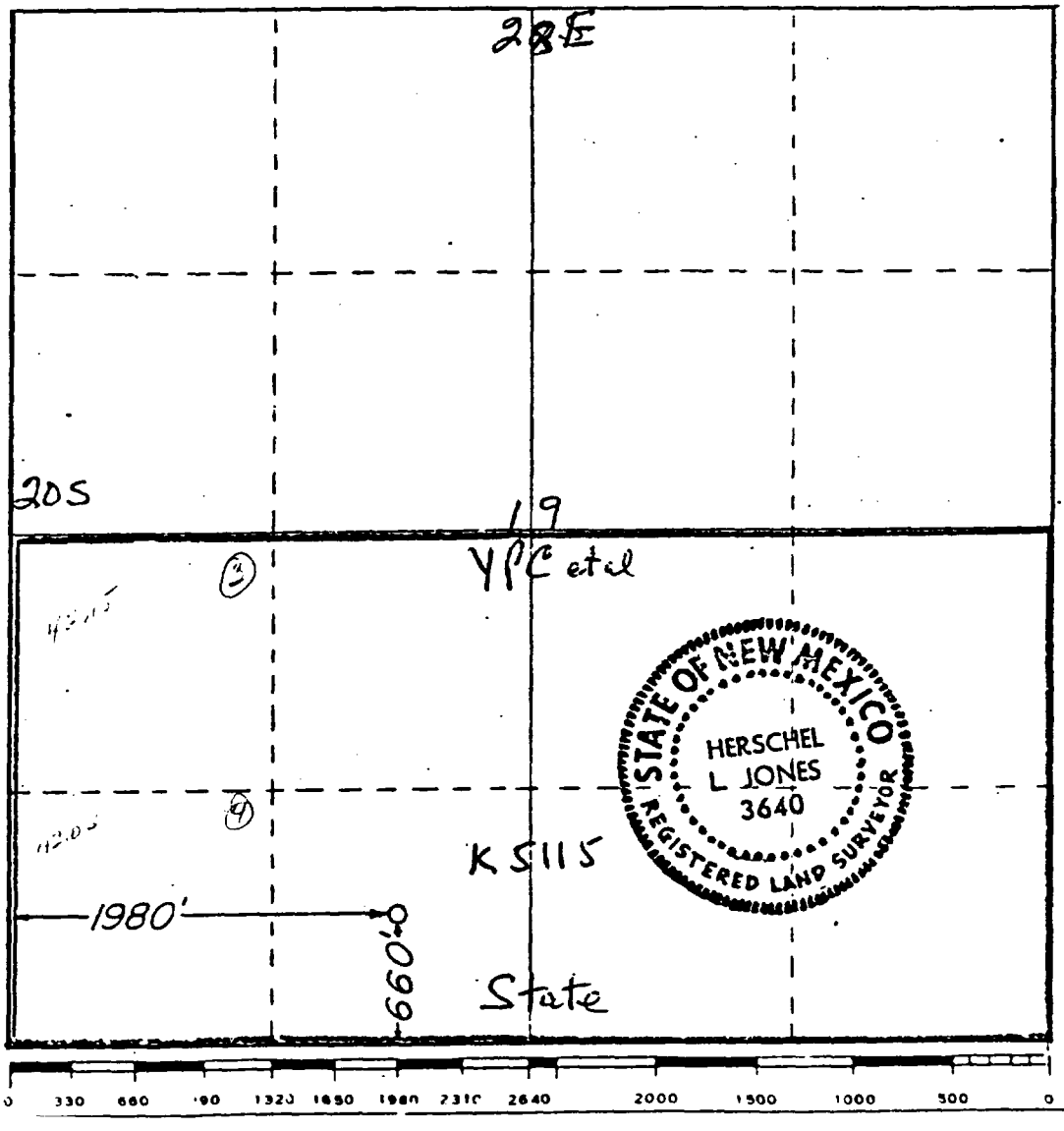
No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Name: Eddie M. Mahfood

Position: Engineer

Company: Yates Petroleum Corp

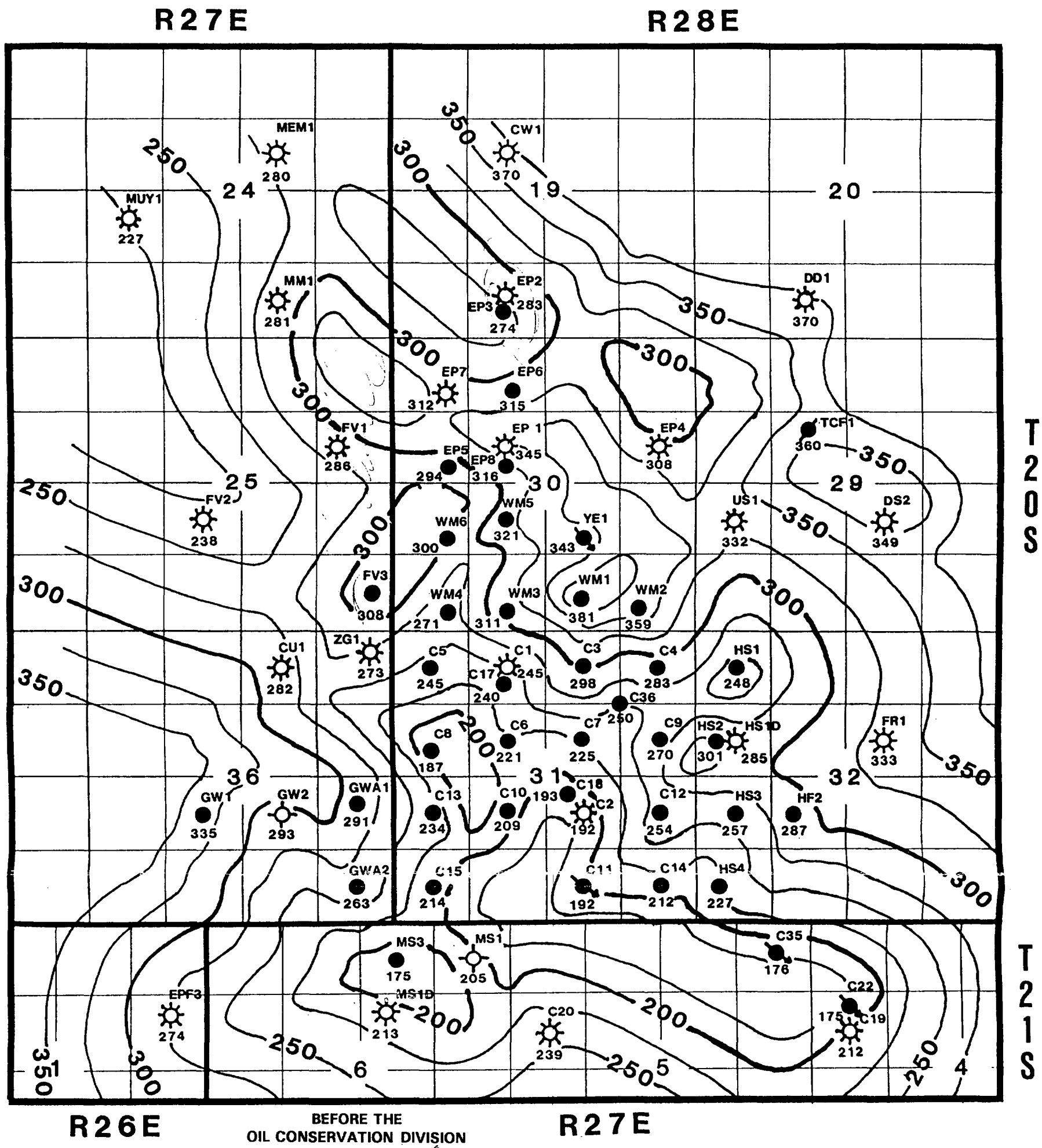
Date: 12-21-76

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: Aug. 25, 1976

Registered Professional Engineer and/or Land Surveyor

Certificate No. 3640



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 2
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

PREMIER OIL & GAS, INC.

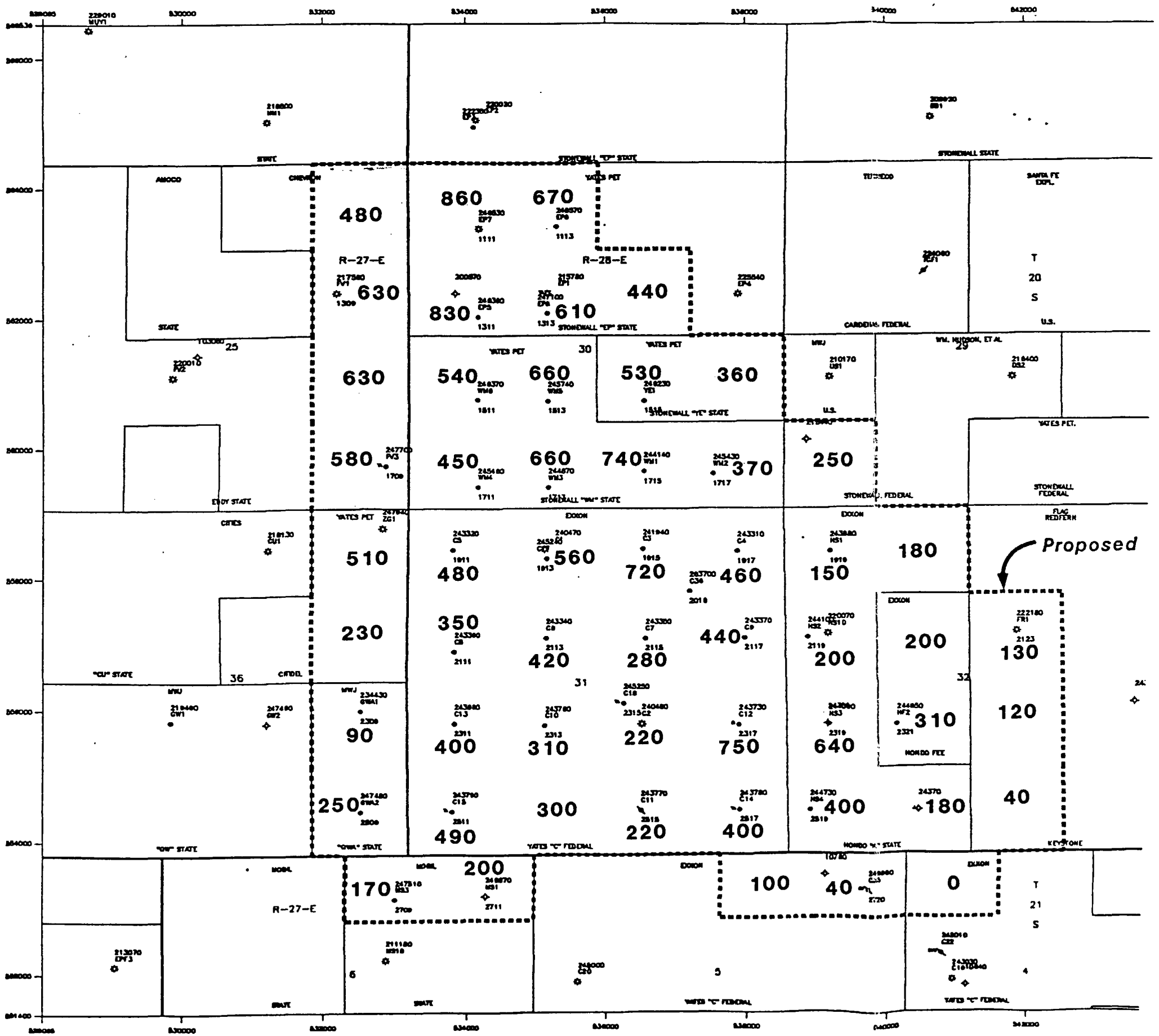
UPPER CHERRY CANYON THICKNESS DOWNLAP - BASE INTERVAL

AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CONTOUR INTERVAL: 25 FEET
SCALE: 2000 FEET / INCH

GEOLOGY BY: G. E. HARRINGTON JUNE, 1995

AVALON (DELAWARE) FIELD BASEMAP



PREMIER OIL & GAS, INC.

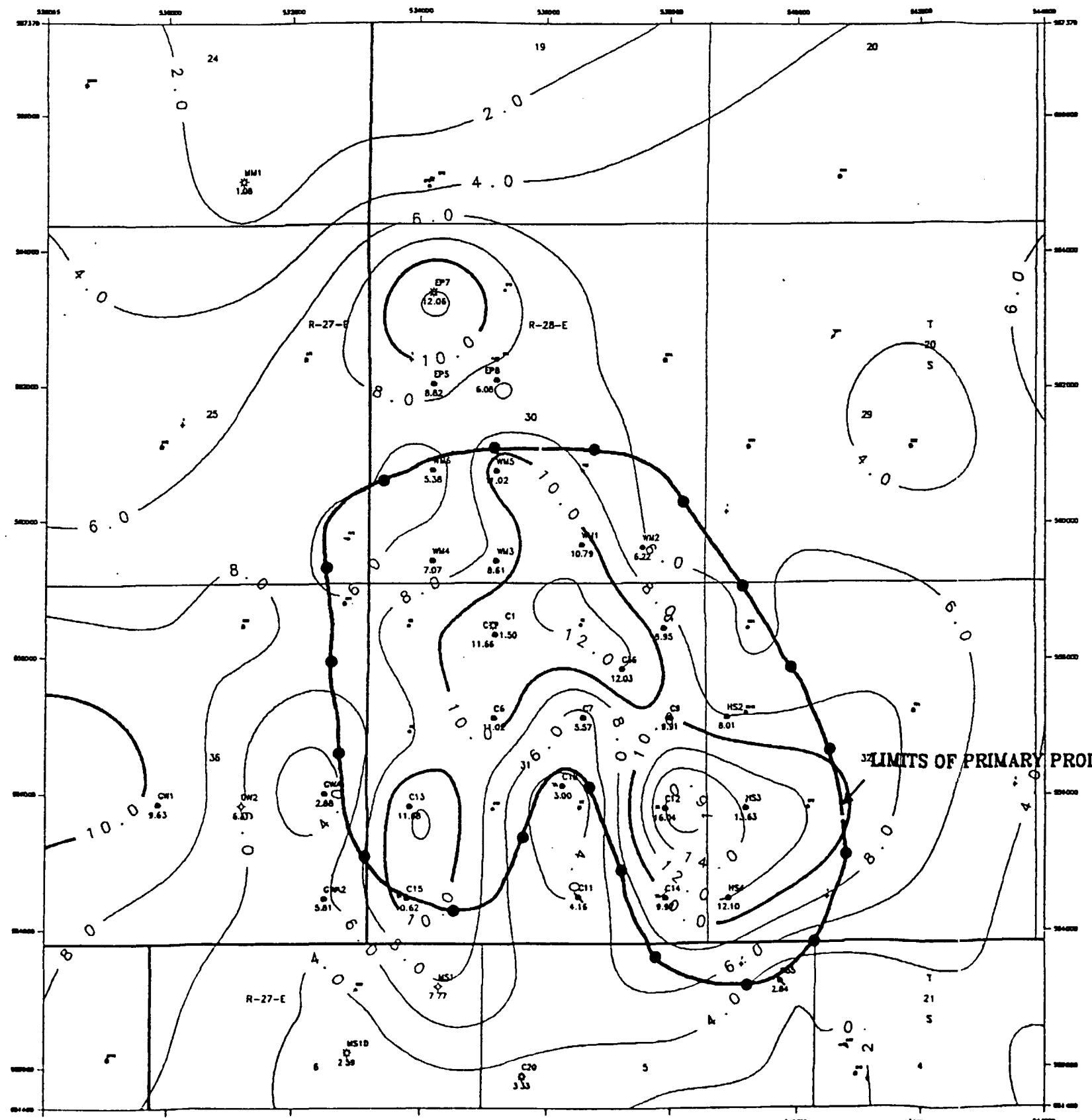
UPPER CHERRY CANYON WATERFLOOD TARGET OIL IN PLACE (KBO)

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 8
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

PAUL [illegible]

JUNE, 1995

UPPER CHERRY CANYON - Hydrocarbon Porosity Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

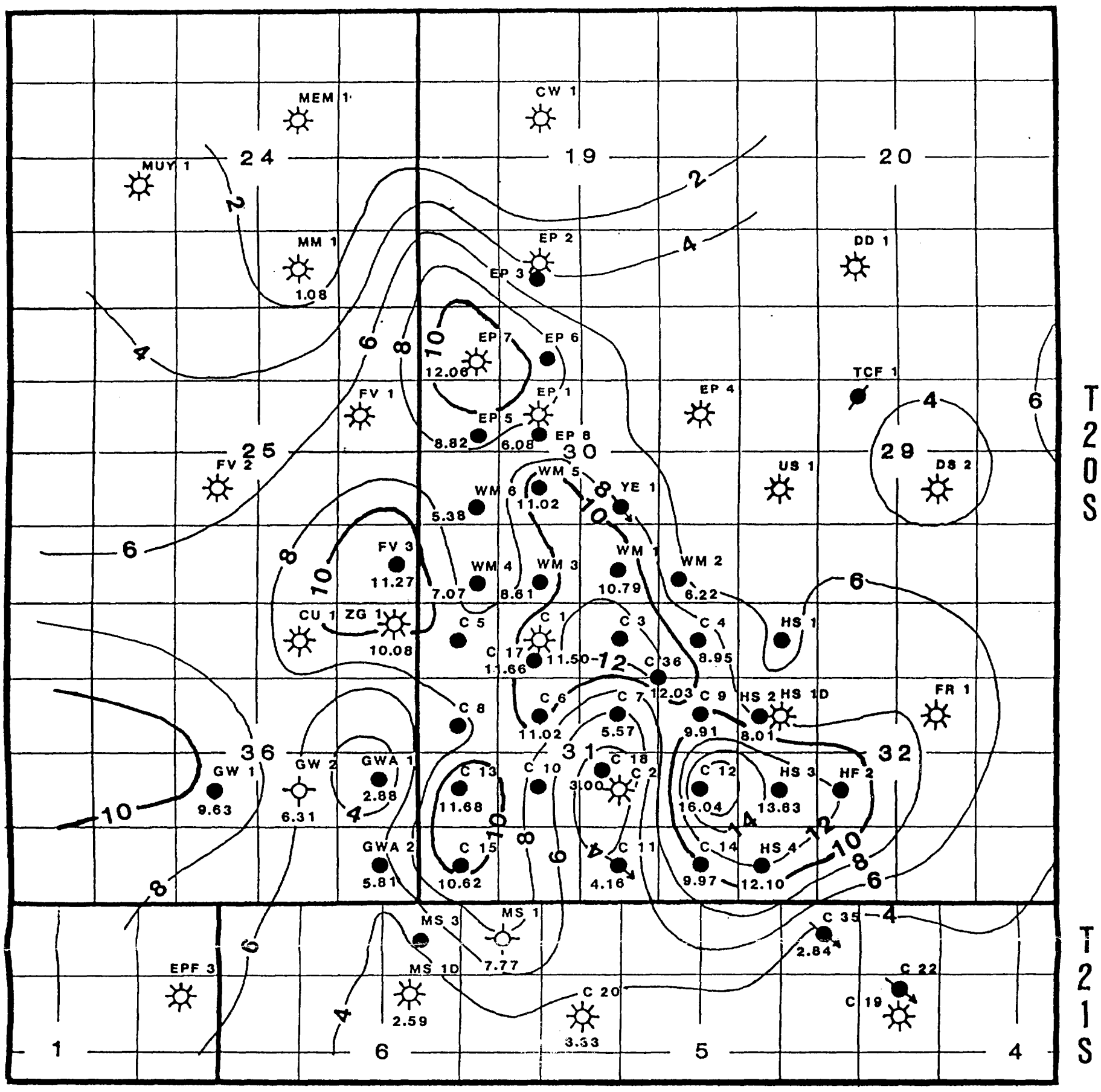
BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 6A
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

Map 20

EXXON COMPANY USA
PRODUCTION DEPARTMENT - SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP - GEOLOGY

TOTAL NET RESERVOIR HYDROCARBON POROSITY THICKNESS AT RE SW COND MAP

CINT = 2 CRIT = 400
SCALE = 1000 FEET/INCH



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 6
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

PREMIER OIL & GAS, INC.

UPPER CHERRY CANYON HYDROCARBON POROSITY THICKNESS

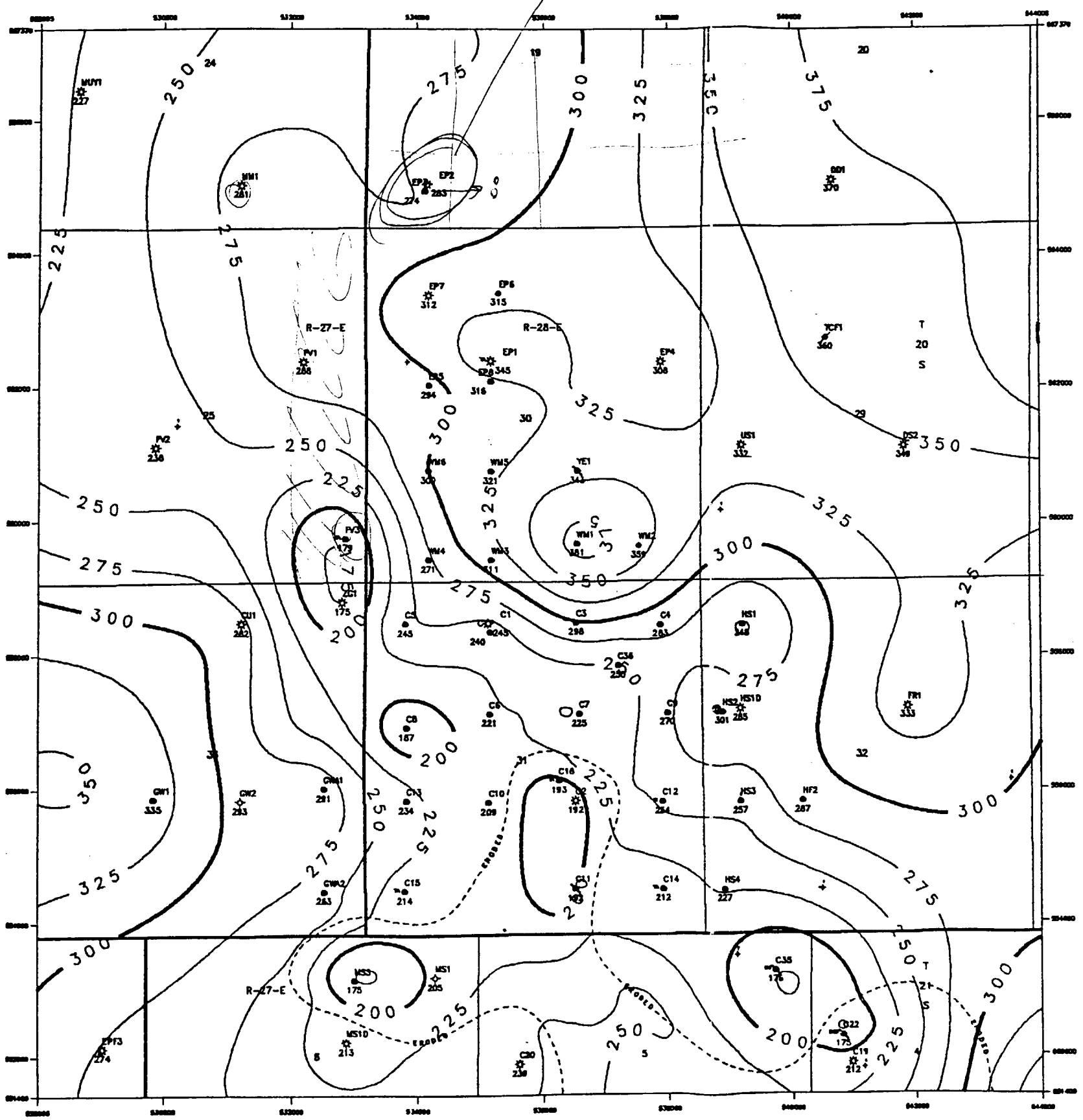
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CONTOUR INTERVAL: 2
SCALE: 2000 FEET / INCH

GEOLOGY BY: G. E. HARRINGTON JUNE, 1995

UPPER CHERRY CANYON - Gross Thickness

See Exh. #5



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 19
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

Map 7

EXXON COMPANY USA
PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL GROSS THICKNESS MAP
AMALGAMATION OF ZONES CCCM CMCB
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLS, THICKNESS (FT)

CONT = 25 CREE = 100
SCALE = 1000 FEET/INCH
JULY 18, 1995
TW BRANNON, D. CAMPBELL, TV WANE

AVALON (DELAWARE) UNIT
BY WELL RESERVES

*** RUR AS OF 1/1/93 ***

*** EUR AND RUR UNITS ARE KBO ***

UNIT WELL NUMBER	---- PRIMARY ---- RUR	EUR	--- WORKOVERS --- EUR	DELTA	--- WATERFLOOD -- EUR	DELTA	--- CO2 FLOOD --- EUR	DELTA
1109	0.0	0.0	0.0	0.0	0.0	0.0	296.9	296.9
1111	0.0	0.0	266.6	266.6	411.9	145.3	1043.9	632.0
1113	0.0	0.0	0.0	0.0	0.0	0.0	548.2	548.2
1309	0.0	0.0	0.0	0.0	0.0	0.0	763.2	763.2
1311	27.2	163.6	377.2	213.6	661.9	284.6	2604.2	1942.3
1313	18.1	137.1	278.7	141.6	571.0	292.3	1878.6	1307.6
1315	0.0	0.0	0.0	0.0	0.0	0.0	498.6	498.6
1509	0.0	0.0	0.0	0.0	0.0	0.0	720.1	720.1
1511	53.4	137.1	303.5	166.4	572.3	268.8	1790.3	1218.0
1513	33.8	154.6	371.4	216.8	921.8	550.5	2921.9	2000.0
1515	0.0	1.7	1.7	0.0	1.7	0.0	882.2	880.5
1517	0.0	0.0	0.0	0.0	0.0	0.0	294.6	294.6
1709	0.0	5.1	5.1	0.0	5.1	0.0	280.1	275.1
1711	19.3	127.6	127.6	0.0	291.2	163.7	1367.7	1076.4
1713	40.3	164.8	164.8	0.0	647.1	482.3	2338.6	1691.5
1715	20.2	66.3	118.8	52.6	225.0	106.2	1039.2	814.2
1717	0.0	0.0	68.8	68.8	84.9	16.1	578.9	494.0
1719	0.0	0.0	0.0	0.0	0.0	0.0	242.7	242.7
1909	0.0	0.0	0.0	0.0	0.0	0.0	345.5	345.5
1911	66.4	190.7	190.7	0.0	419.0	228.3	2006.4	1587.4
1913	80.9	268.8	268.8	0.0	863.2	594.4	2557.4	1694.2
1915	160.9	356.4	470.7	114.2	1456.1	985.4	3682.4	2226.3
1917	53.0	233.8	233.8	0.0	379.4	145.6	1063.9	684.5
1919	24.1	68.4	68.4	0.0	80.1	11.7	529.2	449.1
1921	0.0	0.0	0.0	0.0	0.0	0.0	151.8	151.8
2016	45.6	45.6	45.6	0.0	45.6	0.0	45.6	0.0
2109	0.0	0.0	0.0	0.0	0.0	0.0	84.5	84.5
2111	50.7	138.9	138.9	0.0	209.5	70.6	1310.9	1101.4
2113	120.3	360.8	424.3	63.5	908.1	483.8	2349.3	1441.2
2115	38.0	257.6	257.6	0.0	666.8	409.2	2665.0	1998.2
2117	76.6	275.8	275.8	0.0	829.3	553.5	2956.9	2127.6
2119	126.9	258.2	258.2	0.0	524.9	266.6	1515.8	991.0
2121	0.0	0.0	0.0	0.0	0.0	0.0	335.8	335.8
2123	0.0	0.0	0.0	0.0	0.0	0.0	55.3	55.3
2309	0.4	10.9	10.9	0.0	10.9	0.0	50.5	39.6
2311	19.3	150.6	150.6	0.0	285.7	135.1	1367.3	1081.6
2313	56.7	199.5	199.5	0.0	474.2	274.7	1534.8	1060.7
2315	0.0	22.7	76.8	54.1	119.8	42.9	632.9	513.1
2317	0.0	29.5	41.8	12.3	49.5	7.7	938.8	889.3
2319	29.3	173.6	175.7	2.2	315.8	140.0	1056.4	740.6
2321	3.1	23.2	76.1	52.9	127.7	51.6	969.4	841.7
2323	0.0	0.0	0.0	0.0	0.0	0.0	149.5	149.5
2509	0.3	6.0	6.0	0.0	6.0	0.0	140.2	134.1
2511	0.0	11.9	11.9	0.0	11.9	0.0	542.2	530.2
2513	0.0	0.0	0.0	0.0	0.0	0.0	215.7	215.7
2515	0.0	0.0	0.0	0.0	0.0	0.0	430.0	430.0
2517	0.0	24.6	41.4	16.8	55.5	14.1	514.6	459.2
2519	22.5	114.1	139.6	25.5	215.8	76.2	936.6	720.8
2521	0.0	0.0	0.0	0.0	0.0	0.0	365.0	365.0
2523	0.0	0.0	0.0	0.0	0.0	0.0	22.1	22.1
2709	0.0	3.1	3.1	0.0	3.1	0.0	199.8	196.7
2711	0.0	0.0	0.0	0.0	0.0	0.0	251.8	251.8
2717	0.0	0.0	0.0	0.0	0.0	0.0	99.5	99.5
2719	0.0	0.0	0.0	0.0	0.0	0.0	138.9	138.9
2721	0.0	0.0	0.0	0.0	0.0	0.0	32.7	32.7
TOTAL	1187.4	4182.4	5650.5	1468.1	12451.7	6801.2	52334.5	39882.8

Case 11298

Exhibit G-19

Exh 9

DRILLING TIME & SAMPLE LOG

GERALD E. HARRINGTON
P.O. Box 216

GEOLOGICAL CONSULTANT
Roswell, New Mexico

OPERATOR: GULF OIL EXPLORATION AND PRODUCTION COMPANY

WELL: EDDY "FV" STATE #3

FIELD: AVALON DELAWARE COUNTY: EDDY STATE: NEW MEXICO

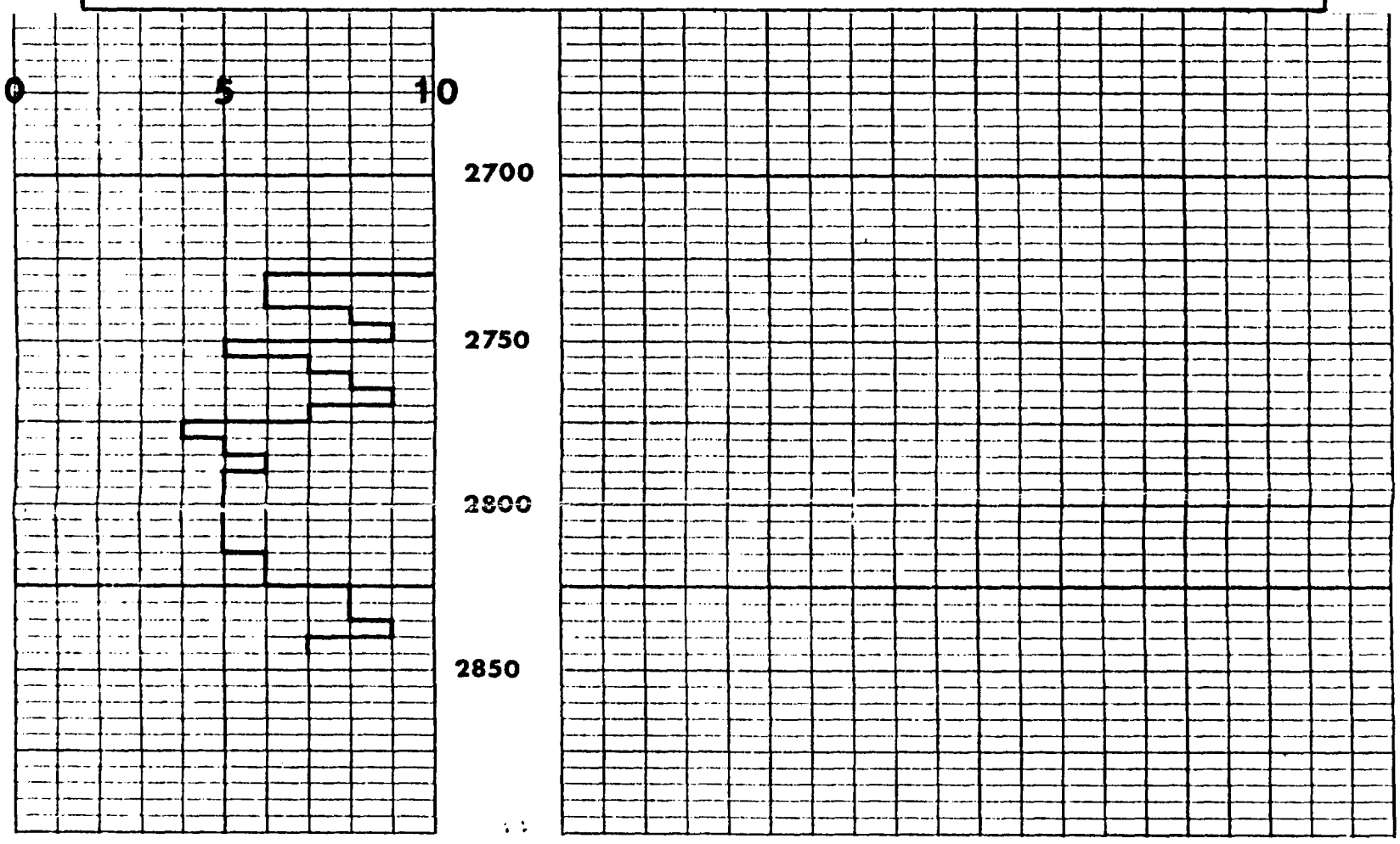
LOCATION: Section 25 Twp 20-S Rge 27-E Elev. KB 3315.5

Footage 660' FSL & 330' FEL DF 3314.5

TD: 4975 CASING: GL 3302.5

BIT SIZE: CONTRACTOR:

REMARKS: DRILLING TIME - MINUTES/ 5 FEET



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 10
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

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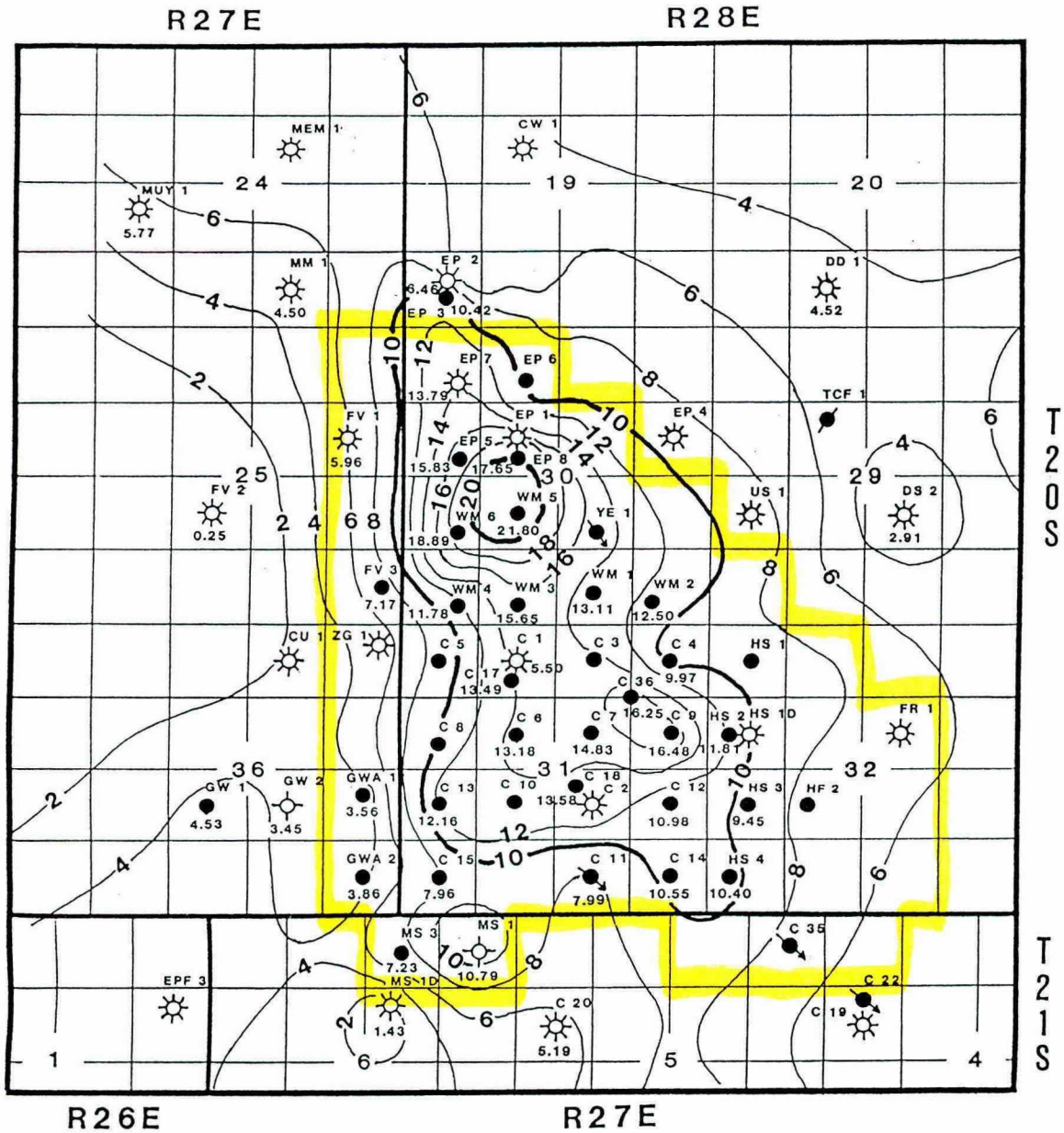


PREMIER OIL & GAS, INC.

LOWER CHERRY CANYON - UPPER BRUSHY CANYON

HYDROCARBON POROSITY THICKNESS

AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

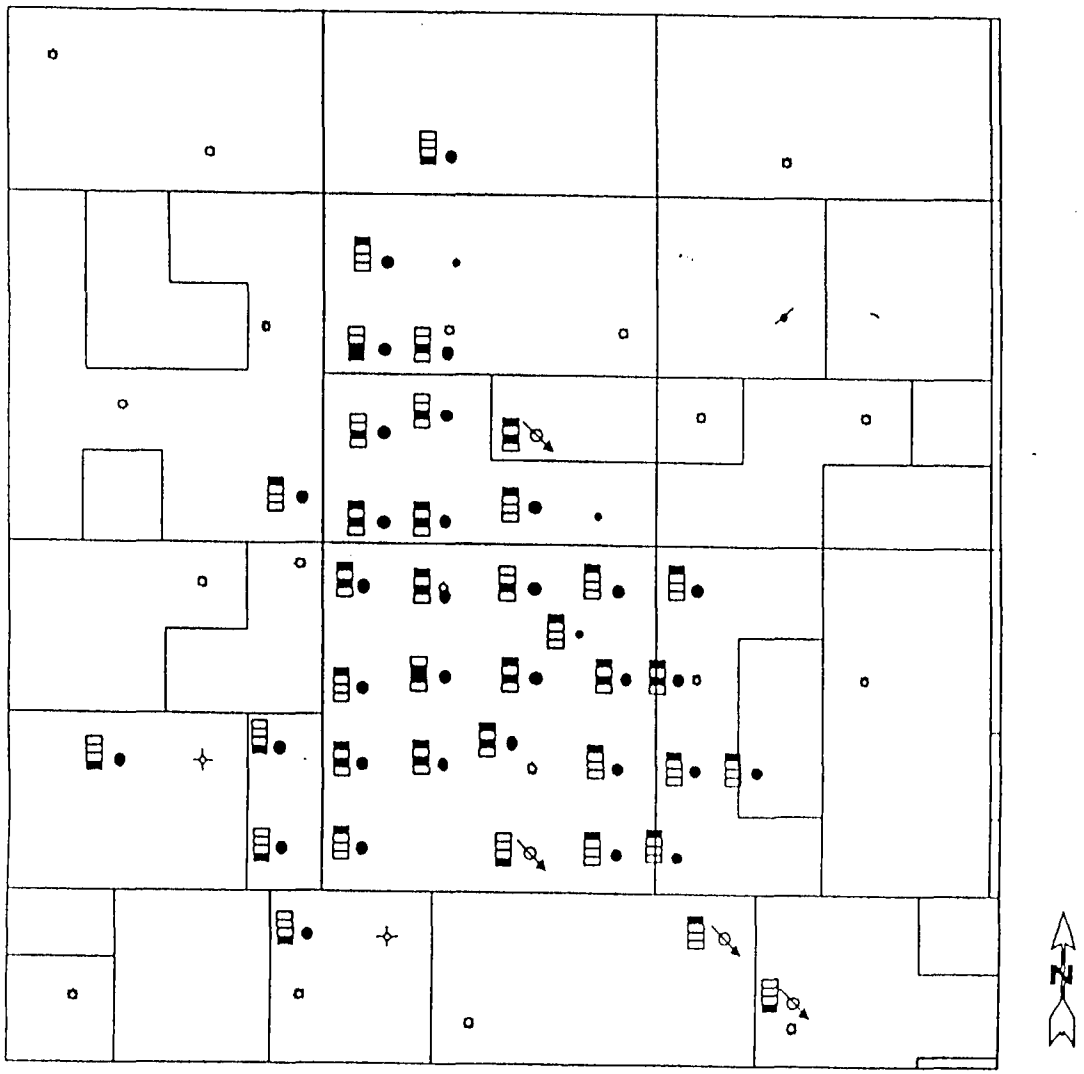
CONTOUR INTERVAL: 2

GEOLOGY BY: G. E. HARRINGTON NOVEMBER, 1995

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

2

AVALON (DELAWARE) FIELD
COMPLETION ZONES



Upper Cherry Canyon
Middle Cherry Canyon
Upper Brushy Canyon
Lower Brushy Canyon

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

Comparison of Waterflood Target Reserves

to

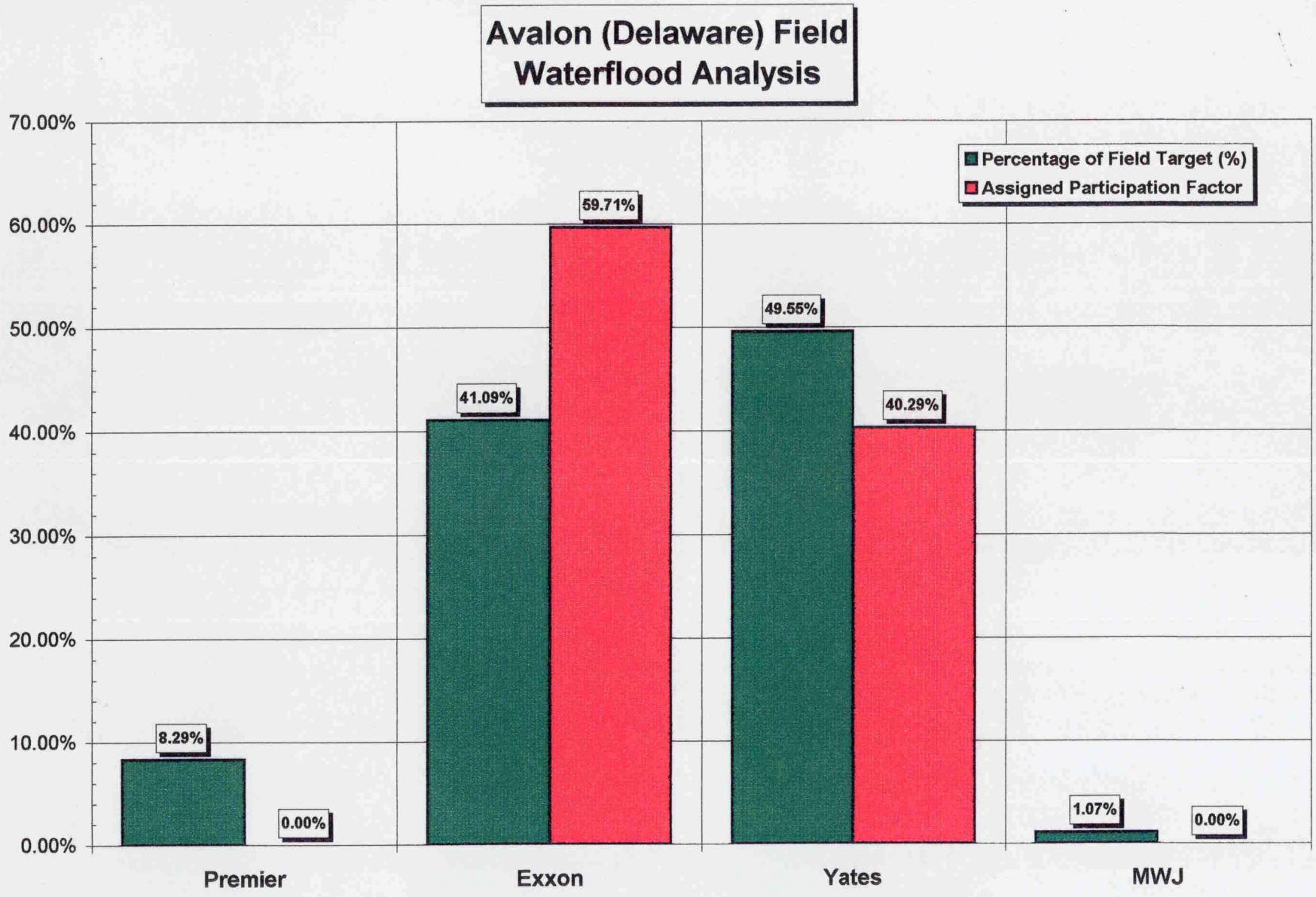
Current Tract Participation

Operator	Waterflood Target Reserves (MMSTBO)	Percentage of Field Target (%)	Assigned Participation Factor
Premier	2.95	8.29%	0.00%
Exxon	14.62	41.09%	59.71%
Yates	17.63	49.55%	40.29%
MWJ	0.38	1.07%	0.00%
Field Total	35.58	100.00%	100.00%

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

Waterflood Target Reserves from Exxon Exhibit 10, NMOCD Case 11297 11298, June 29, 1995

4


Avalon (Delaware) Field
Waterflood Analysis
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Percentage of Field Target (%)
Assigned Participation Factor
8.29%
0.00%
41.09%
59.71%
49.55%
40.29%
1.07%
0.00%
Premier
Exxon
Yates
MWJ

4

Comparison of CO2 Target Reserves

to

Current Tract Participation

Operator	CO2 Target Reserves (MMSTBO)	Percentage of Field Target (%)	Assigned Participation Factor
Premier	10.07	5.88%	4.08%
Exxon	96.71	56.49%	60.26%
Yates	61.65	36.01%	35.25%
MWJ	2.78	1.62%	0.42%
Field Total	171.21	100.00%	100.00%

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

Waterflood Target Reserves from Exxon Exhibit 10, NMOCD Case 11297 11298, June 29, 1995

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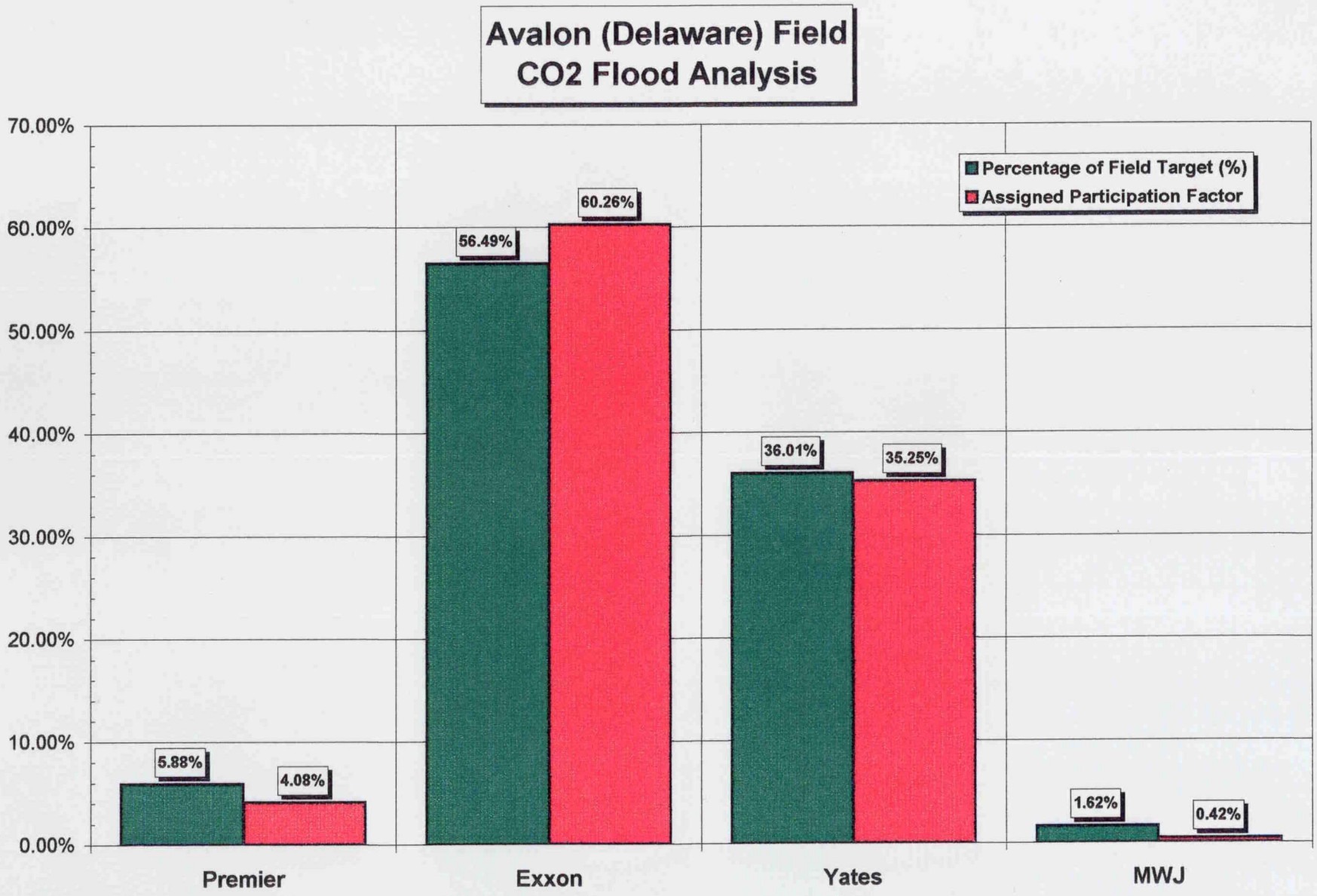

Avalon (Delaware) Field
CO2 Flood Analysis
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Percentage of Field Target (%)
Assigned Participation Factor
5.88%
4.08%
56.49%
60.26%
36.01%
35.25%
1.62%
0.42%
Premier
Exxon
Yates
MWJ

Effect of Reserve Categorization on Participation Percentage

Avalon (Delaware) Field

Given:

Total Future Production From Premier Tracts = 1,626.0 MSTBO

Case 1 - All Production From CO2 Flood

Primary barrels =	0	MSTBO
Waterflood Barrels =	0	MSTBO
CO2 barrels =	1,626.0	MSTBO

Participation % = ((0/1,192.2)*0.25) + ((0/8,269.4)*0.50) + ((1,626.0/39,883.0)*0.25)

Participation % = 1.019

Case 2 - 25% of Production From Waterflood and 75% of Production From CO2 Flood

Primary barrels =	0	MSTBO
Waterflood Barrels =	406.5	MSTBO
CO2 barrels =	1,219.5	MSTBO

Participation % = ((0/1,192.2)*0.25) + ((406.5/8,675.9)*0.50) + ((1,219.5/39,476.5)*0.25)

Participation % = 3.115

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

Premier Tract Future Production from Exxon Exhibit 10, NMOCD Case 11297 11298, June 29, 1995

AVALON (DELAWARE) UNIT
BY WELL RESERVES

RUR AS OF 01/01/93
EUR AND RUR UNITS ARE KBO
(As amended in 2-15-93 letter)

	Primary		Secondary				Tertiary		
Unit Well Number	PRIMARY RUR	PRIMARY EUR	WORKOVERS and WATERFLOOD DELTA	WORKOVERS DELTA	WATERFLOOD DELTA	WATERFLOOD EUR	CO2 FLOOD DELTA	CO2 FLOOD EUR	Resulting Participation Factor
1109	0.0	0.0	0.0	0.0	0.0	0.0	265.4	265.4	0.17%
1111	0.0	0.0	345.1	266.6	78.5	345.1	530.6	875.7	2.42%
1113	0.0	0.0	0.8	0.0	0.8	0.8	446.7	447.5	0.28%
1309	0.0	0.0	0.0	0.0	0.0	0.0	607.3	607.3	0.38%
1311	43.4	179.8	403.6	213.6	190.0	583.4	1,693.0	2,276.4	4.41%
1313	33.4	152.4	373.3	141.6	231.7	525.7	1,045.9	1,571.6	3.61%
1315	0.0	0.0	0.0	0.0	0.0	0.0	362.5	362.5	0.23%
1509	0.0	0.0	0.0	0.0	0.0	0.0	579.0	579.0	0.36%
1511	53.4	137.1	368.1	166.4	201.7	505.2	1,425.9	1,931.1	4.24%
1513	33.8	154.6	741.5	216.8	524.7	896.1	2,177.2	3,073.3	6.56%
1515	0.0	1.7	0.0	0.0	0.0	1.7	852.5	854.2	0.53%
1517	0.0	0.0	0.0	0.0	0.0	0.0	247.4	247.4	0.16%
1709	0.0	5.1	0.0	0.0	0.0	5.1	174.3	179.4	0.11%
1711	19.3	127.6	174.5	0.0	174.5	302.1	1,189.7	1,491.8	2.21%
1713	40.3	164.8	698.4	0.0	698.4	863.2	2,009.3	2,872.5	6.33%
1715	20.2	66.3	157.5	52.5	105.0	223.8	966.2	1,190.0	1.98%
1717	0.0	0.0	69.3	68.8	0.5	69.3	481.0	550.3	0.72%
1719	0.0	0.0	0.0	0.0	0.0	0.0	203.9	203.9	0.13%
1909	0.0	0.0	0.0	0.0	0.0	0.0	336.2	336.2	0.21%
1911	66.4	190.7	252.6	0.0	252.6	443.3	1,687.4	2,130.7	3.98%
1913	80.9	268.8	648.3	0.0	648.3	917.1	1,861.6	2,778.7	6.78%
1915	113.5	309.0	1,101.1	114.3	986.8	1410.1	2,271.4	3,681.5	10.46%
1917	119.4	388.5	156.3	0.0	156.3	544.8	739.5	1,284.3	3.91%
1919	24.1	68.4	11.3	0.0	11.3	79.7	448.6	528.3	0.85%
1921	0.0	0.0	0.0	0.0	0.0	0.0	143.8	143.8	0.09%
2109	0.0	0.0	0.0	0.0	0.0	0.0	91.4	91.4	0.06%
2111	50.7	138.9	102.5	0.0	102.5	241.4	1,195.1	1,436.5	2.43%
2113	120.3	360.8	553.9	63.5	490.4	914.7	1,496.8	2,411.5	6.81%
2115	38.0	257.6	397.1	0.0	397.1	654.7	1,933.6	2,588.3	4.41%
2117	76.6	275.8	587.5	0.0	587.5	863.3	2,241.8	3,105.1	6.56%
2119	126.9	258.2	232.2	0.0	232.2	490.4	925.2	1,415.6	4.64%
2121	0.0	0.0	0.0	0.0	0.0	0.0	308.9	308.9	0.19%
2123	0.0	0.0	0.0	0.0	0.0	0.0	51.5	51.5	0.03%
2309	0.4	10.9	0.0	0.0	0.0	10.9	46.7	57.6	0.04%
2311	19.3	150.6	157.9	0.0	157.9	308.5	1,207.9	1,516.4	2.12%
2313	56.7	199.5	264.9	0.0	264.9	464.4	1,064.2	1,528.6	3.46%
2315	0.0	22.7	73.4	54.1	19.3	96.1	523.1	619.2	0.77%
2317	0.0	29.5	28.6	12.3	16.3	58.1	881.0	939.1	0.73%
2319	29.3	173.6	167.5	2.1	165.4	341.1	823.6	1,164.7	2.14%
2321	3.1	23.2	69.7	52.9	16.8	92.9	741.6	834.5	0.95%
2323	0.0	0.0	0.0	0.0	0.0	0.0	120.1	120.1	0.08%
2509	0.3	6.0	0.0	0.0	0.0	6.0	119.1	125.1	0.08%
2511	0.0	11.9	0.0	0.0	0.0	11.9	522.4	534.3	0.33%
2513	0.0	0.0	0.0	0.0	0.0	0.0	219.4	219.4	0.14%
2515	0.0	0.0	0.4	0.0	0.4	0.4	353.9	354.3	0.22%
2517	0.0	24.6	43.7	16.8	26.9	68.3	525.1	593.4	0.59%
2519	22.5	114.1	88.3	25.5	62.8	202.4	710.5	912.9	1.45%
2521	0.0	0.0	0.1	0.0	0.1	0.1	299.2	299.3	0.19%
2523	0.0	0.0	0.0	0.0	0.0	0.0	19.5	19.5	0.01%
2709	0.0	3.1	0.0	0.0	0.0	3.1	239.4	242.5	0.15%
2711	0.0	0.0	0.0	0.0	0.0	0.0	204.9	204.9	0.13%
2717	0.0	0.0	0.0	0.0	0.0	0.0	148.9	148.9	0.09%
2719	0.0	0.0	0.0	0.0	0.0	0.0	111.9	111.9	0.07%
2721	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0	0.01%
Totals =	1,192.2	4,275.8	8,269.4	1,467.8	6,801.6	12,545.2	39,883.0	52,428.2	100.00%

As per Exxon Exhibit 10, MNOCD Case 11297 11298, June 29, 1995

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

9

AVALON (DELAWARE) UNIT
BY WELL RESERVES

RUR AS OF 01/01/93
EUR AND RUR UNITS ARE KBO
(As amended in 2-15-93 letter)

	Primary		Secondary				Tertiary		
Unit Well Number	PRIMARY RUR	PRIMARY EUR	WORKOVERS and WATERFLOOD DELTA	WORKOVERS DELTA	WATERFLOOD DELTA	WATERFLOOD EUR	CO2 FLOOD DELTA	CO2 FLOOD EUR	Resulting Participation Factor
1109	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00%
1111	0.0	0.0	345.1	266.6	78.5	345.1	530.6	875.7	2.43%
1113	0.0	0.0	0.8	0.0	0.8	0.8	446.7	447.5	0.30%
1309	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00%
1311	43.4	179.8	403.6	213.6	190.0	583.4	1,693.0	2,276.4	4.46%
1313	33.4	152.4	373.3	141.6	231.7	525.7	1,045.9	1,571.6	3.64%
1315	0.0	0.0	0.0	0.0	0.0	0.0	362.5	362.5	0.24%
1509	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.00%
1511	53.4	137.1	368.1	166.4	201.7	505.2	1,425.9	1,931.1	4.28%
1513	33.8	154.6	741.5	216.8	524.7	896.1	2,177.2	3,073.3	6.61%
1515	0.0	1.7	0.0	0.0	0.0	1.7	852.5	854.2	0.56%
1517	0.0	0.0	0.0	0.0	0.0	0.0	247.4	247.4	0.16%
1709	0.0	5.1	0.0	0.0	0.0	5.1	0.0	5.1	0.00%
1711	19.3	127.6	174.5	0.0	174.5	302.1	1,189.7	1,491.8	2.24%
1713	40.3	164.8	698.4	0.0	698.4	863.2	2,009.3	2,872.5	6.38%
1715	20.2	66.3	157.5	52.5	105.0	223.8	966.2	1,190.0	2.01%
1717	0.0	0.0	69.3	68.8	0.5	69.3	481.0	550.3	0.73%
1719	0.0	0.0	0.0	0.0	0.0	0.0	203.9	203.9	0.13%
1909	0.0	0.0	0.0	0.0	0.0	0.0	336.2	336.2	0.22%
1911	66.4	190.7	252.6	0.0	252.6	443.3	1,687.4	2,130.7	4.02%
1913	80.9	268.8	648.3	0.0	648.3	917.1	1,861.6	2,778.7	6.83%
1915	113.5	309.0	1,101.1	114.3	986.8	1410.1	2,271.4	3,681.5	10.52%
1917	119.4	388.5	156.3	0.0	156.3	544.8	739.5	1,284.3	3.93%
1919	24.1	68.4	11.3	0.0	11.3	79.7	448.6	528.3	0.87%
1921	0.0	0.0	0.0	0.0	0.0	0.0	143.8	143.8	0.09%
2109	0.0	0.0	0.0	0.0	0.0	0.0	91.4	91.4	0.06%
2111	50.7	138.9	102.5	0.0	102.5	241.4	1,195.1	1,436.5	2.46%
2113	120.3	360.8	553.9	63.5	490.4	914.7	1,496.8	2,411.5	6.85%
2115	38.0	257.6	397.1	0.0	397.1	654.7	1,933.6	2,588.3	4.46%
2117	76.6	275.8	587.5	0.0	587.5	863.3	2,241.8	3,105.1	6.62%
2119	126.9	258.2	232.2	0.0	232.2	490.4	925.2	1,415.6	4.67%
2121	0.0	0.0	0.0	0.0	0.0	0.0	308.9	308.9	0.20%
2123	0.0	0.0	0.0	0.0	0.0	0.0	51.5	51.5	0.03%
2309	0.4	10.9	0.0	0.0	0.0	10.9	46.7	57.6	0.04%
2311	19.3	150.6	157.9	0.0	157.9	308.5	1,207.9	1,516.4	2.15%
2313	56.7	199.5	264.9	0.0	264.9	464.4	1,064.2	1,528.6	3.49%
2315	0.0	22.7	73.4	54.1	19.3	96.1	523.1	619.2	0.79%
2317	0.0	29.5	28.6	12.3	16.3	58.1	881.0	939.1	0.75%
2319	29.3	173.6	167.5	2.1	165.4	341.1	823.6	1,164.7	2.17%
2321	3.1	23.2	69.7	52.9	16.8	92.9	741.6	834.5	0.97%
2323	0.0	0.0	0.0	0.0	0.0	0.0	120.1	120.1	0.08%
2509	0.3	6.0	0.0	0.0	0.0	6.0	119.1	125.1	0.08%
2511	0.0	11.9	0.0	0.0	0.0	11.9	522.4	534.3	0.34%
2513	0.0	0.0	0.0	0.0	0.0	0.0	219.4	219.4	0.14%
2515	0.0	0.0	0.4	0.0	0.4	0.4	353.9	354.3	0.23%
2517	0.0	24.6	43.7	16.8	26.9	68.3	525.1	593.4	0.61%
2519	22.5	114.1	88.3	25.5	62.8	202.4	710.5	912.9	1.47%
2521	0.0	0.0	0.1	0.0	0.1	0.1	299.2	299.3	0.20%
2523	0.0	0.0	0.0	0.0	0.0	0.0	19.5	19.5	0.01%
2709	0.0	3.1	0.0	0.0	0.0	3.1	239.4	242.5	0.16%
2711	0.0	0.0	0.0	0.0	0.0	0.0	204.9	204.9	0.13%
2717	0.0	0.0	0.0	0.0	0.0	0.0	148.9	148.9	0.10%
2719	0.0	0.0	0.0	0.0	0.0	0.0	111.9	111.9	0.07%
2721	0.0	0.0	0.0	0.0	0.0	0.0	10.0	10.0	0.01%
Totals =	1,192.2	4,275.8	8,269.4	1,467.8	6,801.6	12,545.2	38,257.0	50,802.2	100.00%

As per Exxon Exhibit 10, MNOCD Case 11297 11298, June 29, 1995

10

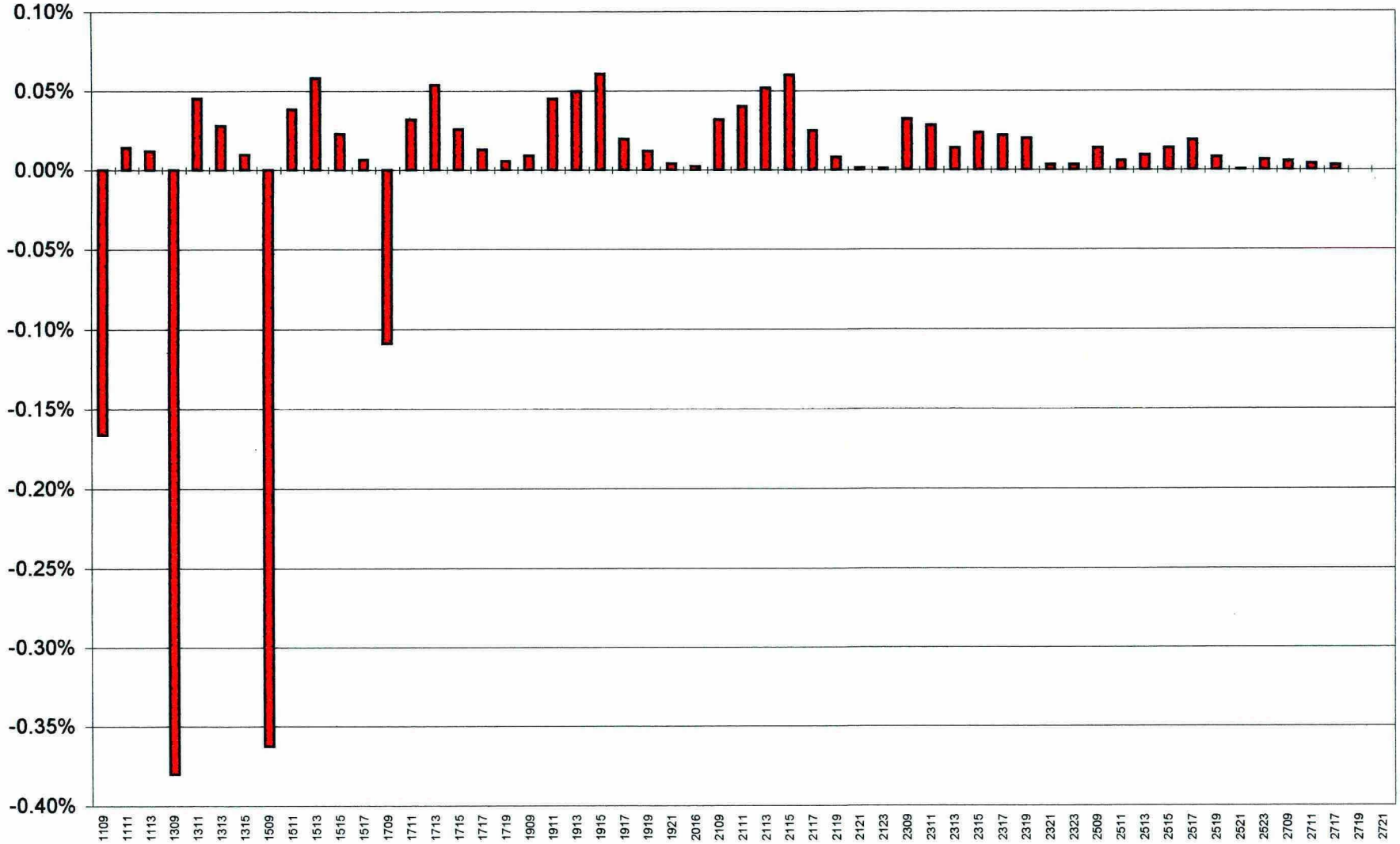
AVALON (DELAWARE) UNIT

Result of Removal of Premier Tracts

Unit Well Number	Existing Formula Resulting Participation Factor	Removing Premier Tracts Resulting Participation Factor	Change in Participation Factor
1109	0.17%	0.00%	-0.17%
1111	2.42%	2.43%	0.01%
1113	0.28%	0.30%	0.01%
1309	0.38%	0.00%	-0.38%
1311	4.41%	4.46%	0.05%
1313	3.61%	3.64%	0.03%
1315	0.23%	0.24%	0.01%
1509	0.36%	0.00%	-0.36%
1511	4.24%	4.28%	0.04%
1513	6.56%	6.61%	0.06%
1515	0.53%	0.56%	0.02%
1517	0.16%	0.16%	0.01%
1709	0.11%	0.00%	-0.11%
1711	2.21%	2.24%	0.03%
1713	6.33%	6.38%	0.05%
1715	1.98%	2.01%	0.03%
1717	0.72%	0.73%	0.01%
1719	0.13%	0.13%	0.01%
1909	0.21%	0.22%	0.01%
1911	3.98%	4.02%	0.04%
1913	6.78%	6.83%	0.05%
1915	10.46%	10.52%	0.06%
1917	3.91%	3.93%	0.02%
1919	0.85%	0.87%	0.01%
1921	0.09%	0.09%	0.00%
2016	0.06%	0.06%	0.00%
2109	2.43%	2.46%	0.03%
2111	6.81%	6.85%	0.04%
2113	4.41%	4.46%	0.05%
2115	6.56%	6.62%	0.06%
2117	4.64%	4.67%	0.02%
2119	0.19%	0.20%	0.01%
2121	0.03%	0.03%	0.00%
2123	0.04%	0.04%	0.00%
2309	2.12%	2.15%	0.03%
2311	3.46%	3.49%	0.03%
2313	0.77%	0.79%	0.01%
2315	0.73%	0.75%	0.02%
2317	2.14%	2.17%	0.02%
2319	0.95%	0.97%	0.02%
2321	0.08%	0.08%	0.00%
2323	0.08%	0.08%	0.00%
2509	0.33%	0.34%	0.01%
2511	0.14%	0.14%	0.01%
2513	0.22%	0.23%	0.01%
2515	0.59%	0.61%	0.01%
2517	1.45%	1.47%	0.02%
2519	0.19%	0.20%	0.01%
2521	0.01%	0.01%	0.00%
2523	0.15%	0.16%	0.01%
2709	0.13%	0.13%	0.01%
2711	0.09%	0.10%	0.00%
2717	0.07%	0.07%	0.00%
2719	0.01%	0.01%	0.00%
2721	0.00%	0.00%	0.00%
Totals =	100.00%	100.00%	

As per Exxon Exhibit 10, MNOCD Case 11297 11298, June 29, 1995

Change in Participation Factor Comparison



AVALON (DELAWARE) UNIT

COMPARISON OF BY WELL RESERVES TO ACTUAL PRODUCTION

RUR AS OF 01/01/93
EUR AND RUR UNITS ARE KBO
(As amended in 2-15-93 letter)

Unit Well Number	Exxon Estimates RUR	Exxon Estimates EUR	Actual Current Production	Overstated Reserve Estimates
1109	0.0	0.0	0.0	
1111	0.0	0.0	1.6	
1113	0.0	0.0	0.0	
1309	0.0	0.0	0.0	
1311	43.4	179.8	152.7	
1313	33.4	152.4	131.7	
1315	0.0	0.0	0.0	
1509	0.0	0.0	0.0	
1511	53.4	137.1	89.4	*
1513	33.8	154.6	140.1	
1515	0.0	1.7	1.7	
1517	0.0	0.0	0.0	
1709	0.0	5.1	5.1	
1711	19.3	127.6	114.9	
1713	40.3	164.8	142.5	
1715	20.2	66.3	51.6	
1717	0.0	0.0	0.0	
1719	0.0	0.0	0.0	
1909	0.0	0.0	0.0	
1911	66.4	190.7	136.0	
1913	80.9	268.8	215.0	
1915	113.5	309.0	209.7	*
1917	119.4	388.5	324.1	*
1919	24.1	68.4	46.9	*
1921	0.0	0.0	0.0	
2109	0.0	0.0	0.0	
2111	50.7	138.9	94.2	*
2113	120.3	360.8	275.9	*
2115	38.0	257.6	249.0	
2117	76.6	275.8	239.3	
2119	126.9	258.2	158.1	
2121	0.0	0.0	0.0	
2123	0.0	0.0	0.0	
2309	0.4	10.9	10.9	
2311	19.3	150.6	154.2	
2313	56.7	199.5	164.8	
2315	0.0	22.7	22.7	
2317	0.0	29.5	29.5	
2319	29.3	173.6	161.9	
2321	3.1	23.2	24.5	
2323	0.0	0.0	0.0	
2509	0.3	6.0	7.7	
2511	0.0	11.9	11.9	
2513	0.0	0.0	0.0	
2515	0.0	0.0	0.0	
2517	0.0	24.6	24.6	
2519	22.5	114.1	105.9	
2521	0.0	0.0	0.0	
2523	0.0	0.0	0.0	
2709	0.0	3.1	3.1	
2711	0.0	0.0	0.0	
2717	0.0	0.0	0.0	
2719	0.0	0.0	0.0	
2721	0.0	0.0	0.0	

As per Exxon Exhibit 10, MNOCD Case 11297 11298, June 29, 1995

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

Comparison of Actual Production to Report Production
Stonewall WM State #6 (1511)

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PRODUCTION

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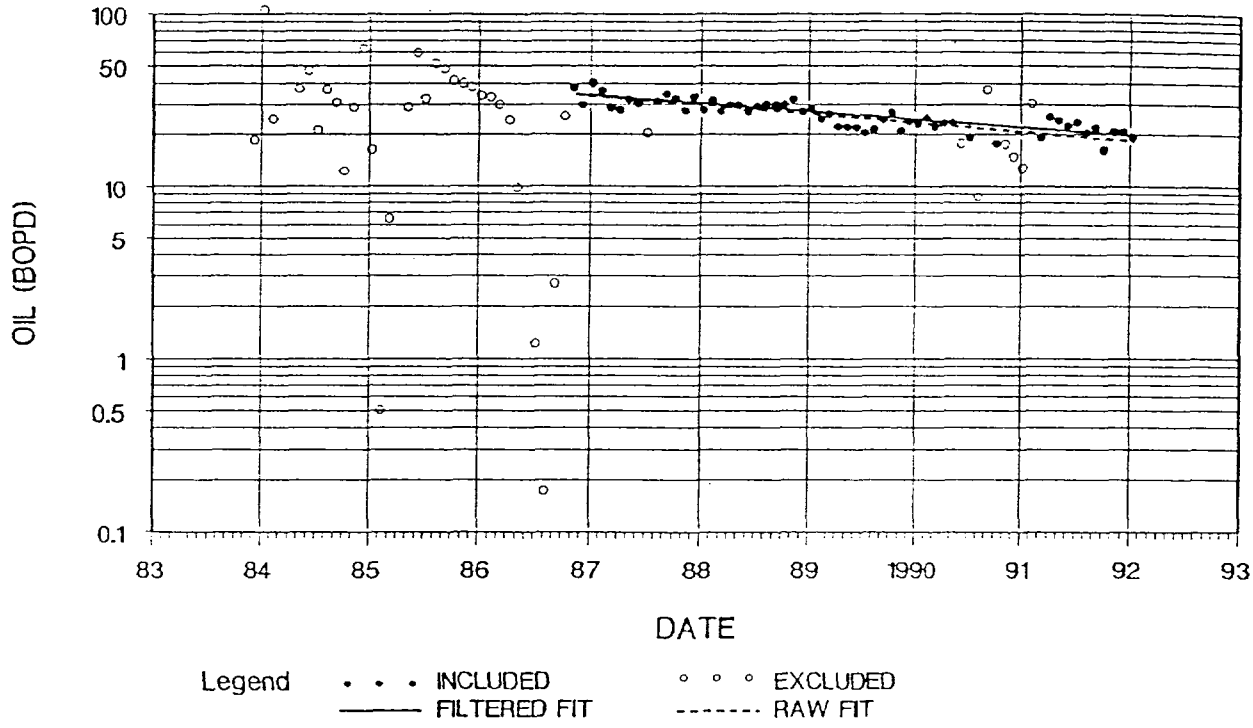
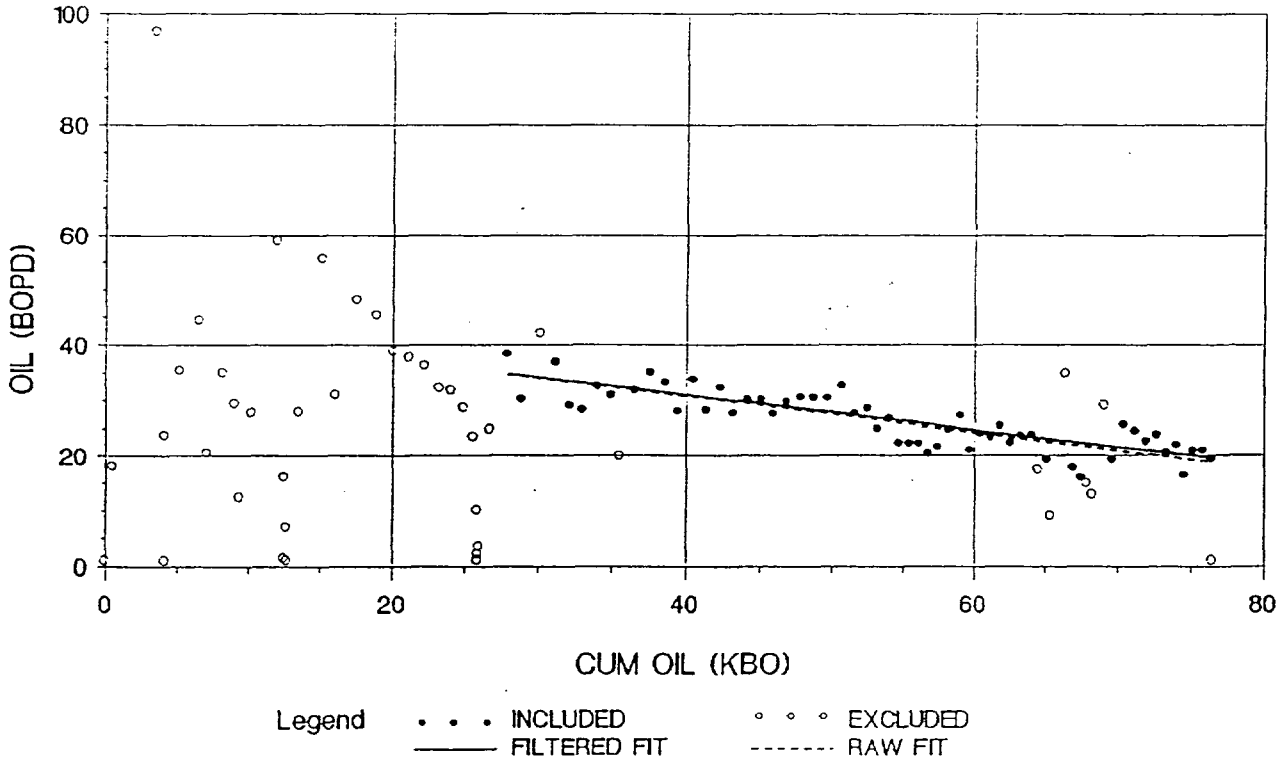
14

AVALON FIELD DECLINE CURVES

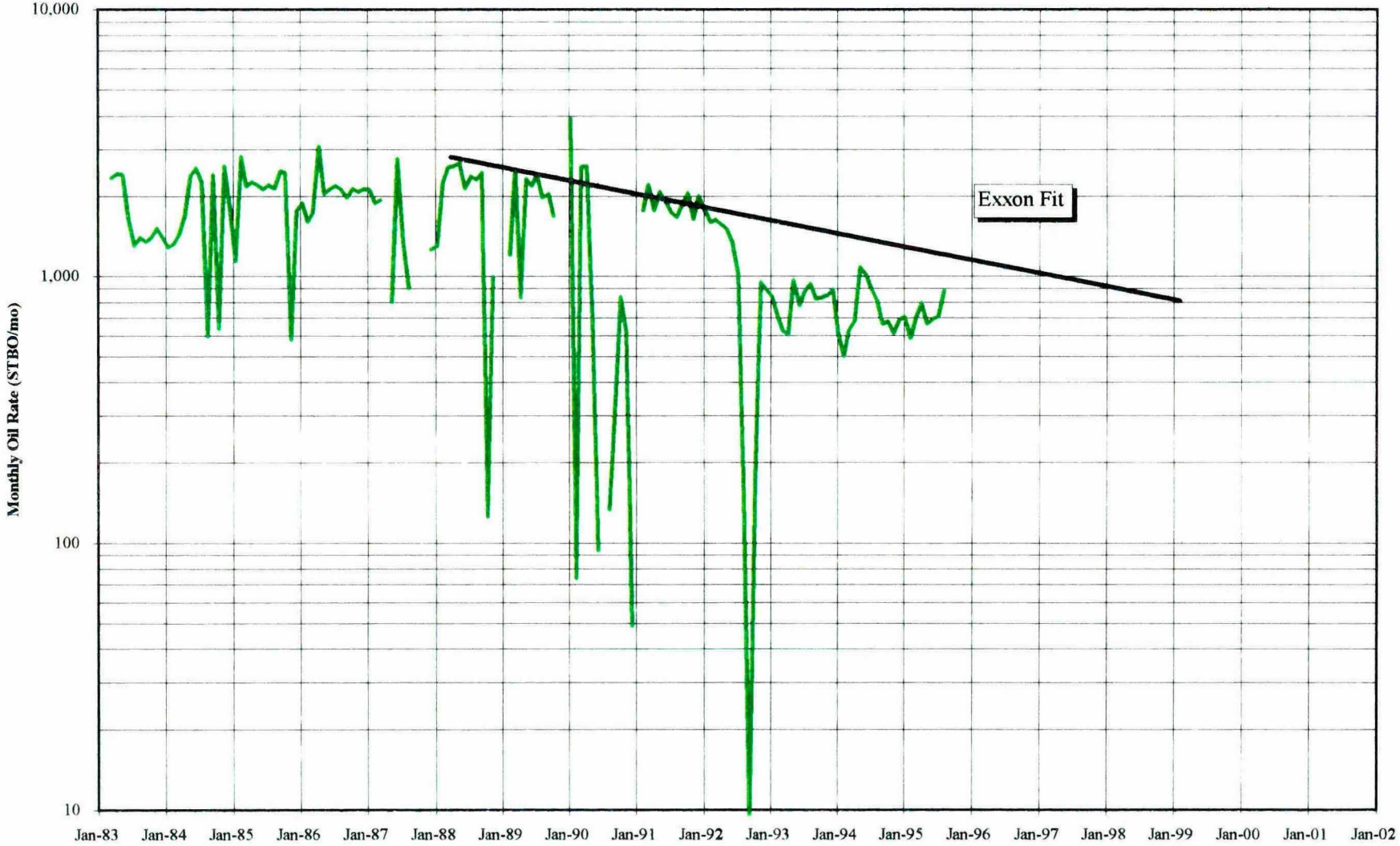
WELL = STONEWALL WM STATE #06 (1511)



WELL = STONEWALL WM STATE #06 (1511)



Comparison of Actual Production to Report Production
Yates C Federal #3 (1915)



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PRODUCTION

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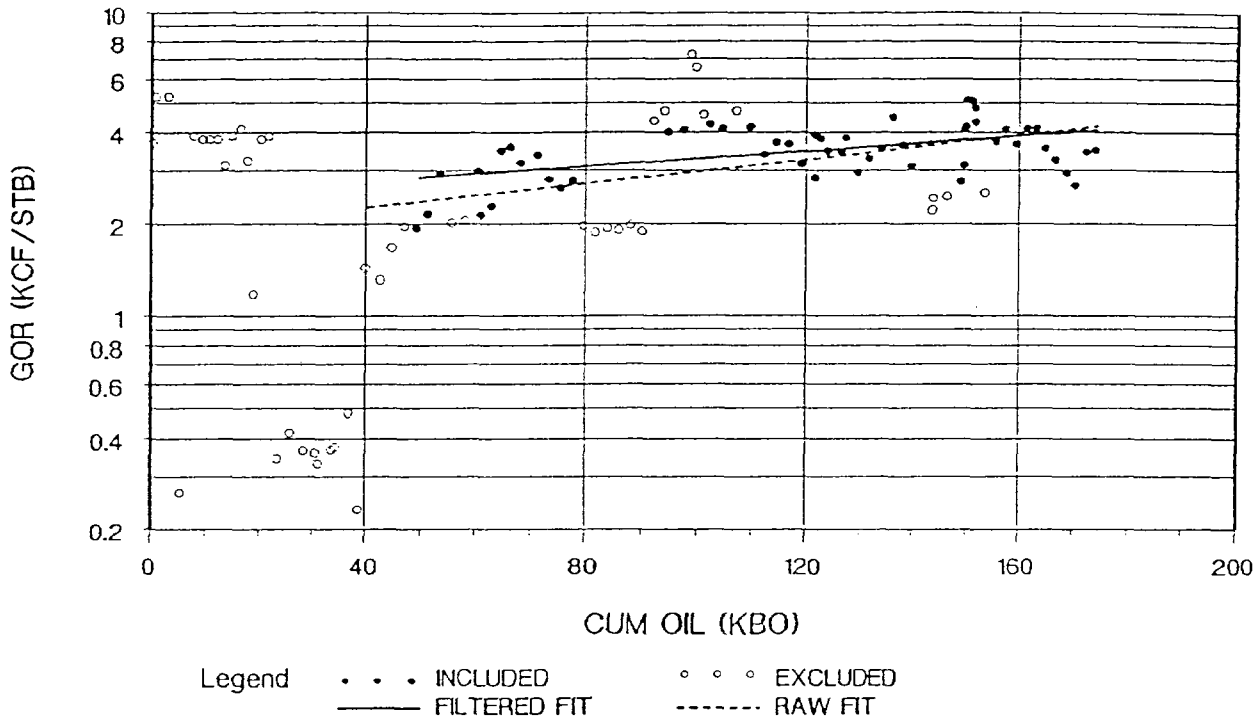
16

AVALON FIELD DECLINE CURVES

WELL = YATES C FEDERAL #03 (1915)



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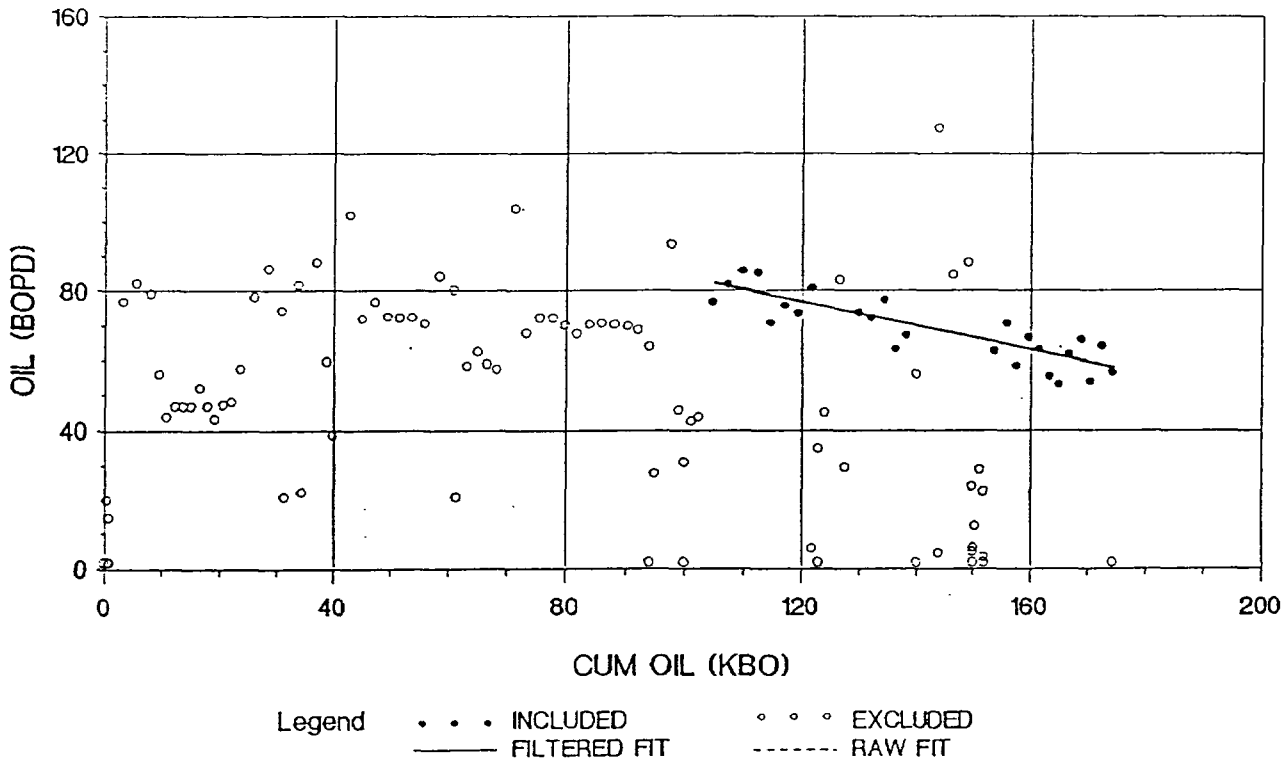
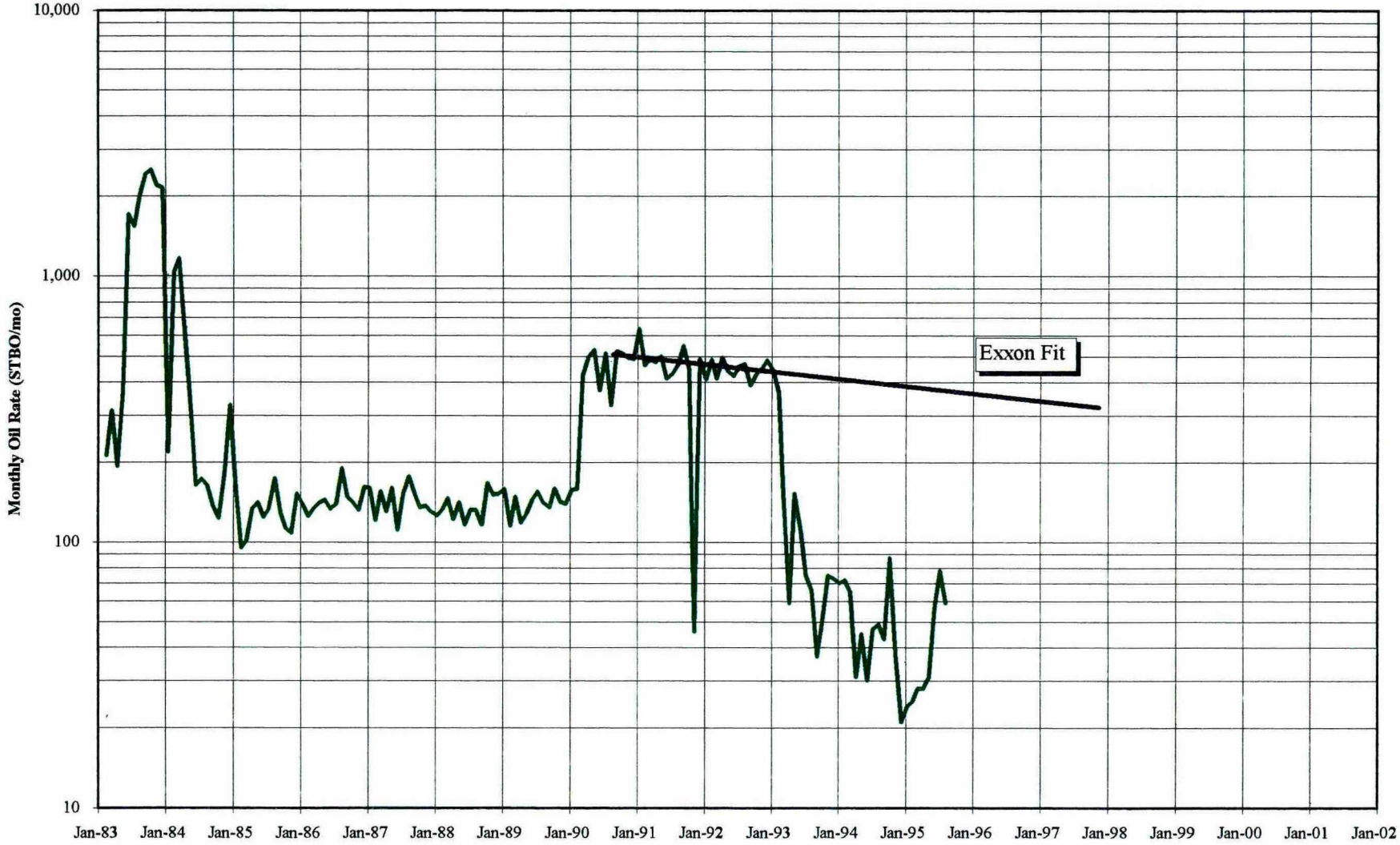


Comparison of Actual Production to Report Production
Hondo A State #1 (1919)



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PRODUCTION

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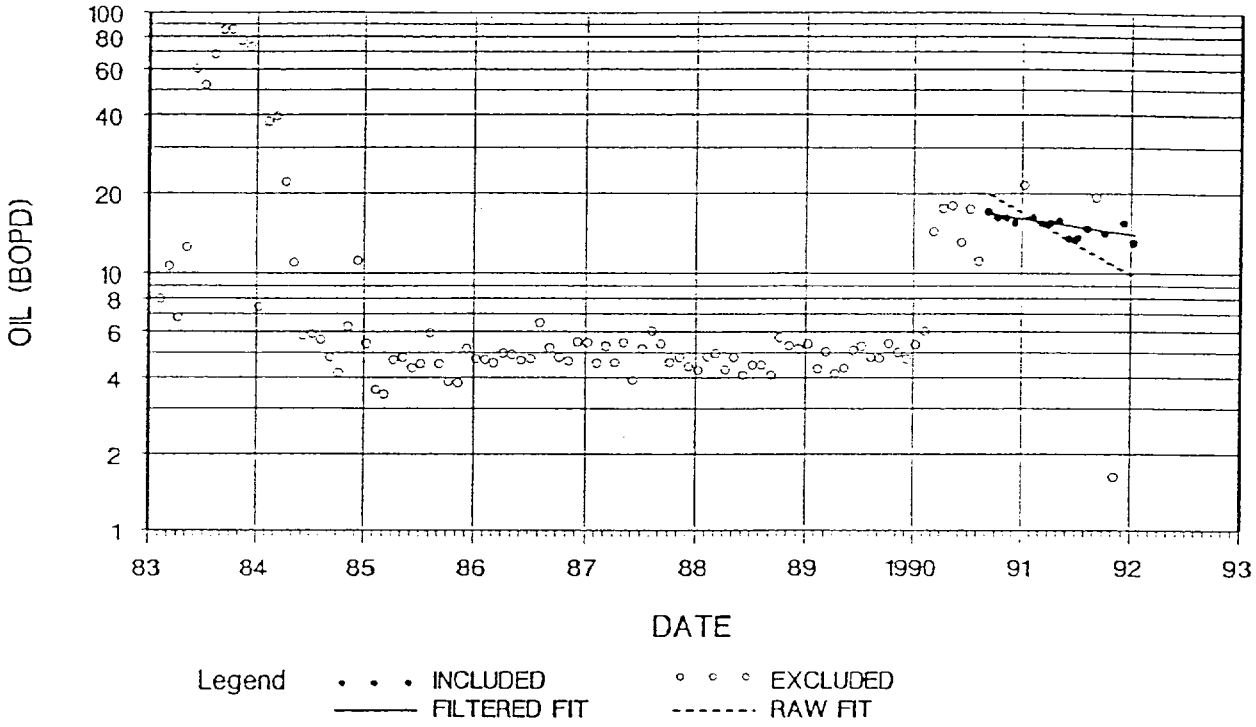
AVALON FIELD DECLINE CURVES

WELL = HONDO A STATE #01 (1919)



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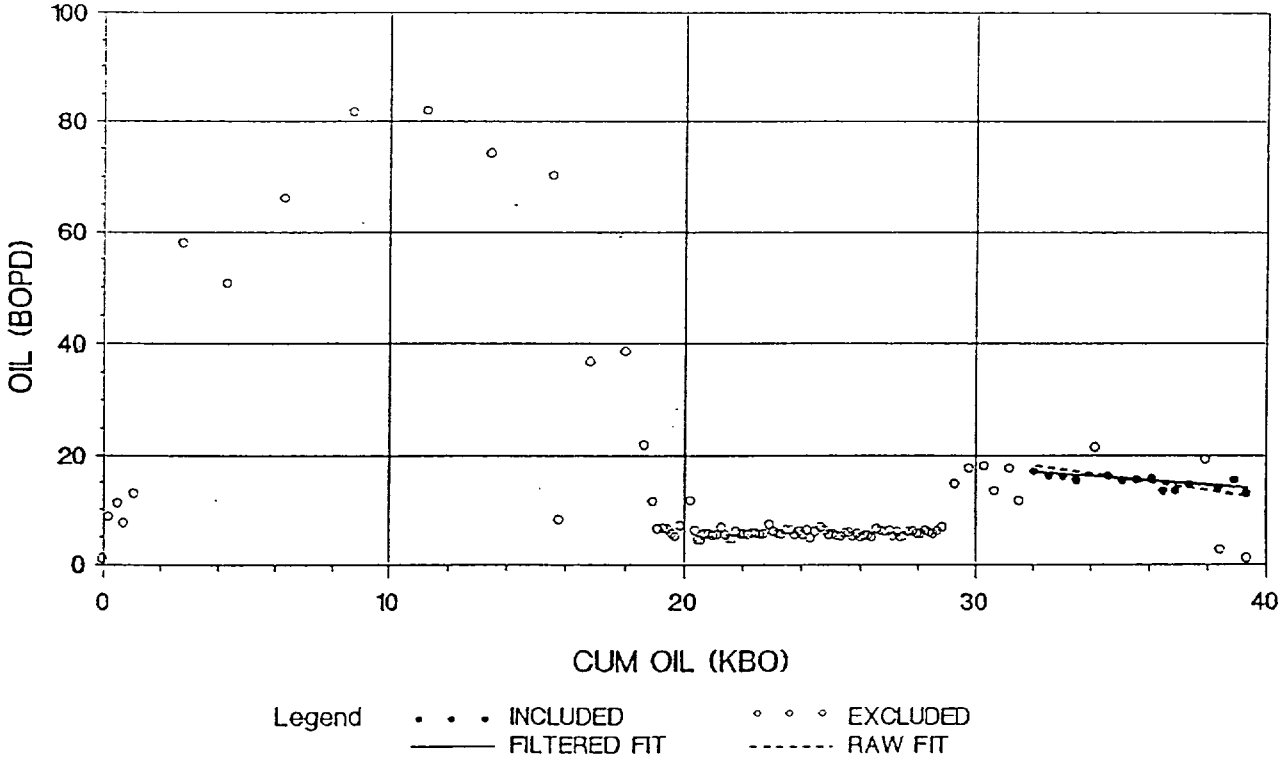
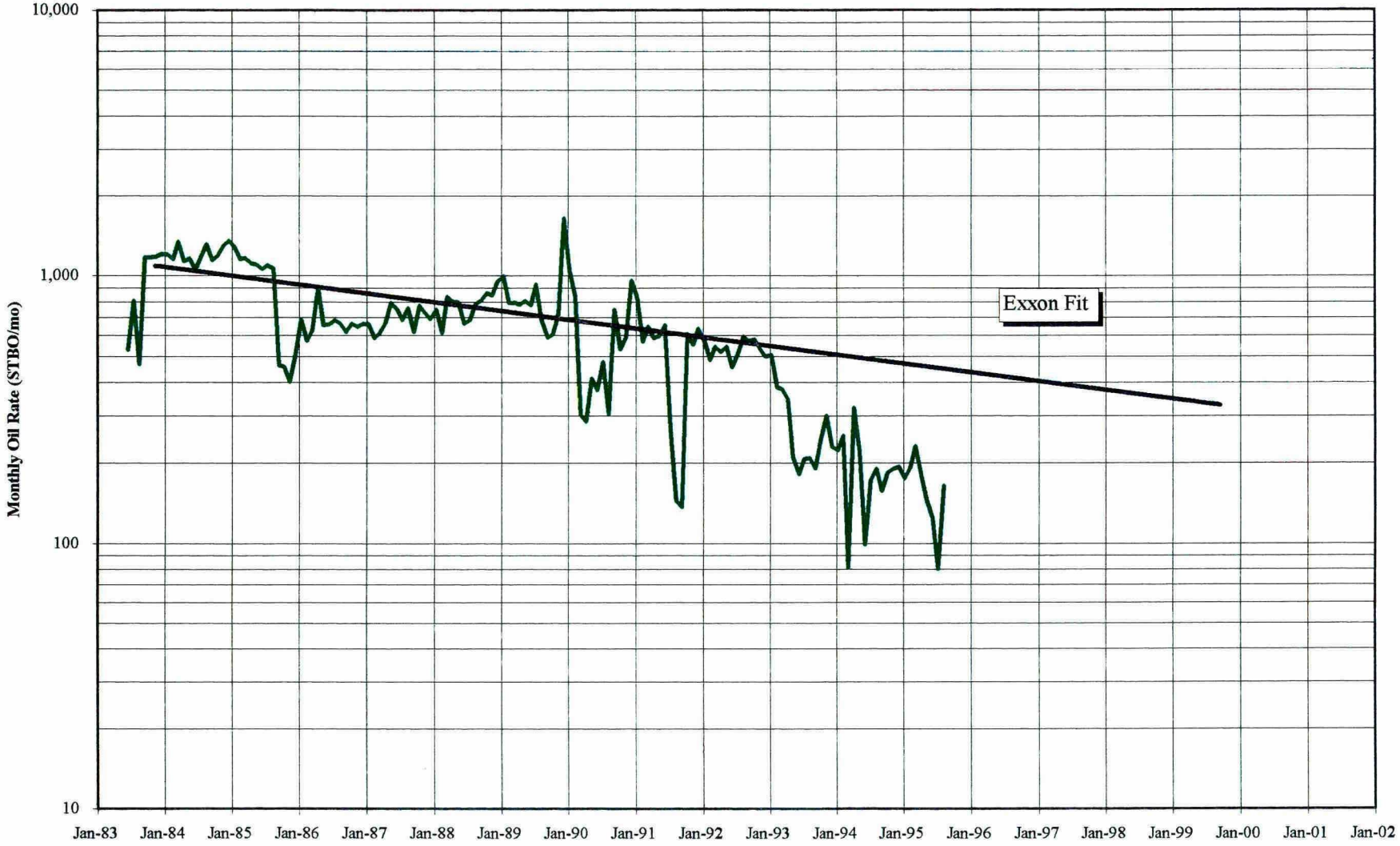


Comparison of Actual Production to Report Production
Yates C Federal #8 (2111)



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PRODUCTION

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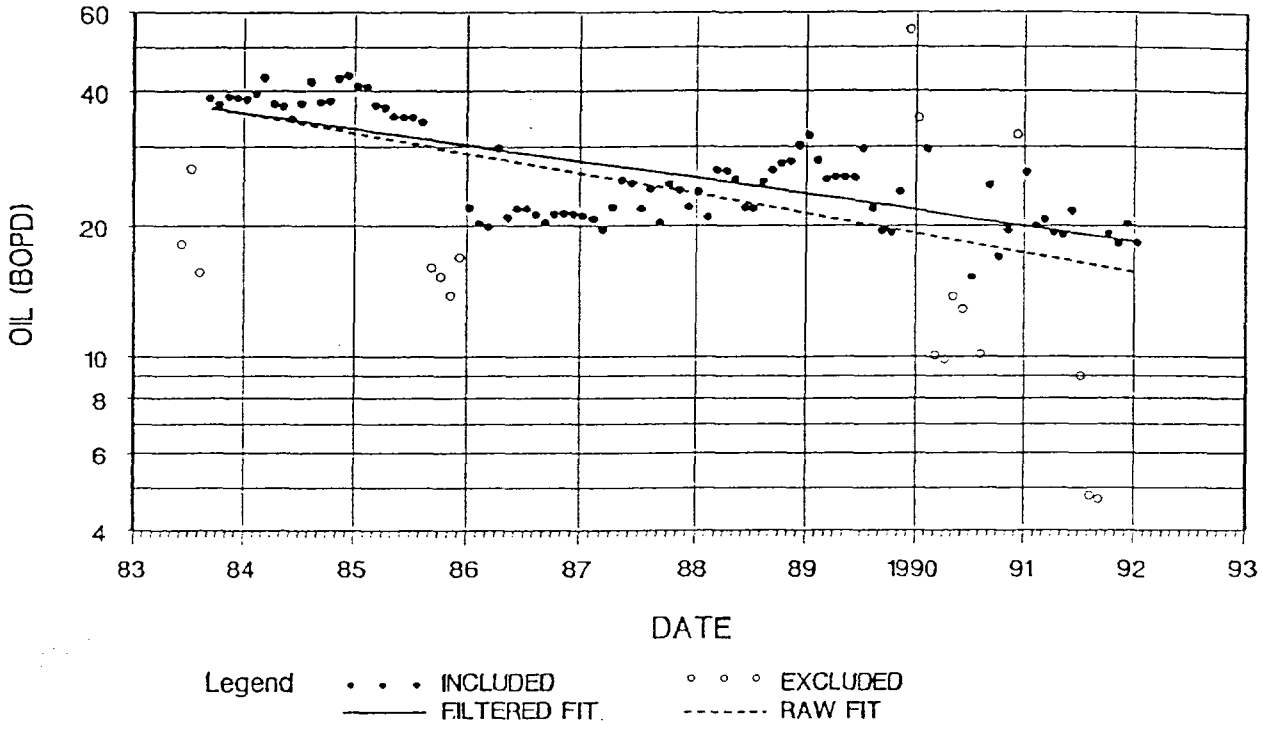
AVALON FIELD DECLINE CURVES

WELL = YATES C FEDERAL #08 (2111)



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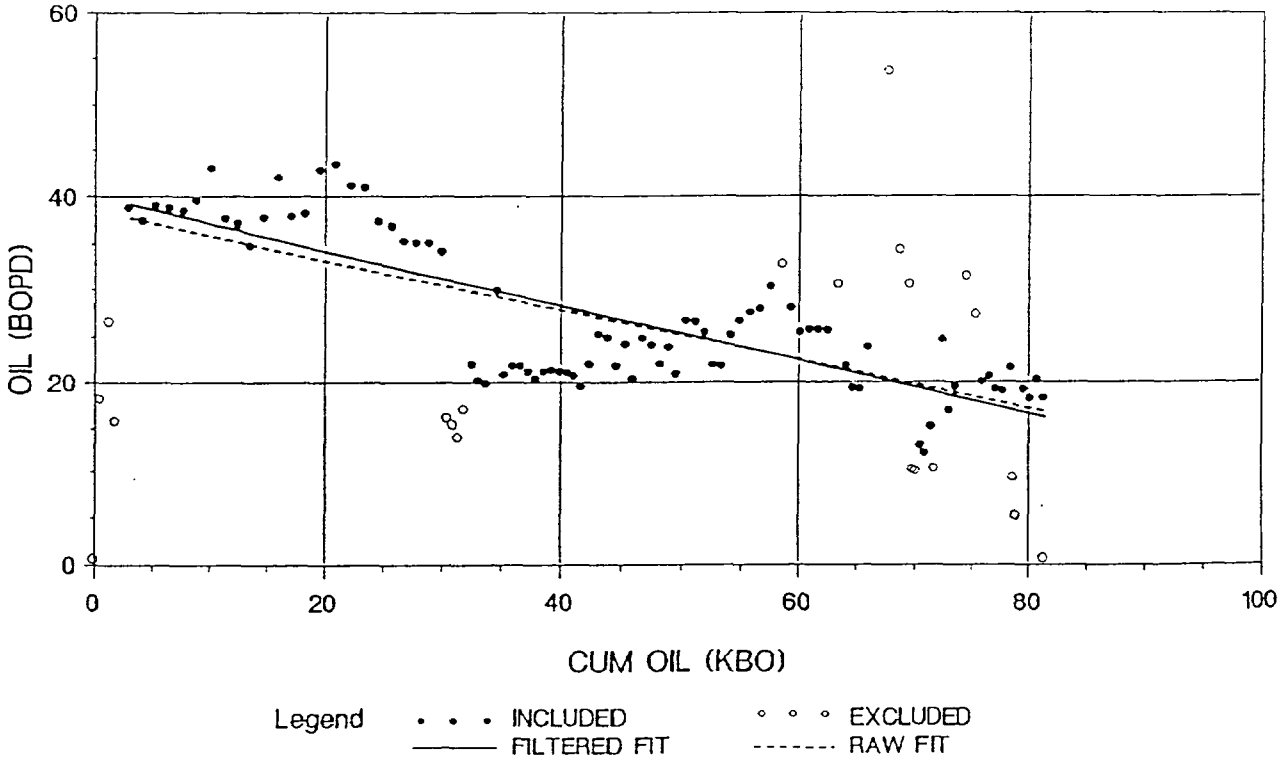

Comparison of Actual Production to Report Production
Yates C Federal #6 (2113)

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PRODUCTION

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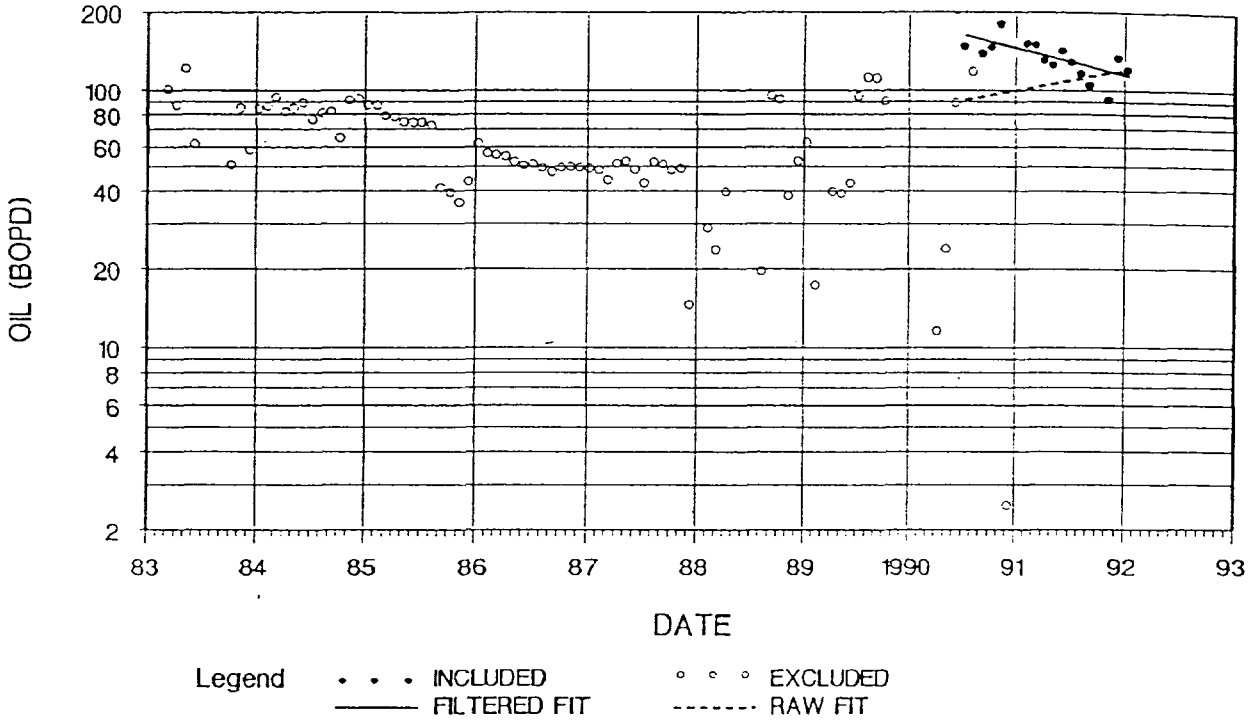
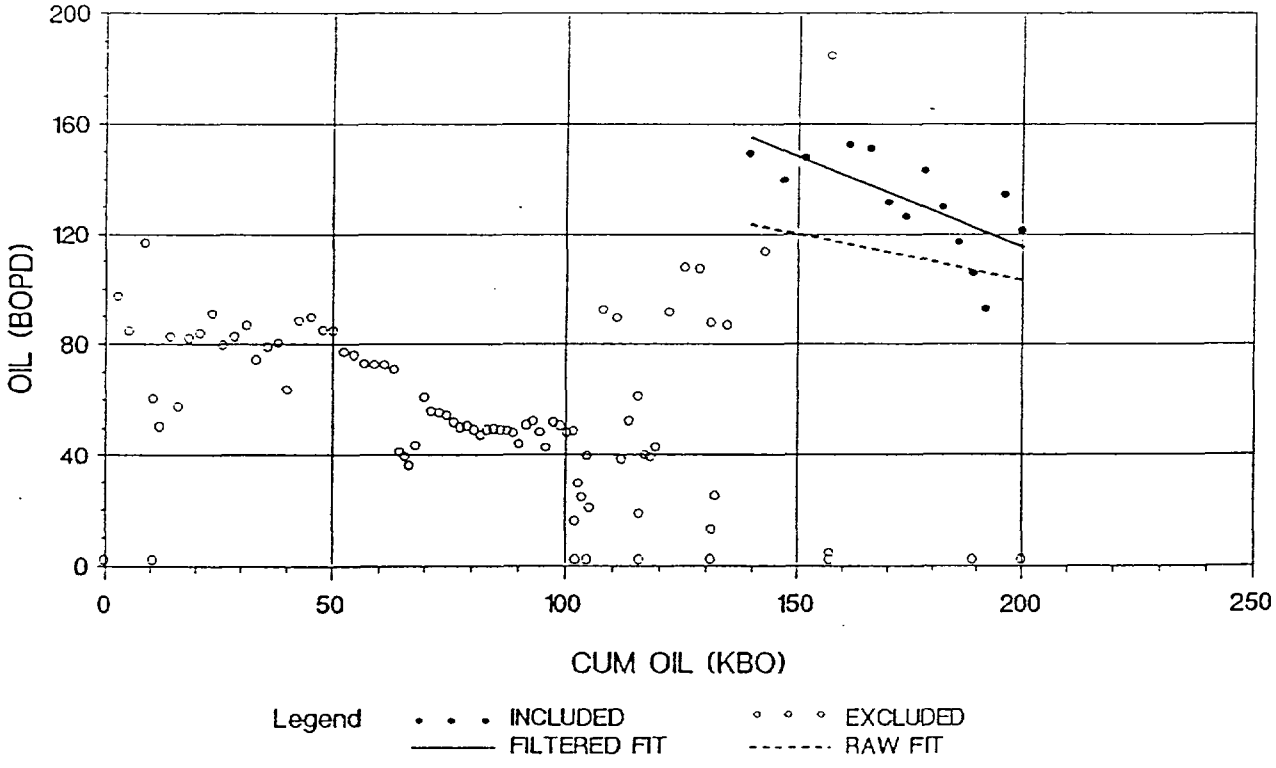
22

AVALON FIELD DECLINE CURVES

WELL = YATES C FEDERAL #06 (2113)



WELL = YATES C FEDERAL #06 (2113)



Comparison of Actual Production to Report Production
Yates C Federal #4 (1917)

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PRODUCTION

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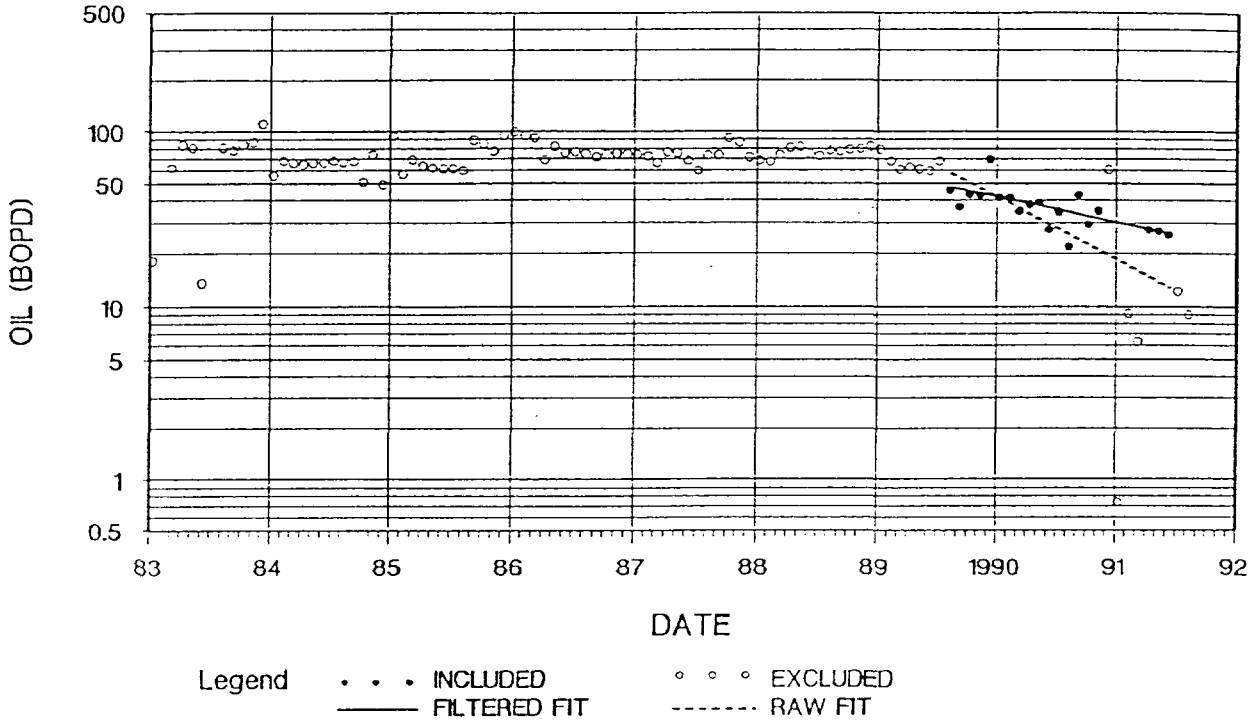
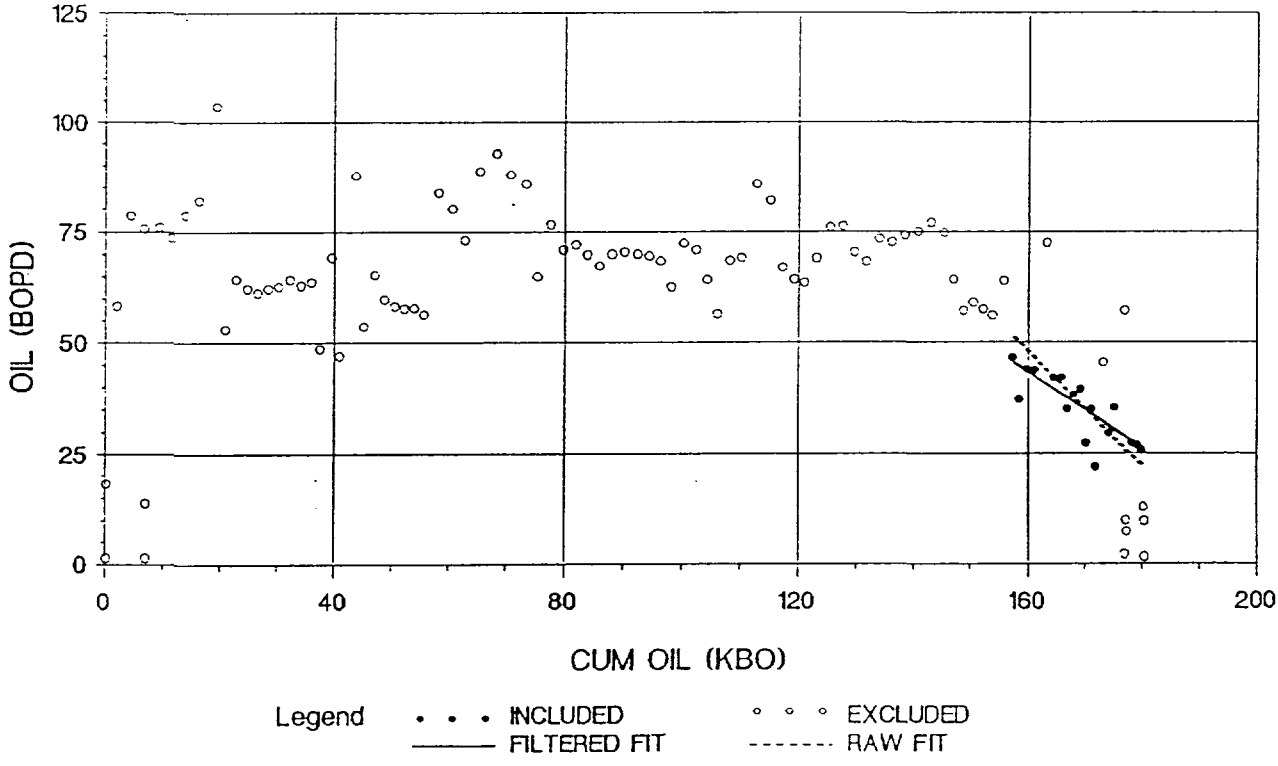
AVALON FIELD DECLINE CURVES

WELL = YATES C FEDERAL #04 (1917)



WELL = YATES C FEDERAL #04 (1917)



Exxon's Calculation of Fractional Recovery of Original Oil in Place by Tract
Avalon Field, Eddy County, New Mexico

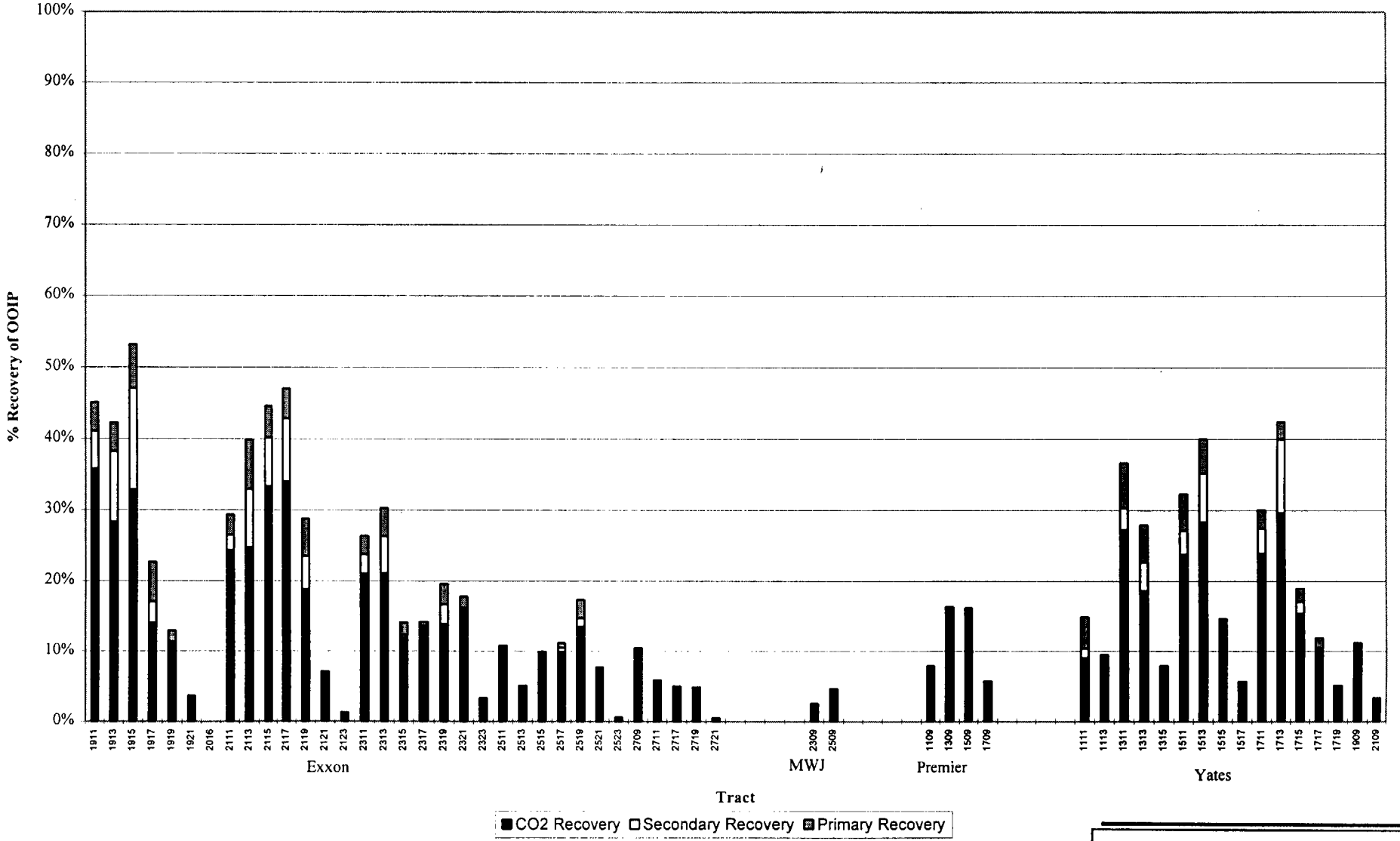


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Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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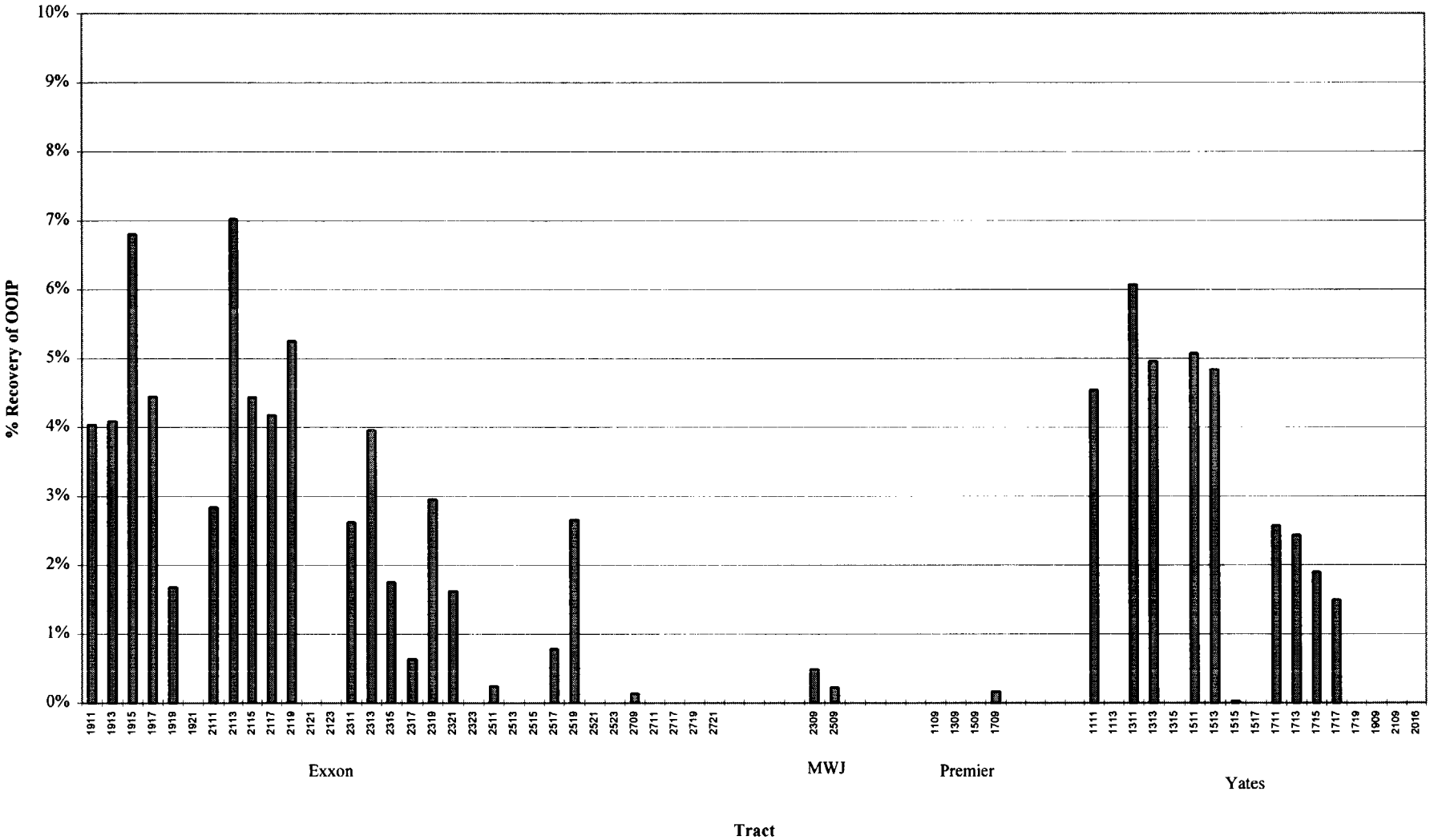
Exxon's Calculation of Primary Recovery of Original Oil in Place by Tract
Avalon Field, Eddy County, New Mexico



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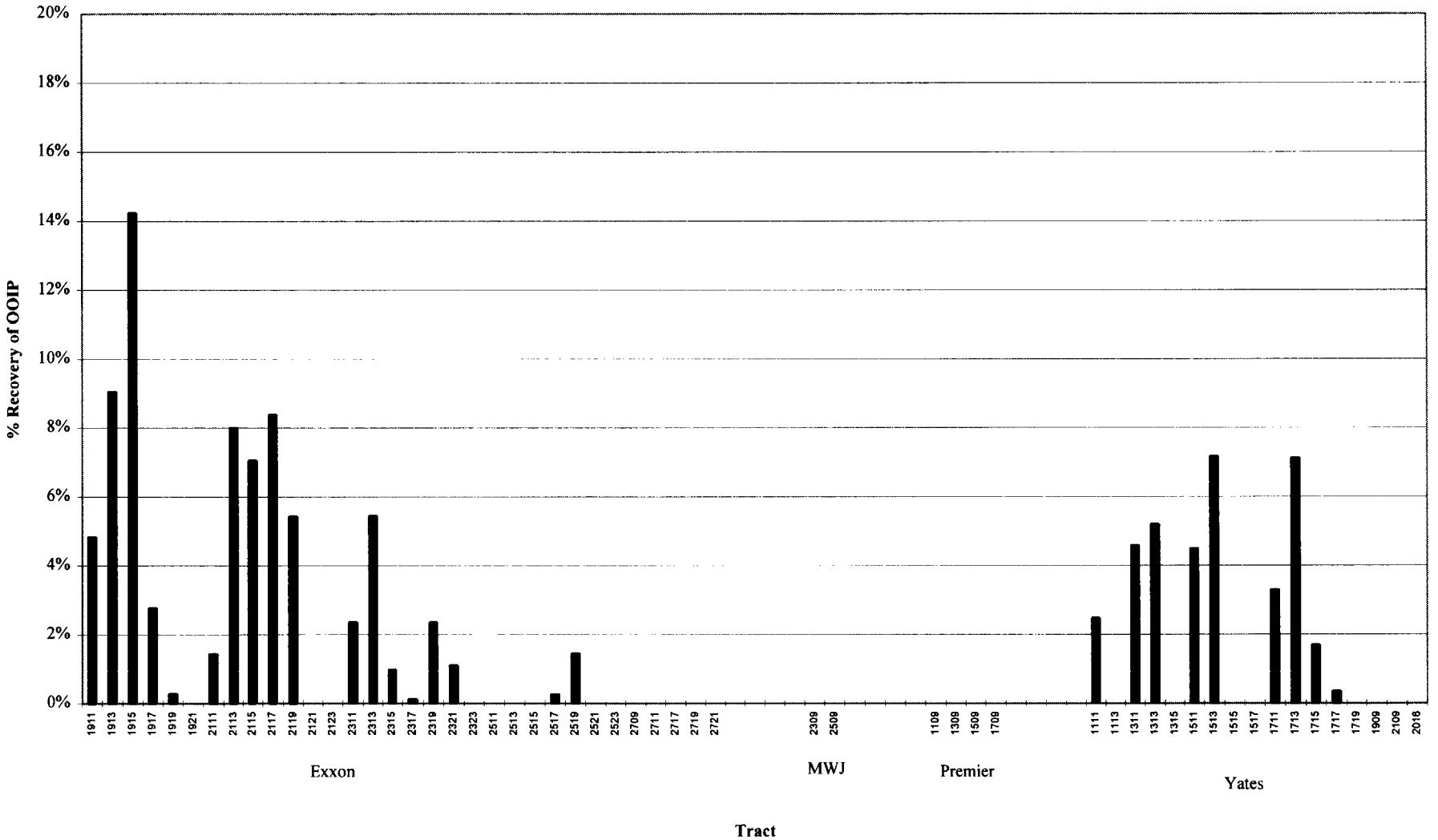
Exxon's Calculation of Secondary Recovery of Original Oil in Place by Tract
Avalon Field, Eddy County, New Mexico



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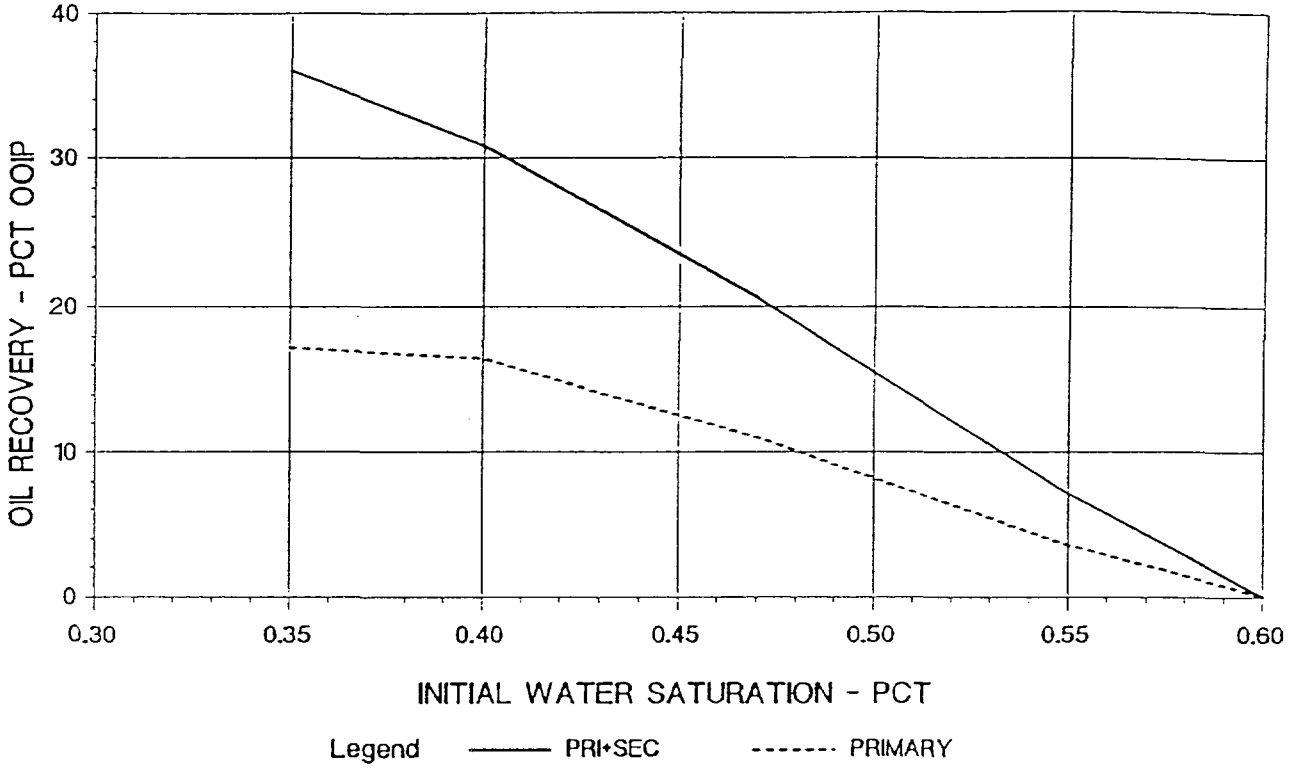
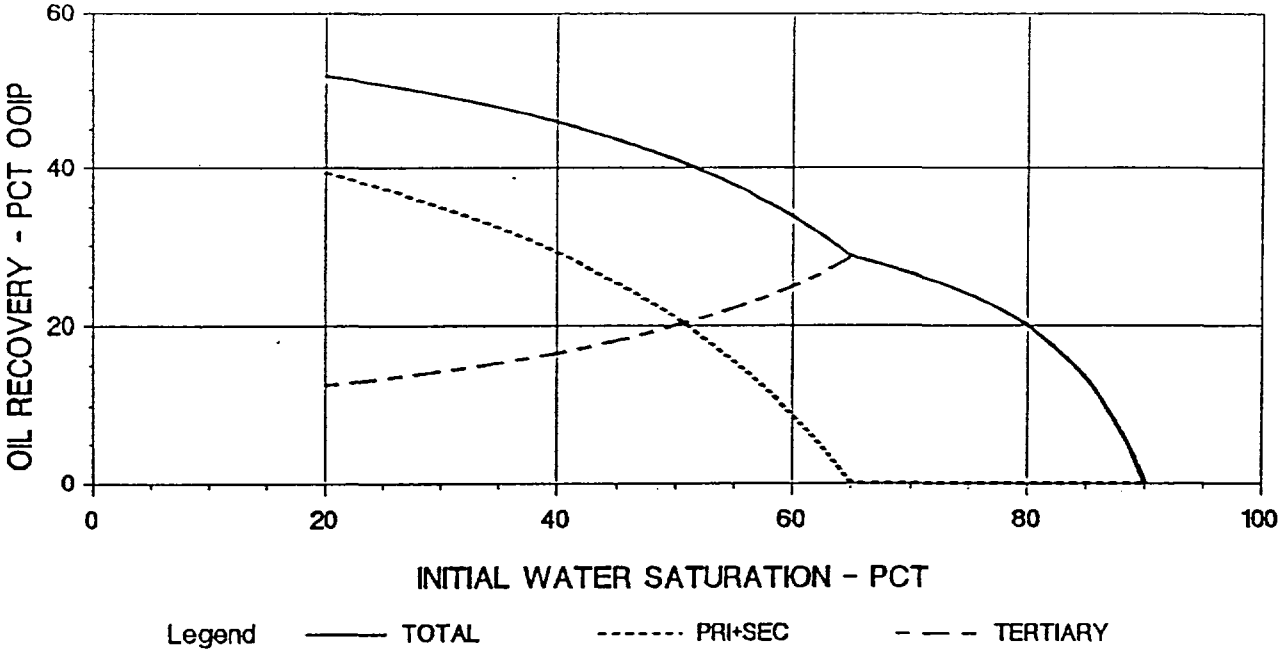
Analysis of Workover Reserves
Avalon (Delaware) Field

Well	Tract	Zone	Report 00IP (MBO)	Workover Reserves (MBO)	Recovery Factor (%)	Remarks
EP 7	1111	UCC	2550	266.6	10.5	Already done
EP 5	1311	UCC	2600	213.6	8.2	
EP 8	1313	UCC	2050	141.6	6.9	
WM 6	1511	UCC	1700	166.4	9.8	
WM 5	1513	UCC	2220			
WM 5	1513	UBC	5450	216.8	2.8	
WM 1	1715	UBC	3630	52.5	1.4	
WM 2	1717	UCC	1590	68.8	4.3	
C 3	1915	UCC	3050	114.3	3.8	
C 6	2113	UCC	2540	63.5	1.2	
C 18	2315	UCC	1220	54.1	4.4	
C 12	2317	UCC	3580	12.3	0.3	
HS 3	2319			2.1		Not on AFE
HF 2	2321			52.9		Not on AFE
C 14	2517	UCC	2600	16.8	0.7	
HS 4	2519			25.5		Not on AFE

OIL RECOVERY VS INITIAL WATER SATURATION
SIMULATION MODEL: UPPER CHERRY PROTOTYPE



THEORETICAL RECOVERY FACTORS

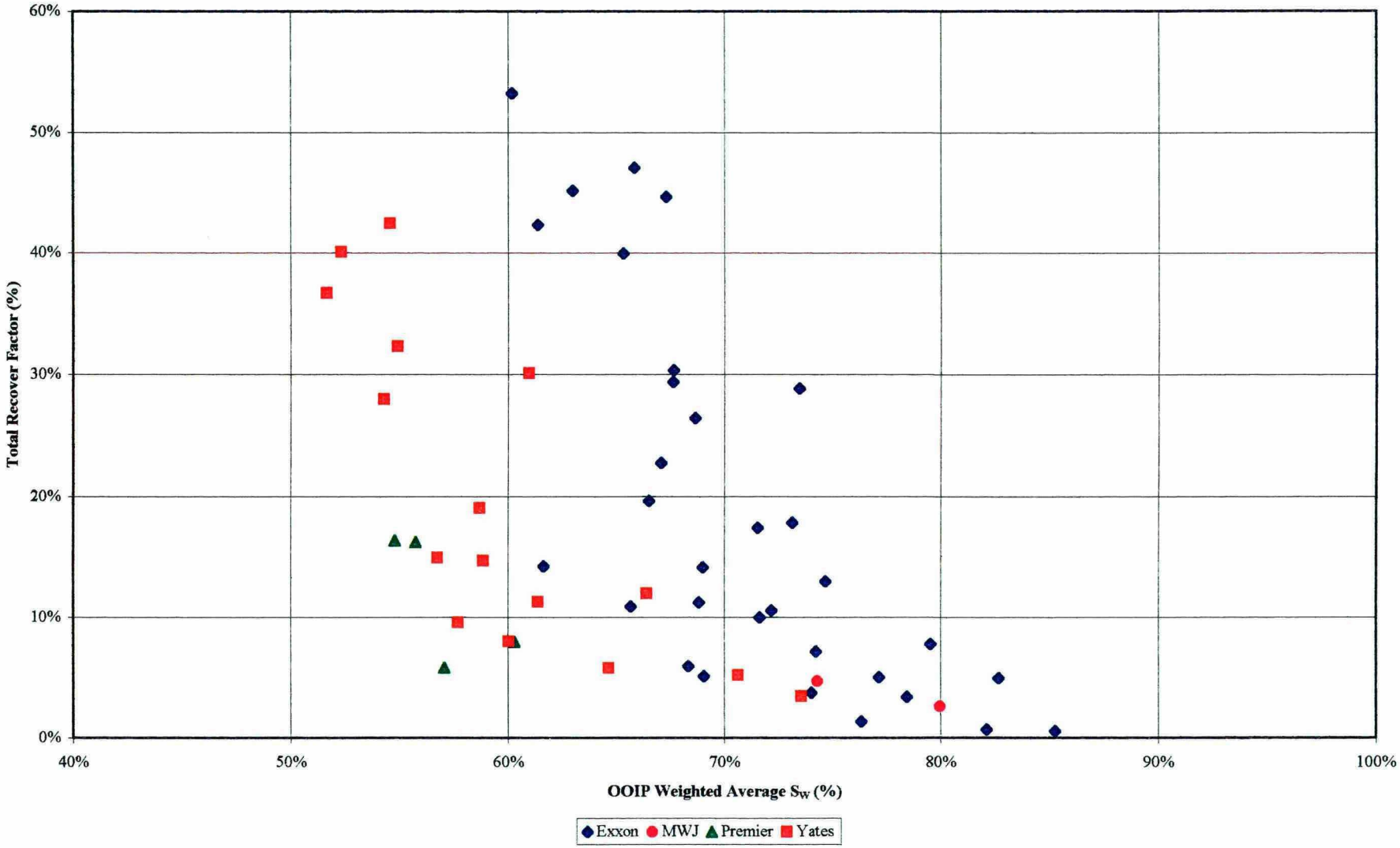


SORWF=0.35, SORM=0.10, EV SEC=0.70, EV TERT=0.40

Exhibit G-20

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

Recovery Factor vs. Water Saturation
Avalon Field, Eddy County, New Mexico



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Comparison Of Future Production

to

Assigned Participation Percentage

Operator	Formula Assigned Participation	Percentage of Future Production
Premier	1.02%	3.30%
Exxon	64.79%	60.63%
Yates	34.07%	35.74%
MWJ	0.12%	0.34%
	100.00%	100.00%

As per Exxon Exhibit 10, MNOCD Case 11297 11298, June 29, 1995

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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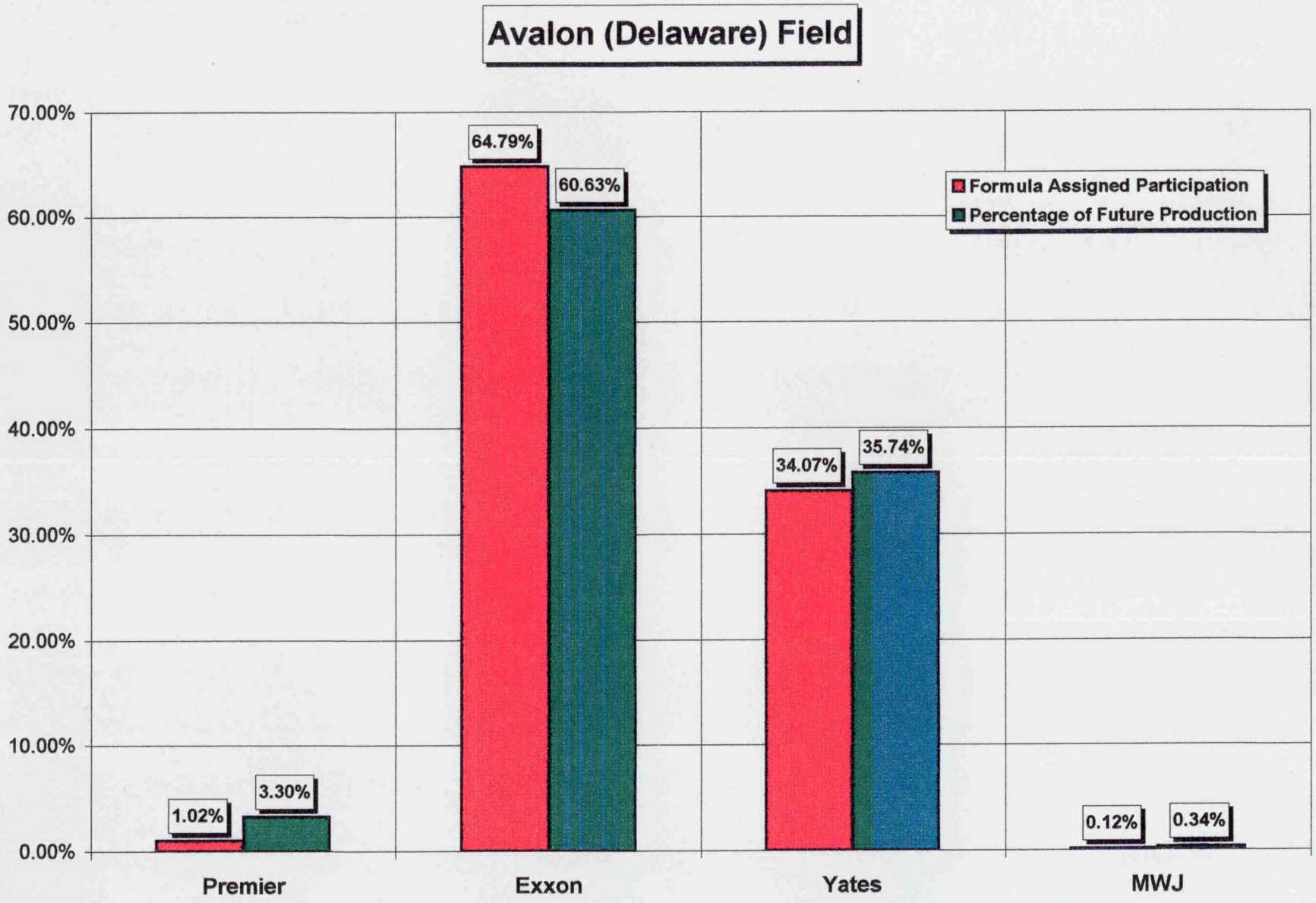
Avalon (Delaware) Field
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Formula Assigned Participation
Percentage of Future Production
1.02%
3.30%
64.79%
60.63%
34.07%
35.74%
0.12%
0.34%
Premier
Exxon
Yates
MWJ

Comparison Of Reserve Category

to

Assigned Participation Percentage

Reserve Category	Percentage of Future Production	Formula Assigned Participation
Primary	2.42%	25.00%
Secondary	16.76%	50.00%
Tertiary	80.83%	25.00%
	100.00%	100.00%

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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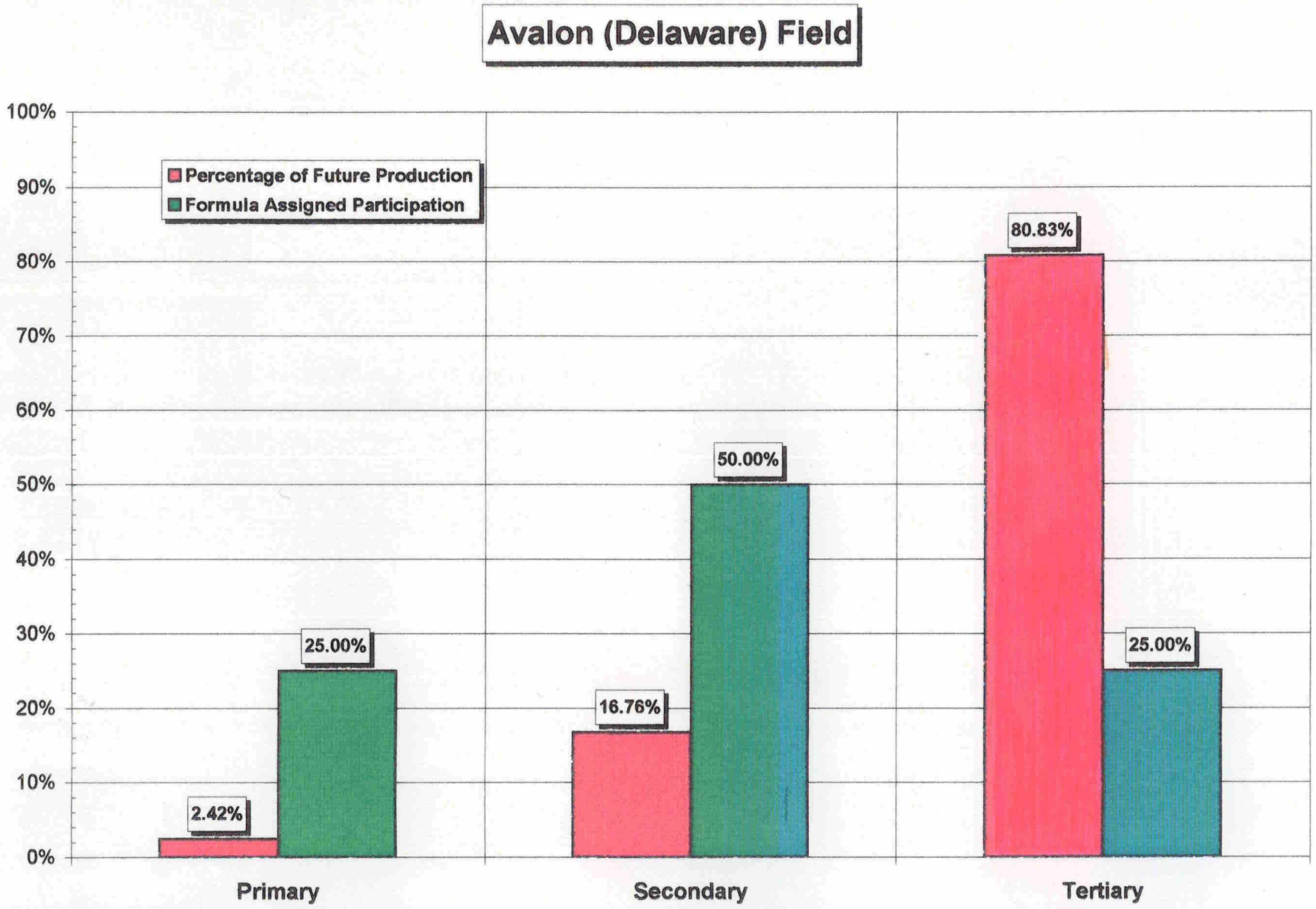
Avalon (Delaware) Field
Percentage of Future Production
Formula Assigned Participation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2.42%
25.00%
16.76%
50.00%
80.83%
25.00%
Primary
Secondary
Tertiary

35

Comparison of Relative Value

to the

Proposed Participation Formula Weighting

Avalon (Delaware) Field

Case	Value ($)	% of Total (%)	Participation Formula Weighting (%)
Future Primary Reserves and Waterflood	263,952,629	19.99%	75.00%
CO2 Flood	1,056,349,142	80.01%	25.00%
Total	1,320,301,771	100.00%	100.00%

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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Economic Analysis

of the

Proposed Waterflood

Avalon (Delaware) Field

Year	Daily Oil (BOPD)	Daily Gas (MCFD)	Yearly Oil (BOPD)	Yearly Gas (MCFD)	Oil Price ($/bbl)	Gas Price ($/MCF)	Oil Revenue ($)	Gas Revenue ($)	Total Revenue ($)	Capital Expenses ($)	Operating Expenses ($)	Overhead Expenses ($)	Production Taxes ($)	Advalorem Taxes ($)	BFIT NCF ($)	Cumulative BFIT NCF ($)	Discounted BFIT NCF ($)
1996	1,021	1,263	372,665	460,995	18.02	1.59	6,716,690	733,674	7,450,364	7,200,000	1,114,500	775,725	513,569	149,007	-2,302,437	-2,302,437	-2,093,125
1997	1,121	656	409,165	239,440	19.00	1.69	7,772,770	404,314	8,177,084	7,200,000	1,096,800	774,840	572,082	163,542	-1,630,180	-3,932,617	-1,347,256
1998	1,245	565	454,425	206,225	20.02	1.79	9,098,717	369,470	9,468,187	0	1,120,000	56,000	664,482	189,364	7,438,341	3,505,723	5,588,535
1999	1,227	600	447,855	219,000	21.10	1.90	9,451,396	416,291	9,867,687	0	1,134,000	56,700	691,864	197,354	7,787,770	11,293,493	5,319,152
2000	1,211	720	442,015	262,800	22.24	2.02	9,831,871	530,022	10,361,893	0	1,144,900	57,245	724,564	207,238	8,227,946	19,521,439	5,108,907
2001	1,164	863	424,860	314,995	23.44	2.14	9,960,603	674,042	10,634,645	0	1,152,900	57,645	740,905	212,693	8,470,502	27,991,941	4,781,378
2002	1,098	939	400,770	342,735	24.71	2.27	9,903,201	778,139	10,681,340	0	1,158,300	57,915	742,034	213,627	8,509,464	36,501,406	4,366,701
2003	1,052	955	383,980	348,575	26.04	2.41	10,000,682	839,674	10,840,355	0	1,163,900	58,195	752,032	216,807	8,649,421	45,150,827	4,035,019
2004	1,000	966	365,000	352,590	27.45	2.56	10,019,694	901,155	10,920,850	0	1,168,400	58,420	756,456	218,417	8,719,157	53,869,983	3,697,774
2005	951	959	347,115	350,035	28.93	2.71	10,043,281	949,197	10,992,478	0	1,173,100	58,655	760,533	219,850	8,780,341	62,650,324	3,385,201
2006	897	953	327,405	347,845	30.50	2.88	9,984,542	1,000,798	10,985,339	0	1,161,700	58,085	758,942	219,707	8,786,905	71,437,229	3,079,757
2007	845	944	308,425	344,560	32.14	3.05	9,913,637	1,051,818	10,965,455	0	1,123,800	56,190	756,459	219,309	8,809,697	80,246,927	2,807,041
2008	801	926	292,365	337,990	33.88	3.24	9,904,885	1,094,700	10,999,585	0	1,126,800	56,340	757,982	219,992	8,838,471	89,085,398	2,560,190
2009	768	898	280,320	327,770	35.71	3.44	10,009,647	1,126,356	11,136,003	0	1,130,100	56,505	767,003	222,720	8,959,675	98,045,073	2,359,363
2010	726	870	264,990	317,550	37.64	3.65	9,973,205	1,157,802	11,131,007	0	1,134,200	56,710	765,988	222,620	8,951,489	106,996,562	2,142,915
2011	684	862	249,660	314,630	39.67	3.87	9,903,640	1,217,132	11,120,772	0	1,127,800	56,390	764,015	222,415	8,950,151	115,946,713	1,947,814
2012	640	847	233,600	309,155	41.81	4.10	9,766,958	1,268,905	11,035,863	0	1,105,100	55,255	756,899	220,717	8,897,892	124,844,605	1,760,400
2013	602	834	219,730	304,410	44.07	4.35	9,683,146	1,325,645	11,008,790	0	1,093,900	54,695	753,786	220,176	8,886,234	133,730,839	1,598,267
2014	568	828	207,320	302,220	46.45	4.62	9,629,615	1,396,390	11,026,005	0	1,087,400	54,370	753,522	220,520	8,910,193	142,641,032	1,456,888
2015	530	805	193,450	293,825	48.96	4.90	9,470,591	1,440,415	10,911,006	0	1,089,400	54,470	744,433	218,220	8,804,483	151,445,514	1,308,730
2016	489	691	178,485	252,215	51.60	5.20	9,209,810	1,311,853	10,521,663	0	1,090,000	54,500	719,489	210,433	8,447,241	159,892,755	1,141,480
2017	436	464	159,140	169,360	54.39	5.52	8,655,036	934,632	9,589,668	0	1,090,000	54,500	661,239	191,793	7,592,136	167,484,891	932,663
2018	406	442	148,190	161,330	57.32	5.86	8,494,720	944,627	9,439,347	0	1,090,000	54,500	650,356	188,787	7,455,703	174,940,594	832,639
2019	386	417	140,890	152,205	60.42	6.21	8,512,379	945,561	9,457,939	0	1,090,000	54,500	651,657	189,159	7,472,624	182,413,218	758,663
2020	365	409	133,225	149,285	63.68	6.59	8,483,931	983,993	9,467,924	0	1,090,000	54,500	651,559	189,358	7,482,507	189,895,724	690,605
2021	338	393	123,370	143,445	67.12	6.99	8,280,595	1,003,175	9,283,770	0	1,090,000	54,500	638,081	185,675	7,315,514	197,211,238	613,811
2022	326	382	118,990	139,430	70.74	7.42	8,417,887	1,034,577	9,452,464	0	1,090,000	54,500	649,399	189,049	7,469,516	204,680,753	569,757
2023	310	363	113,150	132,495	74.56	7.87	8,436,995	1,043,089	9,480,084	0	1,090,000	54,500	651,181	189,602	7,494,801	212,175,555	519,715
2024	297	353	108,405	128,845	78.59	8.35	8,519,677	1,076,230	9,595,907	0	1,090,000	54,500	658,709	191,918	7,600,780	219,776,335	479,149
2025	285	347	104,025	126,655	82.84	8.86	8,616,922	1,122,471	9,739,393	0	1,090,000	54,500	667,925	194,788	7,732,180	227,508,515	443,120
2026	273	335	99,645	122,275	87.31	9.40	8,699,826	1,149,756	9,849,582	0	1,090,000	54,500	675,175	196,992	7,832,915	235,341,430	408,085
2027	246	322	89,790	117,530	92.02	9.98	8,262,731	1,172,552	9,435,284	0	1,090,000	54,500	645,282	188,706	7,456,797	242,798,227	353,172
2028	225	304	82,125	110,960	96.99	10.59	7,965,475	1,174,533	9,140,008	0	1,090,000	54,500	624,275	182,800	7,188,432	249,986,659	309,511
2029	213	291	77,745	106,215	102.23	11.23	7,947,844	1,192,889	9,140,734	0	1,090,000	54,500	623,941	182,815	7,189,478	257,176,136	281,414
2030	190	279	69,350	101,835	107.75	11.92	7,472,466	1,213,464	8,685,930	0	1,090,000	54,500	591,218	173,719	6,776,493	263,952,629	241,135
Totals =									351,994,404	14,400,000	38,957,000	3,387,850	24,257,037	7,039,888			

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Economic Analysis

of the

Proposed CO2 Flood

Avalon (Delaware) Field

Year	Daily Oil (BOPD)	Daily Gas (MCFD)	Yearly Oil (BOPD)	Yearly Gas (MCFD)	Oil Price ($/bbl)	Gas Price ($/MCF)	Oil Revenue ($)	Gas Revenue ($)	Total Revenue ($)	Capital Expenses ($)	Total Expenses ($)	Production Taxes ($)	Advalorem Taxes ($)	BFIT NCF ($)	Cumulative BFIT NCF ($)	Discounted BFIT NCF ($)	Cumulative Discounted BFIT NCF ($)
1996	1,021	1,263	372,665	460,995	18.02	1.59	6,716,690	733,674	7,450,364	7,200,000	2,000,000	513,569	149,007	-2,412,212	-2,412,212	-2,192,920	-2,192,920
1997	1,121	656	409,165	239,440	19.00	1.69	7,772,770	404,314	8,177,084	7,600,000	1,900,000	572,082	163,542	-2,058,540	-4,470,752	-1,701,273	-3,894,193
1998	1,372	623	500,780	227,395	20.02	1.79	10,026,859	407,397	10,434,257	200,000	1,500,000	732,277	208,685	7,793,295	3,322,542	5,855,218	1,961,025
1999	1,702	681	621,230	248,565	21.10	1.90	13,110,250	472,490	13,582,740	14,400,000	4,400,000	954,452	271,655	-6,443,367	-3,120,824	-4,400,906	-2,439,882
2000	2,157	903	787,305	329,595	22.24	2.02	17,512,259	664,735	18,176,994	28,600,000	11,000,000	1,276,607	363,540	-23,063,153	-26,183,977	-14,320,403	-16,760,285
2001	2,702	1,432	986,230	522,680	23.44	2.14	23,121,605	1,118,457	24,240,063	17,300,000	13,400,000	1,697,557	484,801	-8,642,295	-34,826,272	-4,878,350	-21,638,635
2002	3,404	2,230	1,242,460	813,950	24.71	2.27	30,701,727	1,847,977	32,549,704	0	12,700,000	2,272,221	650,994	16,926,489	-17,899,784	8,685,965	-12,952,670
2003	4,009	2,817	1,463,285	1,028,205	26.04	2.41	38,110,963	2,476,818	40,587,780	0	12,900,000	2,829,719	811,756	24,046,305	6,146,522	11,217,779	-1,734,891
2004	4,435	3,903	1,618,775	1,424,595	27.45	2.56	44,437,344	3,641,004	48,078,348	0	13,200,000	3,337,102	961,567	30,579,680	36,726,201	12,968,769	11,233,878
2005	4,530	4,848	1,653,450	1,769,520	28.93	2.71	47,840,233	4,798,446	52,638,679	0	13,200,000	3,636,579	1,052,774	34,749,326	71,475,527	13,397,370	24,631,248
2006	4,634	4,780	1,691,410	1,744,700	30.50	2.88	51,581,234	5,019,740	56,600,974	0	13,300,000	3,913,255	1,132,019	38,255,700	109,731,227	13,408,389	38,039,637
2007	4,694	4,859	1,713,310	1,773,535	32.14	3.05	55,070,547	5,413,967	60,484,514	0	13,800,000	4,180,707	1,209,690	41,294,117	151,025,344	13,157,578	51,197,215
2008	4,658	4,467	1,700,170	1,630,455	33.88	3.24	57,599,193	5,280,804	62,879,997	0	14,200,000	4,353,583	1,257,600	43,068,815	194,094,159	12,475,501	63,672,717
2009	4,701	4,169	1,715,865	1,521,685	35.71	3.44	61,269,986	5,229,154	66,499,139	0	15,100,000	4,611,627	1,329,983	45,457,530	239,551,688	11,970,388	75,643,105
2010	4,667	4,114	1,703,455	1,501,610	37.64	3.65	64,111,500	5,474,938	69,586,438	0	15,800,000	4,825,663	1,391,729	47,569,046	287,120,734	11,387,651	87,030,756
2011	4,569	4,111	1,667,685	1,500,515	39.67	3.87	66,154,579	5,804,673	71,959,251	0	16,300,000	4,987,209	1,439,185	49,232,858	336,353,591	10,714,504	97,745,261
2012	4,394	4,037	1,603,810	1,473,505	41.81	4.10	67,056,273	6,047,897	73,104,170	0	16,100,000	5,063,390	1,462,083	50,478,697	386,832,288	9,986,941	107,732,202
2013	4,233	3,992	1,545,045	1,457,080	44.07	4.35	68,087,633	6,345,291	74,432,925	0	16,500,000	5,151,487	1,488,658	51,292,780	438,125,068	9,225,457	116,957,659
2014	4,102	3,953	1,497,230	1,442,845	46.45	4.62	69,543,451	6,666,582	76,210,033	0	16,900,000	5,270,914	1,524,201	52,514,918	490,639,986	8,586,609	125,544,268
2015	3,953	3,759	1,442,845	1,372,035	48.96	4.90	70,636,310	6,726,113	77,362,423	0	17,500,000	5,351,484	1,547,248	52,963,691	543,603,677	7,872,715	133,416,983
2016	3,754	3,517	1,370,210	1,283,705	51.60	5.20	70,702,712	6,676,972	77,379,684	0	17,300,000	5,353,741	1,547,594	53,178,349	596,782,026	7,186,021	140,603,003
2017	3,621	3,369	1,321,665	1,229,685	54.39	5.52	71,880,475	6,786,152	78,666,627	0	18,000,000	5,442,821	1,573,333	53,650,473	650,432,499	6,590,745	147,193,748
2018	3,477	3,377	1,269,105	1,232,605	57.32	5.86	72,749,115	7,217,205	79,966,320	0	18,900,000	5,526,047	1,599,326	53,940,946	704,373,445	6,024,025	153,217,773
2019	3319	3411	1,211,435	1,245,015	60.42	6.21	73,193,226	7,734,550	80,927,776	0	19,600,000	5,583,447	1,618,556	54,125,774	758,499,219	5,495,152	158,712,925
2020	3093	3387	1,128,945	1,236,255	63.66	6.59	71,892,596	8,148,617	80,041,213	0	17,900,000	5,511,805	1,600,824	55,028,584	813,527,803	5,078,918	163,791,843
2021	2867	3223	1,046,455	1,176,395	67.12	6.99	70,238,067	8,227,055	78,465,122	0	15,300,000	5,398,256	1,569,302	56,197,564	869,725,367	4,715,282	168,507,125
2022	2652	3114	967,980	1,136,610	70.74	7.42	68,479,249	8,433,699	76,912,948	0	15,100,000	5,283,712	1,538,259	54,990,977	924,716,344	4,194,584	172,701,710
2023	2468	2957	900,820	1,079,305	74.56	7.87	67,169,364	8,497,011	75,666,375	0	15,600,000	5,193,875	1,513,328	53,359,172	978,075,516	3,700,104	176,401,813
2024	2303	2769	840,595	1,010,685	78.59	8.35	66,063,355	8,442,153	74,505,508	0	16,000,000	5,112,606	1,490,110	51,902,792	1,029,978,309	3,271,921	179,673,735
2025	2170	2607	792,050	951,555	82.84	8.86	65,609,546	8,433,089	74,042,635	0	16,800,000	5,079,932	1,480,853	50,681,850	1,080,660,159	2,904,504	182,578,238
2026	2026	2551	739,490	931,115	87.31	9.40	64,563,543	8,755,309	73,318,852	0	18,100,000	5,021,777	1,466,377	48,730,698	1,129,390,857	2,538,805	185,117,043
2027	1891	2537	690,215	926,005	92.02	9.98	63,515,548	9,238,402	72,753,951	0	17,800,000	4,971,524	1,455,079	48,527,348	1,177,918,204	2,298,374	187,415,417
2028	1789	2468	652,985	900,820	96.99	10.59	63,334,373	9,535,357	72,869,730	0	18,200,000	4,973,508	1,457,395	48,238,827	1,226,157,031	2,077,008	189,492,425
2029	1687	2381	615,755	869,065	102.23	11.23	62,948,419	9,760,377	72,708,796	0	18,900,000	4,957,357	1,454,176	47,397,263	1,273,554,294	1,855,248	191,347,673
2030	1600	2311	584,000	843,515	107.75	11.92	62,926,031	10,051,306	72,977,337	0	19,800,000	4,970,313	1,459,547	46,747,477	1,320,301,771	1,663,467	193,011,140
Totals =									2,086,238,751	75,300,000	505,000,000	143,912,205	41,724,775				

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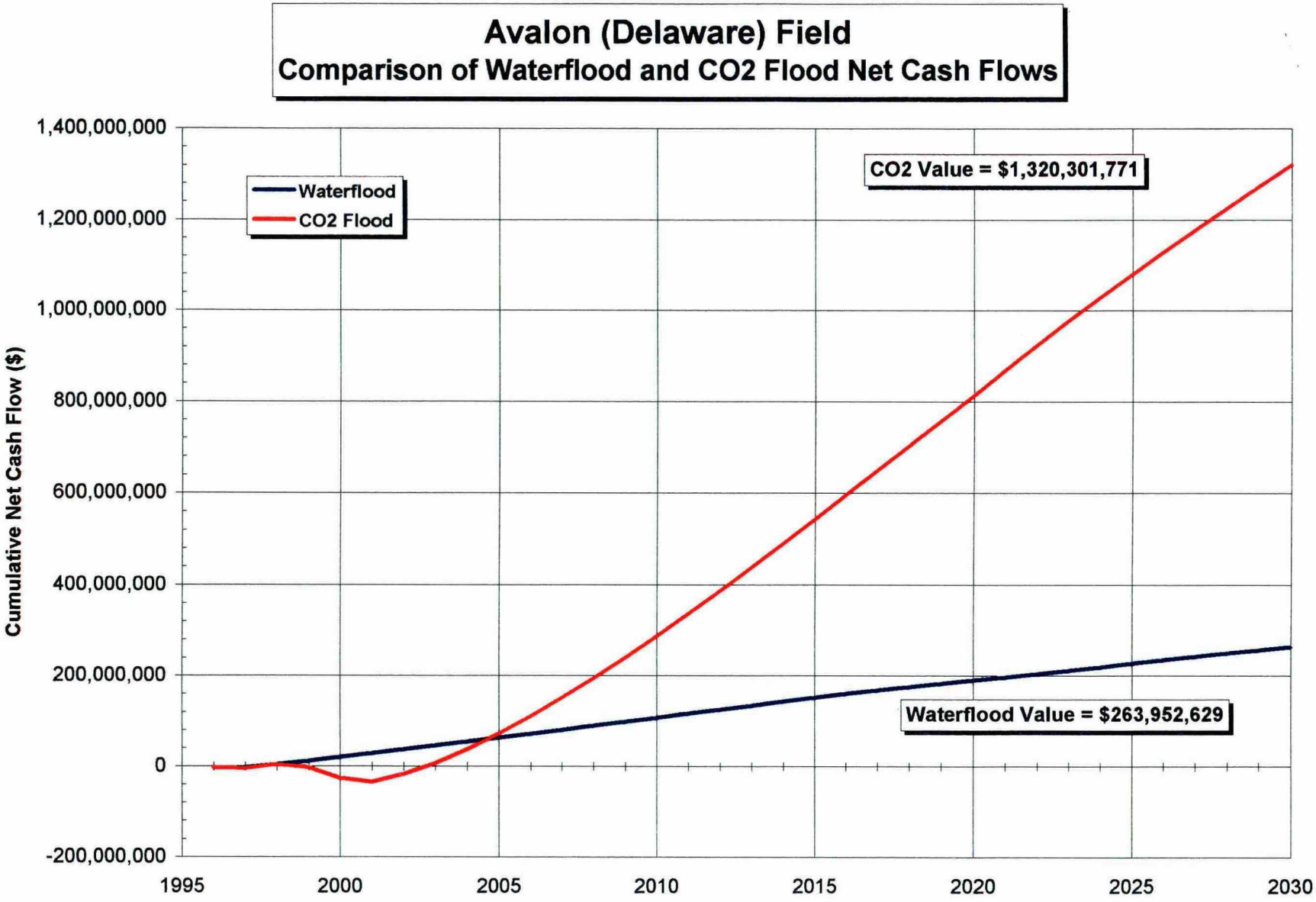
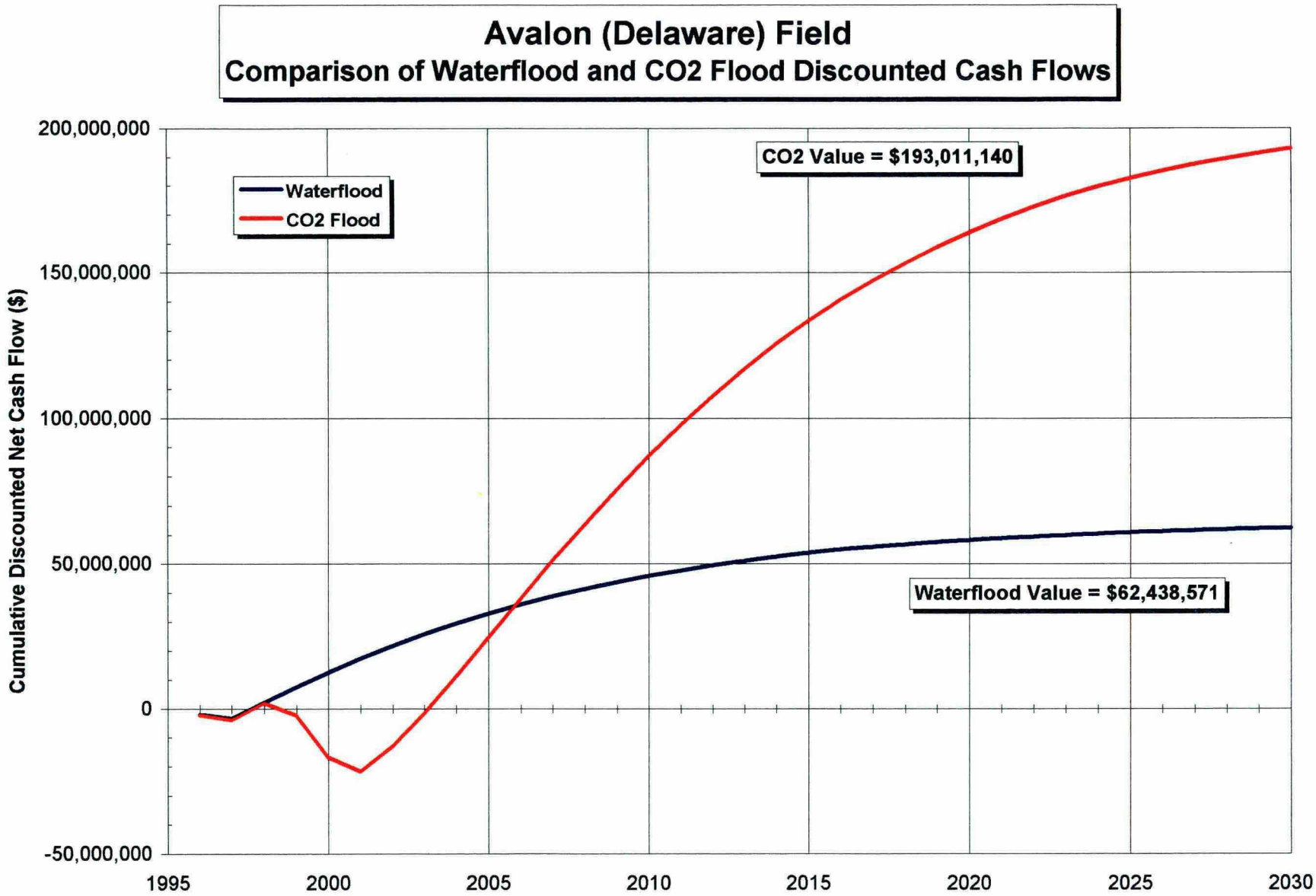

Avalon (Delaware) Field
Comparison of Waterflood and CO2 Flood Net Cash Flows
Waterflood
CO2 Flood
CO2 Value = $1,320,301,771
Waterflood Value = $263,952,629
Cumulative Net Cash Flow ($)
1,400,000,000
1,200,000,000
1,000,000,000
800,000,000
600,000,000
400,000,000
200,000,000
0
-200,000,000
1995
2000
2005
2010
2015
2020
2025
2030


Avalon (Delaware) Field
Comparison of Waterflood and CO2 Flood Discounted Cash Flows
Waterflood
CO2 Flood
CO2 Value = $193,011,140
Waterflood Value = $62,438,571
Cumulative Discounted Net Cash Flow ($)
200,000,000
150,000,000
100,000,000
50,000,000
0
-50,000,000
1995
2000
2005
2010
2015
2020
2025
2030

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Avalon (Delaware) Field

Listing of Potential Tract Participation Factors

Parameter		Premier Acreage	Exxon Acreage	Yates Acreage	MWJ Acreage	Field Total
Original Oil in Place (MSTBO)	Tract Value	13.73	146.70	82.87	4.91	248.21
	% of Field Total	5.53%	59.10%	33.39%	1.98%	100.00%
Cumulative Oil Production to 1-1-93 (MSTBO)	Tract Value	5	2,234	741	16	2,995
	% of Field Total	0.17%	74.57%	24.72%	0.54%	100.00%
January 1993 Oil Production Rate (BOPM)	Tract Value	0	13,244	3,450	54	16,748
	% of Field Total	0.00%	79.08%	20.60%	0.32%	100.00%
Initial Potential Oil Rate (BOPD)	Tract Value	72	2,479	1,118	31	3,700
	% of Field Total	1.95%	67.00%	30.22%	0.84%	100.00%
Number of Wells	Tract Value	2	22	11	2	37
	% of Field Total	5.41%	59.46%	29.73%	5.41%	100.00%
Remaining Primary Reserves (MSTBO)	Tract Value	0.00	1,289.20	1,370.10	0.70	2,660.00
	% of Field Total	0.00%	48.47%	51.51%	0.03%	100.00%
Total Lease Acreage (acres)	Tract Value	160	1,232	646	80	2,119
	% of Field Total	7.55%	58.17%	30.50%	3.78%	100.00%
Waterflood Target (MSTBO)	Tract Value	2.95	14.62	17.63	0.38	35.58
	% of Field Total	8.29%	41.09%	49.55%	1.07%	100.00%
CO2 Target (MSTBO)	Tract Value	10.07	96.71	61.65	2.78	171.21
	% of Field Total	5.88%	56.49%	36.01%	1.62%	100.00%
Waterflood Reserves (MSTBO)	Tract Value	0.0	4,595.8	2,205.8	0.0	6,801.6
	% of Field Total	0.00%	67.57%	32.43%	0.00%	100.00%
CO2 Reserves (MSTBO)	Tract Value	1,626.0	24,031.8	14,059.4	165.8	39,883.0
	% of Field Total	4.08%	60.26%	35.25%	0.42%	100.00%
Future Barrels Produced (MSTBO)	Tract Value	1,626.0	29,916.8	17,635.3	166.5	49,344.6
	% of Field Total	3.30%	60.63%	35.74%	0.34%	100.00%
Total Barrels Produced (MSTBO)	Tract Value	1,631.1	32,150.3	18,375.8	182.7	52,339.9
	% of Field Total	3.12%	61.43%	35.11%	0.35%	100.00%
Average	% of Field Total	3.48%	61.02%	34.21%	1.28%	100.00%
Proposed Participation Factor (50% OOIP,10% 1/93 Rate, 20% Rem Primary, 20% Future Prod)		3.42%	59.28%	36.20%	1.09%	100.00%

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List

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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Comparison of Hydrocarbon Pore Volume
Avalon Field, Eddy County, New Mexico

		Lower Cherry/Upper Brushy		Upper Cherry		Change from Exxon's Calculations	
Tract	Operator	Exxon Calc. (acre-ft)	Premier Map (acre-ft)	Exxon Calc. (acre-ft)	Premier Map (acre-ft)	(MSTBO)	(%)
1109	Premier	295.4	310.0	222.7	253.6	293.7	8.77%
1111	Yates			394.4	399.1	30.2	1.18%
1113	Yates			324.8	330.0	33.5	1.59%
1309	Premier	275.3	284.5	298.5	272.1	-111.6	-3.01%
1311	Yates			402.2	362.7	-255.1	-9.81%
1313	Yates			317.1	314.0	-20.0	-0.98%
1315	Yates			250.6	227.2	-151.2	-9.33%
1509	Premier	278.4	287.7	273.8	322.8	376.9	10.56%
1511	Yates			263.0	278.1	97.9	5.76%
1709	Premier			244.4	408.8	1,062.9	67.27%
1909	Yates			280.0	358.0	504.5	27.87%
	Total	849.2	882.2	3271.5	3526.4	1,861.6	6.99%
	Premier	849.2	882.2	1039.4	1257.3	1,621.9	13.28%
	Yates	0.0	0.0	2232.0	2269.1	239.7	1.66%

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Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

AVALON FIELD WELL-TRACTS

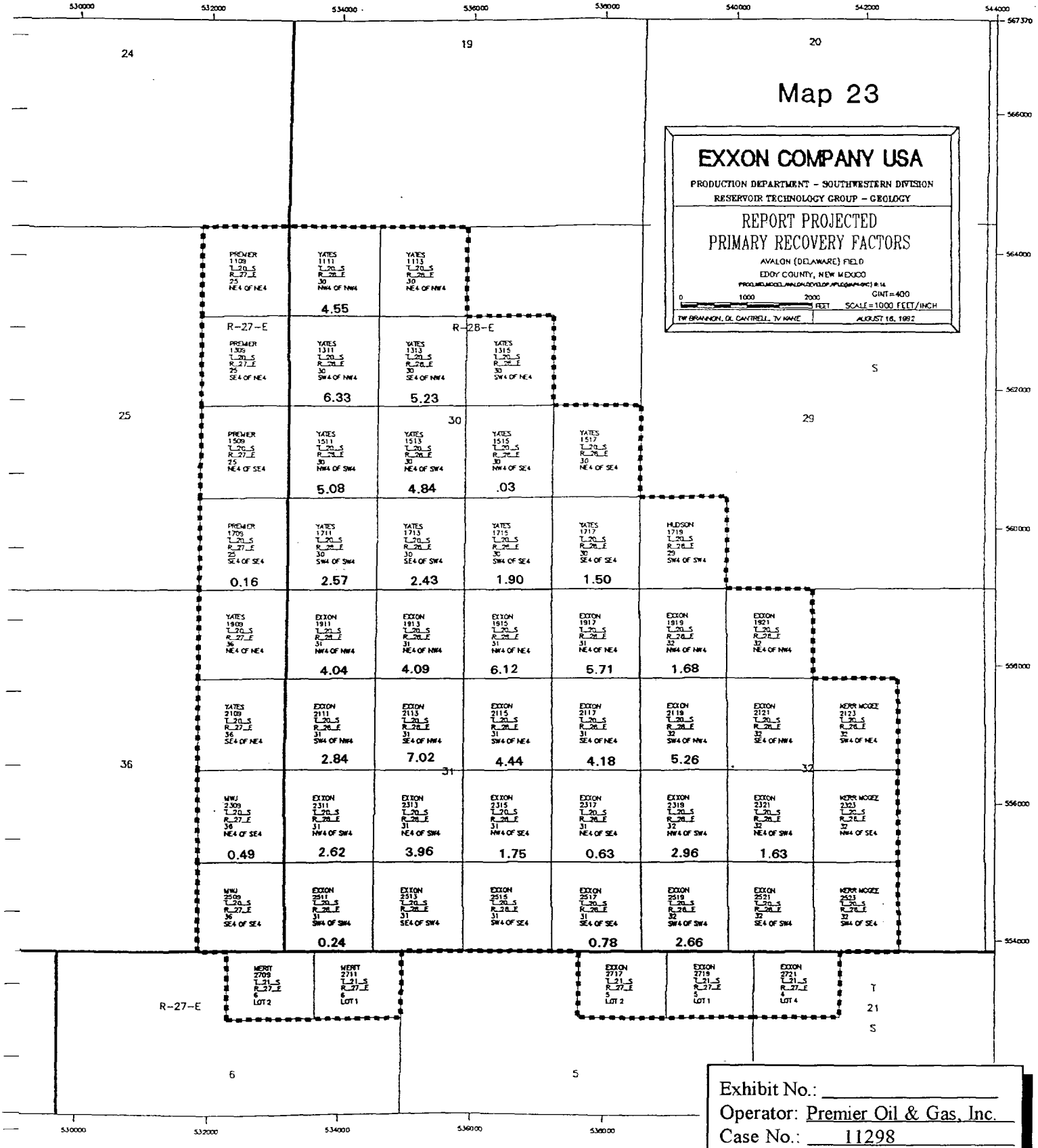

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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Comparison of Primary Recoveries

Offset Tracts to 1709

Avalon (Delaware) Field

Tract	Report OOIP (MSTBO)	Report Primary Recovery (MSTBO)	Recovery Factor (%)
1511	5,980	303.5	5.08%
1711	4,960	127.6	2.57%
1713	6,770	164.8	2.43%
1911	4,720	190.7	4.04%
Field Average =			4.60%
1709	3,100	62.0	2.00%

Ultimate primary reserves =	62.0 MSTBO
Cumulative production =	5.0 MSTBO
Remaining primary reserves =	57.0 MSTBO

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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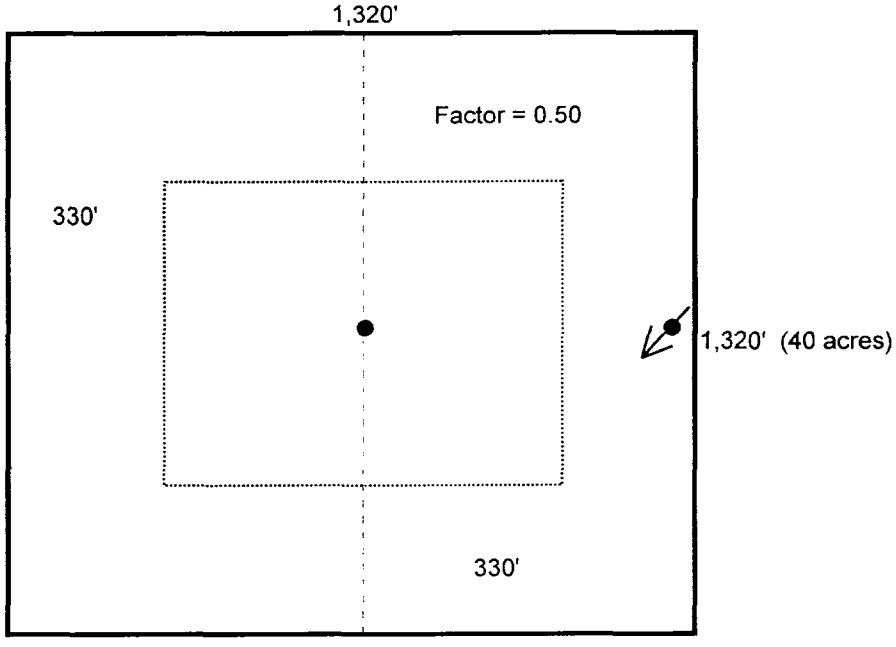
Flood Factor Scenarios

in the

Avalon (Delaware) Field



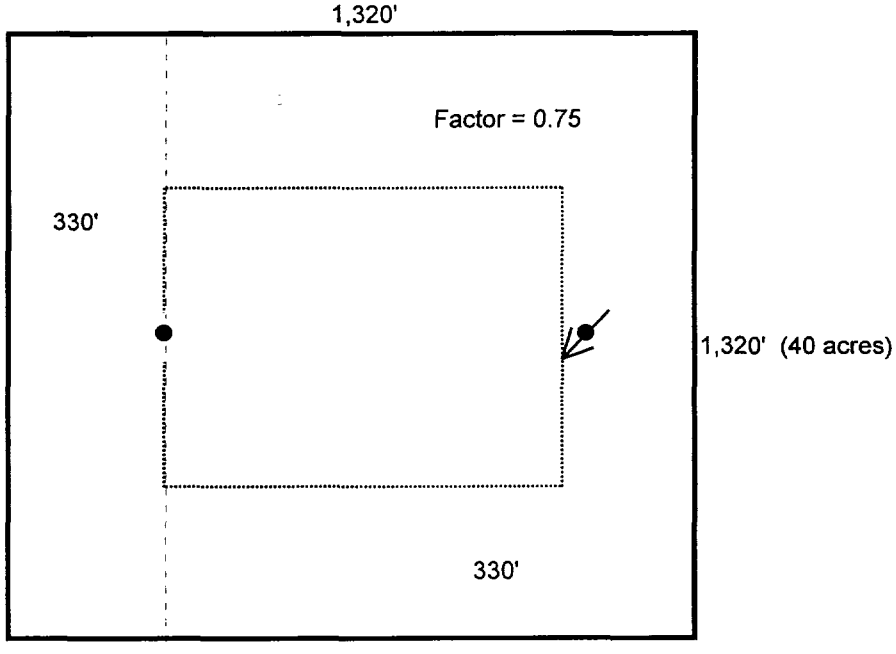


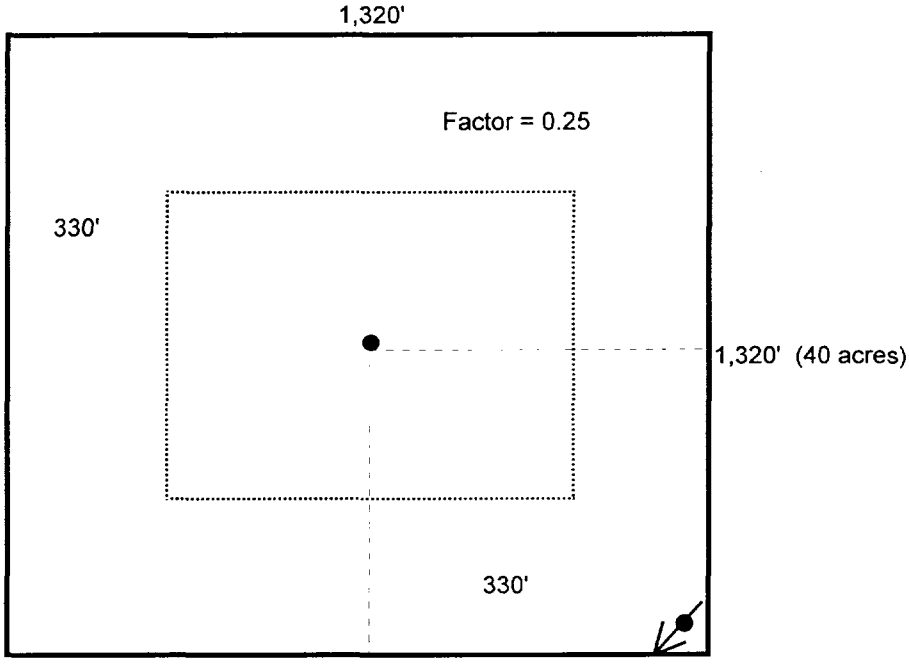
Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

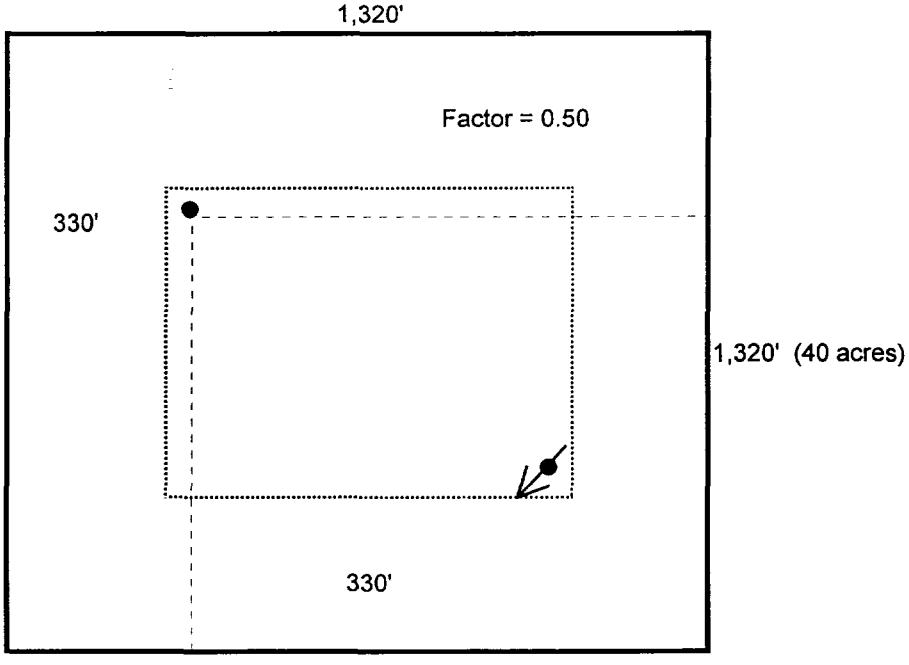
4

Flood Factor Scenarios

in the

Avalon (Delaware) Field





Effect of Revised Flood Patterns

on

Recoverable Reserves

Avalon (Delaware) Field

	Report		Proposed	
Tract	Flood Factor	CO2 Reserves (MSTBO)	Flood Factor	CO2 Reserves (MSTBO)
1109	0.25	265.4	0.50	530.80
1111	0.50	530.6	0.75	795.90
1113	0.25	446.7	0.50	893.40
1309	0.50	607.3	0.75	910.95
1315	0.25	362.5	0.50	725.00
1509	0.50	579.0	0.75	868.50
1517	0.25	247.4	0.50	494.80
1719	0.25	203.9	0.50	407.80
1921	0.25	143.8	0.50	287.60
2109	0.25	91.4	0.50	182.80
2123	0.25	51.5	0.50	103.00
2323	0.50	120.1	0.75	180.15
2513	0.50	219.4	0.75	329.10
2523	0.25	19.5	0.50	39.00
Totals =		3,888.5		6,748.8

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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Example Reservoir Pressure Profile

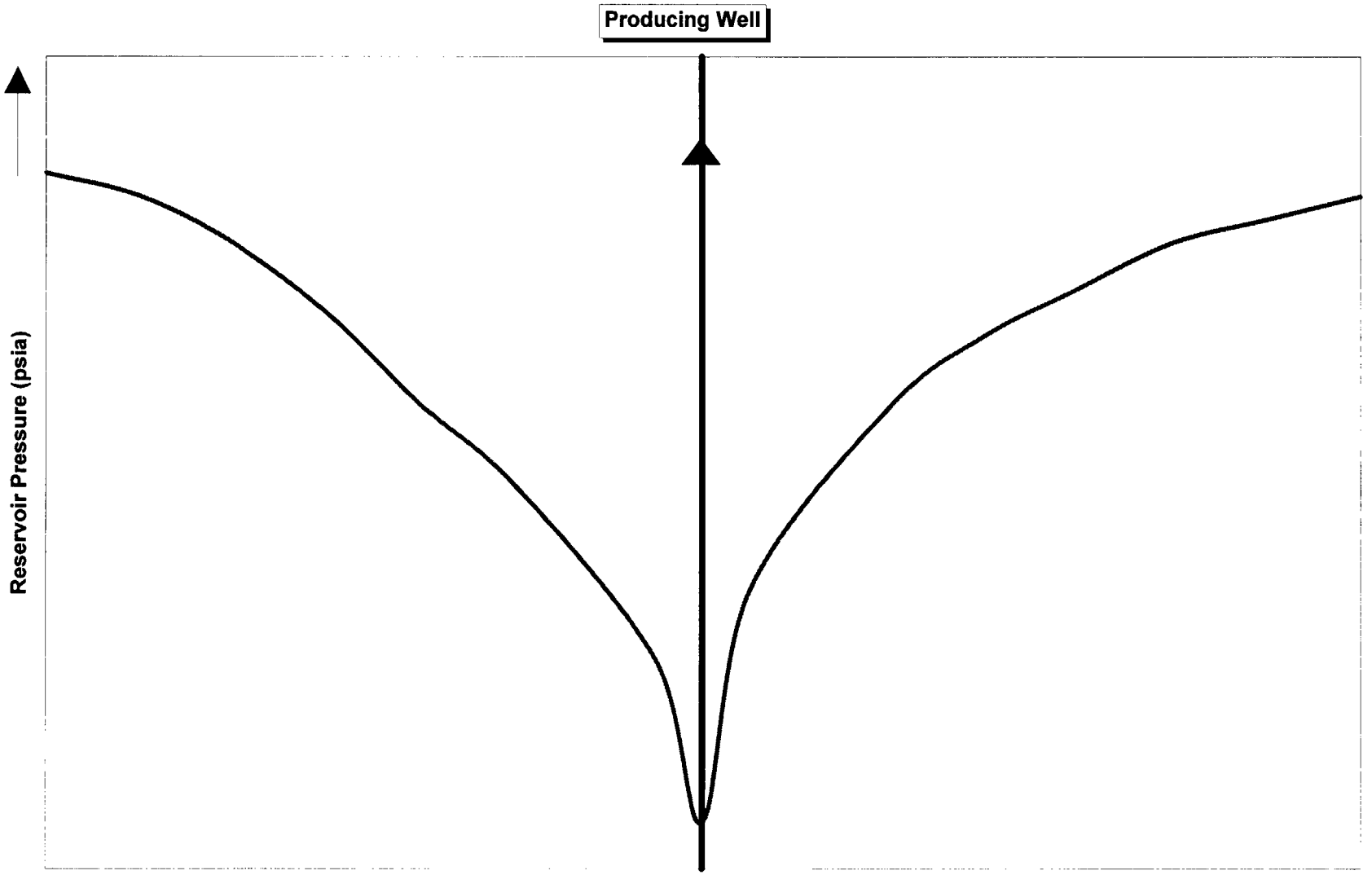

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

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Avalon (Delaware) Field

Listing of Potential Tract Participation Factors

Using Premier HCPV Maps

Parameter		Premier Acreage	Exxon Acreage	Yates Acreage	MWJ Acreage	Field Total
Original Oil in Place (MSTBO)	Tract Value	15.35	146.70	83.11	4.91	250.07
	% of Field Total	6.14%	58.66%	33.23%	1.96%	100.00%
January 1993 Oil Production Rate (BOPM)	Tract Value	0	13,244	3,450	54	16,748
	% of Field Total	0.00%	79.08%	20.60%	0.32%	100.00%
Remaining Primary Reserves (MSTBO)	Tract Value	57.00	1,289.20	1,370.10	0.70	2,717.00
	% of Field Total	2.10%	47.45%	50.43%	0.03%	100.00%
Waterflood Reserves (MSTBO)	Tract Value	0.00	4,595.8	2,200.9	0.0	6,796.7
	% of Field Total	0.00%	67.62%	32.38%	0.00%	100.00%
CO2 Reserves (MSTBO)	Tract Value	2,655.1	24,416.4	15,670.0	165.8	42,907.3
	% of Field Total	6.19%	56.90%	36.52%	0.39%	100.00%
Future Barrels Produced (MSTBO)	Tract Value	2,712.1	30,301.4	19,241.0	166.5	52,420.9
	% of Field Total	5.17%	57.80%	36.70%	0.32%	100.00%
Proposed Participation Factor (50% OOIP,10%1/93 Rate,20% Rem Primary,20% Future Prod)		4.52%	58.29%	36.10%	1.08%	100.00%

H:\815_00.TDP\NEWHCPV.XLS
List

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

49

PREMIER OIL & GAS, INC.

UPPER CHERRY CANYON
HYDROCARBON POROSITY THICKNESS

AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CONTOUR INTERVAL: 2

GEOLOGY BY: G. E. HARRINGTON NOVEMBER, 1995

Exhibit No.: _____
Operator: Premier Oil & Gas, Inc.
Case No.: 11298
Date: December 14, 1995

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

Priemer
Exhibits
1- 40 +

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

GULF OIL EXPLORATION & PRODUCTION COMPANY

EDDY "FV" NO. 3

AVALON (DELAWARE) FIELD

EDDY COUNTY, NEW MEXICO

BEFORE THE
OIL CONSERVATION COMMISSION
*Case No.**11298 DeNovo** Exhibit No.___*
Submitted By: 5-A
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

CORE LABORATORIES, INC.

March 3, 1984

GULF OIL EXPLORATION & PRODUCTION COMPANY
P.O. Box 670
Hobbs, New Mexico 88240

File : 3202-14008
Subject: Core Analysis
Eddy "FV" No. 3
Avalon Field
Eddy County, New Mexico

Gentlemen:

Sidewall Core Analysis was made on 10 sidewall core samples received from Schlumberger.

Fluid removal and fluid saturations were determined using Dean Stark techniques.

Gas expansion porosity and grain density were determined using Boyle's Law.

Gas detections was measured using a "Hot Wire Gas Detector" on gas in the sealed jars.

Permeability values for percussion type sidewall cores are determined emperically.

Descriptions and fluorescence were visually determined microscopically.

The samples are being held at our Midland lab as we await further disposition instructions.

We trust these data will be useful in the evaluation of your property and thank you for the opportunity of serving you.

Very truly yours,

CORE LABORATORIES, INC.

Jack H. Neff

Jack H. Neff
Laboratory Manager

JHN/do/yn

CORE ANALYSIS REPORT

FOR

GULF OIL EXPL. & PROD. CO.

EDDY "FV" NO. 3
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

REC IN	DEPTH FEET	PERM(Ka) MD(*)	FLD POR	OIL% PORE	WTR% PORE	PROB PROD	OIL% BULK	GAS% BULK	GAS DET	DESCRIPTION
0.1	2591.5	0.18	11.8	5.0	65.0	OIL	0.6	3.5	2	SD VFG LT-GRY
0.5	2714.0	310.	28.0	25.9	67.7	OIL	7.3	1.8	75	SD VFG LT-GRY-WH
0.1	2739.0								65	NA SD VFG LT-GRY TBFA
0.5	2744.0	48.	23.8	8.9	57.1	OIL	2.1	8.1	55	SD VFG LT-GRY SHY
0.3	2745.0	315.	28.1	9.1	50.7	OIL	2.6	11.3	50	SD VFG LT-GRY
0.1	2746.0								45	NA SD VFG LT-GRY TBFA
0.1	2747.0								40	NA SD VFG LT-GRY TBFA
0.1	2781.0								90	NA SD VFG LT-GRY-WH TBFA
0.1	2783.0								95	NA SD VFG LT-GRY-WH TBFA
0.5	2869.0	22.	22.6	0.0	82.4	WTR	0.0	4.0	20	SD VFG LT-GRY
0.8	2873.0	400.	29.2	0.0	88.8	WTR	0.0	3.3	20	SD VFG LT-GRY
0.3	2878.0	35.	23.6	3.4	54.8	OIL	0.8	9.6	20	SD VFG LT-GRY-WH
0.1	3488.0								0	NA SD CONTAMINATE TBFA
0.1	3501.0								0	NA SD CONTAMINATE TBFA
0.1	3507.0								0	NA SD CONTAMINATE TBFA
0.1	3758.0	14.	20.8	0.0	66.7	WTR	0.0	6.9	0	SD VFG LT-GRY
0.1	3767.0								0	NA SD VFG LT-GRY TBFA
0.1	3845.0								0	NA SD VFG LT-GRY TBFA
0.3	3850.0	6.0	19.4	0.0	72.5	WTR	0.0	5.3	20	SD VFG LT-GRY-WH
0.1	3934.0								0	NA SD VFG LT-GRY-WH TBFA
0.1	3936.0								0	NA SD VFG LT-GRY-WH TBFA
0.3	4829.5	0.70	8.7	0.0	81.1	WTR	0.0	1.6	0	LM VFXLN DK-BRN VF
0.1	4880.0								20	NA LM DK-BRN-BLK V/SHY
0.1	4886.0								40	NA LM DK-BRN-BLK V/SHY
0.1	4949.5								10	NA LM BLK-DK-BRN V/SHY
0.1	4950.0								0	NA LM BLK-DK-BRN V/SHY

(*) Permeability values for percussion type sidewall cores determined empirically.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

GULF OIL EXPL. & PROD. CO.
EDDY "FV" NO. 3
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

DATE : 3-31-84
FORMATION : DELAWARE SD.
DRLG. FLUID: BRINE WATER
LOCATION : 660' FSL & 330' FEL, SEC. 25, T-20-S, R-27-E

FILE NO : 3202-14008
LABORATORY: MIDLAND, TEXAS
ANALYSTS : REINHEIMER
CORES : SCHLUMBERGER

SIDEWALL CORE ANALYSIS

REC IN	DEPTH FEET	PERM(Ka) MD(*)	FLD POR	OIL% PORE	WTR% PORE	PROB PROD	OIL% BULK	GAS% BULK	GAS DET	DESCRIPTION
0.1	2591.5	0.18	11.8	5.0	65.0	OIL	0.6	3.5	2	SD VFG LT-GRY
0.5	2714.0	310.	28.0	25.9	67.7	OIL	7.3	1.8	75	SD VFG LT-GRY-WH
0.1	2739.0								65	NA SD VFG LT-GRY TBFA
0.5	2744.0	48.	23.8	8.9	57.1	OIL	2.1	8.1	55	SD VFG LT-GRY SHY
0.3	2745.0	315.	28.1	9.1	50.7	OIL	2.6	11.3	50	SD VFG LT-GRY
0.1	2746.0								45	NA SD VFG LT-GRY TBFA
0.1	2747.0								40	NA SD VFG LT-GRY TBFA
0.1	2781.0								90	NA SD VFG LT-GRY-WH TBFA
0.1	2783.0								95	NA SD VFG LT-GRY-WH TBFA
0.5	2869.0	22.	22.6	0.0	82.4	WTR	0.0	4.0	20	SD VFG LT-GRY
0.8	2873.0	400.	29.2	0.0	88.8	WTR	0.0	3.3	20	SD VFG LT-GRY
0.3	2878.0	35.	23.6	3.4	54.8	OIL	0.8	9.6	20	SD VFG LT-GRY-WH
0.1	3488.0								0	NA SD CONTAMINATE TBFA
0.1	3501.0								0	NA SD CONTAMINATE TBFA
0.1	3507.0								0	NA SD CONTAMINATE TBFA
0.1	3758.0	14.	20.8	0.0	66.7	WTR	0.0	6.9	0	SD VFG LT-GRY
0.1	3767.0								0	NA SD VFG LT-GRY TBFA
0.1	3845.0								0	NA SD VFG LT-GRY TBFA
0.3	3850.0	6.0	19.4	0.0	72.5	WTR	0.0	5.3	20	SD VFG LT-GRY-WH
0.1	3934.0								0	NA SD VFG LT-GRY-WH TBFA
0.1	3936.0								0	NA SD VFG LT-GRY-WH TBFA
0.3	4829.5	0.70	8.7	0.0	81.1	WTR	0.0	1.6	0	LM VFXLN DK-BRN VF
0.1	4880.0								20	NA LM DK-BRN-BLK V/SHY
0.1	4886.0								40	NA LM DK-BRN-BLK V/SHY
0.1	4949.5								10	NA LM BLK-DK-BRN V/SHY
0.1	4950.0								0	NA LM BLK-DK-BRN V/SHY

(*) Permeability values for percussion type sidewall cores determined empirically.

LITHOLOGICAL ABBREVIATIONS

ANH(Y)	ANHYDRITE, ANHYDRITIC
ARK	ARKOSE, ARKOSIC
BAN	BAND, BANDED
BREC	BRECCIA, BRECCIATED
CALC	CALCITE, CALCAREOUS
CARB	CARBONACEOUS
CG	COARSE GRAINED
CHK(Y)	CHALK, CHALKY
CHT(Y)	CHERT, CHERTY
CONGL	CONGLOMERATE, CONGLOMERITIC
CXLN	COARSELY CRYSTALLINE
DNS	DENSE
DOL(C)	DOLOMITE, DOLOMITIC
F	RANDOMLY ORIENTED FRACTURES
FG	FINE GRAINED
FOSS	FOSSILIFEROUS
FR	FRIABLE
FXLN	FINELY CRYSTALLINE
GAL	GALENA
GLAUC	GLAUCONITE, GLAUCONITIC
GRAN	GRANITE
GYP	GYPSUM, GYPSIFEROUS
HF	PREDOMINANTLY HORIZONTALLY FRACTURED
INC	INCLUSION
INTBD	INTERBEDDED
LAM	LAMINATED
LM(Y)	LIMESTONE, LIMY
MG	MEDIUM GRAINED
MTX	MATRIX
NA	INTERVAL NOT ANALYZED (AT REQUEST OF CLIENT)
NOD	NODULE, NODULAR
OOL	OOLITIC
PISO	PISOLITIC
PP	PINPOINT POROSITY
PT	PARTING
PYR	PYRITE, PYRITIC
SD(Y)	SANDSTONE, SANDY
SH(Y)	SHALE, SHALY
SHR	SOLID HYDROCARBON RESIDUE
SL/	SLIGHTLY
SLT(Y)	SILT, SILTY
STY	STYLOLITE, STYLOLITIC
SUC	SUCROSIC
SUL	SULPHUR
TBFA	TOO BROKEN FOR ANALYSIS
TRIP	TRIPOLITE
V/	VERY
VF	PREDOMINANTLY VERTICALLY FRACTURED
V	VUGULAR
XBD	CROSSBEDDED
XLN	MEDIUM CRYSTALLINE
XTL	CRYSTAL

THE FIRST WORD IN THE DESCRIPTION COLUMN OF THE CORE ANALYSIS REPORT DESCRIBES THE ROCK TYPE. FOLLOWING ARE ROCK MODIFIERS IN DECREASING ABUNDANCE AND MISCELLANEOUS DESCRIPTIVE TERMS.

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

GULF OIL EXPL. & PROD. CO.
EDDY "FV" NO. 3
EDDY COUNTY, NEW MEXICO

DATE : 3-31-84
FIELD: AVALON (DELAWARE) FIELD

FILE NO: 3202-14008
ANALYST: REINHEIMER

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P.O. BOX 37048
HOUSTON, TEXAS 77236

1 cc GULF OIL EXPL. & PROD. CO
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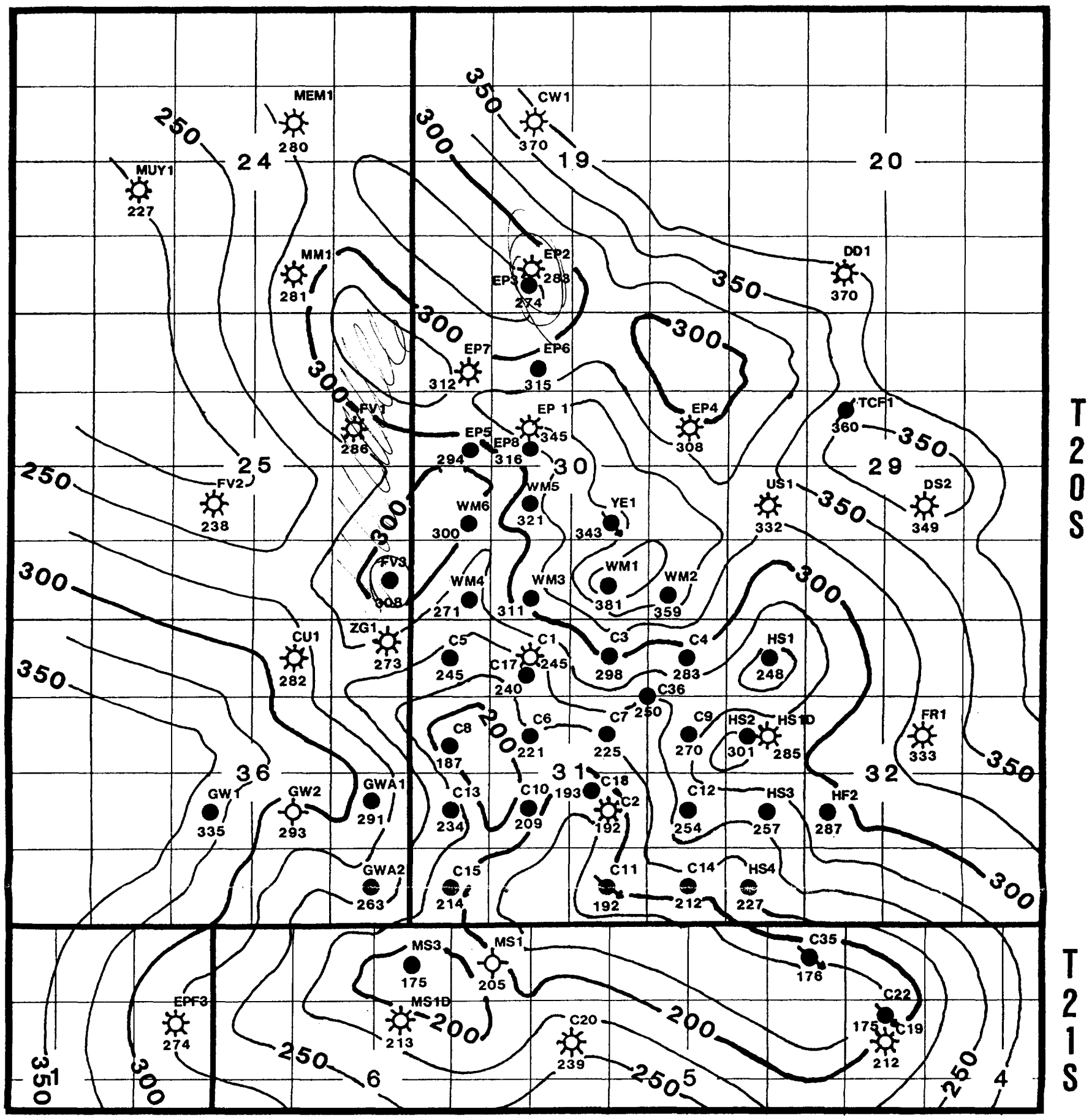
MIDLAND, TEXAS 79702
ATTN: MR. C.D. STENBURG

3 cc AMOCO PRODUCTION COMPANY
EXPLORATION DEPARTMENT
P.O. BOX 3092
HOUSTON, TEXAS 77253
ATTN: MR. R.L. EVANS



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 4
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

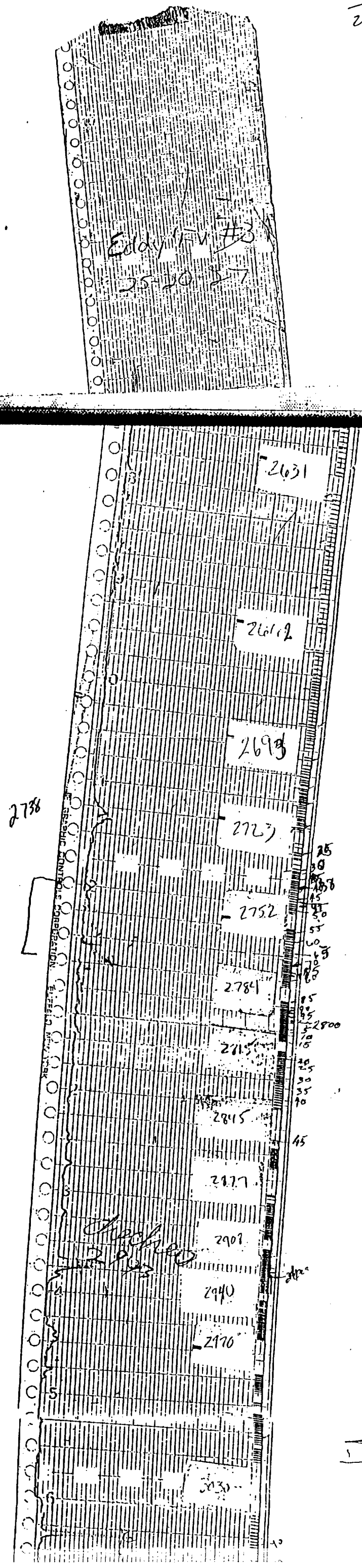
PREMIER OIL & GAS, INC.

UPPER CHERRY CANYON THICKNESS DOWNLAP - BASE INTERVAL

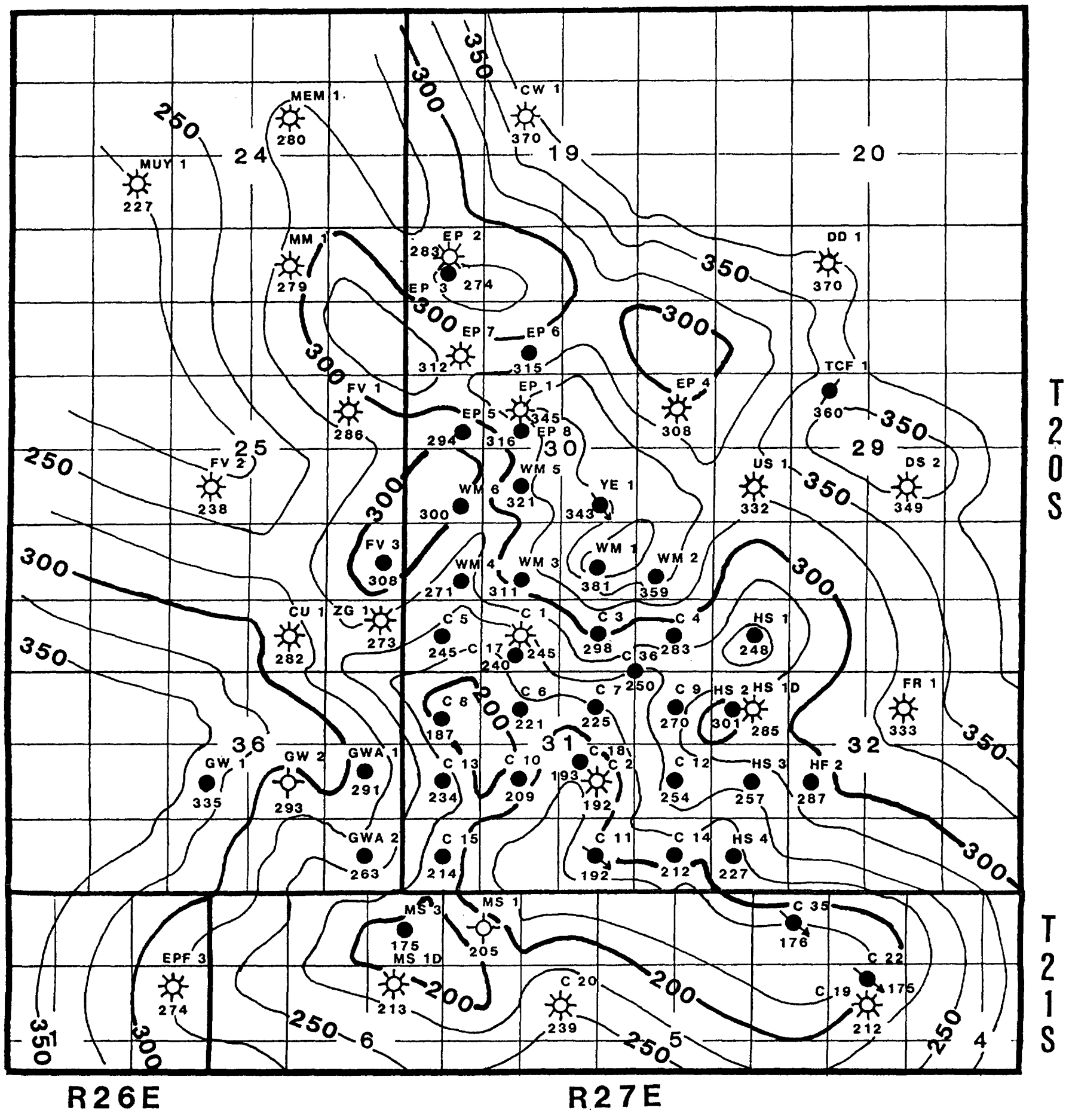
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CONTOUR INTERVAL: 25 FEET
SCALE: 2000 FEET / INCH

GEOLOGY BY: G. E. HARRINGTON JUNE, 1995



BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 11298 DeNovo Exhibit No. 5
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995



PREMIER OIL & GAS, INC.

UPPER CHERRY CANYON THICKNESS DOWNLAP - BASE INTERVAL

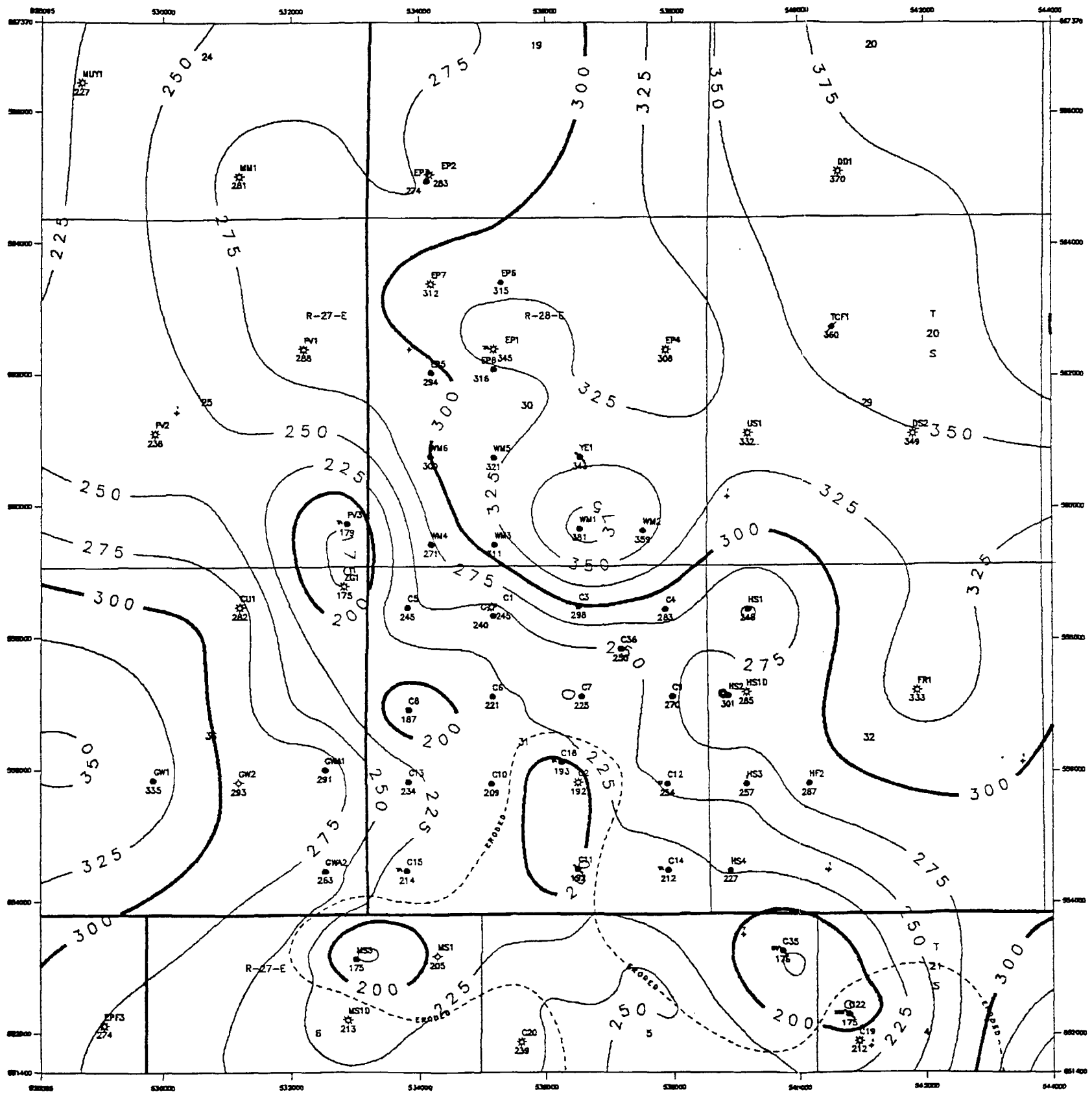
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CONTOUR INTERVAL: 25 FEET
SCALE: 2000 FEET / INCH

BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 11298 DeNovo Exhibit No. 6
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

GEOLOGY BY: G. E. HARRINGTON NOVEMBER, 1995

UPPER CHERRY CANYON - Gross Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 7

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION
RESERVOIR TECHNOLOGY GROUP – GEOLOGY

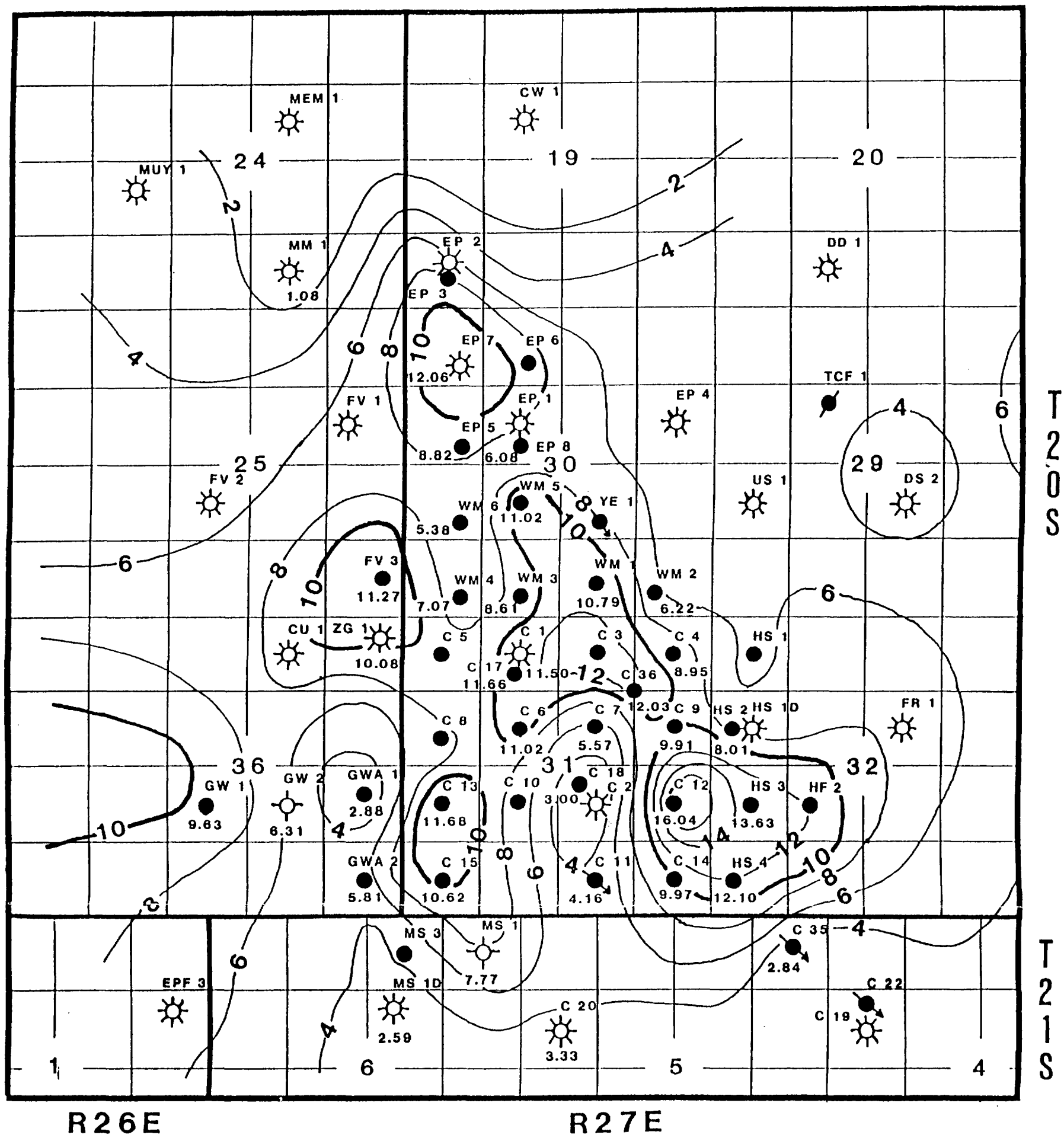
TOTAL GROSS THICKNESS MAP

AMALGAMATION OF ZONES CCCM CMCB
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO
ANNOTATIONS: WELLID, THICKNESS (FT)

0 1000 2000 FEET
CINT = 25 CINT = 400
SCALE = 1000 FEET/INCH

TW BRANNON, DL CAMPBELL, TV HAYE
JULY 29, 1992

BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 11298 DeNovo Exhibit No. 6-A
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995



PREMIER OIL & GAS, INC.

UPPER CHERRY CANYON
HYDROCARBON POROSITY THICKNESS

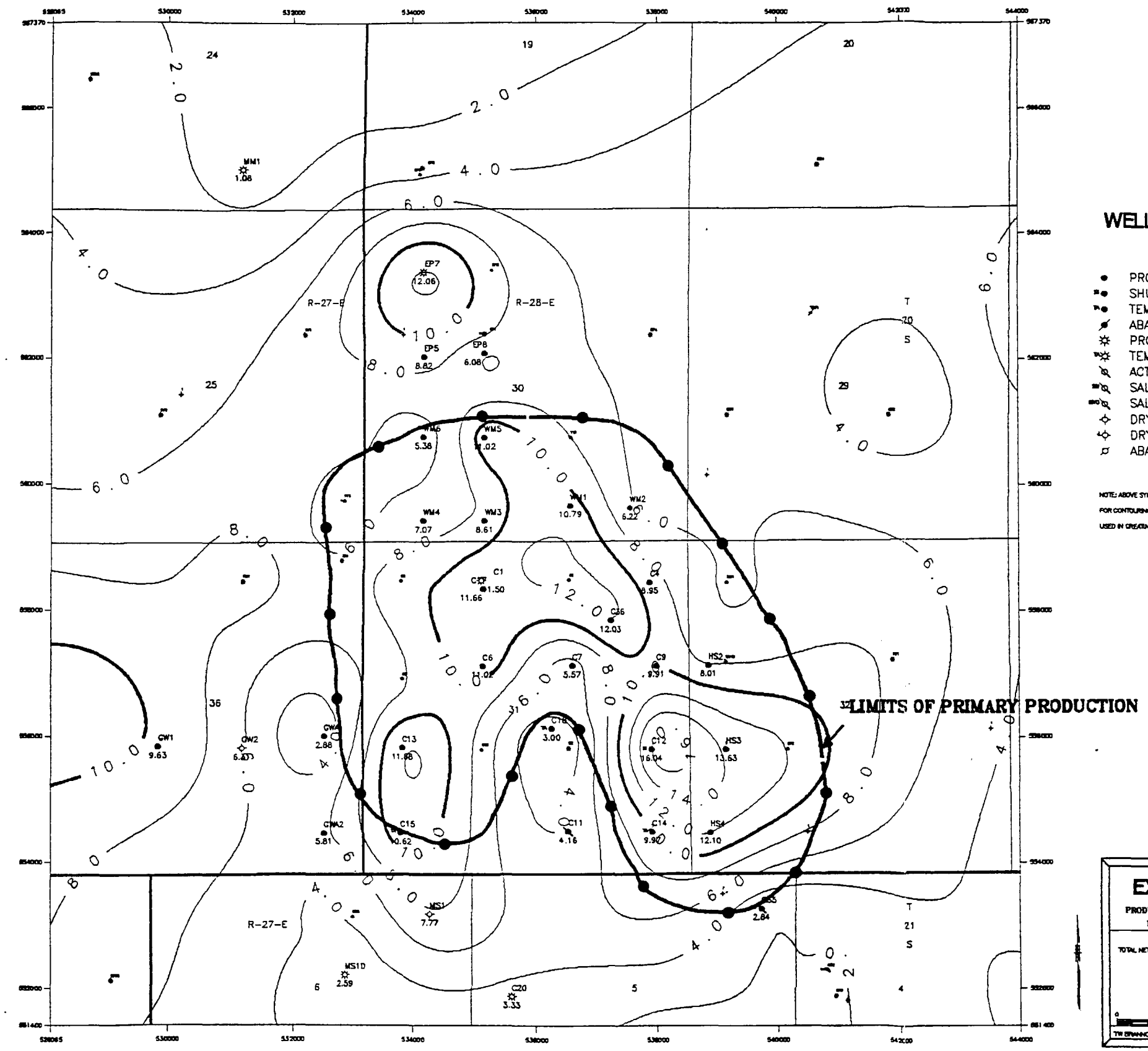
AVALON (DELAWARE) FIELD
EDDY COUNTY, NEW MEXICO

CONTOUR INTERVAL: 2
SCALE: 2000 FEET / INCH

BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 11298 DeNovo Exhibit No. 7
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

GEOLOGY BY: G. E. HARRINGTON NOVEMBER, 1995

UPPER CHERRY CANYON - Hydrocarbon Porosity Thickness



WELL STATUS SYMBOL LEGEND

- PRODUCING OIL WELL
- SHUT IN OIL WELL
- TEMPORARILY ABANDONED OIL WELL
- ABANDONED OIL WELL
- PRODUCING GAS WELL
- TEMPORARILY ABANDONED GAS WELL
- ACTIVE INJECTION WELL
- SALT WATER INJECTION WELL
- SALT WATER DISPOSAL WELL
- DRY HOLE
- DRY HOLE, JUNKED AND ABANDONED
- ABANDONED LOCATION

NOTE: ABOVE SYMBOLS ARE ACTUAL SIZE FOR WELLS USED FOR CONTOURING. SMALL SYMBOLS REFLECT WELLS NOT USED IN CREATING THIS MAP.

Map 20

EXXON COMPANY USA

PRODUCTION DEPARTMENT – SOUTHWESTERN DIVISION

RESERVOIR TECHNOLOGY GROUP – GEOLOGY

TOTAL NET RESERVOIR HYDROCARBON POROSITY THICKNESS AT RESV COND MAP

0 1000 2000 FEET

CINT=2 CINT=400

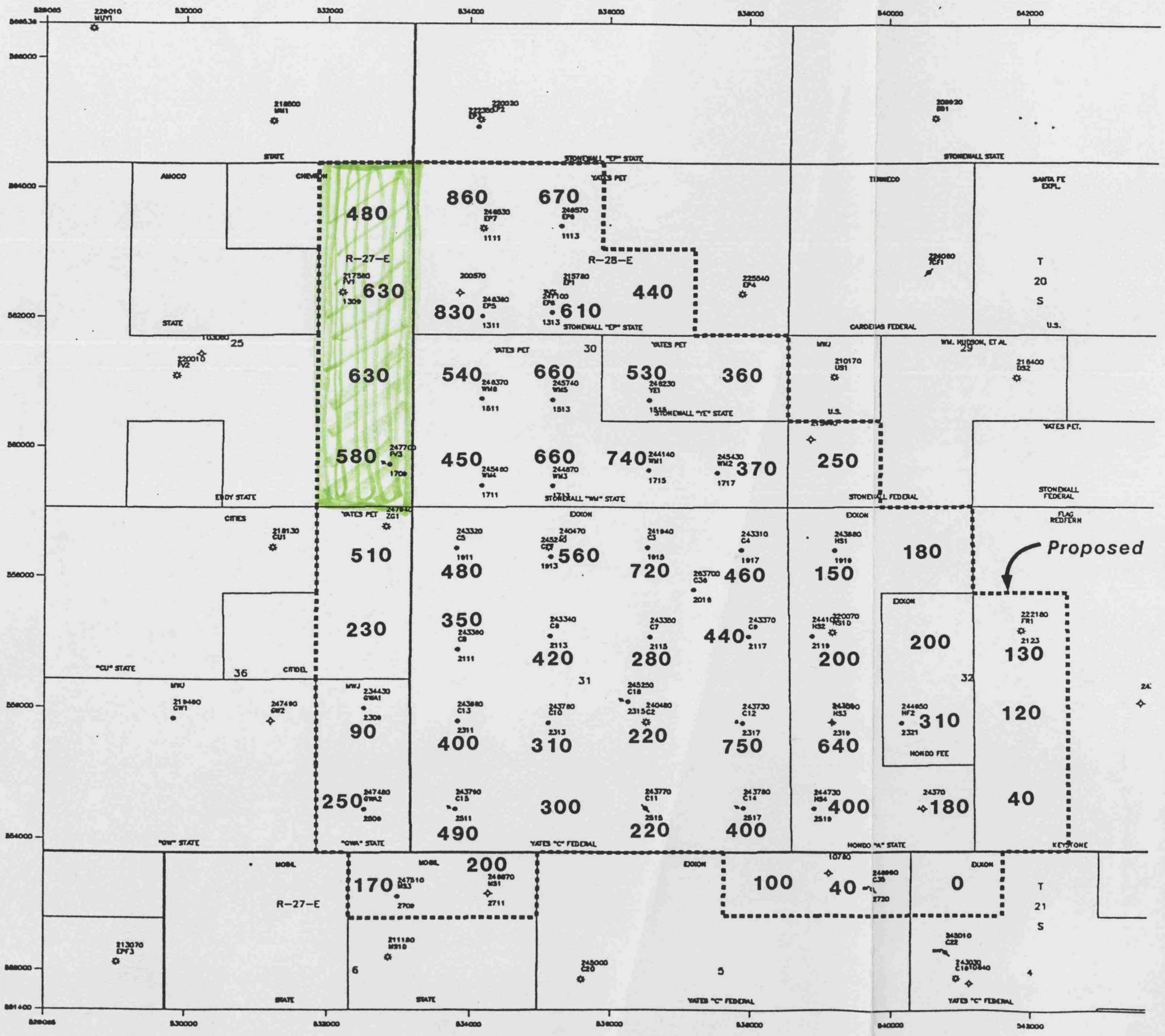
SCALE=1000 FEET/INCH

TW BRANNON, DL DANTRELL, TV KANE

JULY 28, 1992

BEFORE THE
OIL CONSERVATION COMMISSION
Case No.11298 DeNovo Exhibit No. 7-A
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

AVALON (DELAWARE) FIELD BASEMAP



PREMIER OIL & GAS, INC.

UPPER CHERRY CANYON WATERFLOOD TARGET OIL IN PLACE (KBO)

BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 8
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

PAUL G. WHITE

JUNE, 1995

DRILLING TIME & SAMPLE LOG

GERALD E. HARRINGTON
P.O. Box 216

GEOLOGICAL CONSULTANT
Roswell, New Mexico

OPERATOR: GULF OIL EXPLORATION AND PRODUCTION COMPANY

WELL: EDDY "FV" STATE #3

FIELD: AVALON DELAWARE COUNTY: EDDY STATE: NEW MEXICO

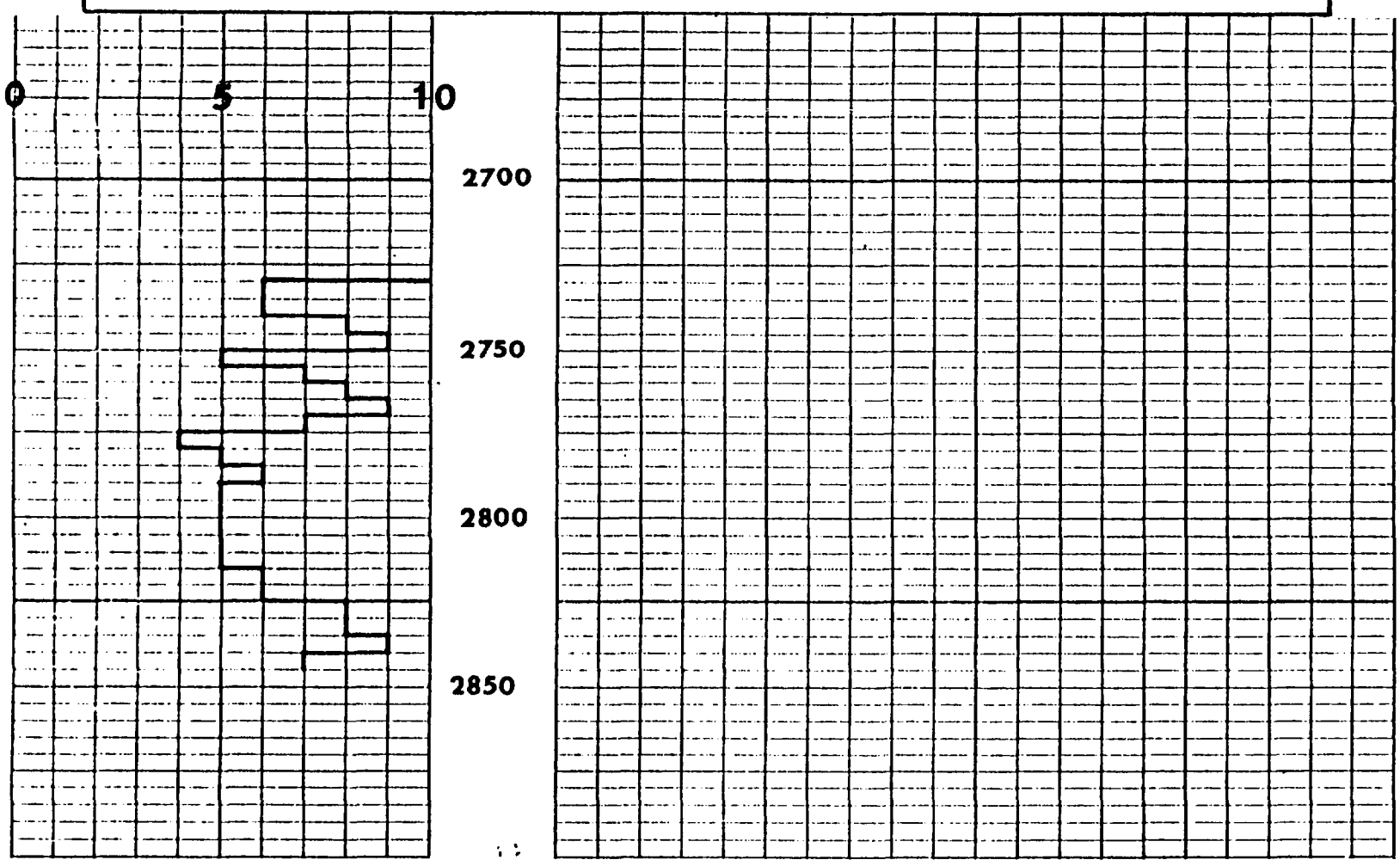
LOCATION: Section 25 Twp 20-S Rge 27-E Elev. KB 3315.5

Footage 660' FSL & 330' FEL DF 3314.5

TD: 4975 CASING: GL 3302.5

BIT SIZE: CONTRACTOR:

REMARKS: DRILLING TIME - MINUTES/ 5 FEET



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 10
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 11298 DeNovo Exhibit No. 4
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

LARGE FORMAT EXHIBIT HAS BEEN REMOVED AND IS LOCATED IN THE NEXT FILE

KELLAHIN AND KELLAHIN
ATTORNEYS AT LAW
EL PATIO BUILDING
117 NORTH GUADALUPE
POST OFFICE BOX 2265
SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN*
*NEW MEXICO BOARD OF LEGAL SPECIALIZATION RECOGNIZED SPECIALIST IN THE AREA OF NATURAL RESOURCES-OIL AND GAS LAW

JASON KELLAHIN (RETIRED 1991)

TELEPHONE (505) 982-4285
TELEFAX (505) 982-2047

December 11, 1995

HAND DELIVERED

Mrs. Jamie Bailey
Office of the Commissioner of Public Lands
State Land Office Building
310 Old Santa Fe Trail
Santa Fe, New Mexico 87501

Re: NMOCD Cases 11297 and 11298
Application of Exxon Corporation for Waterflood Project,
Carbon Dioxide Project and Statutory Unitization
Avalon-Delaware Unit, Eddy County, New Mexico

Dear Mrs. Bailey:

On December 14, 1995, the New Mexico Oil Conservation Commission is scheduled to hearing the subject case which involves Exxon's desire to include State of New Mexico Oil & Gas Lease No. K-6527-1 (E/2E/2 of Section 25, T20S, R27E) in both its proposed waterflood project and its carbon dioxide flood project.

My client is Premier Oil & Gas Inc. who is the current lessee of this lease and who is opposed to its inclusion in the unit.

I am aware that your responsibilities as an employee of the Commissioner of Public Lands ("Land Office") have involved gathering information and making recommendations concerning whether it is in the best interests of the Land Office to include certain State of New Mexico oil & gas leases in units such as this.

While I have the greatest respect for your expertise and your professionalism, I am concerned that your responsibilities to the Land Office this particular case have created a conflict of interest which would preclude you from participating as a member of the Oil Conservation Commission.

BEFORE THE
OIL CONSERVATION COMMISSION
Case No. 11298 DeNovo Exhibit No. A
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

The Land Office has already granted preliminary approval of this unit which includes the disputed tract. Should you ultimately decide in favor of my client, then your actions would be contrary to the decision made by the Land Office.

I would appreciate knowing (a) if you have any reservations about participating in this case, and (b) if you have had any personal involvement on behalf of the Land Office with this unitization effort by Exxon. If so, can you ignore that past involvement and decide this case regardless of the affect that decision might have upon the Land Office and its prior approval to include this tract in this unit.

Very truly yours,

W. Thomas Kellahin

cc: Ken Jones (Premier)
cc: William J. LeMay (Chairman-OCC)
cc: Jim Bruce, Esq. (Exxon)
cc: William F. Carr, Esq. (Yates)

State of New Mexico
Commissioner of Public Lands

RAY POWELL, M.S., D.V.M.
COMMISSIONER

310 OLD SANTA FE TRAIL P.O. BOX 1148
SANTA FE, NEW MEXICO 87504-1148

Legal Division
(505) 827-5713
Fax (505) 827-5853

December 13, 1995

VIA FACSIMILE & U.S. MAIL

W. Thomas Kellahim, Esq.
Kellahin & Kellahin
117 North Guadalupe
P.O. Box 2265
Santa Fe, NM 87504-2265

Re: NMOCD cases 11297 and 11298, Application of Exxon Corporation for Waterflood Project, Carbon Dioxide Project and Statutory Unitization Avalon-Delaware Unit, Eddy County, New Mexico

Dear Mr. Kellahin:

Your letter of December 11, 1995 to Jami Bailey has been referred to me for reply. In your letter you raise certain questions about Ms. Bailey's participation in a State Land Office decision to approve this particular Unit. You are concerned that her participation may have created a conflict of interest precluding her from sitting on the Oil Conservation Commission as the Commissioner of Public Lands' designee. See Sec. 70-2-4 NMSA 1978.

We share your concern that procedural due process of law be accorded parties appearing before this agency and any others on which a designee of the Commissioner sits. We are mindful of our responsibilities to the public in this regard. See Santa Fe Exploration Co. v. Oil Conservation Comm'n, 114 NM 103 (S.Ct. 1992).

In this instance Ms. Bailey and I are satisfied that she can participate as a member of the Commission and hear the matter with complete professionalism and impartiality. In response to the first two questions you pose in your letter, Ms. Bailey has no reservations about participating in this case. Any decision she may make as the Commissioner's designee will be based on the evidence in the record of the case. She had very little personal involvement in the Land Office process concerning this particular unitization. She attended one meeting internally and as a formality signed a letter of preliminary approval prepared by staff. The documents

BEFORE THE
OIL CONSERVATION COMMISSION
Case No.11298 DeNovo Exhibit No. B
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

concerning the unitization in question are, of course, public records and you are free to examine them if you wish. In that event please call me at 827-5715 to arrange a time for you to inspect the documents.

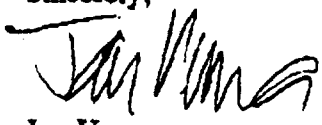
Your letter is the first occasion that this particular conflict of interest question has come to my attention. As you may know, I have been general counsel here for a relatively short time, and I am continually discovering new areas requiring legal attention. This is one of them.

It seems to me that the Legislature created a statutory conflict of interest, or at least a potential one, when it provided for the Commissioner to participate as a member of the Oil Conservation Commission under Sec. 70-2-4 NMSA 1978. It seems to me that the Legislature was concerned enough for the welfare and protection of public lands that, as a secondary consequence of its action, it created this form of institutional conflict. One of the purposes of having the Commissioner of Public Lands or his designee on the Oil Conservation Commission is to look after the interests of public land trust beneficiaries. There is nothing, of course, that the Land Office can do about this legislative framework.

At the same time, however, as we stated earlier, we do recognize that parties litigating before the Oil Conservation Commission are entitled to have their constitutional rights, including procedural due process, respected. As a transactional matter, this means that the Commissioner's designee should be free from bias and prejudgment. We are satisfied that such is the case with Ms. Bailey in this case. In addition, as to the future, we will try to make sure that the Commissioner's designee has not participated in the Land Office decision or transaction that is the subject of the Oil Conservation Commission hearing. The issues before the Land Office may be different from the questions before the Commission, which would mean that participating in a Land Office decision would not preclude a designee from hearing a different issue, albeit arising out of the same facts, before a different administrative body. We haven't researched this issue at this point, partly in the interest of turning around your letter request as soon as possible. We understand that you have a hearing in this matter before the Oil Conservation Commission tomorrow and we would not want to delay that by our review. In any case, we think it is the wiser choice for the Land Office to simply avoid any transactional conflict whenever it can by making sure the Commissioner's designee has not worked directly on the matter before the Commission.

If there is anything further we can do for you on this matter, please give me a call.

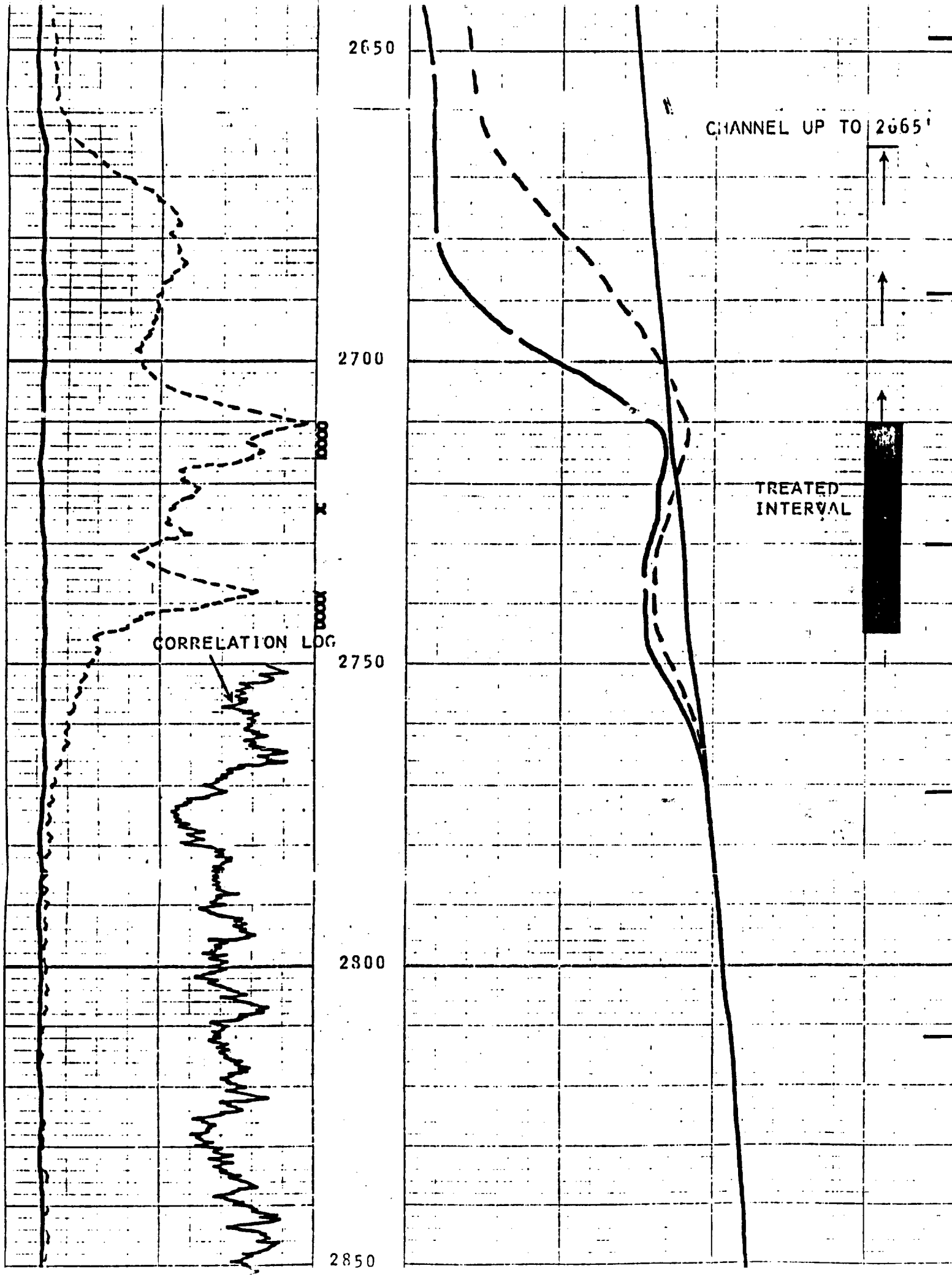
Sincerely,



Jan Unna
General Counsel

JU/jc

cc: Jami Bailey
Rand Carroll, Esq.


2650
2700
2750
2800
2850
CORRELATION LOG
CHANNEL UP TO 2665'
TREATED INTERVAL

CARDINAL

GAMMA & TROL

SURVEYS COMPANY

Log No. 4808	COMPANY GULF OIL EXPLORATION & PRODUCTION COMPANY
	WELL EDDY "FV" STATE #3
	FIELD AVALON DELAWARE
	COUNTY EDDY STATE NEW MEXICO
	Location: 660' FSL & 330' FEL
	Sec. 25 Twp. 20-S Rge. 27-E
	Other Services

Permanent Datum	G.L.	Elev. 3302.5'	Elev. KB 3313.5
Log Measured From	K.B.	11 Ft. Above Perm. Datum	DF 3314.5
Drl. Measured From	K.B.		GL 3302.5

Date	4-14-84
Run No.	ONE
Depth Driller	3700
Depth Logger	3500
Btm. Logged Interval	3300
Top Logged Interval	2500
Type Fluid in Hole	WATER
Max. Rec. Temp. Deg. F	
Recorded By	SCOTT
Witnessed By	MR. CONE
Bit Size	1 3/8"
Type Configuration	CCL/GR/TEMP
Casing Size	8 5/8" (32#) FROM 0-2617' 5 1/2" (15.5#) FROM 0-2675
Tubing Size	2 7/8" FROM SURFACE TO 2617'

TREATMENT REPORT:

CONCLUSION: GAMMA RAY AND TEMPERATURES INDICATE TREATED INTERVAL FROM 2710'-2760', AND CHANNEL UP TO 2665'.

BEFORE THE
OIL CONSERVATION COMMISSION
Case No.11298 DeNovo Exhibit No.___
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: December 14, 1995

AVALON (DELAWARE) UNIT
BY WELL RESERVES

*** RUR AS OF 1/1/93 ***

*** EUR AND RUR UNITS ARE KBO ***

UNIT WELL NUMBER	---- PRIMARY ---- RUR	EUR	--- WORKOVERS --- EUR	DELTA	--- WATERFLOOD -- EUR	DELTA	--- CO2 FLOOD --- EUR	DELTA
1109	0.0	0.0	0.0	0.0	0.0	0.0	296.9	296.9
1111	0.0	0.0	266.6	266.6	411.9	145.3	1043.9	632.0
1113	0.0	0.0	0.0	0.0	0.0	0.0	548.2	548.2
1309	0.0	0.0	0.0	0.0	0.0	0.0	763.2	763.2
1311	27.2	163.6	377.2	213.6	661.9	284.6	2604.2	1942.3
1313	18.1	137.1	278.7	141.6	571.0	292.3	1878.6	1307.6
1315	0.0	0.0	0.0	0.0	0.0	0.0	498.6	498.6
1509	0.0	0.0	0.0	0.0	0.0	0.0	720.1	720.1
1511	53.4	137.1	303.5	166.4	572.3	268.8	1790.3	1218.0
1513	33.8	154.6	371.4	216.8	921.8	550.5	2921.9	2000.0
1515	0.0	1.7	1.7	0.0	1.7	0.0	882.2	880.5
1517	0.0	0.0	0.0	0.0	0.0	0.0	294.6	294.6
1709	0.0	5.1	5.1	0.0	5.1	0.0	280.1	275.1
1711	19.3	127.6	127.6	0.0	291.2	163.7	1367.7	1076.4
1713	40.3	164.8	164.8	0.0	647.1	482.3	2338.6	1691.5
1715	20.2	66.3	118.8	52.6	225.0	106.2	1039.2	814.2
1717	0.0	0.0	68.8	68.8	84.9	16.1	578.9	494.0
1719	0.0	0.0	0.0	0.0	0.0	0.0	242.7	242.7
1909	0.0	0.0	0.0	0.0	0.0	0.0	345.5	345.5
1911	66.4	190.7	190.7	0.0	419.0	228.3	2006.4	1587.4
1913	80.9	268.8	268.8	0.0	863.2	594.4	2557.4	1694.2
1915	160.9	356.4	470.7	114.2	1456.1	985.4	3682.4	2226.3
1917	53.0	233.8	233.8	0.0	379.4	145.6	1063.9	684.5
1919	24.1	68.4	68.4	0.0	80.1	11.7	529.2	449.1
1921	0.0	0.0	0.0	0.0	0.0	0.0	151.8	151.8
2016	45.6	45.6	45.6	0.0	45.6	0.0	45.6	0.0
2109	0.0	0.0	0.0	0.0	0.0	0.0	84.5	84.5
2111	50.7	138.9	138.9	0.0	209.5	70.6	1310.9	1101.4
2113	120.3	360.8	424.3	63.5	908.1	483.8	2349.3	1441.2
2115	38.0	257.6	257.6	0.0	666.8	409.2	2665.0	1998.2
2117	76.6	275.8	275.8	0.0	829.3	553.5	2956.9	2127.6
2119	126.9	258.2	258.2	0.0	524.9	266.6	1515.8	991.0
2121	0.0	0.0	0.0	0.0	0.0	0.0	335.8	335.8
2123	0.0	0.0	0.0	0.0	0.0	0.0	55.3	55.3
2309	0.4	10.9	10.9	0.0	10.9	0.0	50.5	39.6
2311	19.3	150.6	150.6	0.0	285.7	135.1	1367.3	1081.6
2313	56.7	199.5	199.5	0.0	474.2	274.7	1534.8	1060.7
2315	0.0	22.7	76.8	54.1	119.8	42.9	632.9	513.1
2317	0.0	29.5	41.8	12.3	49.5	7.7	938.8	889.3
2319	29.3	173.6	175.7	2.2	315.8	140.0	1056.4	740.6
2321	3.1	23.2	76.1	52.9	127.7	51.6	969.4	841.7
2323	0.0	0.0	0.0	0.0	0.0	0.0	149.5	149.5
2509	0.3	6.0	6.0	0.0	6.0	0.0	140.2	134.1
2511	0.0	11.9	11.9	0.0	11.9	0.0	542.2	530.2
2513	0.0	0.0	0.0	0.0	0.0	0.0	215.7	215.7
2515	0.0	0.0	0.0	0.0	0.0	0.0	430.0	430.0
2517	0.0	24.6	41.4	16.8	55.5	14.1	514.6	459.2
2519	22.5	114.1	139.6	25.5	215.8	76.2	936.6	720.8
2521	0.0	0.0	0.0	0.0	0.0	0.0	365.0	365.0
2523	0.0	0.0	0.0	0.0	0.0	0.0	22.1	22.1
2709	0.0	3.1	3.1	0.0	3.1	0.0	199.8	196.7
2711	0.0	0.0	0.0	0.0	0.0	0.0	251.8	251.8
2717	0.0	0.0	0.0	0.0	0.0	0.0	99.5	99.5
2719	0.0	0.0	0.0	0.0	0.0	0.0	138.9	138.9
2721	0.0	0.0	0.0	0.0	0.0	0.0	32.7	32.7
TOTAL	1187.4	4182.4	5650.5	1468.1	12451.7	6801.2	52334.5	39882.8

Case 11298

Exhibit G-19

Exh 9

Premier Oil & Gas

DRILLING TIME & SAMPLE LOG

GERALD E. HARRINGTON
P.O. Box 216

GEOLOGICAL CONSULTANT
Roswell, New Mexico

OPERATOR: GULF OIL EXPLORATION AND PRODUCTION COMPANY

WELL: EDDY "FV" STATE #3

FIELD: AVALON DELAWARE COUNTY: EDDY STATE: NEW MEXICO

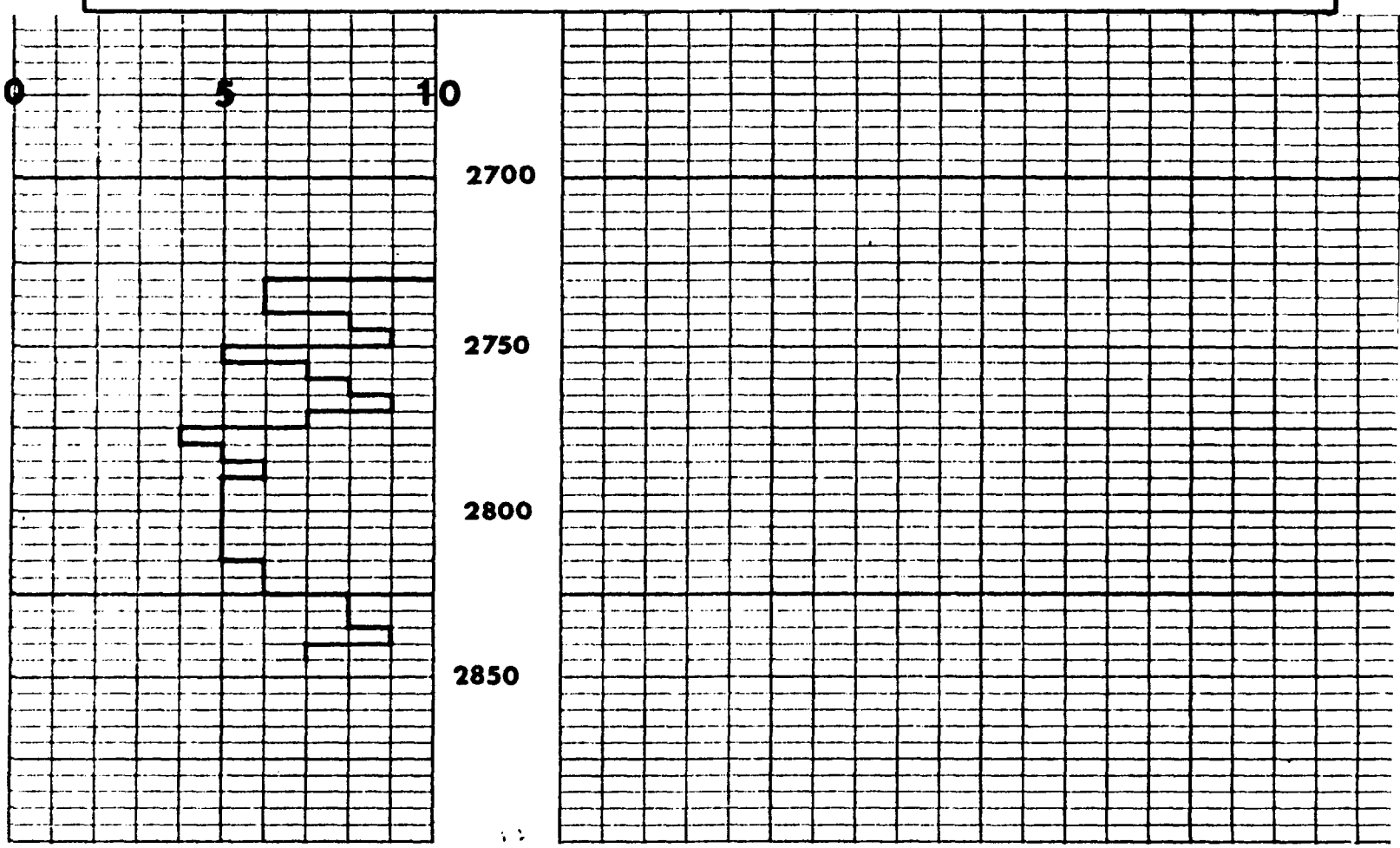
LOCATION: Section 25 Twp 20-S Rge 27-E Elev. KB 3315.5

Footage 660' FSL & 330' FEL DF 3314.5

TD: 4975 CASING: GL 3302.5

BIT SIZE: CONTRACTOR:

REMARKS: DRILLING TIME - MINUTES/ 5 FEET



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 10
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

DRILLING TIME & SAMPLE LOG

GERALD E. HARRINGTON
P.O. Box 216

GEOLOGICAL CONSULTANT
Roswell, New Mexico

OPERATOR: GULF OIL EXPLORATION AND PRODUCTION COMPANY

WELL: EDDY "FV" STATE #3

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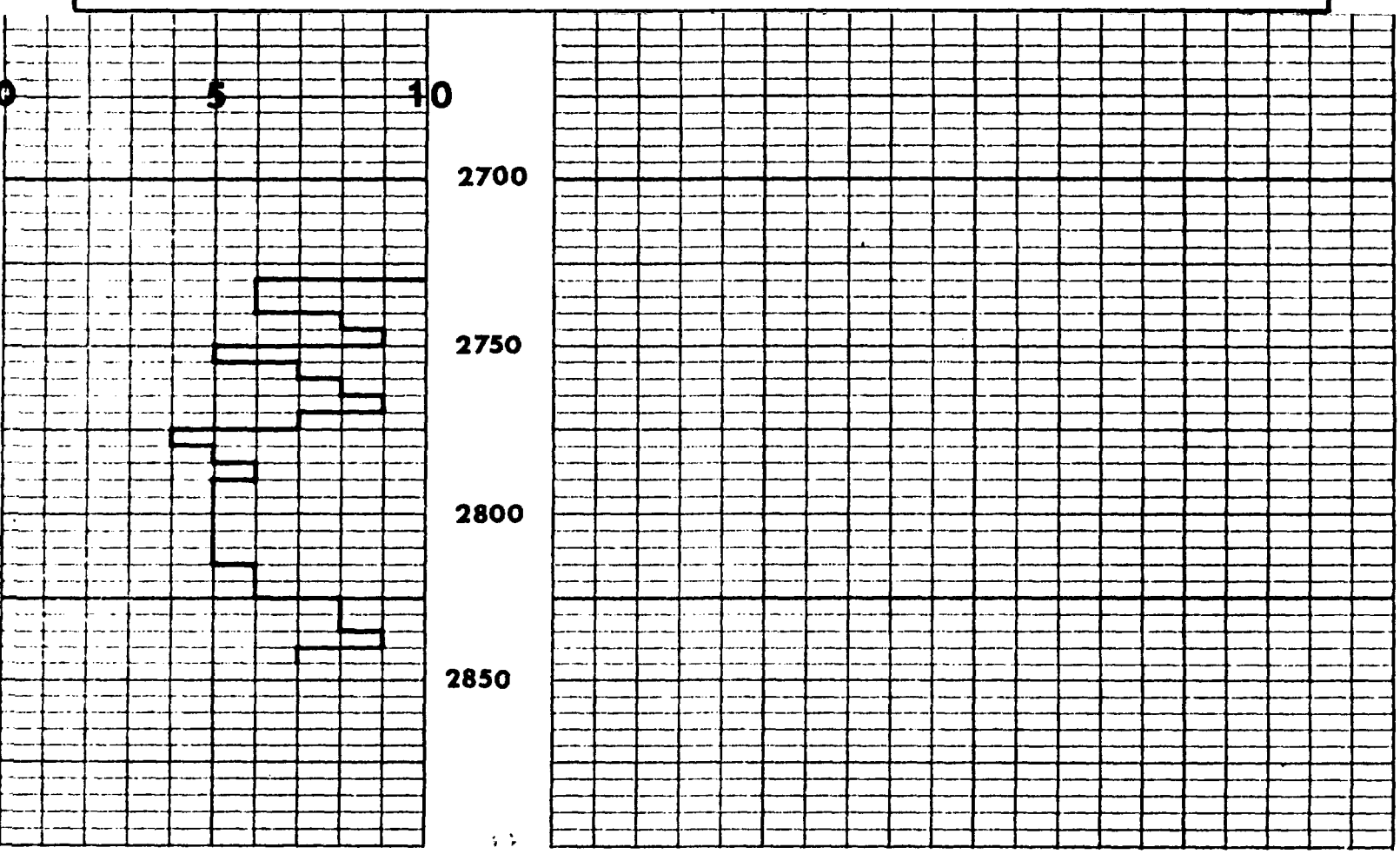
BIT SIZE: CONTRACTOR:

REMARKS: DRILLING TIME - MINUTES/ 5 FEET



BEFORE THE
OIL CONSERVATION DIVISION
Case No. 11298 Exhibit No. 10
Submitted By:
PREMIER OIL & GAS INC.
Hearing Date: June 29, 1995

Cont. Exh. 77

30-015-22235

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LAND OFFICE	1	
OPERATOR	1	

NEW MEXICO OIL CONSERVATION COMMISSION

RECEIVED

AUG 2 1977

O. C. C.
ARTESIA, OFFICE

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease: STATE [X] FEE [ ]

5. State Oil & Gas Lease No.: K-5115

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [X] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [X] GAS WELL [ ] OTHER SINGLE ZONE [ ] MULTIPLE ZONE [ ]

7. Unit Agreement Name:

8. Farm or Lease Name: Stonewall "EP" Sta

2. Name of Operator: Yates Petroleum Corporation

9. Well No.: 3

3. Address of Operator: 207 South 4th Street - Artesia, NM 88210

10. Field and Pool, or Wildcat: Wildcat Delaware

4. Location of Well: UNIT LETTER N LOCATED 545 FEET FROM THE South LINE AND 1960 FEET FROM THE West LINE OF SEC. 19 TWP. 20S RGE. 28E NMPM

12. County: Eddy

19. Proposed Depth: Approx 4800'

19A. Formation: Delaware

20. Rotary or C.T.: Rotary

21. Elevations (Show whether DF, RT, etc.): 3300' GR

21A. Kind & Status Plug. Bond: Blanket

21B. Drilling Contractor: Byrd Drilling Co.

22. Approx. Date Work will start: August 2, 1977

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
17½"	13-3/8"	61#	Approx 550'	350 sx	Circulate
12¼ or 11"	8-5/8"	24#	" 2900'	1000 sx	Circulate
7-7/8"	5½"	15.5#	" 4800'	200 sx	3800'

Propose to drill a Brushy Canyon oil test to approx 4800'. Surface casin will be set at about 550' and cement circulated. Intermediate casing will be set at about 2900' and cement circulated. Will log well, case, perforate and stimulate as needed for production.

Mud Program: - FW Gel and LCM to 2900', native mud to 4300', Lo fluid loss gel mud to TD.

BOP Program: - 10" Series 900 BOP's will be installed on 8-5/8" casing and tested.

APPROVAL VALID FOR 90 DAYS UNLESS DRILLING COMMENCED

EXPIRES 11-3-77

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

Signed Eddie M. Matthews Title Engineer Date 8-1-77

(This space for State Use)

APPROVED BY W. A. Gressett TITLE SUPERVISOR, DISTRICT II DATE AUG 3 1977

CONDITIONS OF APPROVAL, IF ANY:

NE MEXICO OIL CONSERVATION COMMISSI

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Yates Petroleum Corp	Stonewall "EP" State	3

Unit Letter	Section	Township	Range	County
N	19	20-S	28-E	Eddy

Actual Footage Location of Well: 545 feet from the South line and 1960 feet from the West line

Ground Level Elev:	Producing Formation	Pool	Dedicated Acreage:
3300'	Delaware	Wildcat	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

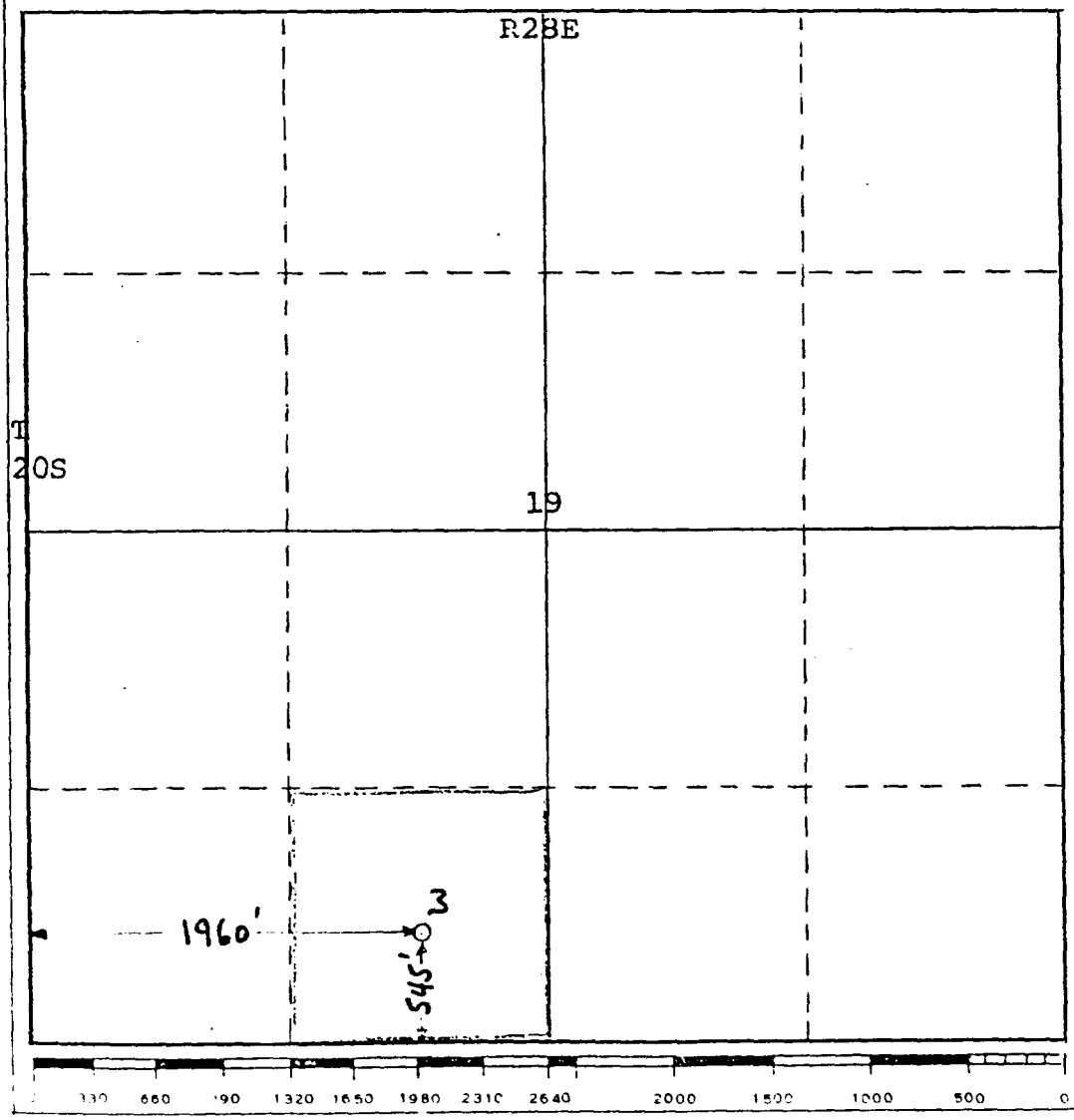
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.

Eddie M. Mahfood

Name: Eddie M. Mahfood

Position: Engineer

Company: Yates Petroleum Corp.

Date: 7-29-77

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: 7-29-77

Eddie M. Mahfood

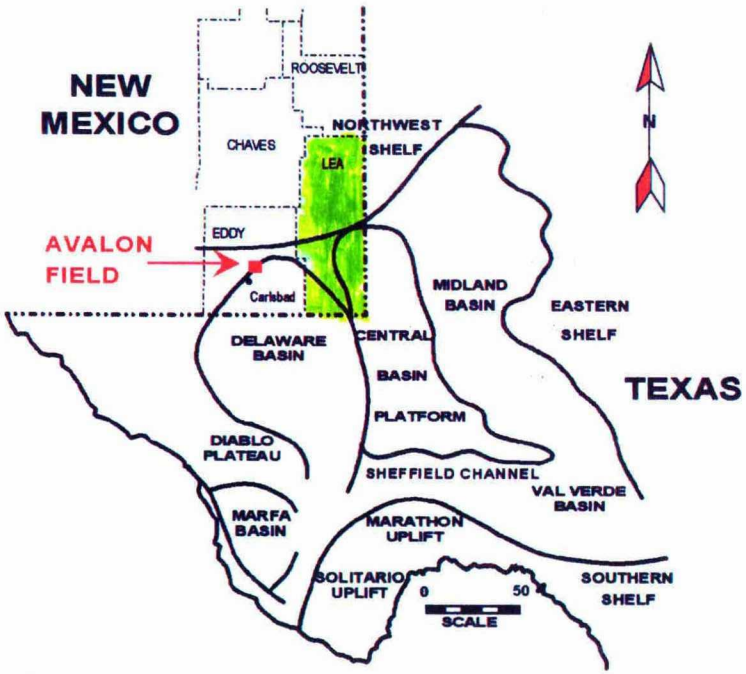
Registered Professional Engineer and/or Land Surveyor

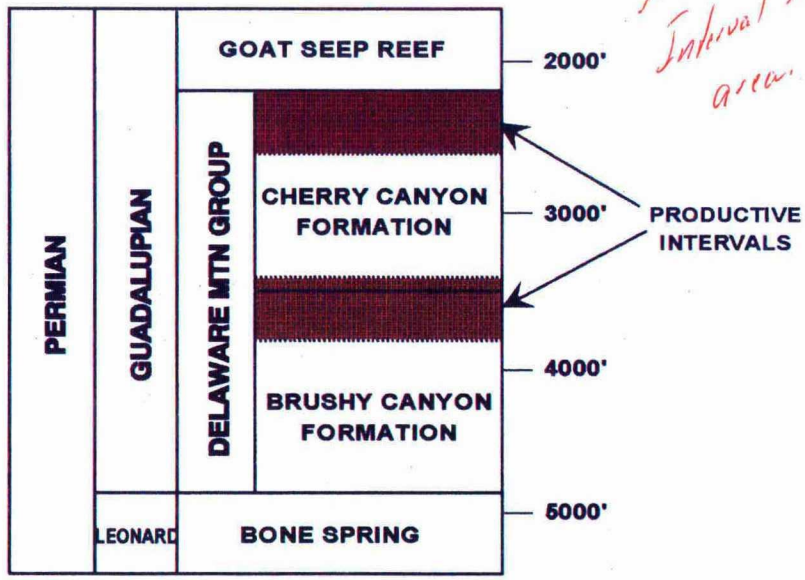
Certificate No. 4605

AVALON (DELAWARE) UNIT

GEOLOGIC OVERVIEW

PERMIAN BASIN
PRINCIPAL GEOLOGIC PROVINCES





No Bell Canyon Interval in this area.

RESERVOIR DESCRIPTION		
PRODUCING FORMATION	UPPER CHERRY CANYON	LOWER CHERRY CANYON/ UPPER BRUSHY CANYON
DEPTH	2600 FT	3400 FT
RESERVOIR LITHOLOGIES	SAND	SAND & SILTSTONE
NET THICKNESS	131 FT	272 FT
AVERAGE POROSITY	14.4%	14.9%
AVERAGE PERMEABILITY	2.3 md	1.1 md
OIL ORIGINALLY IN PLACE	107 MMBO	141 MMBO

MM = Million

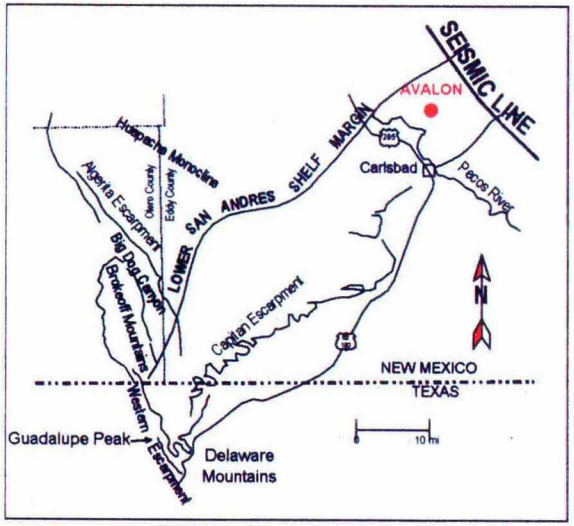
Exhibit No. 11
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

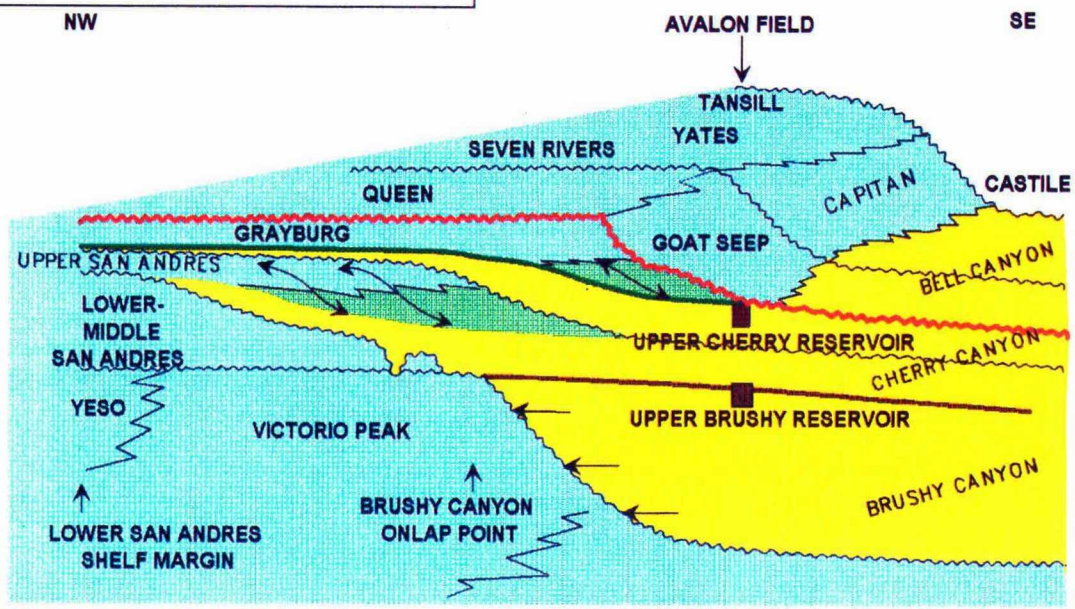
AVALON (DELAWARE) UNIT

STRATIGRAPHY



DATABASE

- 4 cored wells
- 71 wells with modern-vintage digital log data
- 35 wells with mudlog data
- 13 wells with dipmeter information
- Production data from 32 wells



NMOCD Hearing

June, 1995

Exhibit No. 12
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

Type log

EXXON

Yates "C" Federal #36

31-20S-28E

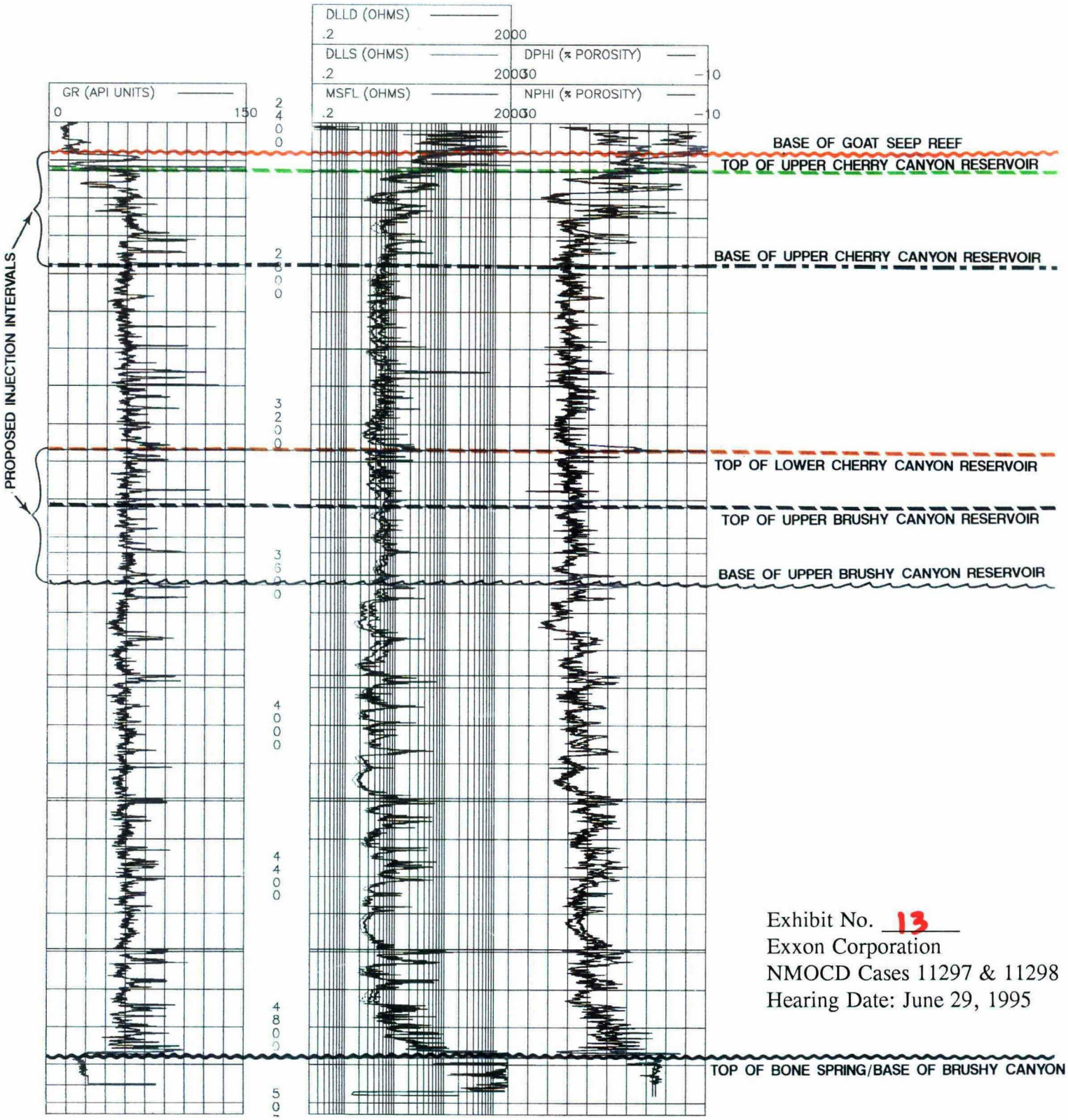


Exhibit No. 13
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

BRUSHY CANYON FORMATION
SCHEMATIC CROSS SECTION

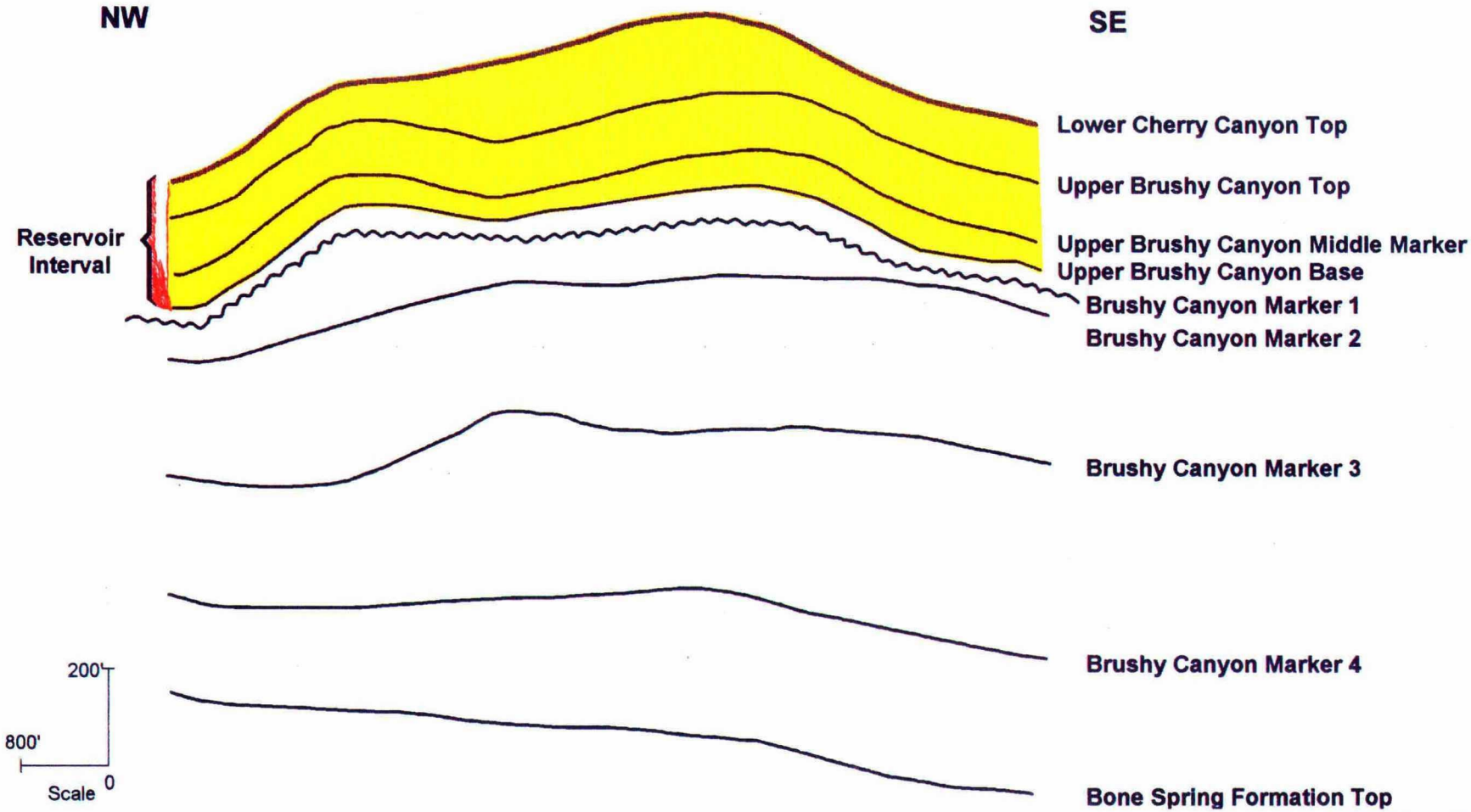


Exhibit No. 14
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

UPPER CHERRY CANYON SCHEMATIC CROSS SECTION

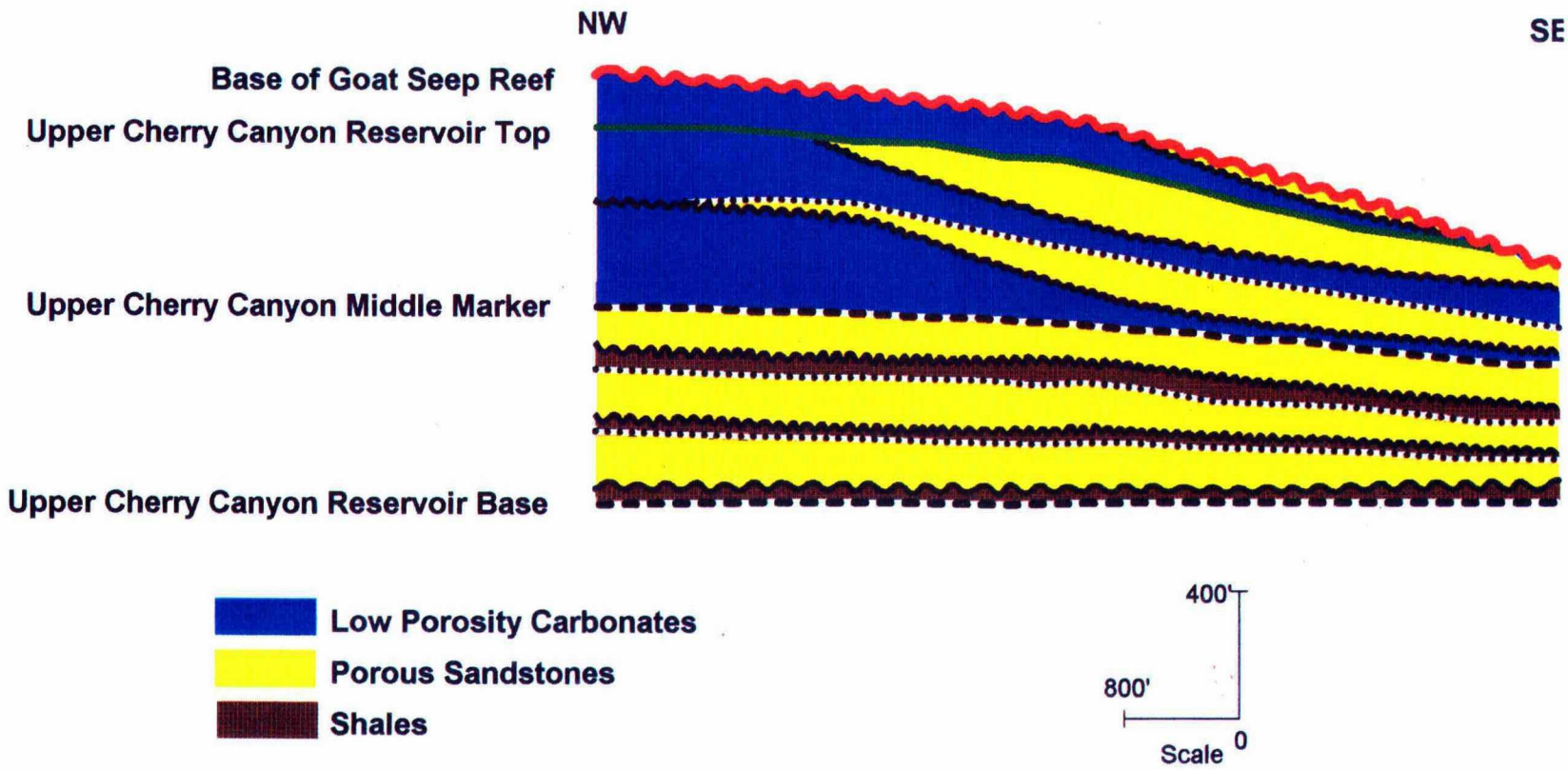


Exhibit No. 15
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

LOWER CHERRY/UPPER BRUSHY CANYON TOP STRUCTURE MAP

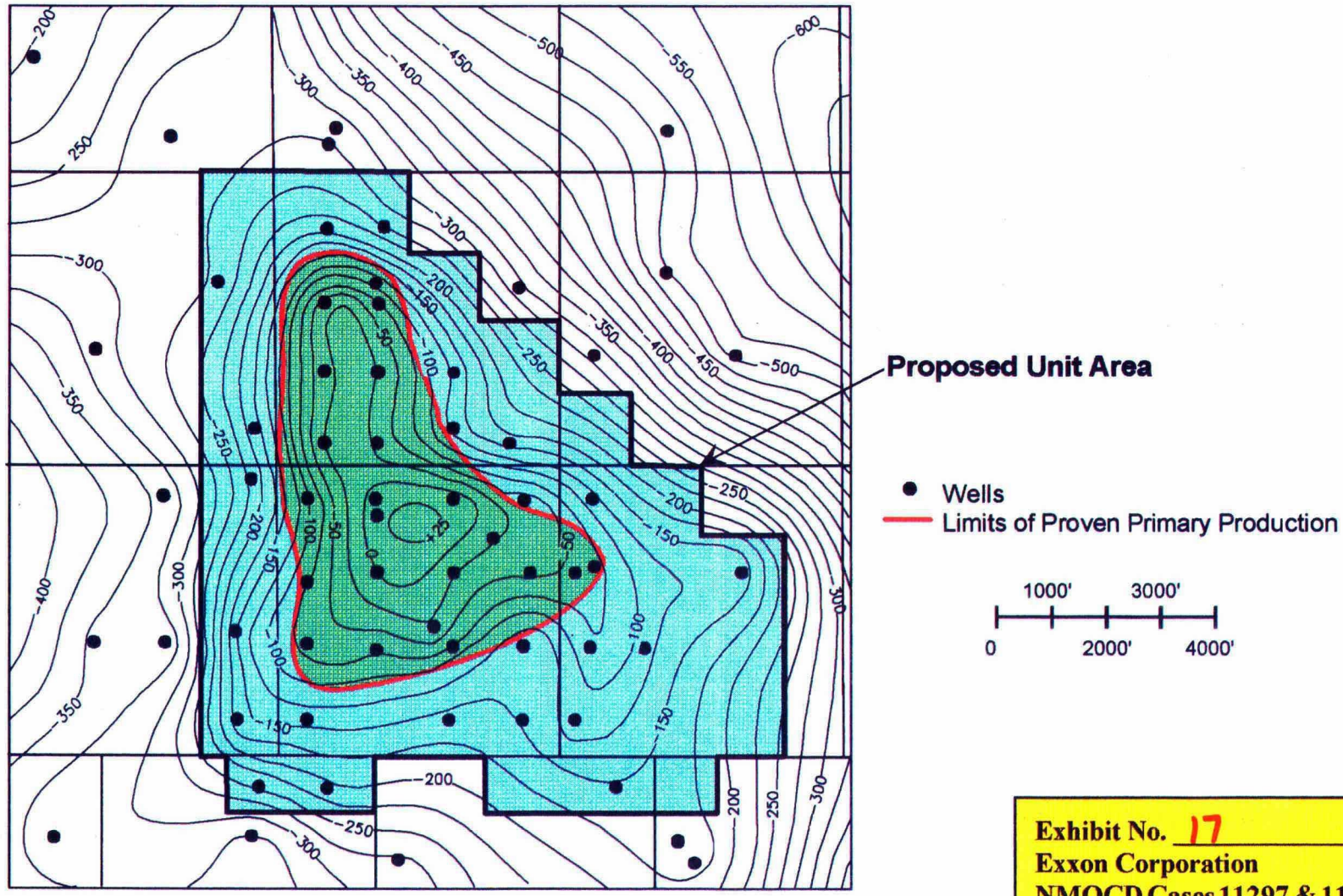


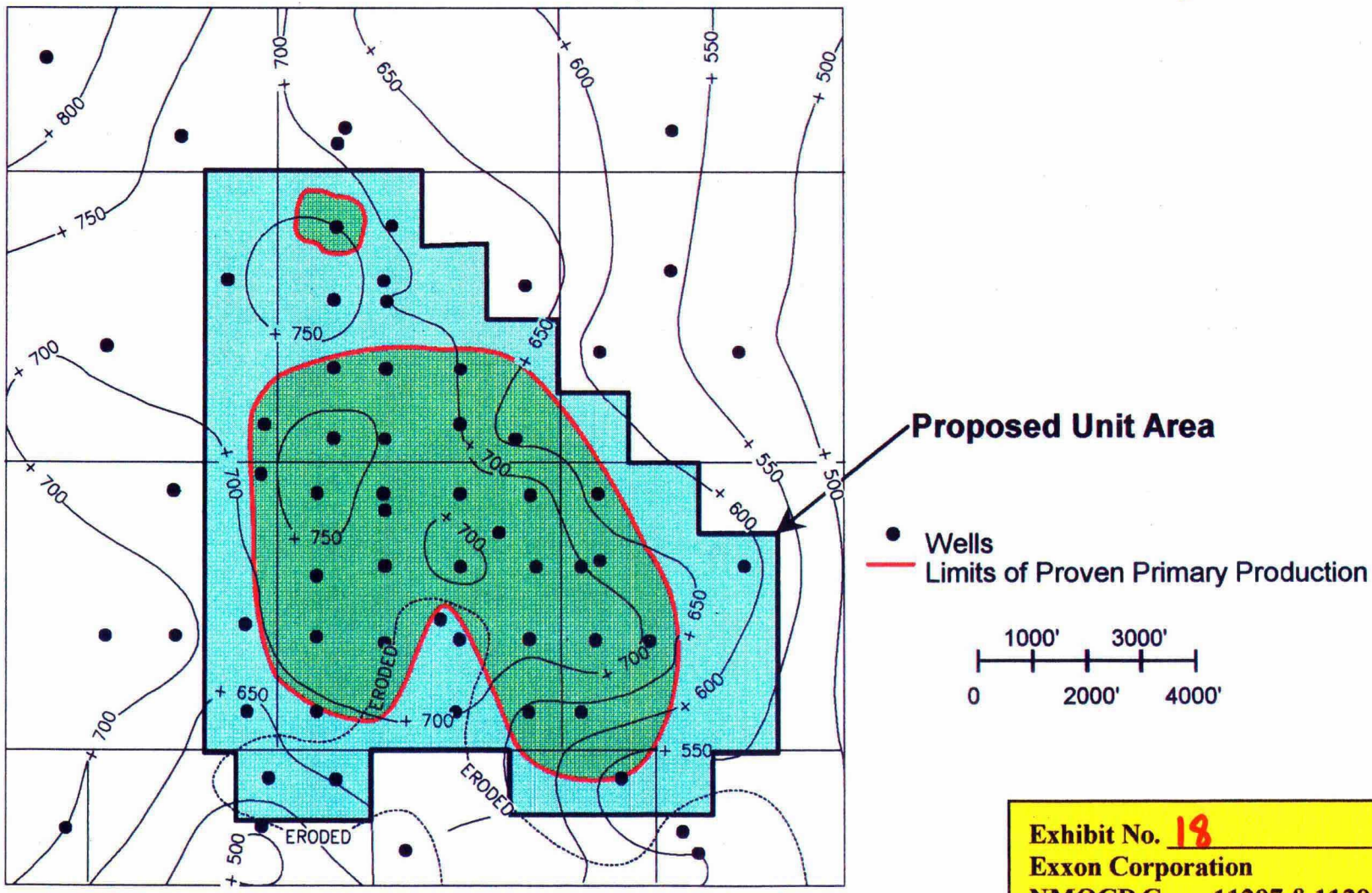
Exhibit No. 17
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

UPPER CHERRY CANYON
TOP STRUCTURE MAP



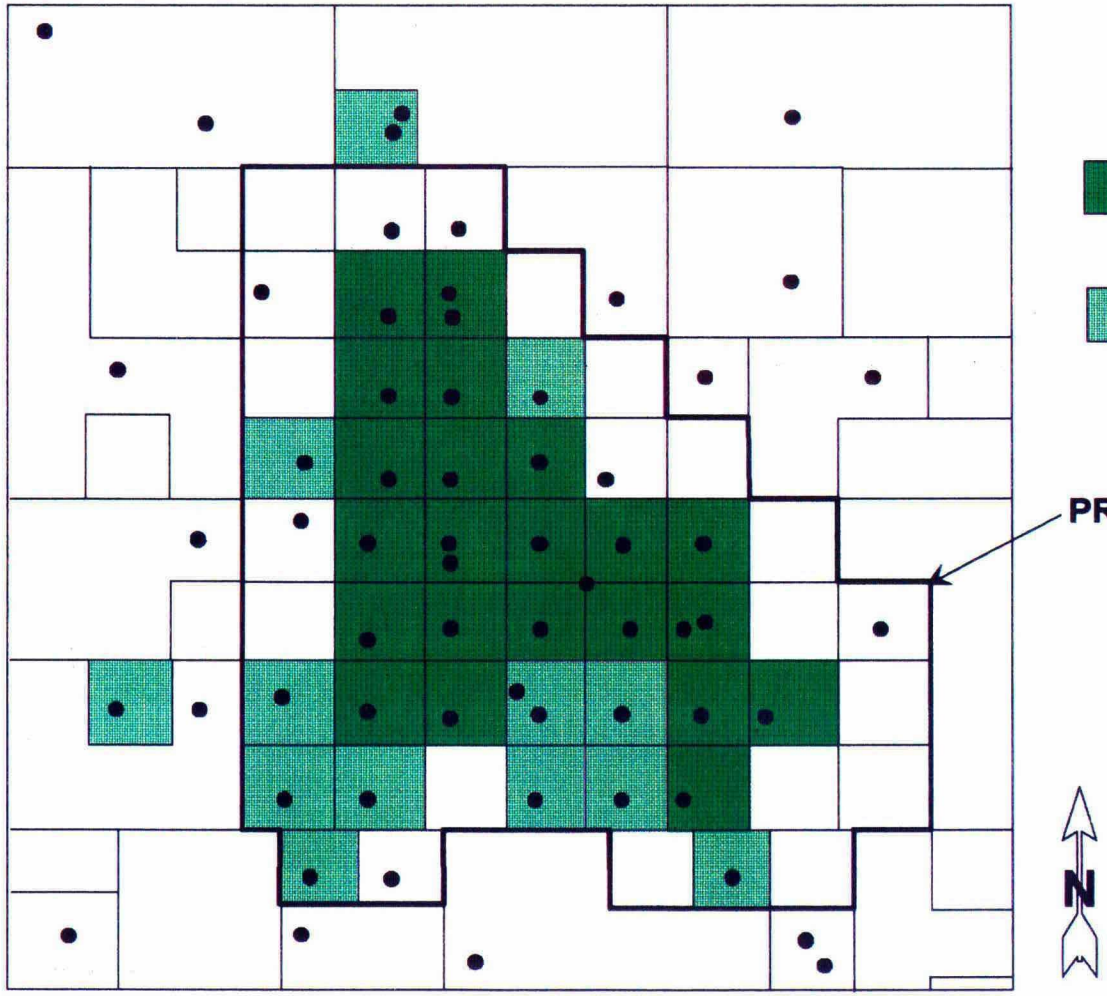
NMOCD Hearing

June, 1995

Exhibit No. 18
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

AVALON UNIT TRACT MAP



Delaware Oil Completions

- Delaware (UCC/UBC) Completion Currently Active
- Delaware Completion UCC/UBC shut-in or has never produced from UCC or UBC

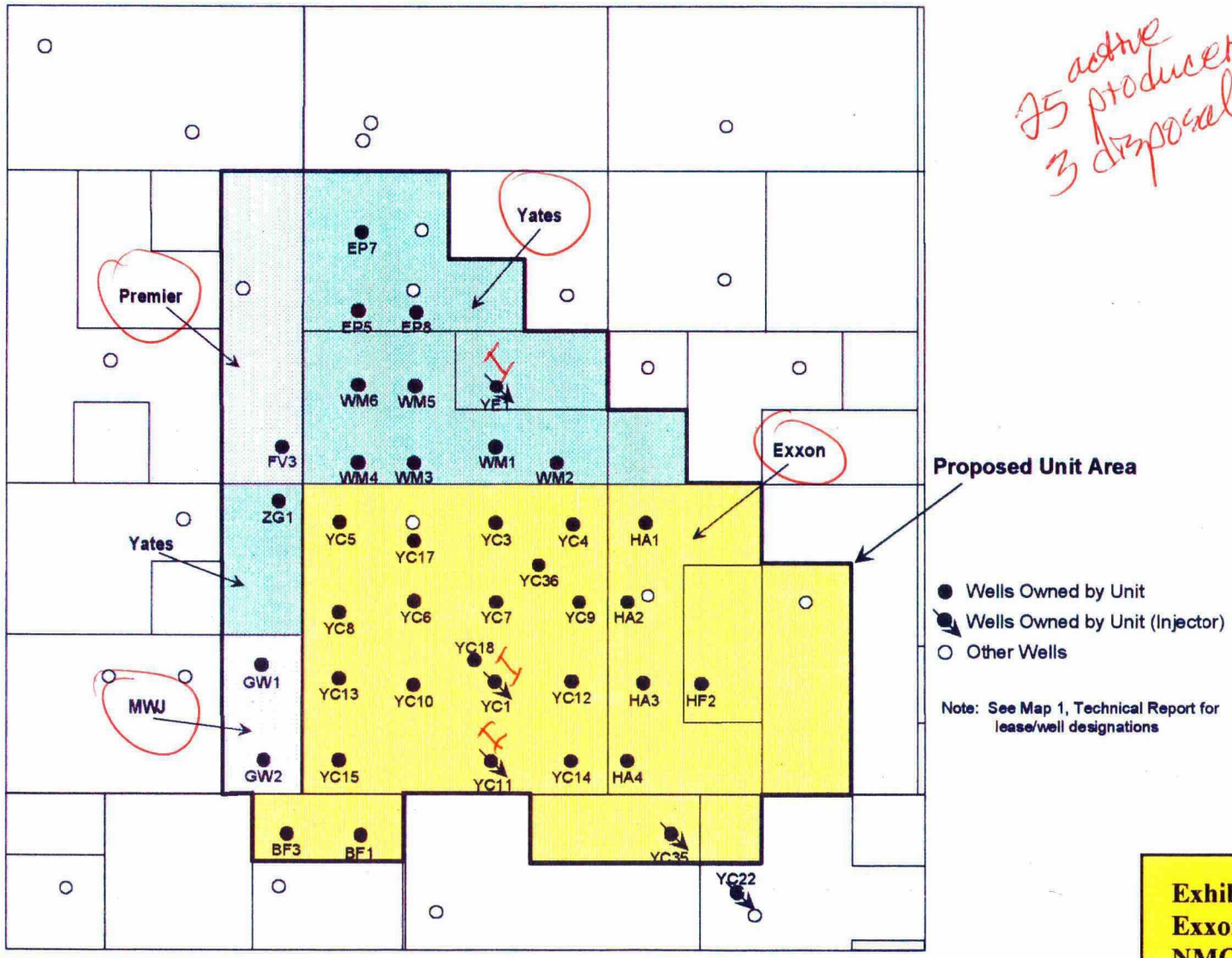
Exhibit No. 19
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

BASE MAP



75 active
3 producers
3 disposal & injectors

NMOCD Hearing

June, 1995

Exhibit No. 20
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

HISTORICAL PRODUCTION RATES

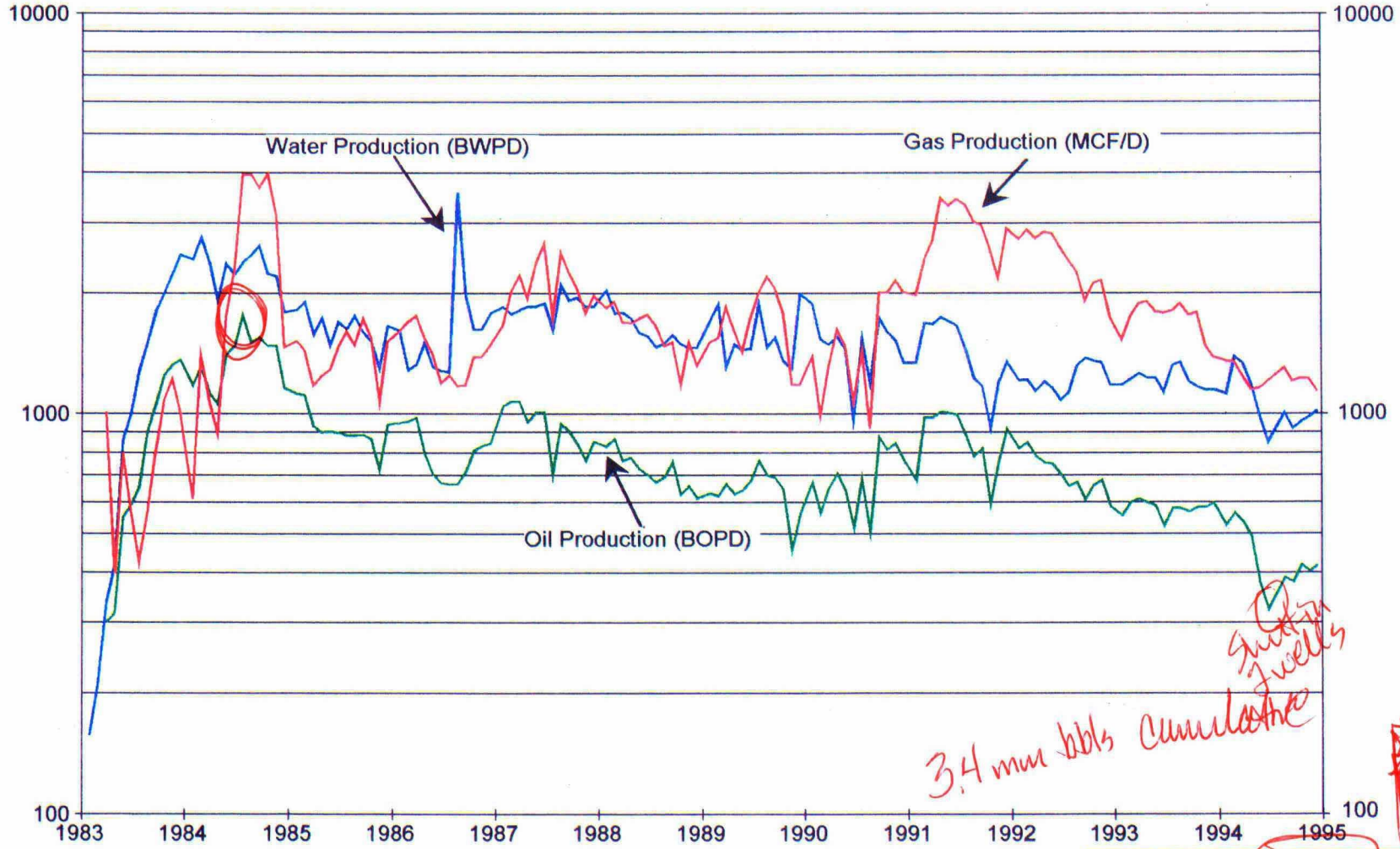


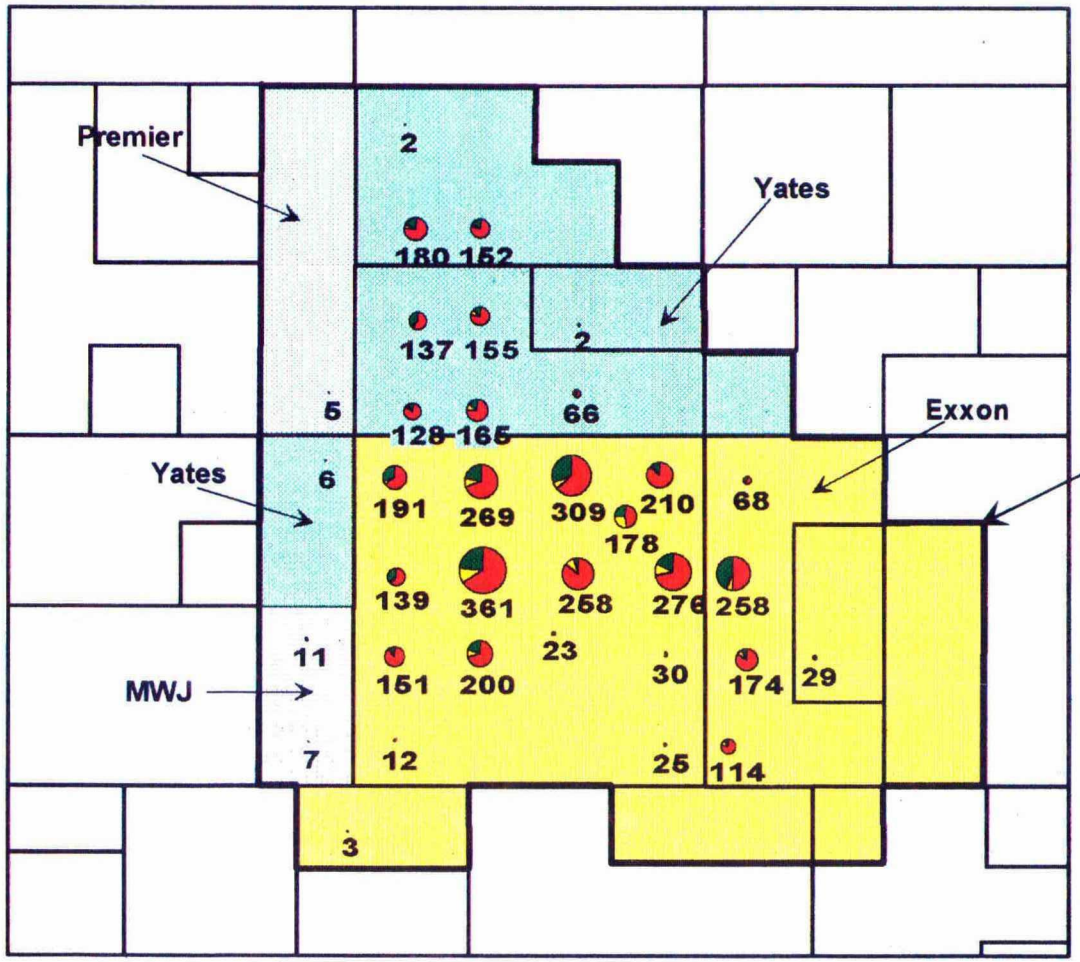
Exhibit No. 21
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

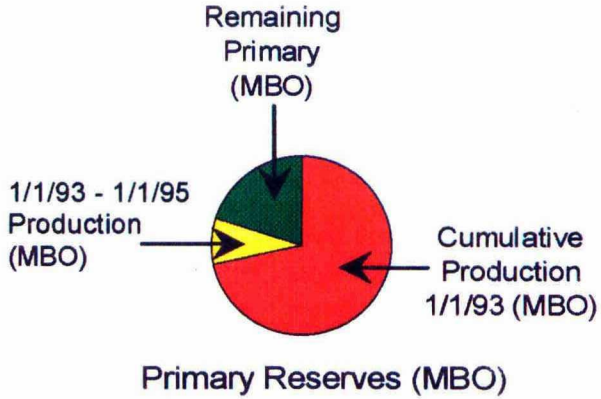
NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

PRODUCTION BUBBLE MAP





PROPOSED UNIT AREA

Exhibit No. 22
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

HISTORICAL PRODUCTION RATIOS

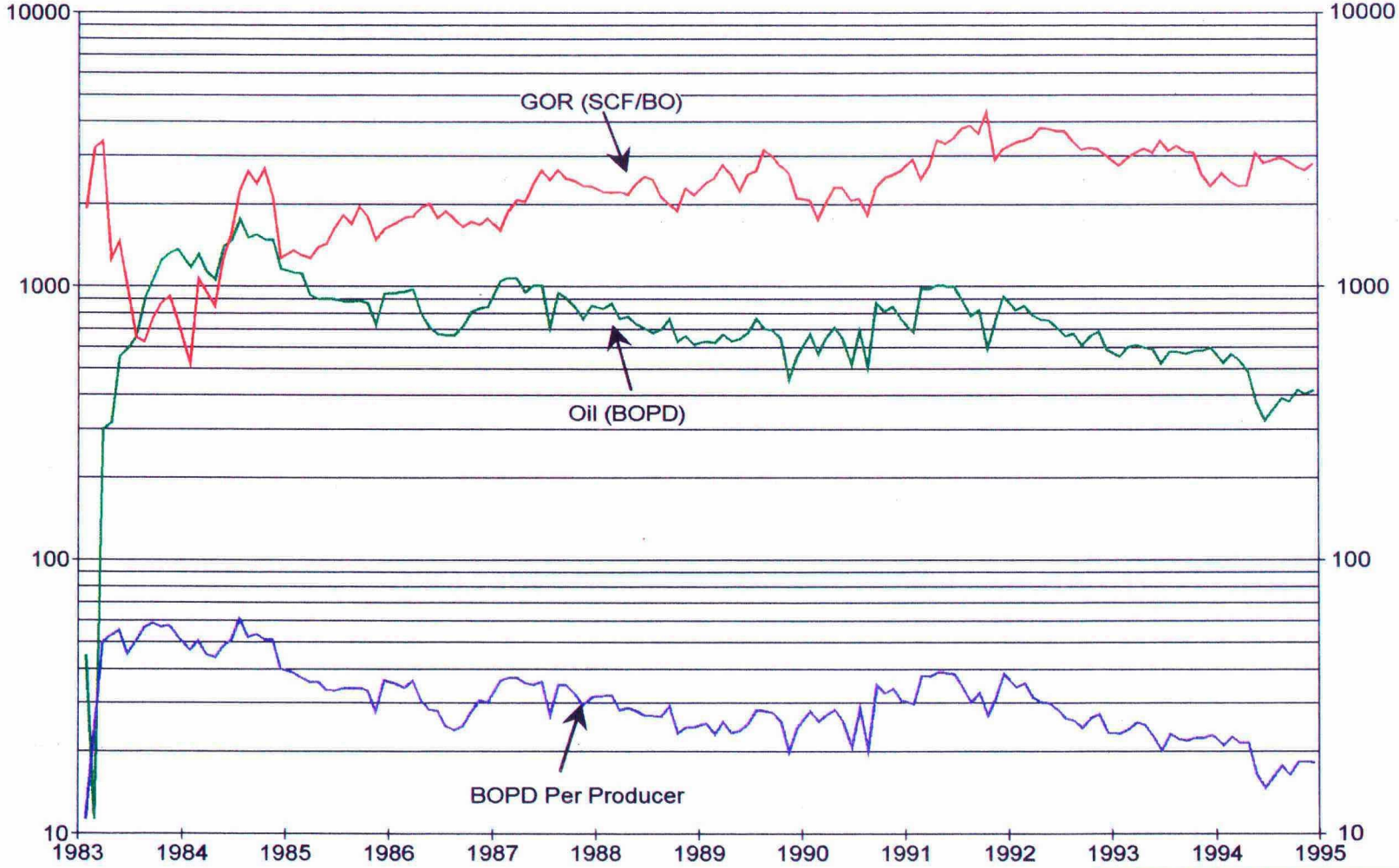


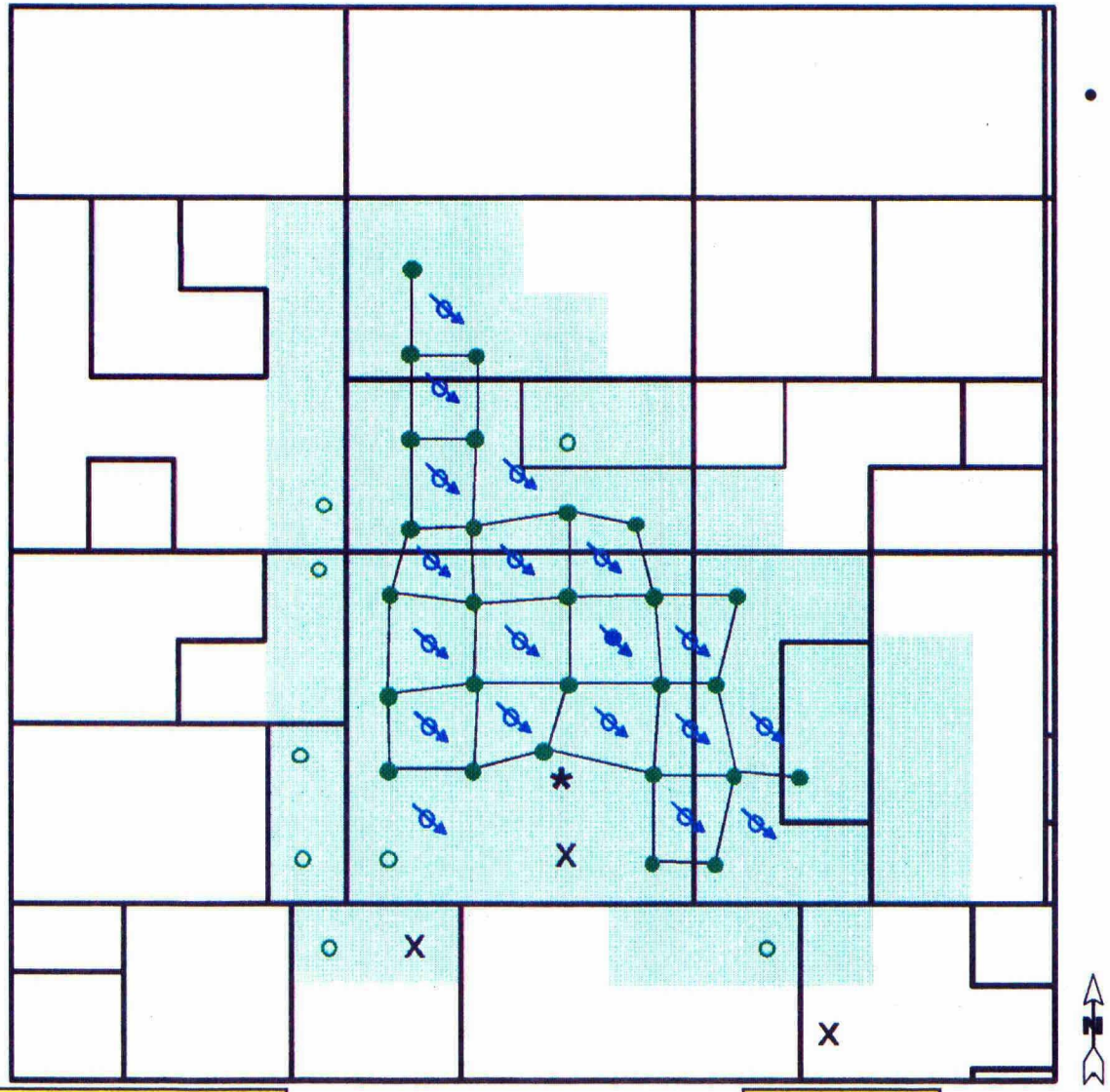
Exhibit No. 23
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

DEVELOPMENT PLAN: WATERFLOOD



- **Scope**
  - 19 water injection patterns, 1100 acres in developed area
  - 18 injector drillwells/1 conversion
  - Water treating and injection facilities
  - Estimated start 2 months after unit approval

WELL SYMBOL LEGEND

- Oil Well
- Injector (Conversion)
- Injector (Proposed)
- X Water Source Well
- Well for Future Use
- * Disposal Well

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NMOCD Hearing

June, 1995

Exhibit No. 25
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

PROJECT FLOWSTREAM METHODOLOGY

- **From Geologic Model**
  - Layering model
  - Volumetrics by pattern (PV, Soi, OOIP)
- **Numerical Simulator**
  - 3-phase, 2-dimension simulator
  - 312 gridblocks per 10 acres
- **Calibration**
  - Historical production performance by well used to calibrate simulation model
  - Only small overall modifications in geologic model required to match field performance
  - Continued operations projection matched with decline curve analysis
- **Used with Development Plan to Predict Future Performance**
  - Continued operations
  - Waterflood
  - CO_2 flood

Exhibit No. 26
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

FUTURE PRODUCTION WITH WATERFLOOD PROJECT

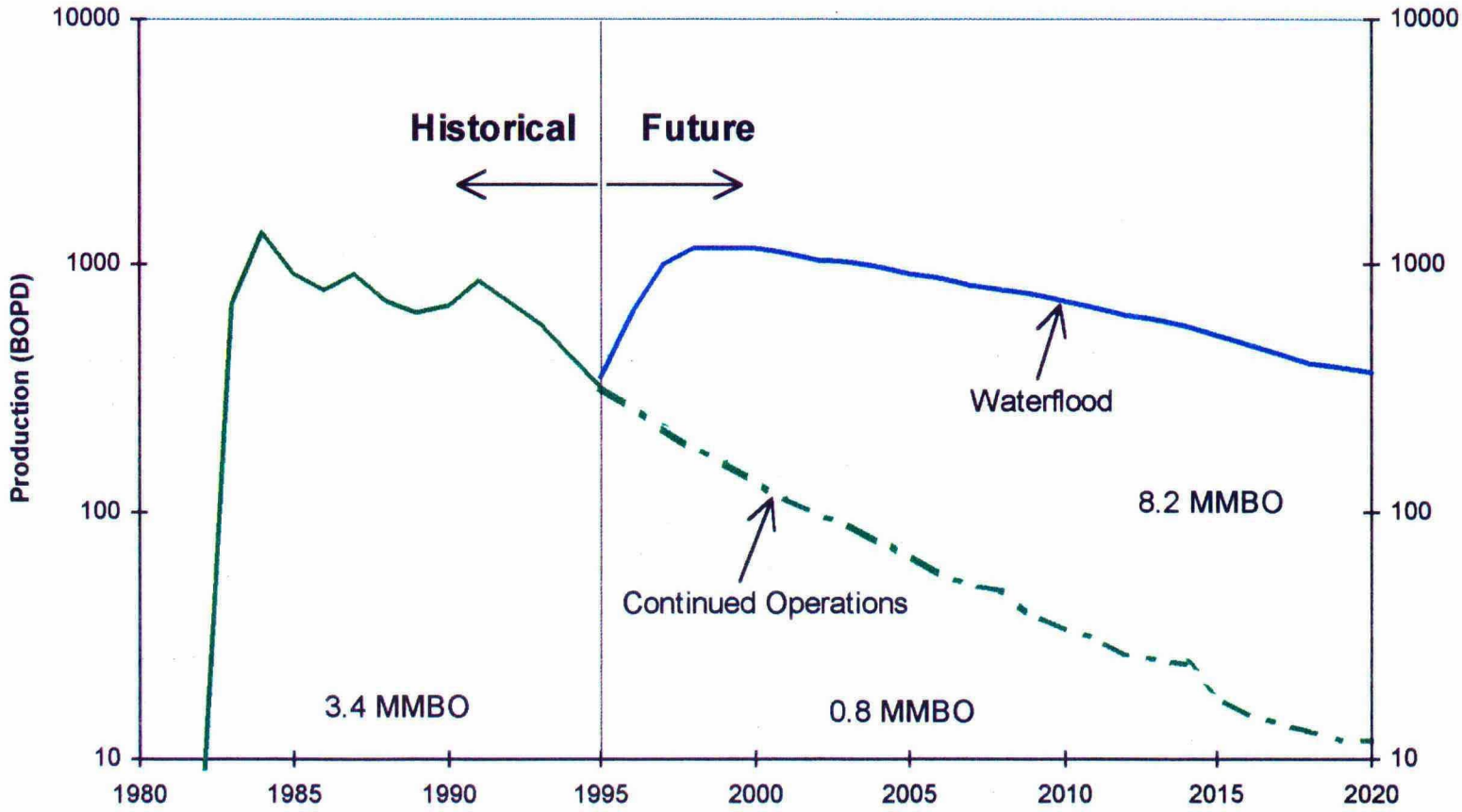
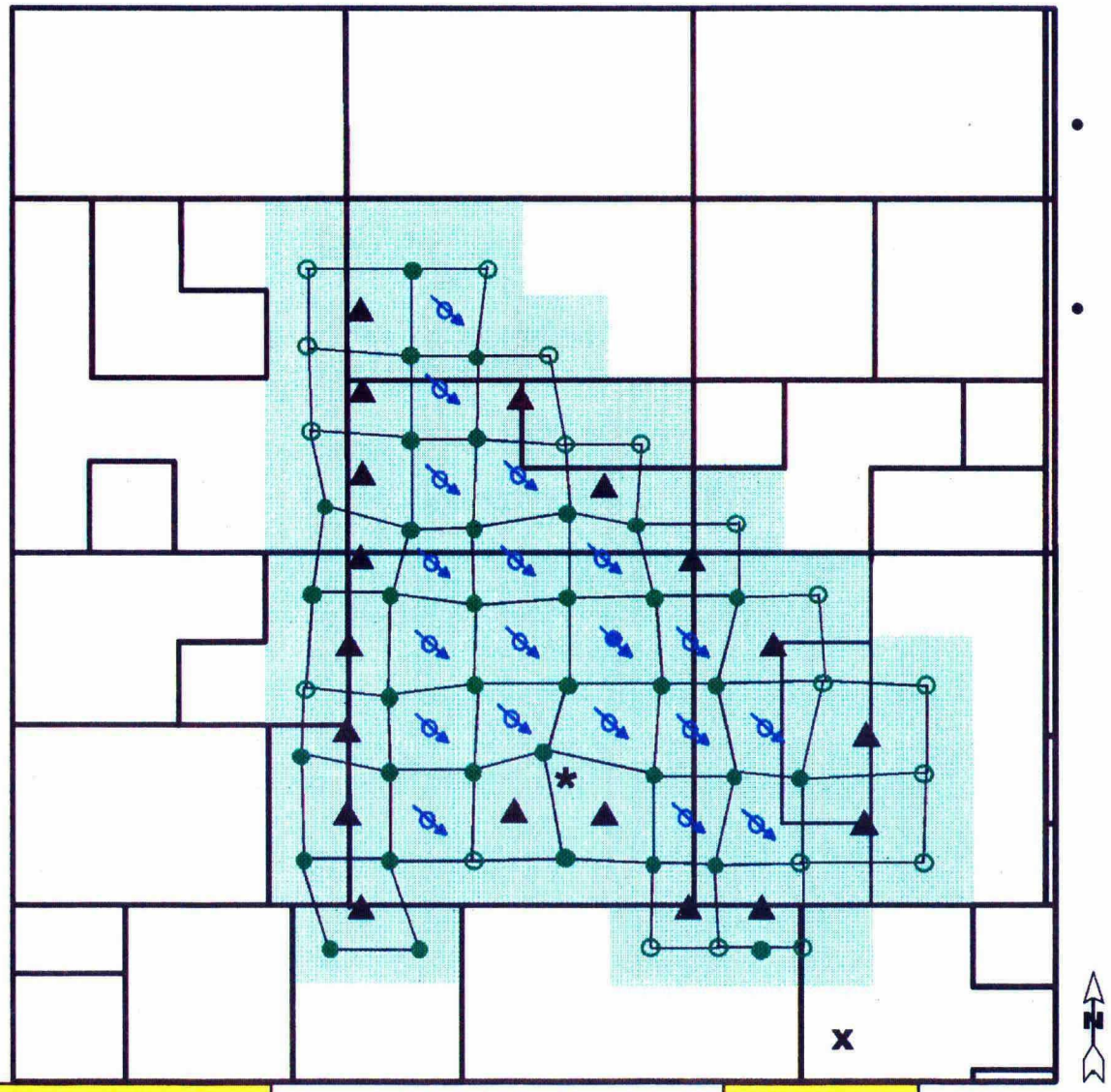


Exhibit No. 27
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

POTENTIAL DEVELOPMENT PLAN: CO_2 FLOOD



- **Scope**
  - 37 patterns, 2100 acres expanding into outer ring
  - Earliest start 1999
- **Issues**
  - Attain miscibility pressure and reduce gas saturation: 3+ years
  - CO_2 injectivity test
  - Oil price

WELL SYMBOL LEGEND

- Oil Well
- Oil Well (Proposed for CO2 Flood)
- Water Phase Injector (Conversion)
- Water Phase Injector (Proposed)
- CO2 Phase Injector (Proposed for CO2 Flood)
- Water Source Well
- Disposal Well

Exhibit No. 28
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

FUTURE PRODUCTION WITH CO_2 PROJECT

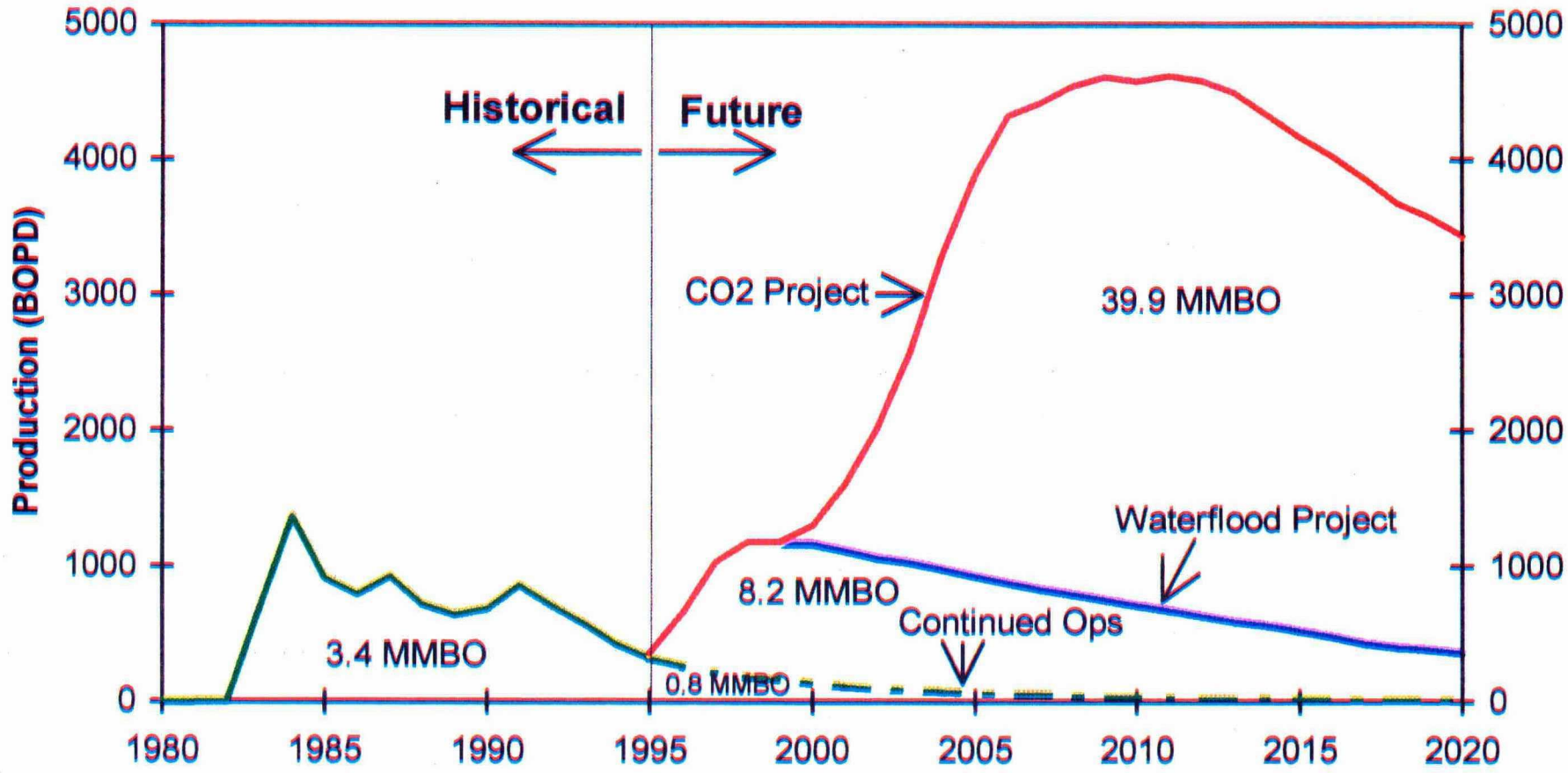


Exhibit No. 29
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

ESTIMATED ECONOMICS

- **Assumptions**
  - 100% working interest/80% net interest
  - Product pricing:
    - Oil @ $17.10/BO escal. @ 5.4%/year
    - Gas @ $1.50/MCF escal. @ 6.1%/year
- **Results**
  - Investments = $14,400,000
  - Additional reserves = 8.2 MMBO
  - Present value profit discounted @ 10% = $21,500,000
  - Payout = 5 years
  - Rate of Return = 30%

Exhibit No. 30
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

PROPOSED UNORTHODOX WELL LOCATIONS
ALL IN EDDY COUNTY, NEW MEXICO

WELL NAME AND NUMBER	SECTION	FOOTAGE LOCATION
AVALON DELAWARE UNI 1212	31-20S-28E	1668 FNL & 1455 FWL
AVALON DELAWARE UNI 1412	31-20S-28E	* 2310 FSL & 1485 FWL
AVALON DELAWARE UNI 1612	31-20S-28E	* 992 FSL & 1489 FWL
AVALON DELAWARE UNI 1614	31-20S-28E	* 1046 FSL & 2677 FWL
AVALON DELAWARE UNI 1812	31-20S-28E	* 183 FNL & 1397 FWL
AVALON DELAWARE UNI 1814	31-20S-28E	* 123 FNL & 2673 FEL
AVALON DELAWARE UNI 1816	31-20S-28E	* 46 FNL & 1402 FEL
AVALON DELAWARE UNI 2012	31-20S-28E	* 1386 FNL & 1314 FWL
AVALON DELAWARE UNI 2014	31-20S-28E	* 1335 FNL & 2681 FWL
AVALON DELAWARE UNI 2018	31-20S-28E	1317 FNL & 97 FEL
AVALON DELAWARE UNI 2212	31-20S-28E	* 2600 FSL & 1322 FWL
AVALON DELAWARE UNI 2214	31-20S-28E	* 2699 FSL & 2549 FWL
AVALON DELAWARE UNI 2216	31-20S-28E	2566 FNL & 1377 FEL
AVALON DELAWARE UNI 2218	31-20S-28E	2423 FSL & 78 FEL
AVALON DELAWARE UNI 2220	31-20S-28E	2648 FSL & 1127 FWL
AVALON DELAWARE UNI 2412	31-20S-28E	* 1337 FSL & 1324 FWL
AVALON DELAWARE UNI 2418	31-20S-28E	1356 FSL & 99 FEL
AVALON DELAWARE UNI 2420	31-20S-28E	1323 FSL & 1107 FWL

* Unstacked location: Actual location may vary

* Converted to injector wells after initial prod. if any

NMOCD Hearing

June, 1995

Exhibit No. 31
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: [X] Secondary Recovery [ ] Pressure Maintenance [ ] Disposal [ ] Storage
Application qualifies for administrative approval? [X] yes [ ] no

II. Operator: Exxon Corp.

Address: PO Box 1600 Midland, TX 79702

Contact party: Marsha Wilson Phone: (915) 688-7871

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? [ ] yes [X] no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Marsha Wilson Title Staff Office Assistant

Signature: Marsha Wilson Date: 5-8-95

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show t of the earlier submittal.

Exhibit No. 32
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

DISTRIBUTION: Original and one copy to Santa Fe with one copy to th district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells:

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

ATTACHMENT TO INJECTION WELL DATA SHEET
AVALON UNIT
EDDY COUNTY, NEW MEXICO

Listed below are the wells in this permit application. All wells are located in T-20-S, R-28-E.

T-20-S, R-28-E
Current Proposed Locations for New Drill Wells:

Section 30

#1212	1495 FWL	1662 FNL
#1412	1485 FWL	2310 FSL
#1612	1489 FWL	992 FSL
#1614	2677 FWL	1046 FSL

Section 31

#1812	1397 FWL	183 FNL
#1814	2673 FEL	123 FNL
#1816	1402 FEL	46 FNL
#2012	1314 FWL	1386 FNL
#2014	2681 FWL	1335 FNL
#2018	56 FEL	1320 FNL
#2212	1322 FWL	2600 FSL
#2214	2549 FWL	2699 FSL
#2216	1375 FEL	2564 FNL
#2218	73 FEL	2648 FSL
#2412	1324 FWL	1337 FSL
#2418	94 FEL	1320 FSL

Section 32

#2220	1128 FWL	2648 FSL
#2420	1107 FWL	1323 FSL

Conversion:

Section 31

#2016 1305 FWL 1305 FNL
(formerly Yates "C" Federal #36)

INJECTION WELL DATA SHEET

OPERATOR	LEASE			
Exxon Corp.	Avalon Unit			
WELL NO.	**FOOTAGE LOCATION**	**SECTION**	**TOWNSHIP**	**RANGE**
2016	1305' FNL & 1305' FEL	31	T-20-S	R-28-E

Schematic

See Attached

Tubular Data

Surface Casing

Size 13 3/8" " Cemented with 750 sx.

TOC Surface feet determined by Circulation

Hole size 17 1/2"

Intermediate Casing

Size 8 5/8" " Cemented with 1385 sx.

TOC Surface feet determined by Circulation

Hole size 11"

Long string

Size 5 1/2" " Cemented with 1000 sx.

TOC Surface feet determined by Circulation

Hole size 7 7/8"

Total depth 4970

Injection interval

2478 feet to 4880 feet
(perforated or open-hole, indicate which)

Tubing size 2 7/8" lined with cement (material) set in a

Baker Model A (brand and model) packer at 2340 feet.

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Delaware
2. Name of Field or Pool (if applicable) Avalon
3. Is this a new well drilled for injection? [ ] Yes [X] No

   If no, for what purpose was the well originally drilled? Oil producer

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   No

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Depths are approximate:

   Yates 350-400', Bone Spring 5000-7000', Atoka 7800-10800',

   Wolfcamp 9000-10000', Strawn 10000, Morrow 11000'

AFE # 16029

WELLBORE SKETCH AND WELL HISTORY

Avalon #2016 Unit (formerly Yates Federal "C" 36) API # 30-105-26

LEASE & WELL NAME: Yates Federal "C" 36

FIELD: Avalon COUNTY: Eddy ST.: N

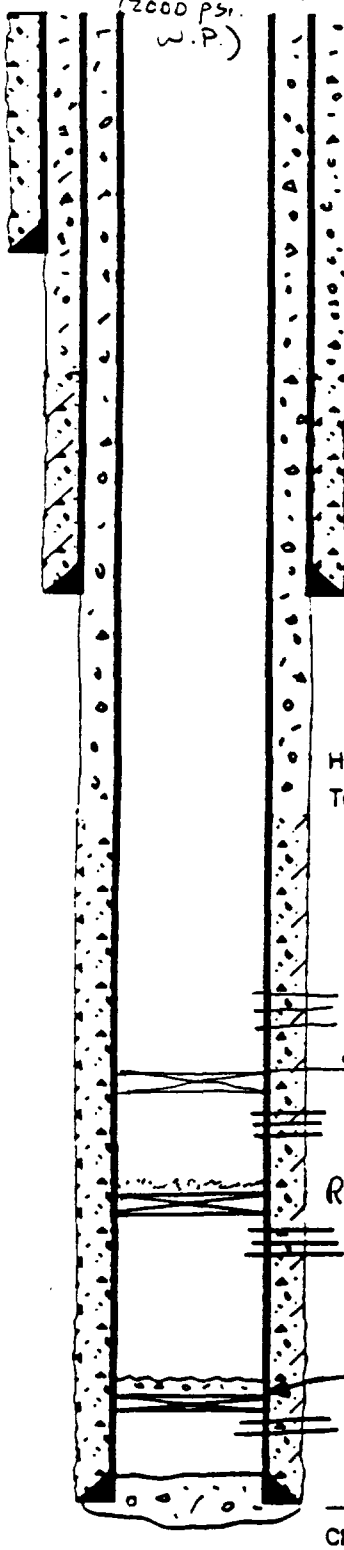
LOCATION: 1305' FNL & FEL

Sec 31; T-20-S; R-28-E

DATE: 10/14/90 BY: JLC REV.: BY:

ELEV.: KB ____, 12.1' ABOVE CHF
10' ABOVE G.L.

Independent Wellhead hookup (2000 psi. W.P.)



HOLE SIZE: 17½"
TOC: Surf'

13-3/8" @ 613'
CMT 750 SX

HOLE SIZE: 11"
TOC: Surf'

8-5/8" @ 2419'
CMT 980 SX (primary)
405 sx (one-inch ops)

HOLE SIZE: 7⅞"
TOC: Surf'

perf 2546'-2810' U Cherry Canyon

CIBP @ 2980'

M. Cherry Canyon perfs @ 3038-3189'

RBP w/30' sand @ 3360' ±

U. Brushy Canyon perfs @ 3406'-3624'

CIBP @ 4690'

L. Brushy Canyon perfs - 4708'-4736' (29 shots)

5½" @ 4924'
CMT 1000 SX Class C + 4% Gel
Circ 193 sx to surf

TD: 4970' PBD: 4660±

CASING RECORD

SURFACE CASING

O.D.	WT/FT	GRADE	SET A
13-3/8"	48	K-55	613

INTERMEDIATE CASING

	O.D.	WT/FT	GRADE	SET A
	8-5/8"	32#	K-55	22
		24#	J-K 55	126
		32#	J-K 55	241
PROD. CSG.	5½"	15.5#	K-55	10
		14#	K-55	492

TUBING

NO. JTS.	O.D.	THD.	TYPE	WT.	GDE.	SE
	2⅞"	API	EUE	6.5	J55	

WELL HISTORY:

New Drill well - FRP'd 9/90
Perf L. Brushy Canyon @ 4708-4736 w/29 shots. Frac w/ 36,000# 16/30 Sand in 14,000 gals gelled water. Tested WET P/B to U. Brushy Canyon. Perf 3406-3624'. Acd w/ 4600 gals NeHCl w/ PFT tool. Frac w/ 18,500# of 20/40 plus 62,500# 12/20 Sand in 49,000 gals gelled water. Well came in flowing. FRW - 142 oil 261 wtr. U.B. & B.C. 0 oil.
12/90 - perfed cherry canyon - (RBP @ 3038'-3189' - M.C.R.U. Dj - water washed & acid washed perfs w 2850 15% HCL. Fracd well D/S 70,000# sand 12/20. Hellfire Fluid. FRW - 104 BO 500 BW.

2/91 Set CIBP @ 2980' perfed well 2546'-2810' - PFT acid job 6720 gal 15% HCL. Fracd well D/S. 105,000# 12/20. Hellfire. PWOP - FRW'd 180 oil 170 wtr.

INJECTION WELL DATA SHEET

OPERATOR	LEASE		
Exxon Corp.	Avalon Unit		

WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE
(See attached list)		30, 31, & 32	T-20-S	R-28-E

Schematic

See attached typical schematic

Tubular Data

Surface Casing

Size 10 3/4 " Cemented with 600 sx.

TOC Surface feet determined by Circulation

Hole size 14 3/4"

Intermediate Casing

Size 7 5/8 " Cemented with 1400 sx.

TOC Surface feet determined by Circulation

Hole size 9 1/2"

Long string

Size 4 1/2" Fiberglass lnr Cemented with 500 sx.

TOC 2340 feet determined by Circulation

Hole size 6 1/2" underreamed to 7"

Total depth 4000'

Injection interval

* feet to * feet
(perforated or open-hole, indicate which)

Perforation

* See attached summary on question VII.3.

Tubing size 2 3/8" lined with cement (material) set in a Baker Model A (brand and model) packer at 2340 feet.

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Delaware
2. Name of Field or Pool (if applicable) Avalon
3. Is this a new well drilled for injection? [X] Yes [ ] No

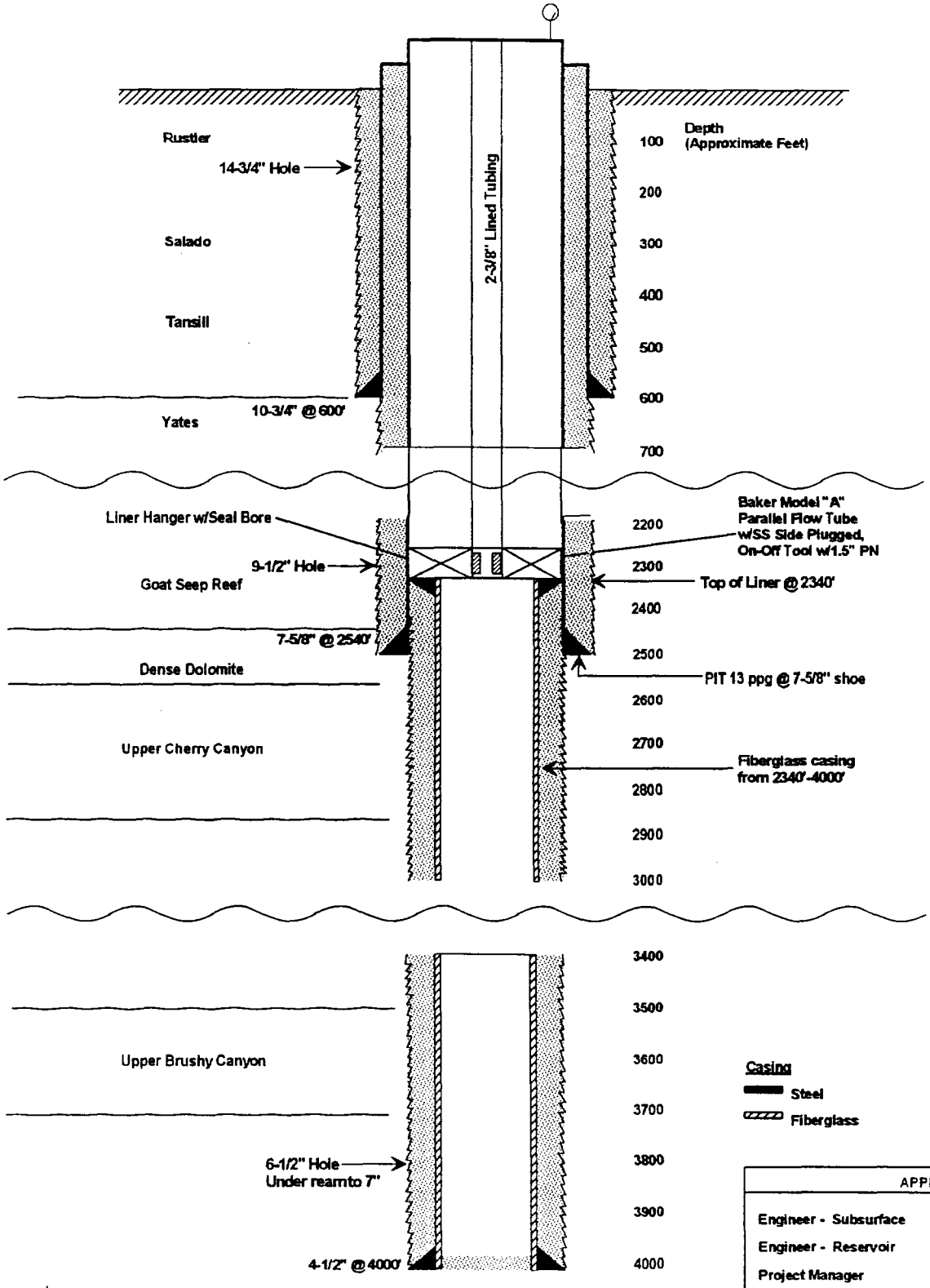
   If no, for what purpose was the well originally drilled?
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used)

   No
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Depths are approximae:

   Yates 350-400', Bone Spring 5000-7000', Atoka 7800-10,800',

   Wolfcamp 9000-10,000', Strawn 10,000' Morrow 11,000'

Avalon Project
Proposed Drillwell
Waterflood



APPROVAL	
Engineer - Subsurface	
Engineer - Reservoir	
Project Manager	
Drilling	
Engineering Supervisor	
Operations Superintendent	

3/22/95
REW/nh

SUPPLEMENT TO APPLICATION FOR AUTHORIZATION TO INJECT
AVALON UNIT
EDDY COUNTY, NEW MEXICO

V. Two maps are attached.

VI. Attached is a typical wellbore sketch and tabular data on wells within the area of review.

VII. Proposed Operations

1. Average daily injection rate = 500 BPD
   Maximum daily injection rate = 2000 BPD
   Volume of fluids to be injected = 141,200,000 Bbls

2. System is open

3. The average and maximum injection pressures are as follows:

	Interval	Avg. Press.	Max. Press.
Section 30			
#1212	2486-4817	493	497
#1412	2509-4832	493	502
#1612	2492-4798	493	498
#1614	2498-4853	493	500
Section 31			
#1812	2467-4774	493	493
#1814	2496-4844	493	499
#1816	2520-4902	493	504
#2012	2481-4800	493	496
#2014	2495-4843	493	499
#2018	2501-4924	493	500
#2212	2496-4817	493	499
#2214	2509-4841	493	502
#2216	2505-4885	493	501
#2218	2477-4918	493	495
#2412	2535-4826	493	507
#2418	2478-4911	493	496
Section 32			
#2220	2489-4945	493	498
#2420	2479-4935	493	496
Conversion - Section 31			
#2016	2478-4880	493	496
(formerly Yates "C" Federal #36)			

4. The source of water that will be injected is from the Delaware.

   The water will be produced from Avalon Unit wells and 2 or 3 source water wells completed in non-productive intervals of the Lower Delaware.

5. NA

VIII. Geological Data

The proposed interval for injection at the Avalon (Delaware) Field is a porous and permeable zone within the Delaware Mountain Group, which in the Avalon area consists of fine sandstones and coarse siltstones of the Cherry Canyon and Brushy Canyon Formations. The estimated average top and base for the Delaware at Avalon are:

	Top	Base
Delaware Mountain Group	2494 ft. (767 ft. subsea)	4860 ft (-1599 ft. subsea) (top of the Bone Spring Fm.), 2366 ft. thick

Fresh water in this area occurs primarily in the Capitan aquifer, which occurs at approximately 750 feet deep (2500 feet subsea) (Hiss, 1976, New Mexico Bureau of Mines and Mineral Resources Resource Map 6). At Avalon, approximately 600 feet of low porosity Goat Seep Reef separate the Delaware from porous zones within the Capitan aquifer. Other potential fresh water zones (primarily the Rustler Formation) occur above the Salado salt and anhydrite. The top of the anhydrite/salt at this location is generally less than 300 feet deep. This unit serves as an effective barrier between injected and fresh water zones near the surface. No fresh water occurs below the proposed injection zone.

IX. Proposed stimulation program

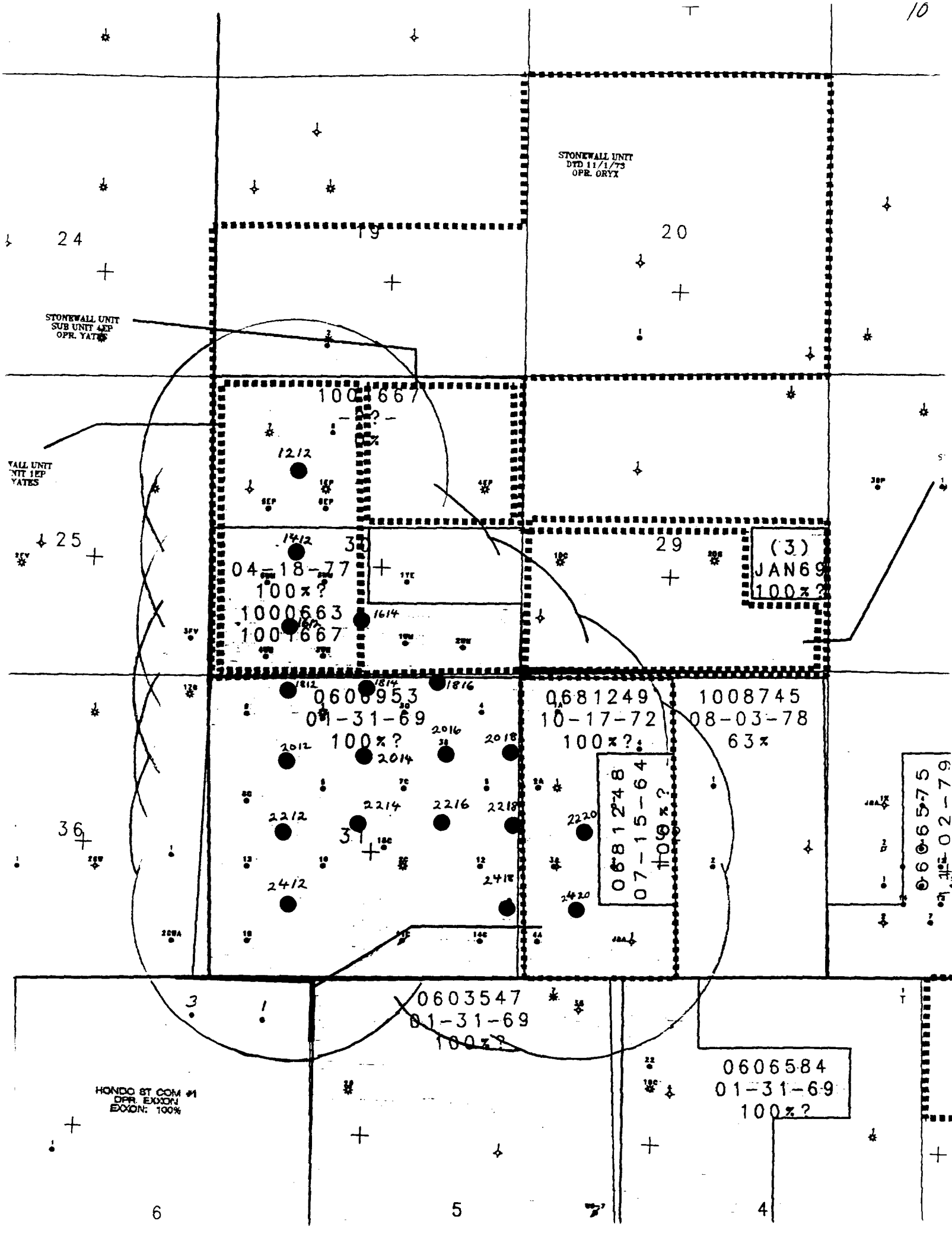
- Perforate Upper Brushy Canyon
- Spot acid across the perforations
- Frac Brushy Canyon with 30-50K # 20/40 sand. Water based frac gel.
- Isolate Brushy Canyon
- Perforate Upper Cherry Canyon
- Spot acid across the perforations
- Frac Cherry Canyon with 30-50K # 20/40 sand. Water based frac gel.
- Put wells on injection
- Run post completion injection profile

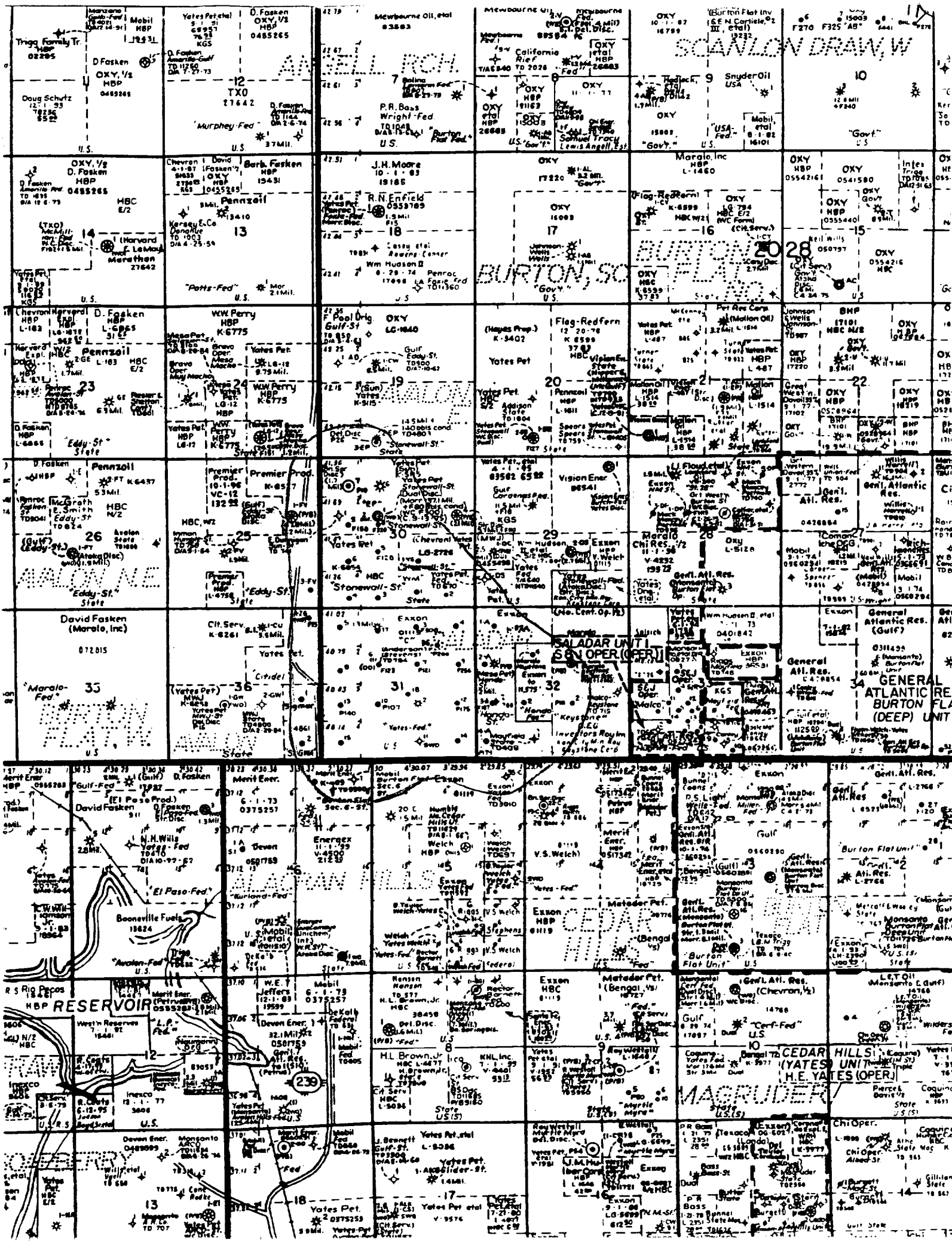
X. Log attached for Yates Federal "C" #36

XI. Chemical analysis on the fresh water well that is within one mile of the proposed wells will be forwarded separately.

XII. There are no indications of open faults or other hydrological connections between the proposed disposal interval and the shallower fresh water zones.

XIII. A signed statement of mailing of notice along with proof of publication will be submitted later.


STONEWALL UNIT
DTD 11/1/75
OPR. ORYX
24
19
20
STONEWALL UNIT
SUB UNIT 4EP
OPR. YATES
1212
25
1412
04-18-77
100%?
1000663
1001667
1614
29
(3)
JAN69
100%?
1812
1814
1816
0606953
01-31-69
100%?
2012
2014
2016
2018
0681249
10-17-72
100%?
1008745
08-03-78
63%
2212
2214
2216
2218
2220
2412
2420
36
31
0681248
07-15-64
100%?
0603547
01-31-69
100%?
0606584
01-31-69
100%?
HONDO ST COM #1
OPR. EXXON
EXXON: 100%
6
5
4


SCANLON DRAW W
BURTON, SO
MALONE NE
MALONE
GENERAL ATLANTIC RE
BURTON FLA
(DEEP) UNIT
SALADAR UNIT I
S & N OPER. (OPER.)
CEDAR HILLS (YATES) UNIT
H.E. YATES (OPER.)
MAGRUDER
RESERVOIR
Burton Flat Unit
Burton Flat Unit

WELLS WITHIN 1/2 MILE RADIUS OF PROPOSED AVALON (DELAWARE) INJECTORS EDDY COUNTY, NEW MEXICO

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)
T-20-S, R-28-E										
Yates Pet.	Stonewall "EP" State #2	Gas	19	660 FS, 1980 FW	02/15/77	11500	11060-11070	13 3/8"	588	500
								8 5/8"	2750	1920
								5 1/2"	11458	265
Yates Pet.	Stonewall "EP" State #3	Oil	19	545 FS, 1960 FW	10/29/77	4800	4369-4399	13 3/8"	512	450
								8 5/8"	2900	1300
								5 1/2"	4797	240
Yates Pet.	Federal "DC" #1	Gas	29	1980 FS, 660 FW	09/02/78	11540	10168-10176	13 3/8"	585	550
								8 5/8"	2845	1840
								5 1/2"	11495	650
Exxon Corp.	Yates "C" Federal #6	Oil	31	1980 FNL, 1980 FWL	02/20/83	4700	3550-3595	8 5/8"	634	500
							3606-3624	5 1/2"	4699	950
Exxon Corp.	Yates "C" Federal #1	Gas	31	660 FNL, 1980 FWL	06/19/82	11470	11040-11110	13 3/8"	584	950
								9 5/8"	3154	985
								7	10395	550
Exxon Corp.	Yates "C" Federal #2	Disposal	31	1980 FS, 1980 FE	10/13/82	11901	9004-9130	13 3/8"	588	600
								9 5/8"	3027	1250
								5 1/2"	11901	1780
Exxon Corp.	Yates "C" Federal #3	Oil	31	660 FN, 1980 FE	10/20/82	4702	3400-3608	8 5/8"	605	425
								5 1/2"	4702	1050
Exxon Corp.	Yates "C" Federal #4	Oil	31	660 FNL, 660 FEL	01/06/83	4701	2574-2818	8 5/8"	618	400
								5 1/2"	4701	1050
Exxon Corp.	Yates "C" Federal #5	Oil	31	660 FNL, 660 FWL	06/08/83	4710	2506-2726	8 5/8"	627	1300
							3494-3676	5 1/2"	4704	750
Exxon Corp.	Yates "C" Federal #7	Oil	31	1980 FN, 1980 FE	05/17/83	4700	3448-3650	8 5/8"	618	400
								5 1/2"	4693	1215
Exxon Corp.	Yates "C" Federal #8	Oil	31	2180 FN, 660 FW	07/01/83	4725	2570-2690	8 5/8"	602	1200
								5 1/2"	4720	904
Exxon Corp.	Yates "C" Federal #9	Oil	31	1980 FNL, 560 FEL	05/16/83	4712	2538-2788	8 5/8"	617	450
							3580-3662	5 1/2"	4700	905
Exxon Corp.	Yates "C" Federal #12	TA	31	1980 FSL, 660 FEL	08/03/83	5000		13 3/8"	598	670
								8 5/8"	2495	850
								5 1/2"	4992	900
Exxon Corp.	Yates "C" Federal #10	Oil	31	1980 FSL, 1980 FWL	07/01/83	5000	2548-2714	13 3/8"	632	525
								8 5/8"	2525	850
								5 1/2"	4988	950
Exxon Corp.	Yates "C" Fed. #WD-11	Disposal	31	660 FS, 1980 FE	03/13/84	5000	3955-3982	13 3/8"	600	525
								8 5/8"	2448	850
								5 1/2"	4990	900
Exxon Corp.	Yates "C" Federal #14	TA	31	660 FS, 660 FE	10/27/83	3890		13 3/8"	590	930
								8 5/8"	2493	1025
								5 1/2"	3890	500
Exxon Corp.	Yates "C" Federal #15	TA	31	660 FSL, 660 FWL	12/10/83	4930		13 3/8"	596	1000
								8 5/8"	2513	1300
								5 1/2"	4923	1150

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)
T-20-S, R-28-E (continued)										
Exxon Corp.	Yates "C" Federal #13	Oil	31	1980 FSL, 660 FWL	07/31/83	4930	2596-2732	13 3/8"	619	750
							3602-3634	8 5/8"	2493	1700
								5 1/2"	4924	1800
Exxon Corp.	Yates "C" Federal #17	Oil	31	760 FNL, 1980 FWL	09/19/83	3897	2568-2605	13 3/8"	606	1050
							3562-3626	8 5/8"	2482	930
								5 1/2"	3887	750
Exxon Corp.	Yates "C" Federal #18	TA	31	2310 FS, 2310 FE	10/20/83	3885		13 3/8"	593	700
								8 5/8"	2491	925
								5 1/2"	3876	525
Yates Pet	Stonewall "EP" State #1	Gas	30	1980 FN, 1980 FW	09/25/75	11478	10079-10097	13 3/8"	612	550
								8 5/8"	2799	1650
								5 1/2"	11380	1300
Yates Pet	Stonewall "WM" State #1	Oil	30	560 FS, 1980 FE	06/02/83	4953	2587-2680	20"	40	- - -
								10 3/4"	545	500
								8 5/8"	2485	1350
								5 1/2"	4953	700
Yates Pet	Stonewall "WM" State #3	Oil	30	330 FS, 1980 FW	07/22/83	4865	2530-2622	13 3/8"	545	650
							3422-3602	8 5/8"	2470	550
								5 1/2"	4864	500
Yates Pet	Stonewall "WM" State #2	Inact. Oil	30	450 FS, 990 FE	08/07/84	5450	4960-5216	13 3/8"	546	550
								8 5/8"	2410	1050
								5 1/2"	4960	750
Yates Pet	Stonewall "WM" State #4	Oil	30	330 FS, 990 FW	11/22/83	4860	2524-2727	20"	40	- - -
							3620-3671	13 3/8"	535	500
								8 5/8"	2642	1300
								5 1/2"	4860	750
Yates Pet	Stonewall "WM" State #5	Oil	30	1650 FS, 1980 FW	11/10/83	4900	3330-3367	13 3/8"	535	600
							3487-3515	8 5/8"	2404	1355
							3570-3576	5 1/2"	4900	700
Yates Pet	Stonewall "YE" State #1	Oil	30	1650 FS, 1980 FE	12/29/83	4950	2595-2732	20"	40	- - -
								13 3/8"	543	550
								8 5/8"	2415	900
								5 1/2"	4950	750
Yates Pet	Stonewall "EP" State #5	Oil	30	2310 FN, 990 FW	03/14/84	4870	3361-3730	13 3/8"	544	500
							4142-4346	8 5/8"	2420	1600
								5 1/2"	4870	800
Yates Pet	Stonewall "WM" State #6	Oil	30	1650 FS, 990 FW	12/27/83	4860	3349-3527	20"	40	- - -
								13 3/8"	535	550
								8 5/8"	2410	800
								5 1/2"	4860	800
Yates Pet	Stonewall "EP" State #7	Oil	30	990 FNL, 990 FWL	01/19/84	5107	4979-4983	20"	40	- - -
								13 3/8"	538	500
								8 5/8"	2372	1120
								5 1/2"	5100	900
Yates Pet	Stonewall "EP" State #6	Gas	30	990 FNL, 2080 FWL	04/20/85	5100	4983-4992	13 3/8"	537	400
								8 5/8"	2469	1050
								5 1/2"	5098	600
Yates Pet	Stonewall "EP" State #8	Oil	30	2310 FN, 1980 FW	04/04/84	5303	3384-3412	13 3/8"	540	425
							3434-3541	8 5/8"	2404	950
							3622-3688	5 1/2"	5303	750

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)
T-20-S, R-28-E (continued)										
Exxon Corp.	Hondo-State Com #1	Gas	32	1980 FN, 660 FW	05/02/77	11475	10385-10705	13 3/8"	565	800
								9 5/8"	2790	1750
								5 1/2"	11475	825
Maralo	Keystone #1	Gas	32	1980 NL, 1980 FEL	01/25/78	11600	6298-6503	13 3/8"	608	695
								8 5/8"	3010	1100
								4 1/2"	11600	875
Exxon Corp.	Hondo "A" State #1	Oil	32	660 FN, 660 FW	02/14/83	4050	2654-2709	8 5/8"	610	400
								5 1/2"	4042	780
Exxon Corp.	Hondo "A" State #3	Oil	32	1980 FS, 610 FW	05/24/83	4050	2506-2598	13 3/8"	590	880
								8 5/8"	2410	1450
								5 1/2"	4050	550
Exxon Corp.	Hondo "A" State #2	Oil	32	1980 FN, 330 FW	03/05/83	4047	2605-2620	8 5/8"	610	400
							2640-2660	5 1/2"	4047	770
							3622-3636			
Exxon Corp.	Hondo "A" State #4	Oil	32	660 FS, 330 FW	06/12/83	3808	2585-2620	13 3/8"	590	800
								8 5/8"	2445	1330
								5 1/2"	3808	450
Exxon Corp.	Hondo Fee #2	Oil	32	1980 FS, 1650 FW	07/15/83	2813	2542-2556	13 3/8"	588	630
							2602-2612	8 5/8"	2422	1300
							2628-2640	5 1/2"	2813	135
Maralo Inc	Keystone #2	- - -	32	1980 FSL, 1980 FEL	08/29/94	6700	6307-6514	13 3/8"	502	875
								8 5/8"	2557	1300
								5 1/2"	6700	890
Maralo Inc	Keystone #4	- - -	32	1650 FNL, 1980 FWL	01/22/95	6650	6283-6484	13 3/8"	504	550
								8 5/8"	2518	1200
								5 1/2"	6650	750
T-20-S, R-27-E										
MWJ Prod.	State "GWA" #1	Oil	36	2180 FS, 660 FE	12/10/80	4845	4724-4731	13 3/8"	410	400
							4740-4758	8 5/8"	2405	1200
							4764-4766	5 1/2"	4845	600
MWJ Prod.	State "GWA" #2	Oil	36	660 FS, 660 FE	09/13/84	4825	4367-4373	13 3/8"	502	500
								8 5/8"	2400	1350
								5 1/2"	4825	550
Yates Pet.	Citdale "ZG" #1	Gas	36	330 RN, 330 FE	08/03/84	5100	4871-4880	13 3/8"	408	325
							5023-5026	8 5/8"	2390	800
								4 1/2"	5100	710
Premier Prod.	Eddy "FV" State Com #1	Gas	25	1980 FN, 990 FE	05/12/76	11450	10014-10028	20"	30	- - -
								13 3/8"	642	650
								9 5/8"	3050	1350
								5 1/2"	11450	1070
Premier Prod.	Eddy "FV" State #3	Inact. Oil	25	660 FS, 330 FE	04/29/84	4975	2710-2716	13 3/8"	500	500
							2723-2725	8 5/8"	2450	1800
							2738-2740	5 1/2"	4975	800

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)
T-21-S, R-27-E										
Mobil Producing	Burton Flat "Sec 6" St #1	D & A	6	660 FNL, 660 FEL	02/19/87	5500		13 3/8"	457	600
								8 5/8"	2599	1300
								5 1/2"	5500	1000
Mobil Producing	Burton Flat "Sec 6" St # 3	Inact. Oil	6	660 FN, 1980 FE	07/27/84	6100	4642-4652	13 3/8"	463	600
								9 5/8"	2500	1500
								7"	6100	1375
Exxon Corp.	Yates "C" Federal #35	Disposal	5	563 FNL, 560 FEL	10/30/85	3110	2702-2898	13 3/8"	629	950
							2950-3098	8 5/8"	2592	1300
								5 1/2"	3110	550

--- = Information not available

Data Source: Petroleum Information, Scout Tickets, Well Files

Schlumberger

COMPENSATED NEUTRON LITHO-DENSITY

COMPANY	EXXON COMPANY USA
WELL	YATES "C" FEDERAL NO. 36
FIELD	AVALON (DELAWARE)
COUNTY	EDDY STATE NEW MEXICO

COUNTY: EDDY
FIELD: AVALON (DELAWARE)
LOCATION: 1305' FNL & FEL
WELL: YATES "C" FEDERAL NO. 36
COMPANY: EXXON COMPANY USA

LOCATION: 1305' FNL & FEL

Other Services: LDT/CNL, DLL/RXO, NGT/EPT, PHASOR/BHC, RFT, LOGNET

API SERIAL NO.	SECT.	TWP.	RANGE
30-015-263700	31	20-S	28-E

Permanent Datum	GL	Elev.	3237.0 F	Elev.: K.B. 3247
Log Measured From	KB	10.0 F	above Perm. Datum	D.F.
Drilling Measured From	KB			G.L. 3237

Date		14-SEP-1990			
Run No.		ONE			
Depth Driller		4970.0 F			
Depth Logger (Schl.)		4972.0 F			
Btm. Log Interval		4939.0 F			
Top Log Interval		2419.0 F			
Casing-Driller		8 5/8 @ 2419.0 F	@	@	
Casing-Logger		2419.0 F			
Bit Size		7 7/8"			
Type Fluid in Hole		CUT BRINE			
Dens.	Visc.	9.40 LB/G	32.0 S		
pH	Fld. Loss	7.5	10.0 C3		
Source of Sample		FLOWLINE			
Rm @ Meas. Temp.		.156 OHMM @ 71.0 DEGF		@	
Rmf @ Meas. Temp.		.126 OHMM @ 71.0 DEGF		@	
Rmc @ Meas. Temp.		.244 OHMM @ 71.0 DEGF		@	
Source: Rmf	Rmc	PRESS	PRESS		
Rm @ BHT		.106 OHMM @ 108. DEGF		@	
TIME	Circulation Ended				
	Logger on Bottom	SEE LOG			
Max. Rec. Temp.		108. DEGF			
Equip.	Location	8329	ROSWELL		
Recorded By		PAT SULLIVAN			
Witnessed By		CANTRELL/LUKAS/GANAPATHY/THOMAS			

The well name, location and borehole reference data were furnished by the customer.

All interpretations are opinions based on inferences from electrical or other measurements and we cannot, and do not guarantee the accuracy or correctness of any interpretations, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages or expenses incurred or sustained by anyone resulting from any interpretations made by any of our officers, agents or employees. These interpretations are also subject to Clause 4 of our General Terms and Conditions as set out in our current Price Schedule.

Run No.	ONE			
Service Order No.	555943			
Drilling Fluid Level				
Salinity	115500. PPM			
Rmf @ BHT	.085 OHMM	@	108. DEGF	@
Rmc @ BHT	.165 OHMM	@	108. DEGF	@
Logging Speed	2000.0 F/HR			
EQUIPMENT DATA				
Tool Number 1	LDT SEE CALS			
Tool Number 2	CNL SEE CALS			
Tool Number 3	DLS 978			
Tool Number 4	DLC 1718			
Tool Number 5	SRS 800			
Tool Number 6	SRE 755			
Tool Number 7	SGC 206			
Tool Number 8	NGT SEE CALS			
Tool Number 9	HOBBS DITE			
Tool Number 10	SGC 206			
Tool Number 11	TCC 373			
Tool Number 12	TCM 1267			

REMARKS:

CHLORIDES 70K FROM MUD REPORT.

MDEN=2.71 FD=1.05

CGR NOT VALID FILES 10 & 11 DUE TO HIRS (HIGH RESOLUTION) ACQUISITION.

KALMAN FILTER DOES NOT WORK OTHER THAN ON 6" DATA FRAMES.

CGR OK ON PASSES 12 & 13.

AFTER SURVEY TOOL CHECK SUMMARY

PERFORMED: 14-SEP-1990 19:59
PROGRAM FILE: TOH (VERSION 32.4 90/06/12 90/06/06)

LDTD TOOL CHECK

DENSITY RESISTIVITY SONDE NUMBER	:	3946
NUCLEAR SERVICE CARTRIDGE NUMBER	:	2839
POWERED DETECTOR HOUSING NUMBER	:	1736
POWERED GAMMA-GAMMA DETECTOR NUMBER	:	2713
LDT LOGGING SOURCE NUMBER	:	1756
LDT CALIBRATION MODE	:	WATE

	MEASURED BACKGROUND BEFORE	AFTER	UNITS	TOLERANCE ON BEFORE-AFTER
LL	18.7	18.6	CPS	+/- 1.0
LU	72.7	72.9	CPS	+/- 1.0
LS	55.0	55.0	CPS	+/- 1.0
LITH	5.4	5.4	CPS	+/- 0.3
SS1	15.8	15.8	CPS	+/- 0.5
SS2	10.7	10.7	CPS	+/- 0.5

HV SETTINGS		DETECTOR RESOLUTIONS	
HV LS:	1266.8 V	LS:	8.4 %
HV SS:	1285.0 V	SS:	8.7 %

BKGD BEFORE SURVEY: 14-SEP-1990 11:47 BKGD AFTER SURVEY: 14-SEP-1990 19:50

NGTC TOOL CHECK

NGTC CARTRIDGE NUMBER : 935
NGTC DETECTOR NUMBER : 949
NGTC CALIBRATOR NUMBER : 11
GSR-U/Y REFERENCE (GAPI) : 164

	BEFORE	AFTER	UNITS
SGR	164	165	GAPI

	MEASURED BKG	AFTER JIG	SURVEY NORM VAL	BEFORE NORM VAL	UNITS
W1NG	59.0	456.8	388.2	387.6	CPS
W2NG	20.6	200.2	175.2	173.7	CPS
W3NG	5.9	31.5	25.0	23.2	CPS
W4NG	1.5	16.7	14.8	14.8	CPS
W5NG	1.4	26.2	24.2	24.2	CPS

PCSL -208 KEY OFFSET

DETECTOR RESOLUTION : 11.5 %
P.M. HIGH VOLTAGE : 1603.8 V
THORIUM PEAK FORM FACTOR : -.16
SHOP QUALITY WINDOWS RATIO: 2.24
QUALITY WINDOWS RATIO : 2.23

BEFORE SURVEY: BACK: 14-SEP-1990 11:47 JIG: 14-SEP-1990 11:57
AFTER SURVEY CHECK: BACK: 14-SEP-1990 19:50 JIG: 14-SEP-1990 19:57

CNTH TOOL CHECK

INPUT	BEFORE JIG	AFTER JIG
CNTC	2842.84	2827.46
CFTC	1193.21	1194.21

CHANGE IN THERMAL POROSITY AT 20 PU IS -.212 PU

BEFORE SURVEY: BACK: 14-SEP-1990 11:47 JIG: 14-SEP-1990 11:57
AFTER SURVEY CHECK: BACK: 14-SEP-1990 19:50 JIG: 14-SEP-1990 19:57

ACCUMULATED INTEGRATION VALUES SUMMARY:

IHV: 1093.57 F3 FROM 4972.00 F TO 2419.00 F
ICV: 672.355 F3 FROM 4972.00 F TO 2419.00 F

EVENT MARK SUMMARY:

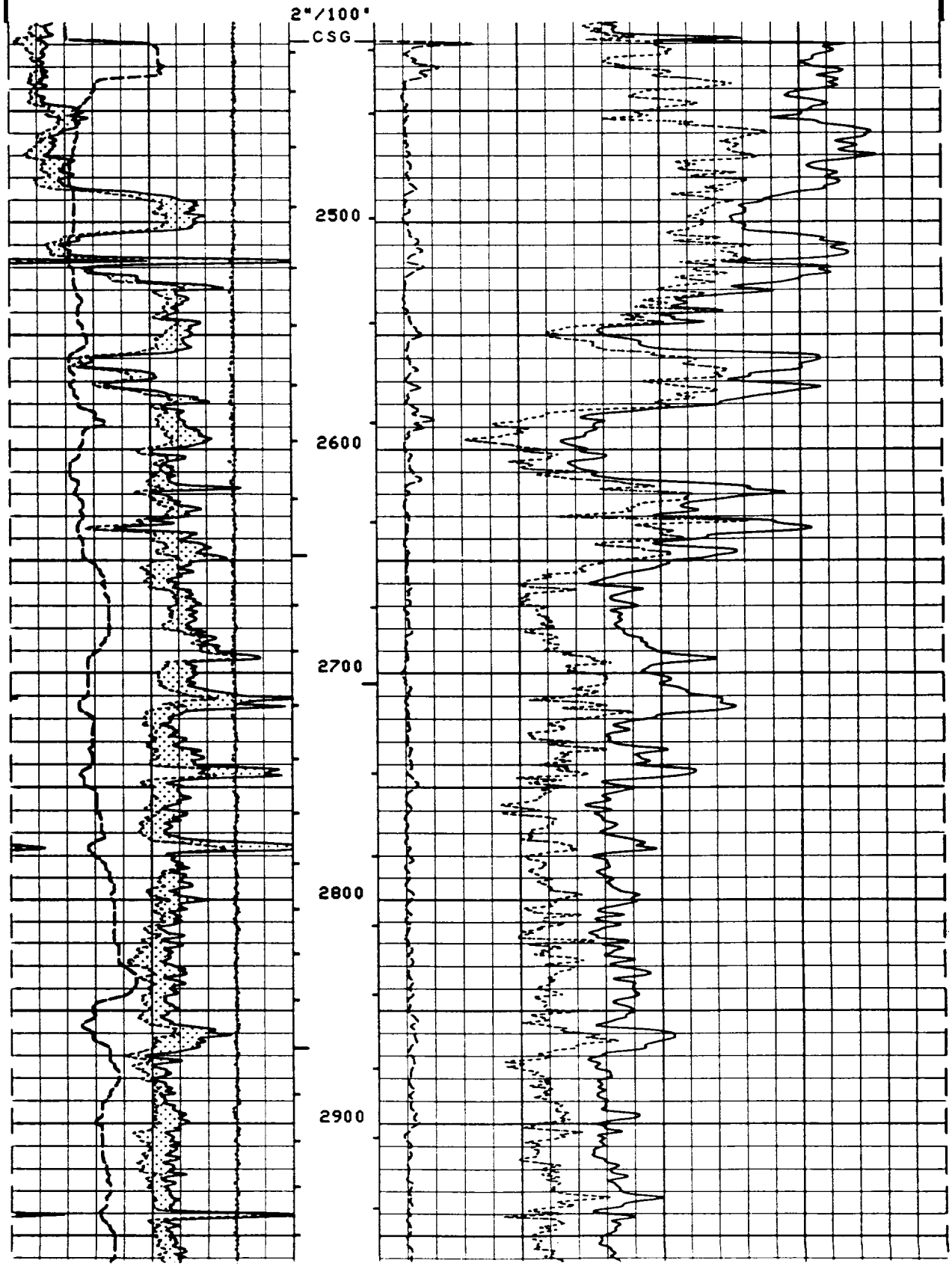
OUTPUT	INTERVAL BETWEEN PIPS	DEPTH TRACK EDGE
IHV	10.0000 F3	LEFT EDGE
ICV	10.0000 F3	RIGHT EDGE

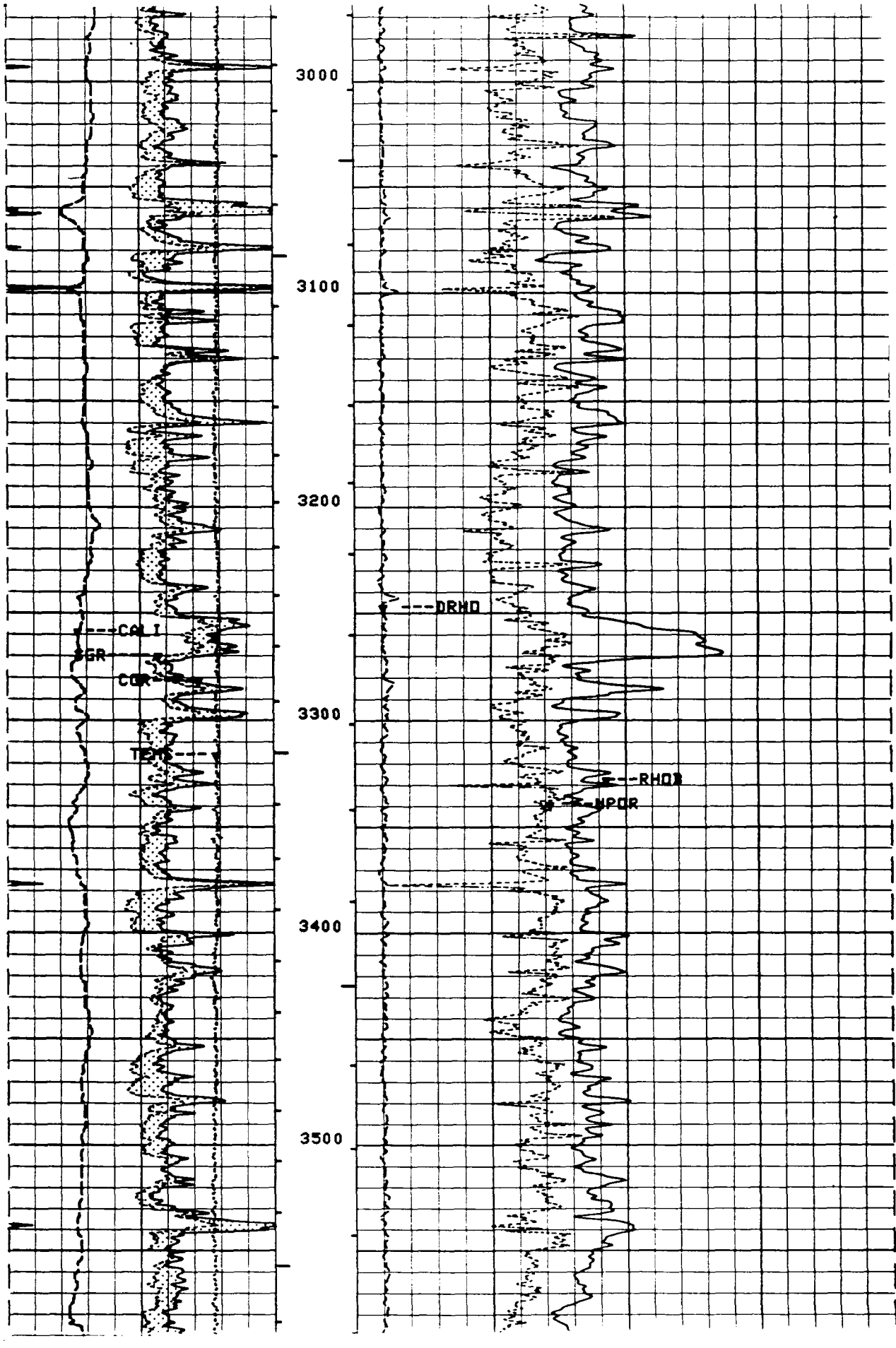
CALI(IN)		DRHO(G/C3)	
6.0000	16.000	-.0500	.45000
SGR (GAPI)		RHOB(G/C3)	
0.0	100.00	2.0000	3.0000
CGR (GAPI)		NPOR(V/V)	
0.0	100.00	.30000	-.1000
TENS(LBF)		NPOR(V/V)	
10000.	0.0	.70000	.30000
SGR (GAPI)			
100.00	200.00		

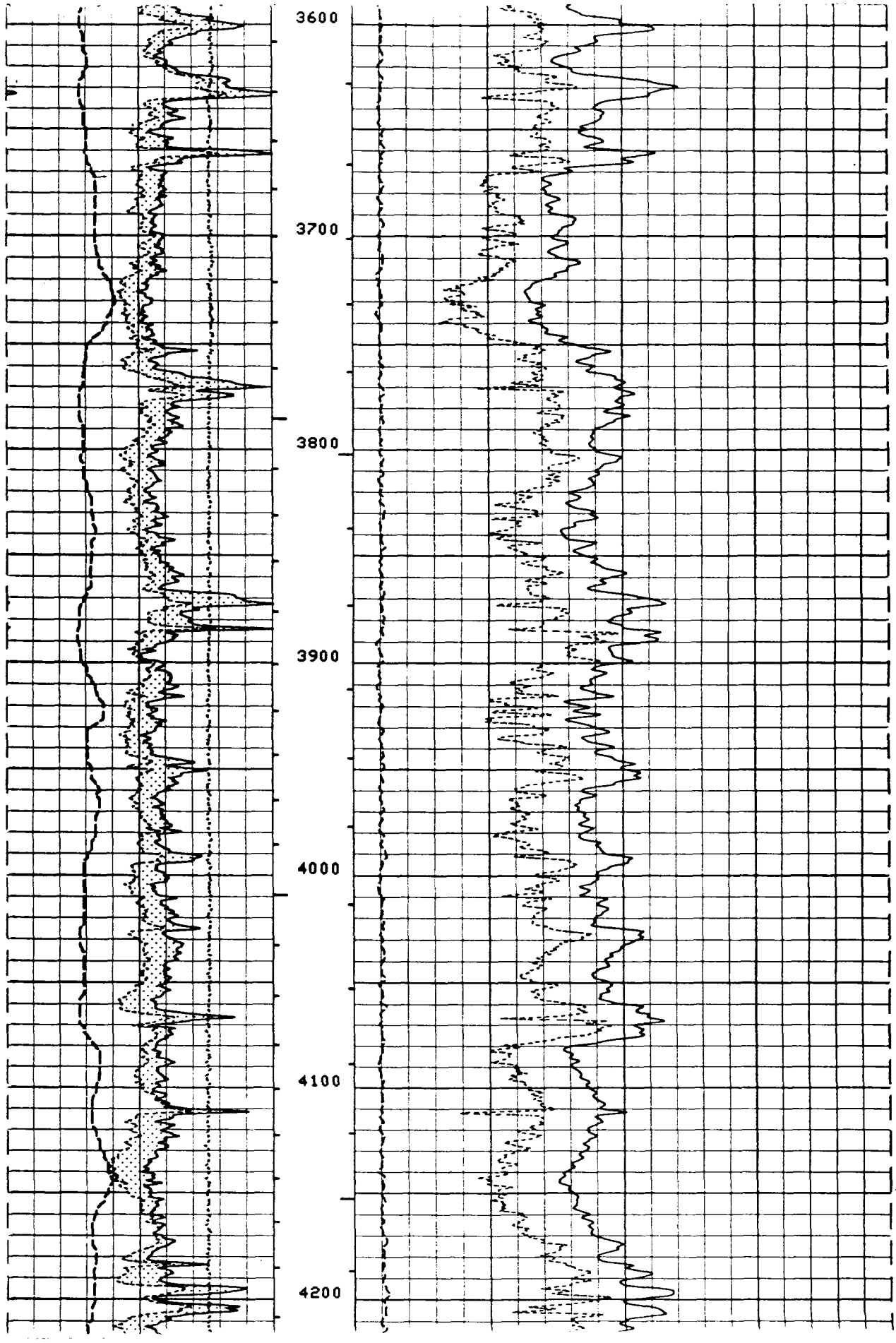
CP 32.4 FILE 7 14-SEP-1990 21:15

INPUT FILE(S)
13

DATA ACQUIRED
14-SEP-1990 15:50




3000
3100
3200
3300
3400
3500
CALI
GR
CCL
TENS
DRHO
RHOB
NPOR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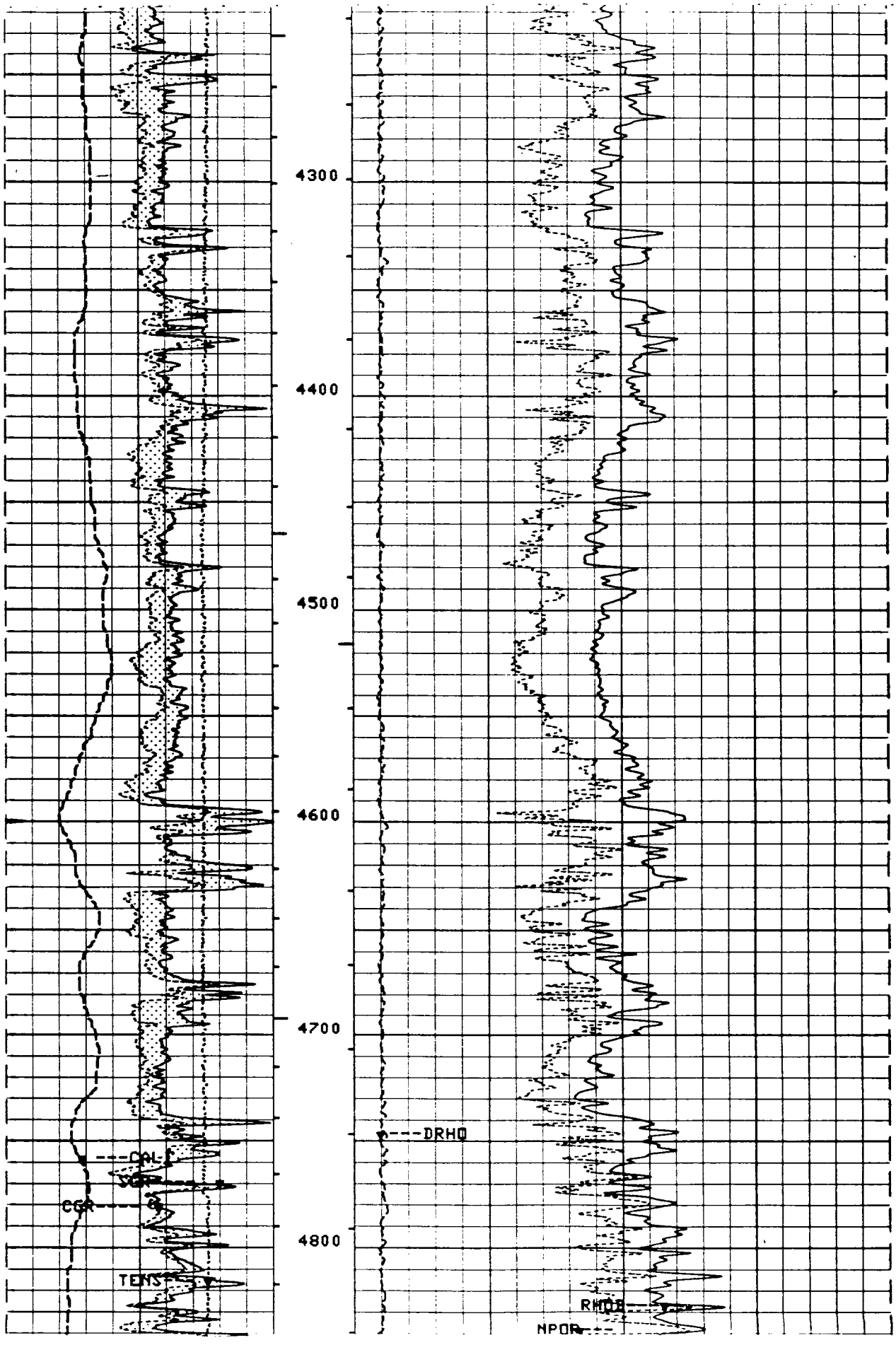
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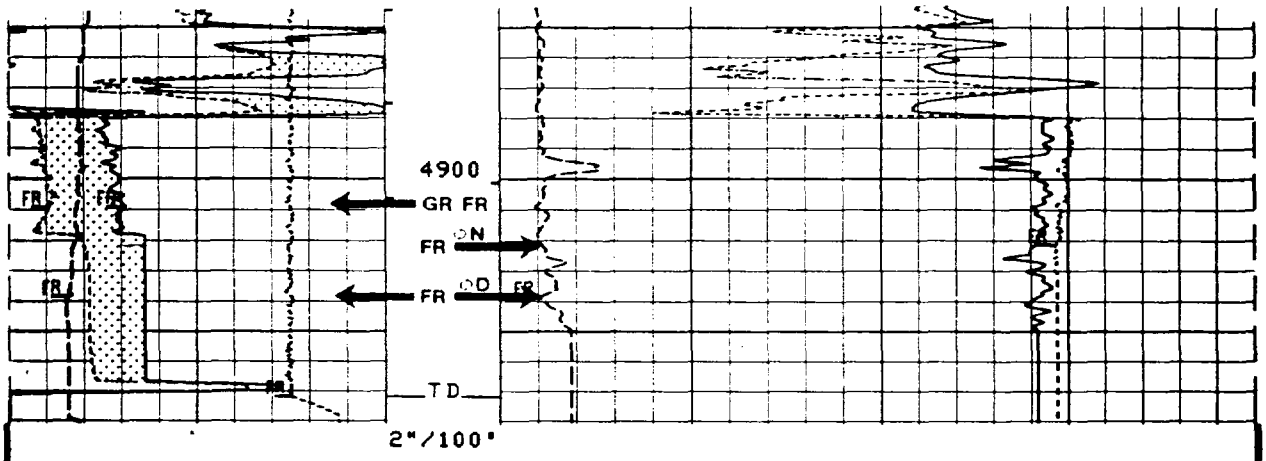
4800
CAL
SGR
CGR
TENS
DRHO
RHOB
NPOR



CP 32.4 FILE 7 14-SEP-1990 21:07

INPUT FILE(S) DATA ACQUIRED
13 14-SEP-1990 15:50

CALI(IN)		DRHO(G/C3)	
6.0000	16.000	-.0500	.45000
SGR (GAPI)		RHOB(G/C3)	
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CGR (GAPI)		NPOR(V/V)	
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TENS(LBF)		NPOR(V/V)	
10000.	0.0	.70000	.30000
SGR (GAPI)			
100.00	200.00		

SENSOR MEASURE POINT TO TOOL ZERO

DV1	14.9	FEET	CAL1	2.8	FEET
SV0	14.9	FEET	SI0	14.9	FEET
DV0	14.9	FEET	DI0	14.9	FEET
CALS	3.1	FEET	DLCS	.6	FEET
W2NG	62.7	FEET	W1NG	62.7	FEET
W4NG	62.7	FEET	W3NG	62.7	FEET
CFTC	50.9	FEET	W5NG	62.7	FEET
LITH	33.3	FEET	CNTC	50.4	FEET
LS	33.3	FEET	LL	33.3	FEET
PARI	32.8	FEET	LU	33.3	FEET
SS2	32.8	FEET	SS1	32.8	FEET
TENS	.6	FEET	CALI	33.4	FEET
CMSF	1.1	FEET	I1	1.3	FEET
TNRA	51.4	FEET	SGR	62.7	FEET

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
PP	NORM		DO	0.0	F
WMUD	9.40000	LB/G	TD	4972.00	F
FCD	5.50000	IN	DHC	NONE	
BFM	LIQU		MDEN	2.71000	G/C3
FD	1.05000	G/C3	DPPM	STAN	
MATR	LIME		HC	CALI	
NPDC	0		HSCO	YES	
SOCO	NO		MCCO	NO	
BSCO	NO		FSCO	NO	
MWCO	NO		PTCO	NO	
SDAT	SOCN		MCOR	NATU	
SOCN	.500000	IN	FSAL	-50000.0	PPM
ANGL	0.0	DEG	GGRD	.0100000	DF/F
BHFL	WATE		PCSL	-208	KEV
NFO	KALM		CBAR	1.00000	
PMUD	0.0	%	GTSE	TEMP	

Exhibit No. 33
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

WELLS WITHIN 1/2 MILE RADIUS OF
PROPOSED AVALON (DELAWARE) INJECTORS
EDDY COUNTY, NEW MEXICO

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG.	DEPTH	CMT (SX)	TOC	HOW TOC DETERMINED
T-20-S, R-28-E												
Yates Pet.	Stonewall "EP" State #2	Gas	19	660 FS, 1980 FW	02/15/77	11500	11060-11070	13 3/8"	588	500	Surface	Circ
								8 5/8"	2750	1920	Surface	Circ
								5 1/2"	11458	265	9900	Temp Survey
Yates Pet.	Stonewall "EP" State #3	Oil	19	545 FS, 1960 FW	10/29/77	4800	4369-4399	13 3/8"	512	450	Surface	Circ
								8 5/8"	2900	1640	Surface	Circ
								5 1/2"	4797	240	3290	Temp Surv, CBL
Yates Pet.	Federal "DC" #1	Gas	29	1980 FS, 660 FW	09/02/78	11540	10168-10176	13 3/8"	585	550	Surface	Circ
								8 5/8"	2845	1840	Surface	Circ
								5 1/2"	11495	650	7000	CBL
												SQ - <2700 CBL
Exxon Corp.	Yates "C" Federal #6	Oil	31	1980 FNL, 1980 FWL	02/20/83	4700	3550-3595	9 5/8"	634	500		
							3606-3624	5 1/2"	4699	950	Surface	Circ
Exxon Corp.	Yates "C" Federal #1	Gas	31	660 FNL, 1980 FWL	06/19/82	11470	11040-11110	13 3/8"	584	950		
								9 5/8"	3154	985	Surface	Circ
								7	10395	550	7497	Calculated
								5" liner	9901-11467	160	9901	Circ
Exxon Corp.	Yates "C" Federal #2	Disposal	31	1980 FS, 1980 FE	10/13/82	11901	9004-9130	13 3/8"	588	600		
								9 5/8"	3027	1250	Surface	Circ
								5 1/2"	11901	1780	3980	Temp Survey
Exxon Corp.	Yates "C" Federal #3	Oil	31	660 FN, 1980 FE	10/20/82	4702	3400-3608	8 5/8"	605	425		
								5 1/2"	4702	1050	1730	Temp Survey
Exxon Corp.	Yates "C" Federal #4	Oil	31	660 FNL, 660 FEL	01/06/83	4701	2574-2818	8 5/8"	618	400		
								5 1/2"	4701	1050	Surface	Circ
Exxon Corp.	Yates "C" Federal #5	Oil	31	660 FNL, 660 FWL	06/08/83	4710	2506-2726	8 5/8"	627	1300		
							3494-3676	5 1/2"	4704	750	280	Temp Survey
Exxon Corp.	Yates "C" Federal #7	Oil	31	1980 FN, 1980 FE	05/17/83	4700	3448-3650	8 5/8"	618	400		
								5 1/2"	4693	1215	Surface	Circ
Exxon Corp.	Yates "C" Federal #8	Oil	31	2180 FN, 660 FW	07/01/83	4725	2570-2690	8 5/8"	602	1200		
								5 1/2"	4720	904	Surface	Circ
Exxon Corp.	Yates "C" Federal #9	Oil	31	1980 FNL, 560 FEL	05/16/83	4712	2538-2788	8 5/8"	617	450		
							3580-3662	5 1/2"	4700	905	Surface	Circ

WELLS WITHIN 1/2 MILE RADIUS OF
PROPOSED AVALON (DELAWARE) INJECTORS
EDDY COUNTY, NEW MEXICO

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG.	DEPTH	CMT (SX)	TOC	HOW TOC DETERMINED
Exxon Corp.	Yates "C" Federal #12	TA	31	1980 FSL, 660 FEL	08/03/83	5000	2528-2624	13 3/8"	598	670		
							3655-3684	8 5/8"	2495	865	Surface	Circ
								5 1/2"	4992	900	Surface	Circ
Exxon Corp.	Yates "C" Federal #10	Oil	31	1980 FSL, 1980 FWL	07/01/83	5000	2548-2714	13 3/8"	632	525		
								8 5/8"	2525	850	Surface	Circ
								5 1/2"	4988	950	620	Calculated
Exxon Corp.	Yates "C" Fed. #WD-11	Disposal	31	660 FS, 1980 FE	03/13/84	5000	3955-3982	13 3/8"	600	525		
								8 5/8"	2448	850	Surface	Circ
								5 1/2"	4990	900	2550	Squeeze job
Exxon Corp.	Yates "C" Federal #14	TA	31	660 FS, 660 FE	10/27/83	3890	2598-2636	13 3/8"	590	930		
								8 5/8"	2493	1025	Surface	Circ
								5 1/2"	3890	500	2446	Temp Survey
Exxon Corp.	Yates "C" Federal #15	TA	31	660 FSL, 660 FWL	12/10/83	4930	2704-2597	13 3/8"	596	1000		
							4422-4429	8 5/8"	2513	1300	410	Temp Survey
							4714-4718	5 1/2"	4923	1150	Surface	Circ
Exxon Corp.	Yates "C" Federal #13	Oil	31	1980 FSL, 660 FWL	07/31/83	4930	2596-2732	13 3/8"	619	750		
							3602-3634	8 5/8"	2493	1980	Surface	Circ
								5 1/2"	4924	1800	Surface	Circ
Exxon Corp.	Yates "C" Federal #17	Oil	31	760 FNL, 1980 FWL	09/19/83	3897	2568-2605	13 3/8"	606	1050		
							3562-3626	8 5/8"	2482	930	Surface	Circ
								5 1/2"	3887	750	Surface	Circ
Exxon Corp.	Yates "C" Federal #18	TA	31	2310 FS, 2310 FE	10/20/83	3885	2596-2757	13 3/8"	593	700		
							3630-3640	8 5/8"	2491	925	Surface	Circ
								5 1/2"	3876	525	1367	Temp Survey
Yates Pet	Stonewall "EP" State #1	Gas	30	1980 FN, 1980 FW	09/25/75	11478	10079-10097	13 3/8"	612	550	Surface	Circ
								8 5/8"	2799	1650	Surface	Circ
								5 1/2"	11380	1300	4800	Temp Surv
												SQ - 2600'
Yates Pet	Stonewall "WM" State #1	Oil	30	560 FS, 1980 FE	06/02/83	4953	2587-2680	13 3/4	545	500		
								8 5/8"	2485	1350	Surface	Circ
								5 1/2"	4953	700	1475	Temp Surv

WELLS WITHIN 1/2 MILE RADIUS OF
PROPOSED AVALON (DELAWARE) INJECTORS
EDDY COUNTY, NEW MEXICO

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)	TOC	HOW TOC DETERMINED
Yates Pet	Stonewall "WM" State #3	Oil	30	330 FS, 1980 FW	07/22/83	4865	2530-2622	13 3/8"	545	650		
							3422-3602	8 5/8"	2470	550	Surface	Circ
								5 1/2"	4864	500	2430	CBL
Yates Pet	Stonewall "WM" State #2	Inact. Oil	30	450 FS, 990 FE	08/07/84	5450	4960-5216	13 3/8"	546	550	Surface	Circ
								8 5/8"	2410	1050	Surface	Circ
								5 1/2"	4960	750	1500	Temp Surv
Yates Pet	Stonewall "WM" State #4	Oil	30	330 FS, 990 FW	11/22/83	4860	2524-2727	20"	40	- - -		
							3620-3671	13 3/8"	535	500	Surface	Circ
								8 5/8"	2642	1300	Surface	Circ
								5 1/2"	4860	750	600	CBL
Yates Pet	Stonewall "WM" State #5	Oil	30	1650 FS, 1980 FW	11/10/83	4900	3330-3367	13 3/8"	535	600	Surface	Circ
							3487-3515	8 5/8"	2404	1355	Surface	Circ
							3570-3576	5 1/2"	4900	700	930	CBL
Yates Pet	Stonewall "YE" State #1	Oil	30	1650 FS, 1980 FE	12/29/83	4950	2595-2732	20"	40	- - -		
								13 3/8"	543	550	Surface	Circ
								8 5/8"	2415	900	Surface	Circ
								5 1/2"	4950	750	<2100	CBL
Yates Pet	Stonewall "EP" State #5	Oil	30	2310 FN, 990 FW	03/14/84	4870	3361-3730	13 3/8"	544	500		
							4142-4346	8 5/8"	2420	1600	Surface	Circ
								5 1/2"	4870	800	880	CBL
Yates Pet	Stonewall "WM" State #6	Oil	30	1650 FS, 990 FW	12/27/83	4860	3349-3527	20"	40	- - -		
								13 3/8"	535	550	Surface	Circ
								8 5/8"	2410	800	Surface	Circ
								5 1/2"	4860	800	190	CBL
Yates Pet	Stonewall "EP" State #7	Oil	30	990 FNL, 990 FWL	01/19/84	5107	4979-4983	20"	40	- - -		
								13 3/8"	538	500	Surface	Circ
								8 5/8"	2372	1120	Surface	Circ
								5 1/2"	5100	900	<2300	CBL
Yates Pet	Stonewall "EP" State #6	Gas	30	990 FNL, 2080 FWL	04/20/85	5100	4983-4992	13 3/8"	537	400	Surface	Circ
								8 5/8"	2469	1725	Surface	Circ
								5 1/2"	5098	600	1950	CBL
Yates Pet	Stonewall "EP" State #8	Oil	30	2310 FN, 1980 FW	04/04/84	5303	3384-3412	13 3/8"	540	425	Surface	Circ
							3434-3541	8 5/8"	2404	950	Surface	Circ
							3622-3688	5 1/2"	5303	750	1890	CBL

WELLS WITHIN 1/2 MILE RADIUS OF
PROPOSED AVALON (DELAWARE) INJECTORS
EDDY COUNTY, NEW MEXICO

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)	TOC	HOW TOC DETERMINED
Exxon Corp.	Hondo-State Com #1	Gas	32	1980 FN, 660 FW	05/02/77	11475	10385-10705	13 3/8"	565	800		
								9 5/8"	2790	1750	Surface	Circ
								5 1/2"	11475	825	2433	Calculated
										+sqz w/ 1200 sx		
Maralo	Keystone #1	Gas	32	1980 NL, 1980 FEL	01/25/78	11600	6298-6503	13 3/8"	608	695		
								8 5/8"	3010	1100	Surface	Circ
								4 1/2"	11600	875	5678	Calculated
Exxon Corp.	Hondo "A" State #1	Oil	32	660 FN, 660 FW	02/14/83	4050	2654-2709	8 5/8"	610	400		
								5 1/2"	4042	780	190	Temp Survey
Exxon Corp.	Hondo "A" State #3	Oil	32	1980 FS, 610 FW	05/24/83	4050	2506-2598	13 3/8"	590	880		
								8 5/8"	2410	1450	Surface	Circ
								5 1/2"	4050	550	1292	Calculated
Exxon Corp.	Hondo "A" State #2	Oil	32	1980 FN, 330 FW	03/05/83	4047	2605-2620	8 5/8"	610	400		
							2640-2660	5 1/2"	4047	770	Surface	Circ
							3622-3636					
Exxon Corp.	Hondo "A" State #4	Oil	32	660 FS, 330 FW	06/12/83	3808	2585-2620	13 3/8"	590	800		
								8 5/8"	2445	1330	Surface	Circ
								5 1/2"	3808	450	1551	Calculated
Exxon Corp.	Hondo Fee #2	Oil	32	1980 FS, 1650 FW	07/15/83	2813	2542-2556	13 3/8"	588	630		
							2602-2612	8 5/8"	2422	1300	Surface	Circ
							2628-2640	5 1/2"	2813	135	2136	Calculated
Maralo Inc	Keystone #2	- - -	32	1980 FSL, 1980 FEL	08/29/94	6700	6307-6514	13 3/8"	502	875		
								8 5/8"	2557	1300	Surface	Circ
								5 1/2"	6700	890	2236	Calculated
Maralo Inc	Keystone #4	- - -	32	1650 FNL, 1980 FWL	01/22/95	6650	6283-6484	13 3/8"	504	550		
								8 5/8"	2518	1200	Surface	Circ
								5 1/2"	6650	750	2650	Temp Survey
Maralo Inc	Keystone #5	- - -	32	660 FNL, 1980 FEL			6331-6523	13 3/8"	530	550		
								8 5/8"	2500	950	Surface	Circ
								5 1/2"	6680	630	2470	Temp Survey

WELLS WITHIN 1/2 MILE RADIUS OF PROPOSED AVALON (DELAWARE) INJECTORS EDDY COUNTY, NEW MEXICO

OPERATOR	WELL NAME	STATUS	SECT. #	FOOTAGE	DATE DRILLED	DEPTH	COMPLETION (PERFS)	CSG	DEPTH	CMT (SX)	TOC	HOW TOC DETERMINED
T-20-S, R-27-E												
MWJ Prod.	State "GWA" #1	Oil	36	2180 FS, 660 FE	12/10/80	4845	4724-4766	13 3/8"	410	400		
								8 5/8"	2405	1200	Surface	Circ
								5 1/2"	4845	600	2270	Temp Survey
MWJ Prod.	State "GWA" #2	Oil	36	660 FS, 660 FE	09/13/84	4825	4367-4373	13 3/8"	502	500		
								8 5/8"	2400	1350	1480 T. S.	Final TOC @ 833'
								5 1/2"	4825	550	2620	Temp Survey
Yates Pet.	Citdel "ZG" #1	Gas	36	330 RN, 330 FE	08/03/84	5100	4871-4880	13 3/8"	408	325		
							5023-5026	8 5/8"	2390	800	Surface	Circ
								4 1/2"	5100	710	<2100	CBL
Premier Prod.	Eddy "FV" State Com #1	Gas	25	1980 FN, 990 FE	05/12/76	11450	10014-10028	20"	30	- - -		
								13 3/8"	642	650		
								9 5/8"	3050	1350	1017	Calculated
								5 1/2"	11450	1070	6084	Calculated
Premier Prod.	Eddy "FV" State #3	Inact. Oil	25	660 FS, 330 FE	04/29/84	4975	2710-2716	13 3/8"	500	500		
							2723-2725	8 5/8"	2450	1800	Surface	Calculated
							2738-2740	5 1/2"	4975	800	963	Calculated
T-21-S, R-27-E												
Exxon Corp.	Burton Flat "Sec 6" St #1	Inact. Oil	6	660 FNL, 660 FEL	02/19/87	5500		13 3/8"	457	600		
								8 5/8"	2599	1300	Surface	Circ
								5 1/2"	5500	1000	1050	Temp Survey
Exxon Corp.	Burton Flat "Sec 6" St # 3	Inact. Oil	6	660 FN, 1980 FE	07/27/84	6100	4642-4652	13 3/8"	463	600		
								9 5/8"	2500	1500	Surface	Circ
								7"	6100	1575	Surface	Circ
Exxon Corp.	Yates "C" Federal #35	Disposal	5	563 FNL, 560 FEL	10/30/85	3110	2702-2898	13 3/8"	629	950		
							2950-3098	8 5/8"	2592	1300	Surface	Circ
								5 1/2"	3110	550	Surface	Circ

- - - = Information not available

Data Source: Petroleum Information, Scout Tickets, Well Files

AVALON (DELAWARE) UNIT

FRESH WATER WELLS

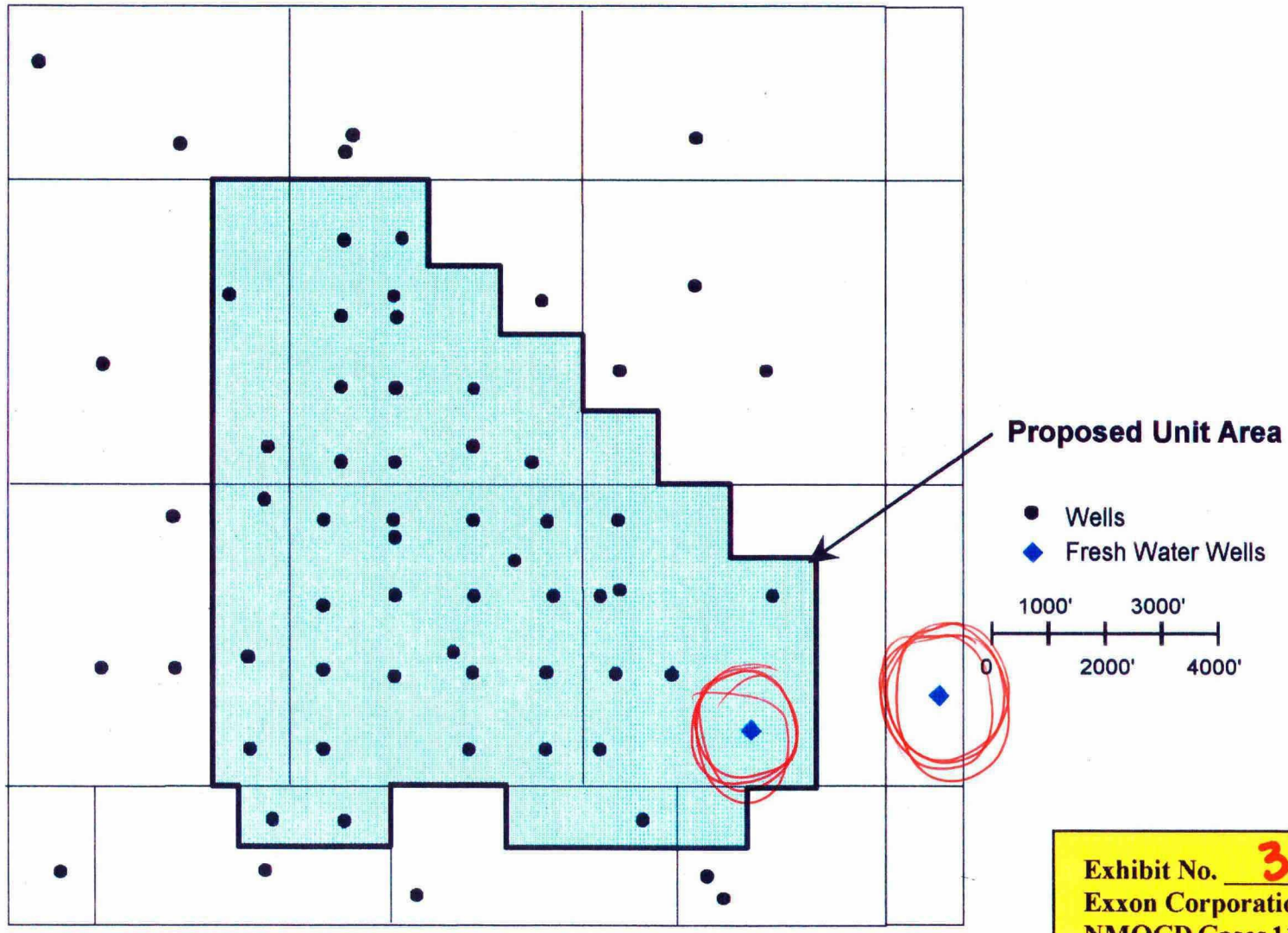


Exhibit No. 34
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

Laboratory Services, Inc.
1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

WATER ANALYSIS

COMPANY	Exxon Company USA
SAMPLE	Riggs/Hood
SAMPLED BY	Exxon
DATE TAKEN	6-6-95 7:00 AM
REMARKS	

Barium as Ba	0.00	
Carbonate alkalinity PPM	0	
Bicarbonate alkilinity PPM	116	
pH at Lab	7.02	
Specific Gravity @ 60° F	1.004	
Magnesium as Mg	1,218	
Total Hardness as CaCO3	2,100	
Chlorides as Cl	372	
Sulfate as SO4	2,625	
Iron as Fe	0.10	
Potassium	0.31	
Hydrogen Sulfide	0.00	
Resistivity Ohms		22.2° C
Total Dissolved Solids	2,040	
Calcium as CA	882	
Nitrate	17.60	

Results reported as Parts per Million unless stated

Langelier Saturation Index -0.01

Analysis by Rolland Perry
Date: 06-07-95

Exhibit No. 35
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

Laboratory Services, Inc.
1331 Tasker Drive
Hobbs, New Mexico 88240

Telephone: (505) 397-3713

WATER ANALYSIS

COMPANY Exxon Company USA

SAMPLE Don Rains
SAMPLED BY Exxon

DATE TAKEN 06-05-95
REMARKS

Barium as Ba	0.00	
Carbonate alkalinity PPM	0	
Bicarbonate alkilinity PPM	144	
pH at Lab	7.06	
Specific Gravity @ 60° F	1.004	
Magnesium as Mg	1,376	
Total Hardness as CaCO3	2,372	
Chlorides as Cl	760	
Sulfate as SO4	2,500	
Iron as Fe	0.65	
Potassium	0.47	
Hydrogen Sulfide	0.00	
Resistivity Ohms		22.2° C
Total Dissolved Solids	2,720	
Calcium as CA	996	
Nitrate	15.40	

Results reported as Parts per Million unless stated

Langelier Saturation Index +0.19

Analysis by Rolland Perry
Date: 06-07-95

AVALON (DELAWARE) UNIT

RESERVES BY TRACT*

TRACT	REMAINING PRIMARY RESERVES	WATERFLOOD RESERVES	TERTIARY RESERVES
1	0.00	0.00	203.90
2	741.80	4,368.20	18,995.00
3-A	0.00	345.10	530.60
3-B	43.40	403.60	1,693.00
3-C	0.00	0.80	446.70
3-D	33.40	373.30	1,045.90
3-E	0.00	0.00	362.50
4-A	0.00	0.00	852.50
4-B	0.00	0.00	247.40
5-A	53.40	368.10	1,425.90
5-B	19.30	174.50	1,189.70
5-C	33.80	741.50	2,177.20
5-D	40.30	698.40	2,009.30
5-E	20.20	157.50	966.20
5-F	0.00	69.30	481.00
6	0.00	0.00	1,626.00
7	0.00	0.00	427.60
8	0.70	0.00	165.80
9	0.00	0.00	444.30
10	202.80	499.40	3,350.90
11	3.10	69.70	1,050.50
12	0.00	0.00	191.10
TOTAL	1,192.20	8,269.40	39,883.00

RESERVE DATA
UNITS ARE THOUSAND OF BARRELS

* From Exhibit D in the Unit Agreement.

Exhibit No. 36
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

EQUITY FORMULA SUMMARY

- **Tract participation = 25% (Primary) + 50% (Secondary) + 25% (Tertiary)**

  Where: Primary = Tract Remaining Primary Reserves as of 1/1/93
  Secondary = Tract Waterflood Reserves
  Tertiary = Tract CO_2 Reserves

- **Reserve Weighting Rationale**

  2% recovery Primary: Small reserves, but highest value per barrel with lowest risk (already developed, established decline)

  18% Secondary: Main objective of unit, large reserves, low risk (same project area as primary, moderate development and operating costs)

  80% Tertiary: Largest reserve target, but lowest value per barrel with highest risk (large expansions, high development and operating costs, very sensitive to future pricing)

Exhibit No. 37
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

EFFECT OF PROPOSED UNIT ON PREMIER

- **Premier Tracts Cumulative Production = 5,100 BO**
- **Premier Without Unit**
  - Current Production = 0 BOPD
  - Remaining Continued Operations Reserves = 0 BO
- **Premier Share With Unit**
  - 1% of Future Production
  - Remaining Primary Reserves (1/1/95) = 8,000 BO
  - Primary + Secondary = 90,000 BO
  - Primary + Secondary + Tertiary = 489,000 BO

Exhibit No. 38
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

AVALON (DELAWARE) UNIT

WATERFLOOD PROJECT AREA

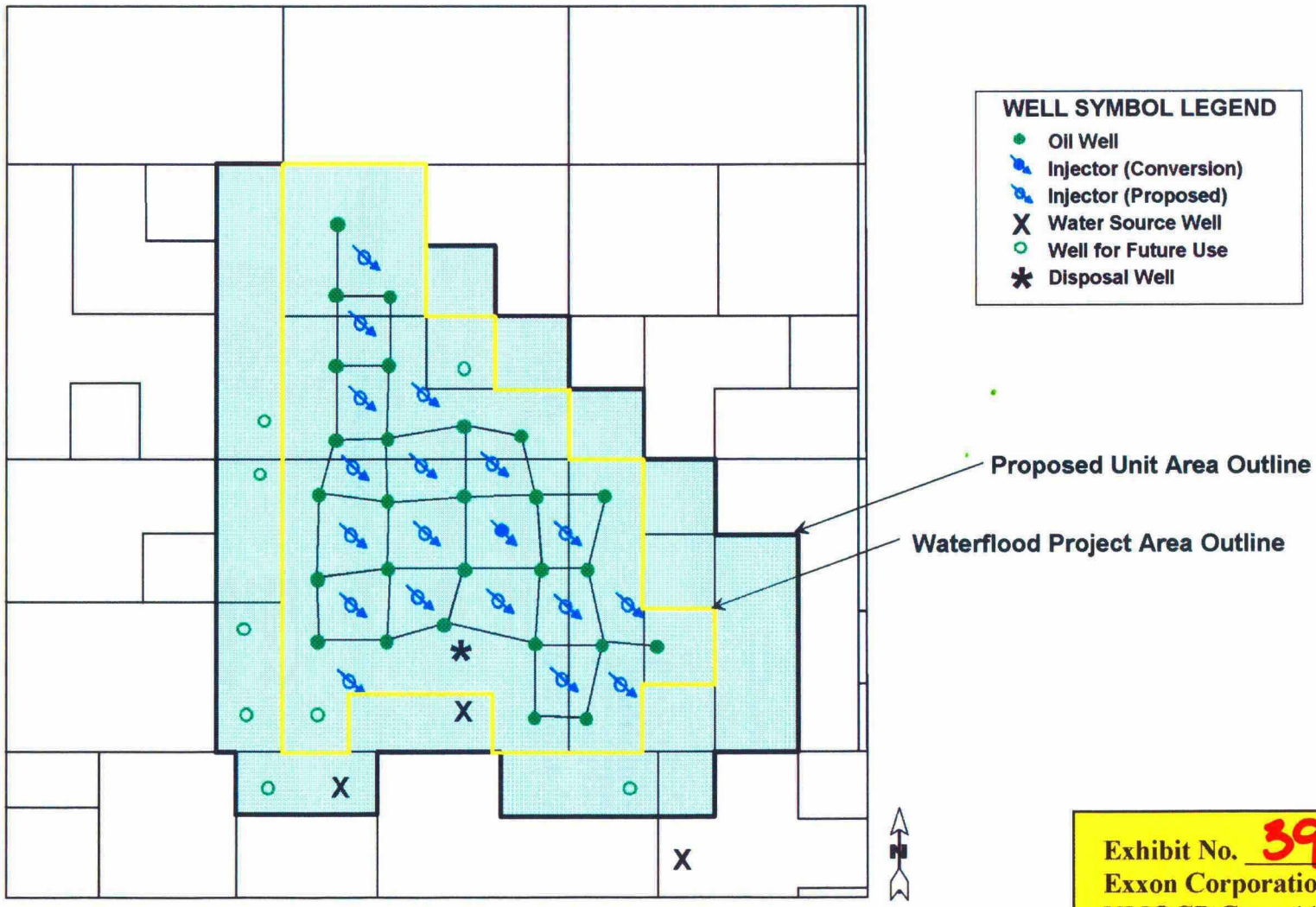


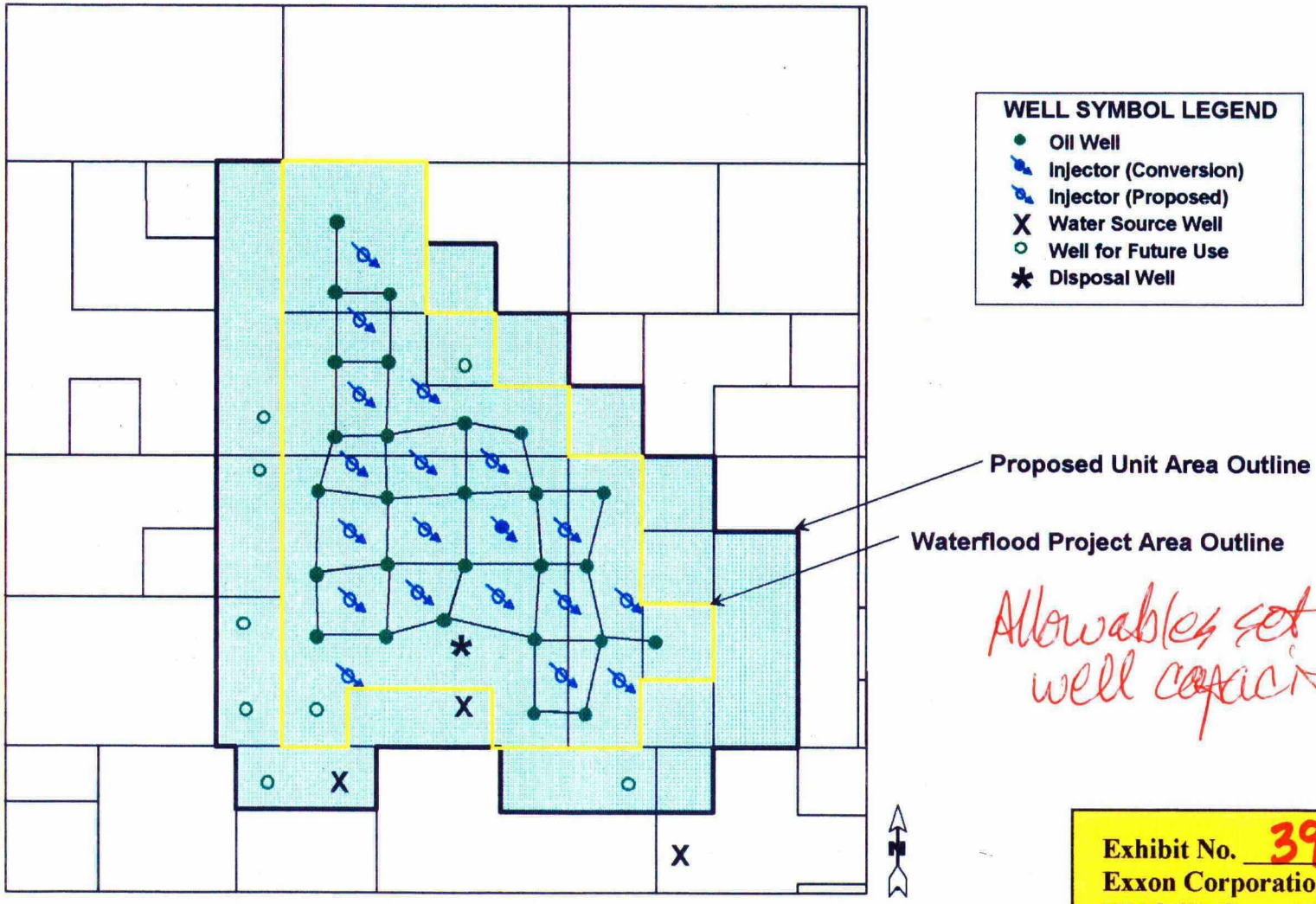
Exhibit No. 39
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

NMOCD Hearing

June, 1995

AVALON (DELAWARE) UNIT

WATERFLOOD PROJECT AREA



Allowables set @ well capacities

NMOCD Hearing

June, 1995

Exhibit No. 39
Exxon Corporation
NMOCD Cases 11297 & 11298
Hearing Date: June 29, 1995

EXXON
SURVEYED LOCATIONS

MIDLAND MAP
PERMITTED LOCATIONS

500 250 0 500 1000 1500

Plot Scale: 1" = 500'

EXXON COMPANY, U.S.A.
A DIVISION OF EXXON CORPORATION
PRODUCTION DEPARTMENT
MIDLAND PRODUCTION ORGANIZATION

I HEREBY CERTIFY TO THE BEST OF MY KNOWLEDGE, INFORMATION AND BELIEF THAT THIS PLAT CORRECTLY REFLECTS THE CONDITIONS AS THEY EXIST ACCORDING TO A SURVEY MADE ON THE GROUND.

REGISTERED PROFESSIONAL SURVEYOR NO. 7062

REGISTERED PROFESSIONAL LAND SURVEYOR

AVALON AREA CONFLICTING WELL POSITIONS
SECTION 19, T20S, R28E, N.M.P.M.
AVALON (DELAWARE) FLD. EDDY CO., N.M.

DRAWN M.L.HOSTAS	REVISION DATE –	SCALE 1"=500'	BOOK: XX	FILE NO.
ENGR. SECTION SURVEY GROUP	BY –	DATE 6/14/95	PAGE: XX	A10975

Exhibit No. 40
Exxon Corporation
NMOCD Cases 11297 & 1129
Hearing Date: June 29, 1995