RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

NOTICE TO OPERATORS

Mortality of Migratory Birds and Other Wildlife Due to Contact with Oil in Open Pits

Representatives of the U. S. Fish and Wildlife Service have been meeting with representatives of the petroleum industry and state regulatory agencies, including the Railroad Commission of Texas, to discuss mortality of migratory birds and other wildlife due to contact with oil in open pits.

The federal Migratory Bird Treaty Act provides for the protection and controlled harvest of migratory birds. Unless authorized by the Fish and Wildlife Service, the killing of a migratory bird in any manner is a violation of federal law subject to a criminal penalty of up to $10,000.00.

Open pits associated with petroleum industry operations are attractive to wildlife. Even small amounts of oil in open pits may result in wildlife mortality due to hypothermia or suffocation.

In a spirit of cooperation, the Fish and Wildlife Service has declined to prosecute documented cases of migratory bird losses due to oil in pits, and has instead asked for the assistance and cooperation of industry and the states in resolving the problem.

The Railroad Commission would appreciate the cooperation of industry in resolving the problem. Although several state and federal agencies have implemented regulatory changes to reduce wildlife losses, the Commission is asking industry to correct the problem.

The Commission will continue vigorous enforcement of regulations requiring that pits be maintained free of oil accumulations. Operators may also want to take extra precautions, such as screening, netting, or other methods, to protect birds from pits in areas that are winter homes to migratory birds.

Austin, Texas April 1989

PLEASE FORWARD THIS NOTICE TO THE APPROPRIATE SECTION OF YOUR COMPANY

Independent Petroleum Association of New Mexico

P.O. Box 1477 • 440 Cerrillos • Santa Fe, New Mexico 87504-1477 • (505) 982-2500

Tommy Roberts
President

Sylvia F. Little
Northern Vice President

Joseph J. Kelly
Southern Vice President

Bruce Ritter
Secretary-Treasurer

Fred J. Schlicher
Past President

Alvin Baca
Executive Director

May 18, 1989

State of New Mexico
Energy, Minerals & Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attn: William J. Lemay, Division Director

Re: Adoption of Rules Regarding
Protection of Birds Covered by the
Migratory Bird Treaty Act

Gentlemen:

My name is Tommy Roberts and I am the President of the Independent Petroleum Association of New Mexico, an association comprised of more than 450 independent oil and gas producers owning interests in properties located in the State of New Mexico.

I would like to take this opportunity to state the position of the Independent Petroleum Association of New Mexico with respect to the adoption of rules regarding protection of birds covered by the Migratory Bird Treaty Act.

The information available to the IPANM indicates there has been documentation of isolated incidents of damage to bird life caused by oily waste in open pits and ponds in some parts of the state. However, we have been informed there has been no documentation of incidents of damage to bird life in other parts of the state where oil and gas production activities are prevalent. If this

information is accurate, then it would appear that the adoption of a state-wide rule requiring screening, netting or other means of protection is both unreasonable and unwarranted. The problem has not yet been documented to be a state-wide problem and a proposal to adopt a state-wide rule requiring netting, screening, etc. would have to be characterized as regulatory excess. This observation is not in any way intended to minimize the seriousness of harm to bird life; however, I think it is extremely important that any proposal to prevent such harm be reasonably related to the kind and magnitude of harm which has been documented.

If it can be agreed that the adoption of a state-wide rule requiring netting, screening, etc. is not appropriate, then the next question to be answered is whether a rule should be adopted which will be applied on a geographically selective basis. It is the position of IPANM that the adoption of a rule to be applied on a geographically selective basis is also inappropriate under the circumstances. Again, the information available to IPANM indicates that there has been a lack of documentation evidencing a pattern of harm or damage to bird life over an extended period of time as a result of oil and gas production activities. Given that lack of evidence, an attempt to apply and enforce a rule requiring netting, screening, etc. on a geographically selective basis would necessarily be arbitrary and subject to regulatory abuse.

IPANM is not urging the Oil Conservation Division to overlook the documented incidents of damage to bird life resulting from oil and gas production activities. Any loss of bird life is a serious problem and serious attention should be given to that problem. However, it is not necessary to show proper concern for the problem by implementing rule or regulation that is overly-broad and not reasonably related to the problem as it has been documented. A neighboring state has already taken an initial step in an effort to resolve this problem. The Texas Railroad Commission has issued a notice to operators in that state advising them of the problem and cautioning them to conduct their operations accordingly. We think this is a reasonable way to initially address the problem. If this approach is found to be ineffective, then it may be necessary to attempt to resolve the problem using a different approach.

In conclusion, IPANM asks you to use regulatory restraint in addressing the problem of damage to bird life resulting from oil and gas production activities. The available documented evidence warrants that restraint. Any regulation ultimately

adopted should provide to the operator an opportunity to assume the business risk of not adequately equipping its facilities for the protection of bird life. The business risk to be assumed would be the imposition of a reasonable monetary penalty in connection with the production of conclusive evidence that damage to bird life has occurred as a result of oil and gas production activities. In other words, compliance with specific netting or screening requirements should not be mandated.

Thank you for this opportunity to be heard.

Independent Petroleum Association
of New Mexico

By: Tommy Roberts
Tommy Roberts, President

TR:nk

El Paso
Natural Gas Company

P. O. BOX 1492
EL PASO, TEXAS 79978
PHONE: 915-541-2600

RECEIVED
JUN 5 1989
OIL CONSERVATION DIVISION

June 1, 1989

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, NM 87504

Subject: Statement for the public record concerning OCD proposals relating to migratory birds, May 18, 1989

Dear Members of the Commission:

El Paso Natural Gas Company (El Paso) has reviewed the subject proposals and would like to offer the following comments.

El Paso is a major interstate natural gas processing and transmission company with several facilities located throughout New Mexico. For the past several months, El Paso has been tracking the concern with migratory birds and other wildlife losses resulting from contact with open pits and tanks containing oil and oil-by-products. We agree that revisions to the Oil Conservation Division (OCD) may be helpful in preventing such losses.

The proposed revisions to the OCD rules will require ponds, pits and open tanks to either be kept free of oil or be screened, netted or covered. Overall, we find such proposals to be reasonable but believe the following should be considered before the rules are finalized.

1. The term "free of oil" should be defined.

   The regulations will require that the operator determine whether a pit, pond or tank is "free of oil". Obviously, such a determination will be subjective if there is no definition or guideline for what constitutes a water surface "free of oil". We anticipate the greatest question will arise with pits, ponds and tanks which contain low hydrocarbon concentrations where the presence or absence of oil or petroleum hydrocarbon is not obvious. In such cases the hazards to migratory birds and other wildlife may be minimal. Consideration of temporary ponds for disposal of hydrostatic test water is one example why a definition would be helpful. Frequently used pipe hydrostatic test water contains low concentrations of hydrocarbons. Often such contamination is not readily visible.

   The agency should therefore establish a reasonable and workable definition to assist the operator in making a determination whether or not it is necessary to screen, net, or cover the pit, pond or tank. We propose the following:

   "free of oil" means that a layer of petroleum hydrocarbon is not visible on a water surface.

2. The OCD should offer guidelines concerning what constitutes a "hazard" to migratory birds.

   The proposals allow exceptions to the screening, netting or covering requirement provided a showing is made that the facility is not hazardous to migratory birds. Because operators are not generally knowledgeable in what constitutes a hazard to migratory birds or other wildlife, El Paso believes that more specificity is necessary. It would seem the U.S. Fish and Wildlife Service working in cooperation with the OCD could offer some guidelines to the regulated community. Such guidelines would make this part of the regulation more workable for all concerned entities.

El Paso appreciates this opportunity to comment on these regulations.

Very truly yours,

Gregory J. Odegard

Gregory J. Odegard, Ph.D., J.D.
Director
Environmental and Safety Affairs Department

GJO/KTB/teb

LANEXCO, INC.

P. O. BOX 2730
MIDLAND, TEXAS 79702
915/687-5047
FAX 915/687-5048

****

P. O. BOX 1206
JAL, NEW MEXICO 88252
505/395-3056
FAX 505/395-3205

ADMINISTRATION
Tommy Phipps
Ric Flores

OPERATIONS
Robert Lansford
Herb Dority
Mike Copeland

May 31, 1989

State of New Mexico
Energy, Minerals & Natural Resources Department
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

RECEIVED
JUN - 5 1989
OIL CONSERVATION DIV.
SANTA FE

Attention: William J. LeMay, Division Director

Re: Protection of Migratory Birds

Gentlemen:

My name is Tommy Phipps and I have twenty years direct experience in the oil and gas drilling and production business, mostly in Southeast New Mexico. In those twenty years I have visited, worked on or inspected hundreds of oil and gas properties. To the best of my memory I have witnessed exactly one dead bird that I considered a casualty of contact with the oil and gas business. That bird was found in an open plastic water-disposal tank on an oil lease.

During that same twenty years, traveling to and from these oil properties, I have witnessed hundreds, perhaps thousands, of dead birds along the highways which were doubtlessly killed by contact with moving automobiles. I could come up with some very witty remarks on a possible cure for this loss of bird life, but my point is that it is awfully easy to come up with rules of dubious value that are to be paid for by someone else.

Very truly yours,

Tommy Phipps
President

TP:se

Amoco Production Company

Houston Region
501 WestLake Park Boulevard
Post Office Box 3092
Houston, Texas 77253

713-556-2000

James F. Trickett
Regional Environmental
Affairs and Safety Manager

May 30, 1989

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attention: Mr. W. J. Lemay

File: JCA-170-986.51NM

Dear Mr. Lemay:

Comments on NMOCD Proposed
Amendments to Statewide Rules 8, 105,
312, 313, and 711

Amoco Production Company respectfully wishes to use this opportunity to comment on the NMOCD's proposed amendments to the captioned statewide rules pertaining to the protection of migratory waterfowl from oily wastes in pits, ponds, and open tanks.

Amoco agrees that this is a serious problem and we support efforts to prevent major losses of migratory birds. We believe that the documentation shown to industry graphically depicts the fact that significant numbers of birds are being lost in some pits, ponds, and tanks. This loss could be curtailed, in our opinion, by increased enforcement of current pit rules.

Amoco understands and appreciates the NMOCD's providing an exception procedure to the netting requirements for pits and ponds. However, we feel that this creates a situation that is ripe for second-guessing. There has been no evidence that contact with a pit's contents causes birds to succumb later, nor is there any that shows that they don't. The only concrete evidence is those cases where oil-coated birds are found on the premises. Therefore, we don't see why there is a need to net every pit and pond, or, in the alternative, to obtain an exception. We just feel that the biological evidence that pits are generally causing bird loss is insufficient.

Industry should focus on the most hazardous pits, those where the major bird losses have been documented. They should be targeted for clean up and netting, or other deterrent devices felt to be effective, now. This increased enforcement action now could result in a significant reduction in bird losses.

Amoco believes that writing statewide rules for netting pits and ponds is excessive regulation. Laws already exist at the state and federal level.

We also question the jurisdiction of statewide rules when federal rules protecting waterfowl already exist. For instance, if an operator nets a pit in compliance with the statewide rule and a bird gets caught in the netting and dies, is the operator still liable under the terms of the Migratory Bird Treaty Act? This appears to be a state rule directing an operator not to violate a federal law, and then directing specific action statewide, whether it is needed or not.

No matter what is done, zero waterfowl loss will remain an improbable goal. We urge the NMOCD and the U. S. Fish and Wildlife Department to not lose sight of that fact.

Yours very truly,

James F. Tuckett Jr

JWC/jwc

D. R. Currens
V. P. Whitfield

United States Department of the Interior

FISH AND WILDLIFE SERVICE
POST OFFICE BOX 1306
ALBUQUERQUE, N.M. 87103

May 31, 1989

Mr. William J. LeMay
Director
New Mexico Oil Conservation Division
State Land Office Building
P.O. Box 2088
Santa Fe, New Mexico

Re: New Mexico Oil Conservation Division - Proposed Rule Changes.

Dear Mr. LeMay,

On May 23-24, 1989, I conducted inspections of oil and gas well sites in the northwestern section of New Mexico at the request of OCD's Bridgette Jacober. The purpose of this inspection was to determine if significant differences exist in the field operations in the northwest versus those in the southeast as they relate to hazards to the survival of migratory birds. Accompanying me during the majority of this inspection was Charles Gholson of OCD's Aztec, NM, office.

During the course of my inspection, I observed what I believe to be a representative cross section of conditions existing in this portion of New Mexico, which included below grade tanks, lined and unlined earthen pits at the oil/gas well and battery sites, and pits associated with the oil/gas refining process. While there are some definite differences in the operations in the two sections of the State, the potential hazards to migratory birds are identical.

In most instances, those well sites, whether primarily oil or gas wells, which produced any quantity of oil generally had an "emergency" pit nearby. These pits were used as a collection point to contain oil emulsions which passed through the normal oil-water separation process. As the oil, which collects on the surface of these pits, reaches a commercially economical level, it is recovered and cycled back through the system.

These pits, when vacuumed, are not left totally free of oil. There is always a surface residue of exposed oil which can trap and kill migratory birds.

A significant difference in this operation and that of the southeast is in the use of a single wash tank at the battery site. In most instances in the southeast, there are two or more tanks in the system between the incoming oil and any discharge to the "emergency" pit. From my understanding of the process, this allows additional time for emulsions to break up and reduces the quantity of oil released to the pit.

As stated earlier, the potential hazards to migratory birds in the northwest portion of New Mexico is identical to that in the southeast. Both areas contain large quantities of open pits containing oil. On the two occasions that I have observed conditions in the northwest portion of the State, I have found only two migratory birds in oil covered pits. The month of May is well after the major spring migration and these findings parallel those from the southeast during the same time of year.

As the investigation continues, I will make additional trips into the northwest to inspect as many pits as possible. Due to the quantity of oil covered pits located in this section of the state, a significant bird loss will undoubtably be detected. From what I have seen during my inspection trips to the northwest, I find no reason to believe oil producers in this area should be exempted or excluded from any regulations requiring screening or otherwise covering exposed oil in pits or tanks.

If you should have further questions concerning my findings related to this matter please feel free to call on me at your convenience.

Sincerely,

Thomas M. Lane
Special Agent
U.S. Fish and Wildlife Service

HEYCO

PETROLEUM PRODUCERS

HARVEY E. YATES COMPANY

P O. BOX 1933 ONE SUNWEST CENTRE 505/623-6601
FAX 505/622-4221
ROSWELL, NEW MEXICO 88202-1933

May 31, 1989

Oil Conservation Division
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87504

Attn: Bill Lemay

RE: Changes to Rules 8, 312, 313, 711 and 105

Dear Bill,

On behalf of HEYCO I would like to express our appreciation to the Commission for allowing industry input to and participation in the rule making process. We feel this is a very valuable mechanism for promulgating rules. However, we are quite concerned about the direction this particular rule making has taken.

As far as I can determine the Commission is, for the first time, about to make rules without any scientific data before it. This is a very dangerous precedent to set. If the rules are implemented, the OCD will be asking industry, based upon the same derth of information, to spend a great deal of money. This, too, is a dangerous and irresponsible precedent to set. The history of this Commission has been to take scientific and engineering data, presented in hearings, and evaluate that data before making or modifying a rule. In this instance we have practically no data, no scientific testimony and so urge that the Commission not make any rules until it has scientific data from both sides to evaluate.

Even evaluating the little bit of data available, no rule making is justified. Let us examine the facts that were entered into the record and those illicited from the Fish and Wildlife Service during the committee meetings. We know that, from a speech given by Robert P. Hauptfuhrer,CEO of Sun, the Fish and Wildlife Service in early 1988 established a goal of having all oil field pits and tanks in the United States covered or netted. According to Fish and Wildlife representatives, they have been flying over the oil fields locating tanks and pits to investigate. Unfortunately, they found some dead ducks, about 500, in a water disposal system owned and operated by a rancher. Now Fish and Wildlife representatives had the incident they needed to put

pressure on State agencies and other Federal agencies to help them achieve their goal of netting pits and tanks. It is undignified and inappropriate for our Oil Conservation Division to become the pawn for some Federal agency with a specialized agenda.

Five hundred and forty-four birds. After numerous visits to southeastern New Mexico and one visit to northwestern New Mexico, in addition to OCD and BLM personnel blanketing the oil patch, the record indicates a find of about 901 birds. Certainly there were some birds that were not found and maybe every tank and pit in southeastern New Mexico was not checked. Incidentally the 500 found in one location, according to Fish and Wildlife, were probably an accumulation of two or three years. The other birds were not found in one day but over a period of time, so assuming even that in the course of a year three times the number found were killed as a result of contact with oil in pits and tanks, that would be 1800 birds a year, a far cry from the 100,000 to 400,000 claimed by Fish and Wildlife. These numbers, by themselves, mean nothing. So how many birds are there in southeastern New Mexico? According to Fish and Wildlife there are approximately 9 million birds residing or passing through southeastern New Mexico with approximately 3 million of these being migratory waterfowl. Now we can begin to determine the magnitude of the problem.

Total Waterfowl	Ducks Found Dead	Problem Ratio
3 million	544	.0001813

Total Bird Population	Total Birds Projected Dead	Problem Ratio
9 million	1800	.0002

Using Fish and Wildlife Numbers:

Total Population	Total Alledged Killed	Problem Ratio
9 million	100,000	.01111

At Fish and Wildlife's High Numbers:

Total Population	Total Alledged Killed	Problem Ratio
9 million	450,000	.05

None of these numbers will support or justify the expenditure of resources which would be required by the proposed rules. No CEO could justify spending money based upon these numbers and I would suspect neither could the Fish and Wildlife, BLM, or OCD justify the kinds of money required from their budgets.

We should also remember at this point that the record has not established that any of these birds were killed as a result of contact with oil in tanks or pits. There is no evidence in the

record that necropsies were performed to establish a cause of death. Nor does the record indicate a normal expected death rate. A third and very real cause of death are hunters and vandals who shoot birds and throw them in the nearest tank. This is a common practice throughout the area and so any of the foregoing would reduce our problem ratio.

Fish and Wildlife representatives advised the committee that even one drop of oil in a fiberglass tank would be sufficient to kill a duck. This is an opinion from non-scientific people and is extremely difficult to accept without further scientific evidence.

So not only would the commission set the dangerous precedent of making a rule with no scientific or engineering data and almost no facts, but it would make a rule when the few facts on the record indicate the contrary.

And what costs is the industry expected to bear based upon such tenuous evidence? Those costs will vary depending upon whether the operator is an independent or major oil company. An independent who must hire a crew to net tanks, will pay about $50 for materials and $200-400 per tank for labor. It should be understood that the wells are 20-60 miles from town and travel is involved. So it would take possibly a half a day per well. One small company with a hundred tanks to net, using a conservative number, would spend about $30,000. This is no small sum especially for those wells which are 3, 5, or even 20 barrel a day wells.

The cost of the industry as a whole will be substantial. If we figure 45,000 wells to be netted and apply the same cost figure we arrive at a total of $13,000,000.00. This is a substantial cost to pay when we have little data and no scientific evidence.

Finally we are very concerned about the legal status of the proposed rules. To set a precedent of rule making based upon little or no facts, and no science at all, is cause for concern, but to compound that by rule making based upon tenuous legal grounds is very shaky.

The record shows that Commission Rule 310 and House Bill 575 are the justification for the extension of Commission authority. Section 70-2-12B(21), the House Bill 575 amendment, gives the Commission authority, "to regulate the disposition of non-domestic wastes...of crude oil or natural gas to protect the public health and the environment;". Clearly, we are not dealing with the disposition of wastes from the production of crude oil or natural gas.

Waste is not defined in the statute but normally is something that is thrown away as useless after being used. Neither the produced water nor the oil is thrown away. The oil, of course, is the product, not a waste and we are in fact prohibited from wasting oil. The oil is the medium which alledgedly, although

there is no evidence in the record, injures waterfowl. If oil in minute quantities is injuring wildlife, and that is not proven by even a small amount of evidence, the Commission does not have authority under 70-2-12B(21) to classify oil as a waste and thereby regulate it. In New Mexico, no one can argue that water, no matter how saline, is a waste. Water produced during the extraction of oil and gas is either reinjected into the ground or allowed to evaporate into the atmosphere. This is not a waste that is thrown away. In any event, testimony has indicated that produced water is not hazardous to waterfowl.

So neither water nor the oil is an unwanted material left over from the manufacturing process or something to be thrown away. Oil in fact is the product. Therefore, the statute cited does not apply and nor would the proposed rules protect correlative rights, the quality of water, or prevent waste. The Commission would be treading on thin ice to make a rule based upon such tenuous legal grounds and such a derth of scientific evidence.

HEYCO agrees with the position taken by IPANM and urges that no rule making be done at this time. Instead, we would suggest a notice to operators be drafted, which parallels the notice sent by the Texas Railroad Commission to its operators, and disseminated to all New Mexico operators. Then if the problem continues, the agencies involved could initiate a study to gather accurate scientific and factual information upon which a commission rule could then be based.

Sincerely,

Dan Girand
Contract Administrator

DG/wbn

MARTIN YATES, III
1912 - 1985
FRANK W. YATES
1936 - 1986

YATES PETROLEUM CORPORATION

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ARTESIA, NEW MEXICO 88210
TELEPHONE (505) 748-1471

S. P. YATES
CHAIRMAN OF THE BOARD
JOHN A. YATES
PRESIDENT
PEYTON YATES
EXECUTIVE VICE PRESIDENT
RANDY G. PATTERSON
SECRETARY
DENNIS G. KINSEY
TREASURER

May 30, 1989

New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Attention: Mr. William J. LeMay, Division Director

Re: Adoption of Rules Regarding
Protection of Birds Covered by the
Migratory Bird Treaty Act

Dear Mr. LeMay:

In cooperation with requests made by the U. S. Fish and Wildlife Service, New Mexico Oil Conservation Division has proposed regulations which would require netting of pits to prevent loss of migratory birds landing on such pits. Pursuant to the requests of the Division for comments on these proposed regulations, we hereby submit the following.

While industry and Yates Petroleum Corporation regrets the loss of any migratory bird due to its errant landing upon a pit which may contain oil, we feel that the proposed regulations are unnecessary and extremely burdensome. The Fish and Wildlife Service claimed that probably 100,000 birds are lost to oil and gas operations each year. This number, we feel, is a sensationalized exaggeration of actual losses. No evidence has been submitted to the Oil Conservation Division or industry proving that even 100 birds are lost per year. Therefore, it is very unrealistic to promulgate regulations until such time as evidence is presented that there is truly a problem.

It is distressing to learn that the single occurrence, a salt water disposal pit owned not by an oil company but by a rancher, where a significant number of migratory birds were killed will be given a waiver as to these migratory bird regulations. It is our opinion that if regulations are to be promulgated, they must apply to <u>all</u> potentially dangerous installations.

Historically, the New Mexico Conservation Commission (Division) has always made rules and decided cases based upon facts and specific scientific evidence of those facts. We feel that it is a very bad direction that the OCD may be taking to begin to promulgate rules without taking into advisement hard scientific

evidence presented in testimony and weighing that evidence against its charges to prevent waste, protect correlative rights, and protect ground water. We feel that the New Mexico Oil Conservation Division should not promulgate these regulations until this is accomplished. Unless specific scientifically gathered evidence shows that large numbers of birds are being killed by oil and gas operations, installations required by the proposed regulations will constitute considerable economic waste.

The U. S. Fish and Wildlife Service has approached the Railroad Commission of Texas as it has the New Mexico Oil Conservation Division. The Railroad Commission of Texas has reviewed the problem and has printed a notice to operators, a copy of which is enclosed. This notice to operators very plainly states the problem and requests cooperation of the operators in protecting birds from oil and gas operations. We believe that the Railroad Commission of Texas" treatment of this problem is proper and reasonable in light of the little or no evidence that considerable wildlife loss is taking place. We therefore recommend that a notice to operators similar to that used by the Railroad Commission of Texas be adopted by the New Mexico Oil Conservation Division and that no regulation be promulgated.

We thank you for the opportunity to make comments on this subject.

Very truly yours,

YATES PETROLEUM CORPORATION

Randy G. Patterson
Secretary

RGP/mw

Enclosure

cc: Mr. Darwin Van DeGraaff
Mr. Alvin Baca
Mr. Doug Lunsford
Mr. Dan Girnad
Mr. Ray Miller

RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

NOTICE TO OPERATORS

Mortality of Migratory Birds and Other Wildlife Due to Contact with Oil in Open Pits

Representatives of the U. S. Fish and Wildlife Service have been meeting with representatives of the petroleum industry and state regulatory agencies, including the Railroad Commission of Texas, to discuss mortality of migratory birds and other wildlife due to contact with oil in open pits.

The federal Migratory Bird Treaty Act provides for the protection and controlled harvest of migratory birds. Unless authorized by the Fish and Wildlife Service, the killing of a migratory bird in any manner is a violation of federal law subject to a criminal penalty of up to $10,000.00.

Open pits associated with petroleum industry operations are attractive to wildlife. Even small amounts of oil in open pits may result in wildlife mortality due to hypothermia or suffocation.

In a spirit of cooperation, the Fish and Wildlife Service has declined to prosecute documented cases of migratory bird losses due to oil in pits, and has instead asked for the assistance and cooperation of industry and the states in resolving the problem.

The Railroad Commission would appreciate the cooperation of industry in resolving the problem. Although several state and federal agencies have implemented regulatory changes to reduce wildlife losses, the Commission is asking industry to correct the problem.

The Commission will continue vigorous enforcement of regulations requiring that pits be maintained free of oil accumulations. Operators may also want to take extra precautions, such as screening, netting, or other methods, to protect birds from pits in areas that are winter homes to migratory birds.

Austin, Texas April 1989

PLEASE FORWARD THIS NOTICE TO THE APPROPRIATE SECTION OF YOUR COMPANY

MURPHY OPERATING CORPORATION
UNITED BANK PLAZA, SUITE 300
400 NORTH PENNSYLVANIA AVENUE
POST OFFICE BOX 2648
ROSWELL, NEW MEXICO 88202-2648

TELEPHONE
505 623-7210

May 31, 1989

RECEIVED
JUN 1 1989
OIL CONSERVATION DIVISION

Mr. William J. LeMay, Director
State of New Mexico
Energy and Minerals Department
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504-2088

Re: State of New Mexico
Energy and Minerals Department
Oil Conservation Division ("OCD")
Proposed Rule Adoption and
Changes relating to
Protection of Migratory Birds.

Gentlemen:

After following the proceedings, testimony, and correspondence from the various entities regarding the above-referenced matter, I wish to make the following comments.

First, it is my understanding that the Department of Interior Fish and Wildlife Service claims that each year over 100,000 migratory birds (primarily ducks) are killed in West Texas and Southeastern New Mexico oil field pits. Based upon my experiences in the oil fields of West Texas and Southeastern New Mexico, I am highly skeptical that a problem exists on the magnitude that the Fish and Wildlife Service purports. My understanding of the procedure used by the Fish and Wildlife Service was the arbitrary extrapulation of one or two incidents. The findings of the Fish and Wildlife Service would certainly be more credible if verified by a unbiased and qualified independent third party.

Secondly, if one accepts that a problem with endangerment of migrating birds exists, then it appears to me that there are federal restraints and procedures as contained within the Migratory Bird Treaty Act. This act imposes stiff fines and penalties for endangerment of migratory birds. I believe that it is improper to create an additional tier of regulation at the state level to combat a problem, the validity of which is highly suspect.

Thirdly, I have serious reservations concerning the propriety of the OCD creating a set of rules and regulations beyond the scope of its authority. My understanding of the OCD's responsibilities include the protection of ground water and correlative rights. The proposed set of regulations is not consistent with these duties, and furthermore, the implementation of rules and regulations without the benefit of credible scientific evidence and technical review is unprecedented.

MOC recommends that the OCD circulate a letter similar in content to the attached correspondence of April, 1989 from the Railroad Commission of Texas. This will allow the operators of the state the opportunity to evaluate the potential for endangerment of water fowl on a case-by-case basis and to take the appropriate action. The creation of frivolous regulations only discourages oil and gas activity and jeopardizes the economic well-being of the state. I strongly recommend the OCD and Governor Carruthers' Administration to re-evaluate its approach to resolving this issue.

Very truly yours,

MURPHY OPERATING CORPORATION

Mark B. Murphy
President and Chief Operating Officer

MBM/js

Enclosure

cc: The Honorable Garrey E. Carruthers
c/o Ms. Maralyn Budke, Chief of Staff
State Capitol
Santa Fe, New Mexico 87503

Tommy Roberts, Esq.
Independent Petroleum Association of New Mexico
Tansy, Roseborough, Gerding & Strothers
Post Office Box 1020
Farmington, New Mexico 87499

Darwin Van de Graff
New Mexico Oil and Gas Association
Post Office Box 1864
Santa Fe, New Mexico 87504-1864

Dan Girand
Harvey E. Yates Company
No. 1 Sunwest Centre
Post Office Box 1933
Roswell, New Mexico 88202-1933

RAILROAD COMMISSION OF TEXAS

Oil and Gas Division

NOTICE TO OPERATORS

Mortality of Migratory Birds and Other Wildlife Due to Contact with Oil in Open Pits

Representatives of the U. S. Fish and Wildlife Service have been meeting with representatives of the petroleum industry and state regulatory agencies, including the Railroad Commission of Texas, to discuss mortality of migratory birds and other wildlife due to contact with oil in open pits.

The federal Migratory Bird Treaty Act provides for the protection and controlled harvest of migratory birds. Unless authorized by the Fish and Wildlife Service, the killing of a migratory bird in any manner is a violation of federal law subject to a criminal penalty of up to $10,000.00.

Open pits associated with petroleum industry operations are attractive to wildlife. Even small amounts of oil in open pits may result in wildlife mortality due to hypothermia or suffocation.

In a spirit of cooperation, the Fish and Wildlife Service has declined to prosecute documented cases of migratory bird losses due to oil in pits, and has instead asked for the assistance and cooperation of industry and the states in resolving the problem.

The Railroad Commission would appreciate the cooperation of industry in resolving the problem. Although several state and federal agencies have implemented regulatory changes to reduce wildlife losses, the Commission is asking industry to correct the problem.

The Commission will continue vigorous enforcement of regulations requiring that pits be maintained free of oil accumulations. Operators may also want to take extra precautions, such as screening, netting, or other methods, to protect birds from pits in areas that are winter homes to migratory birds.

Austin, Texas April 1989

PLEASE FORWARD THIS NOTICE TO THE APPROPRIATE SECTION OF YOUR COMPANY

OIL CONSERVATION DIVISION

PROPOSAL FOR

CHANGES TO RULES 8, 312, 313, 711 AND 105 (NEW)

RELATING TO MIGRATORY BIRDS

Prepared For

Oil Conservation Commission Hearing

May 18, 1989

RULE 8. EXPOSED PITS/LINED PITS/BELOW GRADE TANKS

(a) After January 1, 1986, lined pits and below grade tanks may be used to contain produced water, sediment oil, tank bottoms, miscellaneous hydrocarbons, or other fluids subject to the jurisdiction of the Division under the Oil and Gas Act only upon prior approval of the Division. Applications for approval of lined pits or below grade tanks should be made in accordance with applicable special rules or, in the absence of special rules, in accordance with Division "Guidelines".

(b) To protect migratory birds, all exposed pits, ponds (lined or unlined), ~~and open tanks~~ shall be either kept free of oil, or screened, netted or covered. An exception to screening, netting or covering of a facility may be granted by the district supervisor upon a showing that either an alternative method will protect migratory birds or a showing that the facility is not hazardous to migratory birds.

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(~~h~~)i

(~~i~~)j

RULE 313. EMULSION, BASIC SEDIMENTS, AND TANK BOTTOMS

Wells producing oil shall be operated in such a manner as will reduce as much as practicable the formation of emulsion and basic sediments. These substances and tank bottoms shall not be allowed to pollute fresh waters or cause surface damage. If tank bottoms are removed to surface pits, the pits shall be fenced and the fence shall be kept in good repair. To protect migratory birds, all exposed pits, ponds (lined or unlined), ~~and open tanks~~ shall be either kept free of oil, or screened, netted or covered. An exception to screening, netting or covering of a facility may be granted by the district supervisor upon a showing that either an alternative method will protect migratory birds or a showing that the facility is not hazardous to migratory birds.

RULE 711. COMMERCIAL SURFACE WASTE DISPOSAL FACILITIES

I. To protect migratory birds, all exposed pits, ponds (lined or unlined), ~~and open tanks~~ shall be either kept free of oil, or screened netted or covered. An exception to screening, netting or covering of a facility may be granted by the district supervisor upon a showing that either an alternative method will protect migratory birds or a showing that the facility is not hazardous to migratory birds.

~~I~~.J

~~J~~.K.

~~K~~.L.

New proposal; needs to be advertised:

RULE 105. PIT FOR CLAY, SHALE, DRILL FLUID, and DRILL CUTTINGS

a. In order to assure a supply of proper material for mud-laden fluid to confine oil, gas, or water to their native strata during the drilling of any well, operators shall provide before drilling is commenced an adequate pit for the accumulation of drill cuttings. Drilling fluids and drill cuttings must be disposed of at the well site in a manner to prevent contamination to surface of subsurface waters. Removal of drilling fluids or drill cuttings for offsite disposal will be permitted only by approval of the appropriate Division district supervisor.

b. <u>To protect migratory birds, oil must be removed from the surface of pits used for drilling, completion, blowdown, workover or an emergency immediately after the cessation of each activity.</u>

LAYTON ENTERPRISES, INC.
3103 - 79TH STREET • LUBBOCK, TEXAS 79423 • 806/745-4638

May 26, 1989

State of New Mexico
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504

Attn: Mr. William J. LeMay

Re: Adoption of Rules Regarding Protection of Birds
Covered by Migratory Bird Treaty Act

Dear Bill:

I would like to echo the comments and suggestions of IPANM President Tommy Roberts concerning the captioned rule proposal.

I also concur with the position and the action taken by the Texas Railroad Commission and as a Texas operator I can vouch for the fact first hand that any potential problem areas are being voluntarily corrected.

It can almost always be proven that prudent operators, once apprised of a problem, will promptly adjust and correct in whatever manner necessary. The Division has always had the authority to tkae necessary action in any case of flagrant violation.

The adoption of a state-wide rule in the absence of a clearly documented problem could not be considered prudent regulation and clearly not in the best interests of the State or the industry.

I strongly urge your restraint in this matter.

Best Personal Regards,

LAYTON ENTERPRISES, INC.

Donald R. Layton
President

UNITED STATES
DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE

Ecological Services
Suite D, 3530 Pan American Highway, NE
Albuquerque, New Mexico 87107

May 24, 1989

RECEIVED
MAY 25 1989
OIL CONSERVATION DIV.
SANTA FE

Mr. William J. Lemay, Director
State of New Mexico Energy, Minerals
and Natural Resources Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87504-2088

Dear Mr. Lemay:

We have reviewed the Public Notice dated May 9, 1989 requesting comments for the Bloomfield Refinery discharge permit renewal. The Refinery is located at NW/4 NE/4 and the S/2 NE4 and the N/2 NE/4 and the SE/4 NW/4 SW/4 and the NE/4 SW/4 of Section 26, Township 29, North Range 11 West, N.M.P.M., San Juan County, New Mexico.

Recently, a member of my staff and a special agent were given a tour of refineries, oil and gas fields and commercial disposal basins in San Juan County. At several locations dead migratory birds (ducks and shorebirds) were found trapped in surface oil present on the ponds. Several of these birds were found at a gas refinery.

With reference to the November 1, 1988 meeting with representatives of your office, U.S. Fish and Wildlife Service, New Mexico Department of Game and Fish and New Mexico Department of Natural Resources, and subsequent meetings with industry representatives at which time effective measures to exclude migratory birds from oil pits and similar structures were discussed, we believe that oil and gas operations in San Juan County should also cooperate. Specifically, the Bloomfield Refinery Company should take special precautions to prevent oil from getting on the surface of their evaporation ponds.

If we can be of any assistance, please call Richard Roy at (505) 883-7877.

Sincerely yours,

John C. Peterson
Field Supervisor

cc:
Regional Director, U.S. Fish and Wildlife Service, Fish and Wildlife Enhancement, Albuquerque, New Mexico

marbob
energy corporation

May 22, 1989

William LeMay, Director
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico

RE: Comments on Proposal
for Changes to Rules
8, 312, 313, 711, and 105.

Dear Mr. Lemay:

Marbob Energy Corporation is in agreement with the principals that we are trying to accomplish with proposed rule changes. While we regret the cost which we will incur with these rule changes, we certainly do need to take some type of corrective action if our industry is responsible for the killing of 100,000 migratory birds annually in our general area. The only change that we vehemently oppose is the proposed change to Rule 105. Marbob Energy Corporation specifically objects to any change to Rule 105 for the following reasons:

1. None of the testimony in case 9672 documented specific incidents of any migratory kill from these types of pits.

2. During a portion of the life of these pits there is a level of activity which would deter the birds from this area.

3. These pits have a relative short time of existence in relation to permanent production and disposal pits.

4. The cost borne by industry is significant particularly if we are not saving any migratory birds or only a very small percentage of the estimated annual migratory bird kill.

Marbob Energy Corporation would request that changes proposed for Rule 105 be completely dropped from the final changes adopted by the Oil Conservation Division.

Sincerely,

Mack C. Chase
President

P.O. Drawer 217 Artesia, New Mexico 88211-0217 (505) 748-3303

marbob
energy corporation

RECEIVED
MAY 23 1989
OIL CONSERVATION DIV.
SANTA FE

May 22, 1989

William LeMay, Director
Oil Conservation Division
P.O. Box 2088
Santa Fe, New Mexico

Dear Mr. Lemay:

Enclosed are our comments for the public record regarding the proposed rule changes. We appreciate the fact that you extended the comment period for a two week period. We are certainly concerned about the ramifications of these rule changes. Specifically we feel that dry emergency pits should qualify for the exemption process since if fluid is placed in these pits it is removed within 48 hours. Additionally, we question whether above grade fiberglass tanks which contain an oil covering should be required to be screened unless they are located in an area where it has been demonstrated that similar type facilities are killing migratory birds. Certainly we do operate pits that should be netted or screened as they do pose a significant threat to migratory birds. I suspect that if these bad pits were netted we would reduce our migratory bird kill by over 95 percent. Yet without exemptions to be in complete compliance 90 percent of our cost will be on facilities that contribute to less than 5 percent of the migratory bird kill. I hope that your work with the district supervisor will be attacking the bad pits and will recognize that much of the cost can be exempted since it will do very little to save migratory birds. This of course recognizes that the operator will still be at risk to prosecution by the U.S. Wildlife Department if a facility that has been exempted is found to have killed one or more migratory birds.

Thank you for your help and consideration in this matter.

Sincerely,

Raye Miller

Raye Miller
Secretary/Treasurer

DM/dr

P.O. Drawer 217 Artesia, New Mexico 88211-0217 (505) 748-3303

OIL CONSERVATION DIVISION

PROPOSAL FOR

CHANGES TO RULES 8, 312, 313, 711 AND 105 (NEW)

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United States Department of the Interior
FISH AND WILDLIFE SERVICE
POST OFFICE BOX 1306
ALBUQUERQUE, N.M. 87103

TAKE PRIDE IN AMERICA

MAY 26 1989

In Reply Refer To:
Region 2/RF

RECEIVED
MAY 31 1989
OIL CONSERVATION DIV.
SANTA FE

Mr. William J. Lemay
Division Director
Oil Conservation Division
P.O. Box 2088
State Land Office Building
Santa Fe, New Mexico 87504

Dear Mr. Lemay:

Thank you for the opportunity to participate in the Oil Conservation Commission Hearing on May 18, 1989. Once again, we compliment you on the progress being made toward protecting migratory bird resources.

We have made a few suggestions on the Proposal For Changes to Rules 8,312, 313, 711, and 105 (new) which are enclosed. These changes would simply remove from the operators the determination of "either kept free of oil", where we currently have a history of problems, and place the authority with the appropriate District Supervisor of the Oil Conservation Division. The matter of determining just what constitutes keeping a facility free of oil received a lot of comments and questions at the Hearing and it appears that, in the interest of uniformity and consistency, the solution lies with vesting the authority with the District Supervisors.

It appears that if the Proposal for Changes is adopted in its present or similar form, the numbers of exceptions to the rule may be very limited. For example, two large producers have already initiated action to eliminate most of their pits and open tanks and net or cover the remainder. In another case, Yates asked what our reaction would be to a request for delaying beyond October 1, 1989, the completion of netting their pits and tanks because they had 600 to work on. They further indicated that they would make steady progress on the project and would provide regular reports on such progress. It is my contention that this sort of good faith effort, while not to be overdone, is certainly acceptable.

Along this same vein, it is my suggestion that the above outlined situation and any other exceptions to the new rules be subjected to the submission of an application to the appropriate District Supervisor. The District Supervisor should then confer with Special Agent Tom Lane before issuing an exemption. I also suggest that any exemptions granted carry with them the express written statement that a certain risk exists if the exempted facility becomes oil-contaminated and kills a migratory bird.

Thank you for the opportunity to comment. Please let us know about any further hearings or of any assistance we may provide.

Sincerely,

Regional Director

Enclosure

OIL CONSERVATION DIVISION

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STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

EXAMINER HEARING

IN THE MATTER OF:

Application of OXY USA, Inc., for termination of gas prorationing in the Burton Flat-Morrow Gas Pool, Eddy County, New Mexico — Case 9872

TRANSCRIPT OF PROCEEDINGS

BEFORE: MICHAEL E. STOGNER, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

February 21, 1990

CUMBRE COURT REPORTING
(505) 984-2244

A P P E A R A N C E S

FOR THE DIVISION:	ROBERT G. STOVALL Attorney at Law Legal Counsel to the Divison State Land Office Building Santa Fe, New Mexico
FOR THE APPLICANT:	KELLAHIN, KELLAHIN & AUBREY Attorneys at Law 117 N. Guadalupe Santa Fe, New Mexico 87504 BY: W. THOMAS KELLAHIN, ESQ.

I N D E X

E X H I B I T S

HEARING EXAMINER: This hearing will come to order. We'll call next case, No. 9872.

MR. STOVALL: Application of OXY USA, Inc., for termination of gas prorationing in the Burton Flat-Morrow Gas Pool, Eddy County, New Mexico.

HEARING EXAMINER: Call for appearances.

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of the Santa Fe law firm of Kellahin, Kellahin & Aubrey, appearing on behalf of the Applicant, and I have four witnesses to be sworn.

HEARING EXAMINER: Are there any other appearances in this matter? Will the witnesses please stand and be sworn?

(Witnesses sworn.)

MR. KELLAHIN: Thank you, Mr. Examiner. Mr. Examiner, we have provided you with an exhibit folder that has OXY's exhibits in it. Those exhibits are numbered 1 through 32. In addition to those, I have a separately packaged affidavit on the mailing of notice to all the parties in the case.

I'd like to call at this time Mr. Rick Foppiano, Mr. Examiner.

RICK FOPPIANO,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Foppiano, for the record would you please state your name and occupation.

A. My name is Rick Foppiano, spelled F-o-p-p-i-a-n-o. My occupation is regulatory affairs adviser for OXY USA.

Q. Mr. Foppiano, would you summarize for us your educational background and employment experience?

A. Yes. I have a Bachelor of Science in Civil Engineering from Georgia Institute of Technology which I acquired in 1977. I have three years' work experience for Halliburton Services, and in 1981, I went to work for Cities Service, which is now OXY USA, and since 1981 I have worked for OXY in various phases of drilling and production operations in various states in the south part of the U.S.

Q. What did your company ask you to do with regards to the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico?

A. I was asked to analyze the Burton Flats-Morrow Pool and looked to see what could be done to give us the incentive to further develop the field and to increase our production. And in that context, I researched the allowables and various other things.

Q. Have you participated on behalf of your company in the various prorationing study committees formulated by the Oil Conservation Division?

A. Yes, I have.

Q. Have you previously testified before the Division examiners with regards to the allowables established in the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico?

A. Yes, I have.

MR. KELLAHIN: At this time, Mr. Examiner, we tender Mr. Foppiano as an expert witness.

HEARING EXAMINER: Mr. Foppiano is so qualified.

Q. (BY MR. KELLAHIN) Let me direct your attention, sir, to what is marked as Exhibit No. 1. Would you identify that display for us?

A. Yes. Exhibit No. 1 is a map showing the field limits of the Burton Flat-Morrow field in Eddy County, New Mexico. The field limits are shown with a little dashed line. It's the outline of the Burton Flats field. The proximity of other fields are also shown, some which abut our field, some which are within a mile.

Q. What does the color code show, Mr. Foppiano?

A. The green indicates the marginal wells as of the February 1990 proration schedule, and the orange indicates the nonmarginal wells on that same proration schedule.

Q. Have you and the other technical personnel of OXY completed your study of the prorationing and the production in the Burton Flat-Morrow Gas Pool?

A. Yes, we have.

Q. Based upon that study, have you come to any conclusions?

A. Yes, I have.

Q. What is your conclusion?

A. That in the interest of conservation, proration should be terminated in this field.

Q. Let me direct your attention, sir, to Exhibit No. 2. Describe for us in a summary fashion, if you will, Mr. Foppiano, the regulatory history for the Burton Flat-Morrow Gas Pool.

A. Yes. The pool was created on March 1, 1973, by Order No. R-4486. Approximately a year later, it became prorated by Order No. R-4706. And since that time, the horizontal limits have been extended from time to time.

One of the operators, Fasken, in 1985, requested the OCD to terminate prorationing in this

field. Their request was denied at that time. And just recently here in October 1989, OXY requested administrative adjustments to the pool allowable, and the request was granted, 380,000 Mcf, and 340,000 Mcf were added to the pool allowable in October 89 and November of 1989.

Q. Give us a summary, Mr. Foppiano, of the basis for the October 1989 request by OXY for a bonus allowable, if you will, for the pool.

A. The request was based upon my research and our research of the company into the market demand in the field and what was causing the fluctuations of production in the field. And the analysis that indicated that the fluctuations in production were not due to market curtailment. They were in fact due to low allowables, and in some cases, OCD mandated curtailment.

We contacted all the operators and inquired of them as to their market demand and discovered that, except for one well, which the situation changed on it in July of 1989, there was no market demand curtailment or lack of market demand in the pool.

And so at that time our analysis showed that in 1989, the pool had about 600,000 Mcf more market demand than was reflected by the allowable, and

that was the basis for asking the OCD to administratively increase the pool allowable to take that into account.

Q. Let's give the Examiner some of the factual information that is the background basis for conclusions that you've reached in your study.

Let me turn now to OXY Exhibit No. 3. Explain what you've depicted here.

A. What I'm showing here is an analysis of the pipelines that are shown on the proration schedule as taking gas from the field. There are 11 pipelines, as indicated by the companies on the left of the graph there. The graph shows the type of wells that are connected to each of these pipelines.

To me this indicates, one, that El Paso is the largest pipeline in the field in that they have the largest number of connections, and also that the nonmarginal and marginal wells are distributed across the pipelines in the field.

Q. Turn now, sir, to Exhibit No. 4. Would you identify and describe that exhibit?

A. Yes. This is an analysis of the producers in the field, there again, using the February 1990 proration schedule. And I looked at the type of wells that each producer has, and there are 19 operators,

and we show that there are marginal and nonmarginal wells distributed throughout the various operators in the field, as I've shown.

Q. Sir, let's turn to Exhibit No. 5. Would you identify and describe that exhibit?

A. Yes. This is some more factual information, summarizing the February 1990 proration schedule. It shows that there are a total of 61 wells in the field; 43 are marginal; 18 are classified as nonmarginal.

The 18 nonmarginal wells are further broken down into 61 percent of those 18 are underproduced, and 39 percent are overproduced, as of the February proration schedule.

HEARING EXAMINER: What does this break out to wells, 61 percent of 18 wells? What does that break out to?

THE WITNESS: If you'll give me a second, I'll get my calculator.

HEARING EXAMINER: I can figure the calculations. I thought you might have that off your head. I'm sorry. Please continue.

THE WITNESS: It's 10 or 11. I'm just guessing.

The pie chart, as I've shown in the bottom

part of the graph, are the total number of wells per operator. It shows that OXY is the largest operator in the field, and various other proportional shares shown by the other operators.

Q. (BY MR. KELLAHIN) Did you and the other technical members of the study group examine the issue of underproduction in the pool?

A. Yes, we did.

Q. What did you find when you examined that issue in terms of whether the total production in the pool -- what the relationship was with the pool production, whether you were carrying significant underproduction in certain wells in the pool?

A. As of the February proration schedule, the fields underproduced 162,000 Mcf. And my analysis indicates that a vast majority of that underage is assigned to two wells. Our discussions with the operators of those two wells have indicated that those wells are presently producing at capacity.

So my conclusion is that the proration system in the current form is just assigning a tremendous amount of the allowable in the field to wells that are incapable of making it, and that takes allowable away from the other more capable nonmarginal wells.

Q. Do you find any evidence that the underproduction is directly attributable to the lack of market for production from those wells?

A. No, sir, we do not.

Q. I direct your attention to Exhibit No. 6. Identify and describe what you've shown here.

A. This is a more detailed analysis of the nonmarginal wells in the field, and it shows that there are eight operators that have nonmarginal wells in the field and in various stages of overproduction and underproduction.

Q. As of February 1990 proration schedule, does this represent all of the nonmarginal wells in the Burton Flat-Morrow Gas Pool?

A. Yes, it does.

Q. What does the information show you?

A. It indicates to me that there's a good bit of overproduction in the pool. On the overproduced nonmarginal wells, the overproduced nonmarginal wells are anywhere from 1 to 6.85 times overproduced, and in this pool six times overproduced is the limit. And the underproduced wells shows me that there are some wells that have a small amount of underproduction accumulated on them, and some have a large amount of allowable accumulated on them.

I want to point out two in particular, the two largest, which are the Exxon Corporation New Mexico "CW" State Com #1, which has in excess of 60 million Mcf underage assigned to it, and the Presidio Exploration, Lee Federal #1, which has in excess of 75,000 Mcf assigned to it.

Those two wells, as I'll show on later exhibits, represent a vast majority of the current status of the pool, which is 162,000 underproduced.

Q. For OXY USA did you examine each of the nonmarginal wells that were showing underproduction to determine whether or not that underproduction is directly attributable to lack of market?

A. Yes, we did.

Q. What conclusion?

A. The conclusion is that none of these wells that are nonmarginal and underproduced are in that state because of a lack of market demand. In a vast majority of the cases, those wells are producing at capacity, and the system is just working to assign them more allowable than they could produce.

Q. Did you contact the other operators of the nonmarginal wells to see whether any of their underproduction is directly attributable to lack of market?

A. Yes, we did.

Q. And what result?

A. The result is none of the underproduction is attributable to lack of market.

Q. Have you specifically studied the wells that have significant underproduction?

A. Yes, I have.

Q. Let me turn now to Exhibit No. 7. Would you identify and describe what you've done there?

A. Yes. That's a simple pie chart that shows of the total underproduction in the field or total status of the field, which is 162,000, 84 percent of that is reflected on two wells, the Presidio Lee Federal #1, and the Exxon State #1. I'll say again that we've contacted the operators of those two wells, and they indicate to us that those wells are producing at capacity.

Q. Let's turn to Exhibit No. 8. Would you identify and describe that information?

A. Yes. This is a plot of the Presidio Lee Federal #1. The upper part of the graph, the dashed line, indicates the assigned allowable, and this well has been classified as nonmarginal throughout this whole period of time that I've shown here.

The dashed line shows the allowable that

was assigned to it on a monthly basis. The solid line are the sales from this well on a monthly basis based on the proration schedule.

And the lower graph indicates in a bar chart fashion the status of this well as it has changed from month to month over the same period of time. It started out in January of 88 in excess of 100,000 Mcf overproduced, and as of most recent figures we have, it is now underproduced by 75,859.

Q. What do you conclude from the information shown on Exhibit No. 8?

A. I conclude that the proration system in this particular case is assigning a large amount of allowable to a well that, according to the operator, is producing at capacity, and in this particular case, this well didn't even produce for an entire year, and it's produced a very insignificant amount of gas over the two years that I've looked at it.

It's just the way the numbers have fallen in this case, this well is still classified as nonmarginal, and because of that, it's getting a portion of the pool allowable each month that could be produced by other wells in the field.

Q. Let's turn now to Exhibit No. 9, Mr. Foppiano. Would you identify and describe that

display?

A. Yes. This is the same type of analysis as I did on the Presidio well, except this was done on the Exxon New Mexico "CW" State #1. Here again, the operator indicates to us this well is producing at capacity. And in discussing this situation with him, he's also indicated that he would like to install compression on this well, but that the low allowables in the past have made justification of that compressor installation impossible, as far as their economics goes.

It also shows that the well has produced steadily anywhere from about 6,000 Mcf a month, but that the level of allowable that has been assigned to it has been such that it's bounced back and forth between overproduced, underproduced, but since the allowable that has been administratively increased in the last several months, this well has gotten a good share of that allowable, and it is now 60 million underproduced as of the most recent figures.

Q. Did you also examine the issue, Mr. Foppiano, of whether or not the proration system as applied to this pool was accurately and realistically assigning an allowable based upon market demand for production from the pool?

A. I'm sorry. Can you say that again?

Q. I'm not sure I can. Did you examine, sir, the issue of whether or not the proration system that's applied to the Burton Flat-Morrow Gas Pool is accurately and realistically assigning allowable to those wells in the pool based upon market demand?

A. My opinion is it's not accurately assigning allowable.

Q. So you have examined that question?

A. Yes, I have examined that question.

Q. Have you taken that information in terms of pool production versus nominations and allowables and plotted any of that information?

A. Yes, I have.

Q. Can you demonstrate to us in a graphical way what the nominations have been in relation to pool production?

A. Yes, I can.

Q. Let's turn to Exhibit No. 10. Would you identify and describe that display?

A. Yes. This is looking at all the proration schedules since January of 1988. I've looked at the pool production and the nominations by the various purchasers in the pool, and I've just graphed them on the same time scale.

What it indicates to me is that up until about September of 1988, the nominations somewhat tracked the production. And I say that in that when the nominations went down, the production in the field went down, and when the nominations went up, the production in the field went up, but since September of 1988, the nominations have gone down and stayed low, and the production has been much higher than that, and in fact our analysis indicates the production would have been higher except for the allowables that were set in the field.

This also indicates to me that the pipelines that are nominating are nominating small volumes and indicating to me that they are purchasing small volumes. And most of the gas in the field is being transported on those pipelines instead of being bought by those pipelines.

Q. Identify for the record then what you mean when you say nominations.

A. These are the nominations made by the purchasers as shown in the proration schedule for the purchase of gas. So this would be a nomination by El Paso for the purchase of gas on El Paso's system.

Q. Can you conclude then from the information that you've studied that the nominations as platted on

Exhibit No. 10 do not in fact represent the market demand for pool production?

A. Yes. My opinion is the nominations do not reflect market demand for the gas from this pool, but they might indicate the market demand just for that small party that is being nominated by the purchaser, which may be just system supply or something like that, and the rest of the gas that's being produced out of the pool is being produced and transported on these pipelines instead of bought by them.

Q. You cannot look then at Exhibit No. 10 and conclude that you have pool deliverability for pool wells that exceeds the market demand?

A. No, I don't think you can.

Q. The nominations do not accurately reflect market demand for the pool production?

A. That is correct.

Q. In fact, you've concluded just the opposite, have you not, Mr. Foppiano?

A. They do not reflect market demand for all the gas from this pool.

Q. And that market demand for pool production far exceeds the deliverability of the pool wells?

A. Yes, sir, in my opinion, that's true.

Q. Let's turn now to Exhibit No. 11. Identify

and describe what you've presented here.

A. This is an exhibit that we presented in the October hearing where we're showing the pool production and the pool allowable since January of 88, and we also in the bottom graph show the status of the field as it's changed during that same time period.

I want to point out of a couple of things. In October of 1988, because the pool was overproduced at that time, the OCD administratively adjusted the allowable, and that's what caused the spike in the dashed line on the upper graph. And then as a result of our hearing and related OCD action, there were administrative adjustments in October and November, and, in my opinion, that's what's caused the allowable to spike up in those two months, October and November of 1989.

And, there again, that was made because the field was also overproduced as of that time.

Q. When we look at the upper display and look at the dashed line that shows the allowable, in your opinion, does that allowable as assigned accurately and correctly reflect market demand for pool production?

A. No it does not.

Q. Why not?

A. In our analysis and investigation in this pool, there's a market demand for all the gas that is capable of being produced from this pool. And the allowable we see is going back down, and it's going back down because there are no more administrative adjustments being made, and I think it's going back down because the way the system is operating to assign allowables to wells incapable of making it.

So with that information, it's my opinion that the pool allowable does not accurately reflect the market demand of gas from this pool.

Q. When we look at the October plot for 89, and you're at the top of the spike for the allowable, that's the point in time that the Division put the administrative adjustment of additional allowable for the pool?

A. That's correct.

Q. Why does that allowable start to fall and then decline rapidly later in the year?

A. They made a lesser adjustment in November, and they made no adjustment in the December schedule; so I think that's part of why it drops.

Also, the production from the wells, from some of these wells, are still being curtailed because the allowable is not high enough during those months

to allow us to produce it. As we've seen on a previous exhibit, there are some wells in the field that are close, and in one case over six times overproduced still.

Q. Have you examined other issues with regards to prorationing to see whether or not there is a justification for continuing prorationing in the pool because of the existence of nonstandard proration units?

A. Yes, I've examined that.

Q. Have you reduced that information to a display?

A. Yes.

Q. Let me direct your attention to Exhibit No. 12. Is that the information?

A. Yes. Based on the February 1990 proration schedule, this is a depiction of the nonstandard proration units in the pool. And as shown, there are six of them. That represents 10 percent of the total units in the pool, and all but one are low capacity, marginal wells. The only nonmarginal nonstandard unit is underproduced; yet our information indicates it's producing at capacity also.

So my conclusion is that prorationing is not needed to adjust equities between the standard and

nonstandard proration units in this pool.

Q. Turn to Exhibit No. 13. What have you shown here, Mr. Foppiano?

A. What I'm showing here is a summary of the next 18 pages. What we did is we went to all the operators in the pool, the operators of marginal and nonmarginal wells, and asked them to waive any protest to determining prorationing in this pool if that was their opinion, determined if prorationing should be terminated.

I'm showing, as of today, I have 97 percent on a well basis of the operators in wells in the pool have waived protest to our application to terminate prorationing.

Q. These would include operators of marginal wells as well as nonmarginal wells?

A. Yes. In fact, it was kind of interesting, in talking with several of the operators who had only marginal wells, there was a lot of support for terminating prorationing from the operators of the marginal wells because of the justification for compression installation and reworking those wells, and doing things and spending money to improve the deliverability on those wells. They felt like that the level of nonmarginal allowable in the pool was so

low that economically justifying that work on the marginal wells was tough if not impossible to do.

So there was a lot of support from the operators of the marginal wells in addition to the nonmarginal wells.

Q. Why wouldn't the operators of marginal wells want the continuation of prorationing where they could thereby apply a cap to the higher capacity wells and keep their producing rates down?

A. Well, in discussion with several of them, the opinion is that there's very limited drainage capabilities here in this pool, that they're not worried that the nonmarginal wells that are offsetting their wells are going to drain their well or adversely affect it in any way.

They also believe there's a market for all the gas that they can sell, and they want to do more work in this field. They want to drill some wells, they want to install compression, they want to rework these wells, and the low allowables in the past have precluded them from doing this.

Q. When did you first contacting the operators about the performance of prorationing in the Burton Flat Morrow?

A. As early as, I would say, July or August of

1989 and continually since then.

Q. During that entire process all the way up to today, have you had anyone voice an objection to terminating prorationing in the Burton Flat-Morrow Gas Pool?

A. No, I have not. In fact, I have had several voice strong support for it.

Q. When we look at those parties that have not signed waivers, would you tell the Examiner what the status is of your efforts to inform those particular operators and obtain their waivers?

A. Yes. I'd like to point out one thing. I've shown Coquina under the column of "Have Not Signed Waivers." Late yesterday, we received a waiver from Coquina; so they have in fact waived any protest in this. That's where I get the 97 percent instead of the 95.

The J. M. Huber, I had a lot of difficulty getting in touch were somebody that knew anything about J. M. Huber's operations. When I finally did, a couple of weeks ago, they informed me that they sold that well to Bill H. Pearl Production Company, and my attempts to get ahold of Bill H. Pearl Production Company met with no success.

Texas International, I've heard from

knowledgeable people that they have gone bankrupt, and I have been unable to get ahold of anybody from Texas International.

The point is, I guess, the reason why I don't have waivers from those two individuals is, I think, more logistic than anything else. I don't think there is any protest on their part or any desire not to do what we want to do.

Q. Let me ask you to skip now to the end of the exhibit book, Mr. Foppiano, and if you'll find the last of the fold-out displays, which is marked as OXY Exhibit No. 30?

A. Yes, I have it.

Q. When we talk about your efforts to contact the operators and the interest owners within this area, have you developed a map and an index by which the Examiner, if he desires, may determine what interest owners have been notified, and where their interests may lie in the pool?

A. Yes, I have.

Q. Describe for us then what you've done with Exhibit No. 30.

A. Exhibit No. 30 is an identical field outline to Exhibit No. 1. What we've done is break the field down into tracts. We had several land

people research the records to identify the lessees and unleased mineral interest owners in each of those nonproducing units in this pool. And, of course, we already knew the operators, but we also had them look at that.

So this analysis was mainly an attempt to identify the lessees and unleased mineral interest owners within the field limits. And this depiction shows the individual tracts, and along with the next exhibit, identifies each of these parties that we gave notice to.

Q. When we turn to Exhibit 31 then, that is the list by tract of the interest owners?

A. That's correct.

Q. When we go to Exhibit No. 32, which is the last three pages in the book, what are we looking at there?

A. Exhibit No. 32 is a list of the operators of wells in the Burton Flats-Morrow Field, and within one mile of the field limits. We developed this list also for notice purposes of this application.

Q. When you look at the very last page in the exhibit book, what is shown there?

A. This is based on our research and the OCD records, the known nominators, purchasers, and

transporters of gas from the Burton Flats-Morrow Pool.

Q. From all these lists then did you generate a mailing list for notice purposes that you provided to us for sending out copies of the application and notice of the hearing today?

A. That's correct.

Q. Have you examined that list to satisfy yourself that it's accurate to the best of your knowledge?

A. Yes, I have.

Q. Let me show you what is marked as Exhibit No. 33, Mr. Foppiano, and ask you to turn to a copy of the attachment to the application and have you tell me whether or not this represents the list that you have provided to us for notification purposes?

A. (Witness referred to document.)

Yes, I believe it's the same list.

MR. KELLAHIN: Mr. Examiner, Exhibit No. 33 is our Certificate of Mailing. We have attached to the end of it, in addition to the application and the notice list, the copies of the green return receipt cards that have been returned to us thus far. There are still some that are outstanding, but these are all that we have received as of yesterday.

MR. STOVALL: Mr. Examiner, I'd like to

interrupt the proceeding at this point and turn to Exhibit No. 31.

Under Tract No. 6, there appears an interest of Harvard and LeMay Exploration Company. I'd like to point out to the Examiner and to OXY that Harvard and LeMay Exploration Company is what's left of a partnership in which Mr. Bill LeMay, the Director of this Division, was involved.

I've discussed this with him on previous occasions, and at the time this application was filed, reviewed it with him. Mr. LeMay still has at least a nominal interest in Harvard and LeMay. He receives absolutely no income, has absolutely no ownership or active participation in it, and, in fact, he is and has been for the last three years or longer actively engaged in trying to dispose of any interest he has in this partnership.

I think it's important that you be aware that at least nominally Mr. LeMay does have some small interest. And I believe it's a small mineral interest that that partnership may own. I'm not exactly accurate.

But at this time, having made that statement on the record, I would offer to OXY and Mr. Kellahin, if you have any concerns with that at all,

Mr. LeMay will be more than happy to recuse himself and may do so whether you wish or not and have the Deputy Director sign the order.

Do you have any feelings on that?

MR. KELLAHIN: Mr. Stovall, I think his interest is so small and so abstract in relation to the issue here, that I can't perceive it as being a conflict of interest for him, and we certainly have no objection to him reviewing and executing the order to be entered. We don't propose to assert any conflict because of his ownership of a small interest in a portion of a tract that is involved in the pool.

MR. STOVALL: I certainly want it to be clear on the record though that does exist, and I'll discuss it with him after the hearing as to whether he wishes to do so on his own initiative.

I have nothing further on that issue.

MR. KELLAHIN: Okay.

Q. Let me take you back now, Mr. Foppiano, to Exhibit No. 14. As a result of your study and the studies of the other technical people that assist you in the performance of this work, would you summarize for us what your conclusions are and recommendations to the Examiner?

A. Yes. My conclusions are, number one, that

in the interest of conservation, prorationing should be terminated in this pool. And I've outlined some reasons why I think this should be done, and I'll go through them.

First, I think it will prevent waste because it removes what I consider and other operators consider to be a disincentive to drilling new wells, reworking old wells, and doing other things that will increase the ultimate recovery of gas from this pool.

I don't believe that correlative rights will be adversely affected by the granting of this application, and I say this because our analysis indicates market demand exceeds the pool deliverability. The nonmarginal wells have limited drainage areas, and you'll see some more testimony and exhibits on this. The few nonstandard proration units that are in the field are mostly marginal. So as far as receiving a benefit from termination of prorationing, they won't be able to produce any more than they're producing right now, in my opinion.

And there is but one multiple well unit in this pool. OXY has an interest in it, and OXY has received an AFE from the operator to plug and abandon one of those multiple wells in that unit; so I don't think multiple well units in this pool are a problem,

as far as prorationing goes.

In my opinion, the potential for nonratable takes by the pipelines no longer exists because the marketing of gas has changed dramatically in this pool where the pipelines are not buying very much of the gas that is produced here. They're transporting the gas, and the operators are, a lot of them, through their own methods, are selling their gas to the spot market. So the takes by the pipelines and the purchases by the pipelines I don't think are an issue as far as will they be nonratable if we terminate prorationing.

And, lastly, most of the pool operators, as I've shown you, 97 percent have waived any protest to this application, and none have indicated any objection to us. And, in fact, in my discussions with many of them, there are a lot that support our application to terminate prorationing in this pool.

MR. KELLAHIN: That concludes my examination of Mr. Foppiano, Mr. Examiner.

We would move introduction of his Exhibits 1 through 14 plus the plat 30 and the tabulation of interest owners, 31 and 32.

HEARING EXAMINER: Exhibits 1 through 14 and Exhibits 30, 31, and 32 will be admitted into

evidence at this time.

MR. KELLAHIN: In addition, we would move the introduction of our Certificate of Mailing, which I believe is Exhibit 33.

HEARING EXAMINER: Also Exhibit 33 will be admitted into evidence at this time.

CROSS EXAMINATION

BY HEARING EXAMINER:

Q. Mr. Foppiano, what is the current production as of January -- I'm sorry -- as of the latest proration schedule month reported, and I believe, what, would that be November or December?

A. It would be December.

Q. What was December's total production from the pool? And do you want to refer to -- it's probably in one of your exhibits.

A. I've got exactly in a tabular form right here.

In December the pool produced on OCD records 540,874 Mcf, but I'd like to point out that we're aware that number is inaccurate. It is, in fact, 89,000 less than that because, through some unknown reason, 89,000 Mcf was assigned as production on one of our wells that did not produce it. So the pool production is 89,000 Mcf less than that.

And my exhibits reflect what we know to be the actual production; so I've corrected my exhibits for that.

Q. So basically it's about 460,000 Mcf?

A. About 450, yes, sir.

MR. KELLAHIN: That's on a monthly basis?

THE WITNESS: On a monthly basis.

Q. (BY HEARING EXAMINER) Let's just look at this figure in December. December is normally, in this particular pool, the production goes up, I would assume, because it's in the wintertime? Would that hold true for this particular pool?

A. I think in this case the production has gone up partially because of the administrative adjustments that have been made in this pool. Also, I think there is more desire to sell as much gas as you can in the wintertime because the prices are higher than in the summertime; so there are operators who let their wells ride, I think, through the summertime to accumulate allowable, and then open them up in the wintertime, and in some cases get them six times overproduced.

Q. Does OXY partake in this practice?

A. No, OXY does not partake in this practice.

Q. Who does?

A. My research has indicated one operator, Fasken; they were overproduced in the winter of 88 and 89 on several of their wells. The production on their wells increased dramatically during those winter months.

During the summer months, their production declined. And when we inquired of them as to why their production declined, they indicated they were trying to make up the overproduction that had accumulated during the wintertime when they were producing as much as they could. And they didn't want to go into the next wintertime overproduced.

So, in my opinion, their production was lower because of the allowables in the pool. We asked them, "Is there any market curtailment here?" They indicated no. They could sell as much gas as they wanted to, but they chose to shut their compressors down, cut the cost, and try to make up that overproduction so they didn't go into the next wintertime massively overproduced and not produce as much as they wanted to.

Q. Let's take a look at this December figure. I'm using this for a purpose at this point. Of this 460,000 production, were there any curtailments -- I'm sorry; let me rephrase that.

Did any of the 11 pipelines -- were there 11 pipelines in here?

A. That's correct.

Q. I guess I should say 11 transporters because the pipelines, sometimes they double up, like El Paso and Llano have a separate transportation line; so we'll just say transporters, and we will refer to the 11 which you show on your Exhibit 3.

Were they able to take all of the gas?

A. My research in talking with the other operators was yes, they were able to produce as much gas as they wanted to in December of 1989.

Q. And the pipelines had no trouble taking it?

A. Not to my knowledge, they had no trouble.

Q. Have you studied or do you have another witness that would perhaps give us some figures of if prorationing was lifted in this particular pool, what would our figures from this pool be in December or would have been in December?

A. Yes, we have another witness that will discuss what we think the most optimistic number of pool deliverability is absent proration.

Q. Okay.

A. Another thing I'd like to point out, and we have another witness that will discuss this in more

detail, is, since the allowable was increased, OXY and other operators have done work in the field to increase the pool deliverability; so it keeps marching up. There has been a lot of compression installed on OXY's part. We've reworked some wells. We have a well drilling. As I've said, other operators have indicated they've started to do some work, but some have indicated they won't until they see a lot longer -- if that's possible, until they can see a lot longer of the higher allowables.

HEARING EXAMINER: Mr. Kellahin, we're going to recess for about 15 minutes at this point.

MR. KELLAHIN: Sure.

(Thereupon, a recess was taken.)

HEARING EXAMINER: This hearing will come to order.

Mr. Stovall, I believe you had some questions.

MR. STOVALL: I do, just a few questions, Mr. Foppiano.

CROSS-EXAMINATION

BY MR. STOVALL:

Q. Is there much changing about the status of wells from marginal to nonmarginal? Did you see much flip-flopping at all, particularly before the

administrative changes were made to the marginal/ nonmarginal reclassification procedure?

A. There were very few that were reclassified as a result of the new rule that was instituted in the latter part of 89. I've looked at the marginal and nonmarginal well classifications on a two-year basis, and I see a trend, but I don't see them changing dramatically from month to month.

Q. Is the trend toward more wells going marginal; is that --

A. The trend is more wells going marginal.

Q. Is the effect of that trend that the allowable will be distributed amongst fewer wells; is that correct?

A. This is correct.

Q. One of your great concerns, if I understand what you're saying, is there are too many nonmarginal wells that can't produce an allowable that are in fact holding back the production from other nonmarginal wells that can be produced?

A. Yes, sir, that is one of our concerns.

Q. If that trend were to continue, have you done any studies or analysis that would show that if, let's say these underproduced wells that you've identified, if they moved into a marginal status, what

would the effect be -- let me explain this in terms of what we've seen in other situations.

As the number of nonmarginal wells decreases, the allowable per well increases, and fewer wells are able to meet that allowable, and therefore it becomes kind of a spiral in that direction. Have you done any analysis to see how that could work over a period of time?

A. Yes, I have. My opinion is you're correct. Given a constant amount of pool allowable, because you would be distributing over fewer wells, those fewer wells would enjoy a larger allowable. The problem we see here is that that does not work fast enough.

We are, as of the present day, and other operators are already curtailing their production because of the low allowables that have been assigned in the fast. That curtailment of production will cause lower allowables in the future, and, in my opinion, that's what causes the spiral effect and drives the allowable down. As the allowable starts dropping, more wells get closer to the six times limit; they start getting curtailed; that drops the future allowable. And I think that just points to one of the problems with the current system in how it sets

or how it estimates market demand and prorates it according to the wells in the field.

I just think that it doesn't act fast enough, and wells are getting curtailed before there's a chance to keep the pool allowable up high enough.

Q. What I'm looking at at the moment is considering alternatives to what you're asking, the deproration of the pool. If, for example, looking at your Exhibit 6, let's take the big three underproduced wells, not just the two you identified, but add to that the BHP, Burton Flat Deep Unit No. 56, which is 58,000 underproduced. Is that underproduction accumulated over a period of time? Has it been, do you know?

A. Yes, it has.

Q. So it's not like one spike in downward production on those wells that's created that, but rather a trend showing an inability to produce the allowable?

A. It's a trend, but I think, particularly if you'll look at Exhibit No. 9, you'll see that a large portion of that underage accumulated in recent months when the allowable was administratively increased.

So, yes, it is a trend, but when the allowable gets real high, it serves to take a large

portion of that higher allowable and give it to those wells, and it can't be redistributed fast enough through the classification procedure to go to those wells that are capable of meeting the market demand, and are in fact trying to meet the market demand.

Q. Could that be corrected, do you think, if the operators approached the Division or if the Division could administratively reclassify those wells marginal more rapidly than the automatic system does to put them into marginal status and allow that allowable to go to the nonmarginal wells? Would that help?

A. That would help, yes.

Q. What about, I notice OXY has not asked that the February allowable or the March allowable be administratively increased in the same way as the November and December applications. If that were to happen, if those allowables were to be increased, let's say for the future, would that also provide any assistance in redistributing the allowable properly by keeping it high enough?

A. It would. And my concern there is that it addresses the problem on a short-term and a continual, like us having to come back and ask for a larger allowable -- it would be an ongoing type, short-term

process. And in our discussions with the operators, they desire a more long-term solution to this problem, one that provides them enough of a comfortable factor in justifying drilling new wells, in particular.

When you're looking at pay-out periods of two to three years of drilling a Morrow well here, these operators, including ourselves, would like some comfort that they can sell this gas that they're going to produce from these wells and get the well paid -- get payback on the well. It's an economic venture.

I don't think that continually coming back and asking for the allowable to be administratively increased and relying on that is going to do a whole lot to generate the activity that I think is possible in this field to increase the ultimate recovery of reserves.

Q. Even if, let's say, we did that for a period of one cycle, are you saying in some way, keep the higher allowables and allow the process to reclassify as marginal more and more wells, you don't think that would ultimately provide a solution over a period of a year, say?

A. No. It would help, but I think in terms of drilling new wells, and I'll use our own experience as an example, we're looking at, if we were allowed to

produce what we think the wells are capable of producing, it takes two years to pay back the investment.

And management, when they're looking at the risk of drilling the well, and there's an additional risk of curtailment should the OCD change their mind or some other factor work in here where the allowable would prevent us from selling the gas from a new well, I think management would be real concerned about that risk and may not approve the drilling of a new well in the field.

I think other operators have the same concern. They would just like a more long-term solution. And I think years is what we're having to look at in terms of drilling new wells.

I'd also like to add that our analysis indicates that not very many wells have been added to this pool in the last five years, and as a result of the higher allowables in the last several months, OXY has commenced the drilling of one well, the Government AB 5. I believe it's close to TD. We have two wells planned for 1990 that hinge upon the action taken here.

And I think that in our discussions with other operators, that is indicative of the type of

activity that other operators with like to see too, but they need the higher allowables for a longer period of time to be able to justify it. And termination of proration would make them feel a lot more comfortable about it. It would make us feel a lot more comfortable about it too.

Q. If I understood what you said before, you do have a witness who could testify as to the potential productive capacity of this field, and I would hope also in terms of the ability of the physical pipelines that are in the field to move the gas out to the market?

A. Yes, we do have an additional witness.

Q. Let's turn briefly to Exhibit No. 10. It's your nominations versus production.

A. Yes.

Q. Do you know what role nominations play in the allowable system today?

A. Yes, I do.

Q. What is that role?

A. None at all.

Q. So this exhibit really isn't very helpful in terms of your application or the role of those --

A. We have another witness that will testify in more detail about this, but it backs up our

assertion that the pipelines are mostly transporting gas out of this field. We have contacted the pipelines in this field and inquired as to their marketing practices and how much they're buying for system supply versus how much they're transporting.

I think this pretty well falls in line with that independent research from the pipelines.

Q. Are you familiar with the actual order that comes out with the proration schedule?

A. Yes, I am.

Q. Would you look at paragraph 4 of that, please.

A. What month?

Q. It doesn't matter. I happen to have February here.

A. I've got February also. Okay, the conditions in the gas market.

Q. Paragraph 4 of the findings, excuse me.

A. Okay.

Q. Is that not what the order says, that in fact the nominations don't really reflect the reality?

A. And I believe we've testified that the nominations do not reflect the total market demand of gas from this pool.

MR. STOVALL: I don't have anything further

at this time. As we develop more evidence, we may desire to call Mr. Foppiano back.

If I understand your capacity in this with OXY -- I do have one other question -- your capacity with OXY is such that after we've heard all the testimony, you're kind of overseeing this deprorating project on behalf of OXY; is that correct?

THE WITNESS: You could look at it like that, yes.

Q. A curiosity question, are you familiar with Order R-7982? It's the Fasken application for termination?

A. Yes, I am.

Q. Do you know what Cities Service position was at that time?

A. Yes, I do. We protested that application.

Q. Does this current application reflect a change in position or some other change?

A. It reflects a change in position because of a change in circumstances. During that time, as you know, OXY is the largest operator in the pool, we were curtailed by El Paso and not able to market all of our gas from our wells in the pool. Hence we protested the application to terminate proration.

Since that time, we have gotten our gas

released from El Paso, and we have the ability to market as much gas as we want to out of this pool. In fact, we try to market as much gas as we can; so conditions have changed dramatically for us.

MR. STOVALL: Now I really am through.

CROSS-EXAMINATION

-CONTINUED-

BY HEARING EXAMINER:

Q. In referring to Exhibit No. 14, Mr. Foppiano, you list something in there -- it's titled, "Let's Terminate Prorationing Because it will prevent waste by removing a major disincentive for drilling new wells."

Do you want to elaborate a little bit on this on OXY's standpoint?

A. Sure. Drilling of new wells, we have some economics; they're included in a later exhibit, and a witness will present them. But basically they show under a proration scenario, it's uneconomical to drill a well in this pool. The pay-back period is too long, and in fact it has a discounted cash flow of negative. In terms of providing an economic incentive, continued proration doesn't do it.

Reworking old wells, much the same situation but a little bit different. The level of

nonmarginal allowable is what has really caused the problem there. When you have a well that is a 100, 200 Mcf-a-day producer, and you can rework it, you think, to increase the deliverability up to a million a day, and the nonmarginal allowable is at 150 or 200 Mcf a day, our management will not approve projects that require a capital outlay up front when we don't think we can sell the gas and recoup our investment if the workover is successful.

The same is true for compression installation.

Q. Let's talk about drilling and reworking at this point.

A. Okay.

Q. How many wells has OXY proposed within the last year or reworked within the last year that have been turned down because of this?

MR. STOVALL: Excuse me, Mr. Examiner, if I may interrupt at this time, since you've asked that question, I was going to do this when you were through, but I would like to -- the Director just handed me a letter which he received from Mr. Foppiano. Mr. Kellahin, he has asked we get this into the record, and I believe it addresses the Examiner's question.

If you would identify that letter, Mr. Foppiano -- if you don't mind, we'll call it an OXY exhibit. Mr. Kellahin?

MR. KELLAHIN: I have no objection once the witness looks at the letter.

THE WITNESS: Yes. This is a letter I wrote to Mr. LeMay. It basically detailed the activity that OXY has performed in the field since the allowable was administratively increased in October.

Prior to that time, we did very little activity, and I can't offhand tell you the number of projects that were turned down because they never got to an AFE stage. The engineer wasn't going to look at these projects because of the low allowables in this pool. Since the allowables have been increased, the engineers have been given the incentive to look at these type of activities, and this letter, I think, details it, and I'll just read from it.

MR. KELLAHIN: We can mark it, if that's all right.

MR. STOVALL: We can mark it. You don't need to read it.

Q. (BY HEARING EXAMINER) How many undrilled fracs does OXY have within this pool and within a mile of it?

A. I apologize. I can't answer that question.
Q. You talk about reworking old wells. How many wells does OXY have?
A. We operate, I believe, 18 wells in the pool.
Q. Has OXY reworked any of these old wells within the last year?
A. Yes, they have. It's on that exhibit.
Q. On this Exhibit 34 which I've just been handed?
A. Yes.
HEARING EXAMINER: Mr. Kellahin, should we introduce Exhibit 34 at this time?
MR. KELLAHIN: Absolutely, Mr. Examiner.
HEARING EXAMINER: Exhibit 34 will be admitted into evidence. There's no further questions I have of this witness at this time. We may recall him later.
MR. KELLAHIN: I have a couple of follow-up questions, Mr. Examiner.
HEARING EXAMINER: Okay.

REDIRECT EXAMINATION

BY MR. KELLAHIN:
Q. In response to Mr. Stovall's questions concerning other possible solutions, Mr. Foppiano, you

discussed with Mr. Stovall whether or not a more rapid reclassification of wells to a marginal status would help, and you said it would help. Is that an effective solution to the problem that you see in the pool?

A. In my opinion, no.

Q. What, in your opinion, is the most effective solution for the problems created by the prorationing system?

A. In my opinion, the most effective solution would be to terminate prorationing.

Q. Why should we not simply suspend it or temporarily abandon it for a year?

A. It goes to the economics of some of this work that can be done in the field. Operators need to feel more comfortable about a long-term ability to sell the gas that they get from a new well drilled in the pool absent allowable restrictions.

Q. When was the last well drilled in the pool?

A. Can I take five seconds to --

Q. Sure.

A. Our information is the last well drilled in the pool was in 1983.

MR. KELLAHIN: No further questions.

RECROSS EXAMINATION

BY HEARING EXAMINER:

Q. How about your Government AB Well #5?

A. That is currently drilling. It has not been completed in the pool yet.

Q. Are there any other wells between 1985 and now that have been drilled but not completed in that pool?

A. I'm sure there are. There are wells that have been drilled for other producing horizons in that pool.

Q. Is your Government AB 5, is that for the Morrow or for another pool?

A. That is for the Morrow.

Q. I'm going to ask my question again. Are there any wells down to the Morrow, not for any other pool, but specifically went down to the Morrow that have not been completed in the Morrow yet?

A. Perhaps I don't understand the question. If you're referring to dry holes --

Q. Explain to me your "AB" #5. What's going on? You drilled it to the Morrow?

A. That's correct. We are drilling it to the Morrow.

Q. When did you start drilling it?

A. Latter part of 89. I don't have an exact

date.

Q. So it should be -- is it cable tooled?

A. No, sir.

Q. So you're down to the Morrow; right?

A. We're coring.

Q. You're down to the Morrow?

A. We're down to the Morrow.

Q. You're still testing it?

A. Correct.

Q. You haven't completed it yet?

A. That's correct. I don't even believe we set pipe on it yet.

Q. Have there been any other wells between 1983 and today that specifically were drilled down to the Morrow that are still waiting some sort of a pipeline hookup, or that are still testing, such as your "AB" 5?

A. Not that I'm aware of.

HEARING EXAMINER: Okay. No other questions at this time.

Mr. Kellahin?

MR. KELLAHIN: Nothing else. Thank you.

Mr. Examiner?

HEARING EXAMINER: Yes, Mr. Kellahin.

MR. KELLAHIN: At this time, Mr. Examiner,

I'd like to call Michael Dawson. Mr. Dawson is a gas marketer with expertise in this particular pool on behalf of his company.

MICHAEL DAWSON,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY KELLAHIN:

Q. Mr. Dawson, for the record, would you please state your name and occupation.

A. My name is Michael Dawson. I'm a sales representative for the natural gas market with OXY USA.

Q. Would you describe what you do in relation to your company's business in the Burton Flat-Morrow Gas Pool?

A. I'm responsible for identifying markets for gas and securing contracts for the sale of that gas.

Q. For gas produced out of this particular pool?

A. For gas produced out of.

Q. How long have you performed that function for your company, Mr. Dawson?

A. Since 1981.

Q. Have your engineers and technical personnel

provided you with some reservoir or pool capacity or deliverability numbers?

A. Yes, they have.

Q. For your company as well as what they estimate for the pool deliverability of all wells in the pool?

A. Yes, they have.

Q. Have you made a study to determine whether or not in your opinion you can market that gas produced?

A. Yes, I have.

Q. Have you also made a study to understand whether or not there is any seasonal fluctuation and the range of that fluctuation in terms of gas market for the gas produced from this pool?

A. Yes, I have.

MR. KELLAHIN: At this time, Mr. Examiner, we tender Mr. Dawson as an expert gas marketer.

HEARING EXAMINER: Mr. Dawson is so qualified.

Q. (BY MR. KELLAHIN) Give us some background, Mr. Dawson, in a general way, about what is done with the gas produced out of the Burton Flat-Morrow Gas Pool. Where does it go, and who consumes it?

A. In general, the gas that's produced from

the pool is transported out of the pool, primarily by interstate pipelines to various markets. There are also intrastate pipelines which transport gas out of the pool. Historically, those pipelines have been purchasers of the gas to date. They are mostly transporting the gas to other markets, and the gas can be sold to a variety of markets that are accessible through those pipelines.

Q. In the current market conditions for the gas produced from the pool, who is the ultimate consumer of the gas produced? Where does it go? Where is the end market?

A. The end markets vary. They are utilities and brokerage companies and industrial installations, a variety of different markets available.

Q. Let me ask you to go to what is marked as OXY Exhibit No. 15. Are you familiar with this display?

A. Yes, I am.

Q. Would you identify and describe the information on the display?

A. Okay. The portion which is colored green identifies the production from the pool for years 1988 and 1989.

The red portion of the exhibit shows OXY's

production from the pool for the same period of time. And it shows how our gas was produced in relation to production from the overall pool.

Q. Compare for me, if you will, sir, the relationship of the gas production from the pool during this period of time to the market demand for that gas.

A. Okay. The market demand for that period of time did change, and it is reflected in our production.

As you can see, during the period 1988, up until September, there was limited production by OXY from the pool. And after that period of time, the production increased significantly. What that reflected was was the fact, as I believe Mr. Foppiano alluded to this earlier, that historically we have had sales arrangements primarily with El Paso Natural Gas Company, and we were subject to whatever their limitations were in terms of taking gas. And after that gas was released from El Paso from our contracts with El Paso, toward the end of 1988, we began to be able to sell our gas virtually at capacity, whatever was available.

Q. What have the engineers provided you in terms of a total capacity or a total deliverability of

gas that can be produced by the existing wells out of the pool?

A. For the entire pool?

Q. Yes, sir.

A. 600 million cubic feet per month.

Q. What portion of that volume is represented by OXY's deliverability or capacity of their wells?

A. OXY's deliverability would be a little less than half of that. On a daily rate, that would represent about 20 million cubic feet per day, I think, and OXY's would be somewhere in the range of 9 to 10 million cubic feet per day.

Q. Let's examine OXY's portion of the total pool deliverability. On a monthly basis, OXY's share of the pool deliverability is what volume, sir?

A. On a monthly basis?

Q. Yes, sir.

A. A little less than 300 million cubic feet per month.

Q. If the engineers tell you that for the OXY's wells that represents the total capacity of those wells to produce, in your opinion can you market that volume of gas?

A. Yes, sir, I can.

Q. What volume of gas have you actually been

marketing?

A. I have been marketing the total deliverability of 300.

Q. Do you have a market demand that exceeds the total deliverability of OXY's wells?

A. Yes, sir, I do.

Q. Is that subject to seasonal adjustments to the extent that you will have pool deliverability that exceeds the market demand that you've identified for that production?

A. No, sir, in my opinion, it will not.

Q. Why?

A. And I would like to refer back to the exhibit. You will see that for 1988, during the period of time that we were selling gas primarily to El Paso was the last period that we had that seasonal fluctuation. Of course, that was due to the fact that that was our market. We were limited in that sense. But after we have been able to go out and exercise -- well, pursue other markets, and there are other market opportunities out there, you can see through the same period of time in 1989, we didn't experience any drop-off in our sales.

Q. When we look at total pool deliverability, and on a monthly basis you gave me 600 thousand Mcf a

month?

A. Yes.

Q. Let's assume that OXY has the total pool deliverability, not only for their wells but for all the wells, and your engineer said, "Mr. Dawson, I'm going to give you the total pool deliverability to market."

A. Yes.

Q. Do you think you could market that gas?

A. Yes, sir, I believe I can.

Q. What's the basis for that opinion?

A. It's been my experience that markets are available for the purchase of this gas which exceed the producer's ability to sell the gas from the field in the past.

Q. Are you aware of any operator that is having any kind of curtailment of his production for lack of a market?

A. No, sir, not simply for lack of market.

Q. Do you see any disparity between the transporters of gas produced in the pool so that if a certain operator is hooked up with a certain transporter, then even when he wants to get to market, he can't? Do you see any of that going on in this pool?

A. Of course, the different pipelines have different capacity and that type of thing, but it is important to recognize the fact that there are interconnect points between most of these pipelines, and there is access to various kinds of exchange arrangements and whatnot; so that, in my opinion, that would not impose any kind of limitation on your ability to take the gas to some available market. There would be a way to move the gas.

Q. Is the current market in any way like the historical market several years ago where a producer is locked into a long-term gas contract with El Paso or some other company that now is in the transportation business?

A. Not at all. In fact, most of the pipelines in the field have ceased being purchasers of gas and have become mostly transporters of gas. That's the trend. The highest percentage of purchased gas by any one of the pipelines that we are selling gas to in the field is 25 percent, and the remainder of that gas throughput on their system is transported gas, which reflects the fact that producers in this area are getting their gas released from the traditional types of arrangements that you refer to, and they're pursuing other kinds of markets, and they are securing

those markets.

Q. Are you aware of any instance in the pool where an operator because of seasonal demands in the summertime is locked into a long-term contract that he can't get temporary release of that gas volume if he wants to take it to another market?

A. It's been my experience that most of the pipelines are willing to offer short-term relief for situations for such an operator, and month-to-month or seasonal release of gas is readily forthcoming. They are willing to offer those kinds of opportunities to producers who may have gas contracted to them who otherwise would not be able to sell it due to a decrease in summer demand.

Q. Based upon your experience, Mr. Dosson, do you see any reason to continue the proration system for this pool in order to equitably allocate the market demand for that pool's production among the operators in the pool wells?

A. No, sir.

MR. KELLAHIN: That concludes my examination of Mr. Dawson. We would move the introduction of Exhibit No. 15 at this time, Mr. Examiner.

HEARING EXAMINER: Exhibit No. 15 will be

admitted into evidence at this time.

CROSS-EXAMINATION

BY HEARING EXAMINER:

Q. Mr. Dawson, do you know roughly about what percentage of the gas is interstate as opposed to intrastate from this pool?

A. No, sir, I don't, but I believe the majority of it goes into interstate markets.

Q. How about of the transporters, which ones are transporting intrastate?

A. Which transporters are transporting intrastate?

Q. Yes.

MR. STOVALL: Mr. Dawson, you might look at Exhibit 3.

HEARING EXAMINER: Yes, that's what I'm referring to.

THE WITNESS: Okay. The transporters that I recognize that would be transporting gas intrastate would be Gas Company of New Mexico and Llano.

The other names on this list, some of them are operators, have perhaps systems of their own, primarily, for moving their own gas. Phillips 66 would be sort of -- they would be a transporter, and they would also be a gatherer to their own

facilities. They are not a typical transporter in the sense of El Paso Natural Gas or Llano or Gas Company of New Mexico, Northern Natural, or Natural Gas Pipeline.

Q. How about OXY? OXY's name appears on here. What kind of a marketing relationship or transportation relationship does OXY have in this pool?

A. I believe that would just be our own gathering facilities which take the gas to our own processing plant, processing facilities.

Q. Does OXY as a transporter, does it take just gas from their own wells, or are they also taking gas from other wells?

A. We take gas from other wells as well.

Q. Do you have a percentage perhaps of production or a number of wells from the other operators that are hooked up to OXY's transportation system?

A. No, I don't.

Q. Do you know which part of the pool that OXY's line goes to?

MR. STOVALL: Is there another witness who can answer that better?

THE WITNESS: Yes, sir.

MR. KELLAHIN: We have a reservoir engineer who can tell the connections.

HEARING EXAMINER: We'll just wait for that. I have no other questions of Mr. Dawson.

Are there other questions of this witness?

MR. STOVALL: I do have just a couple of questions, Mr. Dawson.

CROSS-EXAMINATION

BY MR. STOVALL:

Q. Do you market all of OXY's gas through its operations, let's say, the Southwest just to keep it simple?

A. No, I don't, but I do market the majority of it in this area.

Q. Do you market all of OXY's New Mexico gas?

A. Let me explain something about how we are structured now that causes that to be a little bit different.

In 1981 and through 1985, I marketed the gas. I had primary responsibility for the entire area, our entire Southwest region. Since that time we've been structured a little bit differently in that there are reps who have been assigned to specific pipelines, and they would also then at this time be responsible for marketing gas on those pipelines.

However, that does not in the Southwest or in this area doesn't reflect a majority of their business. Most of our gas would not be situated on those pipelines. It's sort of a chance occurrence.

Q. The reason I'm asking those questions is, I guess the real question is, do you have a pretty good understanding of OXY's total gas marketing operations and situation?

A. Yes, I do.

Q. Say, just coming out of New Mexico gas, roughly what general fraction or percentage of OXY's gas comes out of the Burton Flat-Morrow Pool? We're looking at less than a quarter, less than a half?

A. Much less than a quarter.

Q. So there is substantial gas produced throughout mostly southeast New Mexico; is that correct?

A. I'm sorry?

Q. Is most of OXY's production in southeast New Mexico for gas? Most of it's New Mexico production?

A. Most of OXY's production companywide?

Q. No, just for New Mexico, within the southeast.

A. Yes, that's correct.

Q. Does the gas go both directions, east and west?

A. Yes, it does.

Q. Do you know if OXY has any problem marketing gas from other pools and fields in New Mexico? Are you able to market all the gas you produce?

A. Yes, we are.

Q. So it's not just that you are able to market the Burton Flat gas, but in fact any gas that OXY is capable of producing, it can find a market for?

A. That's right.

Q. At an acceptable price, I assume that means? Not necessarily desirable but acceptable?

A. Yes, I guess an acceptable price, yes.

MR. STOVALL: I think that answers all the questions I've got for the moment.

HEARING EXAMINER: For the moment. Thank you, Mr. Dawson.

MR. KELLAHIN: Mr. Examiner, I'd like to call Mr. Scott Gengler. Mr. Gengler is a reservoir engineer and a production engineer that's done additional work for OXY with regards to some of the topics involved in today's hearing.

SCOTT GENGLER,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Gengler, would you please give us your name and occupation for the record.

A. My name is Scott Gengler, spelled G-e-n-g-l-e-r. I'm a petroleum engineer with OXY USA.

Q. Mr. Gengler, have you on prior occasions testified as a petroleum engineer before the Division?

A. No, I have not.

Q. Would you summarize your educational background for us?

A. Yes. I have a Bachelor of Science Degree in Petroleum Engineering from Texas A&M University.

Q. Subsequent to graduation, would you summarize for us your employment experience as to petroleum engineering?

A. I have been a production and reservoir engineer for OXY USA since graduation.

Q. Are you familiar with the production and the reservoir characteristics in the Burton Flat-Morrow Gas Pool of Eddy County, New Mexico?

A. Yes, I am.

MR. KELLAHIN: We tender Mr. Gengler as an

expert petroleum engineer.

HEARING EXAMINER: Mr. Gengler is so qualified.

Q. (BY MR. KELLAHIN) In terms of studying the question of whether or not prorationing can be terminated or, in the alternative, continued in the Burton Flat-Morrow, what were you asked to do, Mr. Gengler?

A. I was asked to look at the drainage question as it applies to marginal wells and nonmarginal wells, and whether or not these marginal wells would drain production from the non -- excuse me -- nonmarginal wells would drain production from the marginal wells.

Q. In the absence of proration?

A. Right.

Q. In order to answer the question of whether or not the nonmarginal wells will drain beyond their 320-acre spacing unit if the prorationing allowable restrictions are removed, what did you do?

A. We looked at all the nonmarginal wells that OXY operates in the pool and determined what their drainage area was.

Q. Have you reduced your calculations and your work to a summary display that shows the results of

that calculation?

A. Yes, I have.

Q. Let me turn to Exhibit No. 16. Is this your exhibit?

A. Yes, it is.

Q. Describe for us what you've done and what you've concluded.

A. We have calculated from isopach maps a PhiHSg for each one of our nonmarginal wells in the pool and used that data along with data from P/Z analysis for a couple of reserves in a volumetric equation to determine drainage area.

Q. When you look at the nonmarginal wells that OXY operated in the pool, what did you calculate for the drainage areas of those wells?

A. We calculated that all wells that we operate as nonmarginal wells have a drainage area of less than 320 acres.

Q. The calculated drainage areas for each of those six wells is shown on Exhibit No. 16?

A. Yes, it is.

Q. Describe for us the method that you went about to get that drainage area.

A. We had our geologist do isopach maps of each individual sand that is produced in each one of

the nonmarginal wells, and we came up with an isopach map for each one of those wells.

We then used that data with planimeter data to come up with the PhiHSg.

Q. What, if anything, did you do as an engineer to check the accuracy of the volumetric calculation?

A. We used P/Z analysis to come up with our reserves, and we double-checked that number against our decline curve analysis and also rate versus cum gas analysis.

Q. In your opinion, are the wells that you've chosen to determine whether or not they had the ability to drain areas larger than 320, whether or not those wells are representative and typical of the higher capacity nonmarginal wells in the pool?

A. Yes. I believe that these are typical. OXY is the largest operator in the pool. We have the most amount of nonmarginal wells. These wells are spread out both in the north and in the south end of the pool and give a representative cross-section of the wells in the pool.

Q. Can you give us a case study and show us the calculations and the method of analysis that you applied to each of the six wells?

A. Yes, I can.
Q. Which well did you select for the case study?
A. We chose the OXY operated Elizondo Federal A #3.
Q. Why did you select the Elizondo Federal A #3 well?
A. It had the most amount of recoverable reserves assigned to it and in our drainage area calculations, showed the most drainage area of any of our wells.
Q. If we then had a likely candidate for a well that might adversely affect offsetting spacing units, this is it; right?
A. Yes, it is.
Q. What did you do?
A. We took and determined the drainage area for this well.
Q. Your drainage calculation is shown on Exhibit 17?
A. Yes, it is.
Q. Then you confirmed the calculation by comparing it to the cumulative recovery on your P/Z versus Q plot?
A. Yes.

Q. Do you have a plot for that well shown in the exhibit book?

A. Yes, I do.

Q. That's No. 18?

A. Yes.

Q. Using the P/Z versus Q gas slope, what did you determine to be the total gas reserves for the well?

A. 7.58 billion cubic feet.

Q. How did that match with your volumetrics that you calculated your drainage for?

A. They matched identically.

Q. In your opinion, will the high capacity nonmarginal wells in the absence of prorationing have the opportunity to impair the correlative rights of the offsetting spacing units by enjoying a drainage advantage over those spacing units?

A. No, they will not.

Q. Have you looked at any other engineering factors or conclusions that would support your opinion that the high capacity wells in this area are not going to drain more than 320 acres?

A. Yes, I have.

Q. What did you do?

A. On our Elizondo Federal A #3, I took our

offsetting wells to the north, to the south, and to the east of the Elizondo Federal A #3, and I compared bottom hole pressures.

Q. So the Examiner can find where you are in the pool, let's take Exhibit No. 1 and have you show us where these four wells on Exhibit No. 19 are located?

A. The Elizondo Federal A #3 is located in Section 20 of Township 21 South, Range 27 East.

Q. Down on the south end of the pool?

A. Yes.

Q. And the other wells that are shown on Exhibit 19, where are those wells located?

A. They are located in Sections 20, 21, and 29.

Q. By looking at the bottom hole pressure information for those four wells, what does it tell you as an engineer?

A. It tells me that there is no difference or no correlative rights problems between the marginal and the nonmarginal wells.

Q. When we look at this display, which are the nonmarginal wells, and which are the marginal?

A. The Elizondo Federal A #3 is a nonmarginal well. The other three are marginal.

I'd like to point out the CDM A #1 is currently classified as a marginal well, but we have had a tubing leak in that well and have had to repair it. It takes time to repair the damage that is done by the water that has been put on that formation, plus we have other mechanical problems that we need to fix, and we are kind of waiting to see what happens with this hearing before we decide whether or not we want to do this work.

Q. What is the magnitude or range of pressure differential between the marginal wells and the nonmarginal wells shown on this display?

A. There is a difference of about 1,500 to 1,600 pounds.

Q. For this particular reservoir in this area, what does that tell you?

A. It tells me that these two zones are not communicated, and that there should be no drainage between these two zones.

Q. Were you asked to study any other issue or topic with regards to this case?

A. Yes, I was.

Q. What were you asked to do?

A. I was asked to determine the pool deliverability of this pool.

Q. Did you do that?
A. Yes, I did.
Q. What, in your opinion, is the current total pool deliverability for the Burton Flat-Morrow Gas Pool?
A. I found that the pool deliverability is 600 million cubic feet per month.
Q. How did you make that determination?
A. We contacted all the nonmarginal operators in the pool to determine what the deliverability of their wells were. Then we assembled that information from them, assuming that they may or may not be producing their wells at capacity.

The marginal wells, we assumed that they could produce anything they could; so they were giving their largest production within the last year as a deliverability.

Q. What is OXY's total deliverability of the wells that they operate?
A. It's approximately 250 million per day.
HEARING EXAMINER: 215?
THE WITNESS: 250.
Q. (BY MR. KELLAHIN) Were you asked to do anything else?
A. Yes, I was.

Q. What else were you asked to do?

A. I was asked to look at the opportunity to work over, drill, or add compression to our wells to increase production from this pool.

Q. Does that opportunity exist?

A. Currently, it has limited applications due to allowables.

Q. Describe for us what you've done in order to reach that conclusion.

A. The first thing that we did was, after getting an increase in allowable in October, we worked over four wells, and we installed compression on seven additional wells.

Q. Can you give us a plat that shows the specific wells in which additional work was done?

A. Yes, I can.

Q. Is that Exhibit No. 20?

A. Yes, it is.

Q. Let's go to that and have you identify for us that display and the color code that applies to the display.

A. On this map, the blue dots indicate the work that has been done since October of 1989 as far as workovers. It also includes two wells that have been recompleted into the pool.

The orange dots indicate the compressor applications that have been added. There are seven of those.

The green dots indicate proposed 1990 workovers that we had proposed to management but have not received approval of.

And the red dots are the proposed 1990 wells, including the government "AB" #5 that is currently being completed.

Q. Assume that proration continues and also assume the Commission does not put any administrative bonus allowable into the system. Under those assumptions, can OXY go ahead with the rework, recompletion, compressor installations, or the drilling of new wells in this pool?

A. No, they may not.

Q. Why not?

A. Due to economics.

Q. If we apply a consistent level of temporary bonus allowables so that each well enjoys on a continual regular monthly basis a fixed amount of allowable, what allowable amount would that have to be in order to generate the additional workover and recompletion work?

A. I would say the bonus allowable that was

added in October and November would justify that if we could be guaranteed for one or two years that that would be in effect.

Q. What does that translate down to to an individual nonmarginal well in terms of a daily producing rate, do you remember?

A. I believe it was about 700 Mcf per day.

Q. 750 is what I remember, but it was in that range?

A. Okay, yes.

Q. What opportunity did OXY exercise then in response to receiving the temporary bonus allowables in October and November of 89?

A. We took and installed seven compressors on both nonmarginal and marginal wells.

Q. And that is what's shown on this exhibit?

A. Yes, along with the workovers.

Q. Why is that not a sufficient enough action by the Division to allow the pool to be operated in such a way that we maximize ultimate limited recovery from the pool?

A. Because we are proposing to do other work, and that other work needs a longer response time to recapture our investment in these workovers and drilling opportunities. And right now our

management's concern is how long do we get this bonus allowable.

Q. Identify for us what has been the recent history in terms of new drilling activity targeted for this particular pool.

A. Since 1983 when we drilled the last well in the pool, there has been no other wells drilled down to the Morrow until we commenced the drilling of the Government AB #5 in December of 1989.

Q. Why was that well commenced then?

A. We decided to go ahead and start our drilling program to show the Commission that there is additional opportunity for drilling in this pool and what kind of results that we might obtain.

Q. Why wasn't that opportunity exercised from 83 to December of 89?

A. First of all, the market demand was below what the deliverability of the wells were; hence, we could not market all the gas that we were producing, which was pretty typical of all operators.

Q. That's changed though in the last 18 months, has it not?

A. Yes, it has.

Q. In the last 18 months, why wasn't, in response to the removal of the constraints of the

market demand -- in other words, you've got market demand that now exceeds pool deliverability, why did that not trigger additional drilling in the pool in the last 18 months?

A. Because of low allowables.

Q. Let's turn now to Exhibit No. 21 and have you identify and describe that exhibit.

A. This is a graph of production from one of our marginal wells in the Burton Flat-Morrow Pool where we have installed compression. This well is, like I say, still classified as a marginal well. Prior to the installation of the compressor, the well was producing approximately 300 Mcf per day. Prior to the bonus allowable, this well was classified as nonmarginal. It was making the 220 average allowable for the last 12 months prior to the bonus allowable.

In December we installed compression, and we are currently producing in the range of 700 Mcf per day, which when the Commission gets around to reclassifying it would move it from a marginal to a nonmarginal status.

Q. What's your conclusion from looking at the information on the Tracy C #1 well?

A. My conclusion is there's ample opportunities to increase production with

compression. If the allowables were to remain back prior to the bonus allowable at 220, we would have never done this work.

Q. Let's turn to Exhibit No. 22, Mr. Gengler, and have you identify and describe the information on this display.

A. These are typical well economics for drilling a Burton Flat-Morrow well. Typical drilling cost is $685,000. We have shown three cases here, the first case being one where the average allowable was 220 Mcf per day, which was the average allowable for the 12 months prior to the addition of the bonus allowable.

The second case assumes that we keep that 750 Mcf per day bonus allowable and not change it for at least two to three years.

And the third case is if there was no proration at all.

Q. What do you conclude from making this economic analysis in terms of whether or not prorationing can be continued?

A. The first case where we stay back where we were on a proration at 220 Mcf per day, the net present worth of the drilling well would be a negative $10,000.

On the prorated case where we had 750 Mcf per day guaranteed, the present worth is $521,000 and would take 2.1 years to get our money back on it.

The third case with no proration has a present worth of $582,000, and that's 1.5 years pay-back period.

Q. In your opinion, should prorationing be continued for the Burton Flat-Morrow Gas Pool?

A. No, it should not.

Q. Let me turn now to Exhibit 23. What is that, sir?

A. This is a letter from one of the other operators in the field, Petrus Oil Company, and this was an unsolicited letter to our petition for deprorating the Burton Flat-Morrow Field.

In their letter, they say there's no economic incentive to rework these wells because of the low allowables. They feel like that they have potential in their marginal wells to rework them, but with the allowable even at 750 Mcf per day, it doesn't give them a security to go about doing this or the economic justification to do it.

Q. And you're talking about reworking of the marginal wells?

A. Yes.

Q. In your opinion, Mr. Gengler, if the Division terminates prorationing, will that result in increasing the ultimate recovery of gas from the pool?

A. No, it will not.

Q. I didn't make myself clear.

A. Excuse me.

Q. If they terminate, in your opinion, will that result in increasing the ultimate recovery?

A. Yes, it will increase the ultimate recovery of the pool because it will allow us and other operators to do rework and compression installations that they would not do under proration.

MR. KELLAHIN: That concludes my examination of Mr. Gengler.

We would move the introduction of his Exhibits 20 through, I believe 23 is the last one.

HEARING EXAMINER: Exhibits 20 through 23 will be admitted into evidence.

CROSS-EXAMINATION

BY HEARING EXAMINER:

Q. Mr. Gengler, let's refer to Exhibit No. 22, and you bring that figure up again, and it's been mentioned several times, and I want to make sure I get it right, what this figure is and where it came from. The 750 Mcf per day, explain to me what that is

again.

A. That is what we used as the bonus allowable that was put into effect in October of 89, and we used that as a standard, you know, if we got a bonus allowable equal to that from now to the end of the pool life.

Q. Was this the only figure you worked with? Did you work with another figure, say 600, 650, 500 Mcf per day on any of your economic analyses?

A. No, we did not.

Q. How many wells in this pool -- I'll ask it in two parts. You have definitely looked at it as far as OXY's wells. How many OXY wells are there that are capable of producing over 650 Mcf per day?

A. I'd say four or five.

Q. On a regular basis -- now, are we talking about after workover, or are we talking about now?

A. We're talking about now.

Q. How about poolwide?

A. I would say there's probably another three or four currently that can produce over that 650, but I'd like to also interject that several operators have told me that they would like to install compression or do some rework to increase those.

One company in particular said that they

would like to rework a well and put it on compression. They've tested for compression and feel like it would make 2 million per day. Currently, the deliverability is 160 Mcf per day.

Q. Of OXY's wells that are capable, the four or five that would be capable of producing over 750 Mcf a day, where are they located in the pool?

A. They're pretty much spread out to the pool.

Q. That's what I was getting at.

A. They're not concentrated in one area.

Q. The same with the three or four others?

A. Yes.

HEARING EXAMINER: Mr. Kellahin, I see that we're going to have some geology enter into this?

MR. KELLAHIN: Just briefly to lay the foundation for the engineering calculations that were done for the drainage conclusions, Mr. Examiner. I wouldn't expect it to take more than 15 minutes to put that in.

Q. (BY HEARING EXAMINER) Of these OXY wells -- I'm going to refer to Exhibit No. 16 -- of the OXY wells that you alluded to that were capable of producing over 750 Mcf a day, are they listed on Exhibit 16?

A. All but one or two of them are listed on

here.

Q. Which one of these six wells can produce over 750 Mcf a day?

A. The Cawley A #1, the Government AD #3. Prior to the workover, the Elizondo Federal A #3 was capable. It currently is not. We have some damage from a tubing leak on that well, but production is slowly climbing, and we expect it in the next few months to be back above 650.

Q. Those are two. Is there another one on there?

A. There was the Cawley A #1, the Government AD #3, and we expect here fairly soon the Elizondo Federal A #3.

Q. Going back to Exhibit No. 22, in the third case, nonprorated, you get a payback over one-and-a-half years. This is a typical well economics. What kind of daily production are we looking at?

A. Initial production of 1.3 million per day.

Q. Of a typical well, when would we start seeing this production drop off?

A. What do you mean by drop off?

Q. To the 750 Mcf a day.

A. I would assume it would take about a year,

year-and-a-half.

HEARING EXAMINER: I have no other questions of this witness. Are there any questions of Mr. Gengler?

MR. STOVALL: I don't ask engineers questions.

HEARING EXAMINER: He may be excused.

Mr. Kellahin?

MR. KELLAHIN: My last witness, Mr. Examiner, is John Carroll. Mr. Carroll is a geologist.

JOHN CARROLL,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Carroll, for the record, would you please state your name and occupation.

A. Yes. My name is John Carroll. I'm an exploitation geologist with OXY USA, Inc.

Q. How do you spell your last name?

A. C-a-r-r-o-l-l.

Q. Mr. Carroll, have you on prior occasions testified before the Division?

A. No, I have not.

Q. Would you summarize your educational background?

A. I have a Bachelor's of Science Degree in Geology from the University of Texas at El Paso which was received in 1981. Since that time, I have worked for Cities, OXY, in both an exploration and production capacity.

Q. Have you prepared a geologic interpretation of the various areas in the Burton Flat-Morrow Gas Pool?

A. Yes, I have.

Q. How long have you been working in this particular pool doing geologic mapping, contouring interpretations?

A. Since 1988.

MR. KELLAHIN: We tender Mr. Carroll as an expert petroleum geologist.

HEARING EXAMINER: Mr. Carroll is so qualified.

Q. (BY MR. KELLAHIN) Mr. Carroll, what were you asked to do with regards to this particular case?

A. I was asked to assist our engineer in determining the drainage areas for all of our nonmarginal wells within the Burton Flat-Morrow pool.

Q. In order to fulfill that responsibility,

what did you do?

A. I went through a number of various stages to come up with some PhiH numbers that were utilized in Mr. Gengler's computations.

Q. Have you provided in the exhibit book a set or an example of the PhiH maps that you prepared for his use?

A. Yes, I have.

HEARING EXAMINER: For the record, we're talking Greek again, right, Mr. Kellahin?

THE WITNESS: Yes. Those PhiH maps are Exhibits 25 through 28 in the book.

Q. (BY MR. KELLAHIN) Let me ask you, sir, to turn to Exhibit No. 24, which is the first of the geologic displays. You prepared that?

A. Yes, I did.

Q. In looking at the stratigraphy of the Burton Flat-Morrow, identify for us that portion of the Morrow that you mapped and utilized for purposes of Mr. Gengler's calculations of the drainage areas.

A. For that particular case study, I did PhiH maps on the Morrow B horizon.

Q. Why did you choose the Morrow B horizon for the particular wells to map?

A. For that particular case, because those

particular sands were the productive sands in that case study area.

Q. Having prepared a north-south stratigraphic cross-section through the pool, what do you conclude?

A. I think it shows the variability in sand deposition from the northern part of the pool to the southern part of the pool. The blue areas are carbonates, and the yellow areas are indicative of sands.

Q. Mr. Gengler has concluded based upon his work that if prorationing is terminated, that he cannot find any of the wells he's examined that will have the ability to drain more than the 320-acre spacing unit assigned to them. How do you react to receiving that conclusion as a geologist, Mr. Carroll?

A. I think based on the depositional system we're looking at here and the discontinuity of the Morrow reservoir, as is exemplified by Exhibit No. 29 --

Q. Let's turn to Exhibit No. 29 and take a look at that.

A. This was a cross-section through the case study area from south to north. It shows that the primary productive sand, the B-2 sand, as you go to the north, that reservoir quality diminishes rapidly

to the north. And due to that discontinuity, I'm not surprised at all that these nonmarginal wells do not drain or actually drain less than 320 acres.

Q. For purposes of the record, let's go through a case study so that Mr. Stogner understands the geologic basis for the engineering conclusions.

Let me start with Exhibit 25.

A. Okay. I'll give you a little background up to that exhibit.

Q. All right.

A. What I attempted to do is correlate the productive sands for each nonmarginal well from that nonmarginal well to the surrounding wells. And for each productive sand, I created a PhiH map for each productive sand.

Q. And you did this for all of the ones on which Mr. Gengler has calculated drainage areas?

A. Yes, I have.

Q. For purposes of the exhibit book, you have included only those set of geologic displays that apply to the Elizondo #3?

A. Yes.

Q. When we look at the Elizondo #3 then, Exhibit No. 25 is your mapping of the B-2 sand?

A. Yes. And I did similar PhiH mapping for

all of the productive sands in that nonmarginal well and surrounding wells.

Q. And then Mr. Gengler has taken the sum total of all those maps for those producing sands in that nonmarginal well and made his calculations of the gas to be recovered and, correspondingly, the drainage areas?

A. Yes, he has.

MR. KELLAHIN: That concludes my examination of Mr. Carroll.

Mr. Examiner, we would move the introduction of his geologic displays which are shown in the exhibit book, starting with Exhibit 24 through 29.

HEARING EXAMINER: Exhibits 24 through 29 are admitted into evidence.

THE WITNESS: The last well on that regional field cross-section is also incorporated in the case study, the CDM "A" #1.

HEARING EXAMINER: And that is the only well?

THE WITNESS: Yes, sir. That was just to give you a general idea of the variability in sand deposition across the field.

That last cross-section I have on a larger

scale if you'd like to look at that.

CROSS-EXAMINATION

BY HEARING EXAMINER:

Q. No. I was trying to establish which zones are the more prolific producers?

A. I would say the Morrow B and the Morrow A. Morrow C is primarily carbonates.

Q. Within the Morrow B, which of the stringers? You've got B-1.

A. For our particular case study, I believe the B-2 would be the primary contributor to that production.

Q. Do we see this B-2 zone pinch out as we go to the north?

A. Yes, I believe we do for this particular study area. We're dealing with highly channelized systems here, and this B-2 can pick up again in other areas of the field. We did a similar process for each one of our nonmarginal wells.

HEARING EXAMINER: I have no questions of this witness. He may be excused.

MR. KELLAHIN: One follow up, one question.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q. As a geologist, do you see any direct

correlation to the porosity thickness values used in the calculations and the corresponding productivity of the wells?

A. Yes, I do. I think there's direct correspondence.

MR. KELLAHIN: No further questions.

HEARING EXAMINER: Thank you, Mr. Kellahin.

MR. KELLAHIN: That concludes our presentation, Mr. Examiner.

HEARING EXAMINER: I don't believe there's any -- or I have no reason to recall any witnesses at this point, Mr. Kellahin. Do you?

MR. KELLAHIN: No, sir.

HEARING EXAMINER: Do you have anything you would like to close with?

MR. KELLAHIN: We'd like the opportunity, if you desire, to provide you with a draft order that will provide you a basis for granting the application. As you can see from the witnesses, OXY has examined this particular pool in-depth for a number of months. We've tried to look at terminating prorationing from every conceivable possible perspective, looking at all the major and secondary issues that might arise for your consideration.

It's interesting to note that we cannot

find anyone that wants to keep prorationing in the pool. There is no reason, I think, to have an administrative solution fixed upon a pool in which none of the interest owners want it. I think what we're asking you is why keep something that no one wants.

There are certain things to examine. All the other issues are based upon the single compelling reason for prorationing, and that is, when the pool deliverability is going to regularly and consistently exceed market demand, then that is the predicate upon which we base prorationing because we have productivity or deliverability of the wells that is going to exceed the pool market demand.

The demonstration here is that just the reverse is occurring, has occurred in the recent past, and will continue to occur on a regular basis. That is, market demand is going to consistently exceed the deliverability of the pool. There is not a seasonal adjustment factor that justifies the continuation of prorationing.

We might try to guess and see what level of productivity or allowable is going to justify the economic incentives necessary for the additional work, but I think we're guessing. I think we need to

terminate prorationing and let the operators in the pooling go about the business of producing gas from that pool in the most efficient way. We can find no reason to continue the prorationing for this particular pool, and, accordingly, would request the Division to terminate. Thank you.

HEARING EXAMINER: Thank you, Mr. Kellahin.

Does anybody else have anything further in this case?

Mr. Kellahin, I won't turn down your offer for a rough draft.

MR. KELLAHIN: All right, sir.

HEARING EXAMINER: Case No. 9872 will be taken under advisement.

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Deborah O'Bine, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I caused my notes to be transcribed under my personal supervision; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL February 23, 1989.

Deborah O'Bine

DEBORAH O'BINE
CSR No. 127

My commission expires: August 10, 1990

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9872, heard by me on 21 February 1990.

Michael E. Stogner, Examiner
Oil Conservation Division

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF CASE 9872 BEING REOPENED PURSUANT OT THE PROVISIONS OF DIVISION ORDER NO. R-9463, WHICH ORDER, AMONG OTHER THINGS, PROVIDED FOR THE RREOPENING OF SAID CASE 9872 IN ORDER THAT ALL OPERATORS IN THE BURTON FLAT-MORROW GAS POOL, EDDY COUNTY, NEW MEXICO, MAY APPEAR AND PRESENT EVIDENCE RELATIVE TO THE PERMANENT TERMINATION OF GAS PRORATIONING FOR SAID BURTON FLAT-MORROW GAS POOL.	CASE NO. 9872

REPORTER'S TRANSCRIPT OF PROCEEDINGS
EXAMINER HEARING

BEFORE: DAVID R. CATANACH, Hearing Examiner
September 19, 1991
10:50 a.m.
Santa Fe, New Mexico

This matter came for hearing before the Oil Conservation Division on September 19, 1991, at 10:50 a.m. at the State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Linda Bumkens, CCR, Certified Court Reporter No. 3008, in and for the County of Bernalillo, State of New Mexico.

FOR: OIL CONSERVATION DIVISION

BY: LINDA BUMKENS CCR
Certified Court Reporter
CCR NO. 3008

I N D E X

September 19, 1991
Examiner Hearing
CASE NO. 9872

E X H I B I T S

OXY USA INC.

A P P E A R A N C E S

FOR THE DIVISION: ROBERT G. STOVALL, ESQ.
General counsel
Oil Conservation Commission
310 Old Santa Fe Trail
Santa Fe, New Mexico
87501

FOR OXY USA INC: KELLAHIN, KELLAHIN & AUBREY
BY MR. W. THOMAS KELLAHIN, ESQ.
117 North Guadalupe
Santa Fe, New Mexico
87501

EXAMINER CATANACH: Call Case 9872.

MR. STOVALL: In the matter of Case Number 9872 being reopened pursuant to provisions of Division Order R-9463 which order, among other things, provided for the reopening of Case 9872 in order that all operators in the Burton Flat-Morrow Gas Pool, Eddy County, New Mexico, may appear and present evidence relative to the permanent termination of gas prorationing for said Burton Flat-Morrow Gas Pool.

EXAMINER CATANACH: Are there appearances in this case?

MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin with the Santa Fe Law Firm Kellahin, Kellahin & Aubrey appearing today on behalf of Oxy USA Inc., and I have one witness to be sworn.

MR. CATANACH: Are there any other appearances?

(No response).

Will the witness please stand and be sworn in?

(At which time Mr. Foppiano was sworn.)

RICHARD E. FOPPIANO,

the Witness herein, being duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Will you please state your name and occupation?

A. My name is Richard E. Foppiano, and my occupation is regulatory affairs engineer for Oxy USA in Midland, Texas.

Q. Mr. Foppiano, did you testify in Case 9872 on February 21, 1990 in the case in which your company sought to terminate gas prorationing in the Burton Flat-Morrow Gas Pool?

A. Yes, I did.

Q. And both prior to and subsequent to that hearing, have you kept yourself informed with regards to the various items of importance to today's hearing?

A. Yes, I have.

Q. Based upon your studies, Mr. Foppiano, have you come to conclusions about whether or not prorationing in the Burton Flat-Morrow Gas Pool ought to be terminated or ceased on a permanent basis?

A. Yes, I have.

MR. KELLAHIN: We tender Mr. Foppiano as an expert petroleum engineer.

EXAMINER CATANACH: He is so qualified.

Q. (By Mr. Kellahin) Let me have you turn to your package of exhibits, Mr. Foppiano, and before obtaining your recommendations for the Examiner concerning prorationing, let's have you take a minute and refresh our recollection about the regulatory history that's in --

MR. KELLAHIN: Mr. Examiner, we provided you with a copy of the prior orders that suspended prorationing in the pool along with Mr. Foppiano's exhibit book.

Q. (By Mr. Kellahin) Would you summarize for us to refresh our recollection, Mr. Foppiano, the regulatory history that's being used in the Burton Flat-Morrow Gas Pool to manage that production?

A. Yes, I will. Exhibit Number 1 is just a previous history of the regulatory aspects of the Burton Flat-Morrow field. The pool was created in 1973, it became prorated in 1974, and in 1985 one of the operators in the pool petitioned the OCD to terminate prorationing, and their request was denied at that time.

In '89 Oxy came in and asked the Oil Conservation Division to increase the allowable in the field because there was a market demand that was

not being reflected by the current proration system, and pursuant to that request, the OCD added volumes administratively to the pool allowable in October and November '89, and then at a hearing in February of 1990 Oxy requested that proration be permanently terminated in the Burton Flats-Morrow field on the basis that it was just unnecessary to continue prorating the pool.

Q. Let's focus on the last order which was the one that resulted in prorationing being temporarily suspended. Summarize for us, and I know the orders detail them more explicitly, but summarize for us the major components for having prorationing suspended for the pool?

A. Well, Exhibit 2 are the details of why we requested that the OCD terminate prorationing in the field. We said that terminating prorationing will prevent waste because it will provide an incentive to the operators to drill wells, rework old wells, and do other things that would increase the ultimate recovery.

We felt at that time that the current prorationing system was actually a disincentive for these type activities, and, in fact, our review of the history indicated that very little of that type

of activity had been done and that other operators indicated the same problem that the allowable system was what was preventing them from undertaking these type of activities.

We also show that correlative rights wouldn't be adversely effected by termination of proration. We show that there was a market demand for everything that the pool could produce. The few nonmarginal wells had limited drainage areas.

We showed that by geological and engineering testimony, and there were a few nonstandard units and most of those were marginal. I think there was only one that was nonmarginal, and the only multiple well unit in the field was operated by BHP, I believe, and it had temporarily -- one of the multiple wells that was temporarily abandoned at that time -- so we didn't feel like proration to adjust equities between multiple well units and nonmultiple well units was justified in that case.

We also believe that potential for nonrateable taking by pipelines didn't exist anymore since the pipelines weren't actually taking gas anymore they were just transporting it, and the operators were selling their gas on the open market.

Most of them were, the ones that we talked to, so there wasn't much taking going on, and so the potential for nonrateable taking just didn't exist in that scenario.

And lastly, we pooled the operators, and I think at the time of the hearing we showed that operators of 97 percent of the wells had waived in protest of the action.

Q. Since the order was entered, what has occurred with regard to the management and production of the reserves being produced from that pool?

A. All sorts of good things have occurred. Exhibit 3 details them. Pool production has increased substantially since the temporary suspension of proration. New wells have been drilled. Prior to the time when we had the hearing last year I don't think there had been any new wells added to the field in, I want to say, five years or more.

Compression installation and work over activity has increased substantially. We've done more of that type of work, and other operators have indicated that they've done more of that type of work. We believe there continues to be a market for

all the gas, and we'll show you some evidence of that market. And to my knowledge, no one has complained since proration was temporarily suspended in February.

Q. Has the additional drilling, the recompletions, the installations of compressors, the increased production from the pool, directly attributable to suspending prorationing in that pool?

A. In my opinion, yes, it is.

Q. Let's turn to some of these specific details with regards to these events. Starting off with the gas production from the pool, if you'll turn to the display following tab four. Identify and describe that for us?

A. This is a plot of the pool production and MCF -- or excuse me -- millions of cubic feet per month produced in the years '88, '89, '90, '91, and it shows fluctuations of production, but basically before the winter season of 1989 it shows -- I'm going to guess -- about 250 million a month average production for the pool.

Since the OCD started adding allowable into the pool, and since proration was terminated, you can see the average production is at least over 500

million cubic feet per month. So in my opinion, pool production has doubled, at least doubled, since the OCD has taken the action that they've taken.

And the graph also shows what, you know, the increase that Oxy has seen and the increase that their operators have seen, and what I think is fairly obvious there is that not only has Oxy benefitted to some degree, but the other operators have certainly taken advantage of this opportunity to produce as much as they desire, and I think that's shown by the widening gap between our production and the total pool production.

Q. Can you show us on the gas production display that point in time in which the additional bonus allowable was applied to the pool which you asked for back in '89, I believe it was?

A. Yes. In October and November of 1989, the OCD administratively added pool allowable, or allowable to the pool to increase it, and you can see what the pool production did as a result of that. It went up dramatically. And in December and January -- I can't see which one exactly -- as you can see over 600 million for the month, and then, of course, you see it dropping dramatically, and the reason why that is, based on my investigation, is

that that so incurs the operators to produce that some of them overproduced, and we were still under the current proration system at that time, and they got overproduced and had to curtail their production.

And that's why the production dropped dramatically until about March or April of 1990. And April 1, 1990, was the effective date of the termination of prorationing. And you can see the production went right back up again.

Q. Let's turn now to the information behind tab five. What have you presented here?

A. Yes. I mentioned that workover activity has increased substantially. This is an exhibit that just shows the workover activity that Oxy has undertaken since the winter of 1989 when the allowable started to be increased, and what it shows is that there are several wells where we've opened up additional Morrow Zones and increased the production from those wells as a result of that workover.

We have stimulated -- You see the Tracy A1? We stimulated the Morrow in that well -- fracture stimulated it -- and we did the same thing on CDM A Number 1. We opened up additional Morrow

Zones and stimulated it, and on the Government Z1 we even recompleted the well from the WolfCamp into the Morrow. And on the rest of them you can see we've done a pretty good -- I have a pretty good program of compression installation, which was another thing we identified the proration was working against because there wasn't much incentive at that time to install compression to increase productional marginal wells because the nonmarginal allowable was so low.

Q. This activity was not undertaken without risk; isn't that true?

A. That's true. You can see that before and after numbers there. In some cases like when we opened up additional Morrow on the Elizando Federal Number 3, we cut our production in half, and you can also see that some of the increases that we saw were not very significant. For example, the CDM A 1, we only increased our deliverability to 50 MCF a day. The Elizando Federal A2Y, 10 MCF a day, and you know, there's some other examples of that, but basically it points out the risky nature of undertaking activities of this sort.

You know, you're going to -- you hope to come out ahead on the long run, but there are risks

in doing this type of activity.

Q. Have prorationing continued for this period none of this activity would have occurred?

A. Very little of it, I think. There wouldn't be as much of it. It's hard to say that we wouldn't have done any of this, but we certainly would not have done as much as this had prorationing continued because the incentive was not there.

Q. Turn now to the information behind tab 6 and identify and explain that.

A. I think one of the main things we showed in the hearing in February was that there hadn't been very many new wells added to the field, and there was potential for new wells to be added to the field, but there wasn't any incentive under the current proration system, and the termination of proration provided that incentive, and sure enough, after proration was terminated we count six new wells have been drilled in the field at a substantial investment.

Four of those wells have been completed in the Morrow, and two of them was completed -- one of them was completed in the Wolfcamp and the other in the Atoka. And it's also significant to point out that not only has Oxy undertaken this activity, but

another operators have also.

And as you can seen by the initial deliverabilities and by the completions that some of these are successful and some of them were not as successful probably as the operators had hoped, so there, again, it points out the risk of even drilling -- infield drilling in this field.

Q. In your opinion, has the suspension of prorationing for this pool resulted in increasing ultimate recovery of hydrocarbons from this pool?

A. It most definitely has. By the work over and drill activities I think there has been a substantial increase in the ultimate recovery that would be realized from this pool.

Q. Have you made an assessment to determine whether or not there is still market demand that exceeds the total pool-wide deliverability for production from this pool.

A. Yes. During the last several months, as you can see from the table in Exhibit 6, we have been completing and trying to put these wells on line. Some of these new ones, particularly the Tracy D and the Simpson A2Z.

And so we've been talking to and communicating with other markets, other pipe lines,

in the field to assess what marketing opportunities we have. And it's our opinion that based on those contacts that there is ample capability to move gas out of this field, and there is even interest generated to improve that even more, but there's ample market.

And what I'm getting around to saying, I guess, is there's ample opportunity and ample market for not only the pool deliverability as it exists today, but even for increase in the pool deliverability.

Q. Are you aware of any operator that has been unable to market his gas if he wanted to market his gas from this pool?

A. I am unaware of any operator who has been unable to market it because of -- or if he was -- They had a market.

Q. Has there been any pipeline capacity problems or curtailments or restrictions due to the additional production from the pool?

A. None that I'm aware of.

Q. Let me ask you to turn to the exhibit after tab seven, and identify and describe this exhibit?

A. This is a plat showing the outlines of the Burton Flat-Morrow Pool, and it shows all the wells

in the pool that are completed in the Morrow within the outline of that field. It also shows highlighted with little red dots, the six wells that were drilled and shows the location of those wells.

It also shows in green, a well that is still at this time a proposed well by Yates in the lower left-hand part of this exhibit. And I don't think that well's been spudded yet, but that's a proposed location for a Burton Flat-Morrow well. It shows that there's even a little more activity in the field than what I had shown on the prior exhibit. Those are just showing what are completed. This shows that there's even still some interest in drilling new wells in the future.

Q. Are you aware of any interest owner in the pool that has demonstrated desire to reinstate proration for the pool?

A. I'm aware of no one that has expressed such a desire.

Q. Turn to the information behind tab 8. What have you compiled?

A. These are communications we've had with pipelines and other communications related to gas marketing opportunities in the Burton Flat-Morrow area, and letter number 1 there, it shows -- this is

a response to interest expressed by Gas Company of New Mexico in purchasing our volumes off of the well we're completing as we speak in the Burton Flat-Morrow, and the next letter is the same type of response to a request for Maple. Maple expressing interest there in buying gas from one of our new wells. Phillips 66 Natural Gas Company is the third letter. They're interested in taking gas from the field. And then there is Llano expressing an interest in taking our gas from the field.

MR. STOVALL: It must be a great contract.

THE WITNESS: Everybody wants a piece of it.

A. TransWestern Pipeline Company expressing interest in gas sales from our gas production in the Burton Flat-Morrow area. And the last two letters are from Axis Gas Corporation, and I thought this would be interesting to include in that it points out the opportunities that had been created as a result of termination of prorationing in the field.

This is a company that is looking at installing a low pressure gathering system in the area to be able to allow operators to produce their wells in lieu of having to install lease compression if they want to go that route, and this has the benefit of just like compression increasing the

ultimate recovery from the pool.

And so I wanted to point it out that in my opinion this is a direct result of the termination of proration, and it's created this kind of opportunity for the producers to take advantage of. I don't think we'd have this kind of thing if we were still under the existing proration system.

Q. With the suspension of prorationing in the pool, do you see any adverse consequences occurring to wells that would have been classified as marginal?

A. No, I do not.

Q. Has suspension of prorationing attained the objectives forecast by you and your company for this pool?

A. In my opinion, it has.

Q. What is your recommendation to the Examiner about the permanent termination of gas prorationing for the Burton Flat-Morrow Gas Pool?

A. My recommendation is that it be permanently terminated.

Q. What is your basis behind that?

A. Well, on the basis that it's no longer necessary to prorate the field. All the conditions that -- the reasons that they for prorating don't

exist anymore. There's a market for all this gas. It will prevent waste by allowing operators to undertake the activity that they want to undertake without curtailment, and it won't adversely effect correlative rights because these wells have limited drainage areas. So, I just I don't see the need to continue prorating the field.

There's the nonmarginal units -- I mean -- the nonstandard proration units. I don't think are a problem here. Multiple well units I don't think are a problem either, so there's no reason to continue prorating.

MR. KELLAHIN: That concludes my examination of Mr. Foppiano. We move the introduction of Exhibits 1 through 8.

MR. CATANACH: Exhibits 1 through 8 will be admitted as evidence.

(Oxy Exhibits 1 through 8 were admitted in evidence.)

MR. STOVALL: One point of clarification. Mr. Kellahin, are you -- because it's a reopened case, I assume your position is that the record from the prior hearing on this case is a part of this record as well?

MR. KELLAHIN: Yes, Mr. Stovall.

MR. STOVALL: The evidence can be considered; is that correct?

MR. KELLAHIN: And, in fact, not only the record but the order itself asked us to come forward as parties and express our comments about the permanent nature of this suspension, so we think this is a continuation of the same base case.

DIRECT EXAMINATION

BY MR. STOVALL:

Q. Mr. Foppiano, on Exhibit 5 you've got the CDM A 1 twice. Once you tested and fract and then installed compressor?

A. Uh-huh.

Q. Is that correct?

A. Yes.

Q. In that sequence? It looks like it might be the opposite sequence; is that correct?

A. I can't tell you the sequence, Mr. Stovall.

Q. I'm just trying to trace from the volume is what I'm trying to do. It looks like the compression went from 190 to 240 and then tested and fract, put back down, and when you fracted you got it back up into the 750?

A. Well, that could be, and that may well be, but I really don't know, but these before and after

volumes are the actual right before we did the work and after we did the work, so they wouldn't be -- they might not necessarily be the same. It may have been that 750 declined down to 190 and we put it on compression, but I really don't know. I would suspect we did what was cheapest to start with, which is to put it on compression, and when that didn't really pan out like we wanted it then we went in and opened additional Morrow and spent more money on it.

Q. So the 750 would reflect actually probably a combination compression and --

A. Could be, yes. Probably does, yes.

Q. How come the Simpson A Number 2-Z was so much more expensive? Is this something we've already discussed?

A. No. That was a well we tried to drill as a straight-up Morrow well at a new location, encountered difficulty, and the difficulties were we lost circulation, I believe, and we could not overcome those difficulties so we plugged that well, skidded the rig, tried it again, and encountered the same difficulties and the same problems with the same result.

We plugged that well and gave up trying to

drill just a brand new well, and we went up to an old abandoned well on the same 320-acre unit, reentered it and drilled directionally and encountered some problems.

Q. I remember that now. I didn't recognize the name.

A. So the total cost here 1.2 million is actually to get a producing well back on that tract, so that incudes the cost of the --

Q. The first two attempts. I forgot. I didn't remember the name of it. It was a forced-pooling case wasn't it, Mr. Foppiano?

A. It was a forced pooling and a directional drilling. We had to get directional drilling authority to reenter that well. In fact, I might just point out the Tracy D is also a reentry. We're talking about the same area, and we got so scared on that Simpson we did the Tracy D as a reentry.

Q. A real cheap reentry and a real expensive reentry; is that what you're saying?

A. Yeah.

Q. Do you suppose the additional production that's resulted from the prorationing unit is contributed to the decline in the price of gas?

A. Oh, I wouldn't say.

Q. Loaded question.

EXAMINATION

BY MR. CATANACH:

Q. Mr. Foppiano, have you been in contact with any of the other operators in the pool?

A. Recently or --

Q. Yes, in terms of this reopened case.

A. In terms of this reopened case I've been in contact with Bridge Oil Company, who has been monitoring the situation ever since the order was issued last year, and I have talked with them, and they just wanted to keep up to speed with what was happening.

DIRECT EXAMINATION

BY MR. STOVALL:

Q. It kept the Burton Flat-Morrow on the proration schedule kind of as a steady case so we could see what would happen to it, and I really looked at it, but have you looked at it enough to see that by allowing you to produce at these rates, has it pushed what would have been the allowable upward, or have you been able to see any effect there on how it would?

A. Oh, I think it's most definitely pushed the allowable up. The new rules also have that

provision in there about six times the January allowable, and if you want to look at Exhibit 4, you can see the January allowable is when the pool produced the most, so the six times limitation is extremely high for the pool right now -- the nonmarginal wells in the pool right now. So that being the limitation for overproduction you know -- the current system right now doesn't prevent much restriction, but what would happen, in my opinion, is that as the production either fluctuated, you know, somebody didn't want to sell their gas or whatever, or they did reach the limitation and started curtailing their production again, then we'd end up back where we were before, or even though there's a market for all this gas, we're still -- the allowable system is still driving down because it's based on production and --.

Q. Now, when this was done, and I'm asking these questions not so much for this pool but for more information and the system as a whole, when this original order was entered in this case we were under the old monthly system which was mathematically driven by prior production because really setting up the allowable was not much more than a mathematical calculation unless we

intentionally did something. So under that old system I would assume by lifting the lid, so to speak, that that mathematical drive would go up in this pool. Do you have any recollection back prior to last March when the new system went into effect?

A. Under the old system, because you mentioned it was so tight, to just what was produced two months prior and couple that with the six times the average monthly allowable for the -- for that average monthly allowable, that low limitation and the fact that it was driven by production was causing a lot of problems in this particular pool.

The new proration system, in my opinion, is a whole lot better. It's much more, I think, responsive to increase in production. It provides the operators a lot more flexibility and, you know, it's a lot better, but I've asked myself the question, well, what would happen if we were just under the new proration system in this pool? And I always come back to the question, Well, why prorate here? Nobody wants it.

There's no reason to continue prorating it, so we really shouldn't prorate this pool anymore. But to get back to your general question, I think that the new system represents a tremendous

improvement because it is less driven by that two-month figure -- two months prior -- and more driven by an average figure, and then the adjustments that are added, there's more input into those adjustments by the operator, so it's a much better system in my opinion.

Q. We could overcome the deficiency of the old system where if somebody pulled gas off the market for whatever business reasons, you could present evidence in that process that would say, don't base the future demand on that old?

A. It overcomes -- it overcomes it to a large degree, but it still -- because it is a production based driven or production driven system -- it forces an operator to monitor it a lot closer and keep up with it, and then be ready to come in and provide that evidence, and in this particular case, you know, I could not see that it's necessary to continue doing that. But in my opinion it is less responsive to an operator for taking his gas off the market than the prior system, and that's one of the great benefits to it.

Q. Are there any -- in this particular pool, are there any what we affectionately refer to as "superstar-type wells" that given no -- the

nonproration that have the potential to, you know, produce tremendous volumes and cause a threat to correlative rights. More of a --

A. There are some there. There's very few of them. Faskin has one. We had one that was a very good well that's declined.

Q. What volume ranges would that be?

A. Well, it's declined down to -- I want to say, 500 M a day. I'd have to look again, but it was, I think, as early as last year producing 3 or 4 million a day -- capable of producing that much volume. So I would classify that as a "superstar-type well." I think Faskin has a well or two that is in the 2 to 3-million-a-day category, and, in fact, I think it's -- you can easily identify and you can look at the proration schedule and they're the ones that are identified as being over the six times under the new proration system, and there's a few of those, but I also harken back to the correlative rights argument.

Can these wells effect their neighbors, and our evidence shows last year, and it continues to show, that the drainage areas are extremely limited even by these good nonmarginal wells. We don't think that they're going to be able to adversely

effect their offsets, and obviously no other operator feels that they're going to be adversely effected by these superstar wells being allowed to produce unlimited and, in fact --

Q. For what period of time? I mean, when you say obviously given enough time their drainage areas will become greater, are we talking about a couple of years or --

A. But these superstar wells are also good because they have more reserves, more porosity, better permeability, so they've got a bigger tank to drain, and, you know, so they have a lot more to do. And by looking at the Morrow it's so lenticular, you know, they're so stratified, you know, I would -- like I say based, on our calculations of just what has been recovered by the nonmarginal wells we don't see those, and I think we even have some offsets to these wells, we don't see those as a threat to the offset wells.

And I would also bring up that another operator in the field, Chevron, has indicated that they don't think that any of the wells down there are capable of draining 320 acres. Bridge Oil Company has expressed that opinion to me, and I think it's in the communication they sent to you all

about the drainage. So everything I see there is there's no concern about the drainage aspect, you know, for allowing these good wells to produce unlimited.

MR. STOVALL: No Further questions.

FURTHER EXAMINATION

BY MR. CATANACH:

Q. Mr. Foppiano, you presented some evidence whereas Oxy has been presented numerous opportunities to sell their gas from the field. Do you have any knowledge of other operators being presented the same opportunity?

A. No, I do not.

Q. But you've heard of no instance where an operator cannot sell his gas or market his gas?

A. In preparation for the February 1990 hearing, I talked to -- I want to say 17 of the 19 operators. I certainly got waivers from that many, and I had to talk to a lot of them to get those waivers and explain to them what we were asking for, and in a lot of those discussions we talked about the market.

I think I inquired -- I know I did -- of some of the operators of the nonmarginal wells why their wells were underproduced. Was it a lack of

market situation, whatever? And in no case did I run into an operator who said he could not sell the gas he wanted to. In the two years I've been working on this and talking with the operators I have not run across anybody in the last two years that has been curtailed because they didn't have a market for their gas.

Q. Do you have any information on workovers conducted by various other companies in the pool?

A. No. I researched records that I had at my disposal, which are basically the Byran Legislative Reports. I think they pick up all the activities, and I didn't see anything in there that related to recompletions in the Morrow, but I wasn't sure if that was because they don't look for that, or there just wasn't much activity going on in that respect.

From talking with other people in the pool, it appears to me that we are one of the major players in that -- in opening up additional Morrow. Maybe these other people had already had additional Morrow zones opened and we're playing catch up here. I don't know.

But as far as opening up additional Morrows, those type of workovers -- I don't have much knowledge about what the other operators are

doing in their recompletions.

EXAMINER CATANACH: I believe that's all I have. The witness may be excused. Anything further in this case?

(No response)

EXAMINER CATANACH: There being nothing further, Case 9872 will be taken under advisement.

(The foregoing case was concluded at the approximate hour of 12:45 p.m.)

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 9872, heard by me on September 19 1991.

David R. Catanach, Examiner
Oil Conservation Division

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

REPORTER'S CERTIFICATE

BE IT KNOWN that the foregoing transcript of the proceedings were taken by me, that I was then and there a Certified Shorthand Reporter and Notary Public in and for the County of Bernalillo, State of New Mexico, and by virtue thereof, authorized to administer an oath; that the witness before testifying was duly sworn to testify to the whole truth and nothing but the truth; that the questions propounded by counsel and the answers of the witness thereto were taken down by me, and that the foregoing pages of typewritten matter contain a true and accurate transcript as requested by counsel of the proceedings and testimony had and adduced upon the taking of said deposition, all to the best of my skill and ability.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto, and have no interest in the outcome hereof.

DATED at Bernalillo, New Mexico, this day November 12, 1991.

My commission expires
April 24, 1994

LINDA BUMKENS
CCR No. 3008
Notary Public

OXY USA INC.

NMOCD HEARING

to Permanently Terminate Gas Prorationing

Burton Flat-Morrow Gas Pool

Eddy County, New Mexico

Case No. 9872
(Reopened)
September 19, 1991

Regulatory History
Burton Flats Morrow Field

- 1973: *Pool was created by Order No. R-4486.*
- 1974: *Pool became prorated by Order No. R-4706.*
- 1985: *Fasken attempted to terminate prorationing. Request was denied.*
- 1989: *OXY requested increases in the pool allowable. Request was granted, 380,000 MCF and 340,000 MCF were added to the pool allowable in October and November, 1989.*
- 1990: *OXY requested that proration be permanently terminated in this pool. Request was granted on a temporary basis. Review hearing to be held in September, 1991.*

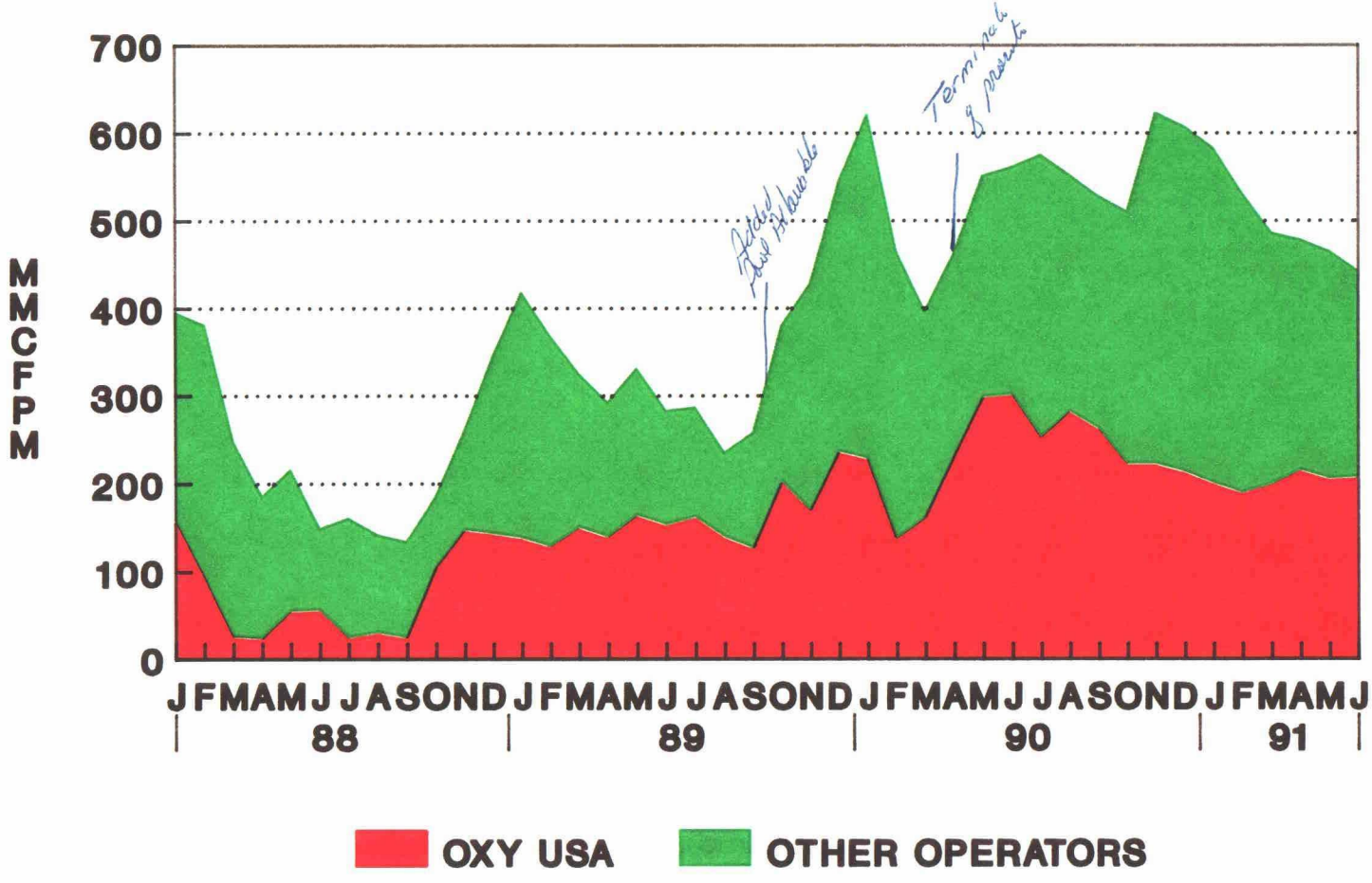
Feb 1990 Hearing: What Was Shown:

- ✓ Terminating gas proration will prevent waste by removing a major disincentive for drilling new wells, reworking old wells and other activities that increase the ultimate recovery of gas from this pool.
- ✓ Correlative rights will not be adversely affected. Market demand exceeds the pool deliverability, the non-marginal wells have limited drainage areas, and the few non-standard proration units are mostly marginal, and multiple well units are not a problem.
- ✓ The potential for non-ratable takes by the pipelines no longer exists. Most gas is now transported instead of purchased by the pipelines.
- ✓ Most of the pool operators have waived any protest to this action, and none have indicated any objection.

What Has Happened Since Feb 1990:

- ✓ Pool production has increased dramatically.
- ✓ New wells have been drilled.
- ✓ Compression installation and workover activity has increased substantially.
- ✓ There continues to be a market for all the gas.
- ✓ No one has complained.

BURTON FLAT MORROW
GAS PRODUCTION



OXY USA

BURTON FLAT MORROW WORKOVERS

WELL	JOB DESCRIPITION	W.O. Cost (M$)	Prior Gas Deliv (MCFPD)	After WO Gas Deliv (MCFPD)
Government AL #1	Test Addl Morrow	48	0	150
Elizondo Fed A #2Y	Test Addl Morrow	156	0	502
Elizondo Fed A #3	Test Addl Morrow	74	750	327
Government AD #3	Test Addl Morrow	132	0	125
Tracy A #1	Frac Morrow	36	50	350
CDM A #1	Test Addl Morrow & Frac	71	225	750
Government Z #1	P&A WC, Test Morrow	38	32	1250
Cawley A #1	Install Compressor	2.3/MO	350	575
CDM A #1	Install Compressor	2.2/MO	190	240
Elizando Fed A #2Y	Install Compressor	1.5/MO	150	160
Government AD #3	Install Compressor	2.3/MO	500	1000
Government AL #1	Install Compressor	2.2/MO	150	325
Government AO #1	Install Compressor	2.2/MO	175	225
State CV #1	Install Compressor	2.3/MO	275	350
State CW #1	Install Compressor	1.7/MO	40	100
Tracy A #1	Install Compressor	2.3/MO	50	350
Tracy C #1	Install Compressor	2.3/MO	300	700

BURTON FLAT MORROW DRILLING

Operator	Well	Zone Completed	Date Completed	Drlg Cost (M$)	Initial Deliv (MCFPD)
OXY USA Inc.	Government AB #5	Morrow	03/30/90	751	1513
OXY USA Inc.	Government W #2	Wolfcamp	07/06/90	639	225
OXY USA Inc.	Government U #2	Atoka	11/21/90	845	1095
OXY USA Inc.	Simpson A #2-Z	Morrow	03/29/91	1211	1834
OXY USA Inc.	Tracy D #1	Morrow	03/18/91	486	1525
Mewbourne Oil Co.	Federal V #1	Morrow	01/22/91	N.A.	700

R-27-E

T-28-E

T 20 S

T 21 S

ANGELL RANCH (ATOKA-MORROW)

WINCHESTER (MORROW)

E. BURTON FLAT (MORROW)

AVALON (MORROW)

S. CARLSBAD (MORROW)

E. CARLSBAD (MORROW)

T-26-E

T-27-E

Chevron 1 Eddy GM
Hillin 4 DWU
Penroc 1 Fed. A
Penroc 1 Lemann Fed.
Robinson 1 State A
Triggs 3 Fed. Ty
Meridian 1 State 2
Chevron 2 Pacheco Fed.
Penroc 2 Wright Fed.
Meridian 1 Citgo 5 Fed.
Pennzoil 1 Winchester Fed.
Oxy 1 Govt AN
Oxy 1 Govt
Hillin 1 JCW State
Yates 1 MJ Fed.
Yates 2 Shell Fed.
Estoril 1 Shell Fed.
Penroc 1 Shell Fed.
Hillin 2 JCW STATE
Underwood 1 Shell-Fed.
Penroc 1 Wright Fed.
Oxy 2 Govt S
Penroc 1 JCW State
Mewbourne 1 Fed V
Fasken 1 Amarillo-Gulf
Oxy 5 Govt AB
Yates 1 Superior KJ
Germany 1 USA 9
Oxy 3 Govt AB
Oxy 2 Govt AB
Oxy 1 Govt Y
OXY 2 Govt Y
Yates 1 Maralo HL
Harvard 1 Murphey Fed.
Oxy 1 Govt AO
Chevron 2 Potts Fed.
Yates 1 Foxie Fed.
Oxy 1 ST CV
Oxy 2 Govt T
Oxy 1 Govt T
Oxy 2 Govt AC
TXO 2 Yates Fed.
Chevron 1 Potts Fed.
Yates 1 Foxie Fed A
Oxy 1 Govt AG
Oxy 1 Govt AC
Oxy 1 Govt R
Petr. Reserve 1 State 21
Oxy 2 Govt U (Atoka Comp.)
Oxy 1 Govt AA
Chevron 2 Eddy GE ST
Bravo 2 Mesa Macho
Oxy 1 State CW
Chevron 1 Eddy GE ST
Bravo 1 Muy Macho
Penroc 1 Allied A
Bravo 1 Mesa Macho
Yates 2 Stonewall EP ST
Yates 1 Stonewall DD
Oxy 2 Govt W (Wolfcamp Comp.)
Oxy 1 Govt W
Penroc 1 Allied
Chevron 2 Eddy FT ST
Chevron 1 Cardenas Fed.
BHP 11 Burton Flat
Great Western 1 Burton State
Presidio 1 Lee Fed.
Penroc 1 Allied B
Chevron 1 Eddy FT ST
BHP 8 Burton Flat
Oxy 1 State CU
Exxon 1 Yates C Fed.
Mesa 1 Hondo ST
BHP 6 Burton Flat
BHP 9 Burton Flat
Manzano 1 ST. LS
Maralo 1 Fed. Hanson
B. Fasken 2 Maralo Fed.
B. Fasken 1 Maralo Fed
BHP 4 Burton Flat
B. Fasken 1 Gulf Fed.
B. Fasken 7 El Paso Fed.
B. Fasken 8 El Paso Fed.
B. Fasken 5 El Paso Fed.
B. Fasken 2 El Paso 2 Fed.
Merit 1 Fed. State
Exxon 20 Yates C Fed.
Exxon 1 N HILLS
Exxon 19 Yates C Fed.
Petus 1 Fed. 4
Exxon 1 Burton Flat Fed.
Exxon 31 Yates C Fed.
Bonneville Fuels 1 Avalon Fed.
Matador 1 Fed. 4
Petrus 1 Fed. 12 COM
Manzano 1 Fed.
BHP 1 Cerf Fed.
Matador 1 Fed. 9
BHP 2 Cerf Fed.
Mobil 2 Govt D
Oxy 1 State CO
Oxy 1 State CP
Coquina 1 Yates State
BHP 1 Avalon Hills
Yates 2 ARCO El Fed
Yates 1 Arco El Fed.
Oxy 1 State CR
Pearl Prod 1 Allied State Com
Yates 2 Avalon Fed.
Oxy 1 State CS
Exxon 1 NM CW State
BHP 1 Lonetree
Hanagan 1 Lowenbruck
Oxy 1 Govt AD
Oxy 3 Govt AD
TXO 1 Pioneer Fed.
Yates 1 S. Avalon Y I Com
Oxy 2Y Elizondo Fed.
TXO 1 MCCord A
Oxy 3 Elizondo A Fed.
Texas Int'l 1 Sun State
Reed & Stevens 1 Humble State
Amoco 2 Big Eddy
Yates 1 N Carlsbad DK Com
Oxy 1 Tracey E Com
Oxy 1 Ives A Com
Oxy 1 CD MA
Oxy 2Z Simpson A
Oxy 1 Elizondo Fed. A
Oxy 6 Elizondo Fed A
Oxy 1 Cawley A
Oxy 2 Govt AE
Amoco 1 Baum Fed. Com
Champlin 1 Toothman
Santa Fe 11 Vernon Fed.
Bass 102 Big Eddy
Oxy 1 Tracy A Com
Oxy 4 Elizondo A Fed.
Champlin 1 Reeves Fed.
Champlin 2 Reeves Fed.
Champlin 2 State 36
Bass 65 Big Eddy
Oxy 1 Tracy C Com
Oxy 1 Tracy D
Bennett 1 Tracy Fairway Com
Oxy 5 Elizondo A Fed.
Western 1 Hanker Com
Champlin 1 State 36
Unocal 1 Wersell Fed.
Unocal 1 Wersell A
Champlin 1 Pecos Fed.

NEW WELLS SINCE OCT., 1989

PROPOSED WELLS

OUTLINE OF BURTON FLAT (MORROW) FIELD

OUTLINE OF OTHER MORROW FIELDS

OXY USA INC.

BURTON FLAT (MORROW) FIELD

EDDY CO., NEW MEXICO

0 — 1 MILE

Sept., 1991

OXY USA INC.
Box 300, Tulsa, OK 74102

May 1, 1991

Mr. Grady Gist
Gas Company of New Mexico
311 Moore Drive
Carlsbad, New Mexico 88220

Re: Carlsbad Area
Eddy County, New Mexico

Dear Mr. Gist:

Pursuant to our recent discussion, enclosed is the information you requested for various wells in the referenced area. OXY would like to evaluate alternatives to redivert this gas for transport savings and possible dual connects.

Do not hesitate to contact us should you determine that Gas Company of New Mexico can provide economic alternatives for our gas production.

Very truly yours,

Susan Forman

Susan E. Forman
Sales Representative
Natural Gas Marketing

SEF:skb

Enclosures

OXY USA INC.
Box 300, Tulsa, OK 74102

May 1, 1991

Mr. Ross Hughes
Maple Gas Corporation
511 W. Texas
Midland, Texas 79701

Re: Tracy D #1
Section 33-21S-27E
Eddy County, New Mexico

Dear Mr. Hughes:

Pursuant to our recent discussion, enclosed per your request is the gas analysis for the subject well. OXY plans to build a line from the Tracy D to the Tracy C (see attached map) and commingle both wells at the surface. I have also enclosed a list of the wells in the area that provides deliverability information. Although all are currently connected, OXY is evaluating alternatives to redivert this gas for transport savings and possible dual connects.

Should you have any interest, do not hesitate to contact me at (918)561-6632.

Very truly yours,

Susan Forman

Susan E. Forman
Sales Representative
Natural Gas Marketing

SEF:skb

Enclosures

SEF MAY 08 1991

PHILLIPS 66 NATURAL GAS COMPANY
A SUBSIDIARY OF PHILLIPS PETROLEUM COMPANY
ODESSA, TEXAS 79762
4001 PENBROOK

May 1, 1991

Oxy USA
P.O. Box 300
Tulsa, OK 74102

Attn: Ms. Susan Foreman

Ms. Foreman:

Enclosed please find a map of Phillips 66 Natural Gas Company's (P66NGC) gas gathering facilities in southeast New Mexico. Note that I have hand drawn an extension to our system currently under construction in Eddy County.

I look forward to working with you on the possible purchase of gas from the Tracy "D" and other wells that Oxy may have available in the same area. Please let me know if Oxy has other gas which you would like P66NGC to evaluate for purchase.

I am confident that P66NGC can provide Oxy with excellent value for natural gas in the vicinity of our gathering systems and will welcome any inquiries that you may have.

Very truly yours,

William E. James

LLANO

SEF APR 26 1991

April 23, 1991

Oxy U.S.A., Inc.
P.O. Box 300
Tulsa, OK 74102
Attn: Susan Forman

FAX # 918 561-2950

RE: OXY: TRACEY C #1 (57% WI) - 262 MMBTU/DAY NET ENTITLEMENT AND TRACEY D #1 (86% WI) - 1000 MMBTU/DAY NET ENTITLEMENT

Dear Susan:

Pursuant to information provided by your offices, Llano Inc. (Llano) proposes the following terms and provisions regarding the construction of interconnect facilities and transmission of production from the captioned well.

1) Llano will cause the construction of facilities necessary to accept delivery of gas from the captioned wells estimated to be an aggregate of [redacted] MMBtu/Day net at a mutually agreeable interconnect location on Llano's system for redelivery of the thermal equivalent at a mutually agreeable interstate- interconnect on Llano's system.

2) Oxy U.S.A., Inc. (Oxy) agrees to provide satisfactory completion and production information, or indemnify Llano to the extent that they will deliver a minimum of [redacted] MMBtu within the first 12 months of date of 1st deliveries (hereinafter "Pay Out Period"). In the event the well fails to deliver at least [redacted] MMBtu within said 12 month period, Oxy will pay Llano [redacted] x the difference between actual deliveries and [redacted] MMBtu on or before the end of the first full calendar month occurring after the end of the Pay Out Period provided; however, that if buyer fails to take the full quantity of gas available (based on last known deliverability) for sale on any day or days, during the payout period, then for the purposes of determining Oxy's payment obligation under this paragraph 2, the Pay Out Period shall be extended by the number of days of any such failure.

3) Llano will transport Oxy's production on a best efforts basis @ [redacted]

4) The term of the contract will be five year and month-to-month until terminated by each party via 30 day notice.

5) Standard Llano payment provisions and gas quality specifications shall apply including mechanical separation only on the lease premises.

LLANO, INC.
A SUBSIDIARY OF HALLIBURTON ENERGY PRODUCTS & SERVICES, INC.
600 East John W. Carpenter Freeway/Suite 201/Irving, Texas 75062-3980
Telephone (214) 717-1480/Fax (214) 650-3288

If the terms and provisions set out herein appear acceptable to the management of Oxy, please execute this letter in the space provided. Upon your and Llano Inc's execution, this letter agreement shall become effective immediately and shall continue in effect until the parties execute a formal agreement incorporating the above terms and conditions. We will prepare and forward the formal agreement for your review and execution as soon as possible.

Very Truly Yours,

J. Mike McGinley
Business Development Manager
S.E. New Mexico Region

JMM:dm

Agreed and Accepted this _____ day of _____, 1991

Oxy U.S.A., Inc.

_____

By: _____
Title: _____

Agreed and Accepted this ___ day of _____, 1991

Llano, Inc.

_____

By: _____
Title: _____

ENRON
Transwestern Pipeline Company

P. O. Box 1188 Houston, Texas 77251-1188 (713) 853-6161

April 3, 1991

Oxy USA
P.O. Box 50250
Midland, Texas 79710

Attn: Mr. G.N. Buttram

Dear Gentlemen:

It has come to my attention that your company has recently begun or completed drilling new wells at the following location:

Section 29-T21S-R27E
Eddy County, New Mexico
Simpson "A" 2 and the 2-Y

I would like to discuss the possibility of connecting gas production you may obtain to Transwestern's pipeline system in the vicinity of these wells for transport. Attached is a list of data we will need in order to evaluate the feasibility of such connection.

If you would like to pursue this opportunity, please contact me at (713) 853-5157.

Thank you for your consideration. I look forward to hearing from you at your earliest convenience.

Jo Anne Sheriff 6171

Sincerely,

James T. Simons
Account Director

JTS/swm
Enclosure

wellconnect:wellltrs

Post-it™ brand fax transmittal memo 7671 | # of pages ▸ 5

To G. Timmerman	From J. Winchester
Co. OXY	Co. OXY
Dept.	Phone # 918-561-3243
Fax # 915-685-5754	Fax # 918-561-2958

Phone 915-685-5852

AXIS GAS CORPORATION

cc B. McMills
S. Forman
G. Timmerman - Midland
→ FAX

Let's get an offer from Hadson + compare + go forward.
Jeff

PRELIMINARY DRAFT

September 4, 1991

Mr. Jeffrey D. Winchester
Manager Market Development
OXY USA INC.
P.O. Box 300
Tulsa, Oklahoma 74102

Dear Mr. Winchester:

Attached is a proposal from Axis Gas Corporation, whom I represent, concerning a gathering system for connecting your gas wells located near Carlsbad, New Mexico into NGPL. These wells are currently connected into El Paso's gathering system, wherein the existing fee is considered to be excessive. The attached proposal includes a substantially lower gathering fee, plus a central compressor installation and dehydration, which will allow increased deliverability and reserves in direct proportion to the reduced gathering system pressure. For example, I have calculated that your current deliverability of 6 to 7 MMCFPD should increase to 10 MMCFPD which will correspondingly increase cash flow by approximately 50%, and the ultimate reserve recovery should increase by at least 10%, which will amount to several BCF, again as a result of the lowered gathering system pressure.

to discuss this with you Regards, Jeff

The current El Paso connection limits your marketing options solely to California. There is growing industry concern that the California market may be approaching over-saturation with a corresponding reduction in prices, because of increased Canadian imports and several planned new pipelines from the Rocky Mountain supply areas. Currently, the only alternative to other markets is for El Paso to re-deliver your gas to other pipelines at Waha but their re-delivery price is [redacted] For comparison, NGPL will re-deliver your gas to Waha, if you so desire, for a back-haul rate of only [redacted]

1801 N. LAMAR SUITE 100, DALLAS, TEXAS 75202
214/220-1080 FAX: 214/720-1048

As you know, NGPL provides access to markets throughout the United States, both for direct delivery and interconnections with other major pipeline systems. Their transportation fees are generally recognized as fair and reasonable, and, in many cases, special negotiations can result in further discounts. For example, NGPL will re-deliver your Carlsbad gas into an El Paso main transmission pipeline fo[redacted] thereby, providing continued economic access to your present California markets if you so desire. Incidentally, because of my background, I have access to many market leads and would be pleased to provide those prospects directly to your marketing group.

As the representative for Axis, I will be directly responsible for negotiating the proposed gathering system contract, if you elect to proceed with these discussion. I am prepared to proceed on a high-priority basis, and because of our past business relationship, I understand the importance of a timely, complete and formal contract to OXY USA, Inc. My goal would be to conclude the contract to your full satisfaction and then directly supervise the system installation in time for gas delivery in NGPL prior to the expected high winter demand and prices.

Thank you for the opportunity to provide this economically attractive alternative for the sale of your Carlsbad gas. If you elect to accept the attached Letter of Intent from Axis, I will be prepared to negotiate and conclude the subsequent definitive contract quickly and, of course, to OXY's complete satisfaction. I look forward to working with you on this important project.

Sincerely,

George S. Loch

George S. Loch
Agent

PRELIMINARY DRAFT

September 4, 1991

Mr. Jeffrey D. Winchester
Manager Market Development
OXY USA INC.
P.O. Box 300
Tulsa, Oklahoma 74102

Dear Mr. Winchester:

We understand that OXY USA, Inc. operates 12 Morrow gas sand wells located just outside of Carlsbad ("south area") and 4 wells located about 10 miles north of Carlsbad ("north area") in the Burton Flat (Morrow) Field, Eddy County, New Mexico. OXY's working interest approximately averages 60%, and the other major working interest owners include Amoco, Kerr-McGee and Redfern. The gas production currently averages between 6 and 7 MMCFPD in the south area and about 1.5 MMCFPD in the north area and is being sold month-to-month on the spot market. The wells are connected into El Paso's so-called Carlsbad gathering system, which operates in the 350+ psig range. After payment of the El Paso gathering fee, OXY sells the gas to various marketing companies, which take delivery at the interconnection of the Carlsbad gathering system into an El Paso main transmission pipeline in southeast New Mexico, for subsequent transportation and sale to California markets.

NGPL operates a pipeline system in the Carlsbad area, the so-called Big Eddy System, with a 10 inch transmission pipeline located east of the subject OXY wells. The system is operated in the 500 to 600 psig range and is considerably under-utilized.

Axis Gas Corporation herewith proposes to install a new low-pressure gathering system which would connect the OXY wells into the nearby NGPL pipeline. Included in the installation will be individual well meters for allocation purposes, two sales delivery meters into NGPL, a central compressor in each area to be operated with an inlet pressure of 125 psig, central dehydration units, and the various valves, controls and other equipment normally associated with such a gathering system.

The system has been designed to initially gather 15 MMCFPD, but this volume capability could be increased if required. The installation will be designed and operated in accordance with all federal and state regulatory requirements and normal industry practices.

1801 N. LAMAR SUITE 100, DALLAS, TEXAS 75202
214/220-1080 FAX: 214/720-1048

JDW MAY 31 1991

AMERICAN CENTRAL GAS COMPANIES, INC.

May 29, 1991

Mr. Jeff Winchester
OXY USA, Inc.
110 West 7th Street
P.O. Box 300
Tulsa, OK 74102

Dear Jeff:

American Central is pleased to make the following proposal for gathering OXY operated wells presently connected to the El Paso Carlsbad Gathering System. The proposal assumes that 100% of the working interest can be committed to the system.

The planned sequence would be to immediately gather and connect the three "high pressure" wells to the NGPL 4" gathering line in Section 20 of 21S-27E. All "low pressure" wells with the exception of the two Tracy wells will be gathered to a common point in the vicinity of the meter station and compression set to boost the gas into the NGPL system through the common meter. As soon as the necessary river crossing permits can be obtained, the two Tracy wells will be connected to the low pressure system. This configuration will allow the "high pressure" wells to be diverted into the low pressure system as they pressure deplete.

We propose a fee structure of [redacted] for daily volumes of [redacted] increasing to [redacted] for volumes less than [redacted] Compressor fuel, estimated to be 3% of the gas compressed, would be deducted from the gathered gas.

The foregoing is subject to confirmation of reserve and deliverability numbers used as a basis for this proposal and execution of a mutually acceptable contract.

We will be happy to meet at your convenience and discuss this proposal in more detail.

Sincerely,

AMERICAN CENTRAL GAS COMPANIES, INC.

Howard W. Martin
Executive Vice President

HWM/sw

One Warren Place, 6100 South Yale Avenue, Suite 1700
Tulsa, Oklahoma 74136
(918) 481-6363
FAX: (918) 492-9810