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December 14, 1993

State of New Mexico
Energy, Minerals and Natural Resources Department
Oil Conservation Division
PO Box 2088
Santa Fe, New Mexico 87504

Re: The Wiser Oil Company
Application for Qualification of EOR Projects
Maljamar Grayburg Unit
Maljamar Grayburg San Andres Pool
Lea County, New Mexico

10896

Gentlemen:

The Wiser Oil Company hereby applies for qualification of the expansion of an existing enhanced oil recovery project for the recovered oil tax rate pursuant to the New Mexico "Enhanced Oil Recovery Act" (Laws 1992, Chapter 38, Section 1 through 5) and as implemented by Order No. R-9708. This project is the Maljamar Grayburg Unit, Maljamar Grayburg San Andres Pool in Lea County, New Mexico.

Following is the pertinent information pertaining to this Application and follows the procedure set out in Paragraph D of Exhibit "A" of Order No. R-9708.

D. 4. a. The operator is The Wiser Oil Company, PO Box 1412, Artesia, NM 88211-1412, phone number 505/748-3352.

b. 1. A plat outlining the project area is attached "Exhibit A".

2. The project area is as follows: SW/4 NW/4, NW/4 SW/4 Section 2; NE/4, SE/4, SW/4 Section 3; S/2 NE/4, NW/4, SW/4, SE/4 Section 4; E/2 Section 8; Section 9; Section 10; SW/4, S/2 SE/4 Section 11; SW/4 Section 14; NE/4 Section 15; Township 17S, Range 32 E, Lea County, New Mexico.

3. There are 3280 acres in the project area.

4. The subject pool and formation is Maljamar Grayburg San Andres.

c. 1. The Maljamar Grayburg Unit was unitized and approved under Order No. R-3177 dated January 18, 1967.

d. 1. Produced water and make up (fresh) water as required will be injected.

2. Maljamar Grayburg Waterflood Project, original Order No. R-1538 dated November 27, 1959, and subsequent Orders No. R-2777 dated October 14, 1964, R-3035 dated February 9, 1966, R-3178 dated January 18, 1967 .

e. 1. a. Present producing wells are as follows: Maljamar Grayburg Unit Wells No. 1, 2, 4, 5, 8, 10, 15, 17, 19, 21, 23, (TA), 25 (TA), 27, 29, 30, 31, 35 (TA), 39 (TA), 41, 43, 45, 47, 53 (SI), 57, 59 (TA), 61, 63 (TA), 67, 70, 72, 74, and 77.

b. Proposed producing wells are as follows: Maljamar Grayburg Unit Wells No. 79, 80, 81, 85, 86, 87, 88, 89, 90, 91, 92, 93, 95, 96, 98, 99, 100, 101, 106, 107, 108, 109, 110, 111, 112 and 122.

2. a. Present injection wells are as follows: Maljamar Grayburg Unit Wells No. 22 and 78.

b. Proposed injection wells are as follows: Maljamar Grayburg Unit Wells No. 2, 4, 5, 6, 8, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 25, 26, 27, 28, 34, 35, 36, 51, 52, 53, 54, 56, 57, 58, 59, 60, 78, 150 and 151.

3. The estimated capital cost of additional facilities is $755 M.

4. The estimated total project cost is $10040 M.

5. The estimated total value of the additional production that will be recovered as a result of this project is $24776 M.

6. The anticipated date for commencement of injection is January 1, 1994.

7. The type of fluid to be injected is produced water and make up (fresh) water. The anticipated volume of injection is 250 BWPD/well.

8. Waterflood operations under Order No. R-1538, in the Maljamar Grayburg Unit were curtailed in 1973-1975. Injection for disposal of produced water has continued to the present. An Independent Reservoir Engineering study conducted in June 1992 by Don Hunter of T. Scott Hickman & Associates, Inc., Midland, Texas, (copy attached) indicates that significant oil reserves remain to be recovered in the Unit area. Recovery of these additional reserves will involve reducing the well spacing to 20 acres per well (from 40 acres) and reinstitution of waterflooding operations on 40 acre 5-spot patterns instead of 80 acre 5-spot patterns.

   The initial two phases of re-development will involve drilling 26 20 acre infill producing wells, and preparing 36 wellbores for injection (redrill 3 wells, convert 19 existing wellbores, and utilizing 14 other wellbores). It is anticipated that this work will be completed by December 31, 1996.

f. Production data and other supporting data to show the production history and production forecast of oil, casinghead gas and water from the project area is given in the attached reservoir engineering study.

CERTIFICATION:

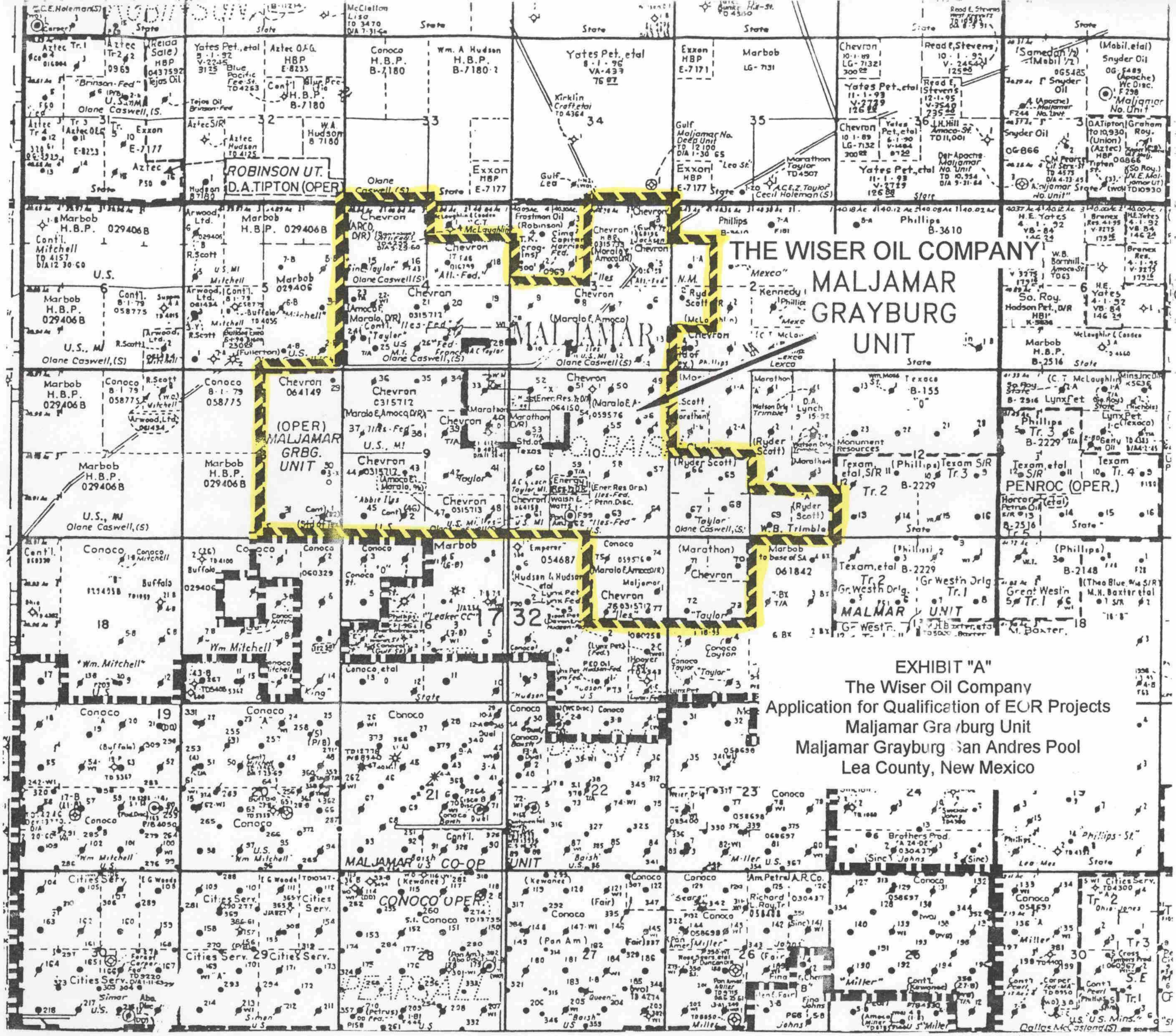
I hereby certify that the information stated above is true and correct to the best of my knowledge.

Perry L. Hughes

Perry L. Hughes, Agent for
The Wiser Oil Company

12/15/93
Date

cc: Jerry Sexton w/attachments



THE WISER OIL COMPANY
MALJAMAR
GRAYBURG
UNIT
EXHIBIT "A"
The Wiser Oil Company
Application for Qualification of EOR Projects
Maljamar Grayburg Unit
Maljamar Grayburg San Andres Pool
Lea County, New Mexico

REDEVELOPMENT STUDY

MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG - SAN ANDRES) FIELD
LEA COUNTY, NEW MEXICO

T. SCOTT HICKMAN & ASSOCIATES, INC.
PETROLEUM ENGINEERS

June 1, 1992

Mr. Perry Hughes
Quality Production Corp.
707 Shell Avenue
Midland, TX 70705

Dear Mr. Hughes:

Re: Maljamar Grayburg Unit
Lea County, New Mexico

In accordance with Mr. Hughes' request, we have evaluated the Proved crude oil and gas reserves as of June 1, 1992 attributed to Phase I and II redevelopment and expansion of injection in the Maljamar Grayburg Unit in Lea County, New Mexico. Infill drilling on 20 acre well spacing and injection expansion on 5-spot patterns is recommended. This plan will require the drilling of 26 producers and 3 injectors, conversion of 19 wells to injection, return of 15 injectors to active status and associated facility work. Economic projections indicate that a capital investment of 10,040 M$, exclusive of acquisition costs, will generate a future net revenue, after investment, of 24,776 M$ in 17 years for a 46% annualized rate of return to 100% working interest (82.58% net revenue interest). The results of this study are discussed in the attached report as outlined in the Table of Contents.

Net oil and gas reserves are estimated quantities of crude oil, natural gas and natural gas liquid attributed to the composite revenue interests being evaluated after deduction of royalty and/or overriding royalty interests. Future net revenue was adjusted for capital expenditures, operating costs, interest reversions, ad valorem taxes and wellhead taxes, but no consideration was given to Federal income taxes or any encumbrances that might exist against the evaluated interests. Present worth future net revenue shows the time value of money at certain discount rates, but does not represent our estimate of fair market value.

The classification of non-producing reserves as Proved Undeveloped is dependent upon establishing full scale injection according to the plan as recommended by this report. The Proved Undeveloped classification is also contingent upon the likelihood that the project will receive financing and proceed ahead in a timely manner. Any prolonged delays in execution of this project in the manner prescribed by this report could lead to a reclassification of these reserves.

Reserves were determined using industry-accepted methods including extrapolation of established performance trends, volumetric calculations and analogy to similar producing zones. The basis for the reserve determinations are presented in the attached report. Where applicable, the evaluator's own experience was used to check the reasonableness of the results.

In the preparation of this report, we have reviewed for reasonableness, but accepted without independent verification information furnished by Quality Production Corp. with respect to interest factors, current prices, log cross-sections and various other data. Production and injection data were obtained from commercial sources, public record, and operator's files. Well completion histories were also obtained from operator's files. The pricing and discount rate were applied at the direction of the client. The use of assumed rather than existing economic parameters affects both the cash flow projections by the difference in prices and expenses and also the reserve volumes by changing the economic limit at which production is terminated. The assumed pricing also has a major effect on the economic viability of non-developed potential and hence the volume of reserves that can be assigned to the non-producing categories.

We are qualified to perform engineering evaluations and do not claim any expertise in accounting, legal or environmental matters. As is customary in the profession, no field inspection was made of the properties nor have we verified that all operations are in compliance with any states and/or Federal conservation, pricing and environmental regulations that apply to them.

This study was performed using industry-accepted principles of engineering and evaluation that are predicated on established scientific concepts. However, the application of such principles involves extensive judgment and assumptions and is subject to changes in performance data, existing technical knowledge, economic conditions and/or statutory provisions. Consequently, our reserve estimates are furnished with the understanding that some revisions will probably be required in the future, particularly on new wells with little production history and for reserve categories other than Proved Developed Producing. Unless otherwise noted, we have based our reserve projections on current operating methods and well densities.

This report is solely for the information of and the assistance to Quality Production Corp. and their investors in evaluating the potential for infill drilling and/or pattern revisions in the Maljamar Grayburg Unit and is not to be used, circulated, quoted or otherwise referred to for any other purpose without the express written consent of the undersigned except as required by law. Persons other than those to whom this report is addressed shall not be entitled to rely upon the report unless it is accompanied by such consent. Data utilized in this report will be maintained in our files and are available for your use.

Yours very truly,

T. SCOTT HICKMAN & ASSOC., INC.

C. Don Hunter, P.E.

glb
attachments

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The reason for the premature shut-in of injection in the MGU may in part be due to suspected injectivity problems. Makeup water for the MGU is the Ogallala aquifer, the source for most of the waterflood projects in this field, including the highly successful Conoco MCA Unit. Accepted practice is to maintain a deoxygenated makeup water system, which may not have been accomplished in the MGU.

Production performance was adversely affected by the reduced injection volumes and injection water makeup volumes after 1974. However, in spite of inadequate injection volumes and inefficient pattern operations during most of the injection period, waterflood response has been satisfactory within certain areas of the Unit. Figure 11 is the Unit rate vs. time performance graph. Figure 12 is a map which shows peak waterflood oil response for each of the producers. As shown by the map, Areas "A" and "B" have experienced significant oil response. These areas also coincide with relatively high primary oil recoveries and net pay thickness. Figures 13 and 14 are the rate vs. time performance graphs for Areas A and B, respectively, which confirms the individual well oil response but is masked by the erratic injection histories. Figure 15 is the performance graph for Area C which also shows oil response to injection, but to a lesser degree. Figure 16 is a composite of average well response for producers within Areas A and B, normalized to date of initial oil response which shows significant but unsustained response due to insufficient injection support.

The MGU injection-withdrawals ratio of 1.13 which is significantly lower than is normal for a mature waterflood. The negative effects of reservoir heterogeneity has been compounded by completion procedures as evidenced by minimal workovers during the past 10 to 15 years of operation.

A cumulative total of 4,961 MSTB have been produced from the MGU as of March 1,1992. During February 1992, the MGU produced at a rate of 36 BOPD and 10 MCFD from 17 producers.(Table 1). Proved Developed Producing oil reserves as of May 1, 1992 are estimated at 84 MSTB.

REDEVELOPMENT PERFORMANCE PREDICTION

Remaining mobile oil in place for the total MGU area is estimated to be 11,796 MSTB at the effective date of June 1, 1992 as shown by Table 2 under item II. Utilizing a conformance factor of 0.6, the MGU maximum potential under Unit-wide 20-acre spacing 5-spot waterflood pattern redevelopment is estimated at 7,078 MSTB (Table 2).

We have made a feasibility study of redeveloping the MGU through 20 acre infill drilling and reestablishing closed pattern water injection and have estimated the economics for a two-phase redevelopment within areas of highest remaining mobile oil potential. Figure 17 is a map of remaining mobile oil on a pattern basis. The ten well Phase I program exploits the high mobile oil segments within Areas "A" and "B" through patterns positioned to optimize investment costs per reserve barrel. The ten well program is considered to be the minimum number of producing wells sufficient to provide a valid test of redevelopment feasibility.

The performance projection for redevelopment was based on analytical prediction techniques. Waterflood recovery was derived from volumetric calculation of remaining mobile oil within the pattern areas and from estimates of displacement efficiency as influenced by analogy. Producing rate projections were also influenced by results in analogous projects.

One of the analogous projects is the Conoco MCA Unit, which adjoins the southwest boundary of the MGU. The MCA Unit is a major Grayburg-San Andres waterflood and CO_2 project with cumulative oil production in excess of 101 MMBLS. The MCA Unit is productive in Grayburg dolomitic sands and San Andres dolomites that are equivalent interval to the producing interval in the MGU. However, the MCA Unit differs from the MGU not only by being significantly larger with an OOIP of 268 MMBLS, but also in its development history. During early primary depletion in 1942, gas injection was initiated which was successful in improving performance. Ultimate primary recovery aided by gas injection, was projected by Conoco to be 56 MMBLS or 21% of OOIP.

Water injection was initiated in 1963 and expanded to full 80-acre, 5-spot patterns by 1969. During 1970-73, 100 infill producers were drilled and waterflooding continued on inverted 9-spot patterns. Ultimate primary and secondary recovery was projected by Conoco to be 119 MMBBL or 44% OOIP.

Infill drilling occurred during active waterflood operations so incremental reserves attributed solely to infill drilling are difficult to assess. Best estimates of initial average rates for the 100 infill producers are in excess of 50 BOPD/well. Performance of the MCA Unit, through published technical engineering and geological reports, provided a basis for conformance factors and end-point saturation values used in MGU redevelopment prediction. Conoco established a CO_2 pilot during 1981-85 and expanded to full CO_2 development during 1988-89.

The Avon Turner "B" project is a depleted 40-acre 5-spot waterflood which was redeveloped with the drilling of 22 infill producing wells on 20-acre spacing during 1990-91. Production is from 3000 to 3600' in Grayburg and San Andres dolomitic sands. The net pay appears to be thicker than the MGU and the average primary recovery is higher. Core data indicates that pay quality is similar. Table 3 shows the comparative project performance between the Turner "B" project and the MGU. The 20-acre infill drilling project was designed to create 40-acre 5-spot patterns but the planned injection well conversions have not occurred. Initial oil rates for the 22 infill producers were high, averaging 95 BOPD/well. However, the deferral in injection well conversions caused inadequate injection support resulting in relatively sharp production declines. Ultimate oil recovery from the 22 infill wells is projected to average 55 MBBL/well under current reduced injection support, but four of the infill wells located within apparently pressured areas will achieve ultimate recoveries ranging from 100 to 150 MBBL/well. It is understood that the current operator plans to initiate the injection well conversions as originally planned.

Table 2 item II(b) is the recovery calculations summary for MGU Phases I and II. Remaining mobile oil at the effective date of June 1, 1992 is 4,208 MSTB. Recoverable oil is 2,525 MSTB, or 97 MSTB/pattern. This estimate is based on a volumetric recovery efficiency of 60%, derived from the evaluator's experience with similar projects. Producing rate forecasts were based upon rate-time performance comparison on an average well basis for infill well performance for analogous projects (Figure 18).

REDEVELOPMENT PLAN AND ECONOMICS

The twenty-six well redevelopment well schedule and preliminary investment schedules are set forth on Tables 4, 5 and 6. The Phase I and II areas are shown by Figure 19.

Investment costs for drilling, workovers and the re-establishment of injection and the projected operating costs are based on data furnished by QPC and supplemented by the evaluator's experience for similar projects. Investment costs do not include acquisition costs or costs of financing.

Initial water injection requirements of 2100-2200 BWPD are estimated for Phase I and 2500-2600 BWPD for Phase II.. The most likely water source will be the Ogallala aquifer. Chevron currently owns Ogallala water rights plus water wells and equipment on the east offsetting Section 1. These water rights are separate from MGU ownership and will permit the withdrawal of 215 ac-ft/year, or approximately 4569 BWPD, which should be adequate for Phase I and II requirements. QPC will acquire these rights as a separate entity and will offer to furnish makeup water to the MGU. For purposes of this evaluation, the cost to the MGU was estimated at \$.08/BBL.

The price and escalation scheme were applied at the direction of QPC. An initial oil price of \$17.50/BBL, after adjustments for gravity and grade, was held constant through 1992. An oil price of \$18.50/BBL was applied for 1993. Beginning January 1, 1994, oil pricing was escalated at 5 % per annum to a maximum of \$50/BBL. A starting gas price of \$1.00/MCF and held constant through 1992. A gas price of \$1.10/MCF was applied for 1993. Beginning January 1, 1994, gas pricing was escalated at 5% per annum to a gas price of \$5.00.

Lease operating expenses of \$1000/month for producer and \$650/month for injector were estimated by QPC based on anticipated operating conditions and include overhead. Expenses were escalated starting January 1, 1993 at 4% per annum until the primary product reached the maximum price. No equipment salvage value or costs were included for the property. Investments were not escalated at direction of QPC..

Incremental economics for the composite of Phases I and II indicate that a capital investment of 10,040 M\$ will generate a 10% discounted future net revenue of 11,138 M\$ resulting in a 45.7% rate of return and a 3.59 year payout. A summary of reserves and economics is shown by Table 7. The oil rate forecasts are shown by Figures 20, 21 and 22. Tables 8 through 10 are the reserves and cash flow projections for Total Proved,

Proved Developed Producing and Proved Undeveloped, respectively. Tables 11 and 12 are the summaries for Phases I and II, Proved Undeveloped categories, respectively. Figure 20 is the rate vs. time oil production forecast for the MGU. Figures 21 and 22 are the rate vs. time projections for Phase I and II, respectively.

The classification of non-producing reserves as Proved Undeveloped is dependent upon establishing full scale injection according to the plan as recommended by this report. The Proved Undeveloped classification is also contingent upon the likelihood that the project will receive financing and proceed ahead in a timely manner. Any prolonged delays in execution of this project in the manner prescribed by this report could lead to a reclassification of these reserves.

Table 1

Project Performance Summary
MALJAMAR UNIT
Maljamar (Grayburg-San Andres) Field
Lea County, New Mexico

Initial Completion Date	1944
Unitization Date	23-Jun-66
Initial Water Injection Date	1962
Total Well Completions:	
Producers	43
Injectors	35
Total	78
Active Well Completions @ 3-1-92	
Producers	17
Injectors	2
Total	19
Unitized Area (Acres)	3350
Average Spacing (Acres/Well)	40
OOIP (MSTB)	40368
Cumulative Oil Production @ 3-1-92 (MBBL)	4961
Cumulative Oil Production @ 3-1-92 (BBL/acre)	1481
Average Oil Cumulative Per Well (MBBL)	64
Feb 92 Oil Rate- Total Unit (BOPD)	36
Feb 92 Oil Rate- Per Well (BOPD)	2.1
Ultimate Primary Oil Recovery (MBBL)	2255
Ultimate Primary Oil Recovery (BBL/Acre)	673
Recovery Factor (%)	5.6
Average Oil Recovery Per Well (MBBL/Well)	29
Cumulative Secondary Oil Recovery @ 3-1-92 (MBBL)	2706
Ultimate Secondary Oil Recovery Under Current Mode (MBBL)	2793
Average Ultimate Secondary Per Well (MBBL)	65
Secondary : Primary Ratio	1.24
Ultimate Oil Recovery Under Current Mode (MBBL)	5048
Estimated Recovery Factor (%)	12.50
Remaining Oil Recovery Under Current Mode @ 6-1-92 (MBBL)	84
Cumulative Gas Production @ 3-1-92 (MMCF)	3662
Cumulative GOR (SCF/STB)	738
Feb 92 Gas Rate (MCFPD)	10
Feb 92 GOR (SCF/BBL)	289

Table 1

Project Performance Summary
MALJAMAR UNIT

Cumulative Water Production @ 3-1-92 (MBBL)	6197
Cumulative WOR (Volume/Volume)	1.25
Cumulative Watercut (%)	55.5
Feb 92 Water Rate (BWPD)	55
Feb 92 WOR (Volume/Volume)	1.53
Feb 92 Watercut (%)	60.5
Cumulative Water Injection @ 3-1-92 (MBBL)	18408
Cumulative Injection-Secondary Oil Recovery Ratio (STB/STB)	6.80
Cumulative Injection-Withdrawal Balance (RBBL/RBBL)	1.13
Feb 92 Injection Rate- Total Unit (BWPD)	53
Feb 92 Injection Rate- Per Well (BWPD)	27

TABLE 2

Recovery Calculation Summary
Maljamar Grayburg Unit
Lea County, New Mexico

Original Oil-in-Place, N

where A = Unit Area (Ac)
h = Net pay (ft)
$\varnothing$ = Porosity (dec.)
S_{wi} = Connate water saturation (dec.)
B_{oi} = Initial formation volume factor

$$N = 7758Ah\varnothing(1-S_{wi})/B_{oi}$$
$$= 7758(113530)(.10)(1-.45)/1.2$$
$$= 40{,}368 \text{ MSTB}$$

NOTE: This is an approximation of OOIP, calculated from currently available data base i.e. limited quantitative logs and core data

I <u>Ultimate Recoveries Under Current Mode of Operations</u>

Effective Date:	June 1, 1992
Cumulative Oil Production @ 6-1-92 (MSTB)	4965
Cumulative Recovery Factor (%)	12.3
Ultimate Primary Recovery (MSTB)	2255
Primary Recovery Factor (%)	5.6
Cumulative Secondary Recovery (MSTB)	2710
Ultimate Secondary Recovery (MSTB)	2793
Secondary:Primary Ratio	1.24
Combined Ultimate Primary plus Secondary (MSTB)	5048
Recovery Factor (%)	12.5

TABLE 2

II <u>Redevelopment Potential Under Phase I and II Redevelopment</u>

Effective Date: June 1, 1992

Estimated Oil Saturation at June 1, 1992, S_{oi}

where:

RF = Recovery Factor at June 1, 1992

= 4965/40368

= .123

B_o = Formation Volume Factor at Estimated current bottom-hole pressure

$S_o = (1\text{-RF})(B_o/B_{oi})(1\text{-Sw})$

$= (1-.123)(1.12/1.2)(1-.45)$

$= 0.450$

(a) Unit Remaining mobile oil at June 1, 1992; N_m

where:

S_{or} = Residual oil saturation, dec.

$N_m = 7758Ah\varnothing(S_o - S_{or})/B_o$

$= 7758(113{,}530)(0.10)(.45-.30)/1.12$

= 11,796 MSTB

Estimated maximum potential recoverable oil, based on estimates of volumetric sweep efficiency , E_v:

where:

Npw = recoverable oil

Ev = volumetric sweep efficiency assuming 5-spot patterns on 20-acre well spacing

$N_{pw} = N_m E_v$

$= (11{,}796)(0.6)$

= 7078 MSTB

TABLE 2

(b) Phase I and II areas remaining mobile oil at June 1, 1992, from 26-well infill drilling program

Effective Date:	June 1, 1992
Cumulative Unit Oil Production at June 1, 1992 (MSTB)	4965
N_m, (MSTB)	4208
Incremental Recovery at $E_V = 0.6$ (MSTB)	2525
Recovery Per Producer Pattern (MSTB)	97
Ultimate Unit primary and secondary recovery (MSTB)	7573
Ultimate Recovery Factor (%)	18.8

TABLE 3

Comparison of Similar Reservoirs
Pre-Infill Drilling Waterflood Performance
Maljamar (Grayburg-San Andres) Field

	Maljamar Unit	Avon Turner-B
Effective Date:	3/1/92	1/1/90
Total Well Completions:		
Producers	43	33
Injectors	35	16
Total	78	49
Injector-Producer Ratio	1.23	0.49
Unitized Area (Acres)	3350	1320
Average Spacing (Acres/Well)	40	40
OOIP (MSTB)	40368	*NA
Cumulative Oil Production (MBBL)	4961	4103
Cumulative Oil Production (BBL/acre)	1481	3109
Average Oil Cumulative Per Well (MBBL)	64	84
Ultimate Primary Oil Recovery (MBBL)	2255	2059
Ultimate Primary Oil Recovery (BBL/acre)	673	1560
Ultimate Primary Recovery Factor (%)	5.6	*NA
Average Oil Recovery Per Well (MBBL)	29	42
Cumulative Secondary Oil Recovery (MBBL)	2706	2044
Ultimate Secondary Oil Recovery (MBBL)	2793	2044
Average Ultimate Secondary Per Well (MBBL)	65	62
Secondary:Primary Ratio	1.24	1.00
Ultimate Oil Recovery (MBBL)	5048	4103
Estimated Recovery Factor (%)	12.5	-
Cumulative Water Production (MBBL)	6197	4747
Cumulative WOR	1.25	1.16
Cumulative Watercut (%)	55.5	53.6
Cumulative Water Injection (MBBL)	18408	24482
Cumulative Injection-Secondary Oil Ratio (STB/STB)	6.8	11.9
Cumulative Injection-Withdrawal Balance (RBBL/RBBL)	1.13	2.67

*NA= data not available

TABLE 4

PROPOSED INVESTMENT SCHEDULE
AND WELL SUMMARY
MALJAMAR UNIT REDEVELOPMENT PLAN
PHASE I

	Drill Producer			INJECTION WELL WORK						Facility		Cum
		Unit		Drill		Convert		Workover			Total	Total
Inv	Well	Loc	Inv	Well	Inv	Well	Inv.	Well	Inv.	Inv	Inv.	Inv
Date	No.	S-G	($M)	No.	($M)	No.	($M)	No.	($M)	($M)	($M)	($M)
D92	95	3-O	260								260	260
D92										100	100	360
D92	106	10-C	260								260	620
J93										80	80	700
J93										100	100	800
J93	96	3-N	260			12	50			25	335	1135
J93						51	80			25	105	1240
J93						53	35			25	60	1300
F93	87	4-E	260			10	35			25	320	1620
F93								22	20		20	1640
F93								20	20		20	1660
F93	88	4-K	260					16	35		295	1955
F93								50	150		150	2105
F93	93	3-J	260					54	125		385	2490
M93						8	35			25	60	2550
M93				11X	200	25	80	26	80	25	385	2935
M93	92	3-K	260					52	125		385	3320
M93						21	35			25	60	3380
M93				7X	200	6	80			25	305	3685
M93	89	4-J	260								260	3945
Ap93	101	4-M	260			27	80	13	100	25	465	4410
Ap93											0	4410
Ap93	79	4-D	260			15	35	36	80	25	400	4810
TOTAL	10		2600	2	400	10	545	9	735	530	4810	

TABLE 5

PROPOSED INVESTMENT SCHEDULE
AND WELL SUMMARY
MALJAMAR UNIT REDEVELOPMENT PLAN
PHASE II

	Drill Producer			INJECTION WELL WORK: Drill		Convert		Workover		Facility		Cum Total
Inv Date	Well No.	Unit Loc S-G	Inv ($M)	Well No.	Inv ($M)	Well No.	Inv. ($M)	Well No.	Inv. ($M)	Inv ($M)	Inv. ($M)	Inv ($M)
Nv93	107	10-B	260								260	260
Nv93											0	260
Nv93	111	10-G	260								260	520
Dc93	86	4-F	260								260	780
Dc93											0	780
Dc93	108	10-A	260			17	35			25	320	1100
Dc93	90	27-I	260			19	75			25	360	1460
Jn94	85	4-G	260								260	1720
Jn94								56	75		75	1795
Jn94	91	3-L	260								260	2055
Jn94	112	10-F	260								260	2315
Fb94	98	27-P	260			59	35	60	70	25	390	2705
Fb94	110	10-H	260			57	35			25	320	3025
Mr94	81	3-G	260			4	35			25	320	3345
Mr94	80	3-H	260			5	35			25	320	3665
Mr94				58X	200	2	35			25	260	3925
Ap94	99	27-O	260			35	40			25	325	4250
Ap94	100	27-N	260			49	40	34	25	25	350	4600
Ap94								28	60		60	4660
My94	109	10-I	260					18	50		310	4970
My94	122	27-K	260								260	5230
TOTAL	16		4160	1	200	9	365	5	280	225	5230	

TABLE 6

PROPOSED INVESTMENT SCHEDULE AND WELL SUMMARY

MALJAMAR UNIT REDEVELOPMENT PLAN

PHASES I & II

	Drill Producer		INJECTION WELL WORK							Cum
			Drill		**Convert**		**Workover**		**Facility**	Total
	No. wells	Inv ($M)	No. wells	Inv ($M)	No. wells	Inv. ($M)	No. wells	Inv. ($M)	Inv ($M)	Inv ($M)
TOTAL	26	6760	3	600	19	910	14	1015	755	10040

Well Status Under Redevelopment:

PRODUCERS		INJECTORS	
Drill	26	Drill	3
Existing	0	Convert	19
		Existing	14
Total	26	Total	36

Table 7

Summary of Economics - Escalated Case
Redevelopment Project
Maljamar Grayburg Unit
Lea County, New Mexico

	Proved Developed Producing	Proved Undeveloped	Total Proved
Effective Date:	....	1-Jun-92	....
Interest:			
Working , %	....	100.00	....
Net Revenue, %	....	82.58	....
Gross Reserves:			
Oil, MBBL	84	2525	2609
Gas, MMCF	42	1263	1305
Net Reserves:			
Oil, MBBL	70	2085	2155
Gas, MMCF	34	1043	1077
Net Operating Revenue, M$	1559	51003	52562
Expenses:			
Wellhead Taxes, M$	103	3385	3488
Operating Costs, M$	826	12801	13627
Total, M$	929	16186	17115
*Investments, M$	0	10040	10040
Future Net Revenue:			
Undiscounted, M$	629	24776	25405
Discounted @ 10%, M$	431	11138	11569
**Payout , Years	-	3.59	-
Annualized Rate of Return, %	-	45.66	-
Income/Investment Ratio:			
Undiscounted	-	3.47	-
Discounted @ 10%	-	2.25	-

*Investments do not include Unit acquisition costs of 1.25MM$
**Payout Calculated From Effective Date

TOTAL MALJAMAR GRAYBURG UNIT (PROVED)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.

TABLE 8

DATE: 05/22/92
TIME: 13:34.31
FILE: TOT
GET#: 0

R E S E R V E S   A N D   E C O N O M I C S

MALJAMAR GRAYBURG UNIT
ESCALATED - W/O ACQ COSTS

AS OF JUNE 1, 1992

T. SCOTT HICKMAN & ASSOC
PETROLEUM ENGINEERS

-END-	---GROSS PRODUCTION---		----NET PRODUCTION----		--PRICES---		--------OPERATIONS, M$--------					10.00 PCT
MO-YR	OIL, MBBL	GAS, MMCF	OIL, MBBL	GAS, MMCF	OIL $/B	GAS $/M	NET OPER REVENUES	SEV+ADV+ WF TAXES	NET OPER EXPENSES	CAPITAL COSTS, M$	CASH FLOW BTAX, M$	CUM. DISC BTAX, M$
12-92	7.506	3.754	6.198	3.100	17.50	1.00	111.565	7.404	54.656	500.000	-450.495	-426.688
12-93	116.528	58.264	96.229	48.115	18.50	1.10	1833.163	121.677	445.599	4810.000	-3544.113	-3701.968
12-94	341.981	170.990	282.408	141.204	19.00	1.13	5524.491	366.688	834.188	4730.000	-406.385	-4170.141
12-95	349.734	174.867	288.810	144.405	19.95	1.19	5932.213	393.750	877.116	.000	4661.347	-694.393
12-96	297.318	148.658	245.526	122.761	20.94	1.25	5295.308	351.477	888.334	.000	4055.497	2054.693
12-97	253.412	126.707	209.268	104.634	21.99	1.31	4738.992	314.550	923.867	.000	3500.575	4211.896
12-98	218.483	109.241	180.423	90.211	23.09	1.37	4290.070	284.754	960.822	.000	3044.494	5917.483
12-99	188.798	94.399	155.910	77.954	24.25	1.44	3892.562	258.370	933.635	.000	2700.557	7292.854
12- 0	163.194	81.598	134.766	67.383	25.46	1.51	3532.899	234.496	970.978	.000	2327.425	8370.432
12- 1	141.106	70.553	116.525	58.263	26.73	1.59	3207.448	212.894	1009.819	.000	1984.735	9205.810
12- 2	122.044	61.022	100.785	50.392	28.07	1.67	2912.900	193.346	981.427	.000	1738.127	9870.884
12- 3	105.589	52.794	87.195	43.597	29.47	1.75	2646.126	175.636	979.682	.000	1490.808	10387.466
12- 4	91.412	45.706	75.488	37.744	30.94	1.84	2405.394	159.658	964.433	.000	1281.303	10794.652
12- 5	78.223	39.112	64.597	32.299	32.49	1.93	2161.276	143.455	931.299	.000	1086.522	11107.097
12- 6	53.189	26.594	43.924	21.962	34.12	2.03	1543.082	102.421	655.148	.000	785.513	11313.908
S TOT	2528.517	1264.259	2088.052	1044.024	23.27	1.38	50027.489	3320.576	12411.003	10040.000	24255.910	11313.908
REM.	80.034	40.017	66.092	33.046	37.24	2.21	2534.152	168.204	1216.884	.000	1149.064	11569.247
TOTAL	2608.551	1304.276	2154.144	1077.070	23.70	1.41	52561.641	3488.780	13627.887	10040.000	25404.974	11569.247

CUM.	4965.028	3664.589
ULT.	7573.579	4968.865

NET OIL REVENUES (M$)	51044.238
NET GAS REVENUES (M$)	1517.403
TOTAL REVENUES (M$)	52561.641

BTAX RATE OF RETURN (PCT)	47.92
BTAX PAYOUT YEARS	3.53
BTAX PAYOUT YEARS (DISC)	3.84
BTAX NET INCOME/INVEST	3.53
BTAX NET INCOME/INVEST (DISC)	2.30

PROJECT LIFE (YEARS)	17.131
DISCOUNT RATE (PCT)	10.000
GROSS OIL WELLS	46.000
GROSS GAS WELLS	.000
GROSS WELLS	46.000

---------PRESENT WORTH PROFILE---------

DISC RATE	PW OF NET BTAX, M$	DISC RATE	PW OF NET BTAX, M$
.0	25404.974	30.0	2497.095
2.0	21527.512	35.0	1540.503
5.0	16942.842	40.0	814.157
8.0	13448.150	45.0	254.705
10.0	11569.247	50.0	-181.236
12.0	9972.588	60.0	-795.830
15.0	7998.226	70.0	-1185.480
18.0	6416.794	80.0	-1435.616
20.0	5533.763	90.0	-1595.951
25.0	3779.034	100.0	-1696.783

MALJAMAR GRAYBURG UNIT (PDP)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.

TABLE 9

DATE: 05/22/92
TIME: 13:34.31
FILE: TOT
GET#: 1

R E S E R V E S   A N D   E C O N O M I C S

MALJAMAR GRAYBURG UNIT
ESCALATED - W/O ACQ COSTS

AS OF JUNE 1, 1992

T. SCOTT HICKMAN & ASSOC
PETROLEUM ENGINEERS

-END-	---GROSS PRODUCTION---		----NET PRODUCTION----		--PRICES---		--------OPERATIONS, M$--------					10.00 PCT
MO-YR	OIL, MBBL	GAS, MMCF	OIL, MBBL	GAS, MMCF	OIL $/B	GAS $/M	NET OPER REVENUES	SEV+ADV+ WF TAXES	NET OPER EXPENSES	CAPITAL COSTS, M$	CASH FLOW BTAX, M$	CUM. DISC BTAX, M$
12-92	7.506	3.754	6.198	3.100	17.50	1.00	111.565	7.404	54.656	.000	49.505	48.154
12-93	11.635	5.817	9.608	4.804	18.50	1.10	183.032	12.149	93.600	.000	77.283	117.892
12-94	10.238	5.119	8.455	4.227	19.00	1.13	165.397	10.978	71.099	.000	83.320	186.223
12-95	9.010	4.505	7.440	3.720	19.95	1.19	152.819	10.143	73.943	.000	68.733	237.474
12-96	7.929	3.964	6.548	3.273	20.94	1.25	141.221	9.374	50.383	.000	81.464	292.696
12-97	6.977	3.489	5.762	2.881	21.99	1.31	130.484	8.661	52.398	.000	69.425	335.479
12-98	6.140	3.070	5.070	2.535	23.09	1.37	120.554	8.002	54.494	.000	58.058	368.004
12-99	5.403	2.701	4.462	2.230	24.25	1.44	111.400	7.395	56.675	.000	47.330	392.109
12- 0	4.755	2.378	3.927	1.964	25.46	1.51	102.947	6.833	58.942	.000	37.172	409.319
12- 1	4.184	2.092	3.455	1.728	26.73	1.59	95.103	6.312	61.299	.000	27.492	420.890
12- 2	3.682	1.841	3.041	1.520	28.07	1.67	87.891	5.834	63.751	.000	18.306	427.875
12- 3	3.240	1.620	2.676	1.338	29.47	1.75	81.210	5.390	66.301	.000	9.519	431.206
12- 4	2.852	1.426	2.355	1.178	30.94	1.84	75.042	4.981	68.953	.000	1.108	431.556
12- 5												
12- 6												
S TOT	83.551	41.776	68.997	34.498	21.94	1.30	1558.665	103.456	826.494	.000	628.715	431.556
REM.	.000	.000	.000	.000	.00	.00	.000	.000	.000	.000	.000	431.556
TOTAL	83.551	41.776	68.997	34.498	21.94	1.30	1558.665	103.456	826.494	.000	628.715	431.556

CUM.	4965.028	3664.589	NET OIL REVENUES (M$)	1513.786
			NET GAS REVENUES (M$)	44.879
ULT.	5048.579	3706.365	TOTAL REVENUES (M$)	1558.665

BTAX RATE OF RETURN (PCT)	100.00	PROJECT LIFE (YEARS)	12.583
BTAX PAYOUT YEARS	.00	DISCOUNT RATE (PCT)	10.000
BTAX PAYOUT YEARS (DISC)	.00	GROSS OIL WELLS	20.000
BTAX NET INCOME/INVEST	.00	GROSS GAS WELLS	.000
BTAX NET INCOME/INVEST (DISC)	.00	GROSS WELLS	20.000
INITIAL W.I. FRACTION	1.000000	INITIAL NET OIL FRACTION	.825800
FINAL W.I. FRACTION	1.000000	FINAL NET OIL FRACTION	.825800
PRODUCTION START DATE	12- 1-91	INITIAL NET GAS FRACTION	.825800
MONTHS IN FIRST LINE	7.00	FINAL NET GAS FRACTION	.825800

---------PRESENT WORTH PROFILE---------			
DISC RATE	PW OF NET BTAX, M$	DISC RATE	PW OF NET BTAX, M$
.0	628.715	30.0	257.724
2.0	578.151	35.0	234.156
5.0	514.187	40.0	214.755
8.0	461.574	45.0	198.555
10.0	431.556	50.0	184.861
12.0	404.889	60.0	163.049
15.0	370.157	70.0	146.509
18.0	340.628	80.0	133.575
20.0	323.335	90.0	123.197
25.0	286.802	100.0	1[illegible].691

TOTAL MALJAMAR GRAYBURG UNIT (PUD)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.

TABLE 10

DATE: 05/22/92
TIME: 13:34.31
FILE: TOT
GET#: 0

R E S E R V E S   A N D   E C O N O M I C S

MALJAMAR GRAYBURG UNIT
ESCALATED - W/O ACQ COSTS

AS OF JUNE 1, 1992

T. SCOTT HICKMAN & ASSOC
PETROLEUM ENGINEERS

-END-	---GROSS PRODUCTION---		----NET PRODUCTION----		--PRICES---		--------OPERATIONS, M$--------					10.00 PCT
MO-YR	OIL, MBBL	GAS, MMCF	OIL, MBBL	GAS, MMCF	OIL $/B	GAS $/M	NET OPER REVENUES	SEV+ADV+ WF TAXES	NET OPER EXPENSES	CAPITAL COSTS, M$	CASH FLOW BTAX, M$	CUM. DISC BTAX, M$
12-92	.000	.000	.000	.000	.00	.00	.000	.000	.000	500.000	-500.000	-474.842
12-93	104.893	52.447	86.621	43.311	18.50	1.10	1650.131	109.528	351.999	4810.000	-3621.396	-3819.850
12-94	331.743	165.871	273.953	136.977	19.00	1.13	5359.094	355.710	763.089	4730.000	-489.705	-4356.364
12-95	340.724	170.362	281.370	140.685	19.95	1.19	5779.394	383.607	803.173	.000	4592.614	-931.867
12-96	289.389	144.694	238.978	119.488	20.94	1.25	5154.087	342.103	837.951	.000	3974.033	1761.997
12-97	246.435	123.218	203.506	101.753	21.99	1.31	4608.508	305.889	871.469	.000	3431.150	3876.417
12-98	212.343	106.171	175.353	87.676	23.09	1.37	4169.516	276.752	906.328	.000	2986.436	5549.479
12-99	183.395	91.698	151.448	75.724	24.25	1.44	3781.162	250.975	876.960	.000	2653.227	6900.745
12- 0	158.439	79.220	130.839	65.419	25.46	1.51	3429.952	227.663	912.036	.000	2290.253	7961.113
12- 1	136.922	68.461	113.070	56.535	26.73	1.59	3112.345	206.582	948.520	.000	1957.243	8784.920
12- 2	118.362	59.181	97.744	48.872	28.07	1.67	2825.009	187.512	917.676	.000	1719.821	9442.989
12- 3	102.349	51.174	84.519	42.259	29.47	1.75	2564.916	170.245	913.381	.000	1481.289	9958.260
12- 4	88.560	44.280	73.133	36.566	30.94	1.84	2330.352	154.677	895.460	.000	1280.195	10363.096
12- 5	78.223	39.112	64.597	32.299	32.49	1.93	2161.276	143.455	931.299	.000	1086.522	10675.451
12- 6	53.189	26.594	43.924	21.962	34.12	2.03	1543.082	102.421	655.148	.000	785.513	10982.352
S TOT	2444.966	1222.483	2019.055	1009.526	23.31	1.39	48468.824	3217.120	11584.509	10040.000	23627.195	10882.352
REM.	80.034	40.017	66.092	33.046	37.24	2.21	2534.152	168.204	1216.884	.000	1149.064	11137.691
TOTAL	2525.000	1262.500	2085.147	1042.572	23.75	1.41	51002.976	3385.324	12801.393	10040.000	24776.259	11137.691
CUM.	.000	.000										
ULT.	2525.000	1262.500										

BTAX RATE OF RETURN (PCT)	45.66
BTAX PAYOUT YEARS	3.59
BTAX PAYOUT YEARS (DISC)	3.93
BTAX NET INCOME/INVEST	3.47
BTAX NET INCOME/INVEST (DISC)	2.25

NET OIL REVENUES (M$)	49530.452
NET GAS REVENUES (M$)	1472.524
TOTAL REVENUES (M$)	51002.976
PROJECT LIFE (YEARS)	17.131
DISCOUNT RATE (PCT)	10.000
GROSS OIL WELLS	26.000
GROSS GAS WELLS	.000
GROSS WELLS	26.000

---------PRESENT WORTH PROFILE---------

DISC RATE	PW OF NET BTAX, M$	DISC RATE	PW OF NET BTAX, M$
.0	24776.259	30.0	2239.371
2.0	20949.361	35.0	1306.347
5.0	16428.655	40.0	599.402
8.0	12986.576	45.0	56.150
10.0	11137.691	50.0	-366.097
12.0	9567.699	60.0	-958.879
15.0	7628.069	70.0	-1331.939
18.0	6076.166	80.0	-1569.191
20.0	5210.428	90.0	-1719.148
25.0	3492.232	100.0	-1811.474

MALJAMAR GB UNIT - PHASE I (PUD)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.

TABLE 11

DATE: 05/22/92
TIME: 13:34.31
FILE: TOT
SET#: 2

R E S E R V E S A N D E C O N O M I C S

MALJAMAR GRAYBURG UNIT
ESCALATED - W/O ACQ COSTS

AS OF JUNE 1, 1992

T. SCOTT HICKMAN & ASSOC
PETROLEUM ENGINEERS

-END-	---GROSS PRODUCTION---		----NET PRODUCTION----		--PRICES---		--------OPERATIONS, M$--------					10.00 PCT
MO-YR	OIL, MBBL	GAS, MMCF	OIL, MBBL	GAS, MMCF	OIL $/B	GAS $/M	NET OPER REVENUES	SEV+ADV+ WF TAXES	NET OPER EXPENSES	CAPITAL COSTS, M$	CASH FLOW BTAX, M$	CUM. DISC BTAX, M$
12-92	.000	.000	.000	.000	17.50	1.00	.000	.000	.000	500.000	-500.000	-474.842
12-93	87.982	43.991	72.656	36.328	18.50	1.10	1384.097	91.870	343.998	4310.000	-3361.771	-3589.619
12-94	160.108	80.054	132.217	66.109	19.00	1.13	2586.442	171.675	361.624	.000	2053.143	-1905.593
12-95	150.063	75.031	123.922	61.961	19.95	1.19	2545.382	168.950	376.089	.000	2000.343	-414.031
12-96	129.416	64.708	106.872	53.436	20.94	1.25	2304.931	152.990	387.155	.000	1764.786	782.258
12-97	110.457	55.229	91.215	45.608	21.99	1.31	2065.616	137.105	402.641	.000	1525.870	1722.564
12-98	96.763	48.381	79.907	39.953	23.09	1.37	1900.015	126.114	418.746	.000	1355.155	2481.749
12-99	85.151	42.576	70.318	35.159	24.25	1.44	1755.611	116.529	402.686	.000	1236.396	3111.435
12- 0	74.932	37.466	61.879	30.939	25.46	1.51	1622.161	107.671	418.792	.000	1095.698	3618.734
12- 1	65.941	32.971	54.454	27.227	26.73	1.59	1498.891	99.489	435.545	.000	963.857	4024.423
12- 2	58.028	29.014	47.920	23.960	28.07	1.67	1384.990	91.930	419.413	.000	873.647	4358.714
12- 3	51.065	25.532	42.169	21.084	29.47	1.75	1279.711	84.941	395.188	.000	799.582	4636.851
12- 4	44.937	22.468	37.109	18.554	30.94	1.84	1182.462	78.486	410.995	.000	692.981	4855.992
12- 5	39.756	19.879	32.831	16.416	32.49	1.93	1098.455	72.910	427.435	.000	598.110	5027.938
12- 6	36.367	18.183	30.032	15.016	34.12	2.03	1055.046	70.028	444.532	.000	540.486	5169.192
S TOT	1190.966	595.483	983.501	491.750	23.37	1.39	23663.810	1570.688	5644.839	4810.000	11638.283	5169.192
REM.	80.034	40.017	66.092	33.046	37.24	2.21	2534.152	168.204	1216.884	.000	1149.064	5424.531
TOTAL	1271.000	635.500	1049.593	524.796	24.24	1.44	26197.962	1738.892	6861.723	4810.000	12787.347	5424.531

CUM.	.000	.000
ULT.	1271.000	635.500

NET OIL REVENUES (M$)	25441.590
NET GAS REVENUES (M$)	756.372
TOTAL REVENUES (M$)	26197.962

BTAX RATE OF RETURN (PCT)	39.55
BTAX PAYOUT YEARS	3.49
BTAX PAYOUT YEARS (DISC)	3.93
BTAX NET INCOME/INVEST	3.66
BTAX NET INCOME/INVEST (DISC)	2.22
INITIAL W.I. FRACTION	1.000000
FINAL W.I. FRACTION	1.000000
PRODUCTION START DATE	1- 1-93
MONTHS IN FIRST LINE	7.00

PROJECT LIFE (YEARS)	17.131
DISCOUNT RATE (PCT)	10.000
GROSS OIL WELLS	10.000
GROSS GAS WELLS	.000
GROSS WELLS	10.000
INITIAL NET OIL FRACTION	.825800
FINAL NET OIL FRACTION	.825800
INITIAL NET GAS FRACTION	.825800
FINAL NET GAS FRACTION	.825800

---------PRESENT WORTH PROFILE---------

DISC RATE	PW OF NET BTAX, M$	DISC RATE	PW OF NET BTAX, M$
.0	12787.347	30.0	814.330
2.0	10684.716	35.0	333.491
5.0	8236.684	40.0	-32.804
8.0	6400.531	45.0	-316.372
10.0	5424.531	50.0	-538.768
12.0	4681.386	60.0	-855.815
15.0	3591.332	70.0	-1060.388
18.0	2788.195	80.0	-1194.299
20.0	2341.801	90.0	-1281.980
25.0	1458.214	100.0	-1338.457

INV W/O ACQUISITION COSTS

MALJAMAR GR UNIT - PHASE II (PUD)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.

TABLE 12

DATE: 05/22/92
TIME: 13:34.31
FILE: TOT
GET#: 3

R E S E R V E S A N D E C O N O M I C S

MALJAMAR GRAYBURG UNIT
ESCALATED - W/O ACQ COSTS

AS OF JUNE 1, 1992

T. SCOTT HICKMAN & ASSOC
PETROLEUM ENGINEERS

-END-	---GROSS PRODUCTION---		----NET PRODUCTION----		--PRICES--		--------OPERATIONS, M$--------					10.00 PCT
MO-YR	OIL, MBBL	GAS, MMCF	OIL, MBBL	GAS, MMCF	OIL $/B	GAS $/M	NET OPER REVENUES	SEV+ADV+ WF TAXES	NET OPER EXPENSES	CAPITAL COSTS, M$	CASH FLOW BTAX, M$	CUM. DISC BTAX, M$
12-92	.000	.000	.000	.000	17.50	1.00	.000	.000	.000	.000	.000	.000
12-93	16.911	8.456	13.965	6.983	18.50	1.10	266.034	17.658	8.001	500.000	-259.625	-230.231
12-94	171.635	85.817	141.736	70.868	19.00	1.13	2772.652	184.035	401.465	4730.000	-2542.848	-2450.771
12-95	190.661	95.331	157.448	78.724	19.95	1.19	3234.012	214.657	427.084	.000	2592.271	-517.836
12-96	159.973	79.986	132.106	66.052	20.94	1.25	2849.156	189.113	450.796	.000	2209.247	979.739
12-97	135.978	67.989	112.291	56.145	21.99	1.31	2542.892	168.784	468.828	.000	1905.280	2153.853
12-98	115.580	57.790	95.446	47.723	23.09	1.37	2269.501	150.638	487.582	.000	1631.281	3067.730
12-99	98.244	49.122	81.130	40.565	24.25	1.44	2025.551	134.446	474.274	.000	1416.831	3789.310
12- 0	83.507	41.754	68.960	34.480	25.46	1.51	1807.791	119.992	493.244	.000	1194.555	4342.379
12- 1	70.981	35.490	58.616	29.308	26.73	1.59	1613.454	107.093	512.975	.000	993.386	4760.497
12- 2	60.334	30.167	49.824	24.912	28.07	1.67	1440.019	95.582	498.263	.000	846.174	5084.275
12- 3	51.284	25.642	42.350	21.175	29.47	1.75	1285.205	85.305	518.193	.000	681.707	5321.409
12- 4	43.623	21.812	36.024	18.012	30.94	1.84	1147.890	76.191	484.485	.000	587.214	5507.104
12- 5	38.467	19.233	31.766	15.883	32.49	1.93	1062.821	70.545	503.864	.000	488.412	5647.513
12- 6	16.822	8.411	13.892	6.946	34.12	2.03	488.036	32.393	210.616	.000	245.027	5713.160
S TOT	1254.000	627.000	1035.554	517.776	23.26	1.38	24805.014	1646.432	5939.670	5230.000	11988.912	5713.160
REM.	.000	.000	.000	.000	.00	.00	.000	.000	.000	.000	.000	5713.160
TOTAL	1254.000	627.000	1035.554	517.776	23.26	1.38	24805.014	1646.432	5939.670	5230.000	11988.912	5713.160

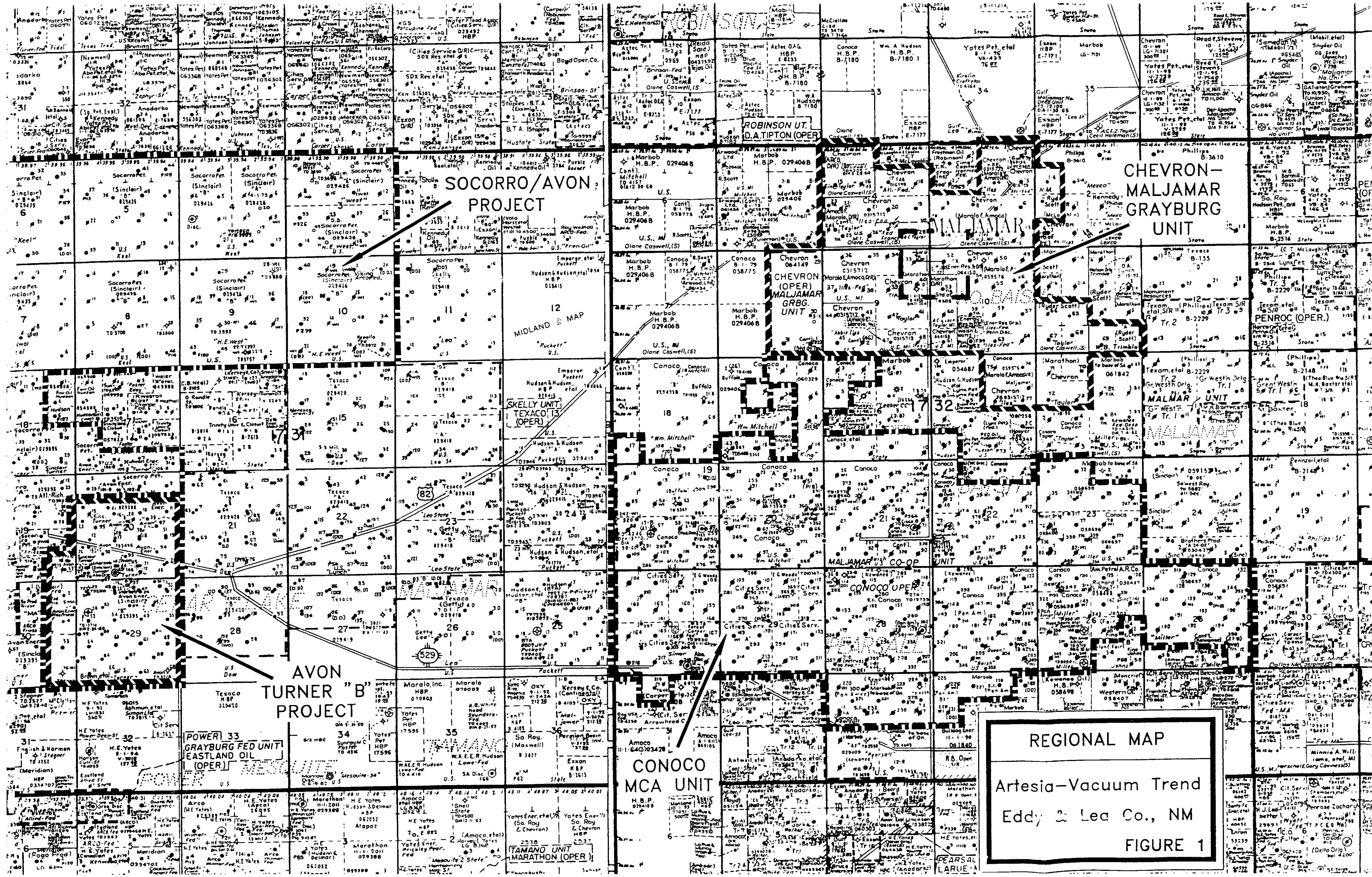
	OIL, MBBL	GAS, MMCF
CUM.	.000	.000
ULT.	1254.000	627.000

NET OIL REVENUES (M$)	24088.862
NET GAS REVENUES (M$)	716.152
TOTAL REVENUES (M$)	24805.014

BTAX RATE OF RETURN (PCT)	56.26
BTAX PAYOUT YEARS	3.68
BTAX PAYOUT YEARS (DISC)	3.93
BTAX NET INCOME/INVEST	3.29
BTAX NET INCOME/INVEST (DISC)	2.28
INITIAL W.I. FRACTION	1.000000
FINAL W.I. FRACTION	1.000000
PRODUCTION START DATE	11- 1-93
MONTHS IN FIRST LINE	7.00

PROJECT LIFE (YEARS)	14.056
DISCOUNT RATE (PCT)	10.000
GROSS OIL WELLS	16.000
GROSS GAS WELLS	.000
GROSS WELLS	16.000
INITIAL NET OIL FRACTION	.825800
FINAL NET OIL FRACTION	.825800
INITIAL NET GAS FRACTION	.825800
FINAL NET GAS FRACTION	.825800

---------PRESENT WORTH PROFILE---------			
DISC RATE	PW OF NET BTAX, M$	DISC RATE	PW OF NET BTAX, M$
.0	11988.912	30.0	1425.041
2.0	10264.645	35.0	972.856
5.0	8191.971	40.0	632.206
8.0	6586.045	45.0	372.522
10.0	5713.160	50.0	172.671
12.0	4966.313	60.0	-103.064
15.0	4036.737	70.0	-271.601
18.0	3287.971	80.0	-374.892
20.0	2868.627	90.0	-437.168
25.0	2034.018	100.0	-473.017

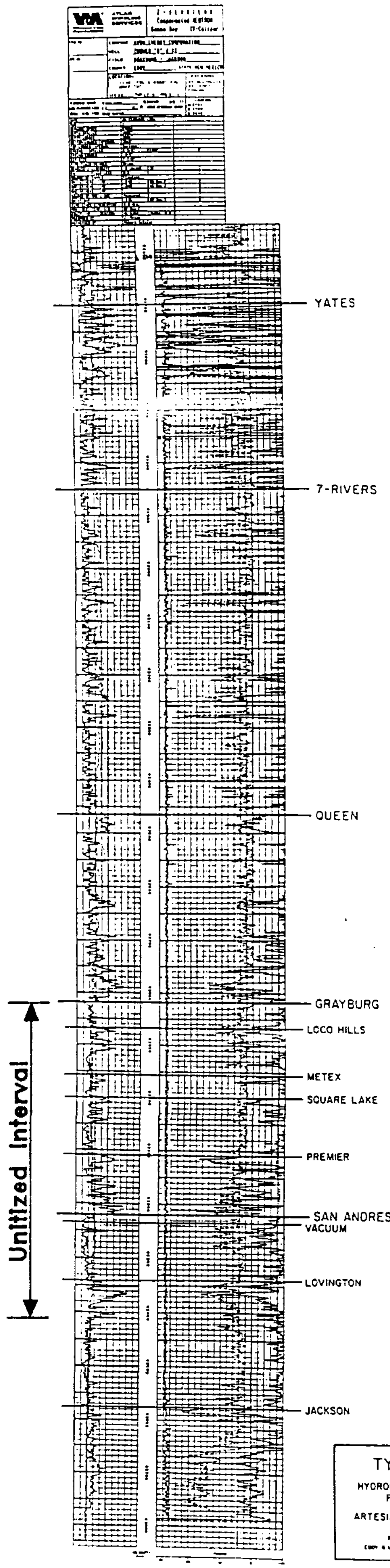


REGIONAL MAP

Artesia–Vacuum Trend

Eddy & Lea Co., NM

FIGURE 1



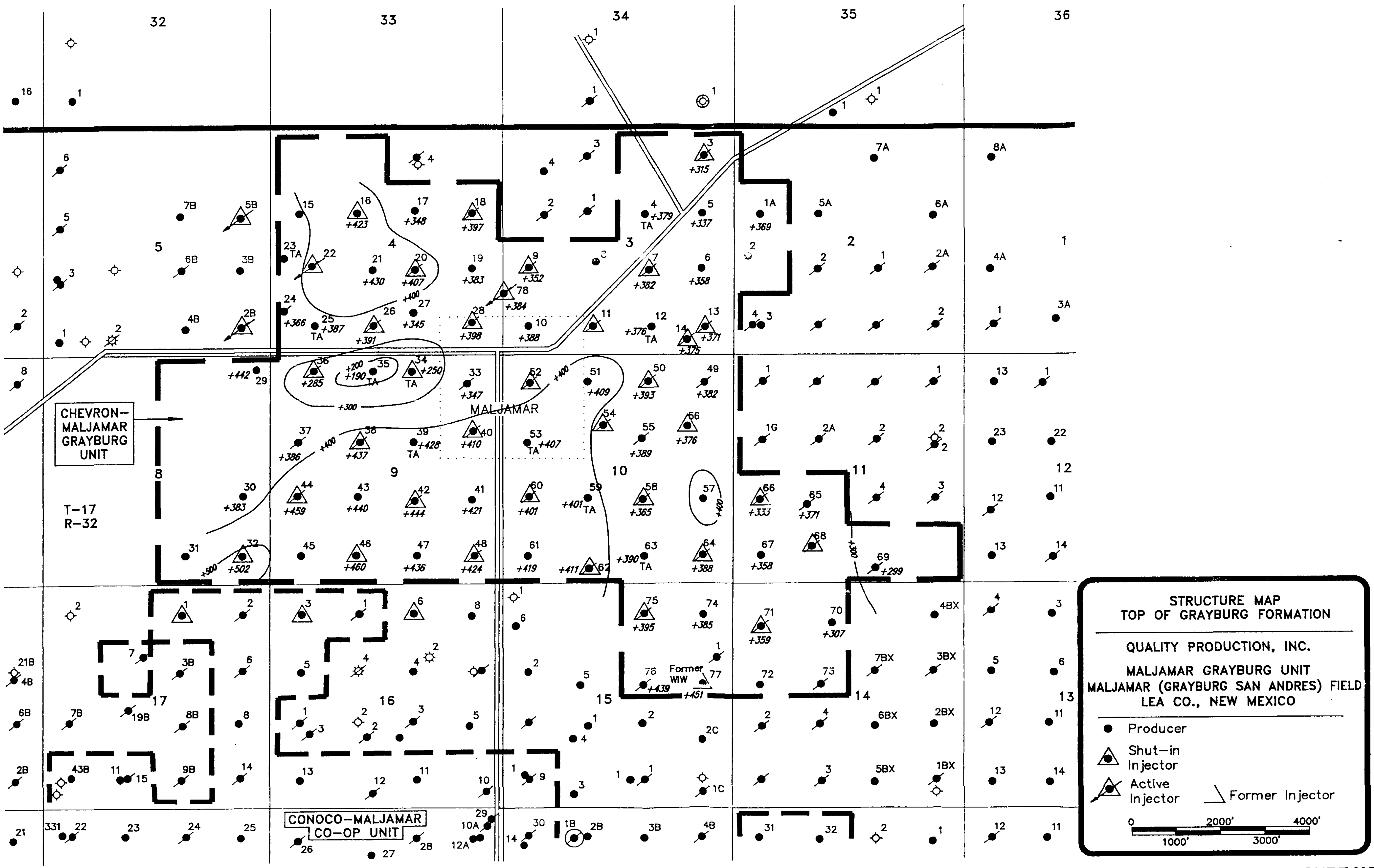
TYPE LOG

HYDROCARBON BEARING FORMATIONS

ARTESIA-VACUUM TREND

PERMIAN BASIN

FIGURE NO. 2



CHEVRON–MALJAMAR GRAYBURG UNIT
T-17
R-32
MALJAMAR
CONOCO–MALJAMAR CO-OP UNIT
STRUCTURE MAP
TOP OF GRAYBURG FORMATION
QUALITY PRODUCTION, INC.
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES) FIELD
LEA CO., NEW MEXICO
Producer
Shut-in Injector
Active Injector
Former Injector
0
1000'
2000'
3000'
4000'

FIGURE NO. 3

W2
WELEX
#30
Cum 33 MBO
#47
Cum 119 MBO
#61
Cum 44 MBO
#59
Cum 93 MBO
#58
Cum 15 MBO
Inj
#66
Cum 50 MBO
#65
Cum 92 MBO
+500'
500'
TOP GRAYBURG
TOP SAN ANDRES
CHEVRON (OPER) MALJAMAR GRBG UNIT
W2
E2

FIGURE 4

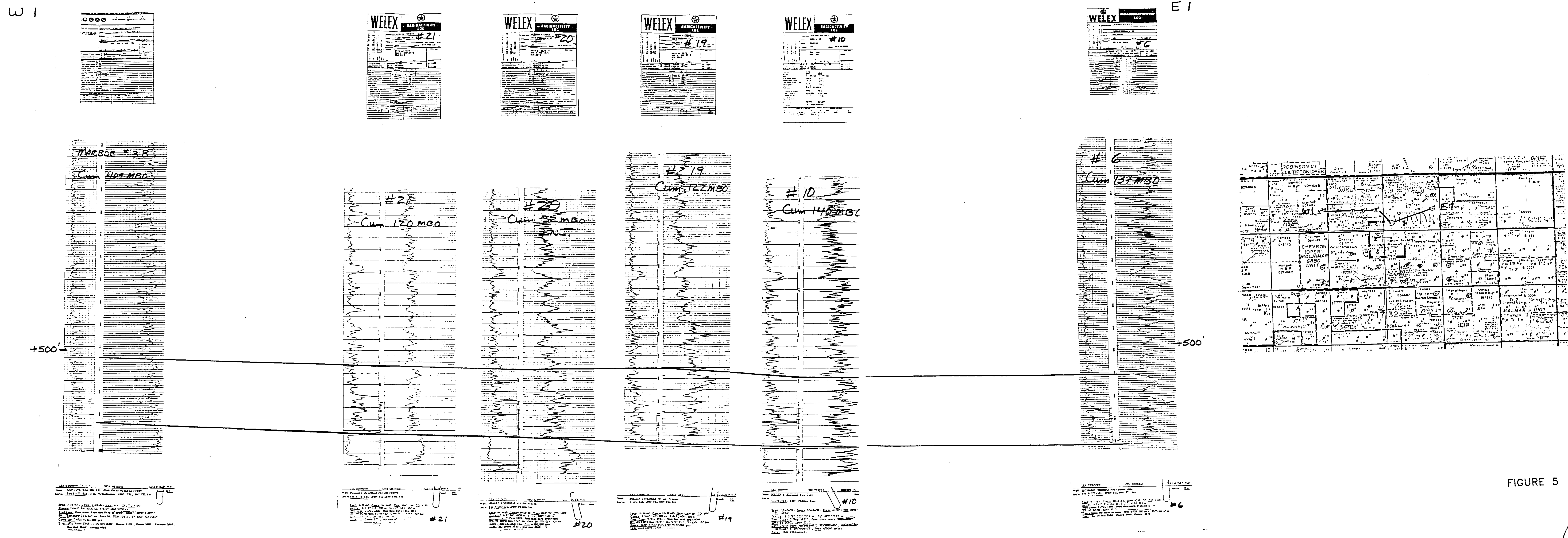
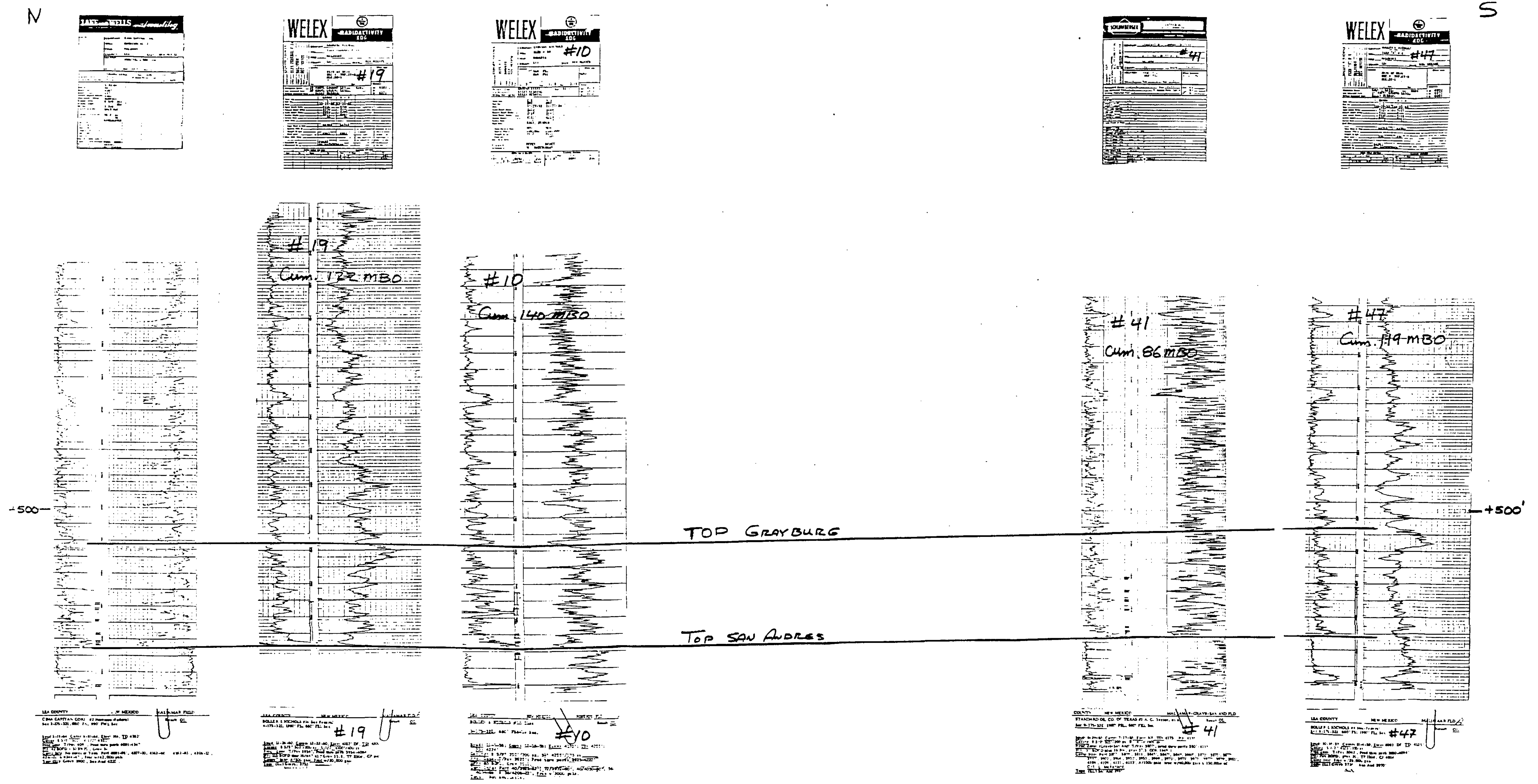
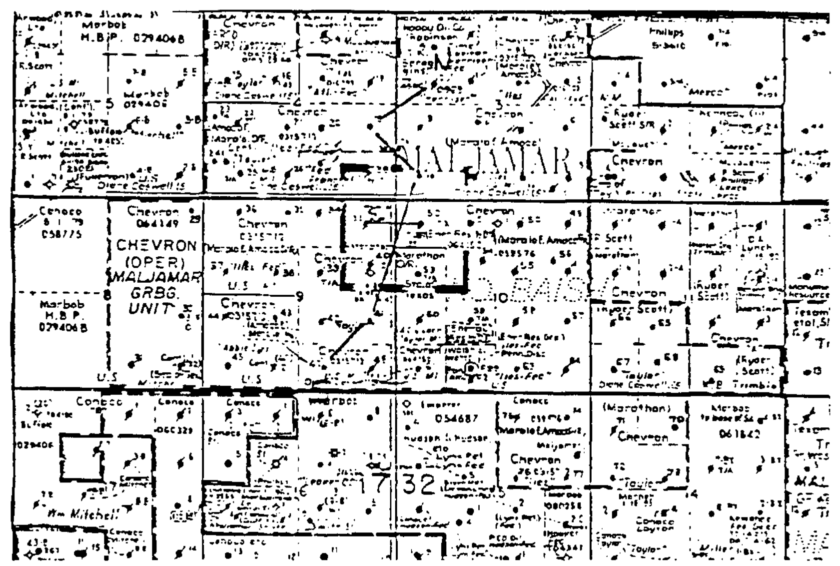

W 1
E 1
WELEX RADIOACTIVITY LOG
#21
#20
#19
#10
#6
MARBOB #38
Cum 409 MBO
Cum 120 MBO
Cum 32 MBO
INJ.
Cum 122 MBO
Cum 140 MBO
Cum 137 MBO
+500'
ROBINSON UT
D.A.TIPTON (OPER)
CHEVRON
(OPER)
MALJAMAR
GRBG
UNIT
MALJAMAR UNIT
W1
E1

FIGURE 5



N
S
WELEX
WELEX
WELEX
#19
#10
#41
#47
Cum. 172 MBO
Cum. 140 MBO
Cum. 86 MBO
Cum. 119 MBO
-500
+500'
TOP GRAYBURG
TOP SAN ANDRES



CHEVRON
(OPER)
MALJAMAR
GRBG.
UNIT
MALJAMAR

FIGURE 6

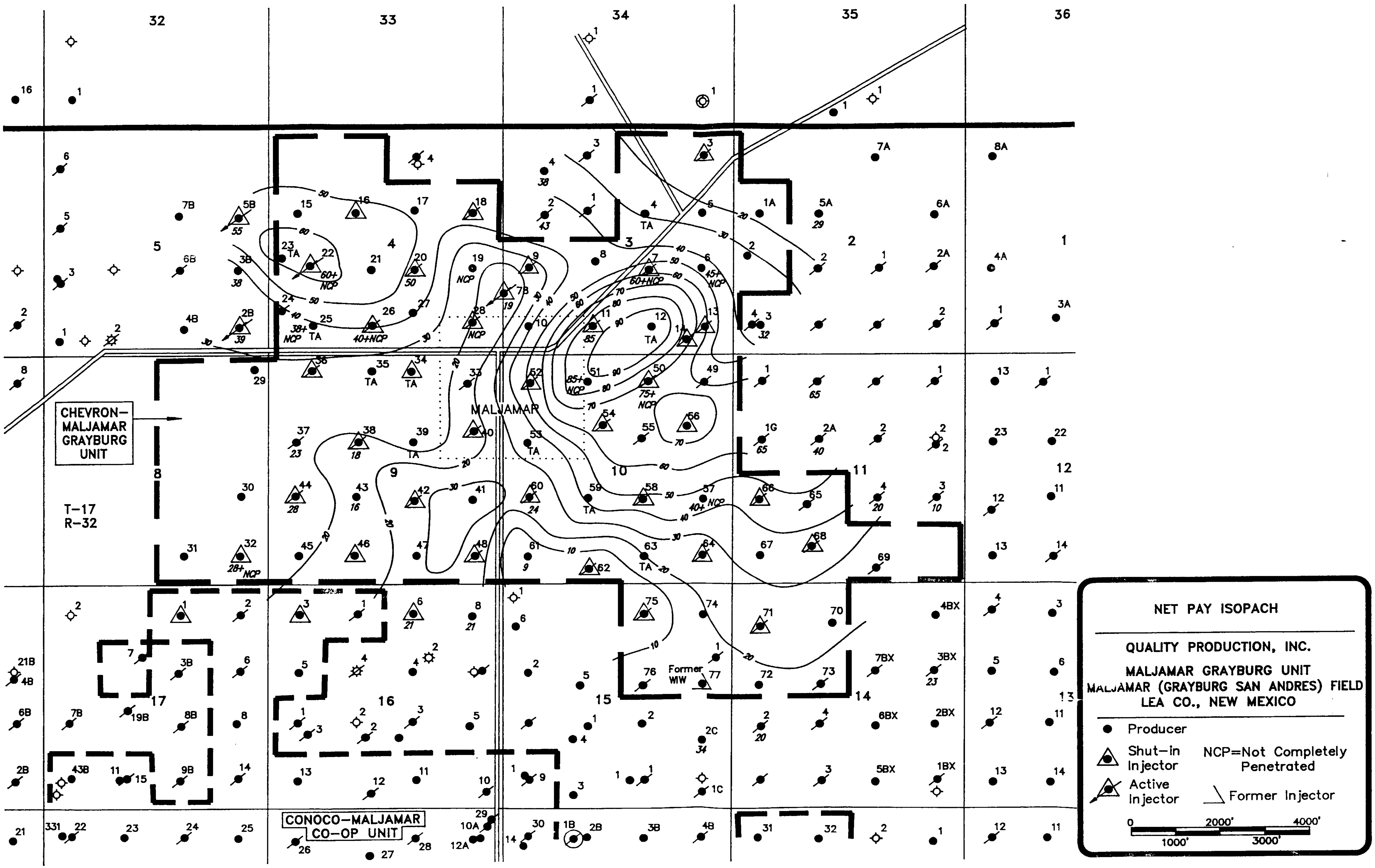

CHEVRON–MALJAMAR GRAYBURG UNIT
T-17
R-32
MALJAMAR
CONOCO–MALJAMAR CO-OP UNIT
Former WIW
NET PAY ISOPACH
QUALITY PRODUCTION, INC.
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES) FIELD
LEA CO., NEW MEXICO
Producer
Shut-in Injector
Active Injector
NCP=Not Completely Penetrated
Former Injector
0
1000'
2000'
3000'
4000'

FIGURE NO. 7

CHEVRON–MALJAMAR GRAYBURG UNIT
T-17
R-32
CONOCO–MALJAMAR CO–OP UNIT
MALJAMAR
ULTIMATE PRIMARY OIL RECOVERY, MMBL
QUALITY PRODUCTION, INC.
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES) FIELD
LEA CO., NEW MEXICO
Producer
Proposed Producer Location
Shut-in Injector
Proposed Injector Conversion
Active Injector
Former Injector
0
1000'
2000'
3000'
4000'

FIGURE NO. 8

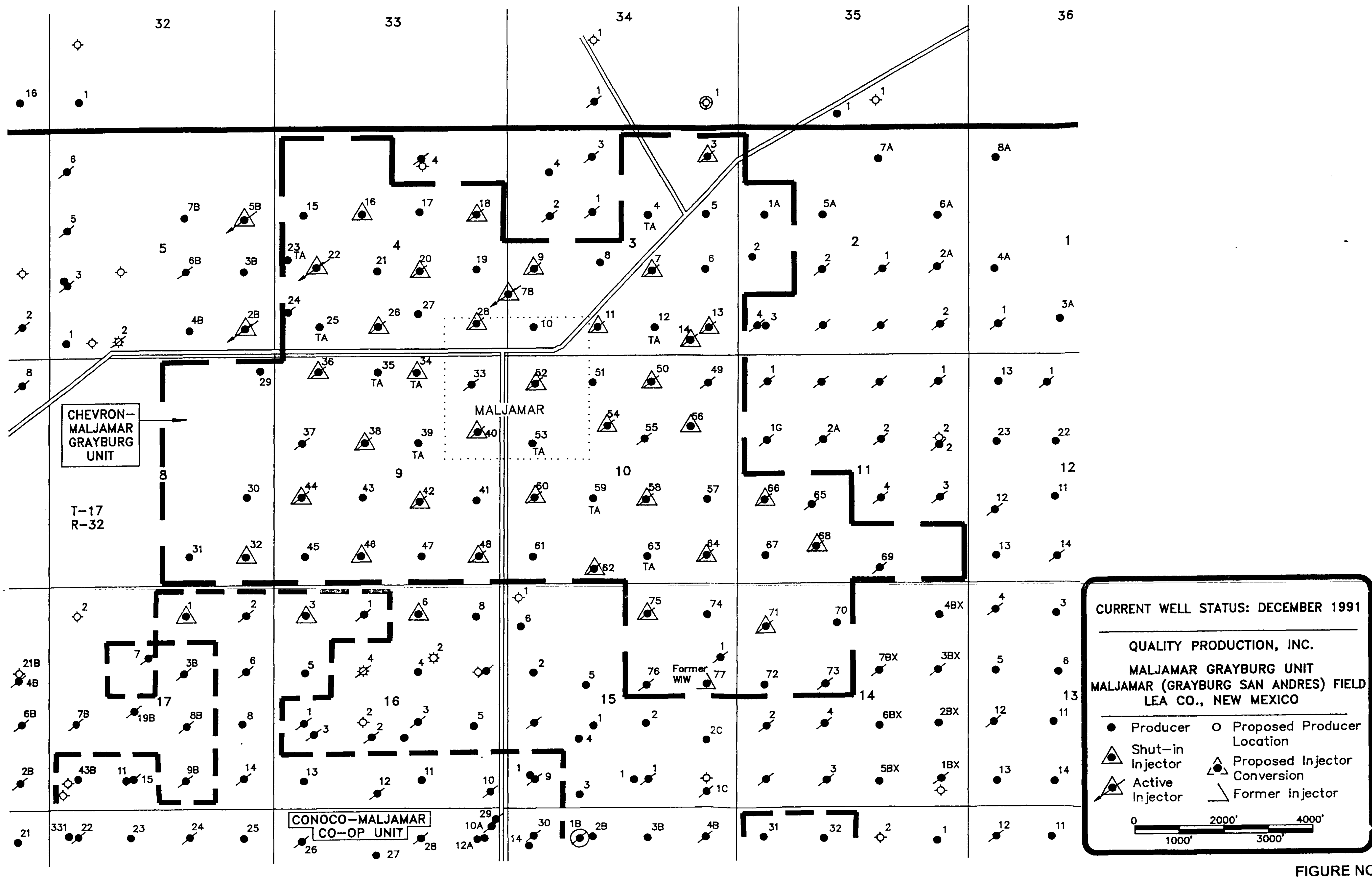

CHEVRON–MALJAMAR GRAYBURG UNIT
T-17
R-32
MALJAMAR
CONOCO–MALJAMAR CO-OP UNIT
Former WIW
CURRENT WELL STATUS: DECEMBER 1991
QUALITY PRODUCTION, INC.
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES) FIELD
LEA CO., NEW MEXICO
Producer
Proposed Producer Location
Shut-in Injector
Proposed Injector Conversion
Active Injector
Former Injector
0
1000'
2000'
3000'
4000'

FIGURE NO

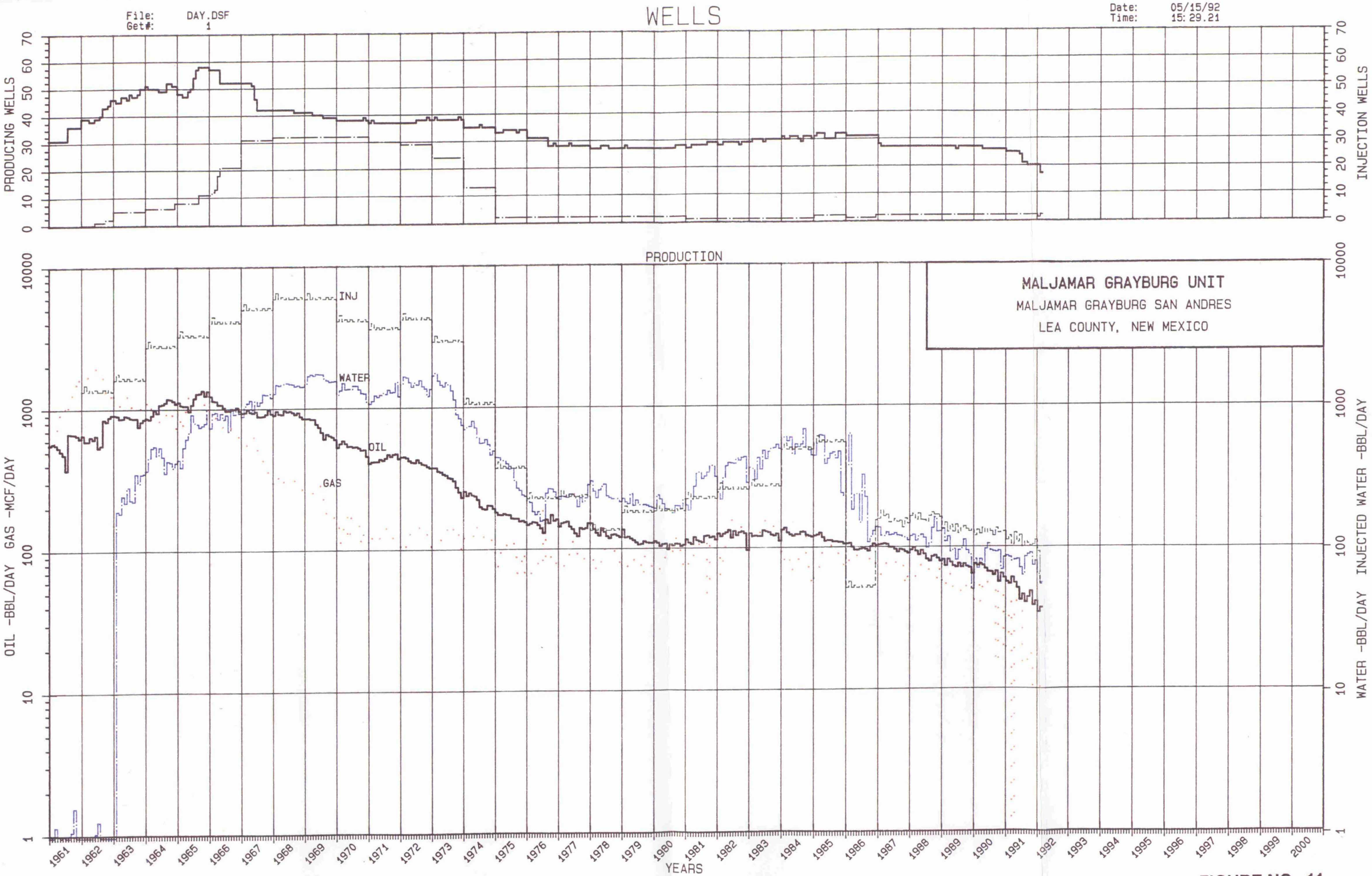
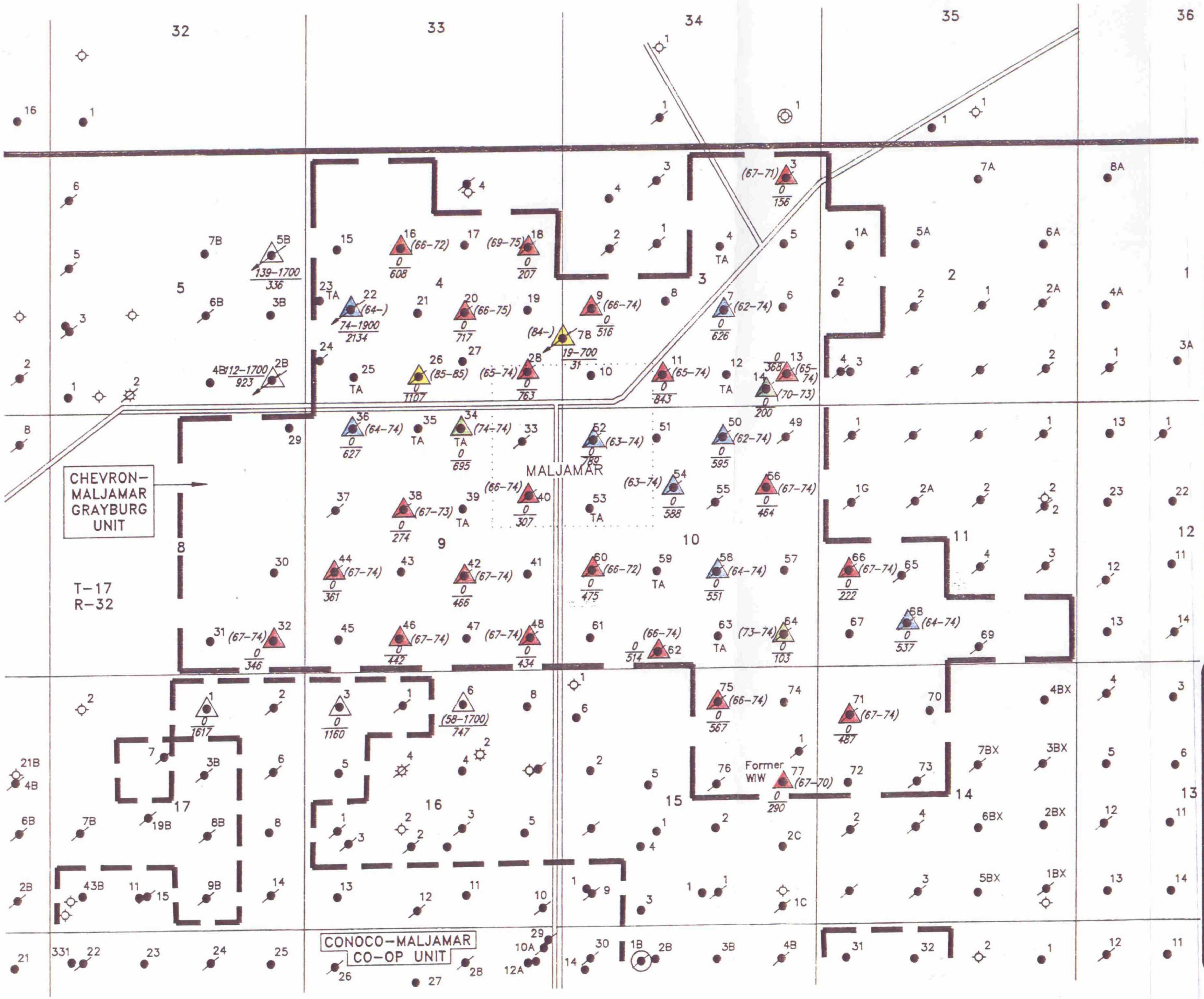

File: DAY.DSF
Get#: 1
WELLS
Date: 05/15/92
Time: 15:29.21
PRODUCING WELLS
INJECTION WELLS
PRODUCTION
MALJAMAR GRAYBURG UNIT
MALJAMAR GRAYBURG SAN ANDRES
LEA COUNTY, NEW MEXICO
INJ
WATER
OIL
GAS
OIL -BBL/DAY GAS -MCF/DAY
WATER -BBL/DAY INJECTED WATER -BBL/DAY
YEARS

FIGURE NO. 11



(67–74) Initial Injection Date–Shut In Date

Dec. 1991 Status

100–1000 / 697 — Rate,BWPD–WHP,Psi / Cum. Injection, MBBL

INITIAL INJECTION DATES

1962–1964

1965–1969

1970–1974

1984–1985

INJECTION WELL STATUS

QUALITY PRODUCTION, INC.

MALJAMAR GRAYBURG UNIT

MALJAMAR (GRAYBURG SAN ANDRES) FIELD

LEA CO., NEW MEXICO

Producer

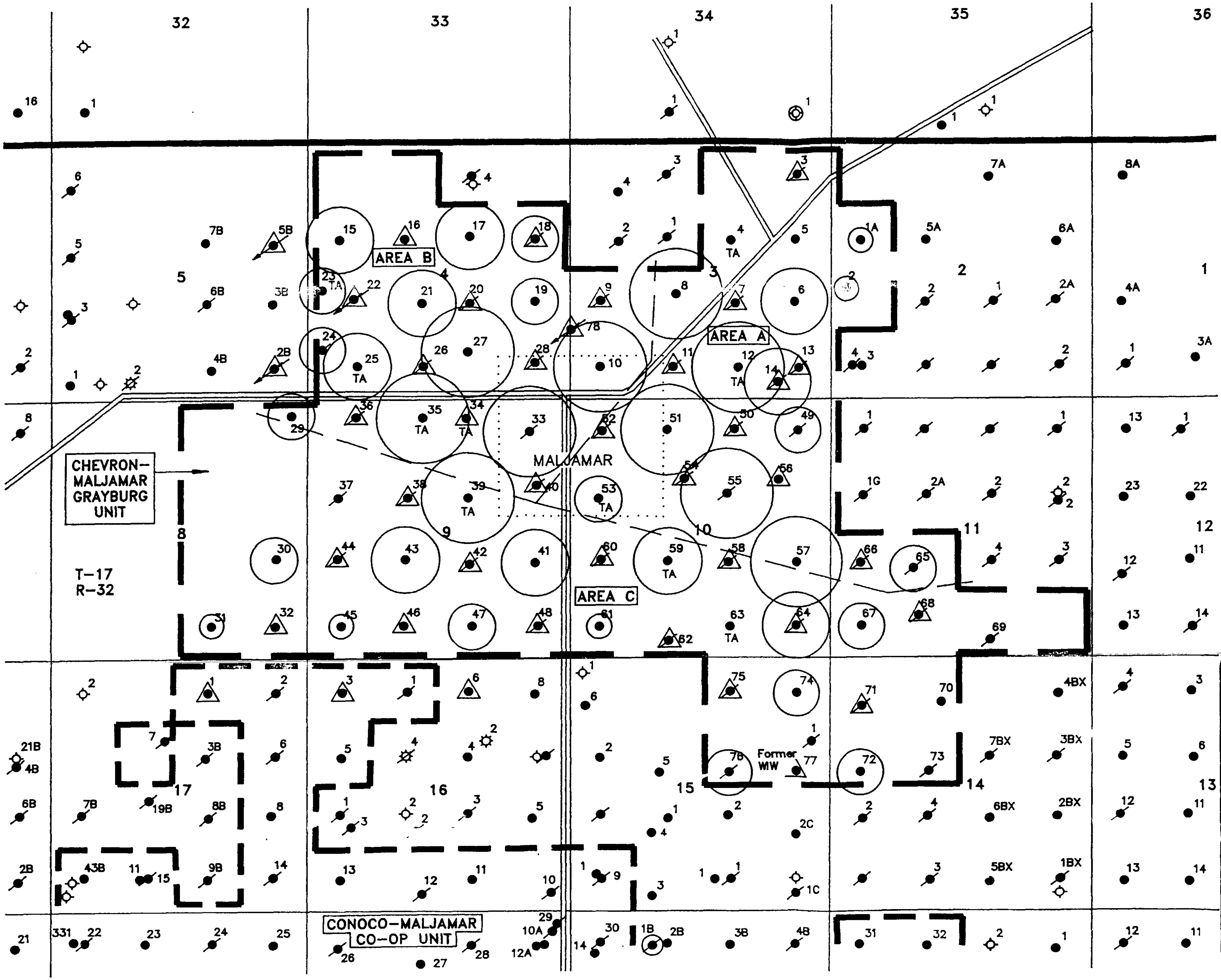
Shut-in Injector

Active Injector

Former Injector

0 1000' 2000' 3000' 4000'

FIGURE



PEAK WATERFLOOD OIL RESPONSE-BOPD

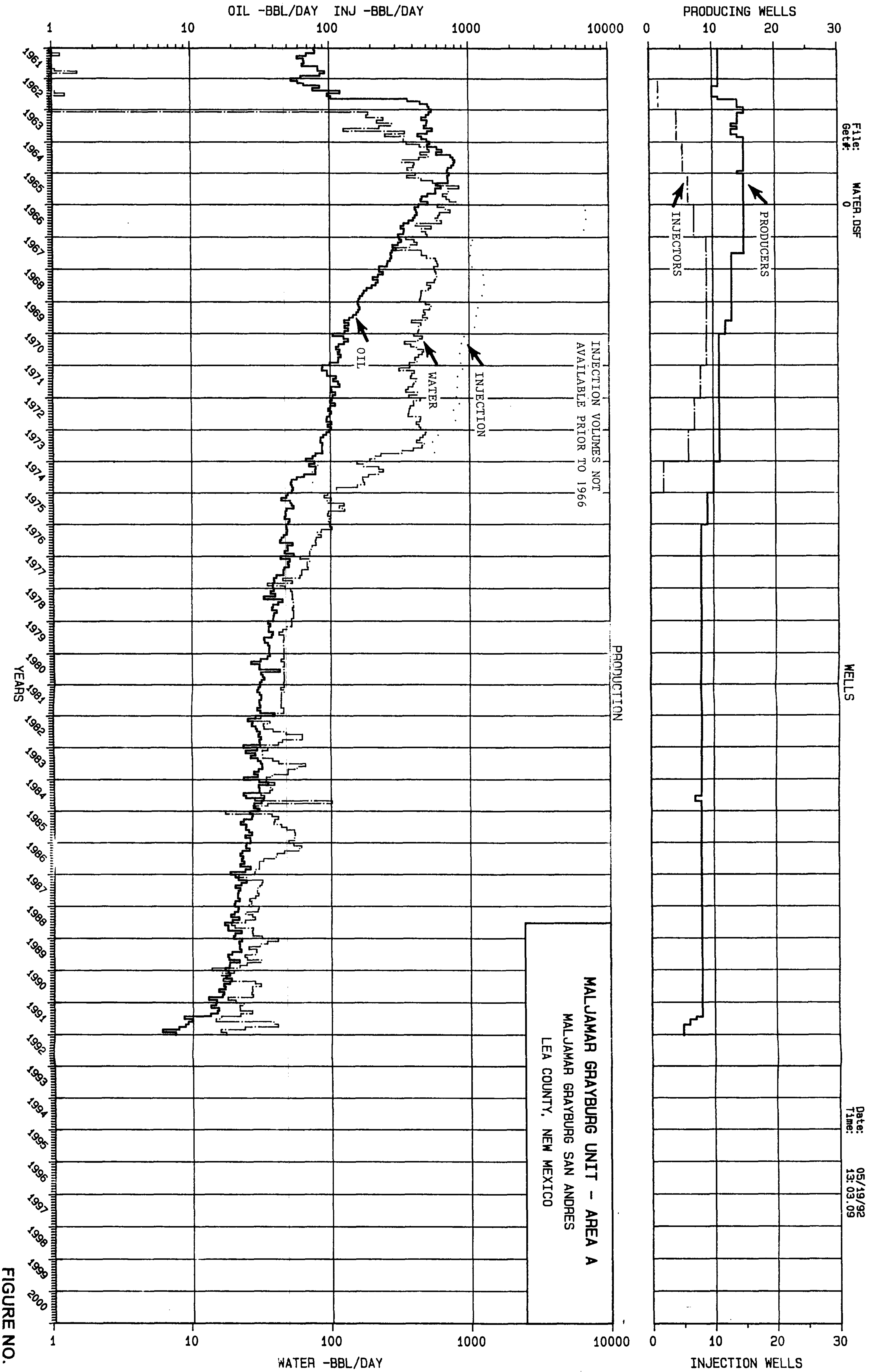
QUALITY PRODUCTION, INC.

MALJAMAR GRAYBURG UNIT

MALJAMAR (GRAYBURG SAN ANDRES) FIELD

LEA CO., NEW MEXICO

FIGURE N



OIL -BBL/DAY INJ -BBL/DAY
PRODUCING WELLS
OIL
WATER
INJECTION
INJECTION VOLUMES NOT AVAILABLE PRIOR TO 1966
INJECTORS
PRODUCERS
PRODUCTION
WELLS
YEARS
MALJAMAR GRAYBURG UNIT - AREA A
MALJAMAR GRAYBURG SAN ANDRES
LEA COUNTY, NEW MEXICO
File: WATER.DSF
Get#: 0
Date: 05/19/92
Time: 13:03.09
WATER -BBL/DAY
INJECTION WELLS

FIGURE NO. 13

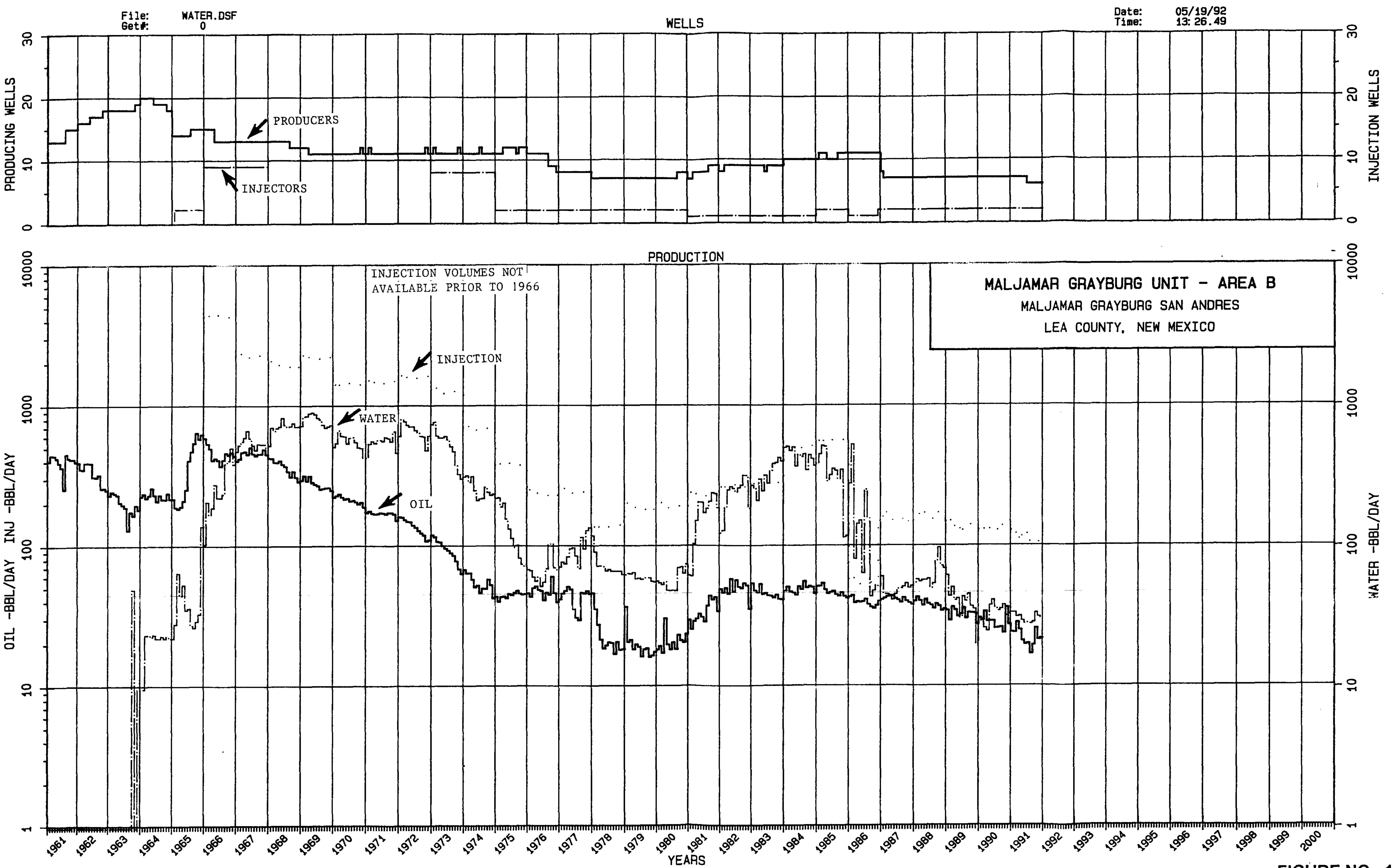

File: WATER.DSF
Get#: 0
Date: 05/19/92
Time: 13:26.49
WELLS
PRODUCING WELLS
INJECTION WELLS
PRODUCERS
INJECTORS
PRODUCTION
INJECTION VOLUMES NOT AVAILABLE PRIOR TO 1966
MALJAMAR GRAYBURG UNIT - AREA B
MALJAMAR GRAYBURG SAN ANDRES
LEA COUNTY, NEW MEXICO
INJECTION
WATER
OIL
OIL -BBL/DAY INJ -BBL/DAY
WATER -BBL/DAY
YEARS

FIGURE NO. 14

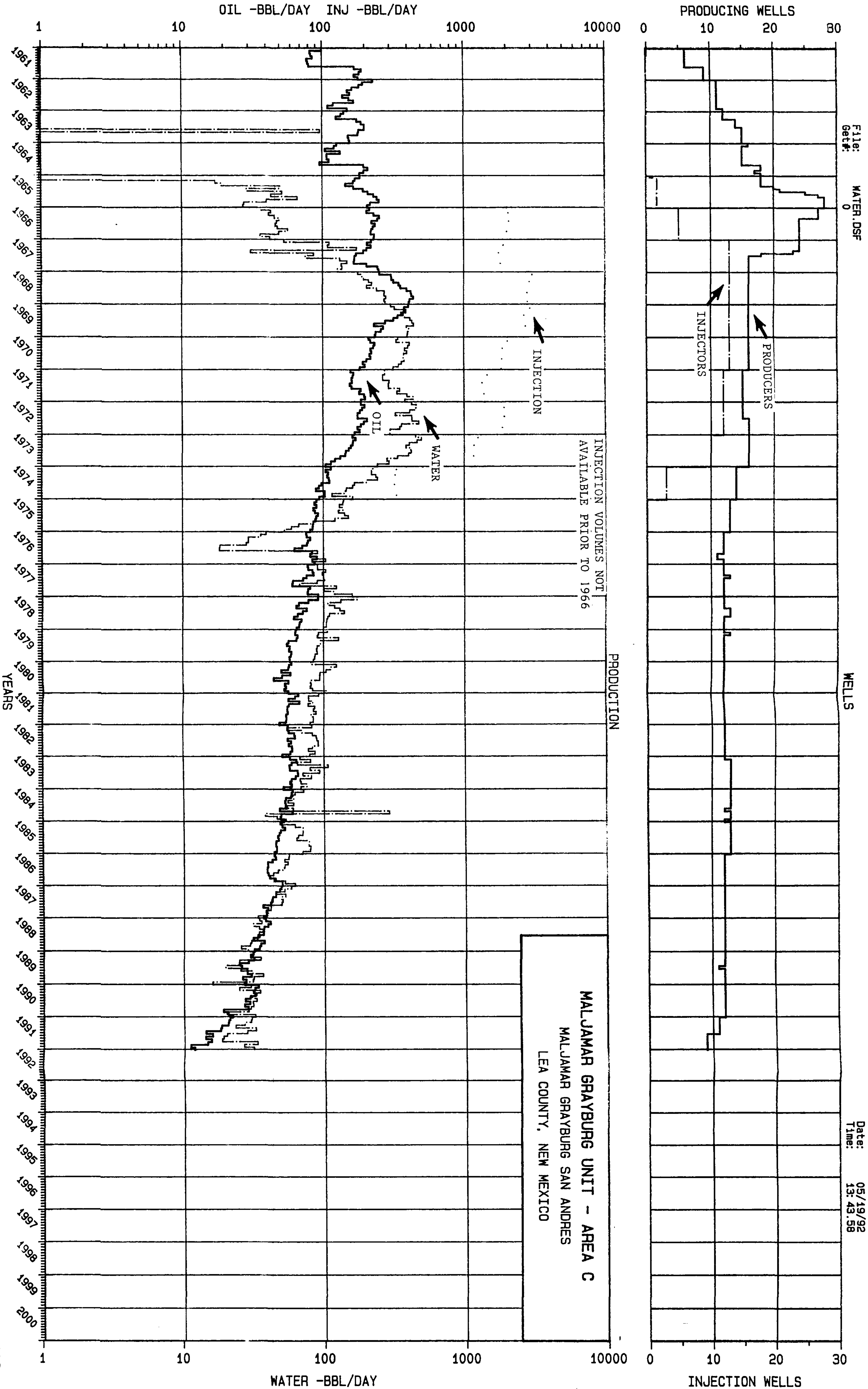
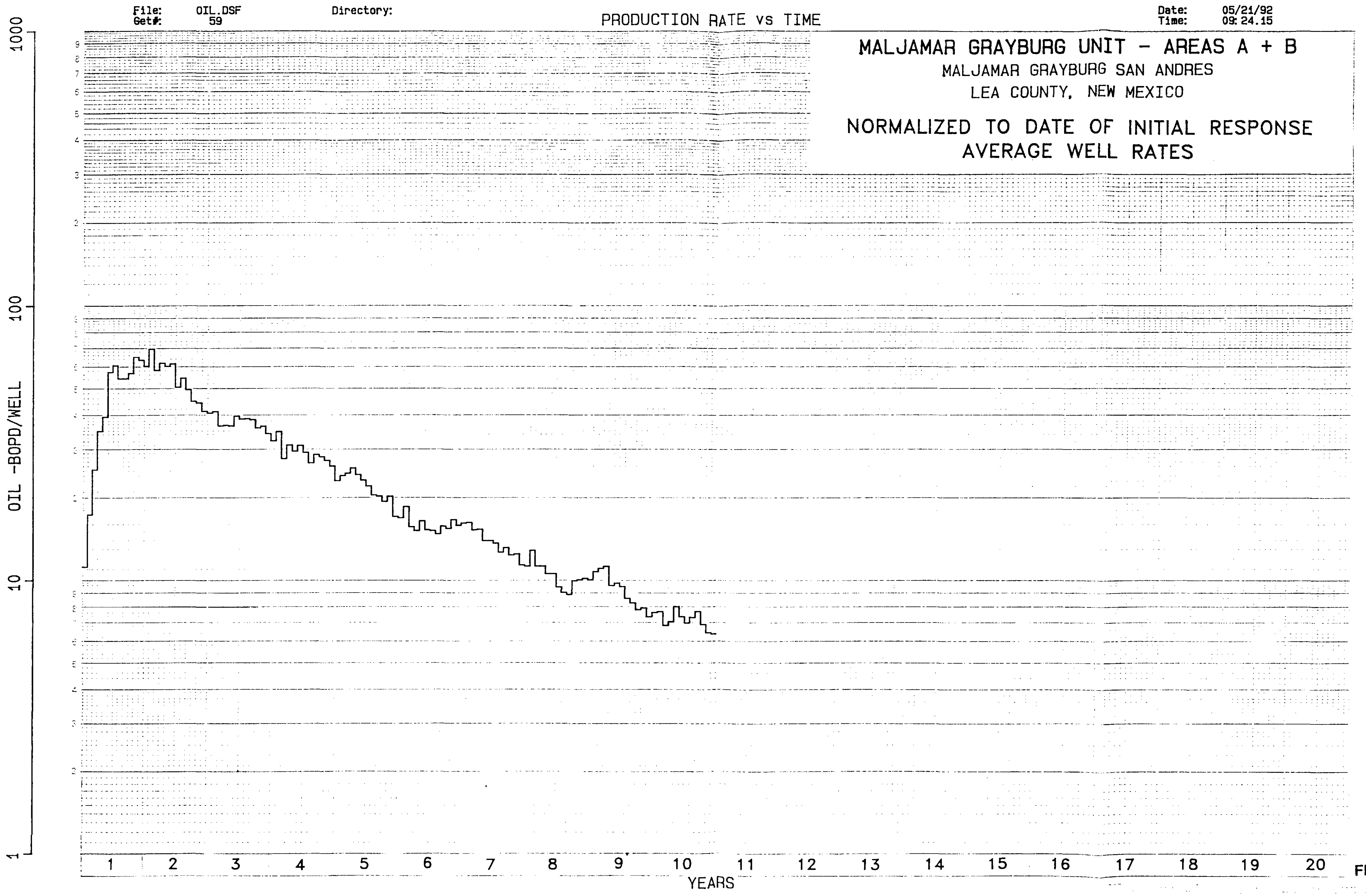

OIL -BBL/DAY INJ -BBL/DAY
PRODUCING WELLS
File:
Get#:
WATER.DSF
0
INJECTION
OIL
WATER
INJECTION VOLUMES NOT AVAILABLE PRIOR TO 1966
INJECTORS
PRODUCERS
PRODUCTION
WELLS
YEARS
MALJAMAR GRAYBURG UNIT - AREA C
MALJAMAR GRAYBURG SAN ANDRES
LEA COUNTY, NEW MEXICO
Date: 05/19/92
Time: 13:43.58
WATER -BBL/DAY
INJECTION WELLS

FIGURE NO.


File: OIL.DSF
Get#: 59
Directory:
PRODUCTION RATE vs TIME
Date: 05/21/92
Time: 09:24.15
MALJAMAR GRAYBURG UNIT - AREAS A + B
MALJAMAR GRAYBURG SAN ANDRES
LEA COUNTY, NEW MEXICO
NORMALIZED TO DATE OF INITIAL RESPONSE
AVERAGE WELL RATES
OIL -BOPD/WELL
1
10
100
1000
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
YEARS
FIGURE

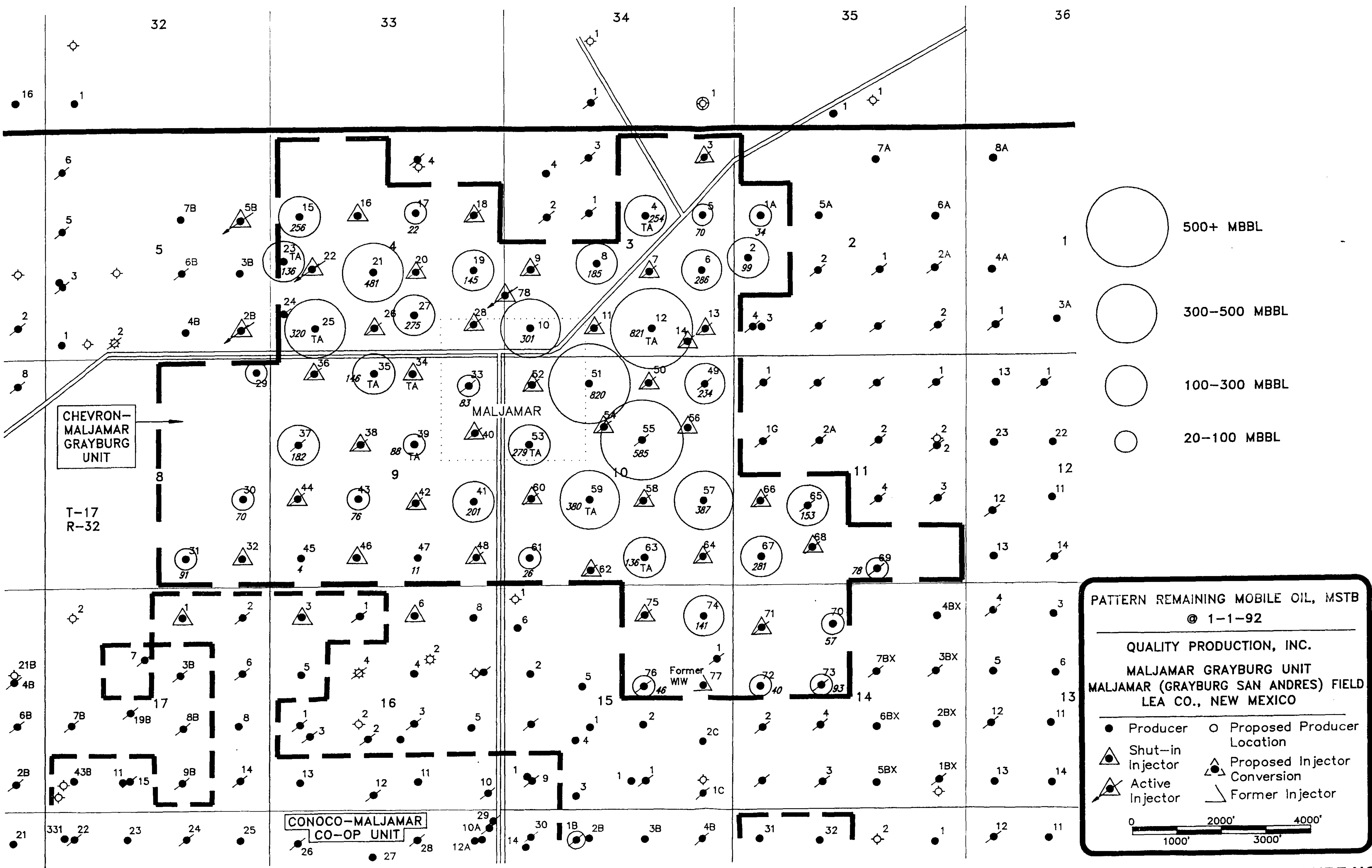

CHEVRON-MALJAMAR GRAYBURG UNIT
T-17 R-32
MALJAMAR
Former WIW
CONOCO-MALJAMAR CO-OP UNIT
500+ MBBL
300-500 MBBL
100-300 MBBL
20-100 MBBL
PATTERN REMAINING MOBILE OIL, MSTB @ 1-1-92
QUALITY PRODUCTION, INC.
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES) FIELD
LEA CO., NEW MEXICO
Producer
Proposed Producer Location
Shut-in Injector
Proposed Injector Conversion
Active Injector
Former Injector
0
1000'
2000'
3000'
4000'

FIGURE NO

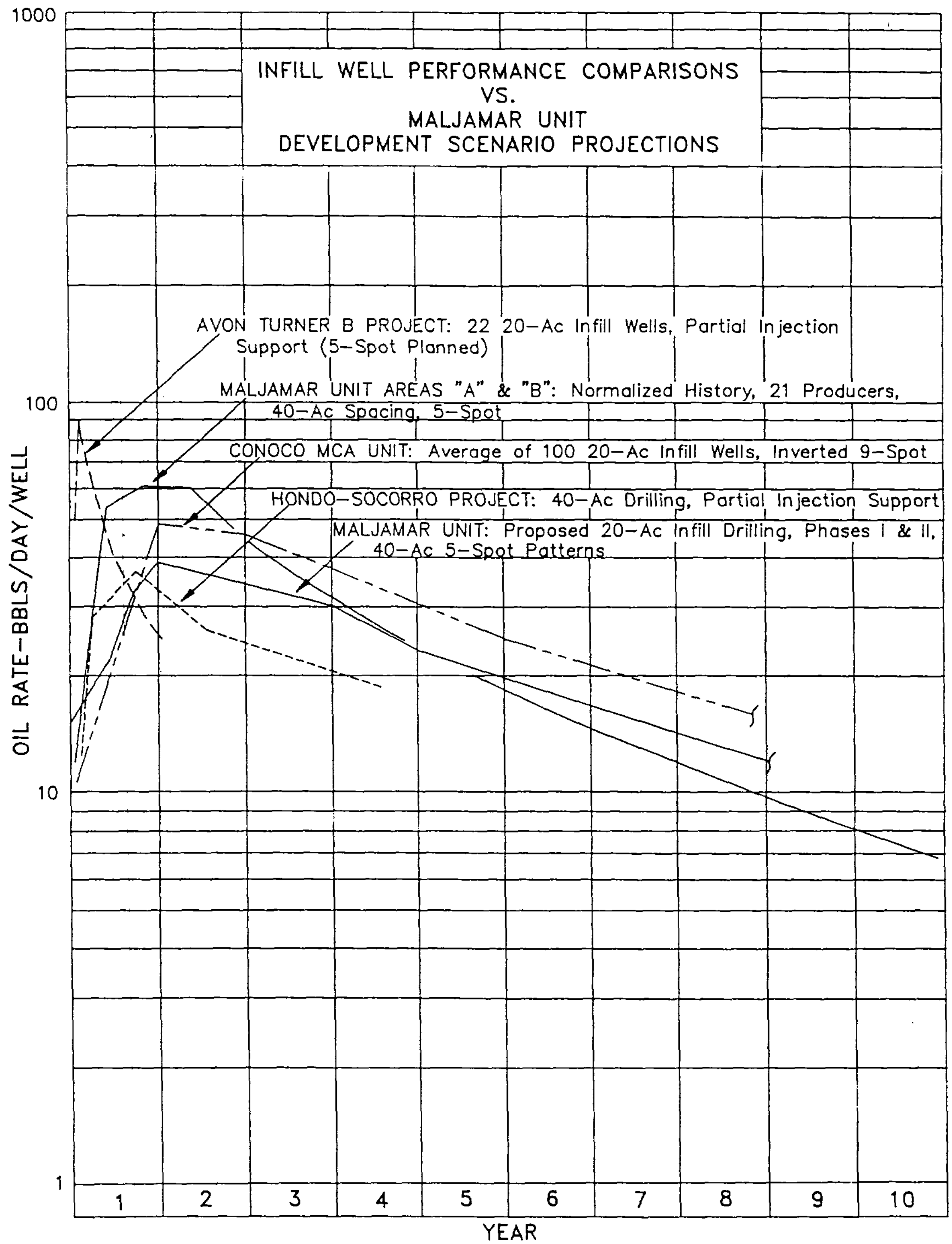

INFILL WELL PERFORMANCE COMPARISONS
VS.
MALJAMAR UNIT
DEVELOPMENT SCENARIO PROJECTIONS
AVON TURNER B PROJECT: 22 20-Ac Infill Wells, Partial Injection Support (5-Spot Planned)
MALJAMAR UNIT AREAS "A" & "B": Normalized History, 21 Producers, 40-Ac Spacing, 5-Spot
CONOCO MCA UNIT: Average of 100 20-Ac Infill Wells, Inverted 9-Spot
HONDO-SOCORRO PROJECT: 40-Ac Drilling, Partial Injection Support
MALJAMAR UNIT: Proposed 20-Ac Infill Drilling, Phases I & II, 40-Ac 5-Spot Patterns
1000
100
10
1
OIL RATE-BBLS/DAY/WELL
1
2
3
4
5
6
7
8
9
10
YEAR

FIGURE NO.

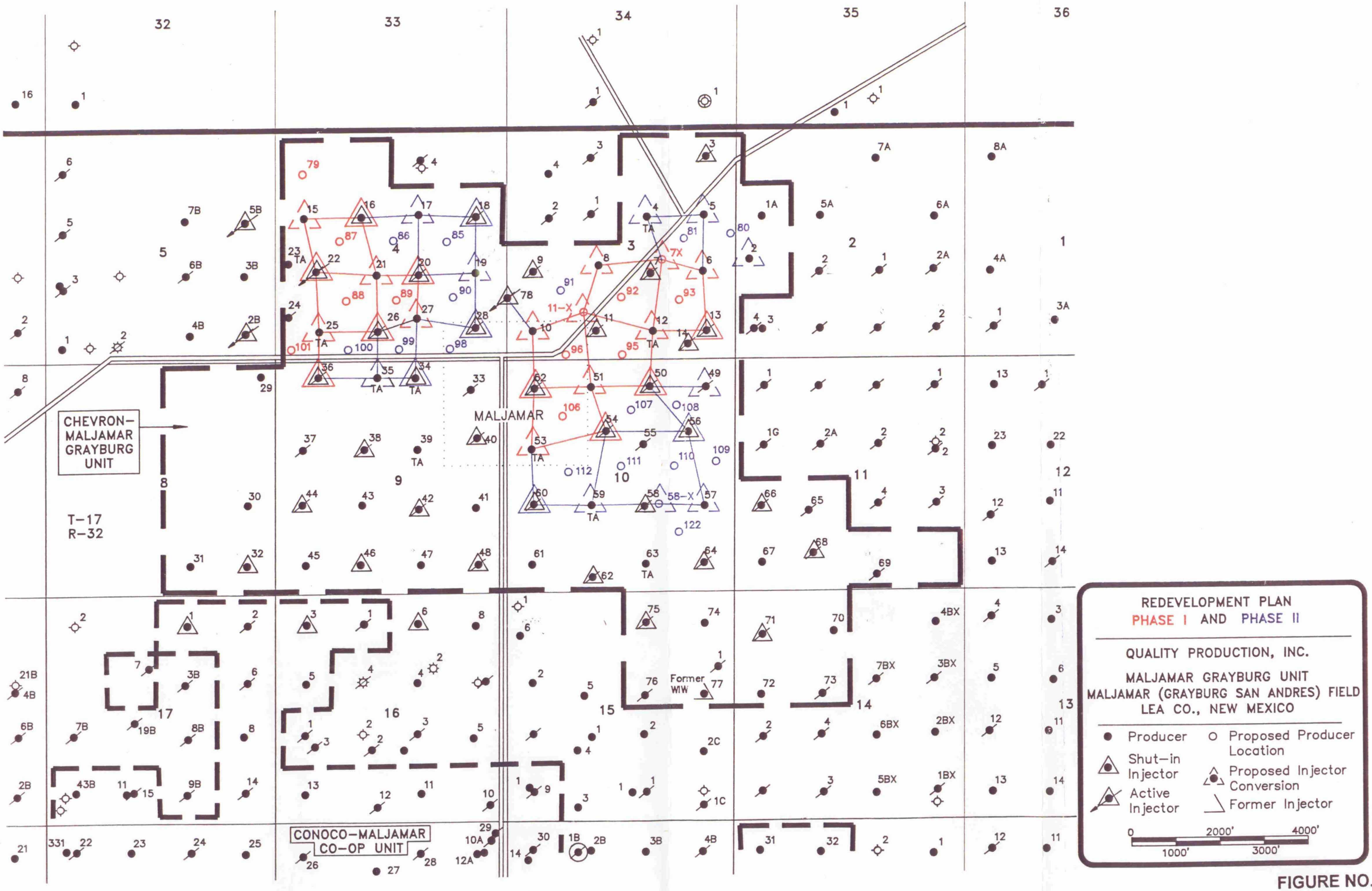
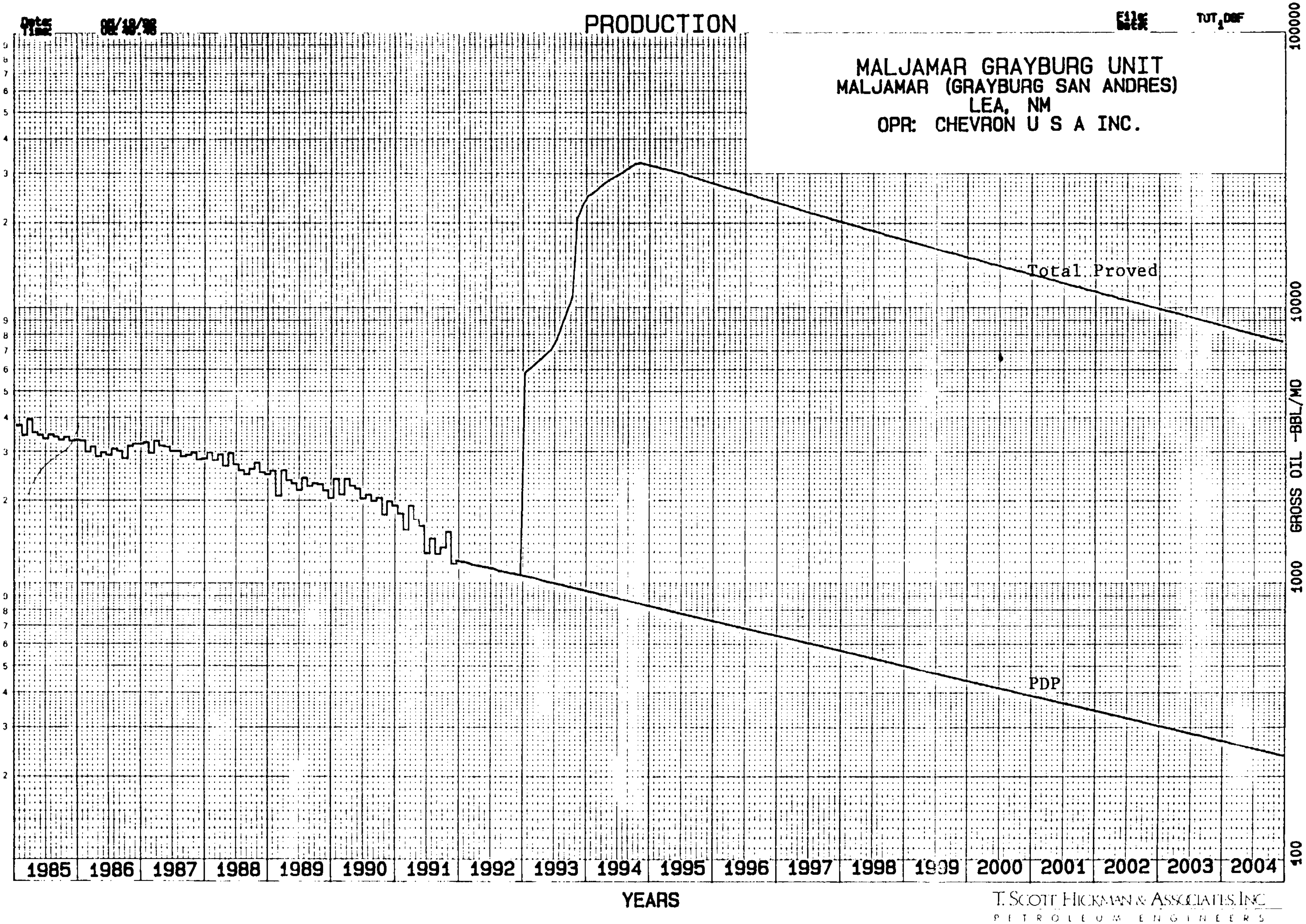
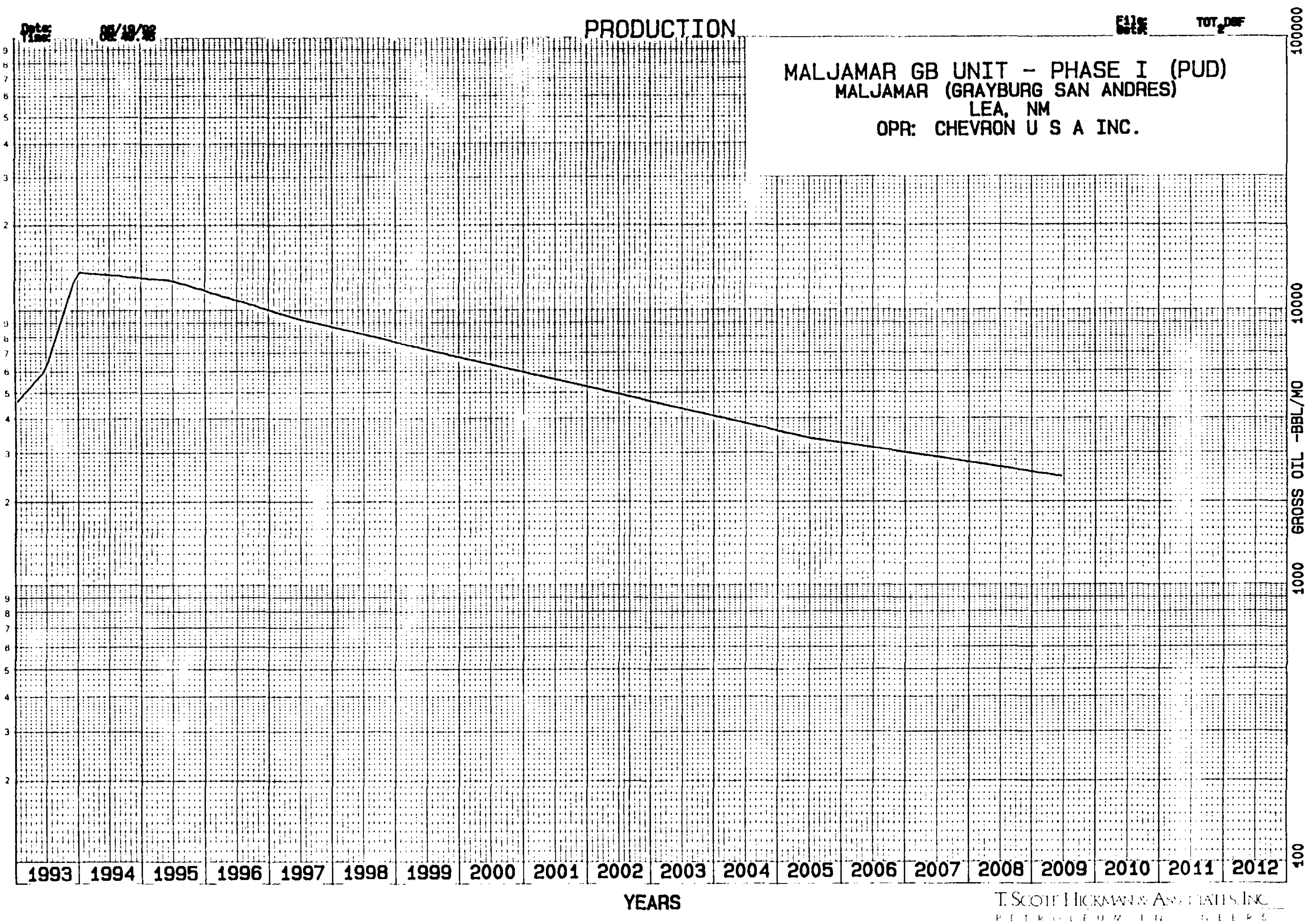

REDEVELOPMENT PLAN
PHASE I AND PHASE II
QUALITY PRODUCTION, INC.
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES) FIELD
LEA CO., NEW MEXICO
Producer
Shut-in Injector
Active Injector
Proposed Producer Location
Proposed Injector Conversion
Former Injector
0
1000'
2000'
3000'
4000'
CHEVRON-MALJAMAR GRAYBURG UNIT
CONOCO-MALJAMAR CO-OP UNIT
MALJAMAR
T-17
R-32
Former WIW

FIGURE NO. 19



PRODUCTION
MALJAMAR GRAYBURG UNIT
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.
Total Proved
PDP
GROSS OIL -BBL/MO
100000
10000
1000
100
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004
YEARS
T. SCOTT HICKMAN & ASSOCIATES, INC.
PETROLEUM ENGINEERS



PRODUCTION
MALJAMAR GB UNIT - PHASE I (PUD)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.
GROSS OIL -BBL/MO
100000
10000
1000
100
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
YEARS
T. SCOTT HICKMAN & ASSOCIATES, INC.

FIGURE NO. 21

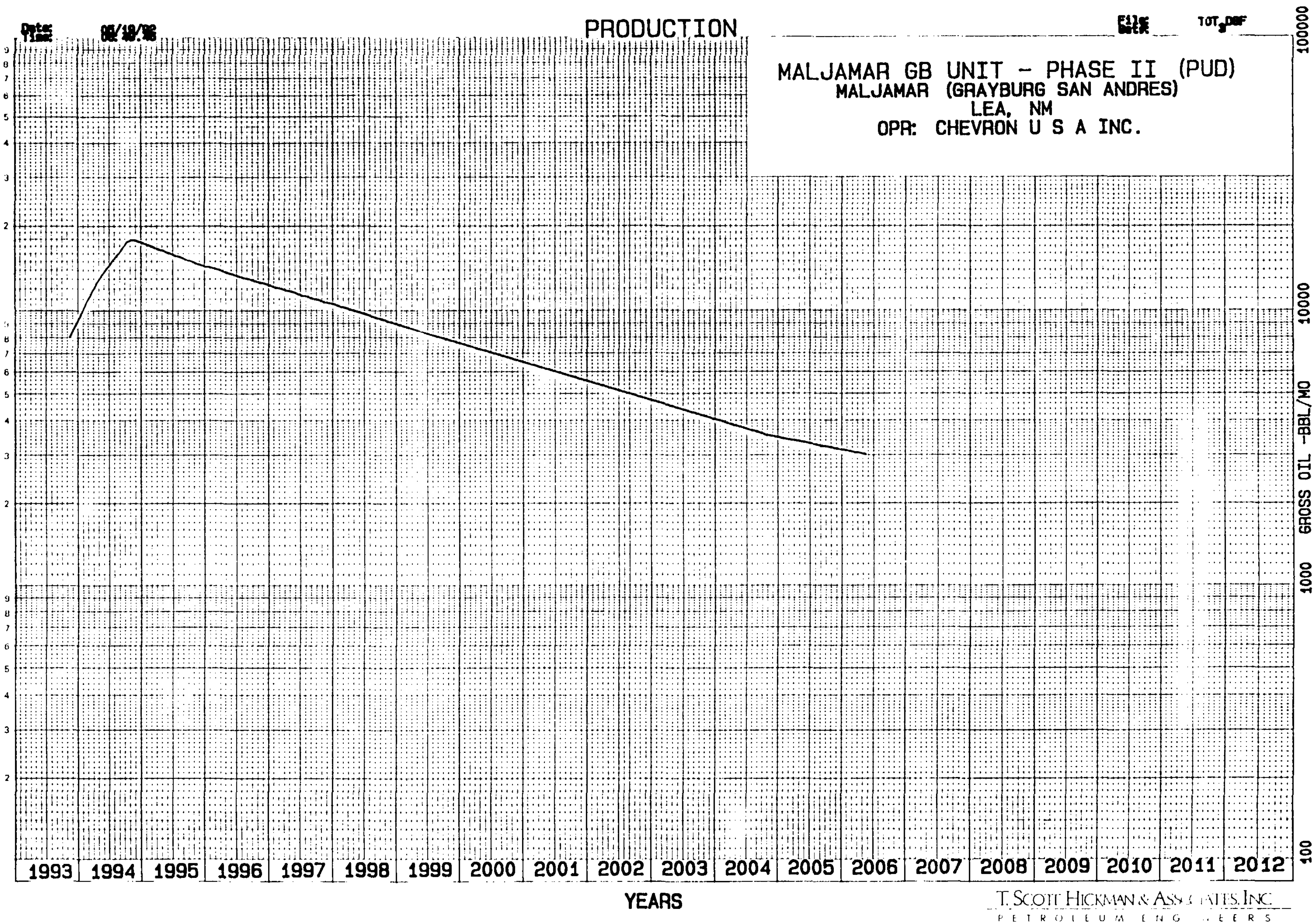

PRODUCTION
MALJAMAR GB UNIT - PHASE II (PUD)
MALJAMAR (GRAYBURG SAN ANDRES)
LEA, NM
OPR: CHEVRON U S A INC.
GROSS OIL -BBL/MO
100000
10000
1000
100
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
YEARS
T. SCOTT HICKMAN & ASSOCIATES, INC.
PETROLEUM ENGINEERS

FIGURE NO 33